CONNECT AND PROTECT

Industrial/Commercial Specifier's Guide

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CHAPTER 7
HMI (HUMAN-MACHINE INTERFACE)

SYSPEND VL-MOTION ARM, TYPE 4

Vertical motion pendant arm effortlessly lifts, lowers and repositions HMI enclosures in NEMA Type 4 and 12 environments. Gas spring counterbalance can be adjusted for loads of 30-100 lb. Release handle and locking mechanism are ideal for applications where machine vibration is a concern.

SYSPEND MONITOR AND KEYBOARD ARM (NOVASTAR)

Support arm for monitor and keyboard
- Static load-carrying capacity 3–7 kg
- Support arm for mounting of monitor, keyboard and mouse on cabinet
- Fixing is to the side of the heavy duty rack (height adjustable)
- Suitable for industrial applications
- Integrated cable routing
- Support arm height - adjustable 300 mm angle of rotation on cabinet 180 ° Monitor rotation angle 340° (fitted on cabinet 270°)

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HMI PRODUCT SELECTION GUIDE

			HMI Enclosures			
			No Enclosure (Flatscreen monitor)	INLINE HMI	CONCEPT HMI	SYSPEND Aluminum HMI
SYSPEND Monitor & Keyboard Arm		Provides vertical height adjustment for flat screen monitors	•			
SYSPEND VL-Motion Arm		Provides vertical height adjustment for loads up to 100 lbs in NEMA Type 4 and 12 environments			•	•
SYSPEND VHD-Motion Arm		Provides vertical height adjustment for loads up to 125 lbs. in NEMA Type 4 and 12 environments			•	•
SYSPEND VHDS-Motion Arm		Provides vertical height adjustment for loads up to 125 lbs. in NEMA Type 4 environments				•
COMPACT Series 1		Provides vertical height adjustment for small enclosures/components up to 30 lbs in NEMA Type 12 environments		•		
COMPACT Series 2		Supports loads up to 101 lbs. in NEMA Type 12 environments		•	•	•
SYSPEND 180-MAX		Supports loads up to 180 lbs. in NEMA Type 12 environments	•	•	•	•
SYSPEND 281-MAX		Supports loads up to 281 lbs. in NEMA Type 12 environments			•	•
COMPACT Series 4 System 80		Supports loads up to 337 lbs. in NEMA Type 12 environments				•
CS480		Supports loads up to 89 lbs. in NEMA Type 4X environments				
CS600		Supports loads up to 134 lbs. in NEMA Type 4X environments				
4x4 Pedestals		Straight, angled, bolt-down and pedestals with legs		•	•	•
6x6 Pedestals		Straight and angled pedestals.				
8x8 Pedestals		Straight, angled, bolt-down and pedestals with legs				
8x8 Stainless Steel Pedestal		Straight pedestal with legs				

Stainless Steel HMI (CS480)	Stainless Steel HMI (CS600)	Consolets	PROLINE Sloped Front
	•		
		•	
		•	
		•	
			•
•			
	•		
		•	
		•	
			•
			•

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INLINE HMI, TYPE 4

INDUSTRY STANDARDS

UL 508A Listed; Type 4, 12; File No. E61997
cUL Listed per CSA C22.2 No. 94; Type 4, 12; File No. E61997

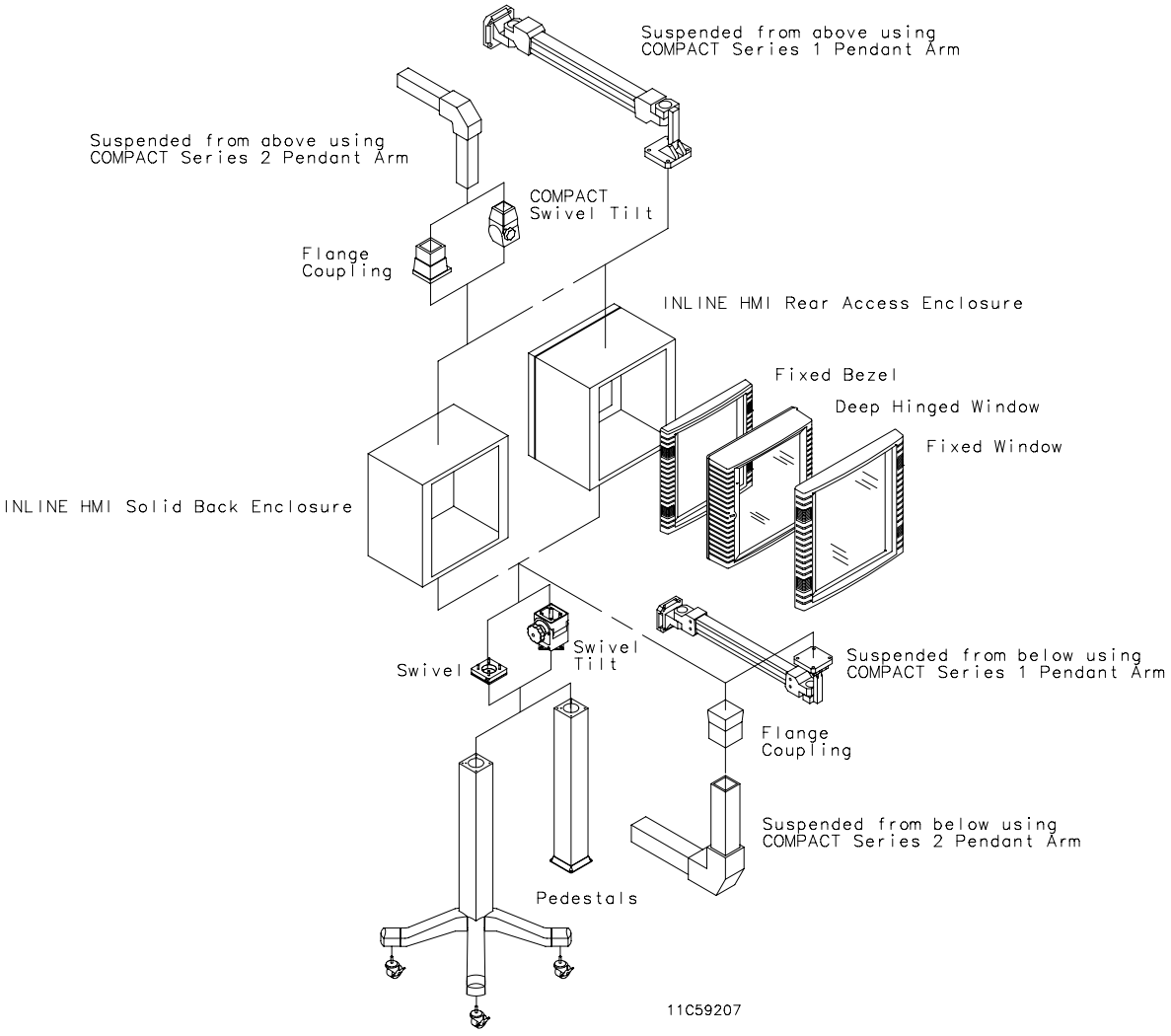
NEMA/EEMAC Type 4, 12
CSA File Number 42186: Type 4, 12
IEC 60529, IP66

APPLICATION

Practical functionality is the signature feature of all INLINE HMI enclosures. With multiple options that allow for many different configurations, these enclosures are highly adaptable and useful in applications where a protective housing is required for small HMI devices.

FINISH

RAL 7035 textured light-gray polyester powder paint inside and out over pretreated surfaces. Optional panels are white.

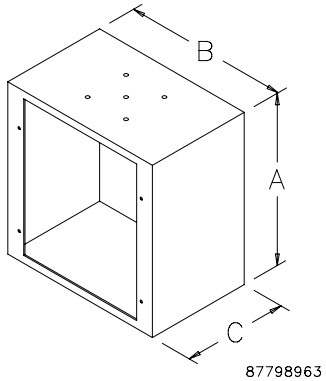


SOLID-BACK BODY

Solid-Back Body is 16 gauge steel with open front. Front is configured to install optional fixed bezel, deep-hinged window or fixed window. Panels or DIN rails mount on studs in the rear of the enclosure. Ground stud furnished. Drill points on enclosure mark location for pendant or pedestal mounting.

BULLETIN: C3

Catalog Number	AxBxC mm/in.	Description	Product Weight (lb.)
LLB161612	166 x 160 x 102 6.54 x 6.30 x 4.00	Solid-Back Body	2.7
LLB252512	250 x 250 x 102 9.84 x 9.84 x 4.02	Solid-Back Body	5.0



REAR-ACCESS BODY

Enclosure body is 16 gauge steel with rear-access door. Open front is configured to install optional fixed bezel, deep-hinged window or fixed window. Rear door, furnished with foam-in-place gasket and quarter-turn latch (standard slotted insert), accepts most INLINE door accessories. Ground stud furnished. Drill points on enclosure mark location for pendant or pedestal mounting.

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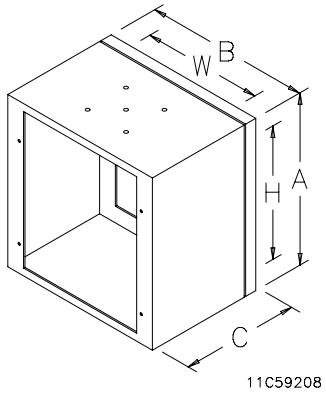

Catalog Number	AxBxC mm/in.	Description	Rear Door Opening mm/in.	Product Weight (lb.)
LLBR161612	166 x 160 x 120 6.54 x 6.30 x 4.72	Rear Access Body	148 x 142 5.82 x 5.58	3.4
LLBR252512	250 x 250 x 120 9.84 x 9.84 x 4.72	Rear Access Body	232 x 232 9.13 x 9.13	5.7

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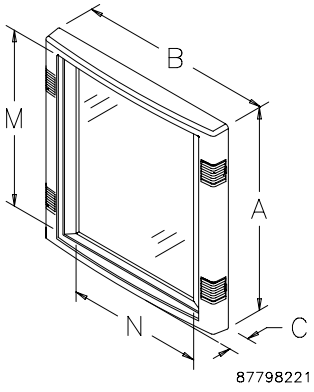
FIXED-WINDOW KIT

Aesthetic die-cast frame has .125-in.-thick clear polycarbonate window. Preassembled kit is secured to front opening of enclosure by mounting screws. Window frame caps conceal mounting screws. Frame has RAL 7035 light-gray textured polyester powder paint finish.

BULLETIN: C3

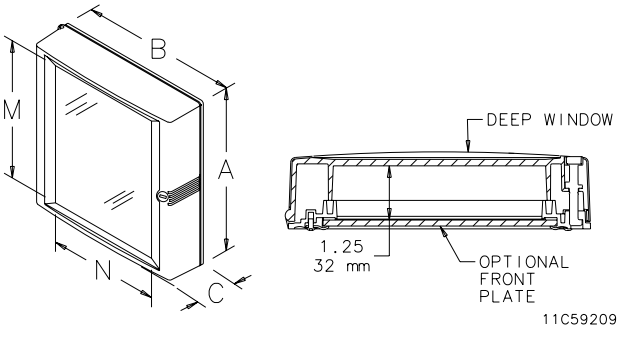


Catalog Number	AxBxC mm/in.	Window Size M x N mm/in.	Product Weight (lb.)
LWF2525	250 x 250 x 17 9.84 x 9.84 x 0.67	220 X 200 8.65 X 7.84	2.7

DEEP-HINGED WINDOW

Clear molded polycarbonate window has a 31.8-mm (1.25-in.) clear space between enclosure front opening and window surface. Space also accommodates equipment mounted on optional front plate. Window kit is hinged on left side with a 140-degree door opening and a quarter-turn slotted latch. Includes mounting hardware for window and optional front plate. Die-cast backing plate has a black polyester powder finish. This kit can be used as an accessory window kit on other Hoffman enclosures.

BULLETIN: C3



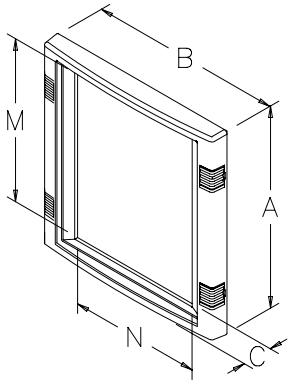
Catalog Number	AxBxC mm/in.	Window Size M x N mm/in.	Accepts Front Plate	Product Weight (lb.)
LWHD1616	166 x 160 x 41 6.54 x 6.30 x 1.64	139 x 112 5.47 x 4.43	LFP1616	1.5
LWHD2525	250 x 250 x 41 9.84 x 9.84 x 1.64	223 x 202 8.78 x 7.97	LFP2525	2.8

Purchase front plate separately.

FIXED HMI BEZEL

Aesthetic die-cast bezel frame accepts front plate or plates with HMI cutout. Includes gasket and mounting hardware. Furnished frame caps conceal mounting screws. Bezel has RAL 7035 light-gray textured polyester powder paint finish.

BULLETIN: C3



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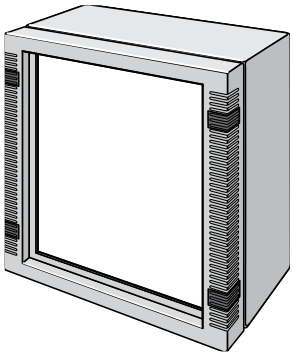
Catalog Number	AxBxC mm/in.	Window Size M x N mm/in.	Accepts Front Plate	Product Weight (lb.)
LBF1616	166 x 160 x 17 6.54 x 6.30 x 0.67	136 x 109 5.35 x 4.30	LFP1616	1.4
LBF2525	250 x 250 x 17 9.84 x 9.84 x 0.67	220 x 200 8.65 x 7.84	LFP2525	2.4

Purchase front plate separately.

FRONT PLATE, INLINE

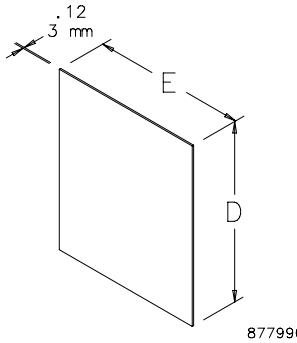


Aluminum plate is .125-in. thick. Front Plate mounts to inside of bezel or deep-hinged window. Order blank or pre-cut for HMI. (Gasket and mounting hardware are included with bezel.)
Hoffman can provide pre-configured front plates to meet your specific requirements. Contact your local Hoffman Sales Representative for more information.

BULLETIN: C3

Catalog Number	D mm/in.	E mm/in.	Fits Bezel	Fits Deep Window	Product Weight (lb.)
LFP1616	149 5.85	122 4.80	LBF1616	LWHD1616	0.5
LFP2525	233 9.16	212 8.34	LBF2525	LWHD2525	1.1

Purchase deep window separately.



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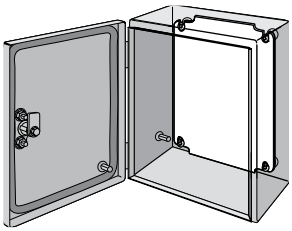
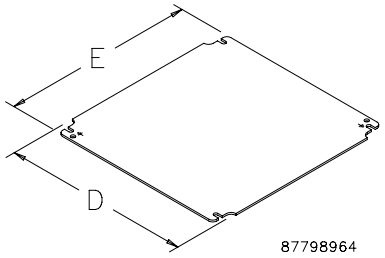
PANEL



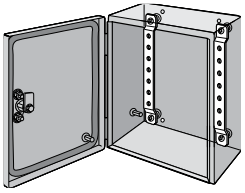
Panel is 12 gauge steel and fits solid back body enclosures only. Panels are painted white.

BULLETIN: A54P

Catalog Number	D mm/in.	E mm/in.	Fits INLINE HMI Enclosure	Product Weight (lb.)
LP1515	131 5.16	131 5.16	LLB161612	0.7
LP2520	231 9.09	181 7.13	LLB252512	1.8



DIN RAIL OR PANEL MOUNTING BRACKETS



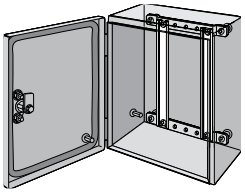
Brackets provide a mounting framework for installing DIN rails or a panel. Rails (or panel) attach to the brackets and the brackets are bolted directly to the enclosure. Brackets are offset to permit additional space in front of or behind mounted equipment. Brackets are plated 12 gauge steel.

BULLETIN: A54Y

Catalog Number	Fits INLINE HMI Enclosure	Product Weight (lb.)
LMK15	LLB161612	0.5
LMK20	LLB252512	0.6
LMK25	LLB252512	0.7

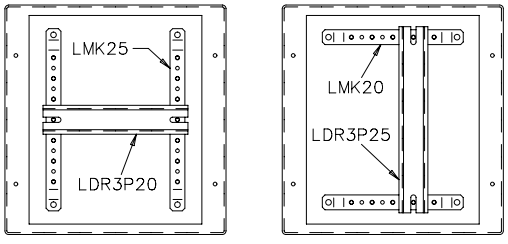
LMK20 fits horizontally. LMK25 fits vertically.

DIN TYPE RAILS



Rails furnish mounting surfaces for DIN3 mount snap-on devices. Rails attach vertically or horizontally to mounting brackets. Kit includes 4 rails, mounting hardware and installation instructions.

BULLETIN: A54Y



Catalog Number	Fits INLINE HMI Enclosure	Product Weight (lb.)
LDR3P15	LLB161612	0.4
LDR3P20	LLB252512	0.5
LDR3P25	LLB252512	0.7

LDR3P20 fits horizontally. LDR3P25 fits vertically.

LOCK INSERTS

Lock Inserts can replace the standard slotted quarter-turn latch. Key included.

BULLETIN: A54SY, A54Y

Catalog Number	Description
LLKSM7	Square 7 mm, Chrome Finish
LLKSM7SS	Square 7 mm, Type 316L Stainless Steel
LLKSM8	Square 8 mm, Chrome Finish
LLKDB	Daimler Benz, Chrome Finish
LLKDBM3	Double bit 3 mm, Chrome Finish
LLKSS	Slotted screw, Chrome Finish

WING KNOB LATCH

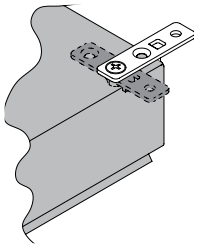
Wing Knob Latch can replace the standard slotted, quarter-turn latch on all hinged-cover and window-cover enclosures. Latch is black die-cast zinc. Includes two keys and installation instructions.

BULLETIN: A54Y

Catalog Number	Product Weight
LLKWK	0.2 lb.

Reduces UL Type rating from 4 or 4X to 12.

MOUNTING BRACKET KIT, PLATED AND 316



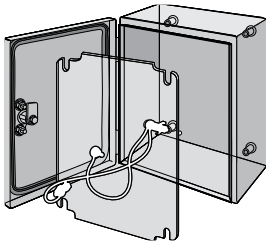
Kit is field-installable on all solid-back-body enclosures. Hardware included. Four brackets per kit.

BULLETIN: A54SY, A54Y

Catalog Number	Description
LMFK	Plated steel mounting-bracket kit
LMFKSS	Type 316L stainless steel mounting-bracket kit

Use of LMFKSS recommended to maintain Type 4X rating.

GROUNDING KIT



Grounding Kit provides means to attach a grounding conductor to the enclosure. Kit includes two insulated copper wires with a ring terminal at each end, all installation hardware and instructions.

BULLETIN: A54Y

Catalog Number	Product Weight
LLGK	0.2 lb.

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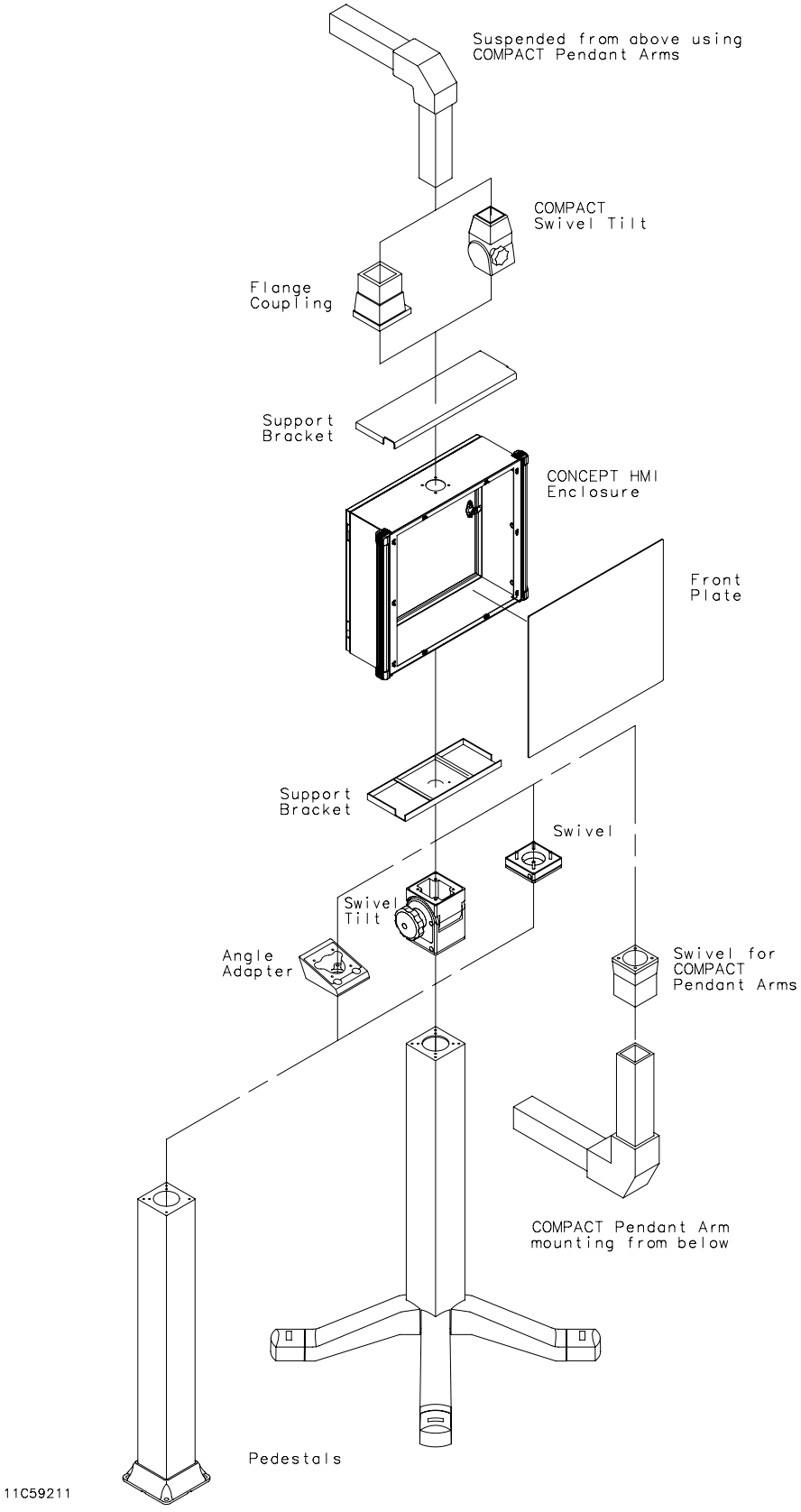
CONCEPT HMI OVERVIEW

These human-machine interface (HMI) enclosures are appropriate for applications incorporating flat-screen devices, pushbuttons and other similar devices. Available in three depths, the system's capability for pendent or pedestal mounting offers exceptional design flexibility.


Suspended from above using COMPACT Pendant Arms
COMPACT Swivel Tilt
Flange Coupling
Support Bracket
CONCEPT HMI Enclosure
Front Plate
Support Bracket
Swivel
Swivel Tilt
Angle Adapter
Swivel for COMPACT Pendant Arms
COMPACT Pendant Arm mounting from below
Pedestals
11C59211

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CONCEPT HMI, TYPE 4

INDUSTRY STANDARDS

UL 508A Listed; Type 4, 12; File Number E61997
cUL Listed per CSA C22.2 No. 94; Type 4, 12; File No. E61997

NEMA Type 4, 12
IEC 60529, IP66

APPLICATION

A traditional landscape-oriented HMI enclosure made of light-gray steel, the CONCEPT HMI is unique among HMI enclosure systems when you need a range of customization options. This pendant- or pedestal-mounted system has many possible configurations and modifications, including a removable front plate that makes it easy to install HMI components and the ability to accommodate cutouts anywhere on the enclosure.

FEATURES

- Predrilled hole in top for pendant arm mounting
- Pedestal mounting when enclosure is inverted
- Integral handle extrusions have a comfort grip that extends the length of the profile; standard color black
- Blue integral handle extrusions and end caps are also available
- Hinged rear corner-formed door has a single-point latch, seamless foam-in-place gasket and panel studs
- Aluminum front plate

SPECIFICATIONS

- Body manufactured from 14 gauge steel
- Front plate is .125-in. aluminum
- Grounding stud on body; bonding provision on door
- Simple easy-to-remove and install hinge pins with built-in captive clip
- High-torque threadless studs and fasteners on door

FINISH

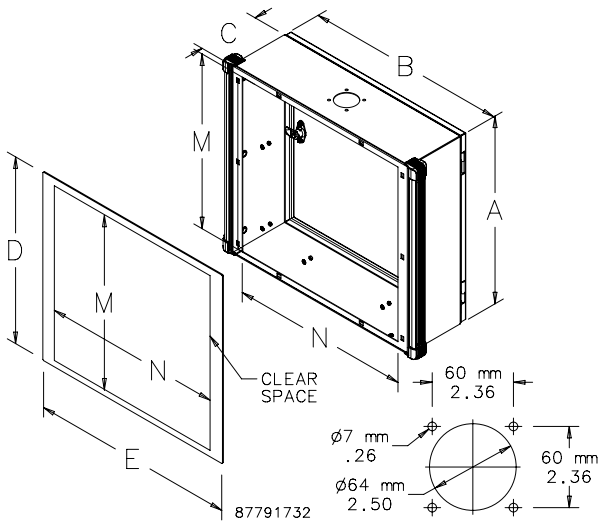
Enclosure body and front plate have RAL 7035 light-gray polyester powder paint finish. Standard handle extrusions and end caps have RAL 9005 black polyester powder paint finish.

ACCESSORIES

Industrial Corrosion Inhibitors, page 546
Thermoplastic Data Pocket, page 521
Electric Heaters, page 474
Compact Axial Fans, page 440
Touch-Up Paint, page 547

MODIFICATION AND CUSTOMIZATION

Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.



BULLETIN: C2

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Standard Product **CONCEPT HMI Enclosures with Black Extrusions**

Catalog Number	AxBxC mm	AxBxC in.	Front Opening M (mm)	Front Opening M (in.)	Front Opening N (mm)	Front Opening N (in.)	Front Plate D (mm)	Front Plate D (in.)	Front Plate E (mm)	Front Plate E (in.)	Product Weight (lb.)
CP253512	250 x 350 x 120	9.84 x 13.78 x 4.72	210	8.27	280	11.02	250	9.86	361	14.22	10.5
CP304012	300 x 400 x 120	11.81 x 15.75 x 4.72	260	10.24	330	12.99	300	11.83	411	16.19	14.9
CP323512	320 x 350 x 120	12.60 x 13.78 x 4.72	285	11.22	280	11.02	325	12.81	361	14.22	16.5
CP354512	350 x 450 x 120	13.78 x 17.72 x 4.72	310	12.20	380	14.96	350	13.79	461	18.16	20.0
CP354518	350 x 450 x 180	13.78 x 17.72 x 7.09	310	12.20	380	14.96	350	13.79	461	18.16	22.3
CP354530	350 x 450 x 300	13.78 x 17.72 x 11.80	310	12.20	380	14.96	350	13.79	461	18.16	26.9
CP374012	370 x 400 x 120	14.57 x 15.75 x 4.72	335	13.19	330	12.99	375	14.78	411	16.19	20.0
CP405012	400 x 500 x 120	15.75 x 19.69 x 4.72	360	14.17	430	16.93	400	15.76	511	20.13	24.3
CP405018	400 x 500 x 180	15.75 x 19.69 x 7.09	360	14.17	430	16.93	400	15.76	511	20.13	26.5
CP405030	400 x 500 x 300	15.75 x 19.69 x 11.80	360	14.17	430	16.93	400	15.76	511	20.13	30.9
CP424512	420 x 450 x 120	16.54 x 17.72 x 4.72	385	15.16	380	14.96	425	16.75	461	18.16	23.9
CP424518	420 x 450 x 180	16.54 x 17.72 x 7.09	385	15.16	380	14.96	425	16.75	461	18.16	25.8
CP424530	425 x 450 x 300	16.73 x 17.72 x 11.80	385	15.16	380	14.96	425	16.75	461	18.16	30.2
CP455512	450 x 550 x 120	17.72 x 21.65 x 4.72	410	16.14	480	18.90	450	17.73	561	22.10	28.6
CP455518	450 x 550 x 180	17.72 x 21.65 x 7.09	410	16.14	480	18.90	450	17.73	561	22.10	31.0
CP455530	450 x 550 x 300	17.72 x 21.65 x 11.80	410	16.14	480	18.90	450	17.73	561	22.10	35.8
CP475012	470 x 500 x 120	18.50 x 19.69 x 4.72	435	17.13	430	16.93	475	18.72	511	20.13	28.0
CP475018	470 x 500 x 180	18.50 x 19.69 x 7.09	435	17.13	430	16.93	475	18.72	511	20.13	30.2
CP475030	475 x 500 x 300	18.70 x 19.69 x 11.80	435	17.13	430	16.93	475	18.72	511	20.13	34.6
CP486012	480 x 600 x 120	18.90 x 23.62 x 4.72	440	17.32	530	20.87	480	18.90	611	24.06	32.2
CP486018	480 x 600 x 180	18.90 x 23.62 x 7.09	440	17.32	530	20.87	480	18.90	611	24.06	34.6
CP486030	480 x 600 x 300	18.90 x 23.62 x 11.80	440	17.32	530	20.87	480	18.90	611	24.06	39.4
CP525512	520 x 550 x 120	20.47 x 21.65 x 4.72	485	19.09	480	18.90	525	20.68	561	22.10	32.5
CP525518	520 x 550 x 180	20.47 x 21.65 x 7.09	485	19.09	480	18.90	525	20.68	561	22.10	34.9
CP525530	525 x 550 x 300	20.67 x 21.65 x 11.80	485	19.09	480	18.90	525	20.68	561	22.10	39.7
CP556012	550 x 600 x 120	21.65 x 23.62 x 4.72	515	20.28	530	20.87	555	21.86	611	24.06	36.8
CP556018	550 x 600 x 180	21.65 x 23.62 x 7.09	515	20.28	530	20.87	555	21.86	611	24.06	38.8
CP556030	555 x 600 x 300	21.85 x 23.62 x 11.80	515	20.28	530	20.87	555	21.86	611	24.06	43.6

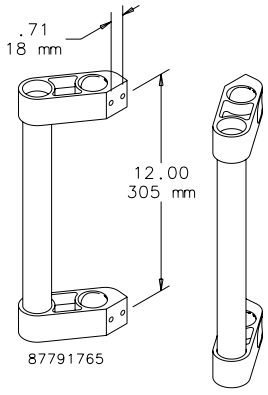
Standard Product **CONCEPT HMI Enclosures with Blue Extrusions**

Catalog Number	AxBxC mm	AxBxC in.	Front Opening M (mm)	Front Opening M (in.)	Front Opening N (mm)	Front Opening N (in.)	Front Plate D (mm)	Front Plate D (in.)	Front Plate E (mm)	Front Plate E (in.)	Product Weight (lb.)
CP253512B	250 x 350 x 120	9.84 x 13.78 x 4.72	210	8.27	280	11.02	250	9.86	361	14.22	10.5
CP304012B	300 x 400 x 120	11.81 x 15.75 x 4.72	260	10.24	330	12.99	330	12.99	411	16.19	14.9
CP323512B	320 x 350 x 120	12.60 x 13.78 x 4.72	285	11.22	280	11.02	325	12.81	361	14.22	16.5
CP354512B	350 x 450 x 120	13.78 x 17.72 x 4.72	310	12.20	380	14.96	350	13.79	461	18.16	20.0
CP354518B	350 x 450 x 180	13.78 x 17.72 x 7.09	310	12.20	380	14.96	350	13.79	461	18.16	22.3
CP354530B	350 x 450 x 300	13.78 x 17.72 x 11.80	310	12.20	380	14.96	350	13.79	461	18.16	26.9
CP374012B	370 x 400 x 120	14.57 x 15.75 x 4.72	335	13.19	330	12.99	375	14.78	411	16.19	20.0
CP405012B	400 x 500 x 120	15.75 x 19.69 x 4.72	360	14.17	430	16.93	400	15.76	511	20.13	24.3
CP405018B	400 x 500 x 180	15.75 x 19.69 x 7.09	360	14.17	430	16.93	400	15.76	511	20.13	26.5
CP405030B	400 x 500 x 300	15.75 x 19.69 x 11.80	360	14.17	430	16.93	400	15.76	511	20.13	30.9
CP424512B	420 x 450 x 120	16.54 x 17.72 x 4.72	385	15.16	380	14.96	425	16.75	461	18.16	23.9
CP424518B	420 x 450 x 180	16.54 x 17.72 x 7.09	385	15.16	380	14.96	425	16.75	461	18.16	25.8
CP424530B	425 x 450 x 300	16.73 x 17.72 x 11.80	385	15.16	380	14.96	425	16.75	461	18.16	30.2
CP455512B	450 x 550 x 120	17.72 x 21.65 x 4.72	410	16.14	480	18.90	450	17.73	561	22.10	28.6
CP455518B	450 x 550 x 180	17.72 x 21.65 x 7.09	410	16.14	480	18.90	450	17.73	561	22.10	31.0
CP455530B	450 x 550 x 300	17.72 x 21.65 x 11.80	410	16.14	480	18.90	450	17.73	561	22.10	35.8
CP475012B	470 x 500 x 120	18.50 x 19.69 x 4.72	435	17.13	430	16.93	475	18.72	511	20.13	28.0
CP475018B	470 x 500 x 180	18.50 x 19.69 x 7.09	435	17.13	430	16.93	475	18.72	511	20.13	30.2
CP475030B	475 x 500 x 300	18.70 x 19.69 x 11.80	435	17.13	430	16.93	475	18.72	511	20.13	34.6
CP486012B	480 x 600 x 120	18.90 x 23.62 x 4.72	440	17.32	530	20.87	480	18.90	611	24.06	32.2
CP486018B	480 x 600 x 180	18.90 x 23.62 x 7.09	440	17.32	530	20.87	480	18.90	611	24.06	34.6
CP486030B	480 x 600 x 300	18.90 x 23.62 x 11.80	440	17.32	530	20.87	480	18.90	611	24.06	39.4
CP525512B	520 x 550 x 120	20.47 x 21.65 x 4.72	485	19.09	480	18.90	525	20.68	561	22.10	32.5
CP525518B	520 x 550 x 180	20.47 x 21.65 x 7.09	485	19.09	480	18.90	525	20.68	561	22.10	34.9
CP525530B	525 x 550 x 300	20.67 x 21.65 x 11.80	485	19.09	480	18.90	525	20.68	561	22.10	39.7
CP556012B	550 x 600 x 120	21.65 x 23.62 x 4.72	515	20.28	530	20.87	555	21.86	611	24.06	36.8
CP556018B	550 x 600 x 180	21.65 x 23.62 x 7.09	515	20.28	530	20.87	555	21.86	611	24.06	38.8
CP556030B	555 x 600 x 300	21.85 x 23.62 x 11.80	515	20.28	530	20.87	555	21.86	611	24.06	43.6

ACCESSORY HANDLE KIT

Install handles on the integral handle extrusions or the bottom of the enclosure. Handle is 13.40-in. long and can be cut down to fit smaller enclosure sizes. Aluminum tube has RAL 9005 black polyester powder paint finish. Plastic ends are RAL 9005 black. Kit includes one pair of handles and all mounting hardware.

BULLETIN: C2

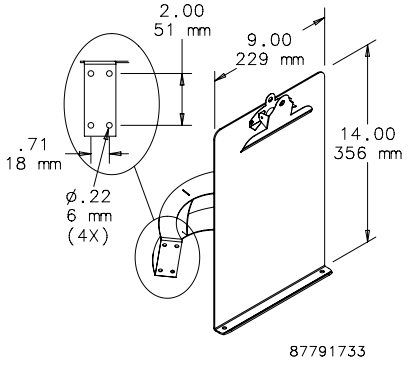


Catalog Number	Description	Product Weight (lb.)
CHDLK	One pair of handles and mounting hardware	1.7

CLIPBOARD/WHITE BOARD

The Clipboard/White Board can be installed on either handle extrusion. All mounting hardware and installation instructions are included. Finished with white paint. Dry-erase markers can be used on the front writing surface.

BULLETIN: C2

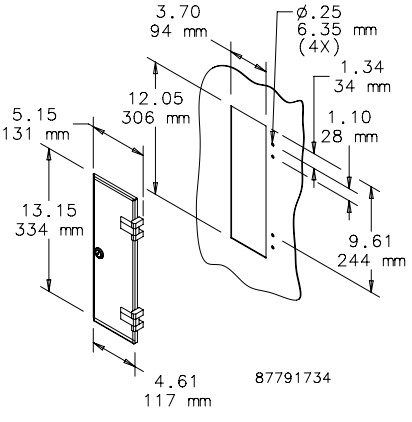


Catalog Number	Description	Product Weight (lb.)
CCLPBRD	Clipboard and mounting hardware	2

DRIVE ACCESS DOOR

Drive door can be installed only on enclosures to access internal disk drives. Key-locking latch is included. An installation template is included in the installation instructions. All installation hardware is included. RAL 7035 light-gray polyester powder paint finish. Hinges have RAL 9005 black polyester powder paint finish. Maintains NEMA Type 12 rating. Cannot be used on 120-mm deep enclosures.

BULLETIN: C2

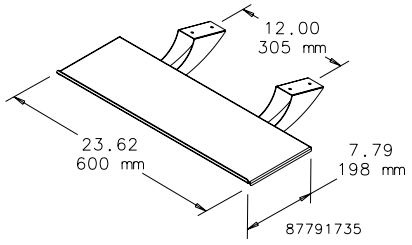


Catalog Number	Description	Product Weight (lb.)
CDACCDR	Door and installation hardware	1.7

KEYBOARD TRAY

The Keyboard Tray mounts under the enclosure for a keyboard and mouse. All mounting hardware is included. The tray has RAL 7035 light-gray polyester powder paint finish.

BULLETIN: C2

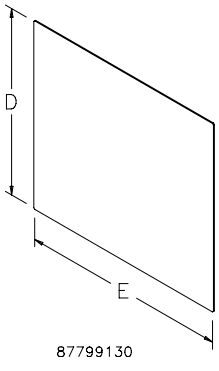


Catalog Number	Description	Product Weight (lb.)
CKBT	Keyboard tray and mounting hardware	3.2

REPLACEMENT FRONT PLATE

Aluminum plate is .125-in. thick. Finish is RAL 7035 light-gray polyester powder paint. Mounting hardware is included.

BULLETIN: C2



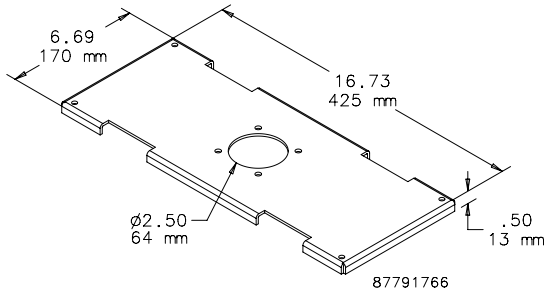
Catalog Number	D mm/in.	E mm/in.	Fits Enclosure A x B mm/in.	Product Weight (lb.)
CPFP2535	250 9.84	361 14.22	250 x 350 9.84 x 13.78	1.7
CPFP3040	300 11.81	411 16.19	300 x 400 11.81 x 15.75	2.4
CPFP3235	325 12.80	361 14.22	325 x 350 12.80 x 13.78	2.3
CPFP3545	350 13.78	461 18.16	350 x 450 13.78 x 17.72	3.1
CPFP3740	375 14.76	411 16.19	375 x 400 14.76 x 15.75	3.0
CPFP4050	400 15.75	511 20.13	400 x 500 15.75 x 19.68	3.9
CPFP4245	425 16.73	461 18.16	425 x 450 16.73 x 17.72	3.8
CPFP4555	450 17.72	561 22.10	450 x 550 17.72 x 21.65	4.8
CPFP4750	475 18.70	511 20.13	475 x 500 18.70 x 19.68	4.7
CPFP4860	480 18.90	611 24.06	480 x 600 18.90 x 23.62	5.6
CPFP5255	525 20.67	561 22.10	525 x 550 20.67 x 21.65	5.6
CPFP5560	555 21.85	611 24.06	555 x 600 21.85 x 23.62	6.5

SUPPORT BRACKET

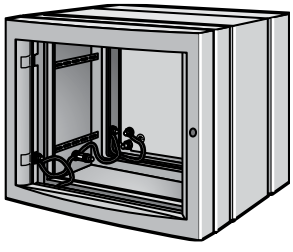
Support Bracket provides extra rigidity in 180-mm-deep enclosures that are either pendant- or pedestal-mounted. The bracket mounts in the top or bottom of the enclosure; drilling is required (drill points included on enclosure). The support bracket is not required for 120-mm-deep enclosures.

BULLETIN: C2

Catalog Number	Description	Product Weight (lb.)
CSB180	One bracket per package	1.8



GROUNDING KIT



Kit provides a means of attaching a grounding conductor to an enclosure. Kit consists of two insulated copper wires with all installation hardware and instructions included.

BULLETIN: C2

Catalog Number
CCGK

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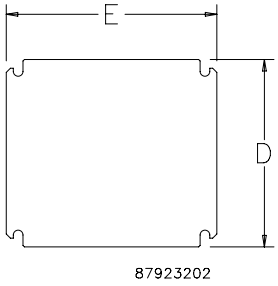
DOOR PANELS

Use CONCEPT HMI Door Panels for mounting in the rear door of a CONCEPT HMI enclosure. Constructed of 14 gauge steel and painted white; conductive panels have a galvanized finish.

BULLETIN: C2



Catalog Number	Type	Gauge	D (mm)	D (in.)	E (mm)	E (in.)
CP2535	Steel	14	131	5.18	232	9.14
CP2535G	Conductive	12	131	5.18	232	9.14
CP3040	Steel	14	181	7.15	282	11.11
CP3040G	Conductive	12	181	7.15	282	11.11
CP3235	Steel	14	206	8.13	232	9.14
CP3235G	Conductive	12	206	8.13	232	9.14
CP3545	Steel	14	232	9.12	332	13.08
CP3545G	Conductive	12	232	9.12	332	13.08
CP3740	Steel	14	256	10.10	282	11.11
CP3740G	Conductive	12	256	10.10	282	11.11
CP4050	Steel	12	281	11.09	382	15.04
CP4050G	Conductive	12	281	11.09	382	15.04
CP4245	Steel	12	306	12.07	332	13.08
CP4245G	Conductive	12	306	12.07	332	13.08
CP4555	Steel	12	331	13.05	432	17.01
CP4555G	Conductive	12	331	13.05	432	17.01
CP4750	Steel	12	356	14.04	382	15.04
CP4750G	Conductive	12	356	14.04	382	15.04
CP4860	Steel	12	361	14.23	482	18.98
CP4860G	Conductive	12	361	14.23	482	18.98
CP5255	Steel	12	407	16.01	432	17.01
CP5255G	Conductive	12	407	16.01	432	17.01
CP5560	Steel	12	436	17.19	482	18.98
CP5560G	Conductive	12	436	17.19	482	18.98

Notes

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STAINLESS STEEL HMI ENCLOSURES, TYPE 4X

APPLICATION

These stainless steel, front-door control enclosures are ideal for applications that require corrosion resistance and the suspension of process and control equipment for easy cleaning.

Use these enclosures with the CS480 and CS600 Pendant Arm Systems.

SPECIFICATIONS

- Enclosure constructed of 1.5-mm Type 304 stainless steel
- Front door constructed of 1.5-mm Type 304 stainless steel
- Polyurethane foam gaskets
- Front door hinged on side
- Facilities for installing mounting plates
- Stainless steel safety latch mounted at side, away from protected space
- Can be mounted from top or bottom

BULLETIN: CCR6

INDUSTRY STANDARDS

UL 508A Listed; Type 4, 4X, 12; File No. E61997
cUL Listed per CSA C22.2 No. 94; Type 4, 4X, 12; File No. E61997

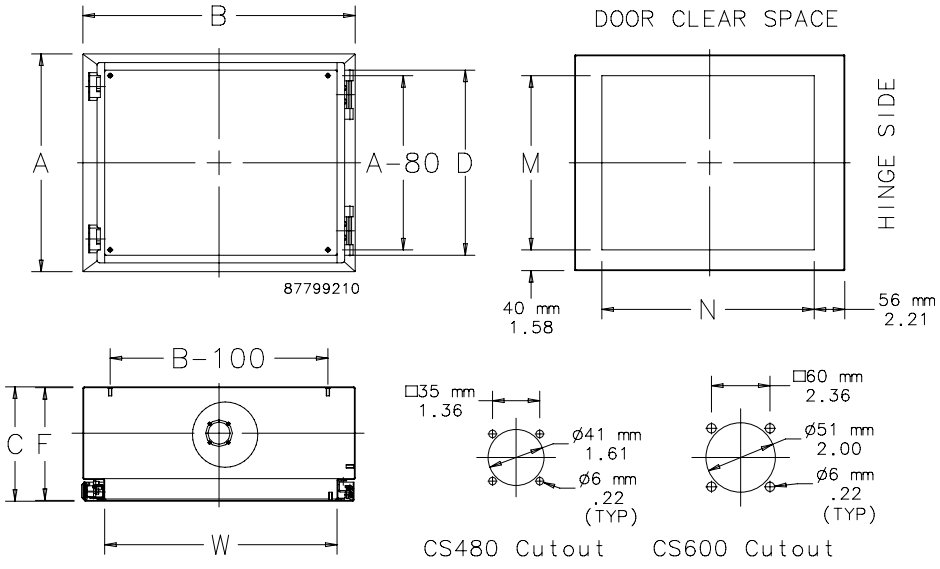
IEC 60529, IP66

Standard Product

Catalog Number	AxBxC mm	AxBxC in.	Use with Pendant Arm System	D (mm)	D (in.)	W (mm)	W (in.)	F (mm)	F (in.)	Door Clear Space M x N (mm)	Door Clear Space M x N (in.)	Mounting Plate
CCC48S302513	300 x 250 x 130	11.81 x 9.84 x 5.12	CS480	240	9.45	177	6.96	125	4.90	220 x 140	8.66 x 5.51	CCCP3025
CCC48S303513	300 x 350 x 130	11.81 x 13.78 x 5.12	CS480	240	9.45	277	10.86	125	4.90	220 x 240	8.66 x 9.45	CCCP3035
CCC48S354016	350 x 400 x 160	13.78 x 15.75 x 6.30	CS480	290	11.42	327	12.86	155	6.08	270 x 290	10.63 x 11.42	CCCP3540
CCC60S354016	350 x 400 x 160	13.78 x 15.75 x 6.30	CS600	290	11.42	327	12.86	155	6.08	270 x 290	10.63 x 11.42	CCCP3540
CCC48S404016	400 x 400 x 160	15.75 x 15.75 x 6.30	CS480	340	13.39	327	12.86	155	6.08	320 x 290	12.59 x 11.42	CCCP4040
CCC60S404016	400 x 400 x 160	15.75 x 15.75 x 6.30	CS600	340	13.39	327	12.86	155	6.08	320 x 290	12.59 x 11.42	CCCP4040
CCC48S405021	400 x 500 x 210	15.75 x 19.69 x 8.27	CS480	340	13.39	427	16.80	205	8.05	320 x 390	12.59 x 15.35	CCCP4050
CCC60S405021	400 x 500 x 210	15.75 x 19.69 x 8.27	CS600	340	13.39	427	16.80	205	8.05	320 x 390	12.59 x 15.35	CCCP4050
CCC48S455521	450 x 550 x 210	17.72 x 21.65 x 8.27	CS480	390	15.35	477	18.77	205	8.05	370 x 440	14.57 x 17.32	CCCP4555
CCC60S455521	450 x 550 x 210	17.72 x 21.65 x 8.27	CS600	390	15.35	477	18.77	205	8.05	370 x 440	14.57 x 17.32	CCCP4555
CCC48S505521	500 x 550 x 210	19.69 x 21.65 x 8.27	CS480	440	17.32	477	18.77	205	8.05	420 x 440	16.54 x 17.32	CCCP5055
CCC60S505521	500 x 550 x 210	19.69 x 21.65 x 8.27	CS600	440	17.32	477	18.77	205	8.05	420 x 440	16.54 x 17.32	CCCP5055
CCC48S605521	600 x 550 x 210	23.62 x 21.65 x 8.27	CS480	540	21.26	477	18.77	205	8.05	520 x 440	20.47 x 17.32	CCCP6055
CCC60S605521	600 x 550 x 210	23.62 x 21.65 x 8.27	CS600	540	21.26	477	18.77	205	8.05	520 x 440	20.47 x 17.32	CCCP6055
CCC60S605530	600 x 550 x 300	23.62 x 21.65 x 11.81	CS600	540	21.26	477	18.77	295	11.60	520 x 440	20.47 x 17.32	CCCP6055

Pendant Cutout

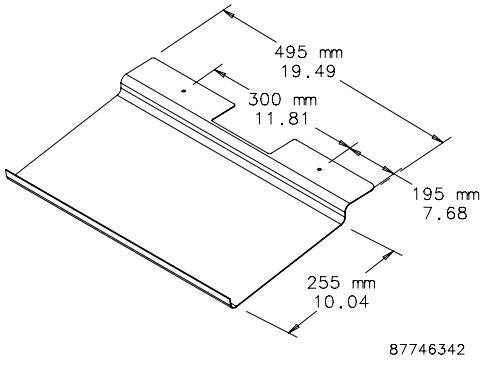
Catalog Numbers	Pendant Cutout	Weight (lb.)	Weight (kg)
CS480			
CCC48S302513	CS480	14.00	6.4
CCC48S303513	CS480	14.00	6.4
CCC48S354016	CS480	16.00	7.3
CCC48S404016	CS480	20.00	9.1
CCC48S405021	CS480	26.00	11.8
CCC48S455521	CS480	28.00	12.7
CCC48S505521	CS480	30.00	13.6
CCC48S605521	CS480	32.00	14.5
CS600			
CCC60S354016	CS600	16.00	7.3
CCC60S404016	CS600	20.00	9.1
CCC60S405021	CS600	26.00	11.8
CCC60S455521	CS600	28.00	12.7
CCC60S505521	CS600	30.00	13.6
CCC60S605521	CS600	32.00	14.5
CCC60S605530	CS600	36.00	16.3



KEYBOARD SHELF

Shelf is for 350-mm and wider enclosures. Stainless steel. 10-degree slope. Mounting hardware included. Enclosure machining required.

BULLETIN: CCR6Y



Catalog Number	Description	Weight (lb.)
CCSSKBT	Keyboard shelf	4.9

MOUNTING PLATE

Plate is for mounting equipment on the rear panel. Made of 3-mm plated steel. Mounted using pins on the rear panel.

BULLETIN: CCR6Y

Catalog Number	Height (mm)	Height (in.)	Width (mm)	Width (in.)	Weight (lb.)
CCCP3025	230	9.06	170	6.69	2.0
CCCP3035	230	9.06	270	10.63	2.0
CCCP3540	280	11.02	320	12.60	3.0
CCCP4040	330	12.99	320	12.60	3.0
CCCP4050	330	12.99	420	16.54	4.0
CCCP4555	380	14.96	470	18.50	5.0
CCCP5055	430	16.93	470	18.50	6.0
CCCP6055	530	20.87	470	18.50	7.0

HANDLES

Handles are stainless steel for mounting on enclosure sides. Mounting hardware included. Enclosure machining required. (Handles are not required to use the SYSPEND VHDS-Motion Arm.)

BULLETIN: CCR6Y

Catalog Number	Description	Weight (lb.)
CCSSHDL	Handles for CC480/600 enclosures	5.0

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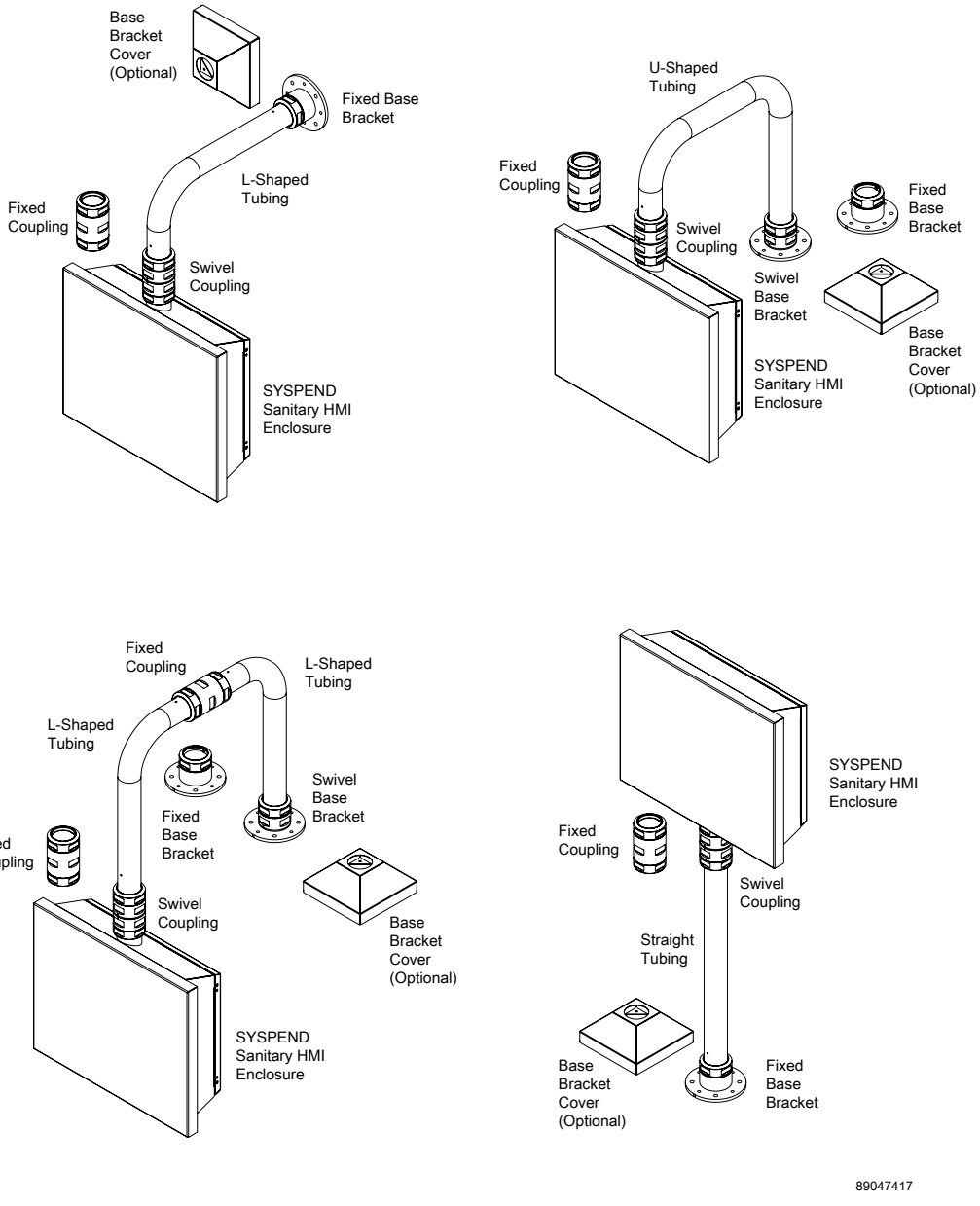
SYSPEND HMI SANITARY SYSTEM OVERVIEW

The SYSPEND Sanitary HMI (Human-Machine Interface) System is a Type 304 stainless steel enclosure series and suspension system designed to enclose, protect and suspend lightweight HMI devices up to a maximum load of 90 lb. (40.8 kg) in NEMA Type 4X environments.

The system features a modular design for application versatility and is specifically designed to meet the demanding needs of sanitary environments. The entire system meets Type 4X and IP69K requirements for high-pressure, high-temperature washdown applications.


Base Bracket Cover (Optional)
Fixed Base Bracket
L-Shaped Tubing
Fixed Coupling
Swivel Coupling
SYSPEND Sanitary HMI Enclosure
U-Shaped Tubing
Fixed Coupling
Swivel Coupling
Fixed Base Bracket
Swivel Base Bracket
Base Bracket Cover (Optional)
SYSPEND Sanitary HMI Enclosure
Fixed Coupling
L-Shaped Tubing
L-Shaped Tubing
Swivel Base Bracket
Fixed Base Bracket
Fixed Coupling
Swivel Coupling
Base Bracket Cover (Optional)
SYSPEND Sanitary HMI Enclosure
SYSPEND Sanitary HMI Enclosure
Fixed Coupling
Swivel Coupling
Straight Tubing
Base Bracket Cover (Optional)
Fixed Base Bracket
89047417

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SYSPEND HMI SANITARY ENCLOSURE, TYPE 4X

INDUSTRY STANDARDS

UL 508A Listed; Type 4, 4X, 12; File No. E61997
cUL Listed per CSA C22.2 No 94; Type 4, 4X, 12; File No. E61997

NEMA/EEMAC Type 4, 4X, 12
CSA File No. 42186; Type 4, 4X, 12
IEC 60529, IP66, IP69K

APPLICATION

Specifically designed to house process control equipment in sanitary washdown environments, particularly food and beverage manufacturing. The enclosure features many clean design elements and meets Type 4X and IP69K requirements for high-pressure, high-temperature washdown applications.

FEATURES

- Enclosure provides modern, flat-screen monitor-style aesthetics
- Integrated side handles allow for easy repositioning of enclosure
- Fully concealed gasket area provides complete protection in washdown environments
- 20-degree sloped top facilitates runoff of water and cleaning solutions and prohibits the placement of objects on the top of the enclosure
- Slanted flange trough collar prohibits pooling of fluids along the top edge of the enclosure opening
- Enclosure can be flipped for either pendant or pedestal mounting
- Hinges are shielded by door
- Suspension arm adapter provided with enclosure; provides means of attachment to the SYSPEND Sanitary Suspension System and SYSPEND VHDS-Motion Arm
- Suspension arm adapter can be installed backwards to provide 40-degree tilt for pedestal applications
- Internal support plate included with each enclosure provides extra rigidity for suspension mounting
- Flat area provided for installing optional H2OMIT Vent Drain to provide means of removing condensed moisture from the enclosure
- Optional adapter available for mounting enclosure to the SYSPEND VHDS-Motion arm

SPECIFICATIONS

- Constructed from 1.2-mm thick (18 gauge) Type 304 stainless steel
- Seams continuously welded and ground smooth
- One-piece, closed-cell silicone gasket
- Bonding provision on door; grounding stud on body
- Door secured with two stainless steel quarter-turn latches with flush slotted insert
- Panel studs on door fit optional NEMA-style panels
- Furnished hardware kit consists of illustrated instruction sheet, grounding hardware, internal support plate, suspension arm adapter and hardware for attaching the support plate and adapter

FINISH

External surfaces have a #3 brushed finish

MODIFICATION AND CUSTOMIZATION

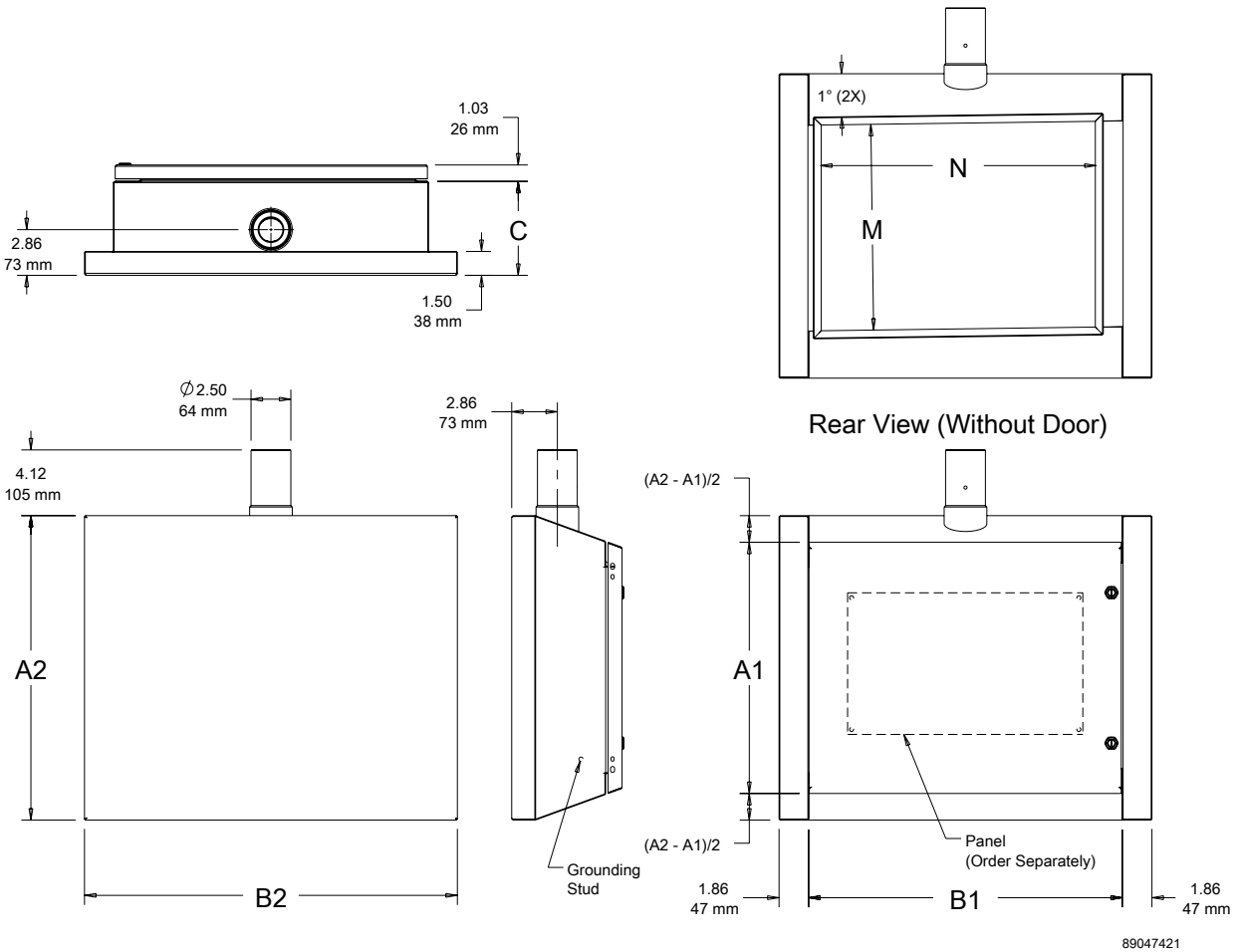
Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.

BULLETIN: VM9

Standard Product

Catalog Number	AxBxC mm/in.	A1 mm/in.	B1 mm/in.	A2 mm/in.	B2 mm/in.	M x N mm/in.	Steel Panel	Product Weight (kg)	Product Weight (lb.)
S303015SS	300 x 300 x 150 11.81 x 11.81 x 5.91	300 11.81	300 11.81	385 15.17	394 15.53	228 x 238 8.97 x 9.35	A8P6	6.9	15.3
S304015SS	300 x 400 x 150 11.81 x 15.75 x 5.91	300 11.81	400 15.75	385 15.17	494 19.46	228 x 338 8.97 x 13.29	A10P8	8.0	17.7
S404015SS	400 x 400 x 150 15.75 x 15.75 x 5.91	400 15.75	400 15.75	485 19.11	494 19.46	328 x 337 12.92 x 13.26	A12P10	9.4	20.7
S405015SS	400 x 500 x 150 15.75 x 19.68 x 5.91	400 15.75	500 19.68	485 19.11	594 23.40	323 x 437 12.92 x 17.20	A16P10	10.7	23.6
S505015SS	500 x 500 x 150 19.68 x 19.68 x 5.91	500 19.68	500 19.68	585 23.04	585 23.40	428 x 48 16.87 x 17.25	A16P10	12.2	27.0
S506015SS	500 x 600 x 150 19.68 x 23.62 x 5.91	500 16.68	600 23.62	585 23.04	694 27.34	428 x 538 16.87 x 21.19	A18P16	13.7	30.2
S303020SS	300 x 300 x 200 11.81 x 11.81 x 7.87	300 11.81	300 11.81	421 16.59	394 15.53	233 x 237 9.15 x 9.33	A8P6	7.8	17.2
S304020SS	300 x 400 x 200 11.81 x 15.75 x 7.87	300 11.81	400 15.75	421 16.59	494 19.46	233 x 337 9.15 x 13.26	A10P8	9.0	19.9
S404020SS	400 x 400 x 200 15.75 x 15.75 x 7.87	400 15.75	400 15.75	521 20.52	494 19.46	332 x 338 13.09 x 13.29	A12P10	10.5	23.1
S405020SS	400 x 500 x 200 15.75 x 19.68 x 7.87	400 15.375	500 19.68	521 20.52	594 23.40	332 x 438 13.09 x 17.23	A16P10	11.9	26.2
S505020SS	500 x 500 x 200 19.68 x 19.68 x 7.87	500 19.68	500 19.68	621 24.46	594 23.40	432 x 438 17.01 x 17.23	A16P10	13.5	29.8
S506020SS	500 x 600 x 200 19.68 x 23.62 x 7.87	500 19.68	600 23.62	621 24.46	694 27.34	432 x 538 17.01 x 21.17	A18P16	15.1	33.3

Enclosure dimensions are based upon the rear door; non-usable space on front face provides required area for heat dissipation.



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SYSPEND ALUMINUM HMI ENCLOSURES, TYPE 12

INDUSTRY STANDARDS

UL 508A Listed; Type 12; File No. E61997
cUL Listed per CSA C22.2 No. 94; Type 12; File No. E61997

NEMA/EEMAC Type 12
IEC 60529; IP 65

APPLICATION

The SYSPEND Aluminum HMI enclosure is designed to accommodate modern touch-screen HMI devices and can be pendant- or pedestal-mounted. Extruded aluminum sides provide enhanced usability with internal mounting channels. The single-walled aluminum reduces the overall weight of the enclosure, eliminating strain during installation and use. The integrated side handles provide enhanced ergonomics. The SYSPEND Aluminum HMI enclosure's aesthetics are clean and modern and the life of the HMI system is extended due to increased heat dissipation.

FEATURES

- **Extruded, single-walled aluminum construction** for enhanced ergonomics and heat dissipation
- **Anodized and RAL 7035 sections**
- **Two body style options** for a variety of configurations
- **Integrated side handles** for clean appearance and ease of operation
- **Integrated mounting extrusions** for installing components or din rail directly inside the enclosure using brackets or spring nuts
- **Anodized aluminum front plate** installed into enclosure
- **Pre-cut mounting holes** compatible with support arm systems; pedestal mounting when enclosure is inverted

SPECIFICATIONS

- Extruded channels inside enclosure
- Seamless integrated handles
- Body is available hinged or solid with hinged back-plate
- Single-walled aluminum body
- Oil-resistant gasket attached with oil-resistant adhesive

FINISH

Enclosure vertical components are clear anodized aluminum; horizontal components are painted RAL 7035 light gray aluminum. Rear covers and front plates have a clear anodized aluminum finish.

BULLETIN: VMA

Standard Product **Hinged Back Plate**

Catalog Number	AxBxC mm/in.	X mm/in.	Y mm/in.	Z mm/in.	Weight (kg)	Weight (lb.)	Compatibility	Replacement Front Plate
SY222266A	336 x 350 x 80 13.23 x 13.78 x 3.15	225 8.86	225 8.86	66 2.60	5.27	11.62	COMPACT Series 2 Flange Coupling, SYSPEND 180-MAX*	SY2222AFP
SY273066A	386 x 425 x 80 15.20 x 16.73 x 3.15	275 10.83	300 11.81	66 2.60	6.84	15.08	COMPACT Series 2 Flange Coupling, SYSPEND 180-MAX*	SY2730AFP
SY322266A	436 x 350 x 80 17.17 x 13.78 x 3.15	325 12.80	225 8.86	66 2.60	6.30	13.89	COMPACT Series 2 Flange Coupling, SYSPEND 180-MAX*	SY3222AFP
SY323518A	436 x 475 x 200 17.17 x 18.70 x 7.87	325 12.80	350 13.78	186 7.32	13.27	29.26	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY3235AFP
SY353718A	461 x 500 x 200 18.15 x 19.69 x 7.87	350 13.78	375 14.76	186 7.32	14.29	31.50	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY3537AFP
SY405018A	511 x 625 x 200 20.12 x 24.61 x 7.87	400 15.75	500 19.69	186 7.32	18.03	39.75	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY4050AFP
SY455218A	561 x 650 x 200 22.09 x 25.59 x 7.87	450 17.72	525 20.67	186 7.32	19.78	43.61	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY4552AFP
SY605018A	711 x 625 x 200 27.99 x 24.61 x 7.87	600 23.62	500 19.69	186 7.32	22.76	50.18	Compact Series 4, System 80 **	SY6050AFP
SY505018A	611 x 625 x 200 24.06 x 24.61 x 7.87	500 19.69	500 19.69	186 7.32	20.39	44.95	Compact Series 4, System 80 **	SY5050AFP

XxYxZ dimensions refer to usable space (height x width x depth)

All enclosures come with front plates installed.

* Can be used with an adapter to accommodate the SYSPEND 180-MAX.

** Includes strengthening for pendant arm system due to dimensions.

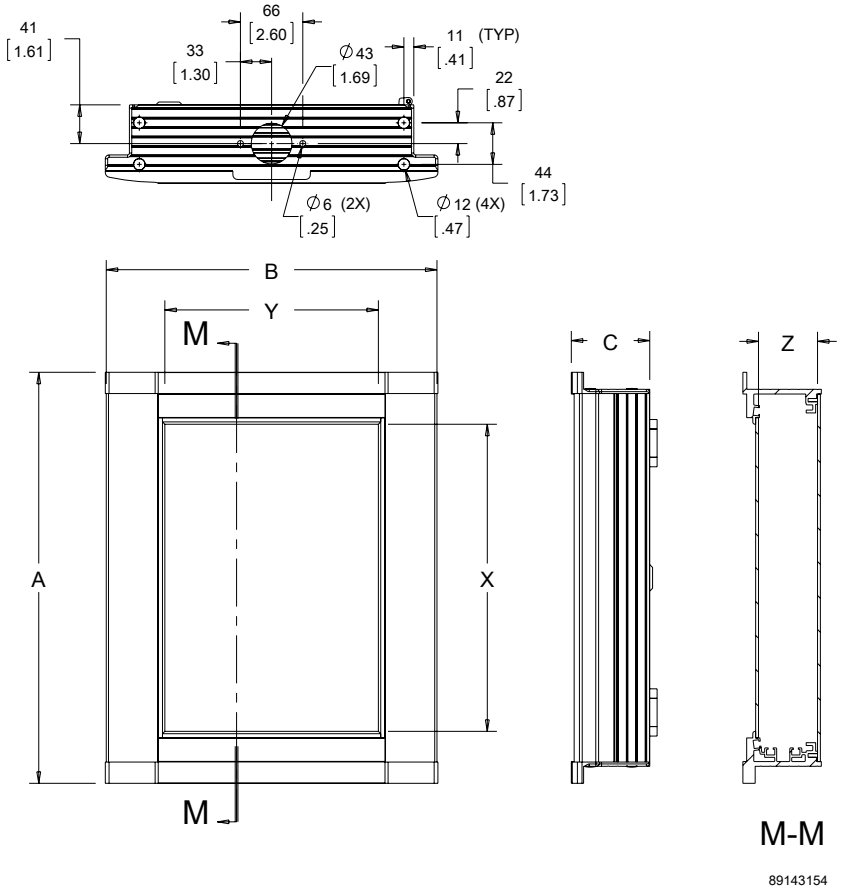
Standard Product **Hinged Door**

Catalog Number	AxBxC mm/in.	X mm/in.	Y mm/in.	Z mm/in.	Weight (kg)	Weight (lbs.)	Compatibility	Replacement Front Plate
SY252516A	361 x 375 x 180 14.21 x 14.76 x 7.09	250 9.84	250 9.84	166 6.54	9.63	21.23	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY2525AFP
SY323716A	436 x 500 x 180 17.17 x 19.69 x 7.09	325 12.80	375 14.76	166 6.54	13.52	29.81	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY3237AFP
SY374216A	486 x 550 x 180 19.13 x 21.65 x 7.09	375 14.76	425 16.73	166 6.54	15.61	34.41	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY3742AFP
SY303016A	411 x 425 x 180 16.18 x 16.73 x 7.09	300 11.81	300 11.81	166 6.54	11.50	25.35	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY3030AFP
SY322516A	436 x 375 x 180 17.17 x 14.76 x 7.09	325 12.80	250 9.84	166 6.54	10.90	24.03	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY3225AFP
SY353516A	461 x 475 x 180 18.15 x 18.70 x 7.09	350 13.78	350 13.78	166 6.54	13.47	29.70	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY3535AFP
SY354516A	461 x 575 x 180 18.15 x 22.64 x 7.09	350 13.78	450 17.72	166 6.54	15.62	34.44	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY3545AFP
SY404016A	511 x 525 x 180 20.12 x 20.67 x 7.09	400 15.75	400 15.75	166 6.54	15.57	34.33	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY4040AFP
SY454716A	561 x 600 x 180 22.09 x 23.62 x 7.09	450 17.72	475 18.70	166 6.54	18.36	40.48	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY4547AFP
SY505216A	611 x 650 x 180 24.06 x 25.59 x 7.09	500 19.69	525 20.67	166 6.54	20.71	45.66	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY5052AFP
SY353726A	461 x 500 x 280 18.15 x 19.69 x 11.02	350 13.78	375 14.76	266 10.47	18.48	40.74	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY3537AFP
SY405026A	511 x 625 x 280 20.12 x 24.61 x 11.02	400 15.75	500 19.69	266 10.47	23.19	51.13	Compact Series 2, SYSPEND 180-MAX, SYSPEND 281-MAX	SY4050AFP
SY605026A	711 x 625 x 280 27.99 x 24.61 x 11.02	600 23.62	500 19.69	266 10.47	28.74	63.36	Compact Series 4, System 80 **	SY6050AFP
SY505026A	611 x 625 x 280 24.06 x 24.61 x 11.02	500 19.69	500 19.69	266 10.47	25.97	57.25	Compact Series 4, System 80 **	SY5050AFP

XxYxZ dimensions refer to usable space (height x width x depth)

All enclosures come with front plates installed.

** Includes strengthening for pendant arm system due to dimensions.



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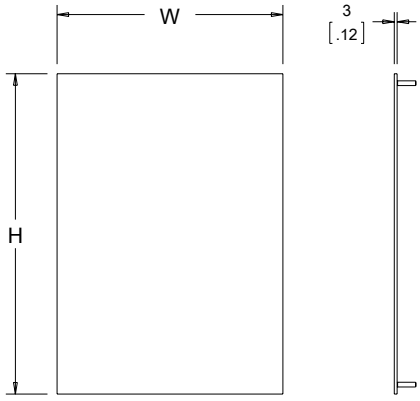
REPLACEMENT FRONT PLATE



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Front plates are 14 gauge aluminum with clear anodized brushed finish. Mounting hardware included.

BULLETIN: VMY

Standard Product

Catalog Number	AxB mm/in.	Fits Enclosure H x W mm	H mm/in.	W mm/in.	Weight (kg)	Weight (lb.)
SY2222AFP	239 x 239 9.41 x 9.41	225 x 225	239 9041	239 9.41	.59	1.30
SY2730AFP	389 x 314 11.38 x 12.36	275 x 300	389 11.38	314 12.36	.86	1.90
SY3222AFP	339 x 239 13.35 x 9.41	325 x 225	339 13.35	239 9.41	.78	1.72
SY3235AFP	339 x 364 13.35 x 14.33	325 x 350	339 13.35	364 14.33	1.12	2.47
SY3537AFP	364 x 389 14.33 x 15.32	350 x 375	364 14.33	389 15.32	1.27	2.80
SY4050AFP	414 x 514 16.30 x 20.24	400 x 500	414 16.30	514 20.24	1.85	4.08
SY4552AFP	464 x 539 18.27 x 21.22	450 x 525	464 18.27	539 21.22	2.15	4.74
SY6050AFP	614 x 514 24.17 x 20.24	600 x 500	614 24.17	514 20.24	2.68	5.91
SY5050AFP	514 x 514 20.24 x 20.24	500 x 500	514 20.24	514 20.24	2.26	4.99
SY2525AFP	264 x 264 10.39 x 10.39	250 x 250	264 10.39	264 10.39	.69	1.52
SY3237AFP	339 x 389 13.35 x 15.32	325 x 375	339 13.35	389 15.32	1.19	2.63
SY3742AFP	389 x 439 15.32 x 17.28	375 x 425	389 15.32	439 17.28	1.51	3.32
SY3030AFP	314 x 314 12.36 x 12.36	300 x 300	314 12.36	314 12.36	.92	2.04
SY3225AFP	339 x 264 13.35 x 10.39	325 x 250	339 13.35	264 10.39	.85	1.87
SY3535AFP	364 x 364 14.33 x 14.33	350 x 350	364 14.33	364 14.33	1.20	2.64
SY3545AFP	364 x 464 14.33 x 18.27	350 x 450	364 14.33	464 18.27	1.49	3.29
SY4040AFP	414 x 414 16.30 x 16.30	400 x 400	414 16.30	414 16.30	1.51	3.34
SY4547AFP	464 x 489 18.27 x 19.25	450 x 475	464 18.27	489 19.25	1.96	4.33
SY5052AFP	514 x 539 20.24 x 21.22	500 x 525	514 20.24	239 21.22	2.37	5.22

STEEL MOUNTING BRACKETS

Steel mounting brackets for installing components or DIN rails directly inside the enclosure.

BULLETIN: VMY

Catalog Number	Description
SYMBRK	Aluminum HMI Mounting Brackets

STEEL SPRING NUTS

No drilling required when using steel spring nuts to mount into enclosure. Package includes (10) M5 spring nuts.

BULLETIN: VMY

Catalog Number	Description
SYSPN	Aluminum HMI Spring Nuts

REPLACEMENT GROUNDING KIT

Grounding kit includes spring nuts for installation into mounting extrusions.

BULLETIN: VMY

Catalog Number	Description
SYAGK	Replacement Grounding Kit

REPLACEMENT KEY

Metallic 3-mm double-bit key.

BULLETIN: VMY

Standard Product

Catalog Number	Description
SYARK	Replacement Key

SYSPEND USB PORT

The interface allows access to programmable components installed inside the enclosure without opening the door. It can also be used as a keyboard or mouse connection.

BULLETIN: CC3

Catalog Number	Description
CCUSB	USB Data Port

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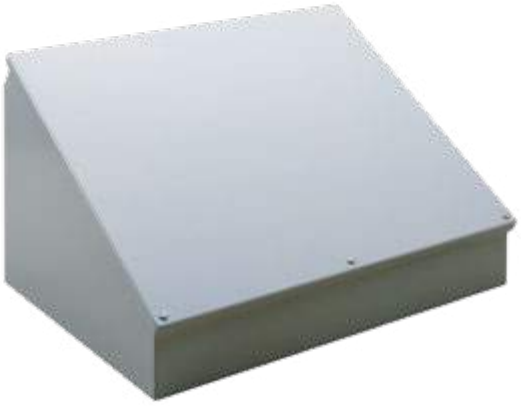
MILD STEEL CONSOLETS



APPLICATION

Consolets are ideal for mounting small control or instrumentation devices where the desirable access requires a 30- or 60-degree surface. These enclosures can be mounted on either of two sides for placement on desktops, pedestals or other flat surfaces.

SPECIFICATIONS

- 14 gauge steel
- Seams continuously welded and ground smooth; no holes or knockouts
- Captivated cover screws thread into sealed wells
- Bonding provision on cover
- Oil-resistant gasket and adhesive
- Control panel attached with continuous hinge along bottom edge

FINISH

ANSI 61 gray polyester powder paint inside and out over pretreated surfaces.

INDUSTRY STANDARDS

UL 508A Listed; Type 12, 13; File No. E61997
cUL Listed per CSA C22.2 No. 94; Type 12, 13; File No. E61997

NEMA/EEMAC Type 12, 13
CSA File Number 42186: Type 12
IEC 60529, IP65

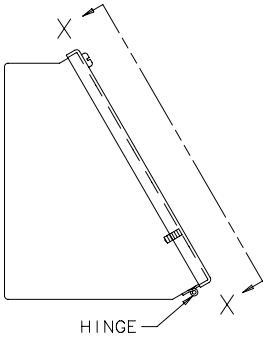
ACCESSORIES

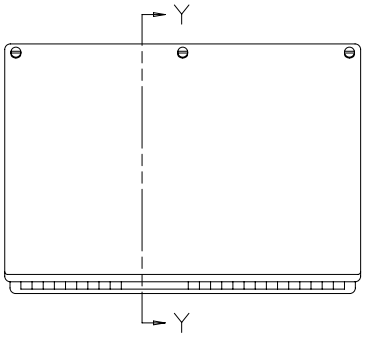
Industrial Corrosion Inhibitors, page 546
HOL-SEALERS Hole Seals, page 542
Latch Kits for Type 4 and 12 Enclosures, page 537
Mounting Bracket Kits (DMFK), page 570
Touch-Up Paint, page 547
Steel, Stainless Steel and Non-Metallic Window Kits, page 514

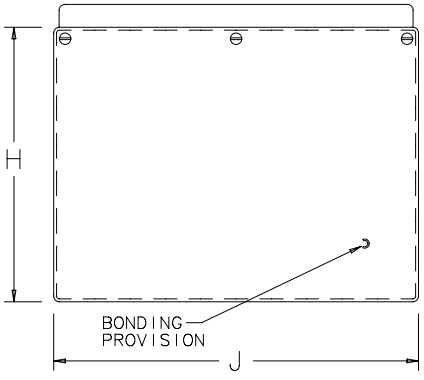
BULLETIN: C5, P1

Standard Product **Consolets**

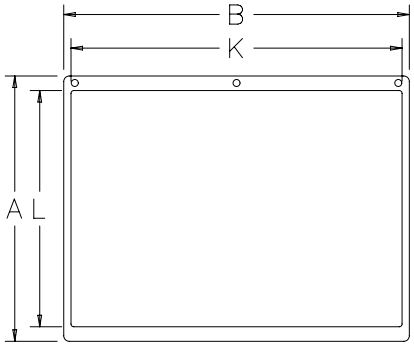
Catalog Number	AxBxC in./mm	E in./mm	H in./mm	J in./mm	K in./mm	L in./mm	N in./mm
C8C8	8.00 x 8.00 x 7.09 203 x 203 x 180	5.62 143	8.28 210	8.28 210	7.50 191	6.62 168	7.44 189
C8C12	8.00 x 12.00 x 7.09 203 x 305 x 180	5.62 143	8.28 210	12.28 312	11.50 292	6.62 168	7.44 189
C8C16	8.00 x 16.00 x 7.09 203 x 406 x 180	5.62 143	8.28 210	16.28 414	15.50 394	6.62 168	7.44 189
C8C20	8.00 x 20.00 x 7.09 203 x 508 x 180	5.62 143	8.28 210	20.28 515	19.50 495	6.62 168	7.44 189
C12C12	12.00 x 12.00 x 9.09 305 x 305 x 231	7.62 194	12.28 312	12.28 312	11.50 292	10.62 270	10.91 277
C12C16	12.00 x 16.00 x 9.09 305 x 406 x 231	7.62 194	12.28 312	16.28 414	15.50 394	10.62 270	10.91 277
C12C20	12.00 x 20.00 x 9.09 305 x 508 x 231	7.62 194	12.28 312	20.28 515	19.50 495	10.62 270	10.91 277
C12C24	12.00 x 24.00 x 9.09 305 x 610 x 231	7.62 194	12.28 312	24.28 617	23.50 597	10.62 270	10.91 277
C16C16	16.00 x 16.00 x 11.09 406 x 406 x 282	9.62 244	16.28 414	16.28 414	15.50 394	14.62 371	14.38 365
C16C20	16.00 x 20.00 x 11.09 406 x 508 x 282	9.62 244	16.28 414	20.28 515	19.50 495	14.62 371	14.38 365
C16C24	16.00 x 24.00 x 11.09 406 x 610 x 282	9.62 244	16.28 414	24.28 617	23.50 597	14.62 371	14.38 365
C16C30	16.00 x 30.00 x 11.09 406 x 762 x 282	9.62 244	16.28 414	30.28 769	29.50 749	14.62 371	14.38 365
C16C36	16.00 x 36.00 x 11.09 406 x 914 x 282	9.62 244	16.28 414	36.28 922	35.50 902	14.62 371	14.38 365
C20C20	20.00 x 20.00 x 13.09 508 x 508 x 332	11.62 295	20.28 515	20.28 515	18.62 473	18.62 473	17.84 453
C20C24	20.00 x 24.00 x 13.09 508 x 610 x 332	11.62 295	20.28 515	24.28 617	22.62 575	18.62 473	17.84 453
C20C30	20.00 x 30.00 x 13.09 508 x 762 x 332	11.62 295	20.28 515	30.28 769	28.62 727	18.62 473	17.84 453



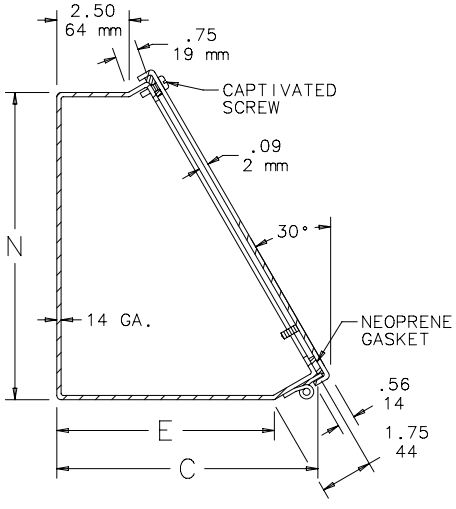




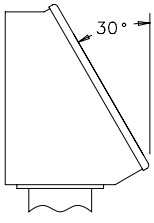
VIEW X–X

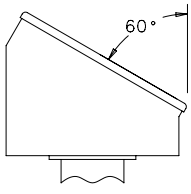


VIEW X–X
with cover removed



SECTION Y–Y





C2760-C

Standard Product **Pedestal Columns and Bases for Consolets**

Catalog Number	AxBxC in./mm	Description
A44CCOL	35.00 x 4.00 x 4.00 889 x 102 x 102	Straight Pedestal Column
A66CCOL	35.00 x 6.00 x 6.00 889 x 152 x 152	Straight Pedestal Column
A18SBASE	18.00 x 18.00 457 x 457	Pedestal Base
A24SBASE	24.00 x 24.00 610 x 610	Pedestal Base

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STAINLESS STEEL CONSOLETS, TYPE 12

APPLICATION

Consolets are ideal for mounting small control or instrumentation devices where the desirable access requires a 30- or 60-degree surface. These enclosures can be mounted on either of two sides for placement on desktops, pedestals or other flat surfaces.

SPECIFICATIONS

- Type 304 stainless steel
- Seams continuously welded and ground smooth
- Captivated cover screws thread into sealed wells
- Cover attached with continuous hinge
- Oil-resistant gasket
- Bonding provision on door

FINISH

Cover and sides of body have smooth #4 brushed finish.

ACCESSORIES

Industrial Corrosion Inhibitors, page 546
Steel, Stainless Steel and Non-Metallic Window Kits, page 514
Stainless Steel Pedestal, page 163
HOL-SEALERS Hole Seals, page 542

MODIFICATION AND CUSTOMIZATION

Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.

BULLETIN: C5S

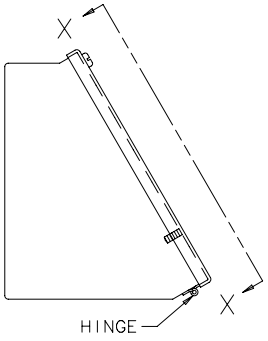
INDUSTRY STANDARDS

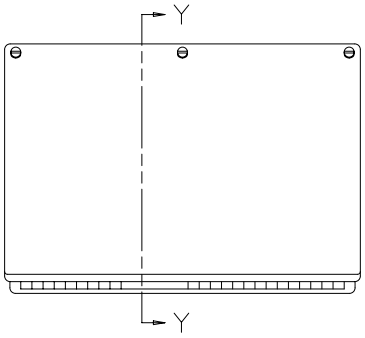
UL 508A Listed; Type 12, 13; File Number E61997
cUL Listed per CSA C22.2 No 94; Type 12, 13; File Number E61997

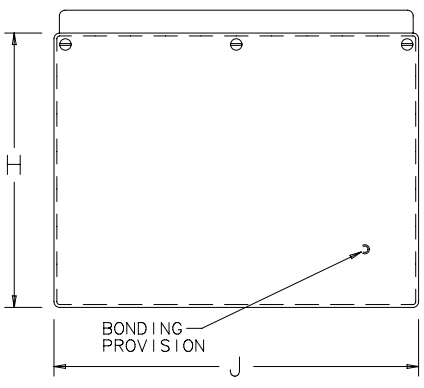
NEMA/EEMAC Type 12
CSA File Number 42186: Type 12
IEC 60529, IP65

Standard Product

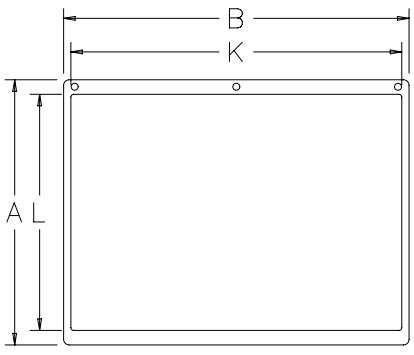
Catalog Number	AxBxC in./mm	E in./mm	H in./mm	J in./mm	K in./mm	L in./mm	N in./mm
C8C8SS	8.00 x 8.00 x 7.09	5.62	8.28	8.28	7.50	6.62	7.44
	203 x 203 x 180	143	210	210	191	168	189
C8C12SS	8.00 x 12.00 x 7.09	5.62	8.28	12.28	11.50	6.62	7.44
	203 x 305 x 180	143	210	312	292	168	189
C8C16SS	8.00 x 16.00 x 7.09	5.62	8.28	16.28	15.50	6.62	7.44
	203 x 406 x 180	143	210	414	394	168	189
C8C20SS	8.00 x 20.00 x 7.09	5.62	8.28	20.28	19.50	6.62	7.44
	203 x 508 x 180	143	210	515	495	168	189
C12C12SS	12.00 x 12.00 x 9.09	7.62	12.28	12.28	11.50	10.62	10.91
	305 x 305 x 231	194	312	312	292	270	277
C12C16SS	12.00 x 16.00 x 9.09	7.62	12.28	16.28	15.50	10.62	10.91
	305 x 406 x 231	194	312	414	394	270	277
C12C20SS	12.00 x 20.00 x 9.09	7.62	12.28	20.28	19.50	10.62	10.91
	305 x 508 x 231	194	312	515	495	270	277
C12C24SS	12.00 x 24.00 x 9.09	7.62	12.28	24.28	23.50	10.62	10.91
	305 x 610 x 231	194	312	617	597	270	277
C16C16SS	16.00 x 16.00 x 11.09	9.62	16.28	16.28	15.50	14.62	14.38
	406 x 406 x 282	244	414	414	394	371	365
C16C20SS	16.00 x 20.00 x 11.09	9.62	16.28	20.28	19.50	14.62	14.38
	406 x 508 x 282	244	414	515	495	371	365
C16C24SS	16.00 x 24.00 x 11.09	9.62	16.28	24.28	23.50	14.62	14.38
	406 x 610 x 282	244	414	617	597	371	365
C16C30SS	16.00 x 30.00 x 11.09	9.62	16.28	30.28	29.50	14.62	14.38
	406 x 762 x 282	244	414	769	749	371	365
C16C36SS	16.00 x 36.00 x 11.09	9.62	16.28	36.28	35.50	14.62	14.38
	406 x 914 x 282	244	414	922	902	371	365
C20C20SS	20.00 x 20.00 x 13.09	11.62	20.28	20.28	18.62	18.62	17.84
	508 x 508 x 332	295	515	515	473	473	453
C20C24SS	20.00 x 24.00 x 13.09	11.62	20.28	24.28	22.62	18.62	17.84
	508 x 610 x 332	295	515	617	575	473	453
C20C30SS	20.00 x 30.00 x 13.09	11.62	20.28	30.28	28.62	18.62	17.84
	508 x 762 x 332	295	515	769	727	473	453



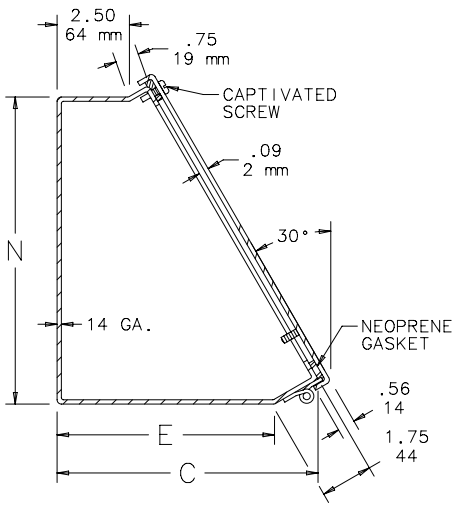




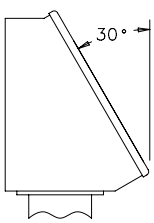
VIEW X-X

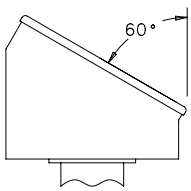


VIEW X-X
with cover removed



SECTION Y-Y





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CONCEPT CONSOLE, TYPE 4X

APPLICATION

Sloped CONCEPT Consoles provide a convenient surface for mounting and monitoring components. Ergonomically designed so users can sit or stand while working, consoles feature a large internal capacity for mounting components and controls.

SPECIFICATIONS

- 14 gauge Type 304 stainless steel
- Ergonomically designed for sitting or standing operation
- Solid bottom
- Corner-formed doors
- External-formed 90-degree body flange
- 20-degree sloped-top cover for 38.00-in. (965-mm) tall console or 30-degree top cover for 48.00-in. (1219-mm) console
- Quarter-turn stainless steel latches hold top cover securely closed
- Door props hold top cover open at 90-degrees
- Integral water-shedding trough
- Collar studs for optional back panel
- Optional side panels (mounted to collar studs) expand equipment mounting space
- Tool-to-open 3-point latch on front access door; door is removable and reversible; 170-degree full-access opening
- Seamless foam-in-place gasket
- Bonding provision on door; grounding stud on body
- Provision for data pocket on lower front door
- Easy-to-remove clip-style hinge pins

FINISH

Doors and body have smooth #4 brushed finish.

ACCESSORIES

Caster Kit, page 35
Side Panels, page 35

MODIFICATION AND CUSTOMIZATION

Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.

BULLETIN: C1S

INDUSTRY STANDARDS

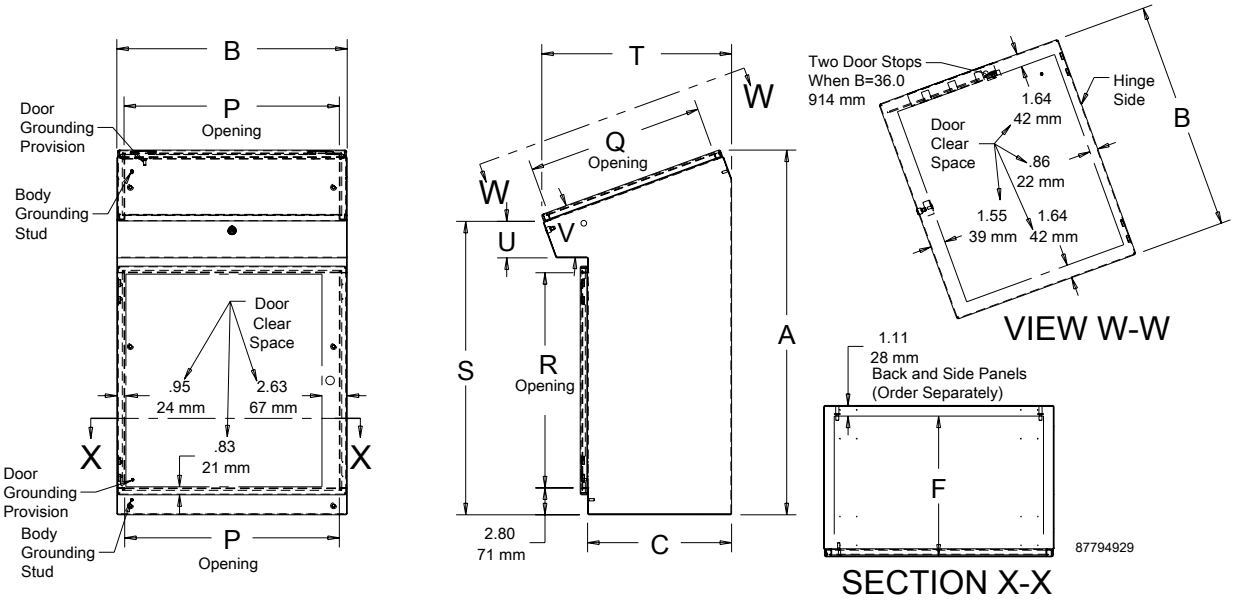
UL 508A Listed; Type 3R, 4, 4X, 12; File No. E61997
cUL Listed per CSA C22.2 No 94; Type 3R, 4, 4X, 12; File No. E61997

NEMA Type 3R, 4, 4X, 12, 13
CSA File No. 42186: Type 4, 4X, 12
Meets NEMA Type 3RX requirements

Standard Product

Catalog Number	AxBxC in./mm	Back Panel	Conductive Panel	Back Panel Height x Width in./mm	F in./mm	P in./mm	Q in./mm	R in./mm	S in./mm	T in./mm	U in./mm	V	W in./mm	Data Pocket
CFC382416SS	38.00 x 24.00 x 15.00 965 x 610 x 381	CP3624	CP3624G	34.20 x 22.20 869 x 564	14.57 370	22.40 569	18.40 467	22.37 568	30.44 773	19.82 503	3.79 96	20°	20.00 508	Small
CFC383616SS	38.00 x 36.00 x 15.00 965 x 914 x 381	CP3636	CP3636G	34.20 x 34.20 869 x 869	14.57 370	34.40 874	18.40 467	22.37 568	30.44 773	19.82 503	3.79 96	20°	20.00 508	Large
CFC482423SS	48.00 x 24.00 x 18.00 1219 x 610 x 457	CP2442	CP2442G	40.20 x 22.20 1021 x 564	17.57 446	22.40 569	23.36 593	28.35 720	35.35 898	23.84 606	2.54 64	30°	24.00 610	Large
CFC483623SS	48.00 x 36.00 x 18.00 1219 x 914 x 457	CP4236	CP4236G	40.20 x 34.20 1021 x 869	17.57 446	34.40 874	23.36 593	28.35 720	35.35 898	23.84 606	2.54 64	30°	24.00 610	Large

Order Back Panel and Data Pocket separately.



CASTER KIT

Order two swivel caster kits or one swivel caster kit plus one stationary caster kit.
Height = 3.72 in. (94 mm)
Wheel diameter = 3.00 in. (76 mm)
Load rating each = 210 lb. (95 kg)

BULLETIN: C1

Catalog Number	Description
AC4M6ST	Caster kit, stationary (2 casters per kit)
AC4M6SV	Caster lit, swivel (2 casters per kit)
CCPK18	Caster plate kit, 18 in., (2 plates per kit)

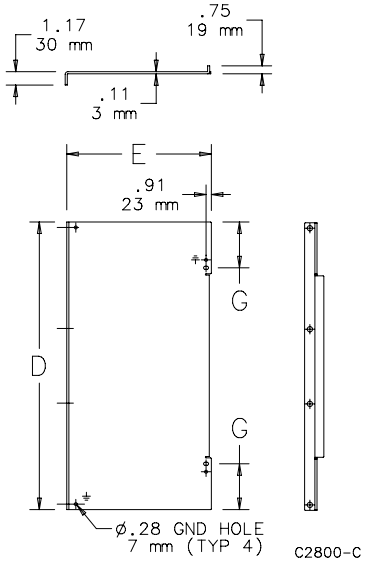
Order two swivel caster kits or one swivel caster kit plus one stationary caster kit.

SIDE PANELS

One panel per kit. Two kits required if a panel is needed on each side.

BULLETIN: C1

Catalog Number	D in./mm	E in./mm	G in./mm
CPC3816	27.15	13.65	4.33
	690	347	110
CPC4823	31.57	16.65	3.54
	802	423	40



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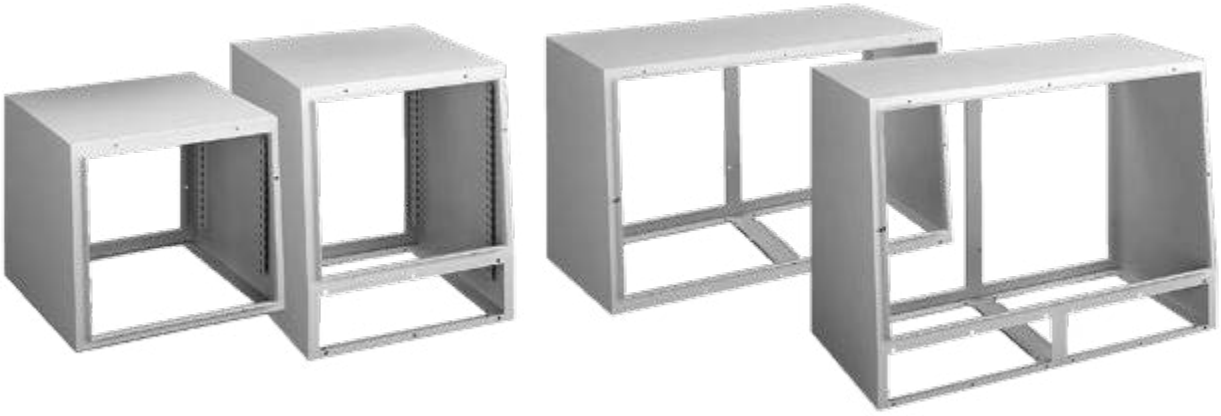
PROLINE SLOPED-FRONT HMI, TYPE 4, 4X, 12



INDUSTRY STANDARDS

Painted versions:

UL 508A Listed; Type 12: File No. E61997
cUL Listed per CSA C22.2 No. 94; Type 12: File No. E61997

NEMA/EEMAC Type 12
IEC 60529, IP55

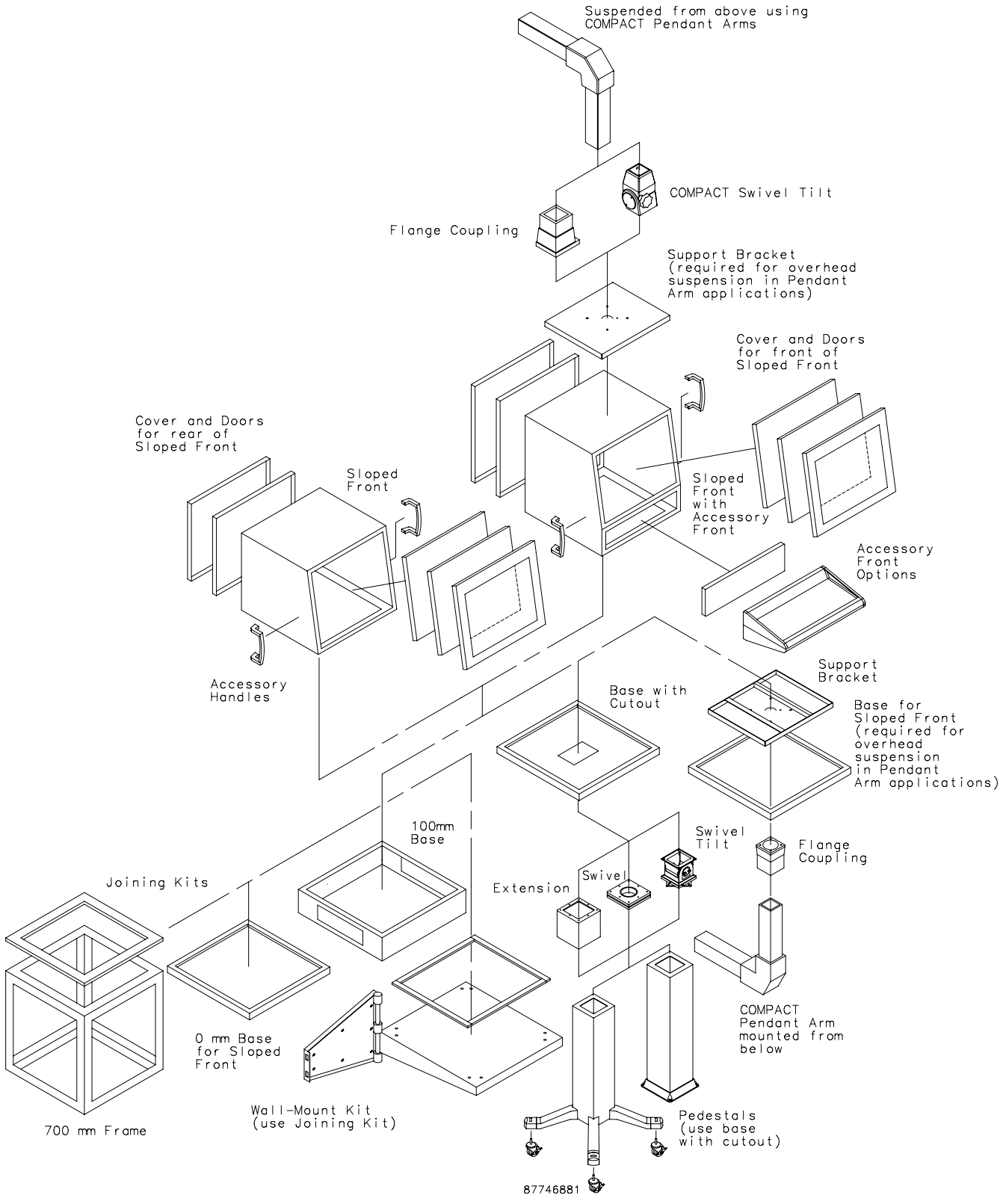
Stainless steel versions:

UL 508A Listed; Type 4, 4X, 12: File No. E61997
cUL Listed per CSA C22.2 No. 94; Type 4, 4X, 12: File No. E61997

NEMA/EEMAC Type 4, 4X, 12
IEC 60529, IP66

APPLICATION

A truly modular, build-your-own system for CRT monitors and keyboards, the PROLINE Sloped-Front HMI System's foundation is extremely adaptable for nearly any application. Add one or more of the many possible fronts, backs, mounting options, doors and bases to the core frame to build an enclosure that meets your design specifications.

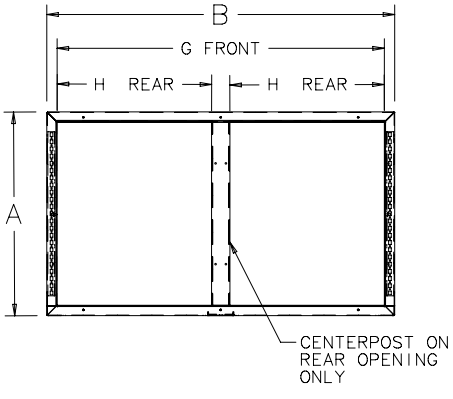

Suspended from above using COMPACT Pendant Arms
COMPACT Swivel Tilt
Flange Coupling
Support Bracket (required for overhead suspension in Pendant Arm applications)
Cover and Doors for front of Sloped Front
Cover and Doors for rear of Sloped Front
Sloped Front
Sloped Front with Accessory Front
Accessory Front Options
Accessory Handles
Support Bracket
Base with Cutout
Base for Sloped Front (required for overhead suspension in Pendant Arm applications)
100mm Base
Swivel Tilt
Flange Coupling
Joining Kits
Extension
Swivel
COMPACT Pendant Arm mounted from below
0 mm Base for Sloped Front
Wall-Mount Kit (use Joining Kit)
Pedestals (use base with cutout)
700 mm Frame
87746881

SLOPED FRONT

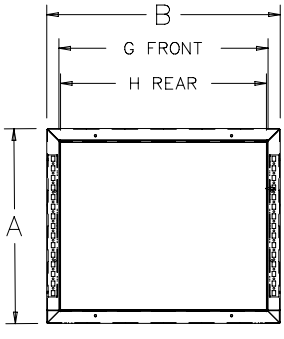
Enclosure is available in three heights—400, 500 and 700 mm. Full-front opening for door/cover options has a 5-degree slope. Rear opening(s) for door and cover options. Optional PROLINE Frame Shelf or PROLINE Grid System is recommended to provide a stationary platform for supporting deep equipment. The open bottom is suitable for joining the top to a 700-mm-tall PROLINE frame. The bottom of the 600 x 600-mm sizes can be joined through a cutout base to a pedestal or pendant arm system. A support bracket accessory allows the 600 x 600-mm sizes to be suspended from an overhanging pendant arm. Sloped-front enclosures are Type 304 stainless steel or 14 gauge steel with a RAL 7035 light-gray textured polyester powder paint finish.

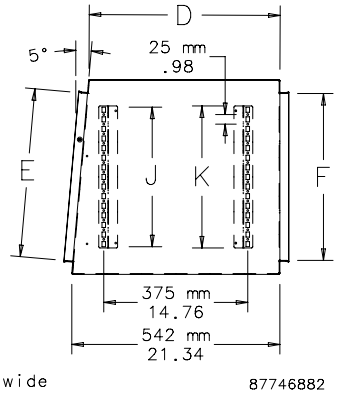
BULLETIN: P9, P9S

Catalog Number	AxBxC mm/in.	D mm/in.	Description	Nominal Size A x B x C mm/in.	Front Opening E x G mm/in.	Rear Opening F x H mm/in.	Internal Mounting J mm/in.	Internal Mounting K mm/in.	Product Weight (lb.)
PST466	400 x 600 x 600 15.75 x 23.62 x 23.62	507 19.96	Steel	400 x 600 x 600	339 x 536 13.36 x 21.11	336 x 564 13.21 x 21.11	225 8.86	225 8.86	44.0
PST566	500 x 600 x 600 19.69 x 23.62 x 23.62	498 19.61	Steel	500 x 600 x 600	440 x 536 17.31 x 21.11	435 x 536 17.13 x 21.11	325 12.80	325 12.80	46.7
PST766	700 x 600 x 600 27.56 x 23.62 x 23.62	481 18.92	Steel	700 x 600 x 600	641 x 536 25.22 x 21.11	636 x 536 25.02 x 21.11	525 20.67	525 20.67	59.9
PST766SS	707 x 608 27.85 x 23.94	481 18.92	Stainless Steel	700 x 600 x 600	641 x 536 25.22 x 21.11	636 x 536 25.02 x 21.11	525 20.67	525 20.67	68.0
PST786	700 x 800 x 600 27.56 x 31.50 x 23.62	481 18.92	Steel	700 x 800 x 600	640 x 736 25.22 x 28.98	636 x 736 25.02 x 28.98	525 20.67	525 20.67	66.0
PST7126	700 x 1200 x 600 27.56 x 47.24 x 23.62	481 18.92	Steel	700 x 1200 x 600	641 x 1136 25.22 x 44.73	636 x 536 25.02 x 21.11	525 20.67	525 20.67	82.0



1200 mm wide





800 mm wide

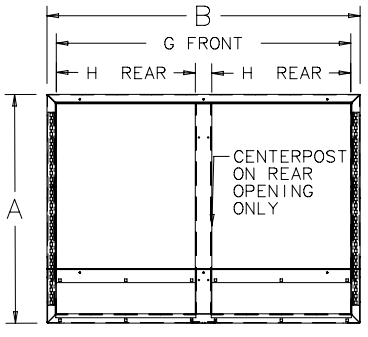
87746882

SLOPED FRONT WITH ACCESSORY OPENING

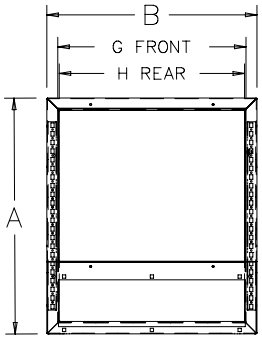
Enclosure is available in two heights: 500 mm and 700 mm. Upper front opening for door/cover options has a 5-degree slope. Lower section is suitable for keyboard or other front options. Rear opening(s) for door and cover options. The internal mounting hole pattern accommodates most PROLINE internal accessories. Optional PROLINE Frame Shelf or PROLINE Grid System provides a stationary platform for supporting deep equipment. The open bottom is suitable for joining the top to a 700-mm PROLINE frame. The bottom of the 600 x 600-mm sizes can be joined through a cutout base to a pedestal or pendant arm system. A support bracket accessory allows the 600 x 600-mm size to be suspended from an overhanging pendant arm. Sloped fronts with accessory opening are Type 304 stainless steel or 14 gauge steel with RAL 7035 textured light-gray polyester powder paint finish.

BULLETIN: P9

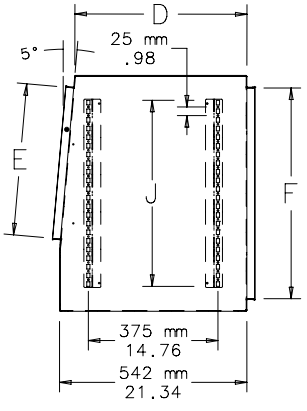
Catalog Number	AxBxC mm/in.	D mm/in.	Description	Nominal Size A x B x C mm/in.	Front Opening E x G mm/in.	Rear Opening F x H mm/in.	Internal Mounting J mm/in.	Internal Mounting K mm/in.	Product Weight (lb.)
PST5A66	500 x 600 x 600 19.69 x 23.62 x 23.62	498 19.61	Steel	500A x 600 x 600	440 x 536 17.31 x 21.11	611 x 536 24.04 x 21.11	500 19.69	500 19.69	59.0
PST5A86	500 x 800 x 600 19.69 x 31.50 x 23.62	498 19.61	Steel	500A x 800 x 600	440 x 736 17.31 x 28.98	611 x 736 24.04 x 28.98	500 19.69	500 19.69	64.0
PST5A126	500 x 1200 x 600 19.69 x 47.24 x 23.62	498 19.61	Steel	500A x 1200 x 600	440 x 1136 17.31 x 44.73	611 x 536 24.04 x 21.11	500 19.69	500 19.69	86.0
PST7A66	700 x 600 x 600 27.56 x 23.62 x 23.62	481 18.92	Steel	700A x 600 x 600	641 x 536 25.22 x 21.11	811 x 536 31.91 x 21.11	700 27.56	700 27.56	70.0
PST7A86	700 x 800 x 600 27.56 x 31.50 x 23.62	481 18.92	Steel	700A x 800 x 600	641 x 736 25.22 x 28.98	811 x 736 31.91 x 28.98	700 27.56	700 27.56	73.0
PST7A126	700 x 1200 x 600 27.56 x 47.24 x 23.62	481 18.92	Steel	700A x 1200 x 600	641 x 1136 25.22 x 44.73	811 x 536 31.91 x 21.11	700 27.56	700 27.56	111.0



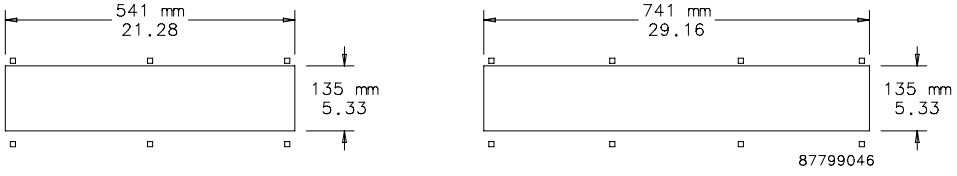
1200 mm wide Sloped Top with Accessory Front



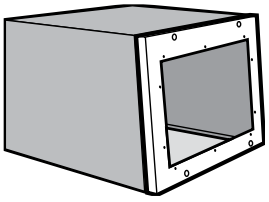
600 mm wide Sloped Top with Accessory Front



Accessory Front Opening Dimensions

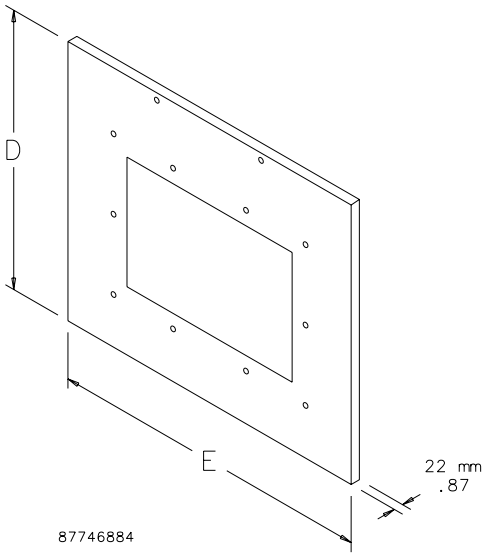


COVERS WITH HMI CUTOUT FOR UPPER FRONT OF SLOPED FRONTS



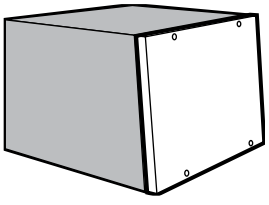
Covers with HMI cutouts are secured to the front opening of a PROLINE Sloped Front with semi-flush cover screws along the top and bottom cover edges. Use PROLINE Frame Shelf or PROLINE Grid Straps and Plates to support human-machine interface. Ground stud and mounting hardware are included. Seamless foam-in-place gasket assures a watertight and dust-tight seal. 16 gauge steel cover finish is RAL 7035 textured light-gray polyester powder paint. Optional tamper-resistant cover screws are available. *Hoffman can provide preconfigured covers to meet your specific requirements. Contact your local Hoffman sales office or distributor for more information.*

BULLETIN: P9



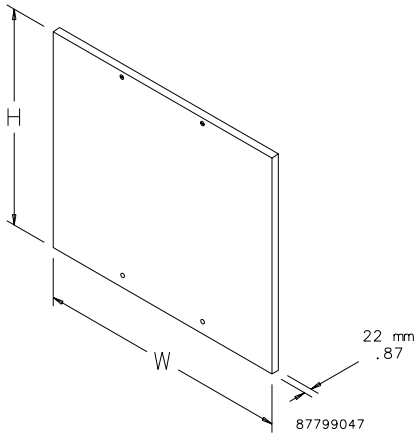
Catalog Number	Manufacturer	Model for Manufacturer	Approx. HMI Weight (lb.)	Approx. HMI Weight (kg)	D x E mm/in.	Fits Sloped front	Product Weight (lb.)
PCSK56F6	Allen-Bradley	PanelView 1200e/1400e Keypad	46	20.9	504 x 592 19.86 x 23.30	500 x 600 and 500A x 600	13.0

COVERS FOR UPPER FRONT OF SLOPED FRONTS



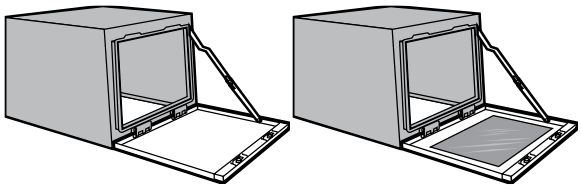
Solid 16 gauge steel covers are secured to the front opening of a PROLINE Sloped Front with semi-flush cover screws along the top and bottom cover edges. Ground stud and mounting hardware are included. Seamless foam-in-place gasket assures a watertight and dust-tight seal. Covers are Type 304 stainless steel or 16 gauge steel with a RAL 7035 light-gray textured polyester powder paint finish. Optional tamper-resistant cover screws are available.

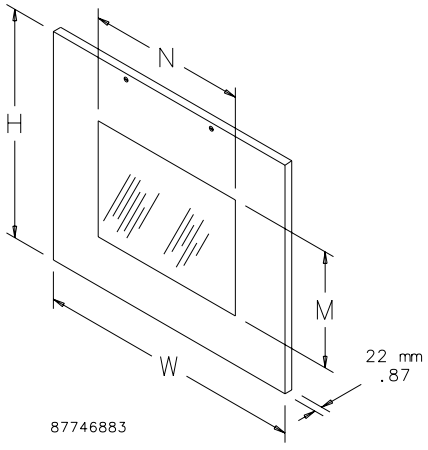
BULLETIN: P9, P9S



Catalog Number	Description	Cover Size H x W (mm)	Cover Size H x W (in.)	Product Weight (lb.)
PCS46F	Steel	406 x 592	15.98 x 23.30	13.0
PCS56F	Steel	506 x 592	19.93 x 23.30	14.0
PCS58F	Steel	506 x 792	19.93 x 31.17	17.0
PCS58FSS	Stainless Steel	506 x 792	19.93 x 31.17	23.0
PCS512F	Steel	507 x 1192	19.93 x 46.92	25.0
PCS76F	Steel	707 x 592	27.84 x 23.30	15.5
PCS76FSS	Stainless Steel	707 x 592	27.84 x 23.30	19.5
PCS78F	Steel	707 x 792	27.84 x 31.17	20.5
PCS712F	Steel	707 x 1192	27.84 x 46.92	30.0

DOORS FOR UPPER FRONT OF PROLINE SLOPED FRONTS





Solid 16 gauge steel doors are available with or without windows. Doors are hinged at lower edge and have quarter-turn latches. A stop arm assembly holds the door at 95 degrees (horizontal) from its closed position. Standard latch and insert options are available. Ground stud and mounting hardware are included. Seamless polyurethane foam-in-place gasket assures watertight and dust-tight seal.
Window doors feature a maximum size .25-in.-thick polycarbonate window with a smoke-gray tint. Window is field-replaceable. Finish is RAL 7035 textured light-gray polyester powder paint or Type 304 stainless steel.

BULLETIN: P9, P9S

Solid Doors for Upper Front

Catalog Number	Description	Door Size H x W (mm)	Door Size H x W (in.)	Product Weight (lb.)
PDS46F	Steel	404 x 592	15.91 x 23.30	14.0
PDS56F	Steel	504 x 592	19.86 x 23.30	15.0
PDS56FSS	Stainless Steel	504 x 592	19.86 x 23.30	21.5
PDS58F	Steel	504 x 792	19.86 x 31.17	18.0
PDS58FSS	Stainless Steel	504 x 792	19.86 x 31.17	24.0
PDS512F	Steel	504 x 1192	19.86 x 46.92	26.0
PDS76F	Steel	705 x 592	27.77 x 23.30	16.5
PDS76FSS	Stainless Steel	705 x 592	27.77 x 23.30	20.5
PDS78F	Steel	705 x 792	27.77 x 31.17	21.5
PDS712F	Steel	705 x 1192	27.77 x 46.92	31.0

Window Doors for Upper Front

Catalog Number	Description	Door Size H x W (mm)	Door Size H x W (in.)	Window Size M x N (mm)	Window Size M x N (in.)	Product Weight (lb.)
PDW46F	Steel	404 x 592	15.91 x 23.30	254 x 432	10.00 x 17.00	14.0
PDW56F	Steel	504 x 592	19.86 x 23.30	362 x 432	14.25 x 17.00	15.0
PDW56W16	Steel	504 x 592	19.86 x 23.30	254 x 318	10.00 x 12.50	15.0
PDW58F	Steel	504 x 792	19.86 x 31.17	362 x 635	14.25 x 25.00	18.0
PDW58FSS	Stainless Steel	504 x 792	19.86 x 31.17	362 x 635	14.25 x 25.00	24.0
PDW76F	Steel	705 x 592	27.77 x 23.30	559 x 432	22.00 x 17.00	16.5
PDW76W21	Steel	705 x 592	27.77 x 23.30	330 x 432	13.00 x 17.00	16.5

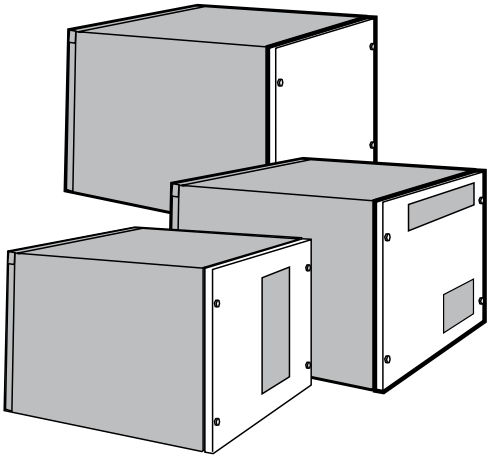
UPPER FRONT DOOR ACCESSORIES

These accessories provide a variety of latch configurations for PROLINE sloped front doors.

BULLETIN: A54Y, P9

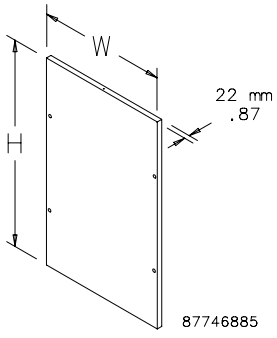
Catalog Number	Description
LLKSM7	7-mm-square key insert
LLKSM8	8-mm-square key insert
LLKDBM3	Double-bit key insert with 3mm pin
LLKDB	Daimler Benz key insert
LLKSS	Slotted key insert
LLKWK	One wing knob latch and two keys
PSTLO	One flush key lock and two keys

COVERS FOR REAR OF SLOPED FRONTS



Use PROLINE Frame Shelf or PROLINE Grid Straps to support the operator interface. Seamless foam-in-place gasket assures watertight and dust-tight seal. Ground stud and mounting hardware are included. Optional tamper-resistant screws are available. Covers are Type 304 stainless steel or 16 gauge steel finished with RAL 7035 textured light-gray polyester powder paint.

BULLETIN: P9, P9S



Cover fits rear opening of PROLINE Sloped Fronts and is secured with semi-flush cover screws along right and left cover edges.

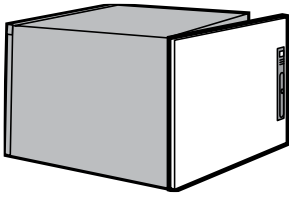
Solid Covers

Catalog Number	Description	Cover Size H x W (mm)	Cover Size H x W (in.)	Product Weight (lb.)
PCS46R	Steel	405 x 596	15.96 x 23.47	13.0
PCS56R	Steel	506 x 596	19.92 x 23.47	14.0
PCS76R	Steel	596 x 706	23.47 x 27.79	17.0
PCS76RSS	Stainless steel	596 x 706	23.47 x 27.79	23.0
PCS78R	Steel	706 x 796	27.79 x 31.35	20.5
PCS5A6R	Steel	679 x 597	26.75 x 23.51	15.0
PCS5A6RSS	Stainless steel	679 x 597	26.75 x 23.51	21.0
PCS5A8R	Steel	679 x 796	26.75 x 31.35	19.0
PCS7A6R	Steel	879 x 596	34.62 x 23.47	18.0
PCS7A8R	Steel	879 x 796	34.62 x 31.35	24.0

Covers with Cutouts for Hoffman Side Mount 13 Series Air Conditioner

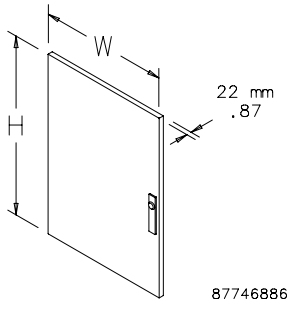
Catalog Number	Description	Cover Size H x W (mm)	Cover Size H x W (in.)	Product Weight (lb.)
PCSK7A6ACR	Steel	879 x 596	34.62 x 23.47	18.0

DOORS FOR REAR OF PROLINE SLOPED TOPS



Rear doors are side-hinged. The hinges are hidden and provide 130-degree door swing. Optional PROLINE 180-Degree Hinge Kit is available (see PROLINE Solid Rear Door Accessories in this section). Doors can be hinged from left or right. Door includes two-point latching with a flush slotted quarter-turn insert. Standard PROLINE handle and insert options are available for retrofit (see PROLINE Solid Rear Door Accessories in this section). Use PROLINE Frame Shelf or PROLINE Grid Straps to support the operator interface. Ground stud and mounting hardware are included. Seamless foam-in-place gasket assures a watertight and dust-tight seal. Covers are Type 304 stainless steel or 16 gauge steel finished with RAL 7035 textured light-gray polyester powder paint.

BULLETIN: P9, P9S



Catalog Number	Description	Door Size H x W (mm)	Door Size H x W (in.)	Product Weight (lb.)
PDS46R	Steel	405 x 592	15.96 x 23.30	10.0
PDS56R	Steel	506 x 592	19.91 x 23.30	12.0
PDS76STR	Steel	706 x 592	27.79 x 23.30	15.0
PDS76RSS	Stainless Steel	706 x 592	27.79 x 23.30	19.5
PDS78STR	Steel	706 x 792	27.79 x 31.17	19.5
PDS5A6R	Steel	679 x 592	26.75 x 23.30	14.5
PDS5A8R	Steel	679 x 792	26.75 x 31.17	19.0
PDS7A6R	Steel	879 x 592	34.62 x 23.30	18.0
PDS7A8R	Steel	879 x 792	34.62 x 31.17	24.0

SOLID REAR DOOR ACCESSORIES

Accessories listed here are designed for use with PROLINE Sloped Front Rear Doors.

See PROLINE Accessories in the Modular Enclosure Systems chapter.

BULLETIN: A80DP, P20

Key Inserts

Catalog Number	Description
PKOTM7	7-mm triangle
PKOTM8	8-mm triangle
PKOTM65	CNOMO
PKOSM7	7-mm square
PKOSM8	8-mm square
PKODBK3	Double-bit with 3mm pin

Flush Handle

Catalog Number	Description
PSHKBL	One handle and two keys

Data Pockets

Catalog Number	Description
ADP1	Small data pocket
ADP2	Large data pocket

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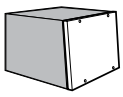
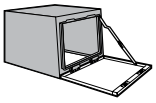
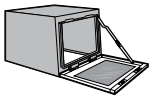
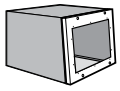
PROLINE SLOPED-FRONT HMI ENCLOSURE SYSTEM SELECTION MATRIX: FRONT AND REAR OPTIONS

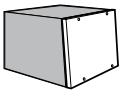
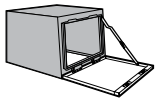
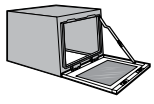
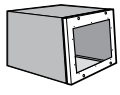
SELECTION MATRIX: FRONT OPTIONS

FRONT OPTIONS

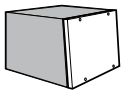
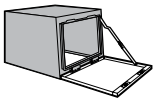
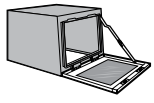
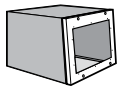
SLOPED FRONT A	B	C	SOLID COVER (STEEL)	SOLID COVER (STAINLESS STEEL)	SOLID DOOR (STEEL)	SOLID COVER (STAINLESS STEEL)	WINDOW DOOR (STEEL)	WINDOW DOOR (STAINLESS STEEL)	COVER WITH HMI CUTOUT
400	600	600	PCS46F		PDS46F		PDW46F		
500	600	600	PCS56F	PCS56FSS	PDS56F	PDS56FSS	PDW56F OR PDW56W16	PDW56FSS	PCSK56F6
700	600	600	PCS76F	PCS76FSS	PDS76F	PDS76FSS	PDW76F OR PDW76W21	PDW76FSS	PCSK76F6
700	800	600	PCS78F		PDS78F				

FRONT OPTIONS

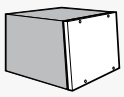
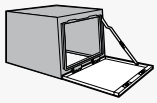
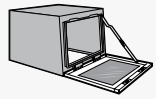
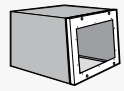
1200-MM SLOPED FRONT A	B	C	SOLID COVER (STEEL)	SOLID COVER (STAINLESS STEEL)	SOLID DOOR (STEEL)	SOLID COVER (STAINLESS STEEL)	WINDOW DOOR (STEEL)	WINDOW DOOR (STAINLESS STEEL)	COVER WITH HMI CUTOUT
700	1200	600	PCS712F		PDS712F				

FRONT OPTIONS

SLOPED FRONT WITH ACCY. FRONT OPENING A	B	C	SOLID COVER (STEEL)	SOLID COVER (STAINLESS STEEL)	SOLID DOOR (STEEL)	SOLID COVER (STAINLESS STEEL)	WINDOW DOOR (STEEL)	WINDOW DOOR (STAINLESS STEEL)	COVER WITH HMI CUTOUT
500A	600	600	PCS56F	PCS56FSS	PDS56F	PDS56FSS	PDW56F OR PDW56W16	PDW56FSS	
500A	800	600	PCS58F	PCS58FSS	PDS58F	PDS58FSS	PDWS58F	PDW58FSS	PCSK56F6
700A	600	600	PCS76F	PCS76FSS	PDS76F	PDS76FSS	PDW76F OR PDW76W21	PDW76FSS	PCSK76F6
700A	800	600	PCS78F		PDS78F				

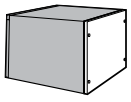
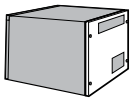
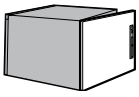
FRONT OPTIONS

1200-MM SLOPED FRONT WITH ACCY. FRONT OPENING A	B	C	SOLID COVER (STEEL)	SOLID COVER (STAINLESS STEEL)	SOLID DOOR (STEEL)	SOLID COVER (STAINLESS STEEL)	WINDOW DOOR (STEEL)	WINDOW DOOR (STAINLESS STEEL)	COVER WITH HMI CUTOUT
500A	1200	600	PCS512F		PDS512F				
700A	1200	600	PCS712F		PDS712F				

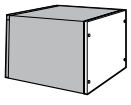
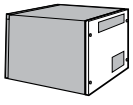
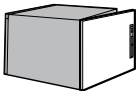
SELECTION MATRIX: REAR OPTIONS

REAR OPTIONS

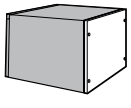
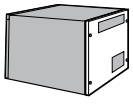
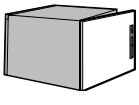
SOLID COVER (STEEL)	SOLID COVER (STAINLESS STEEL)	COVER WITH AIR CONDITIONER CUTOUT [a]	DOOR WITH SIDE HINGE (STEEL)	DOOR WITH SIDE HINGE (STAINLESS STEEL)	SLOPED FRONT A	B	C
PCS46R			PDS46R[b]		400	600	600
PCS56R			PDS56R[b]		500	600	600
PCS76R	PCS76RSS	PCSK7A6ACR	PDS76STR[b]	PDS76RSS[b]	700	600	600
PCS78R			PDS78STR[b]		700	800	600

REAR OPTIONS

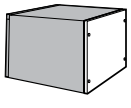
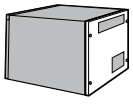
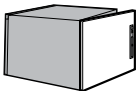
SOLID COVER (STEEL)	SOLID COVER (STAINLESS STEEL)	COVER WITH AIR CONDITIONER CUTOUT [a]	DOOR WITH SIDE HINGE (STEEL)	DOOR WITH SIDE HINGE (STAINLESS STEEL)	1200-MM SLOPED FRONT A	B	C
PCS76R	PCS76RSS	PCSK7A6ACR	PDS76STR[b]	PDS76RSS[b]	700	1200	600

REAR OPTIONS

SOLID COVER (STEEL)	SOLID COVER (STAINLESS STEEL)	COVER WITH AIR CONDITIONER CUTOUT [a]	DOOR WITH SIDE HINGE (STEEL)	DOOR WITH SIDE HINGE (STAINLESS STEEL)	SLOPED FRONT WITH ACCY. FRONT OPENING A	B	C
PCS5A6R	PCS5A6RSS		PDS5A6R[b]	PDS5A6RSS[b]	500A	600	600
PCS5A8R			PDS5A8R[b]		500A	800	600
PCS7A6R	PCS7A6RSS	PCSK7A6ACR	PDS7A6R[b]	PDS7A6RSS[b]	700A	600	600
PCS7A8R			PDS7A8R[b]		700A	800	600

REAR OPTIONS

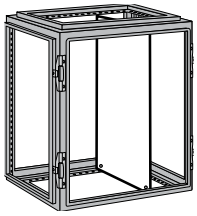




SOLID COVER (STEEL)	SOLID COVER (STAINLESS STEEL)	COVER WITH AIR CONDITIONER CUTOUT [a]	DOOR WITH SIDE HINGE (STEEL)	DOOR WITH SIDE HINGE (STAINLESS STEEL)	1200-MM SLOPED FRONT WITH ACCY. FRONT OPENING A	B	C
PCS5A6R	PCS5A6RSS		PDS5A6R[b]	PDS5A6RSS[b]	500A	1200	600
PCS7A6R	PCS7A6RSS	PCSK7A6ACR	PDS7A6R[b]	PDS7A6RSS[b]	700A	1200	600

[a] For Hoffman Side-Mount 13 Series air conditioners.

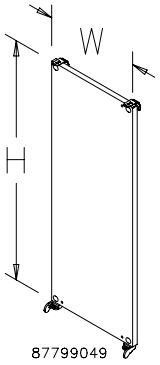
[b] Door hinged on side. Two-point latching with slotted insert. Other handle options are available. See Accessories for Sloped Front HMI Enclosures in this section.

FULL SUBPANELS



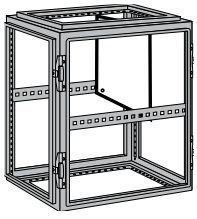
Subpanels are 12 gauge steel, have flanges on all sides and are painted white (conductive panels are plated). They can be mounted in PROLINE frame bases and HMI sloped fronts at any depth in 25-mm increments using optional grid straps. All mounting hardware is included.

BULLETIN: P20



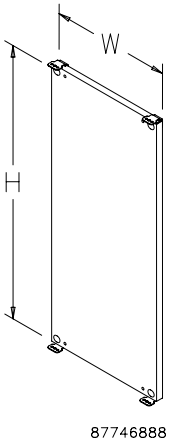
Catalog Number	Conductive Panel	H (mm)	H (in.)	W (mm)	W (in.)	Fits
PPF76	PPF76G	585	23.03	530	20.87	500A x 600 and 700 x 600
PPF78	PPF78G	585	23.03	730	28.74	500A x 800 and 700 x 800
PPF712	—	585	23.03	1130	44.49	500A x 1200 and 700 x 1200

PARTIAL SUBPANELS



Partial Subpanels are 12 gauge steel, have flanges on all sides and are painted white (conductive panels are plated). They can be positioned vertically in .88-in. increments and can also be positioned in PROLINE frame bases and HMI sloped fronts at 25-mm increments using optional grid straps. All mounting hardware is included.

BULLETIN: P20



Catalog Number	Conductive Panel	H (mm)	H (in.)	W (mm)	W (in.)	Fits
PPP46	PPP46G	360	14.17	530	20.87	All 600-mm-wide HMIs
PPP48	PPP48G	360	14.17	730	28.74	All 800-mm-wide HMIs
PPP412	PPP412G	360	14.17	1130	44.49	All 1200-mm-wide HMIs

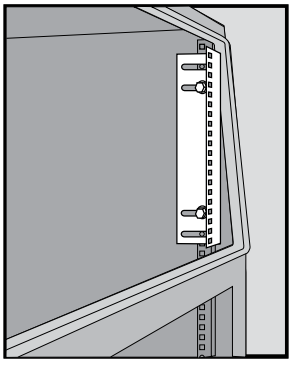
PROLINE GROUNDING KIT

The Grounding Kit allows a PROLINE or PROLINE G2 enclosure to be grounded to VDE specifications. Includes six 12-gauge wires 411 mm (16.19) long with ring terminations and M6 mounting hardware.

BULLETIN: P20

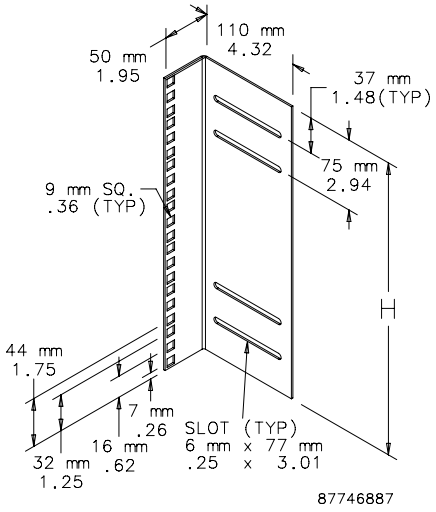
Catalog Number	Wire Size	Length Between Ring Terminals mm/in.	Ring Terminal Hole Diameter mm/in.
PGK	12 ga.	411 16.19	7 .29

RACK ANGLES FOR SLOPED FRONTS



Symmetrical Rack Angles have through-holes in mounting surfaces for mounting rack equipment. Angles are 14 gauge plated steel. Rack Angles with through-holes accommodate either English or metric cage nuts. Rack Angles are furnished in pairs and comply with ANSI/EIA RS310 rack mounting standards.

BULLETIN: P9



Catalog Number	Units	H (mm)	H (in.)	Description	Product Weight (lb.)
PRA5TH	5	223	8.77	General Purpose Short Section	2.5
PRA7TH	7	312	12.27	Fits Front a back of 400-mm-high HMI	3.5
PRA9TH	9	401	15.77	Fits front of 500/500A and back of 700/500A	4.5
PRA13TH	13	578	22.77	Fits front of 500/500A and back of 700/500A	6.5
PRA17TH	17	756	29.77	Fits back of 700A	8.0

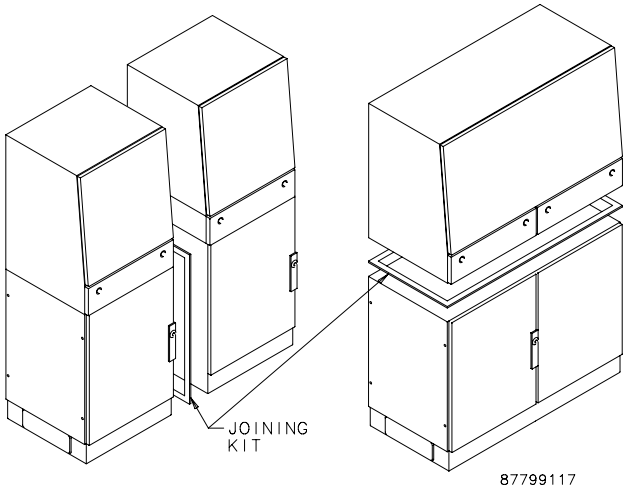
One unit = 1.75 inches (44.4mm).

JOINING KITS

Joining Kits permit joining two 700-mm frames while maintaining an environmental seal. Joining Kit for Side-to-Side Applications (PJ2FW7) fits on either side of the frame.
Top-to-frame Joining Kits permit joining two 700-mm frames while maintaining an environmental seal. Joining Kit for Side-to-Side Applications (PJ2FW7) fits on either side of the frame, allowing sloped fronts to be attached to 700-mm PROLINE frames or to wall-mount kit. Kits available for one sloped front and one frame or one 1200-mm wide sloped front on two joined frames. Kits include gasket and mounting hardware.

BULLETIN: P9

Catalog Number	Description
PJ2FW7	Joins frames side-to-side under HMI Sloped fronts
PJSTF6	Joins HMI sloped front to 600 x 600-mm frame
PJSTF8	Joins HMI sloped front to 800 x 600-mm frame
PJSTF12	Joins HMI sloped front to 1200 x 600-mm frame



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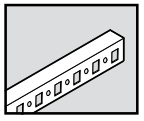
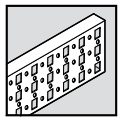
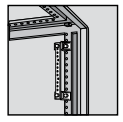
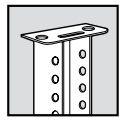
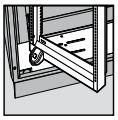
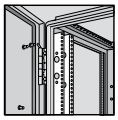
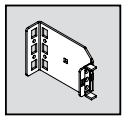
PROLINE SLOPED-FRONT HMI ENCLOSURE SYSTEM SELECTION MATRIX: INTERNAL COMPONENTS

INTERNAL COMPONENTS FOR SLOPED-FRONT FRAME BASE

										
	FULL SUBPANEL (See Modular Enclosures)			**PARTIAL SUBPANEL (See Modular Enclosures)**			**SWING-OUT PANEL KIT (See Modular Enclosures)**		**GRID STRAP ONE ROW (See Modular Enclosures)**				**GRID STRAP THREE ROW (See Modular Enclosures)**				**GROUNDING BAR SYSTEM (See Modular Enclosures)**		**CENTER UPRIGHT (See Modular Enclosures)**
Sloped Front Frame Bases	PDF76 / PPF76G	PDF78 / PPF78G	PDF712 / PPF712G	PDP46 / PPP46G	PDP468/ PPP48G	PDP4612/ PPP412G	PSP76	PSP78	PGH1S6	PGH1S7	PGH1S9	PGH1S13	PGH3S6	PGH3S7	PGH3S9	PGH3S12	PGS2K	PGS4K	PCU7
PF766	•			•			•		•	•			•	•			•	•	
PF786		•			•			•	•		•		•		•		•	•	
PF7126			•			•			•			•	•			•	•	•	•

INTERNAL COMPONENTS FOR SLOPED-FRONT FRAME BASE

							
SWING-OUT RACK FRAME (See Modular Enclosures)		**RACK ANGLES (See Modular Enclosures)**		**FRAME SHELF (See Modular Enclosures)**		**FRAME REDUCING BRACKETS (See Modular Enclosures)**	
PSF76	PSF78	PRA197TH / TP	PRA247TH / TP	PFSH66	PFSH86	PRB50	**SLOPED FRONT FRAME BASES**
•				•			PF766
•	•	•	•		•	•	PF786
•							PF7126

ACCESSORIES FOR SWING-OUT RACK FRAME INCLUDE:	
Guides	PSFG
Rack Panels	A19RP____(23 models)
Screw Package	AS1032 or PSM5
Clip Nut Packages	AN1032 or PSM5

ACCESSORIES FOR RACK ANGLES INCLUDE:	
Drawers	A19DR2U and A19DR4U
Drawer Writing Surface	A19WSDR
Guides	PSFG, AG1U5 and AG1U6
Slides	A16SL2U
Fixed Shelf	A19SH5 and A19SH6
Pull-Out Shelf	A19SHP6
Rack Panels	A19RP____ (23 models)
Screw Packages	AS1032 or PSM5
Clip Nut Packages	AN1032 or PNM5

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ACCESSORY FRONT OPTIONS

A variety of keyboard compartments and shelves, control compartments and writing surfaces is available in steel finished with RAL 7035 light-gray polyester powder paint or Type 304 stainless steel. Each one is designed to fit into the accessory front opening of the PROLINE HMI Sloped Front. An access cover is available for applications not requiring a keyboard or controls. An integrated elastomer keyboard/mouse combination is available on some models of the keyboard shelf accessory. The keyboard has 101 keys. Supplied cables are compatible with USB connections. *See Modular Enclosure Systems chapter for keyboard accessory dimensions.*

BULLETIN: P20, P20PC

Access Covers

Catalog Number	Description	Fits	Product Weight (lb.)
PCS6	Steel	600	7.3
PCS8	Steel	800	7.9

Consolet Compartments

Catalog Number	Description	Fits	Product Weight (lb.)
PCC6	Steel	600	30.0
PCC8	Steel	800	35.0

PCDS6SS - See previous table for information on this compartment.

20-Degree Control Compartments

Catalog Number	Description	Fits	Product Weight (lb.)
PC20A6	Steel	600	21.0
PC20A8	Steel	800	26.0

Keyboard Compartments

Catalog Number	Description	Fits	Product Weight (lb.)
PKBC6R	Steel	600	42.0
PKBC8R	Steel	800	48.0

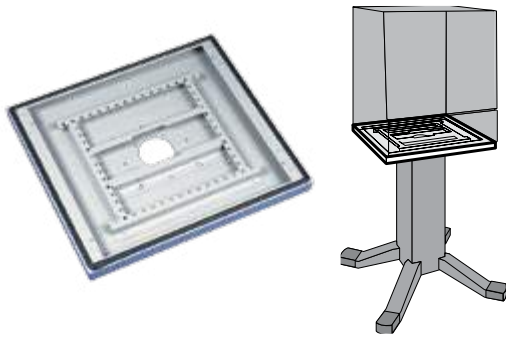
Keyboard Shelves

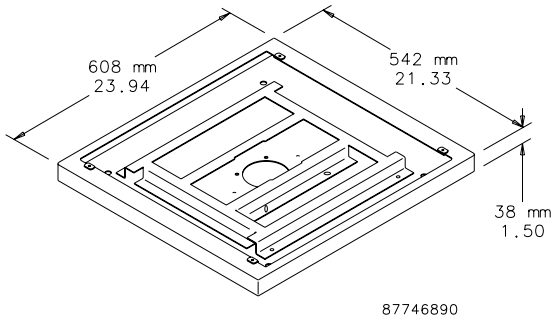
Catalog Number	Description	Fits	Product Weight (lb.)
PKBS6	Steel	600	20.0
PKBS8	Steel	800	24.0

Keyboard Shelves with Integrated Keyboard/Mouse

Catalog Number	Description	Fits	Product Weight (lb.)
PEKBMC6	Steel with keyboard	600	21.0

BASE WITH CUTOUT FOR SLOPED FRONT



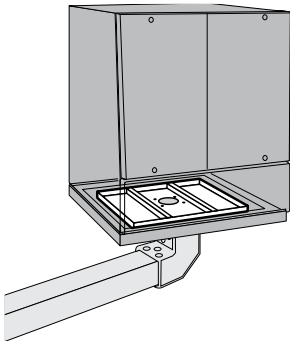


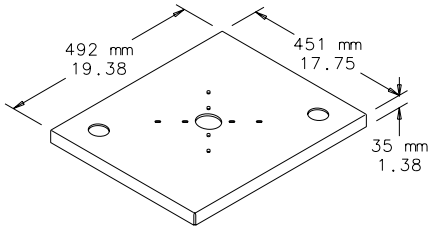
Closes off open bottom of sloped-front enclosures. Also fits COMPACT Series 4 Pendant Arm Flange Coupling Systems 80 and 80/140. The 14 gauge steel base has a stiffener framework attached to the inside and mounting holes that provide a rigid mounting means for 8.00 x 8.00-in. pedestal, pedestal extension, swivel tilt or angle adapter. Base has foam-in-place gasket and RAL 7035 textured light-gray polyester powder paint finish. Mounting hardware is furnished.

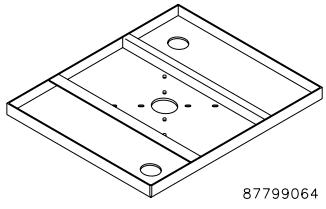
BULLETIN: P9, P9S

Catalog Number	Description
PBSK66	Steel
PBSK66SS	Stainless Steel

SUPPORT BRACKET





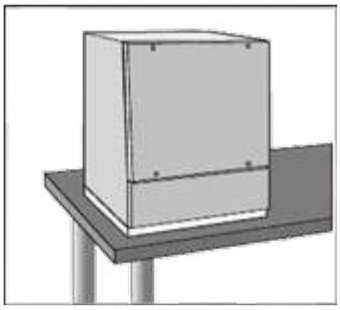


A Support Bracket is required when suspending a 600-mm wide sloped-front enclosure from above. The rigid bracket mounts inside the enclosure to stiffen its top. Bracket has prepunched holes to fit COMPACT Pendant Arm Series 4 Systems 50, 60 and 80 flange couplings as well as swivel tilts. Bracket is used as a template to drill holes in sloped front. Bracket is .125-inch-thick aluminum and is furnished with mounting bolts and seals. A support bracket can also be used inside a base for Series 4 System 50, 60 and 80 sloped fronts when mounting from below.

BULLETIN: P9

Catalog Number	Description
PTS66	Support Bracket

BASES FOR SLOPED FRONT

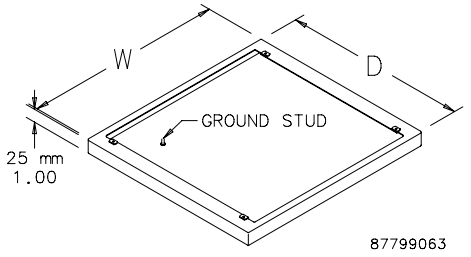


Closes off open bottom of sloped-front enclosures that are table-top mounted or suspended from overhead. Base is 14 gauge steel and has a ground stud provided. Foam-in-place gasket assures a water-tight and dust-tight seal. Steel bases are finished with RAL 7035 textured light-gray polyester powder paint. A top support bracket can be installed inside a 600-mm wide base for reinforcement when a COMPACT Pendant Arm Series 4 System 50, 60 or 80 is attached from below.

BULLETIN: P20, P20S, P9

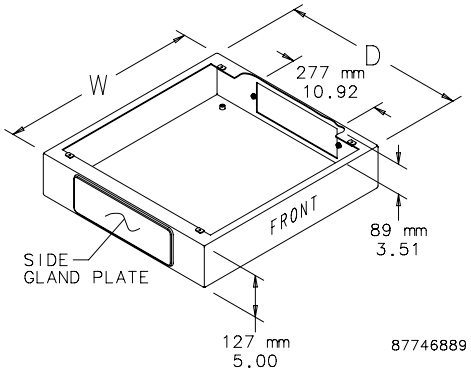
0-mm Base

Catalog Number	Description	D mm/in.	W mm/in.
PBS66	Steel	542 21.34	608 23.94
PBS86	Steel	542 21.34	808 31.81
PBS126	Steel	542 21.34	1208 47.56

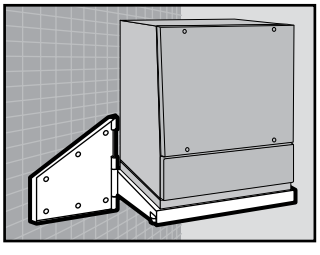


100-mm Base

Catalog Number	Description	D mm/in.	W mm/in.
PB166	Steel	559 22.01	599 23.58
PB166SS	Stainless Steel	559 22.01	599 23.58
PB186	Steel	759 29.88	599 23.58

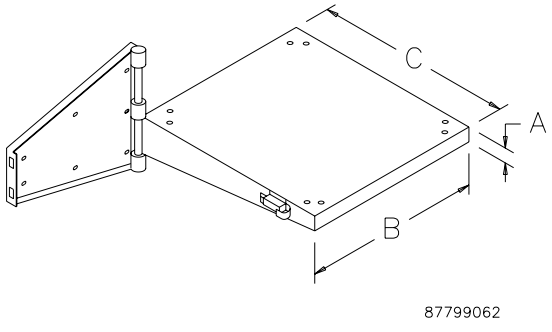


WALL-MOUNT KIT



Hinged platform for a PROLINE sloped-front enclosure pivots 90 degrees from wall bracket, allowing complete access to rear of the sloped-front enclosure. The kit can be installed to pivot left or right and locks securely in position against a wall. Pivot pin is removable. Platform can support equipment weighing up to 300 lb. and includes holes to mount 600-mm wide sloped fronts in two positions. RAL 7035 textured light-gray polyester powder paint finish. Includes Top-Unit-to-Frame Joining Kit (catalog number PJSTF6) to provide a watertight and dusttight seal to the sloped front.

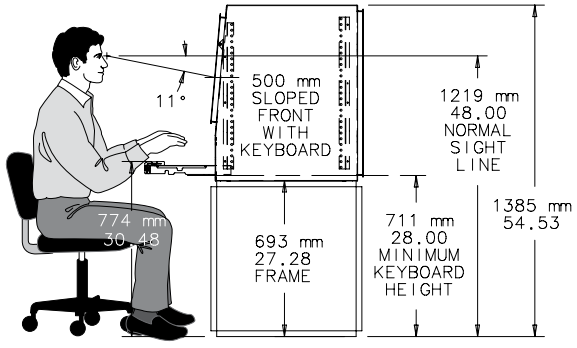
BULLETIN: P9

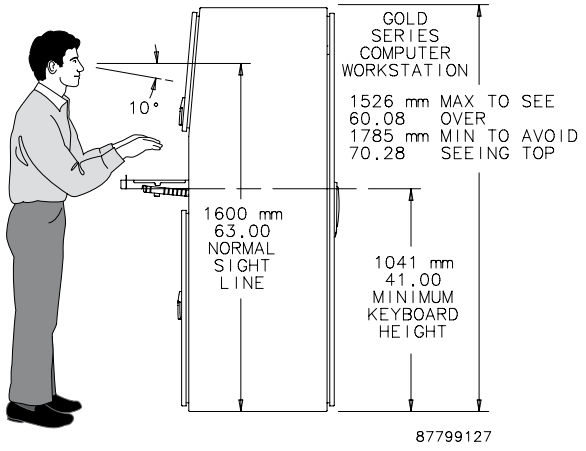


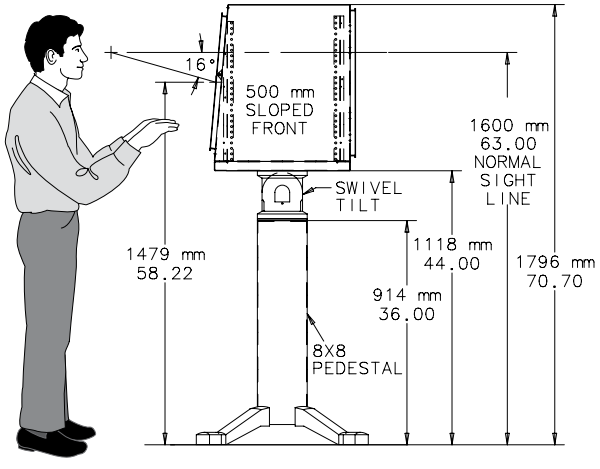
Catalog Number	AxBxC in./mm	Description
PWMK66	23.90 x 23.62 x 26.88 607 x 600 x 683	Steel

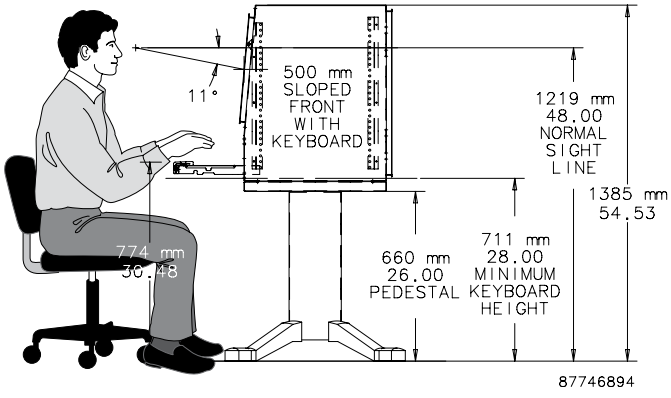
ERGONOMIC DESIGN

To order the HMI enclosure and accessories that provide an optimum ergonomic design for your operators, we've developed the Ergonomics Reference Guide below. By knowing the height of each piece that is part of the Human-Machine Interface Enclosure System, you can design a workstation that provides optimum effectiveness and safety. The adjustable keyboard and swivel/tilt accessories provide additional ergonomic solutions.









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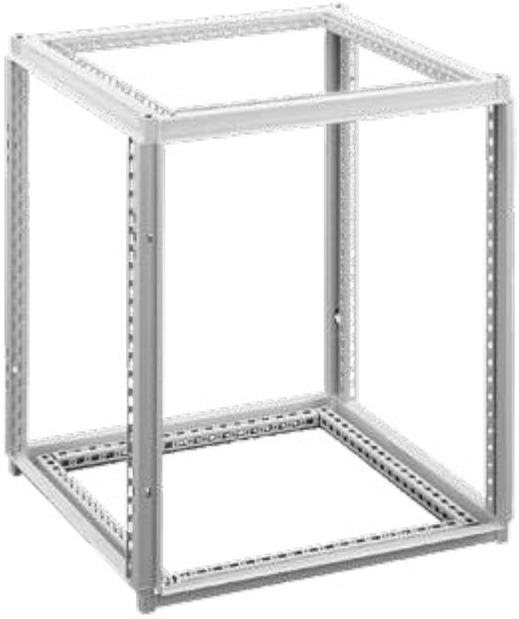
FRAME BASE FOR SLOPED-FRONT HMI



Frames are 700-mm tall and sized to allow installation of sloped fronts on top and other equipment below, thus configuring a console suitable for sitting or standing operators. The frame provides joining capability and means for rack, subpanel or grid-system mounting of any type of equipment inside. Frames are available 600-, 800- and 1200-mm wide to fit 600-, 800- and 1200-mm wide sloped fronts. All frames have two latch/hinge blocks per vertical unit. Requires appropriate frame joining kit. Finish is RAL 7035 textured light-gray polyester powder paint. See Modular Enclosure Systems for additional frame sizes.

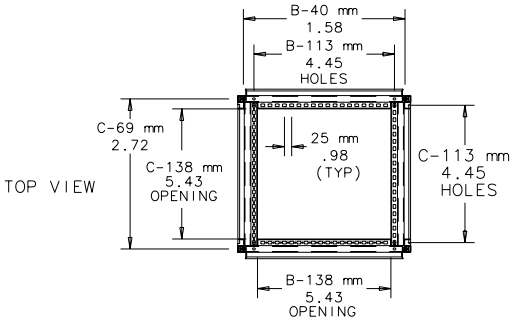
A 1200-mm wide sloped front will accommodate two 600-mm wide frames only if frame joining kit PJ2FW7 is used.

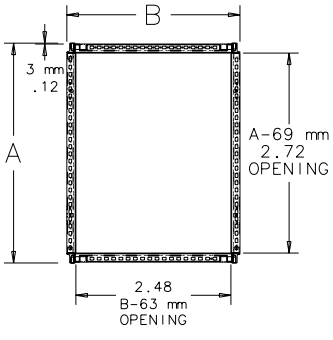
When used in conjunction with sloped fronts, PROLINE frames provide an excellent solution for configuring and joining multiple consoles into a large control installation. Joining enclosures frame-to-frame provides uninterrupted space for wiring and additional equipment. The sloped front and frame can also be used individually as a stand-alone console.

The modular design of the frames provides maximum mounting flexibility. Choose from a variety of door and cover options. A full range of accessories is also available.

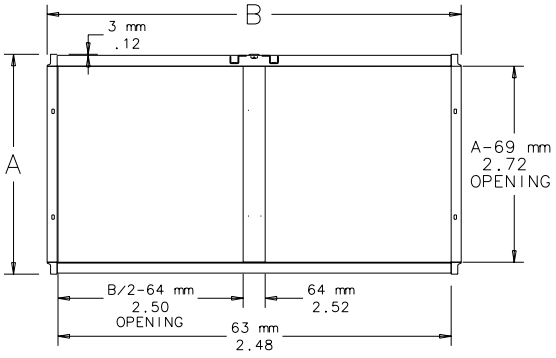
BULLETIN: P20, P20EM

Catalog Number	AxBxC mm/in.	Nominal Frame Size	Maximum Subpanel Size mm/in.	Maximum Rack Mounting Space
PF766	680 x 599 x 588 26.77 x 23.58 x 23.15	700 x 600 x 600	585 x 530 23.03 x 20.87	13U
PF786	700 x 800 x 600 27.56 x 31.50 x 23.62	700 x 800 x 600	585 x 530 23.03 x 20.87	13U
PF786HF	700 x 800 x 600 27.56 x 31.50 x 23.62	700 x 800 x 600	585 x 530 23.03 x 20.87	13U
PF7126	700 x 1200 x 600 27.56 x 47.24 x 23.62	700 x 1200 x 600	585 x 1130 23.03 x 44.49	13U x 2

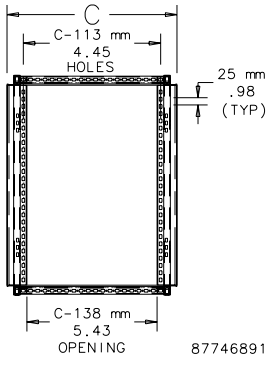




600 mm/800 mm WIDE FRAME

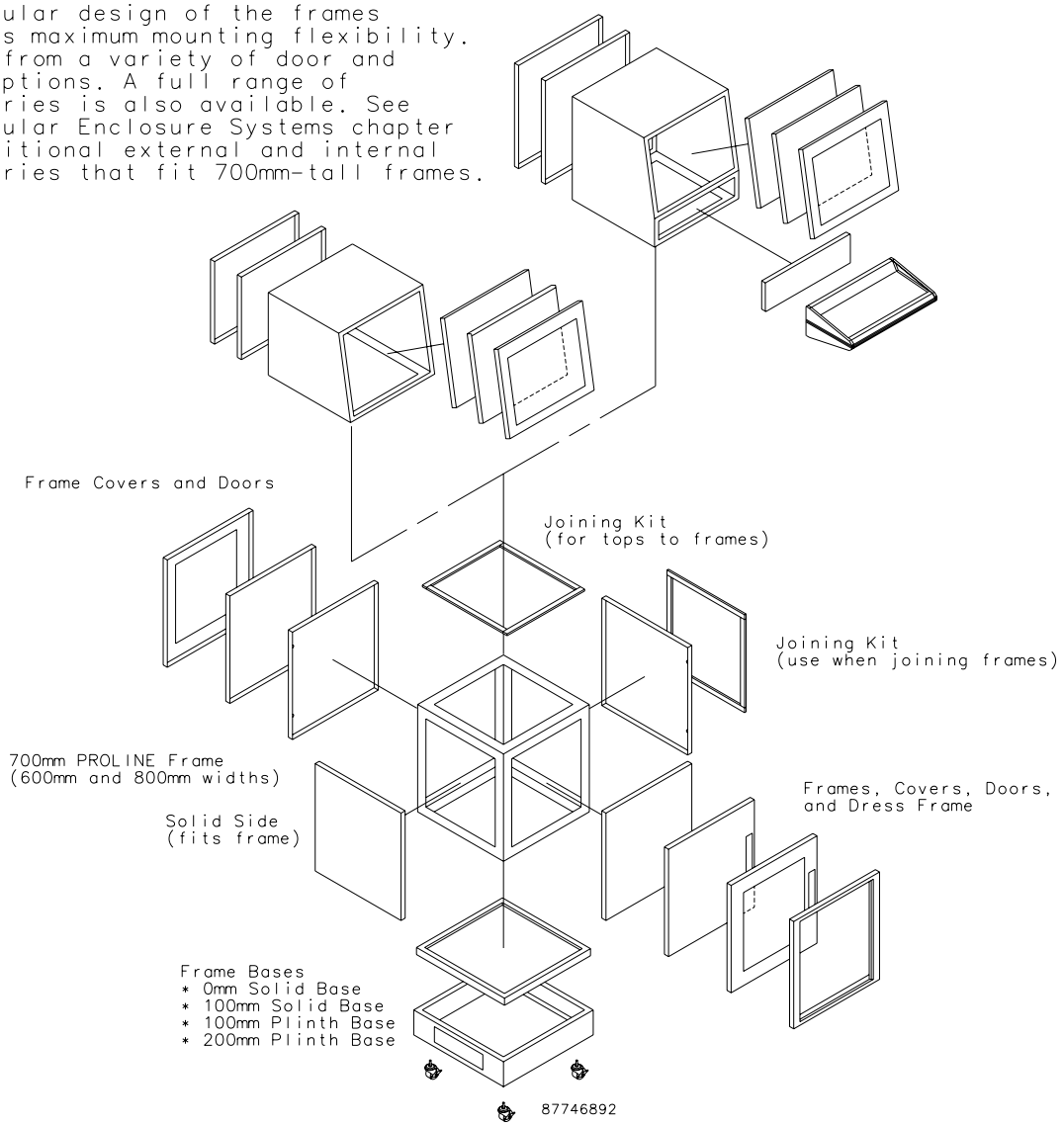


1200 mm WIDE FRAME



SIDE VIEW

When used in conjunction with sloped tops, PROLINE frames provide an excellent solution for configuring and joining multiple consoles into a large control installation. Joining enclosures frame-to-frame provides uninterrupted space for wiring and additional equipment. The sloped top and frame can also be used individually as a stand-alone console.
The modular design of the frames provides maximum mounting flexibility. Choose from a variety of door and cover options. A full range of accessories is also available. See the Modular Enclosure Systems chapter for additional external and internal accessories that fit 700mm-tall frames.



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SYSPEND MONITOR AND KEYBOARD ARM

APPLICATION

Vertical motion pendant arm for mounting a flat screen monitor, keyboard and mouse in industrial environments. Opens up plant floor space by locating the display where it is convenient for the operator. Display and keyboard can be raised and lowered with one hand. Keyboard folds up when not in use.

FEATURES

- Supports 6-15 lb. loads with an internal gas spring counterbalance
- Provides 12 in. of vertical height adjustment
- Toggle lever locks arm in place when repositioned vertically
- 3 x 3-in. and 4 x-4 in. VESA mounting pattern fits most flat screen monitors
- Arm swivels 340 degrees at monitor end and 180 degrees at mounting end
- Display tilts forward 15 degrees and back 45 degrees to reduce glare
- Folds up within 5 in. of the wall
- Display and keyboard stay level as they travel vertically
- Side cable manager protects cables and cords from pulling or chafing
- Easily installs on a wall or vertical surface
- VELCRO® included to affix keyboard to mounting surface
- Monitor, keyboard and mouse are not included

VELCRO is a trademark of Velcro Industries B.V.

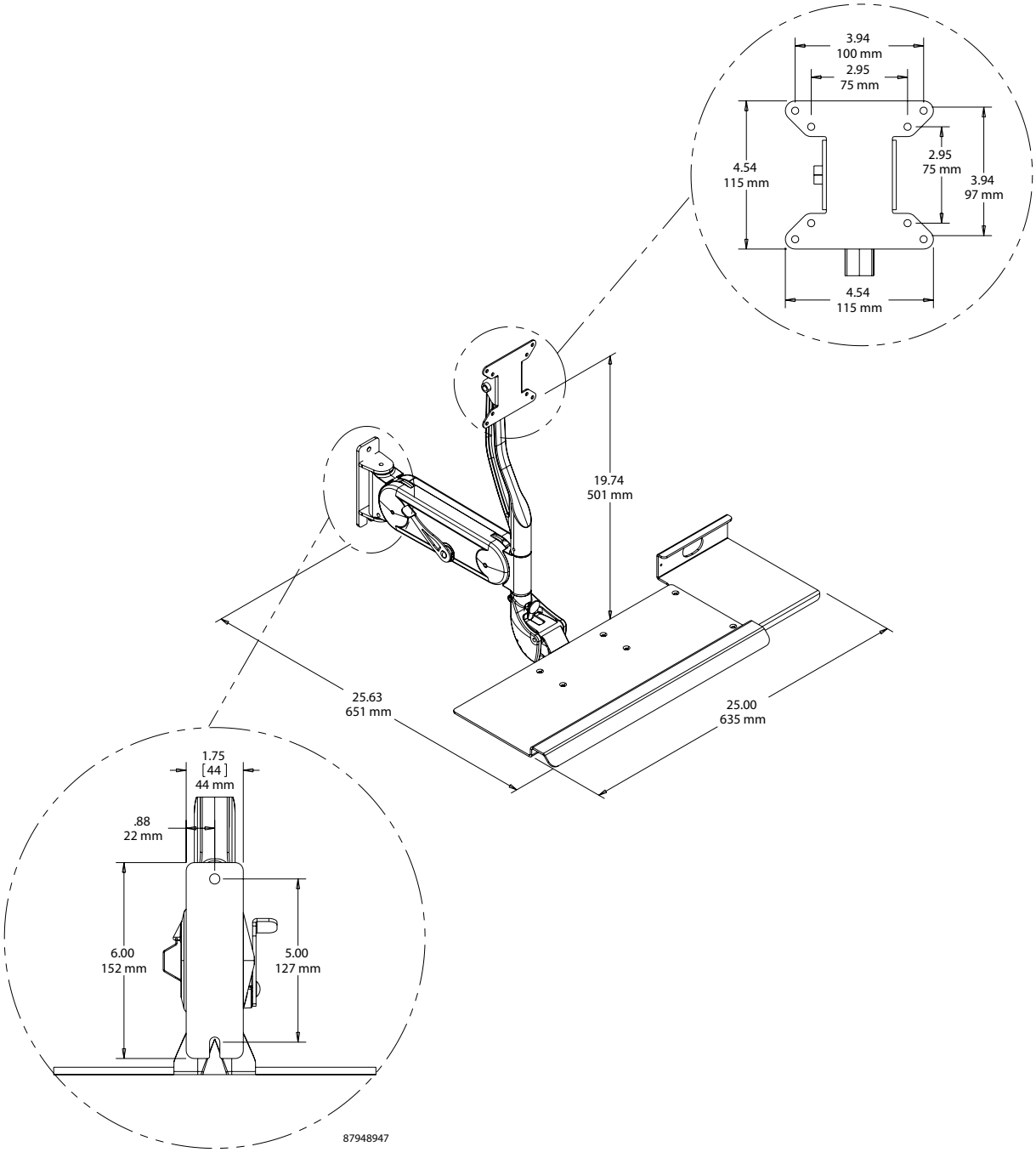
SPECIFICATIONS

- Aluminum construction
- RAL 7035 light-gray finish
- Gas spring counterbalance

BULLETIN: VM5

Standard Product

Catalog Number	AxBxC in./mm	Description	Arm Weight (lb.)	Arm Weight (kg)
VAMONITOR	21.22 x 25.00 x 25.63 539 x 635 x 651	SYSPEND Monitor and Keyboard Arm	20.0	9.07


3.94
100 mm
2.95
75 mm
4.54
115 mm
2.95
75 mm
3.94
97 mm
4.54
115 mm
19.74
501 mm
25.63
651 mm
25.00
635 mm
1.75
[44]
44 mm
.88
22 mm
6.00
152 mm
5.00
127 mm
87948947

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SYSPEND VL-MOTION ARM, TYPE 4

INDUSTRY STANDARDS

Maintains NEMA Type 4 and 12 and IEC IP66 enclosure rating when properly installed per Hoffman instructions.

APPLICATION

Vertical motion pendant arm effortlessly lifts, lowers and repositions HMI enclosures in NEMA Type 4 and 12 environments. Gas spring counterbalance can be adjusted for loads of 30-100 lb. Release handle and locking mechanism are ideal for applications where machine vibration is a concern.

FEATURES

- Field-adjustable gas-spring counterbalance supports loads of 30-100 lbs.
- Gas springs are set to maximum pressure (100 lb. load) and lifting force can be reduced through a sealed access cap in the top of the arm *(Lifting force cannot be increased once spring pressure is reduced.)*
- Provides 13 in. of vertical height adjustment
- Release handle (included with arm) automatically locks arm in place when repositioned vertically (release handle is required to operate the arm)
- Easily interfaces with Hoffman HMI enclosures using a 60-x-60-mm enclosure mounting pattern (enclosure must be ordered separately)
- 1.4-in. internal cable pathway maintains NEMA Type 4 and 12 enclosure rating and protects wires and cables
- Gasketed mounting surfaces at both ends of arm maintain seal integrity
- Enclosure and arm can be swiveled 320 degrees
- Wall-mount, machine-top-mount and post-top-mount options available
- Optional floorpost available

SPECIFICATIONS

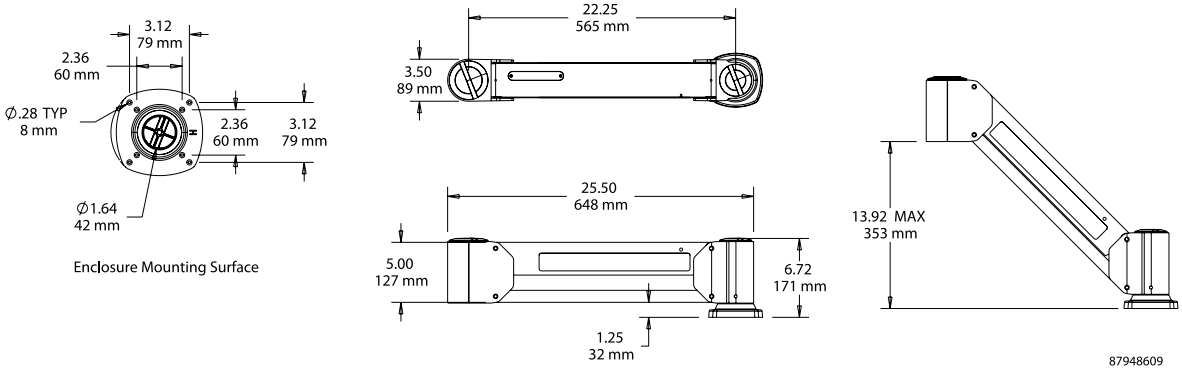
- Aluminum construction
- RAL 7035 light-gray finish
- Gas spring counterbalance

BULLETIN: VM4

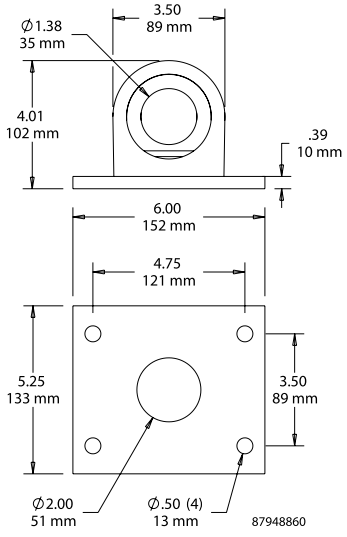
Standard Product

Catalog Number	AxBxC in./mm	Description[a]	Wall-Mount Adapter	Post-Top-Mount Adapter	Machine-Top-Mount Adapter	Load Capacity (lbs.)	Load Capacity (kg)	Arm Weight (lb.)	Arm Weight (kg)
VL22	6.72 x 25.50 x 3.50 171 x 648 x 89	VL-Motion Arm, 22-in.	VLWALL	VLPOST	VLMACHINE	30-100	14-45	20.0	9.07

[a]Mounting adapter required. Order separately.
Release handle included with arm.



WALL-MOUNT ADAPTER



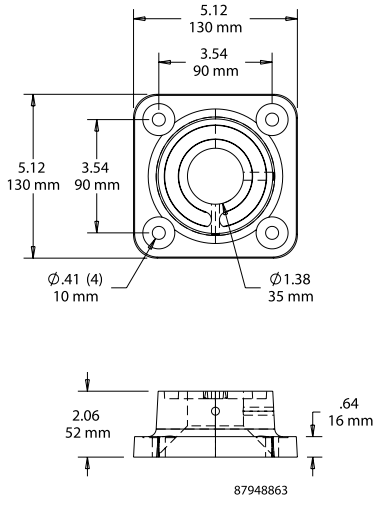
Order separately to install the SYSPEND VL-Motion Arm on a wall or vertical surface.

- RAL 7035 light-gray polyester powder paint finish
- Includes hardware to mount the adapter to the arm
- Hardware for mounting to the wall is not included

BULLETIN: VM4

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
VLWALL	5.25 x 6.00 x 4.01 133 x 152 x 102	VL-Motion Arm Wall-Mount Adapter	8.0	3.63

MACHINE-TOP-MOUNT ADAPTER



Order separately to install the SYSPEND VL-Motion Arm on a machine top or horizontal surface.

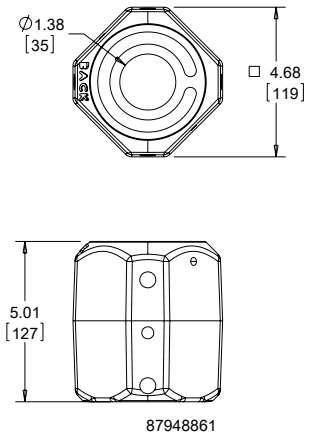
- RAL 7035 light-gray polyester powder paint finish
- Includes hardware to mount the adapter to the arm
- Hardware for mounting to a horizontal surface is not included

BULLETIN: VM4

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
VLMACHINE	5.12 x 5.12 x 2.06 130 x 130 x 52	VL-Motion Arm Machine-Top-Mount Adapter	8.0	3.63

POST-MOUNT ADAPTER

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
VLPOST	5.01 x 4.68 x 4.68 127 x 119 x 119	VL-Motion Arm Post-Mount Adapter	8.0	3.63



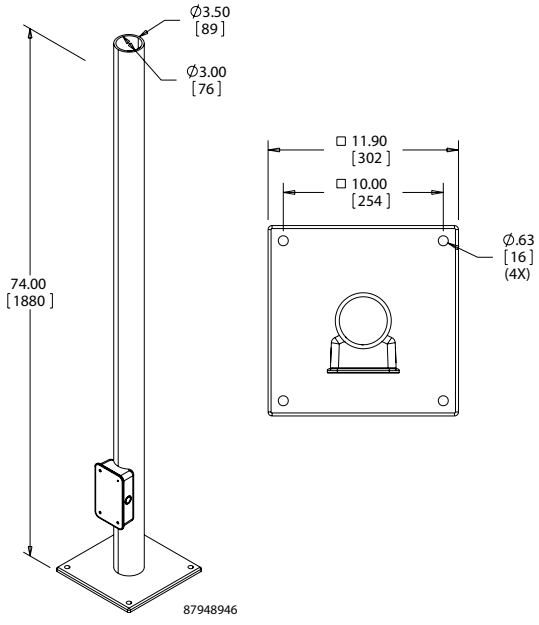
Order separately to install the SYSPEND VL-Motion Arm on a 3.5-in. OD tube.

- RAL 7035 light-gray polyester powder paint finish
- Includes hardware to mount the adapter to the arm and set screws to attach to a tube

BULLETIN: VM4

FLOORPOST WITH JUNCTION BOX

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
FLOORPOST	11.90 x 11.90 x 74.00 302 x 302 x 1880	Floorpost with Junction Box	65.0	29.48



Provides method for mounting the SYSPEND VL and VHD Motion Arms when a structural surface is not available.

- Heavy-wall 3.5-in. structural tube welded to a 12 x 12 x 3/8-in.-thick baseplate
- Provides a "rough-in" point and pull box for power and network field wiring
- Includes internal CAT5 coupler and finger-safe power terminals
- Two conduit knock-outs can be opened to either 1/2 in. or 3/4 in.
- Fully gasketed 16 gauge cover panel on junction box can be used for additional conduit attachment
- Tough, molded ABS junction box is contoured to fit the post and is fluted into the post to protect cables

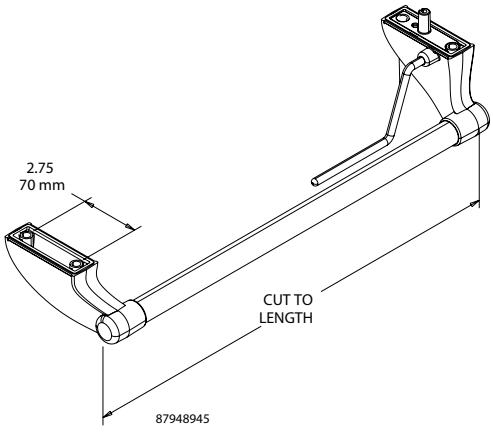
BULLETIN: VM4

REPLACEMENT RELEASE HANDLE

Replacement release handle for use with the SYSPEND VL-Motion Arm. (Handle is included with the VL-Motion Arm.)
Includes handle end supports with 491 mm (19.3 in.) tube that can be easily cut to length to fit the enclosure.

BULLETIN: HB1

Catalog Number	AxBxC in./mm	Description
VLHANDLE	3.88 x 1.38 x 19.30 99 x 35 x 490	Replacement Release Handle for VL-Motion Arm

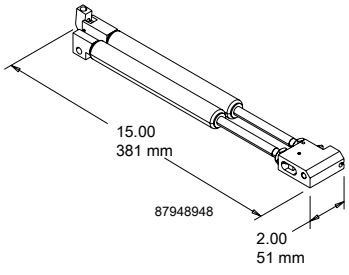


REPLACEMENT GAS SPRINGS

Includes instructions for field replacement of gas springs for the SYSPEND VL-Motion Arm.

BULLETIN: HB1

Catalog Number	AxB in./mm	Description
VLSPRINGS	2.00 x 15.00 51 x 381	Replacement Gas Springs for VL-Motion Arm



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SYSPEND VHD-MOTION ARM, TYPE 4

INDUSTRY STANDARDS

Maintains NEMA Type 4 and 12 and IEC IP66 enclosure rating when properly installed per Hoffman instructions.

APPLICATION

Heavy-duty vertical motion pendant arm effortlessly lifts, lowers and repositions HMI enclosures in NEMA Type 4 and 12 environments. Two arm lengths are available with field-adjustable counterbalances to support loads up to 125 lb. No release handle is required to operate the arm.

FEATURES

- 26-in. arm supports loads of 45-125 lb. with 13-in. of vertical height adjustment
- 36-in. arm supports loads of 25-75 lb. with 20-in. of vertical height adjustment
- Field-adjustable gas spring counterbalance allows the user to adjust lifting force by turning an adjustment mechanism under the arm
- Angle of gas springs is adjustable (not the pressure); allows lifting force to be increased or decreased at any time for changes in load
- Tension adjustment at front of the arm provides additional fine-tuning of lifting force
- No locking enclosure handle required; enclosure stays in place after repositioning
- Easily interfaces with Hoffman HMI enclosures using a 60-x-60-mm enclosure mounting pattern (enclosure must be ordered separately)
- 1.3-in. internal cable pathway maintains NEMA Type 4 and 12 enclosure rating and protects wires and cables
- Gasketed mounting surfaces at both ends of arm maintain seal integrity
- Enclosure and arm can be swiveled 330 degrees with swivel stops available in 30-degree increments
- Standard models are available with machine-top mounting (wall-mount and post-mount adapters sold separately)
- Optional floorpost available

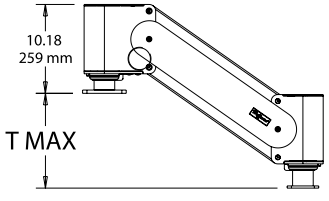
SPECIFICATIONS

- Mild steel construction
- RAL 7035 light-gray finish with black end supports
- Gas spring counterbalance

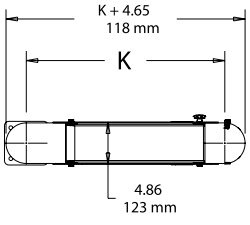
BULLETIN: DMID, VM2

Standard Product

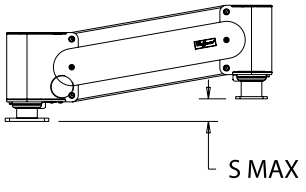
Catalog Number	AxBxC in./mm	Description	Wall-Mount Adapter	Post-Mount Adapter	Load Capacity (lb.)	Load Capacity (kg)	Arm Length mm/in.	Arm Weight (lbs.)	K in./mm	S in./mm	T in./mm
VHD26	10.18 x 30.65 x 4.86 259 x 779 x 123	VHD-Motion Arm, 26-in. Machine-Top Mount	VHDWALL	VHDPOST	45-125	20-57	25	54	26.00 660	3.00 76	10.00 254
VHD36	10.18 x 40.65 x 4.86 259 x 1033 x 123	VHD-Motion Arm, 36-in. Machine-Top Mount	VHDWALL	VHDPOST	25-75	11-37	27	60	36.00 914	4.00 102	16.00 406



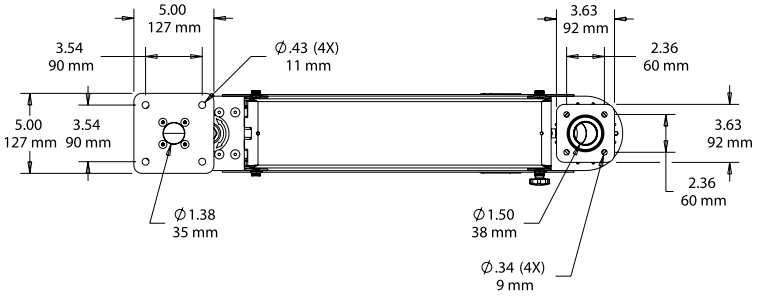
DOWNWARD TRAVEL



TOP VIEW

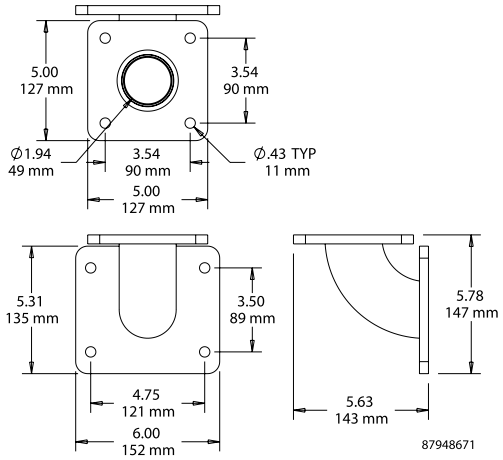


UPWARD TRAVEL



BOTTOM VIEW

WALL-MOUNT ADAPTER



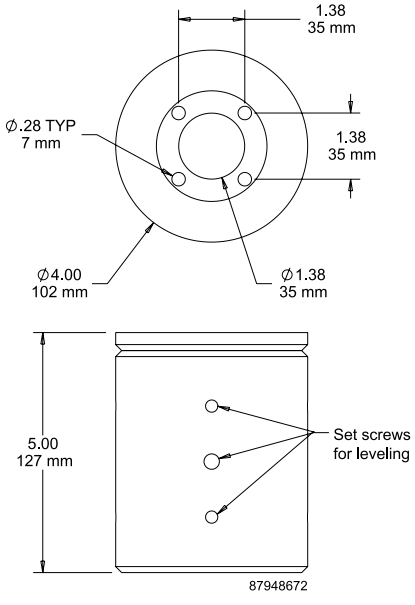
Order separately when installing the SYSPEND VHD-Motion Arm to a wall or vertical surface.

- RAL 7035 light-gray polyester powder paint finish
- Includes hardware to mount the adapter to the arm
- Hardware for mounting to the wall is not included

BULLETIN: VM2

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
VHDWALL	5.78 x 5.63 x 5.00 147 x 143 x 127	VHD-Motion Arm Wall-Mount Adapter	10.0	4.54

POST-MOUNT ADAPTER



Order separately when installing the SYSPEND VHD-Motion Arm to a 3.5-in. OD tube.

- RAL 7035 light-gray polyester powder paint finish
- Includes hardware to mount the adapter to the arm and setscrews for mounting to a tube

BULLETIN: VM2

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
VHDPOST	5.00 x 4.00 x 4.00 127 x 102 x 102	VHD-Motion Arm Post-Mount Adapter	6.5	2.95

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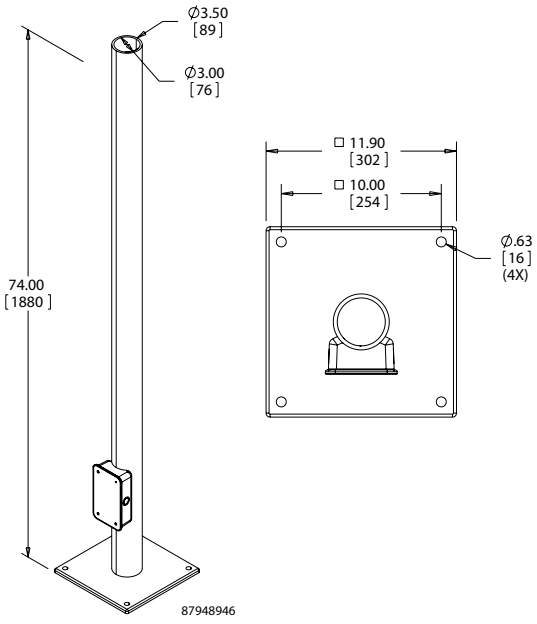
FLOORPOST WITH JUNCTION BOX

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
FLOORPOST	11.90 x 11.90 x 74.00 302 x 302 x 1880	Floorpost with Junction Box	65.0	29.48



Provides method for mounting the SYSPEND VL and VHD Motion Arms when a structural surface is not available.

- Heavy-wall 3.5-in. structural tube welded to a 12 x 12 x 3/8-in.-thick baseplate
- Provides a "rough-in" point and pull box for power and network field wiring
- Includes internal CAT5 coupler and finger-safe power terminals
- Two conduit knock-outs can be opened to either 1/2 in. or 3/4 in.
- Fully gasketed 16 gauge cover panel on junction box can be used for additional conduit attachment
- Tough, molded ABS junction box is contoured to fit the post and is fluted into the post to protect cables

BULLETIN: VM4

HANDLES

Accessory handle kits are available to allow for easy repositioning of the enclosure. Handles attach inside enclosure with provided hardware. Handles are not required to use the SYSPEND VHD-Motion Arm.

BULLETIN: C2, CC3

Catalog Number	Description	Weight (lb.)
CHDLK	One pair of handles and mounting hardware	1.7

SYSPEND VHDS-MOTION ARM, TYPE 4X

INDUSTRY STANDARDS

Maintains NEMA Type 4, 4X and 12 and IEC IP 66 enclosure ratings when properly installed per Hoffman instructions.

APPLICATION

Heavy-duty, stainless steel vertical motion pendant arm provides corrosion resistance and suspends process and control equipment for easy cleaning. Operators in NEMA Type 4X environments can effortlessly lift, lower and reposition HMI enclosures using the pendant arm's field-adjustable counterbalance.

FEATURES

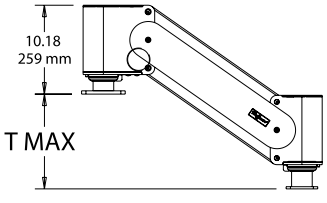
- Corrosion resistant stainless steel housing with provisions for water drainage from arm
- 26-in. arm supports loads of 45-125 lb. with 13-in. of vertical height adjustment
- 36-in. arm supports loads of 25-75 lb. with 20-in. of vertical height adjustment
- Field-adjustable gas spring counterbalance allows the user to adjust lifting force by turning an adjustment mechanism under the arm
- Angle of gas springs is adjustable (not the pressure); allows lifting force to be increased or decreased at any time for changes in load
- Tension adjustment at front of the arm provides additional fine-tuning of lifting force
- No locking enclosure handle required; enclosure stays in place when repositioned
- Easily interfaces with Hoffman HMI enclosures using a 60-x-60-mm enclosure mounting pattern (enclosure must be ordered separately; not for use with CS480 enclosures)
- 1.25-in. internal cable pathway maintains Type 4, 4X and 12 enclosure rating and protects wires and cables
- Gasketed mounting surfaces at both ends of arm maintain seal integrity
- Enclosure and arm can be swiveled 330 degrees with swivel stops available in 30-degree increments
- Standard models are available with machine-top mounting (wall-mount and post-mount adapters sold separately)
- Optional floorpost available

SPECIFICATIONS

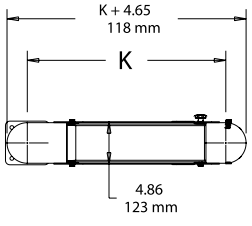
- Type 304 stainless steel construction
- Gas spring counterbalance

BULLETIN: DBB, VM3

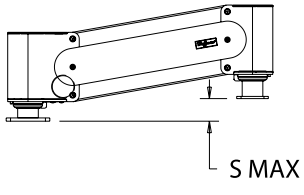
Catalog Number	AxBxC in./mm	Description	Wall-Mount Adapter	Post-Mount Adapter	Load Capacity (lb.)	Load Capacity (kg)	Arm Weight (lb.)	Arm Weight (kg)	K in./mm	S in./mm	T in./mm
VHDS26	10.18 x 30.65 x 4.86 259 x 779 x 123	VHDS-Motion Arm, 26-in. Machine-Top Mount	VHDSWALL	VHDSPOST	45-125	20-57	54	25	26.00 660	3.00 76	10.00 254
VHDS36	10.18 x 40.65 x 4.86 259 x 1033 x 123	VHDS-Motion Arm, 36-in. Machine-Top Mount	VHDSWALL	VHDSPOST	25-75	11-37	60	27	36.00 914	4.00 102	16.00 406



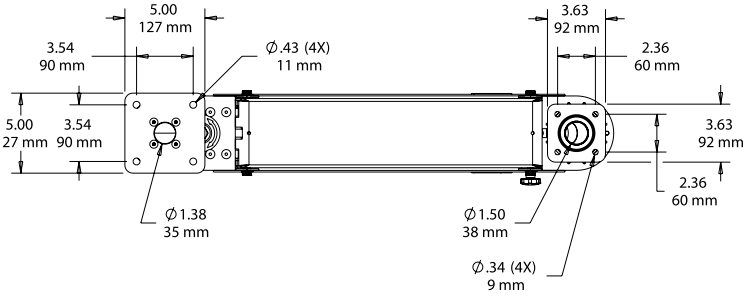
DOWNWARD TRAVEL



TOP VIEW



UPWARD TRAVEL



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BOTTOM VIEW

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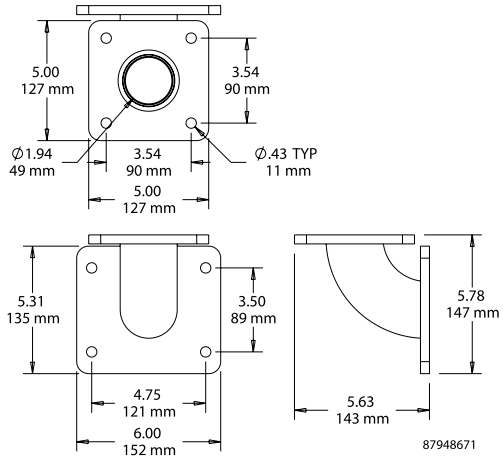
WALL-MOUNT ADAPTER



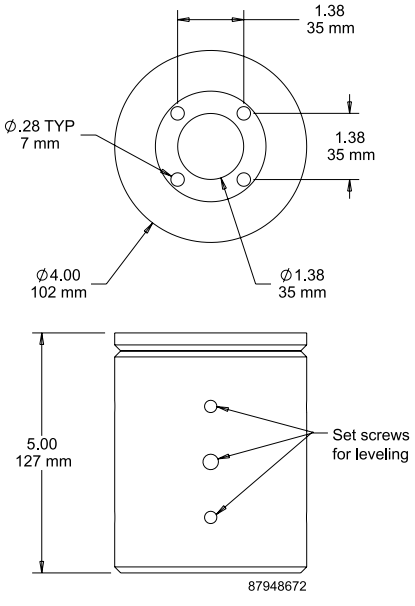
Order separately to install the SYSPEND VHDS-Motion Arm on a wall or vertical surface.

- Type 304 stainless steel
- Includes hardware to mount the adapter to the arm
- Hardware for mounting to the wall is not included

BULLETIN: VM3

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
VHDSWALL	5.78 x 5.63 x 5.00 147 x 143 x 127	VHDS-Motion Arm Wall-Mount Adapter	10.0	4.54

POST-MOUNT ADAPTER



Order separately when installing the SYSPEND VHDS-Motion Arm to a 3.5-in. OD tube.

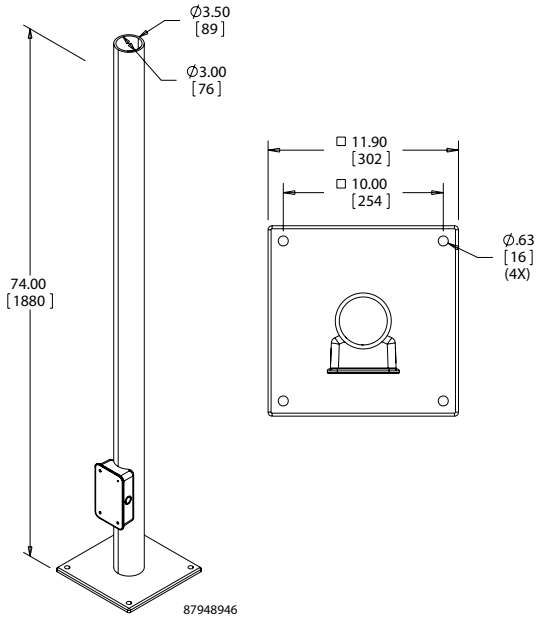
- Type 304 stainless steel
- Includes hardware to mount the adapter to the arm and setscrews for mounting to a tube

BULLETIN: VM3

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
VHDSPOST	5.00 x 4.00 x 4.00 127 x 102 x 102	VHDS-Motion Arm Post-Mount Adapter	7.0	3.18

STAINLESS STEEL FLOORPOST WITH JUNCTION BOX

Catalog Number	AxBxC in./mm	Description	Weight (lb.)	Weight (kg)
FLOORPOSTSS	11.90 x 11.90 x 74.00 302 x 302 x 1880	Stainless Steel Floorpost with Junction Box	70	31.75



Provides method for mounting the SYSPEND VHDS-Motion Arm when a structural surface is not available.

- Heavy-wall 3.5-in. structural tube welded to a 12 x 12 x 3/8-in.-thick baseplate
- Provides a "rough-in" point and pull box for power and network field wiring
- Includes internal CAT5 coupler and finger-safe power terminals
- Two conduit knock-outs can be opened to either 1/2 in. or 3/4 in.
- Fully gasketed 16 gauge cover panel on junction box can be used for additional conduit attachment
- Tough, molded ABS junction box is contoured to fit the post and is fluted into the post to protect cables

BULLETIN: VM3

HANDLES

Handles are stainless steel for mounting on enclosure sides. Mounting hardware included. Enclosure machining required. (Handles are not required to use the SYSPEND VHDS-Motion Arm.)

BULLETIN: CCR6Y

Catalog Number	Description	Weight (lb.)
CCSSHDL	Handles for CC480/600 enclosures	5.0

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COMPACT PENDANT ARM SERIES 1, TYPE 12

APPLICATION

The Series 1 COMPACT Pendant Arm provides a flexible and easy-to-use method for mounting and positioning small or lightweight HMI controls and instruments, up to 30 lbs. The COMPACT Pendant Arm is easily attached to a machine or wall and moves both horizontally and vertically to suit the user's needs and preferences.

SPECIFICATIONS

- Cast aluminum and extruded aluminum tube
- Four pre-assembled models. One model capable of horizontal and vertical motion. One model capable of horizontal motion. Either model is available in two lengths, 500 mm or 800 mm.
- Internal braking mechanism (vertical motion only) prevents downward "free-fall" motion when locked
- Easily removable snap-on cover provides access to wire containment channel
- Adjustable enclosure mounting. Arm can be configured to mount to top, bottom or back of an enclosure.
- Enclosure mounting plate can be rotated, tilted and locked into desired position
- Handle available as option

FINISH

Tube is anodized. Color is silver. Fittings and snap-on cover are RAL 7035 light-gray polyester powder paint.

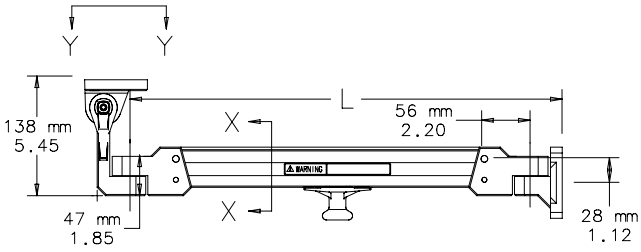
BULLETIN: CS4

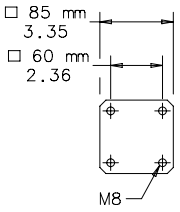
INDUSTRY STANDARDS

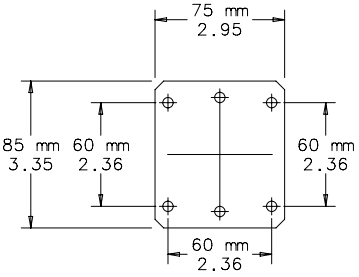
NEMA/EEMAC Type 12
IEC 60529, IP65
DIN 40050

Standard Product

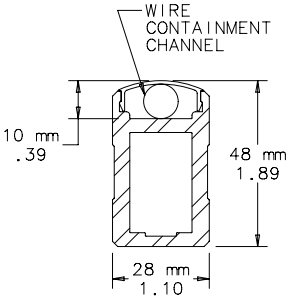
Catalog Number	Description	L	Maximum Load
CCS1H5V	Vertical and horizontal motion	500 mm	30 lbs.
CCS1H8V	Vertical and horizontal motion	800 mm	15 lbs.
CCS1H5	Horizontal motion	500 mm	30 lbs.
CCS1H8	Horizontal motion	800 mm	15 lbs.



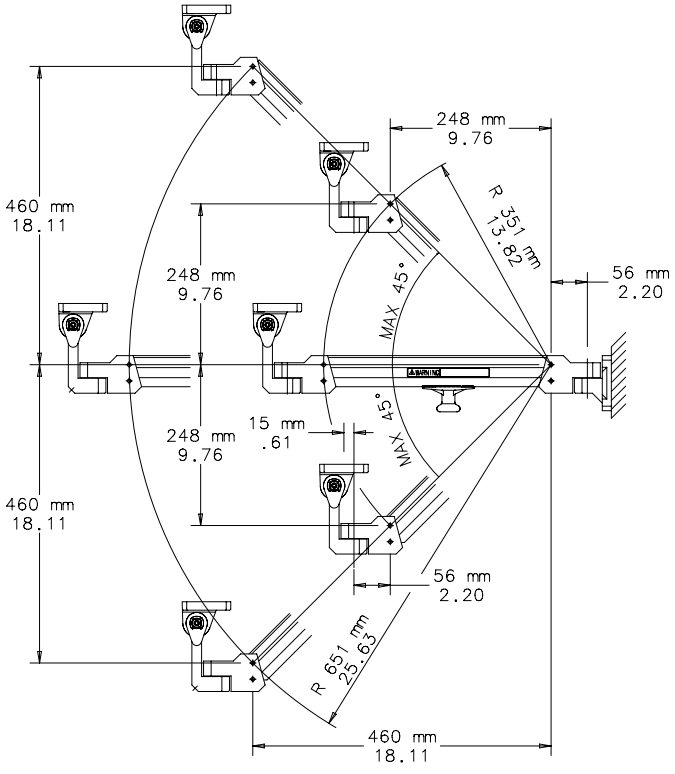




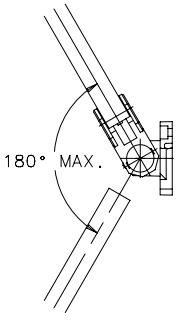
DETAIL Y-Y



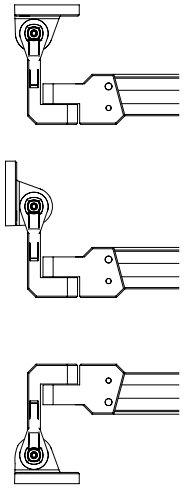
SECTION X-X



VERTICAL ROTATION



HORIZONTAL ROTATION



ENCLOSURE MOUNTING POSITIONS

87799131

HANDLE

Mounts to end of arm in pre-threaded hole.

BULLETIN: CS4

Catalog Number	Color
CCS1HDL	Black

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COMPACT PENDANT ARM SERIES 2, TYPE 12

APPLICATION

COMPACT Series 2 Pendant Arms allow operators to easily move controls into and out of position as needed, and they are easily mounted to a machine, wall or floor. Offering both superior load-bearing capacity and functional reliability, the COMPACT Series 2 Pendant Arm has a maximum load of 101 lb. (45.8 kg) at 3.3 ft. (1 m) and is recommended for use with INLINE, CC2000, CC4000 and CONCEPT HMI enclosures as well as Consolets.

SPECIFICATIONS

- Cast aluminum couplings and extruded aluminum tubing. Series components provide excellent structural strength.
- Multiple coupling types and three standard tube lengths (500, 1000 and 1500 mm) combine to form numerous configurations as conduits for equipment wiring (see configuration guide)
- Removable access plates simplify cable installation inside fittings
- Heavy duty bearings in all movable joints for convenient, smooth operation and enhanced durability
- Deep tube fittings in all couplings
- Adjustable set screws allow accurate alignment of supporting tubes
- Oil-resistant neoprene gasket

FINISH

Couplings and access plates have RAL 7035 light-gray polyester powder paint finish. Tubing is anodized aluminum.

INDUSTRY STANDARDS

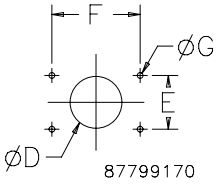
NEMA/EEMAC Type 12
IEC 60529, IP55
DIN 40050

Standard Cutout for Mounting

Dimensions for Cutout	Set-Up Joint in./mm	Vertical or Horizontal Wall Joint in./mm	Flange or Flange Elbow Coupling/Swivel Tilt Straight or 90° Elbow in./mm	Wall Flange or Base Bracket in./mm	Rotational Base in./mm
ØD	1.58 40	2.76 70	1.58 40	— —	1.58 40
E	3.54 90	3.54 90	2.36 60	3.54 90	3.54 90
F	3.54 90	4.33 110	2.36 60	3.54 90	3.54 90
ØG	0.35 9	0.35 9	0.26 7	0.35 9	0.35 9

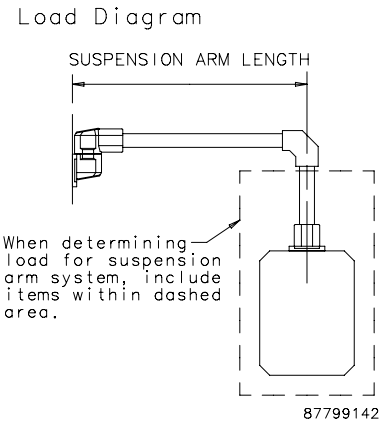
See product drawings for alternate shallow enclosure mounting.

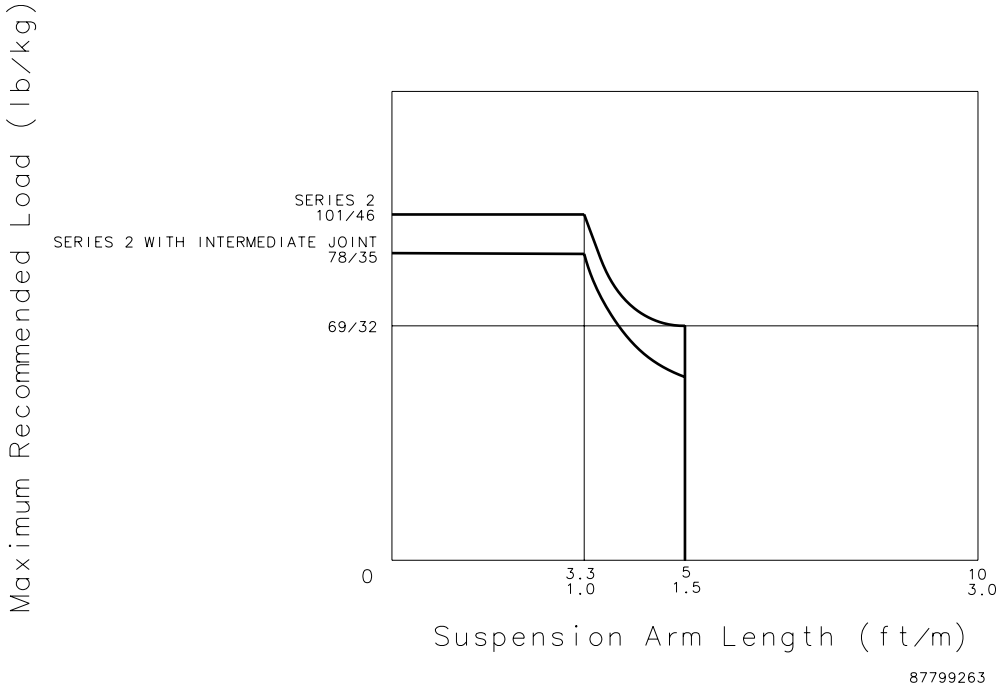
Standard Cutout for Mounting



SYSTEM LOAD CAPACITY

The Series 2 pendant arm load graph is the result of load capacity tests. Please contact Hoffman for specific application information.

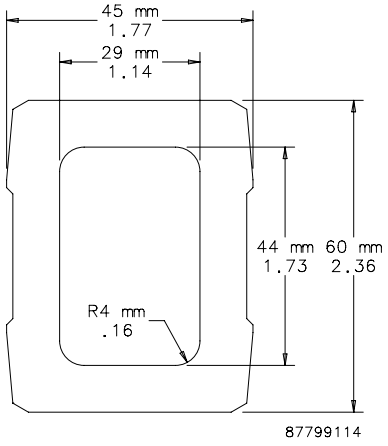




TUBES

Hollow aluminum extrusion available in 500-, 1000- and 1500-mm lengths. Connection components fastened to support arm with set screws. DIN 59411 and 2395.

BULLETIN: CS4

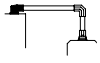


Catalog Number	AxBxC in./mm	Length in./mm	External Dimensions in./mm	Wall Thickness Dimensions in./mm	Inside Cross Section (cm^2)	Inside Cross Section ($in.^2$)	Weight (lb.)
CCS2T5	19.68 x 1.77 x 2.36 500 x 45 x 60	19.68 500	1.77 x 2.36 45 x 60	0.31 8	12.65	1.96	4.5
CCS2T10	39.37 x 1.77 x 2.36 1000 x 45 x 60	39.37 1000	1.77 x 2.36 45 x 60	0.31 8	12.65	1.96	9.0
CCS2T20	59.06 x 1.77 x 2.36 1500 x 45 x 60	59.06 1500	1.77 x 2.36 45 x 60	0.31 8	12.65	1.96	14.0

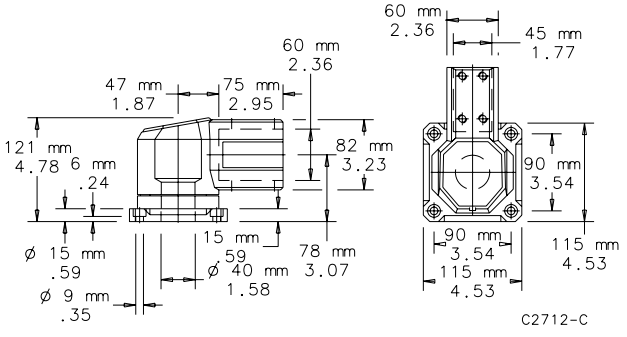
SET-UP JOINT

Joint includes access plate for easy wire installation. Turning range of 300 degrees. Cast aluminum with RAL 7035 light-gray polyester powder paint finish. Setscrews, gasket and removable access plate included. Mounting fasteners are not provided.

BULLETIN: CS4



Catalog Number	Weight (lb.)
CCS2SJLG	4.0

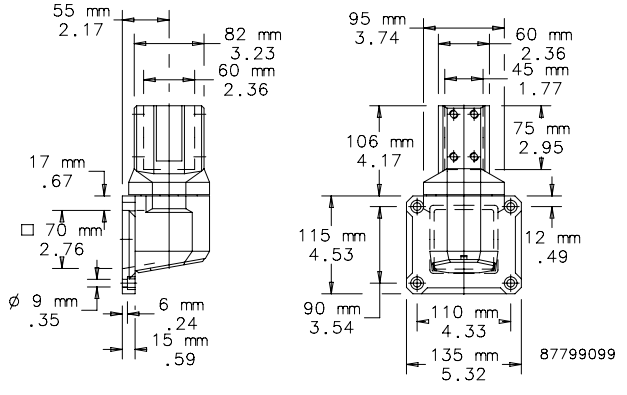


WALL JOINT (VERTICAL)

Vertical joint includes access plate for easy wire installation. Turning range of 300 degrees. Cast aluminum with RAL 7035 light-gray polyester powder paint finish. Setscrews, gasket and removable access plate included. Mounting fasteners are not provided.

BULLETIN: CS4

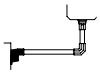
Catalog Number	Weight (lb.)
CCS2WJVLG	5.0



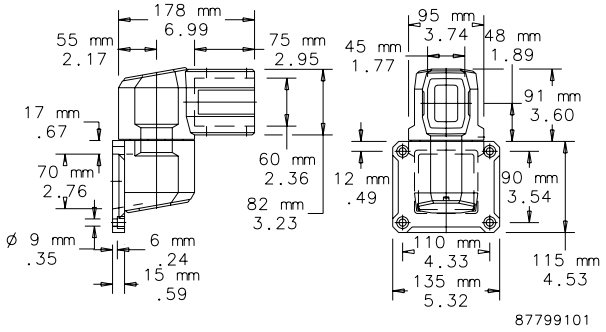
WALL JOINT (HORIZONTAL)

Includes access plates for easy wire installation. Turning range of 300 degrees. Cast aluminum with RAL 7035 light-gray polyester powder paint finish. Setscrews, gasket and removable access plates included. Mounting fasteners not provided.

BULLETIN: CS4



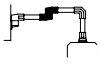
Catalog Number	Weight (lb.)
CCS2WJHLG	5.0



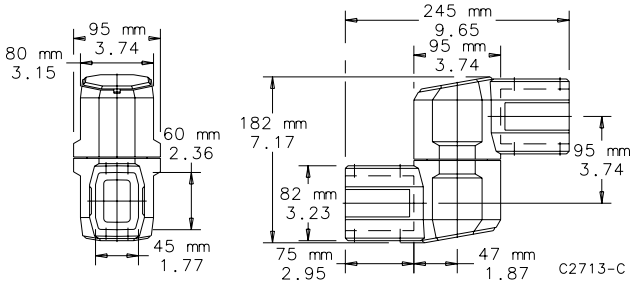
INTERMEDIATE JOINT

Joint is cast aluminum with RAL 7035 light-gray polyester powder paint finish. Turning range is 360 degrees with stop. Includes access plates for easy wire installation, installation hardware and gasket. Use of the intermediate joint reduces pendant arm load capacity by 43 percent.

BULLETIN: CS4



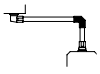
Catalog Number	Weight (lb.)
CCS2IJLG	5.0



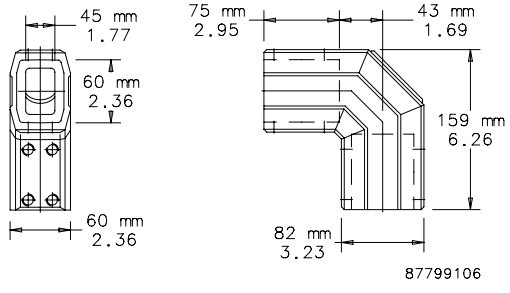
HEAVY DUTY ELBOW

Elbow is made of aluminum with increased wall thickness for additional strength and support. Setscrews for tube adjustment. Cast aluminum with RAL 7035 light-gray polyester powder paint finish. All installation hardware and gasket included.

BULLETIN: CS4



Catalog Number	Weight (lb.)
CCS2EHDLG	3.0



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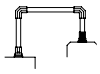
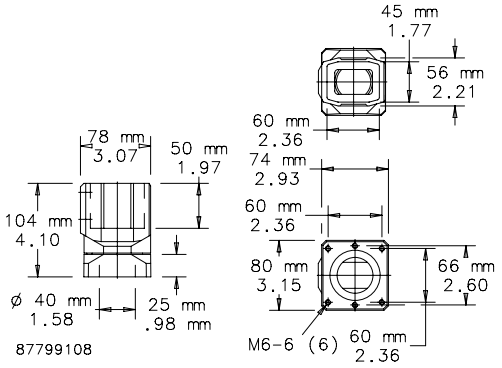
FLANGE COUPLING

Coupling can rotate 300 degrees. Maintenance-free bearing is steel and polyamide. Cast aluminum with RAL 7035 light-gray polyester powder paint finish. Installation hardware, mounting fasteners and gasket included.

BULLETIN: CS4



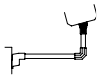
Catalog Number	Weight (lb.)
CCS2FCLG	2.5



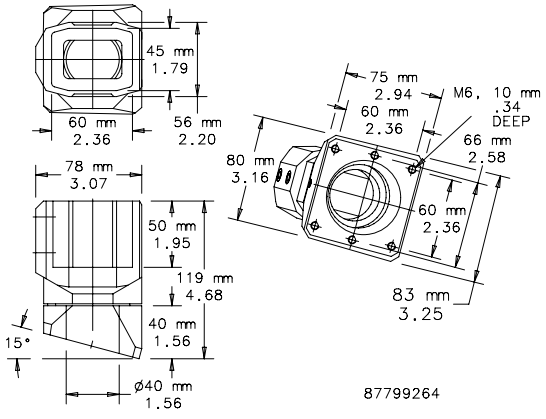
FLANGE COUPLING, 15-DEGREE

Coupling can rotate 300 degrees. Maintenance-free bearing is steel and polyamide. Enclosure is mounted at a 15-degree incline angle. Cast aluminum with RAL 7035 light-gray polyester powder paint finish. Installation hardware, mounting fasteners and gaskets included.

BULLETIN: CS4



Catalog Number	Product Weight (lb.)
CCS2FC15LG	2.5

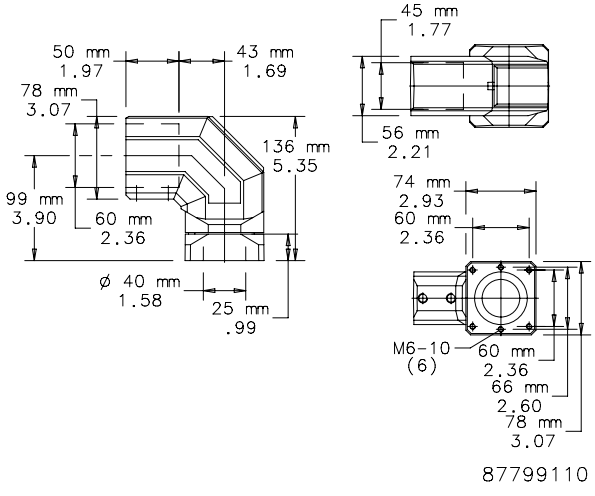


FLANGE ELBOW COUPLING

Turning range of 300 degrees. Maintenance-free bearing is steel and polyamide. Includes access plate for easy wire installation. Cast aluminum finished in RAL 7035 light-gray polyester powder paint. Installation hardware, mounting fasteners and gasket included.

BULLETIN: CS4

Catalog Number	Weight (lb.)
CCS2FECLG	3.0

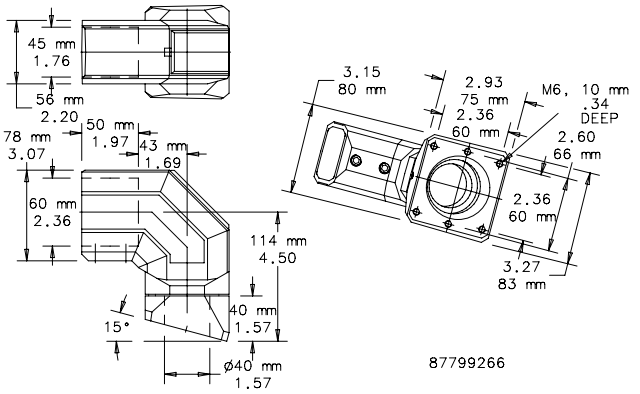


FLANGE ELBOW COUPLING, 15-DEGREE

Turning range of 300 degrees. Maintenance-free bearing is steel and polyamide. Access plate included for easy wire installation. Enclosure is mounted at a 15-degree incline angle. Cast aluminum finished in RAL 7035 light-gray polyester powder paint. Installation hardware, mounting fasteners and gaskets included.

BULLETIN: CS4

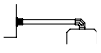
Catalog Number	Product Weight (lb.)
CCS2FEC15LG	3.1



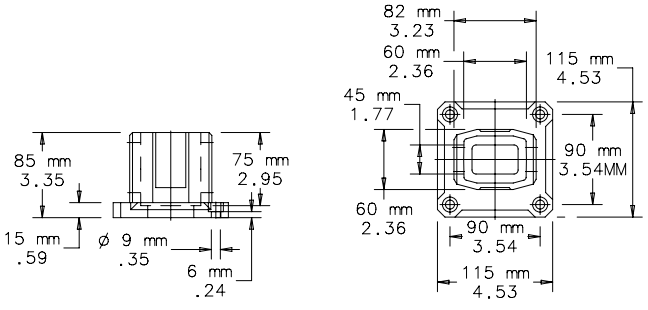
BASE BRACKET/WALL FLANGE

Cast aluminum with RAL 7035 light-gray polyester powder paint finish. Set screws and gasket are included. Mounting fasteners are not provided.

BULLETIN: CS4



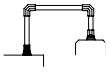
Catalog Number	Weight (lb.)
CCS2WFBLG	2.5



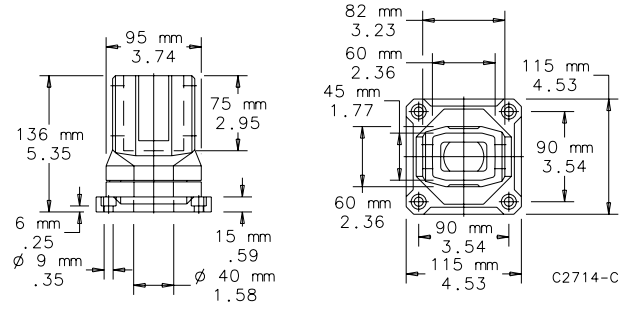
ROTATIONAL BASE

Turning range of 300 degrees. Cast aluminum finished in RAL 7035 light-gray polyester powder paint. Setscrews and gasket are included. Mounting fasteners are not provided.

BULLETIN: CS4



Catalog Number	Weight (lb.)
CCS2RBLG	3.5

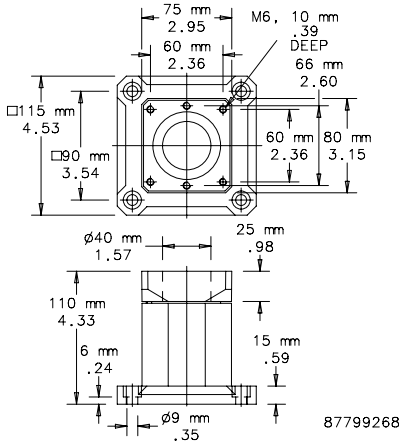


ROTATIONAL BASE BRACKET

Turning range of 300 degrees. Cast aluminum finished in RAL 7035 light-gray polyester powder paint. Setscrews and gaskets are included. Mounting fasteners are not provided.

BULLETIN: CS4

Catalog Number	Product Weight (lb.)
CCS2RBBLG	2.7

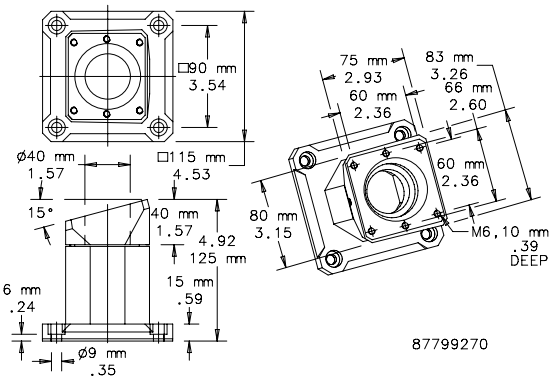


ROTATIONAL BASE BRACKET, 15-DEGREE

Turning range of 300 degrees. Enclosure is mounted at a 15-degree incline angle. Cast aluminum finished in RAL 7035 light-gray polyester powder paint. Setscrews and gaskets are included. Mounting fasteners are not provided.

BULLETIN: CS4

Catalog Number	Product Weight (lbs.)
CCS2RBB15LG	2.7



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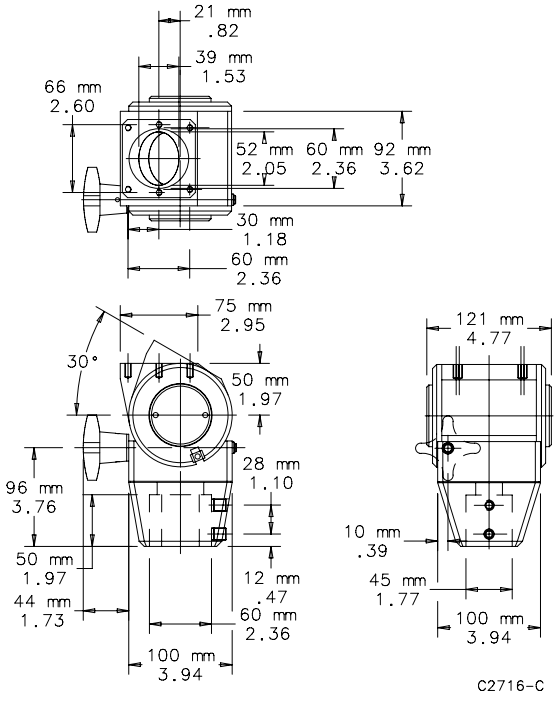
SWIVEL TILT STRAIGHT

Mounts between pendant arm and HMI enclosure to provide both swivel and tilt options for the machine operator. Swivel allows 300-degree maximum rotation. Tilt allows infinite adjustment from horizontal to 30 degrees. Cast aluminum finished in RAL 7035 light-gray polyester powder paint. Installation hardware, mounting fasteners and gasket included.
Maximum load is 66 lb. (30 kg).

BULLETIN: CS4

Catalog Number	Weight (lb.)
CCS2STLG	7.0

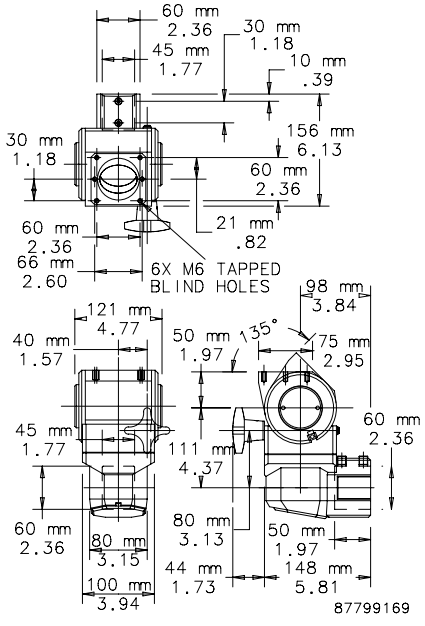


SWIVEL TILT 90-DEGREE ELBOW

Mounts between pendant arm and HMI enclosure to provide both swivel and tilt options for the machine operator. A 90-degree elbow is incorporated into this design. Swivel allows 300-degree maximum rotation. Tilt allows infinite adjustment from horizontal to 30 degrees. Cast aluminum finished in RAL 7035 light-gray polyester powder paint. Installation hardware, mounting fasteners and gasket are included.
Maximum load is 66 lb. (30 kg).

BULLETIN: CS4

Catalog Number	Weight (lb.)
CCS2ESTLG	7.5



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PEDESTAL BASE

Base is cast aluminum one-piece construction finished with RAL 7035 light-gray textured polyester powder paint. Includes all hardware for attaching tubes.

BULLETIN: CC3

Catalog Number
CCS2PB

MONITOR PLATFORM

Platform attaches to pendant arm to provide a surface for a monitor. Adjustable stops hold monitor securely in place. Aluminum construction finished with RAL 7042 gray polyester powder paint. Order Monitor Platform, Keyboard Tray and Keyboard Frame separately.

BULLETIN: CS4

Catalog Number	Description
CCS1MP	Monitor Platform (Does not include Keyboard Frame or Keyboard Tray)

KEYBOARD FRAME

Mounts to monitor platform. Frame locks at desired position by tightening knobs. Chrome plated finish. Order Monitor Platform, Keyboard Tray and Keyboard Frame separately.

BULLETIN: CS4

Catalog Number	Description
CCS1KBF	Keyboard Frame only

KEYBOARD TRAY

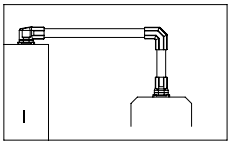
Tray attaches to keyboard frame. Provides a surface for a PC mouse as well as a platform for a keyboard. Aluminum construction finished with RAL 7042 gray polyester powder paint. Order Monitor Platform, Keyboard Tray and Keyboard Frame separately.

BULLETIN: CS4

Catalog Number	Description
CCS1KBT	Keyboard Tray only

SYSTEM CONFIGURATIONS

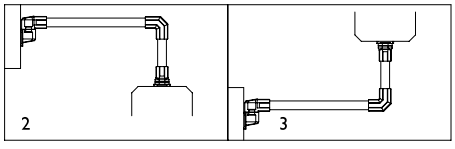
Note to Specifier:
Select suspension system sizing using the Compact Series 2 load capacity chart.
1. Tube catalog numbers are not included in configuration tables.
2. There are multiple configurations possible with many of the options shown. Components can be inverted. For illustration purposes, configurations may show how components can be inverted or used with varying enclosure couplings.



87799173

1

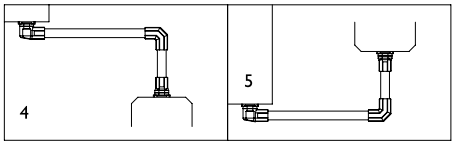
Description	Qty.	Catalog Number
Set up joint	1	CCS2JLG
Heavy duty elbow	1	CCS2EHDLG
Flange coupling or Swivel tilt	1 1	CCS2FCLG CCS2STLG



87799174

2 AND 3

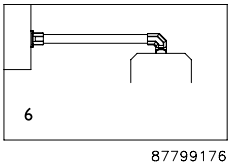
Description	Qty.	Catalog Number
Wall joint (horizontal)	1	CCS2WJHLG
Heavy duty elbow	1	CCS2EHDLG
Flange coupling or Swivel tilt or Flange coupling 15º	1 1 1	CCS2FCLG CCS2STLG CCS2FC15LG



87799175

4 AND 5

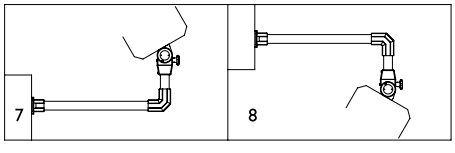
Description	Qty.	Catalog Number
Set up joint	1	CCS2SJLG
Heavy duty elbow	1	CCS2EHDLG
Flange coupling or Swivel tilt	1 1	CCS2FCLG CCS2STLG



87799176

6

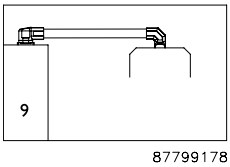
Description	Qty.	Catalog Number
Wall flange/base bracket	1	CCS2WFBLG
Flange elbow coupling or 90º Swivel tilt or Flange elbow coupling 15º	1 1 1	CCS2FECLG CCS2ESTLG CCS2FEC15LG



87799177

7 AND 8

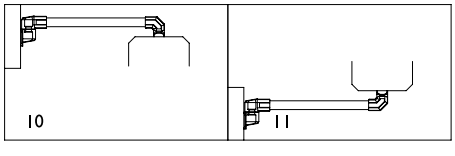
Description	Qty.	Catalog Number
Wall flange/base bracket	1	CCS2WFBLG
Heavy duty elbow	1	CCS2EHDLG
Flange coupling or Swivel tilt	1 1	CCS2FCLG CCS2STLG



87799178

9

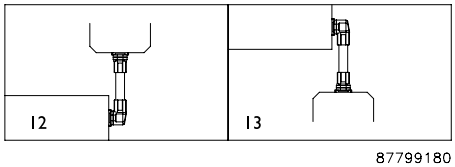
Description	Qty.	Catalog Number
Set-up joint	1	CCS2SJLG
Flange elbow coupling or 90º Swivel tilt	1 1	CCS2FECLG CCS2ESTLG



87799179

10 AND 11

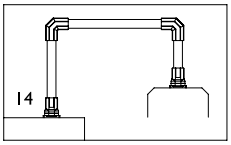
Description	Qty.	Catalog Number
Wall joint (horizontal)	1	CCS2WJHLG
Flange elbow coupling or 90º Swivel tilt	1 1	CCS2FECLG CCS2ESTLG



87799180

12 AND 13

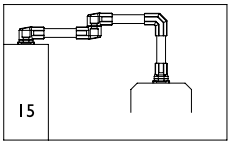
Description	Qty.	Catalog Number
Wall joint (vertical)	1	CCS2WJVLG
Flange coupling or Swivel tilt	1 1	CCS2FCLG CCS2STLG



87799181

14

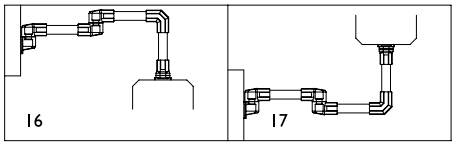
Description	Qty.	Catalog Number
Rotational base	1	CCS2RBLG
Heavy duty elbow	2	CCS2EHDLG
Flange coupling or Swivel tilt	1 1	CCS2FCLG CCS2STLG



87799182

15

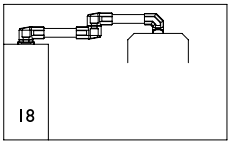
Description	Qty.	Catalog Number
Set up joint	1	CCS2SJLG
Intermediate joint	1	CCS2IJLG
Heavy duty elbow	1	CCS2EHDLG
Flange coupling or Swivel tilt	1 1	CCS2FCLG CCS2STLG



87799183

16 AND 17

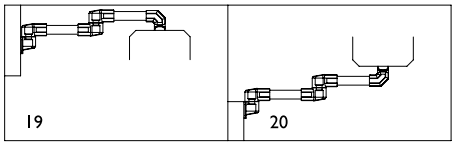
Description	Qty.	Catalog Number
Wall Joint (horizontal)	1	CCS2WJHLG
Intermediate joint	1	CCS2IJLG
Heavy duty elbow	1	CCS2EHDLG
Flange coupling or Swivel tilt	1 1	CCS2FCLG CCS2STLG



87799184

18

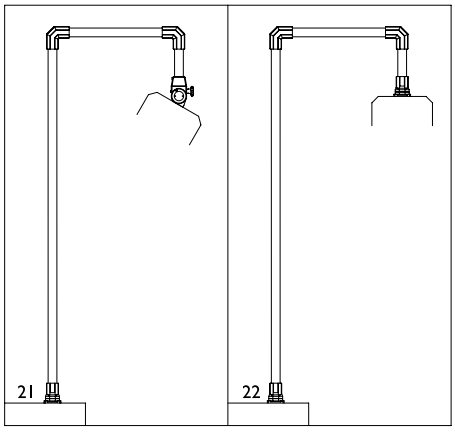
Description	Qty.	Catalog Number
Set up joint	1	CCS2SJLG
Intermediate joint	1	CCS2IJLG
Flange elbow coupling or 90º Swivel tilt	1 1	CCS2FECLG CCS2ESTLG



87799185

19 AND 20

Description	Qty.	Catalog Number
Wall joint (horizontal)	1	CCS2WJHLG
Intermediate joint	1	CCS2IJLG
Flange elbow coupling or 90º Swivel tilt	1 1	CCS2FECLG CCS2ESTLG



C2802-C

21 AND 22

Description	Qty.	Catalog Number
Wall flange/base bracket	1	CCS2WFBLG
Heavy duty elbow	1	CCS2EHDLG
Flange coupling or Swivel tilt	1 1	CCS2FCLG CCS2STLG

Note to the Specifier:

1. Select pendant system sizing using the COMPACT Series 2 load capacity chart.
2. Tube catalog numbers are not included in configuration tables.

Notes

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SYSPEND 180-MAX SUSPENSION SYSTEM, TYPE 12

INDUSTRY STANDARDS

Maintains NEMA Type 12 and IEC IP55 enclosure rating when properly installed per Hoffman instructions.

APPLICATION

The SYSPEND 180-MAX is a modular enclosure suspension system designed for modern industrial aesthetics, excellent ergonomics and multiple component combinations. The easy-to-install components can be configured in a variety of ways to get the right combination for any application. At 3.3 ft. (1 m) the system supports up to 180 lb. (81.6 kg). Recommended for use with CC2000, CC4000, and CONCEPT HMI enclosures.

FEATURES

- System supports up to 180 lb. (82 kg) and allows operators to easily move controls in and out of position
- Multiple modular components available to provide ergonomic, fatigue-free operation
- Clean lines and smooth transitions between tubes and system components provide attractive aesthetics and allow for ease of cleaning
- Tubing provides structural integrity and acts as equipment wiring conduit
- Secure attachment with sixfold positive connection between tubes and components along with recessed mounting areas in components; no additional safety drilling required
- Secure connections and easy adjustment of system alignment using tube setscrews coated with thread sealer
- System design allows for user friendly readjustment and leveling without disassembling the complete system or additional kits
- Multiple tube lengths offer system design versatility
- Heavy-duty bearings in all movable joints for convenient, smooth operation and enhanced durability to withstand stresses of repeated use
- Variable torque adjustment available for all rotating components; general adjustment at bearing with locking handle adjustment on enclosure couplings
- Panel couplings allow for connection at the rear of displays or monitors with VESA mounting
- System can be combined with the SYSPEND 281-MAX using the Reduction Elbow to achieve a higher load rating

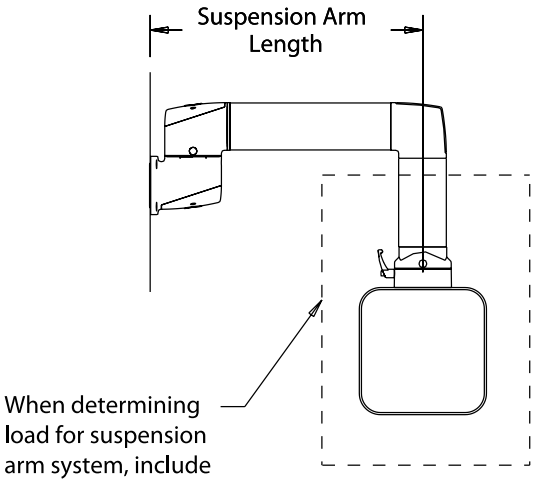
SPECIFICATIONS

- Anodized aluminum tubes
- Choice of RAL 9005 black or RAL 7035 light-gray die-cast aluminum components
- RAL 9006 white aluminum cable access caps
- Oil-resistant neoprene gaskets

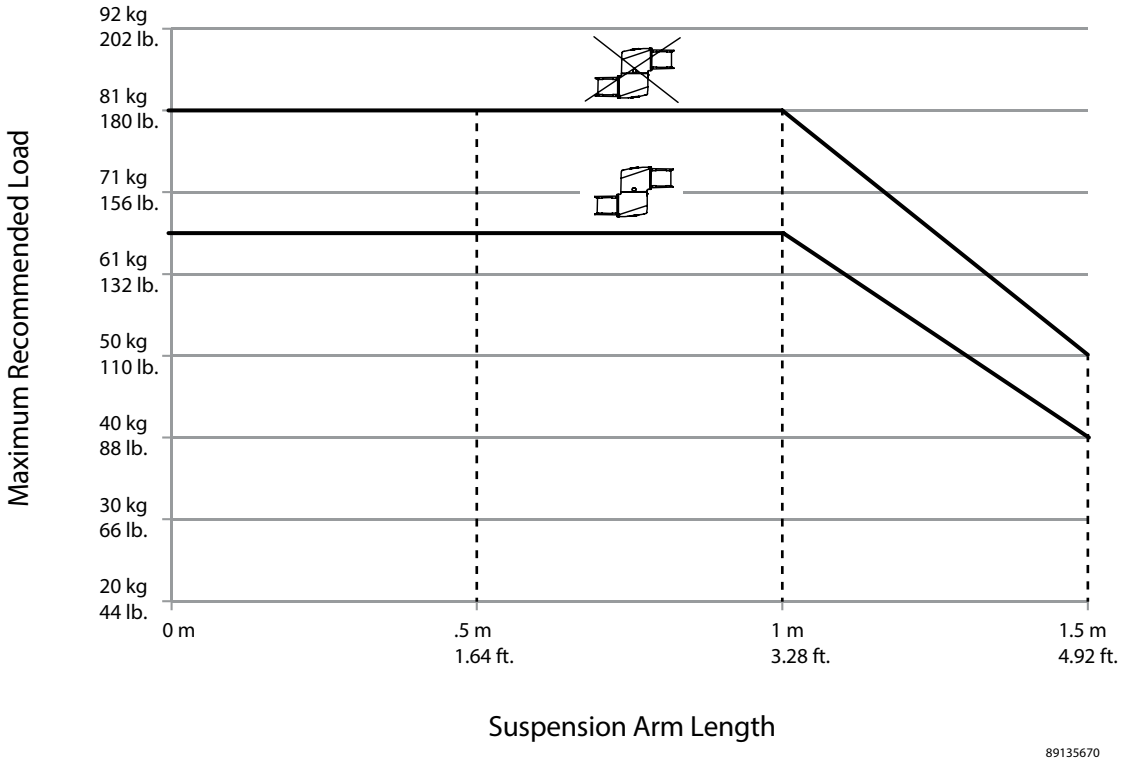
SYSTEM LOAD CAPACITY

The SYSPEND 180-MAX load graph is the result of load capacity tests. Please contact Hoffman for specific application information.

Load Diagram



Load Diagram for Static Load Capacity



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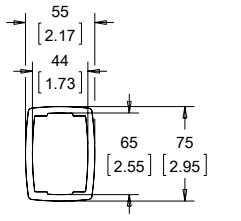
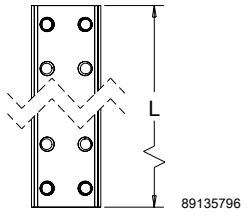
TUBES

Aluminum tubes provide structural integrity and act as conduit for equipment wiring. Tubes attach to system components with 6 setscrews on each end of the tube. Setscrews are provided with system couplings, not the tubes. Setscrews allow for easy adjustment and leveling of the system. Setscrews are provided with thread sealer providing secure connections. Available in 6 standard lengths ranging from 250 mm (9.84) to 1500 mm (59.05). Tubes 750 mm (29.53) and longer include drilling template to assist with drilling and tapping the holes when tube is cut to length.

BULLETIN: CS5

Catalog Number	Color	L mm/in.	Weight (lb.)	Weight (kg)
S1MT250	Anodized	250 9.84	1.75	.79
S1MT500	Anodized	500 19.68	3.50	1.59
S1MT750	Anodized	750 29.53	5.25	2.38
S1MT1000	Anodized	1000 39.37	7.00	3.18
S1MT1250	Anodized	1250 49.21	8.75	3.97
S1MT1500	Anodized	1500 59.05	10.50	4.76

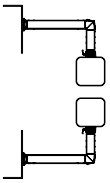




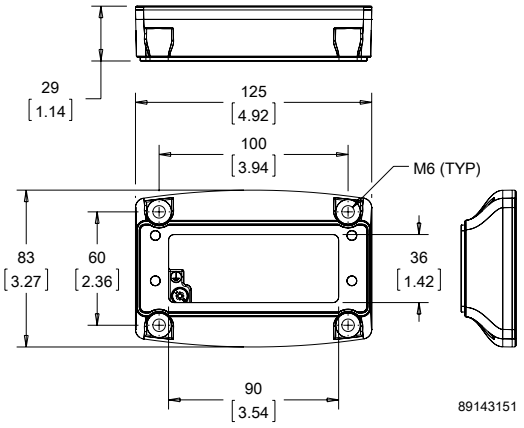
NARROW ADAPTER

The Narrow Adapter can be attached to the Flange Coupling and Flange Elbow Coupling to create a narrower connection to an enclosure. Specifically designed for use with the SYSPEND ALUMINUM HMI Enclosures that have 66mm of usable space. Does not inhibit coupling functionality. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, and mounting hardware.

BULLETIN: CS5



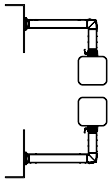
Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MA	RAL 9005, Black	0.5	0.25
S1MAG	RAL 7035, Light Gray	0.5	0.25



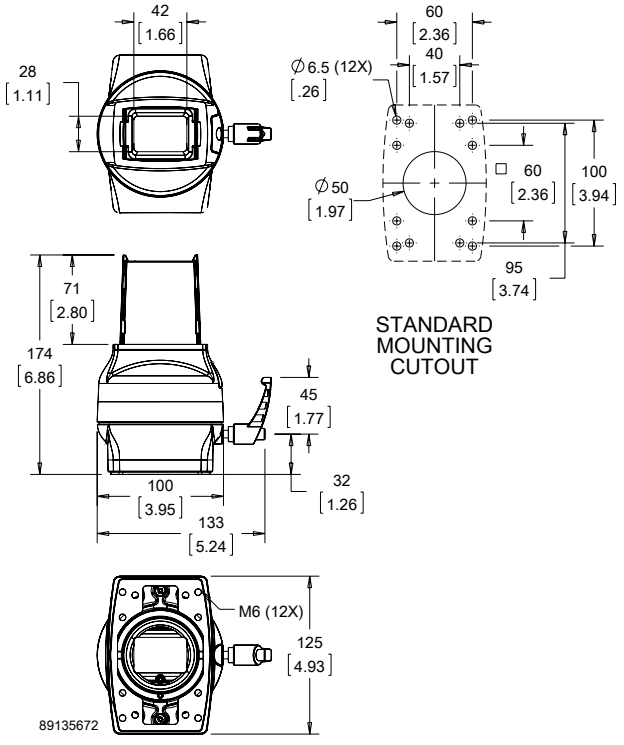
FLANGE COUPLING

The flange coupling attaches a tube to the enclosure, enabling 300-degree enclosure rotation and can be locked into a given position. The flange coupling has a safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, tube setscrews and enclosure mounting hardware.

BULLETIN: CS5



Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MFC	RAL 9005, Black	3.50	1.59
S1MFCG	RAL 7035, Light Gray	3.50	1.59

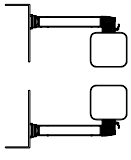


STANDARD MOUNTING CUTOUT

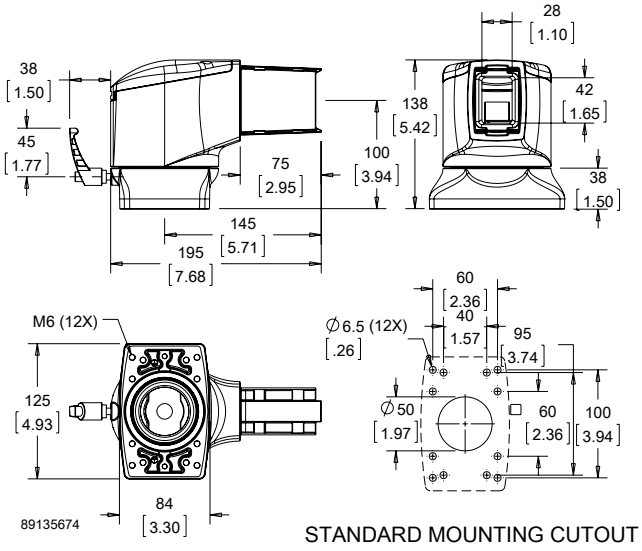
FLANGE ELBOW COUPLING

The flange elbow coupling attaches directly to the enclosure for applications where a vertical tube is not required. It enables the enclosure to rotate 300 degrees and can be locked into a given position. The flange elbow coupling has a safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, tube setscrews and enclosure mounting hardware.

BULLETIN: CS5



Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MFEC	RAL 9005, Black	4.50	2.04
S1MFECG	RAL 7035, Light Gray	4.50	2.04



STANDARD MOUNTING CUTOUT

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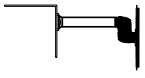
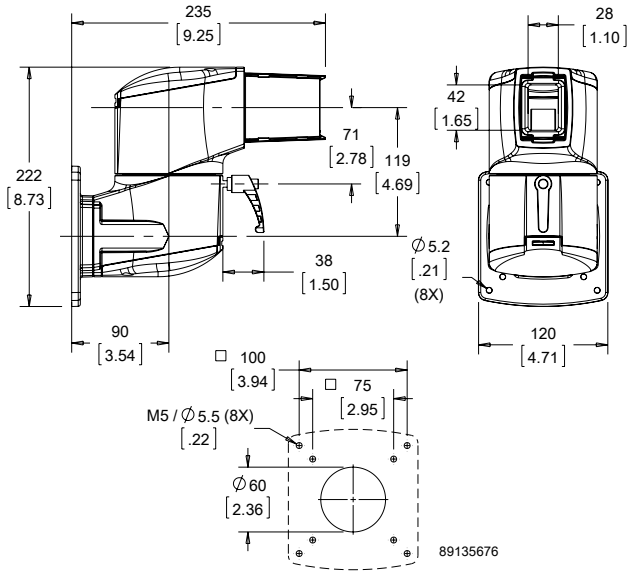
HORIZONTAL PANEL COUPLING

The horizontal panel coupling mounts a horizontal tube to the back of an enclosure or screen using Video Electronics Standards Association (VESA) mounting. The coupling has mounting holes drilled for standard VESA 75 and 100 flange sizes. It enables the enclosure to rotate 300 degrees and can be locked into a given position. The horizontal panel coupling has a safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, tube setscrews and enclosure mounting hardware.

BULLETIN: CS5



Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MPCH	RAL 9005, Black	6.50	2.95
S1MPCHG	RAL 7035, Light Gray	6.50	2.95

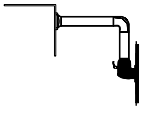


STANDARD MOUNTING CUTOUT

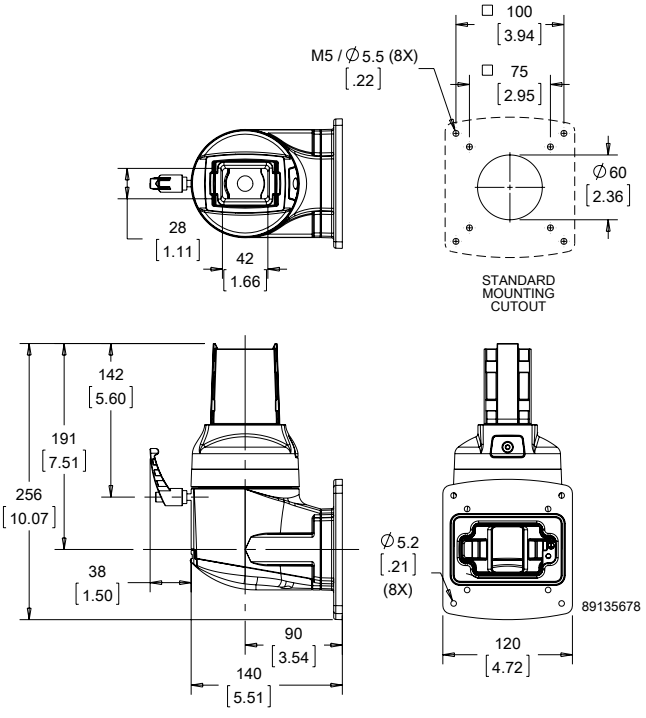
VERTICAL PANEL COUPLING

The vertical panel coupling mounts a vertical tube to the back of an enclosure or screen using Video Electronics Standards Association (VESA) mounting. The coupling has mounting holes drilled for standard VESA 75 and 100 flange sizes. It enables the enclosure to rotate 300 degrees and can be locked into a given position. The vertical panel coupling has a safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, tube setscrews and enclosure mounting hardware.

BULLETIN: CS5



Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MPCV	RAL 9005, Black	5.50	2.49
S1MPCVG	RAL 7035, Light Gray	5.50	2.49

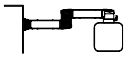


INTERMEDIATE JOINT

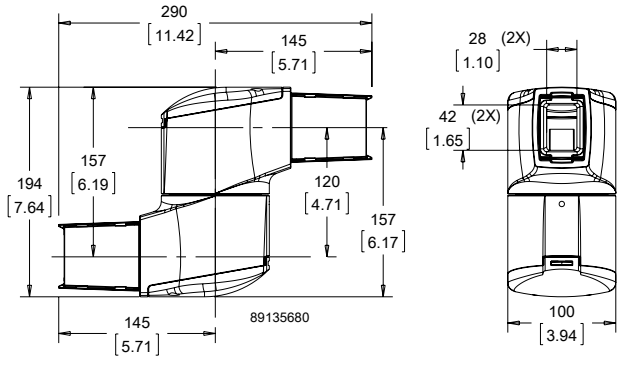
Use an intermediate joint to join two horizontal tubes together for a longer length. The arm can be rotated 300 degrees. Includes safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, and tube setscrews.

Use of the intermediate joint reduces the system load rating capacity to 146 lb. (66 kg) at 3.3 ft. (1 m).

BULLETIN: CS5



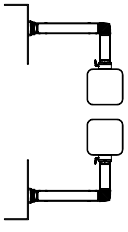
Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MIJ	RAL 9005, Black	6.00	2.72
S1MIJG	RAL 7035, Light Gray	6.00	2.72



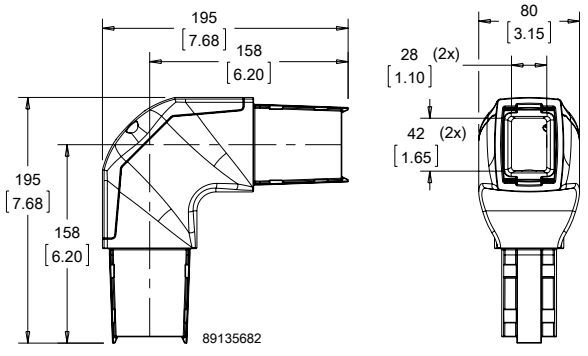
ELBOW

The elbow provides a 90-degree bend in the suspension system. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, and tube setscrews.

BULLETIN: CS5



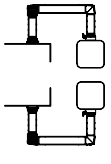
Catalog Number	Color	Weight (lb.)	Weight (kg)
S1ME	RAL 9005, Black	2.75	1.25
S1MEG	RAL 7035, Light Gray	2.75	1.25



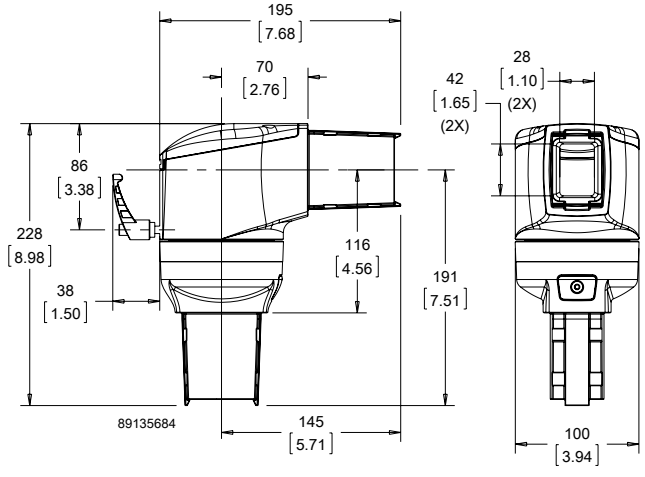
ROTATABLE ELBOW

The rotatable elbow provides a 90-degree bend in the suspension system and allows the vertical tube to rotate 300 degrees. Includes safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, and tube setscrews.

BULLETIN: CS5



Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MER	RAL 9005, Black	5.00	2.27
S1MERG	RAL 7035, Light Gray	5.00	2.27



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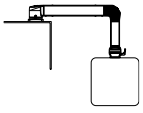
REDUCTION ELBOW

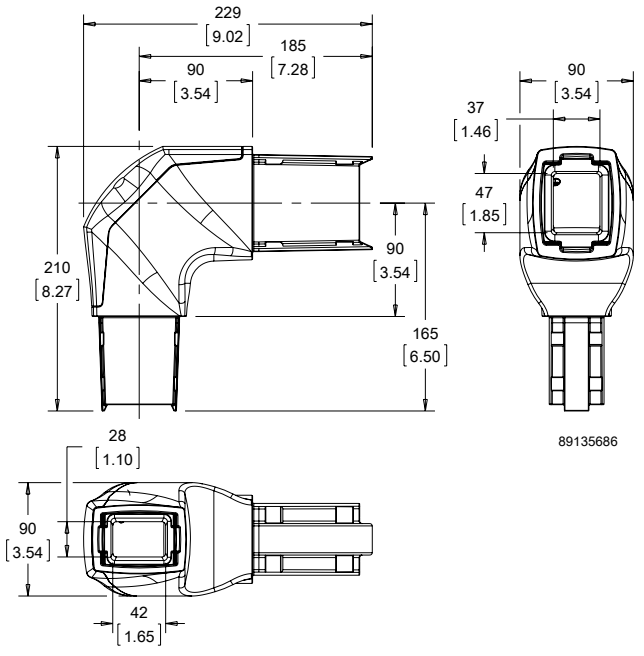
The reduction elbow provides a 90-degree bend in the suspension system between the horizontal tube and base connection of the SYSPEND 281-MAX system and the vertical components of the SYSPEND 180-MAX system. Die-cast aluminum construction. Available in RAL 9005 black finish only. Includes installation instructions, gaskets, and tube setscrews.

Use of the reduction elbow with the SYSPEND 281-MAX base and tube increases the system load rating to 281 lb. (127 kg) at 3.3 ft. (1 m).

BULLETIN: CS5



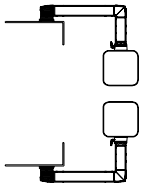
Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MRE	RAL 9005, Black	4.00	1.81



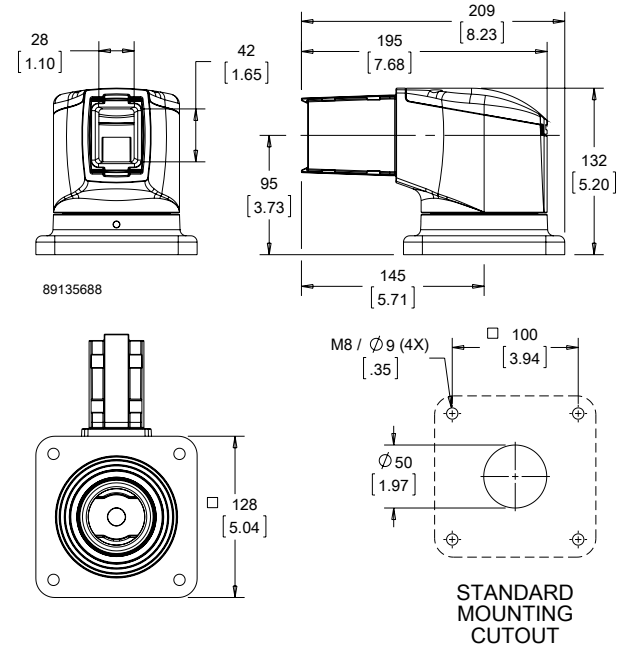
SET-UP JOINT

The set-up joint mounts the suspension system to a horizontal surface. The arm can be rotated 300 degrees. Includes a safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS5



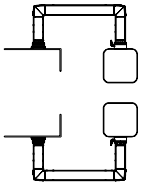
Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MSJ	RAL 9005, Black	4.75	2.15
S1MSJG	RAL 7035, Light Gray	4.75	2.15



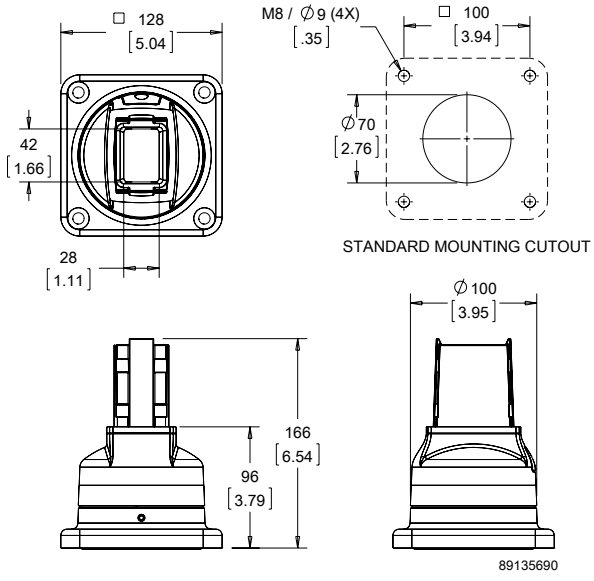
ROTARY BASE

The rotatable base bracket allows the entire suspension system to rotate at the point of attachment on a horizontal surface. The arm can be rotated 300 degrees. Includes a safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS5



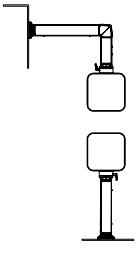
Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MTBB	RAL 9005, Black	3.75	1.70
S1MTBBG	RAL 7035, Light Gray	3.75	1.70



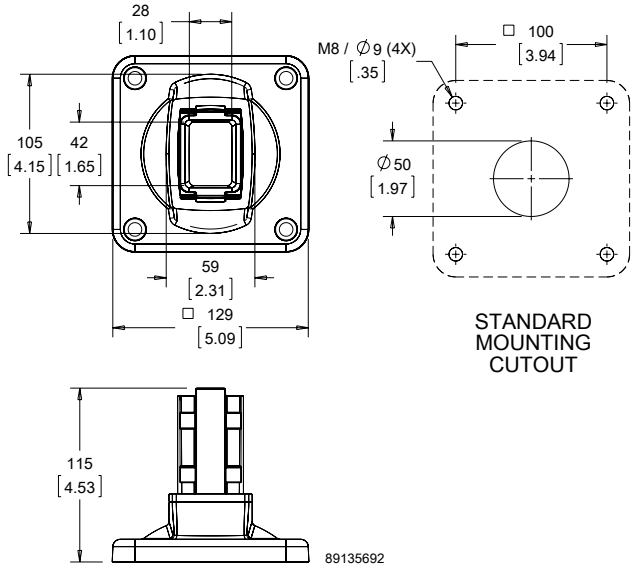
WALL FLANGE

The wall flange allows for fixed positioning on a horizontal or vertical surface when rotation is not needed. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS5



Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MWF	RAL 9005, Black	2.00	.91
S1MWFG	RAL 7035, Light Gray	2.00	.91



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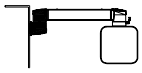
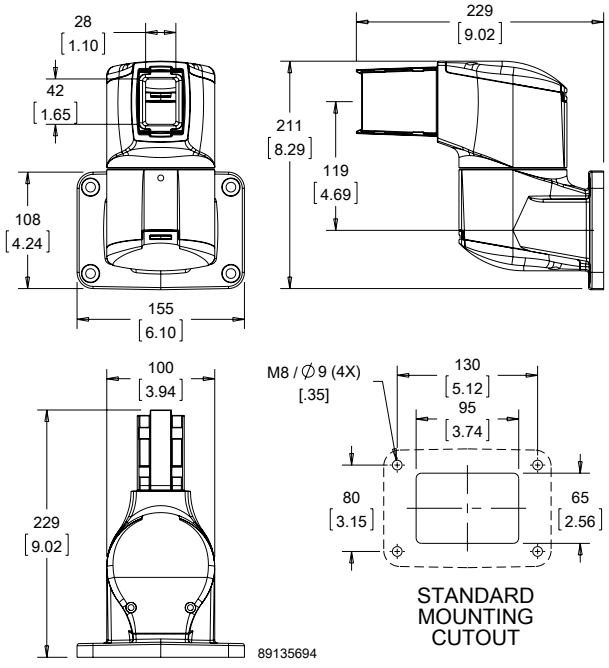
HORIZONTAL WALL JOINT

The horizontal wall joint mounts the suspension system to a vertical surface, allowing the tube to extend horizontally. The arm can be rotated 300 degrees. Includes a safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS5



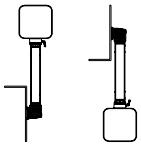
Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MWJH	RAL 9005, Black	6.50	2.95
S1MWJHG	RAL 7035, Light Gray	6.50	2.95



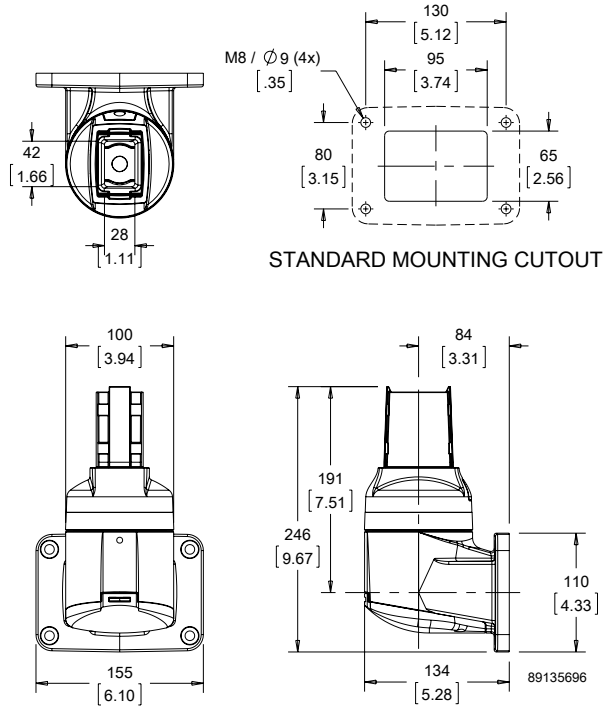
VERTICAL WALL JOINT

The vertical wall joint mounts the suspension system to a vertical surface, allowing the tube to extend vertically. The arm can be rotated 300 degrees. Includes a safety stop and maintenance-free bearings. Die-cast aluminum construction. Choice of RAL 9005 black or RAL 7035 light gray finish. Includes installation instructions, gaskets, and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS5



Catalog Number	Color	Weight (lb.)	Weight (kg)
S1MWJV	RAL 9005, Black	5.50	2.49
S1MWJVG	RAL 7035, Light Gray	5.50	2.49



ROTATION LIMITER

Rotation limiters are a retrofit option to limit the rotation of couplings and joints which normally rotate 300 degrees. Each block limits rotation 30 degrees. Kit includes six rotation limiting blocks and installation instructions.

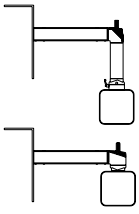
BULLETIN: CS5

Catalog Number	Qty.
S1MRL	6

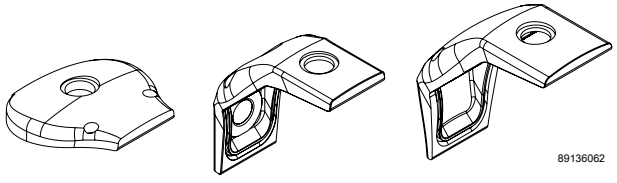
SIGNAL LIGHT ADAPTERS

The signal light adapters are available in either round, elbow and reduction elbow cover versions and provide a means for attaching signal lights. Signal lights are not included. Aluminum caps are finished in RAL 9006 white aluminum powder paint. Includes caps, gasket, attachment hardware, and post.

BULLETIN: CS5



Catalog Number	Description	Color	Weight (lb.)	Weight (kg)
S1MSLAR	Round Cap	RAL 9006, White Aluminum	.53	.24
S1MSLAA	Angled Cap	RAL 9006, White Aluminum	.58	.26
S1MSLARE	Reduction Elbow Cap	RAL 9006, White Aluminum	.74	.34



S1MSLAR S1MSLAA S1MSLARE

REPLACEMENT CAPS

Replacement Caps for SYSPEND 180-MAX couplings are available in either round, elbow or reduction elbow versions. The hardware is included. The caps are aluminum finished in RAL 9006 white aluminum powder paint.

BULLETIN: CS5

Catalog Number	Description	Color	Weight (lb.)	Weight (kg)
S1MRCRK	Round Cap	RAL 9006 White Aluminum	.40	.18
S1MRCAK	Angled Cap	RAL 9006 White Aluminum	.40	.18
S1MRCREK	Reduction Elbow Cap	RAL 9006 White Aluminum	.40	.18

REPLACEMENT HARDWARE KIT

The replacement hardware kit includes spare parts necessary within the SYSPEND 180-MAX system.
Kit Includes:

- 1 lock actuator
- 1 lever clamp
- 1 coupling gasket
- 2 flat small gaskets
- 4 M6 allen head screws
- 4 M6 lock washers
- 12 M10 headless setscrews
- 1 flat large gasket
- 6 M12 headless setscrews
- .5 meters of 3mm cord gasket

BULLETIN: CS5

Catalog Number	Weight (lb.)	Weight (kg)
S1MRHK	.15	.07

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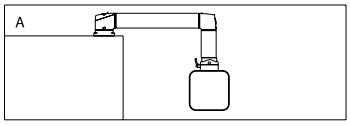
SYSPEND 180-MAX SUSPENSION SYSTEM CONFIGURATIONS

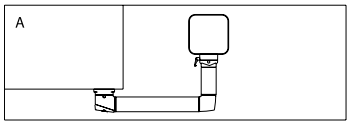
Note to Specifier:

Select suspension system sizing using the SYSPEND 180-MAX load capacity chart.

1. Tube catalog numbers are not included in configuration tables.
2. The catalog numbers for both RAL 9005 black and RAL 7035 light gray are given. Please select one catalog number per line, making sure to keep the color choice consistent throughout the system for a cohesive appearance.
3. There are multiple configurations possible with many of the options shown. Components can be inverted. For illustration purposes, configuration A shows how components can be inverted.



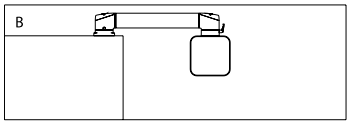
87956903



87956961

A

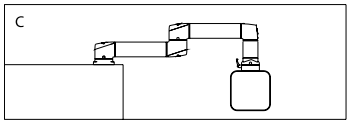
Description	Qty.	Catalog Number
Set-up Joint	1	S1MSJ S1MSJG
Elbow	1	S1ME S1MEG
Flange Coupling	1	S1MFC S1MFCG



87956965

B

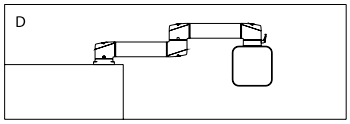
Description	Qty.	Catalog Number
Set-up Joint	1	S1MSJ S1MSJG
Flange Elbow Coupling	1	S1MFEC S1MFECG



87956966

C

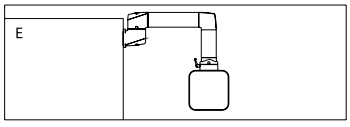
Description	Qty.	Catalog Number
Set-up Joint	1	S1MSJ S1MSJG
Intermediate Joint	1	S1MIJ S1MIJG
Elbow	1	S1ME S1MEG
Flange Coupling	1	S1MFC S1MFCG



87956967

D

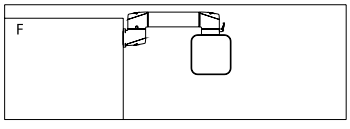
Description	Qty.	Catalog Number
Set-up Joint	1	S1MSJ S1MSJG
Intermediate Joint	1	S1MIJ S1MIJG
Flange Elbow Coupling	1	S1MFEC S1MFECG



87956969

E

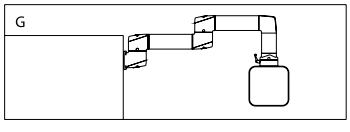
Description	Qty.	Catalog Number
Horizontal Wall Joint	1	S1MWJH S1MWJHG
Elbow	1	S1ME S1MEG
Flange Coupling	1	S1MFC S1MFCG



87956970

F

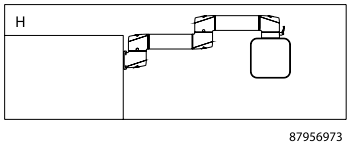
Description	Qty.	Catalog Number
Horizontal Wall Joint	1	S1MWJH S1MWJHG
Flange Elbow Coupling	1	S1MFEC S1MFECG



87956971

G

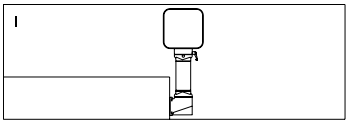
Description	Qty.	Catalog Number
Horizontal Wall Joint	1	S1MWJH S1MWJHG
Intermediate Joint	1	S1MIJ S1MIJG
Elbow	1	S1ME S1MEG
Flange Coupling	1	S1MFC S1MFCG



87956973

H

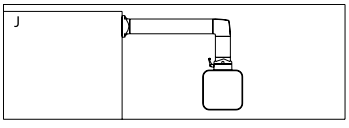
Description	Qty.	Catalog Number
Horizontal Wall Joint	1	S1MWJH S1MWJHG
Intermediate Joint	1	S1MIJ S1MIJG
Flange Elbow Coupling	1	S1MFEC S1MFECG



87956974

I

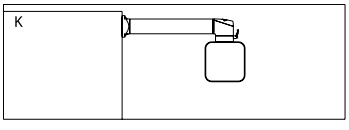
Description	Qty.	Catalog Number
Vertical Wall Joint	1	S1MVWJ S1MVWJG
Flange Coupling	1	S1MFC S1MFCG



87956975

J

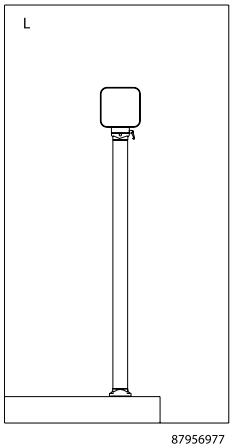
Description	Qty.	Catalog Number
Wall Flange	1	S1MWF S1MWFG
Elbow	1	S1ME S1MEG
Flange Coupling	1	S1MFC S1MFCG



87956976

K

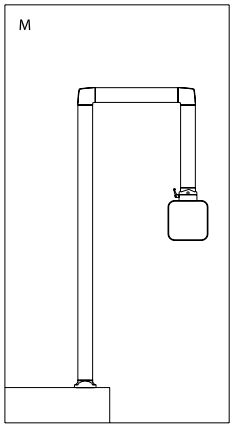
Description	Qty.	Catalog Number
Wall Flange	1	S1MWF S1MWFG
Flange Elbow Coupling	1	S1MFEC S1MFECG



87956977

L

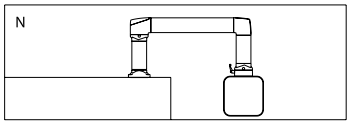
Description	Qty.	Catalog Number
Wall Flange	1	S1MWF S1MWFG
Flange Coupling	1	S1MFC S1MFCG



87956979

M

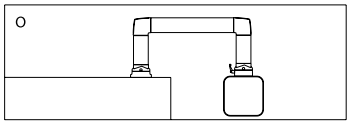
Description	Qty.	Catalog Number
Wall Flange	1	S1MWF S1MWFG
Elbow	2	S1ME S1MEG
Flange Coupling	1	S1MFC S1MFCG



87956980

N

Description	Qty.	Catalog Number
Wall Flange	1	S1MWF S1MWFG
Rotatable Elbow	1	S1MER S1MERG
Elbow	1	S1ME S1MEG
Flange Coupling	1	S1MFC S1MFCG



87956981

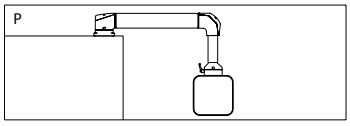
O

Description	Qty.	Catalog Number
Rotary Base	1	S1MTBB S1MTBBG
Elbow	2	S1ME S1MEG
Flange Coupling	1	S1MFC S1MFCG

Note to Specifier:

The Following Images show how you can combine the SYSPEND 281-MAX and SYSPEND 180-MAX systems using the Reduction Elbow. The Length of the system will need to come from the SYSPEND 281-MAX and the connection to the enclosure will be the SYSPEND 180-MAX. The following charts will include the number of tubes necessary for each system as well as the couplings.

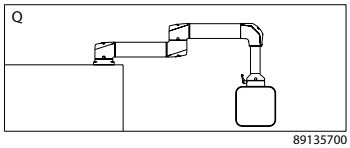
Please note that all of the possible length options for tubes are given for your reference and only select the total number of parts listed in the table Qty. column.



89135699

P

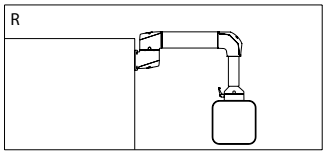
Description	Qty.	Catalog Number
281-MAX Set-up Joint	1	S2MSJ
281-MAX Tube	1	S2MT250 S2MT500 S2MT750 S2MT1000 S2MT1250 S2MT1500 S2MT1750 S2MT2000
281-MAX to 180-MAX Reduction Elbow	1	S1MRE
180-MAX Tube	1	S1MT250 S1MT500 S1MT750 S1MT1000 S1MT1250 S1MT1500
180-MAX Flange Coupling	1	S1MFC



89135700

Q

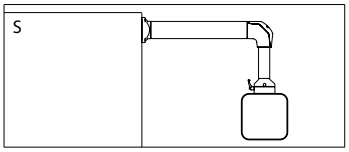
Description	Qty.	Catalog Number
281-MAX Set-up Joint	1	S2MSJ
281-MAX Tubes	2	S2MT250 S2MT500 S2MT750 S2MT1000 S2MT1250 S2MT1500 S2MT1750 S2MT2000
281-MAX Intermediate Joint	1	S2MIJ
281-MAX to 180-MAX Reduction Elbow	1	S1MRE
180-MAX Tube	1	S1MT250 S1MT500 S1MT750 S1MT1000 S1MT1250 S1MT1500
180-MAX Flange Coupling	1	S1MFC



89135701

R

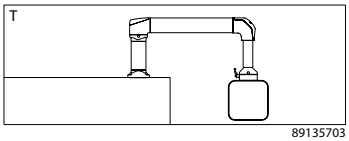
Description	Qty.	Catalog Number
281-MAX Horizontal Wall Joint	1	S2MWJH
281-MAX Tube	1	S2MT250 S2MT500 S2MT750 S2MT1000 S2MT1250 S2MT1500 S2MT1750 S2MT2000
281-MAX to 180-MAX Reduction Elbow	1	S1MRE
180-MAX Tube	1	S1MT250 S1MT500 S1MT750 S1MT1000 S1MT1250 S1MT1500
180-MAX Flange Coupling	1	S1MFC



89135702

S

Description	Qty.	Catalog Number
281-MAX Wall Flange	1	S2MWF
281-MAX Tube	1	S2MT250 S2MT500 S2MT750 S2MT1000 S2MT1250 S2MT1500 S2MT1750 S2MT2000
281-MAX to 180-MAX Reduction Elbow	1	S1MRE
180-MAX Tube	1	S1MT250 S1MT500 S1MT750 S1MT1000 S1MT1250 S1MT1500
180-MAX Flange Coupling	1	S1MFC



89135703

T

Description	Qty.	Catalog Number
281-MAX Wall Flange	1	S2MWF
281-MAX Rotatable Elbow	1	S2MER
281-MAX Tubes	2	S2MT250 S2MT500 S2MT750 S2MT1000 S2MT1250 S2MT1500 S2MT1750 S2MT2000
281-MAX to 180-MAX Reduction Elbow	1	S1MRE
180-MAX Tube	1	S1MT250 S1MT500 S1MT750 S1MT1000 S1MT1250 S1MT1500
180-MAX Flange Coupling	1	S1MFC

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SYSPEND 281-MAX SUSPENSION SYSTEM, TYPE 12

INDUSTRY STANDARDS

Maintains NEMA Type 12 and IEC IP55 enclosure rating when properly installed per Hoffman instructions.

APPLICATION

Variability in system configuration, advanced design and ease of assembly are key requirements when specifying an enclosure suspension system. The SYSPEND 281-MAX features a modern industrial design, excellent ergonomics and multiple component combinations for an innovative system solution on a modular platform. At 3.3 ft. (1 m) the system supports up to 281 lb. (127.7 kg). Recommended for use with CC2000, CC4000 and CONCEPT HMI enclosures.

FEATURES

- System supports up to 281 lb. and allows operators to easily move controls into and out of position
- Multiple modular components available to provide ergonomic, fatigue-free operation
- Clean lines and smooth transitions between tubes and system components provide attractive aesthetics and allow for ease of cleaning
- Tubing provides structural integrity and acts as equipment wiring conduit
- Vertical motion pedestal tubes provide versatile, height-adjustable solutions for pedestal mounting
- Secure attachment with sixfold positive connection between tubes and components along with recessed mounting areas in components; no additional safety drilling required
- Secure connections and easy adjustment of system alignment using tube setscrews, coated with LOCTITE, that seal threaded holes
- System design allows for user friendly readjustment at any time without disassembling the complete system
- Cable access covers available on all components
- Multiple tube lengths offer system design versatility
- Heavy-duty bearings in all movable joints for convenient, smooth operation and enhanced durability to withstand stresses of repeated use
- Variable torque adjustment available for all rotating components; general adjustment at the bearing with locking handle adjustment on enclosure couplings

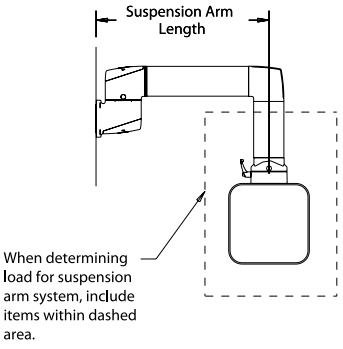
SPECIFICATIONS

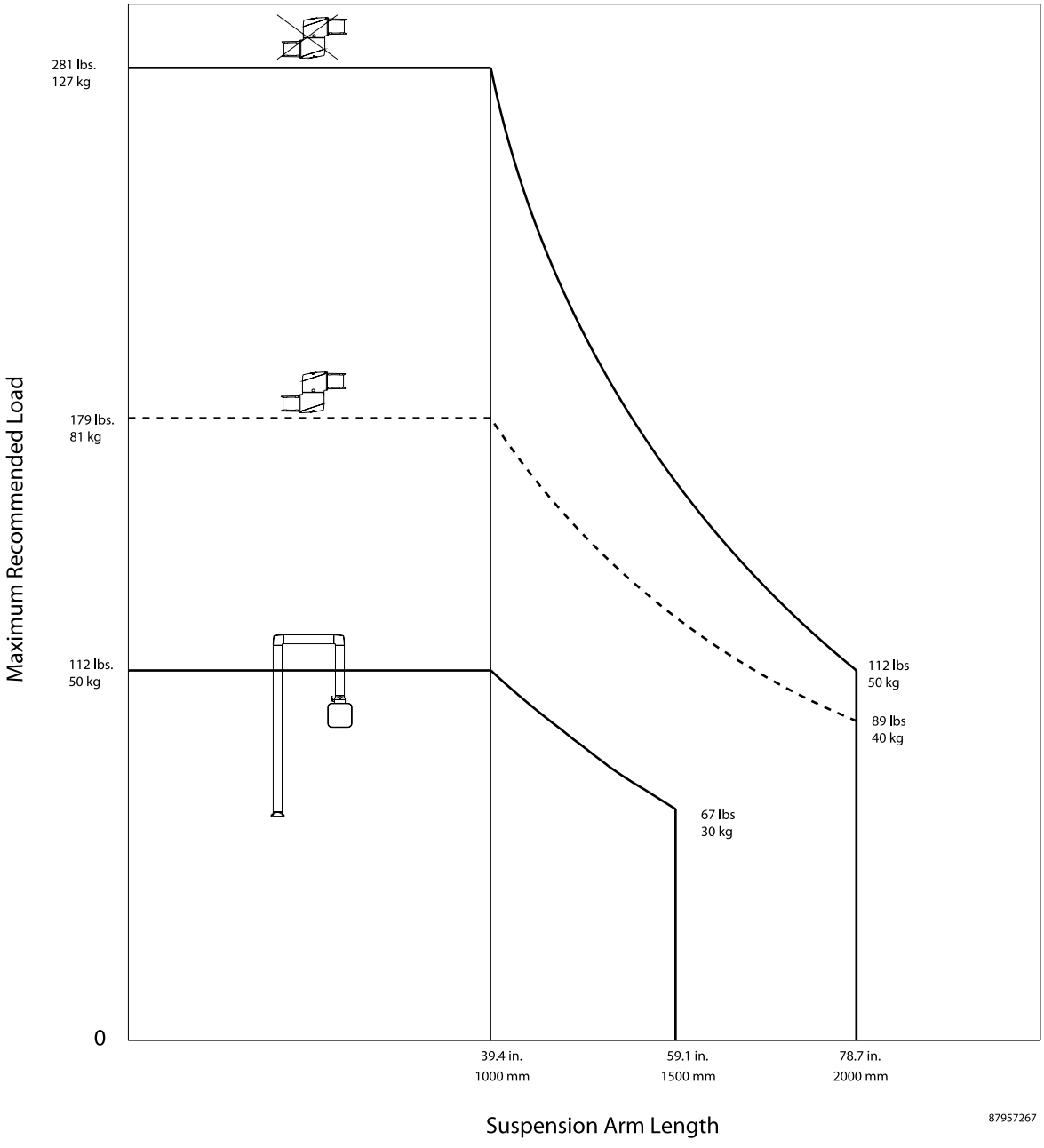
- Silver anodized aluminum tubes
- RAL 9005 black die-cast aluminum components
- Gray composite cable access covers
- Oil-resistant neoprene gaskets

SYSTEM LOAD CAPACITY

The SYSPEND 281-MAX load graph is the result of load capacity tests. Please contact Hoffman for specific application information.

Load Diagram





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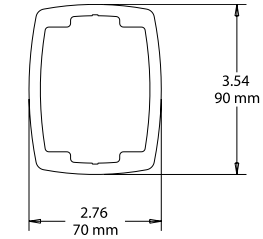
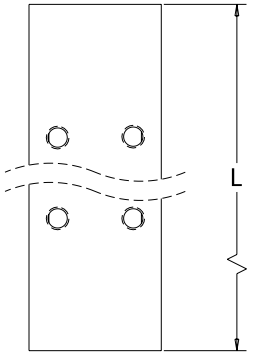
TUBES

Angled aluminum tubes provide structural integrity and act as conduit for equipment wiring. Tubes attach to system components with 6 setscrews on each end of the tube. (Setscrews are provided with the mating system components, not the tubes.) Setscrews allow for easy adjustment and leveling of the system. Setscrews are provided with LOCTITE to seal threaded holes and provide secure connections. Available in 8 standard lengths ranging from 250 mm to 2000 mm. Tubes 750 mm and longer include drilling template to assist with drilling and tapping the holes when the tube is cut to length.

BULLETIN: CS4

Catalog Number	L (mm)	L (in.)	Weight
S2MT250	250	9.84	2.8 lb.
S2MT500	500	19.68	5.4 lb.
S2MT750	750	29.53	8.2 lb.
S2MT1000	1000	39.37	11.0 lb.
S2MT1250	1250	49.21	13.7 lb.
S2MT1500	1500	59.05	16.5 lb.
S2MT1750	1750	68.90	19.3 lb.
S2MT2000	2000	78.74	22.0 lb.





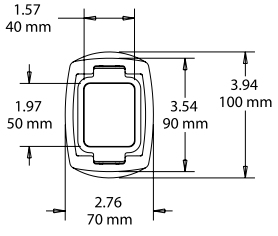
87955755

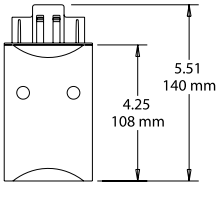
TUBE ADAPTER

Use a Tube Adapter when the tube is cut to length and it is not desirable to drill and tap new holes in the tube. Adapter attaches to the tube with internal setscrews and provides mounting holes at the end where the tube was cut. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gasket and hardware for attaching to the tube.

BULLETIN: CS4

Catalog Number	Weight
S2MTA	1.6 lb.



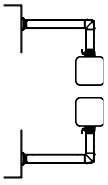


87955759

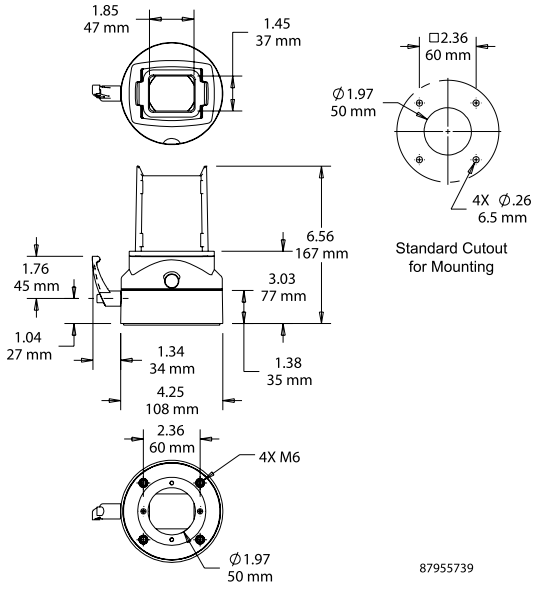
FLANGE COUPLING

Flange Coupling attaches a tube to the enclosure, enabling 300-degree enclosure rotation. Enclosure can be locked in position. Flange Coupling has safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gaskets, tube setscrews and enclosure mounting hardware.

BULLETIN: CS4



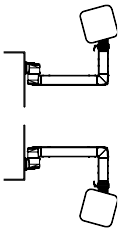
Catalog Number	Weight
S2MFC	3.2 lb.



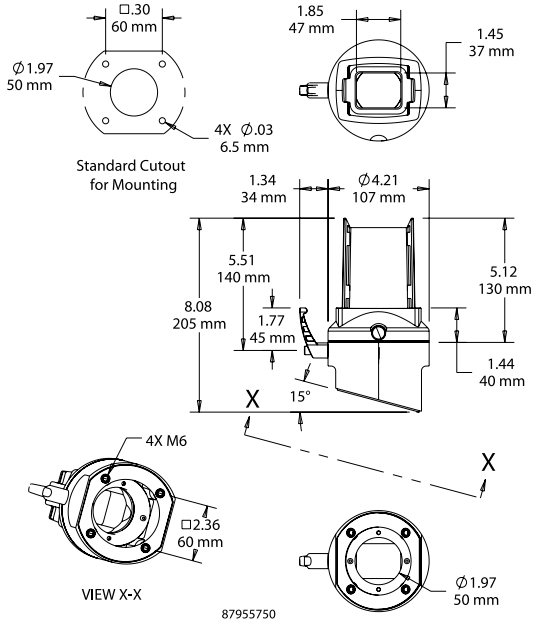
ANGLED COUPLING TILTED BACK

Use Angled Coupling Tilted Backward to mount enclosure at a 15-degree backward angle. Enclosure can be rotated 300 degrees and locked in position. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gaskets, tube setscrews and enclosure mounting hardware.

BULLETIN: CS4



Catalog Number	Weight
S2MACB	3.7 lb.



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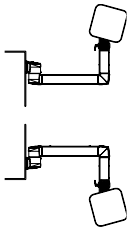
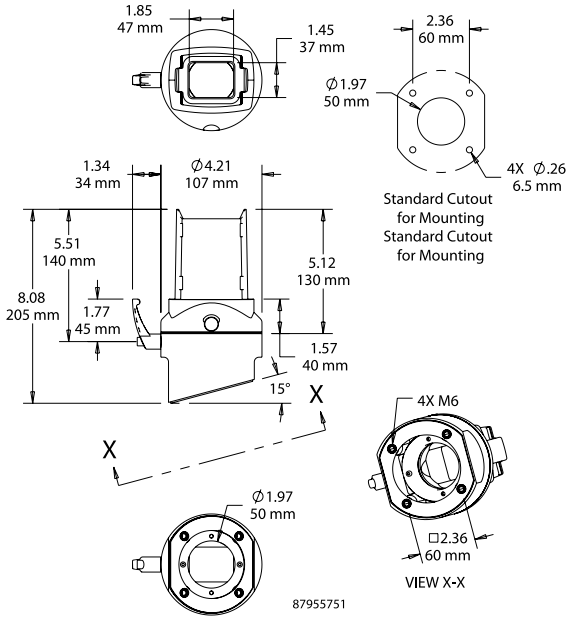
ANGLED COUPLING TILTED FORWARD

Use Angled Coupling Tilted Forward to mount enclosure at a 15-degree forward angle. Enclosure can be rotated 300 degrees and locked in position. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gaskets, tube setscrews and enclosure mounting hardware.

BULLETIN: CS4



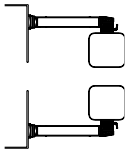
Catalog Number	Weight
S2MACF	3.7 lb.



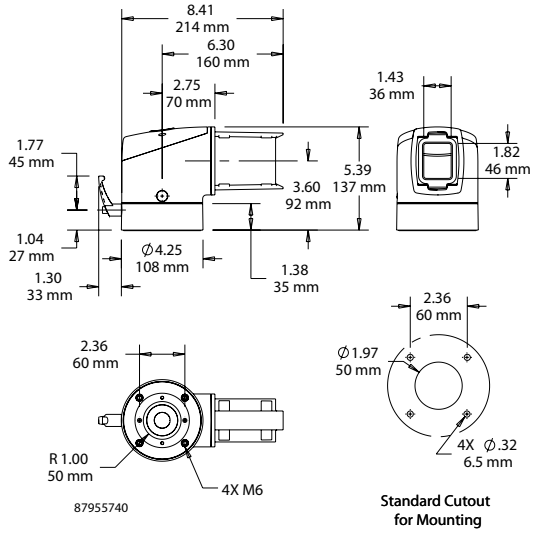
FLANGE ELBOW COUPLING

Flange Elbow Coupling attaches directly to the enclosure for applications where a vertical tube is not required. Enables enclosure to be rotated 300 degrees and locked in position. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes cable access cover, installation instructions, gaskets, tube setscrews and enclosure mounting hardware.

BULLETIN: CS4



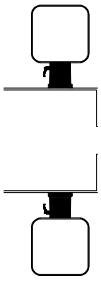
Catalog Number	Weight
S2MFEC	4.6 lb.



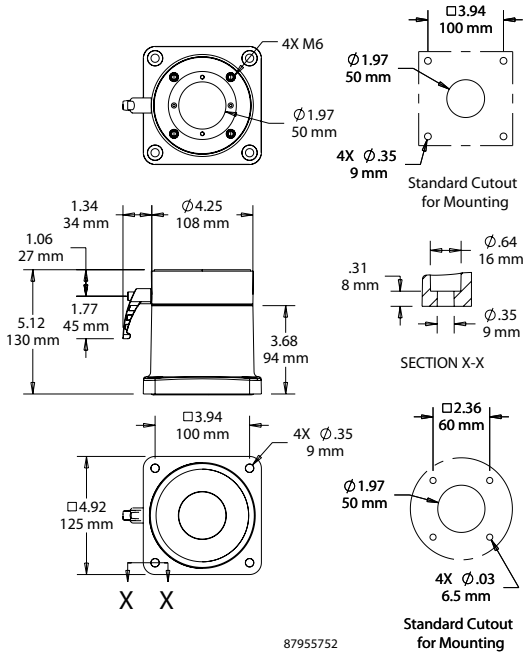
BASE COUPLING

Base Coupling attaches the enclosure directly to a horizontal surface. Enclosure can be rotated 300 degrees and locked in position. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gaskets and enclosure mounting hardware. Surface mounting hardware not provided.

BULLETIN: CS4



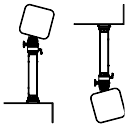
Catalog Number	Weight
S2MBC	4.7 lb.



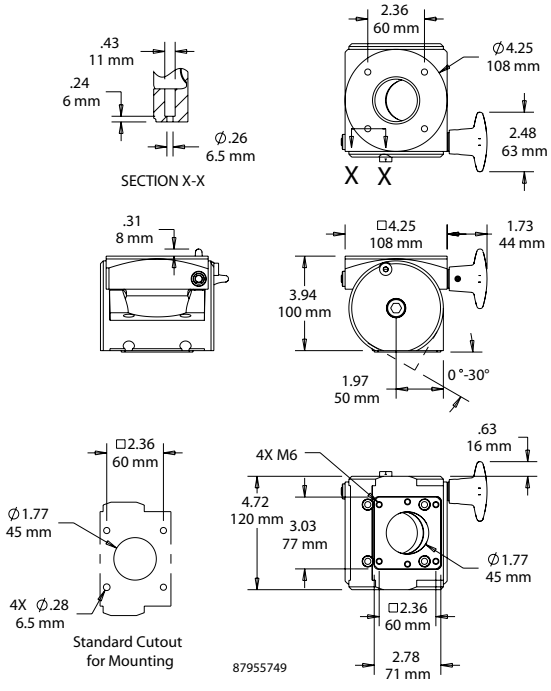
ANGLED ADAPTER, STEPLESS 30 DEGREES

Angled Adapter must be used in conjunction with a coupling (not compatible with S2MFC48). Enclosure angle can be adjusted forward or backward up to 30 degrees. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gasket and enclosure mounting hardware.
Maximum load bearing capacity is 67 lb. (30.4 kg).

BULLETIN: CS4



Catalog Number	Weight
S2MAA	4.1 lb.



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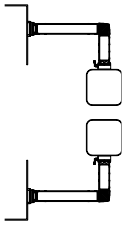
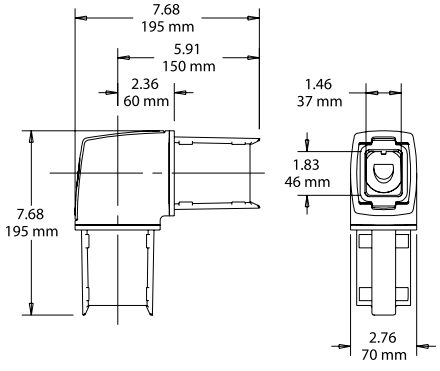
ELBOW

Elbow provides a 90-degree bend in the suspension system. RAL 9005 black finish. Die-cast aluminum construction. Includes removable cable access cover, installation instructions, gaskets and tube setscrews.

BULLETIN: CS4



Catalog Number	Weight
S2ME	3.7 lb.

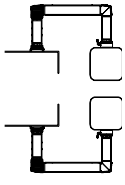


87955746

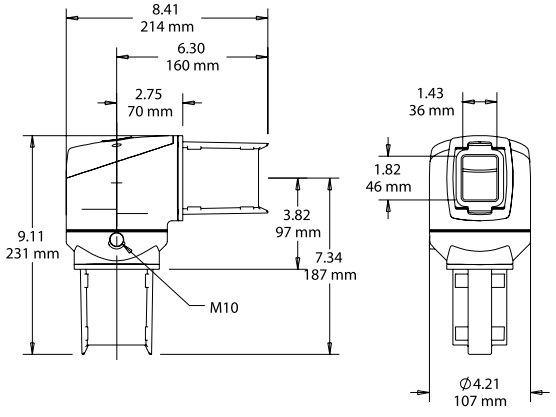
ROTATABLE ELBOW

Rotatable elbow provides a 90-degree bend in the suspension system and allows the vertical tube to rotate 300 degrees. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes removable cable access cover, installation instructions, gaskets and tube setscrews.

BULLETIN: CS4



Catalog Number	Weight
S2MER	5.4 lb.

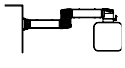


87955747

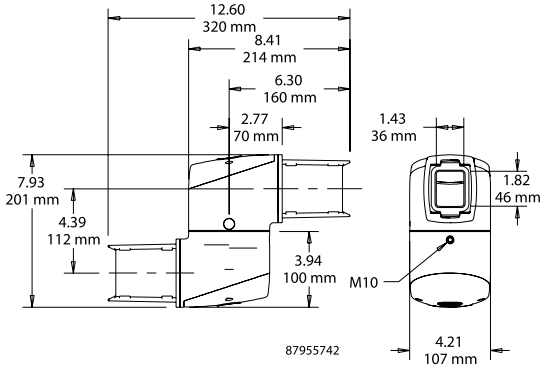
INTERMEDIATE JOINT

Use Intermediate Joint to join two horizontal tubes together for a longer run. Arm can be rotated or turned 300 degrees. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes two removable cable access covers, installation instructions, gaskets and tube setscrews.
Use of the Intermediate Joint reduces the system load capacity to 179 lb. (81.2 kg) at 3.3 ft. (1 m).

BULLETIN: CS4



Catalog Number	Weight
S2M1J	6.5 lb.

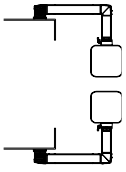


87955742

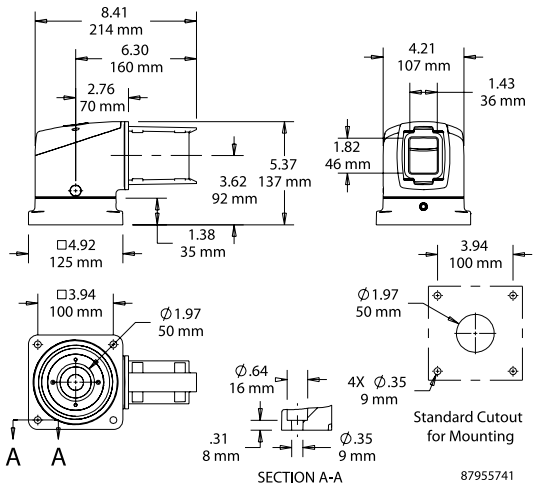
SET-UP JOINT

Set-Up Joint mounts suspension system to a horizontal surface. Arm can be rotated or turned 300 degrees. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes removable cable access cover, installation instructions, gaskets and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS4



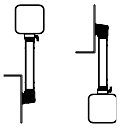
Catalog Number	Weight
S2MSJ	5.0 lb.



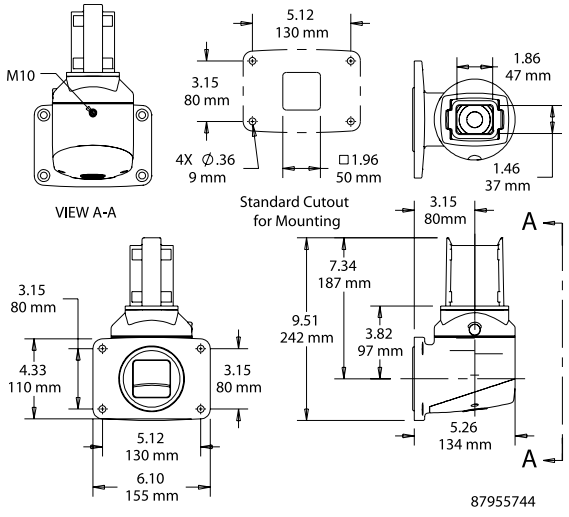
VERTICAL WALL JOINT

Vertical Wall Joint mounts suspension system to vertical surface and allows tube to extend vertically. Enables arm to be rotated or turned 300 degrees. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes removable cable access cover, installation instructions, gaskets and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS4



Catalog Number	Weight
S2MWJV	5.4 lb.



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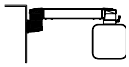
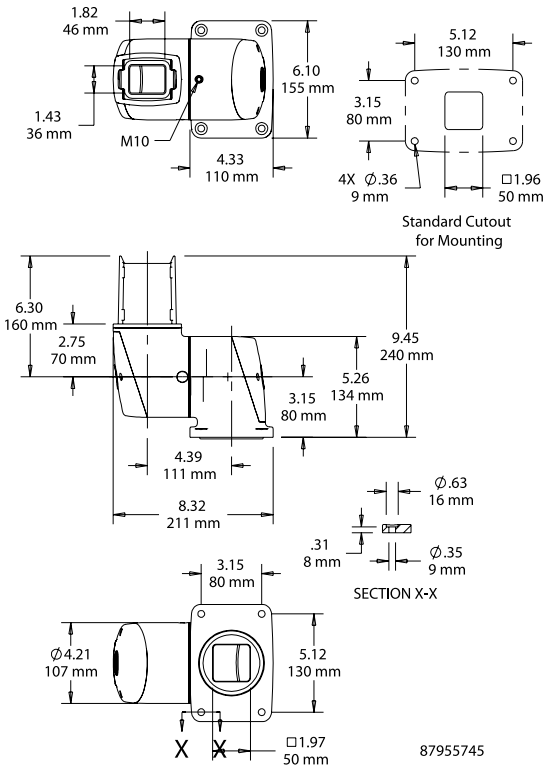
HORIZONTAL WALL JOINT

Horizontal Wall Joint mounts suspension system to vertical surface, allowing tube to extend horizontally. Arm can be rotated or turned 300 degrees. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes two removable cable access covers, installation instructions, gaskets and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS4



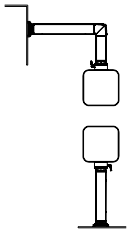
Catalog Number	Weight
S2MWJH	6.4 lb.



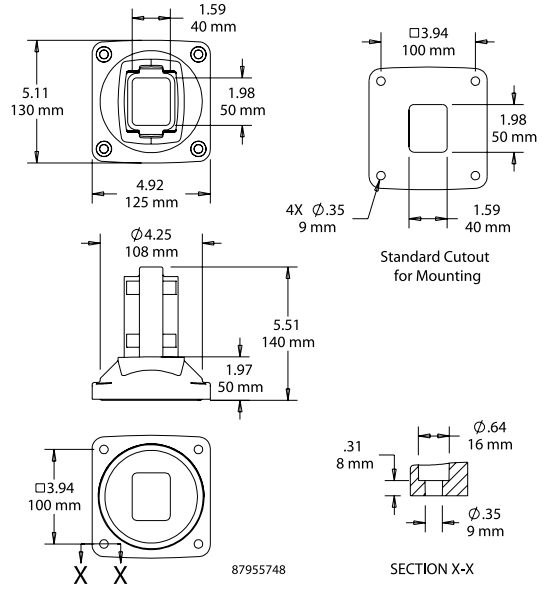
WALL FLANGE

Wall Flange allows for fixed positioning on a horizontal or vertical surface when rotation is not needed. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gaskets and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS4



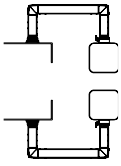
Catalog Number	Weight
S2MWF	2.8 lb.



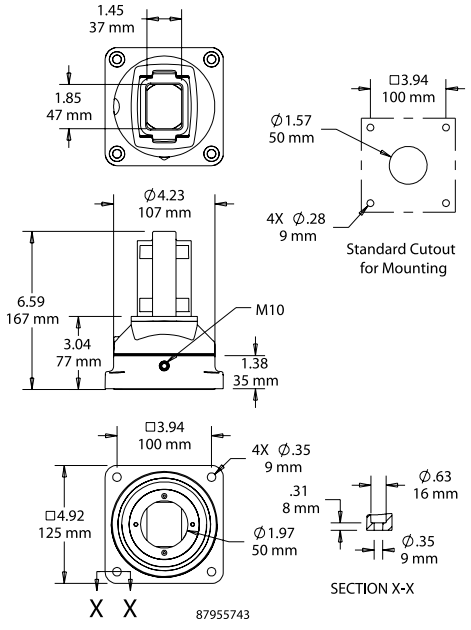
ROTARY BASE

Rotary Base allows the entire suspension system to rotate at the point of attachment on a horizontal surface. Arm can be rotated or turned 300 degrees. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gaskets and tube setscrews. Surface mounting hardware not provided.

BULLETIN: CS4



Catalog Number	Weight
S2MRB	3.9 lb.



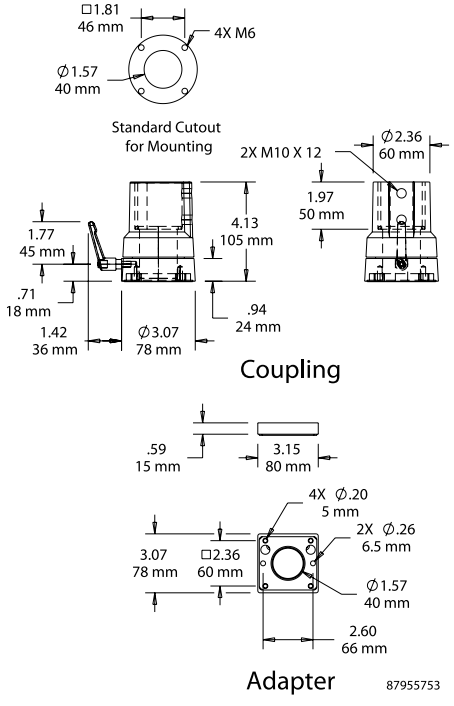
48-MM ROUND TUBE FLANGE COUPLING AND ADAPTER

Use Flange Coupling to attach the Vertical Motion Pedestal Tube to the enclosure. Enclosure can be rotated 300 degrees and locked in position. Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gaskets and enclosure mounting hardware.

Coupling attaches to enclosure using a 48 x 48-mm hole pattern. An adapter is required to attach the coupling to a standard Hoffman HMI enclosure that uses a 60 x 60-mm hole pattern (i.e., required for attaching to CONCEPT HMI, CC2000, CC4000). Includes safety stop and maintenance-free bearing. RAL 9005 black finish. Die-cast aluminum construction. Includes installation instructions, gaskets and enclosure mounting hardware.

BULLETIN: CS4

Catalog Number	Description	Weight
S2MFC48	Flange Coupling (Requires use of S2MA48 for enclosure with 60 x 60-mm hole pattern)	3.9 lb.
S2MA48	Adapter	0.2 lb.



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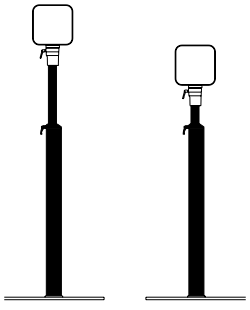
VERTICAL MOTION PEDESTAL TUBES

Height-adjustable tubes allow enclosure to be positioned at the optimal viewing height for different operators. Requires the 48-mm Round Tube Flange Coupling (S2MFC48) and Adapter (S2MA48) for attachment to Hoffman enclosures with a 60 x 60-mm hole pattern (i.e., required for attaching to CONCEPT HMI, CC2000, CC4000).

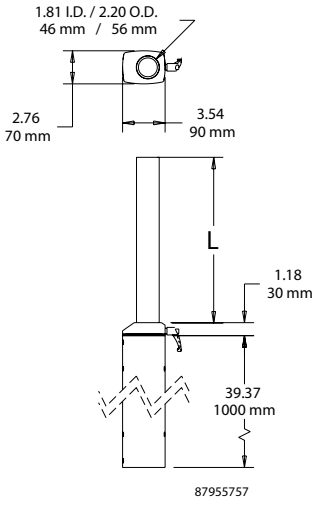
- Adjustable from 1130 mm (44.49 in.) to 1380 mm (54.33 in.) with internal gas springs
- Four models support loads ranging from 11 to 77 lb. (4.9 to 34.9 kg)
- Height is fixed in place at any position by locking handle
- Cables are separated from gas springs inside the tube
- Internal strain-relief for cables inside the tube
- Can be attached to Small Pedestal Base, Large Pedestal Base, Vertical Wall Joint, Wall Flange, Rotary Base, Elbow or Rotatable Elbow
- Aluminum construction

Tube cannot be inverted for overhead mounting on the enclosure.
The weight of the coupling, adapter plate, enclosure and internal components must be factored into the load when selecting a tube.

BULLETIN: CS4



Catalog Number	L Max. mm/in.	L Min. mm/in.	Load Capacity	Weight
S2M10VP22	350 13.78	100 3.94	11-22 lb.	15.5 lb.
S2M10VP37	350 13.78	100 3.94	22-37 lb.	15.5 lb.
S2M10VP57	350 13.78	100 3.94	37-57 lb.	15.5 lb.
S2M10VP77	350 13.78	100 3.94	57-77 lb.	15.5 lb.

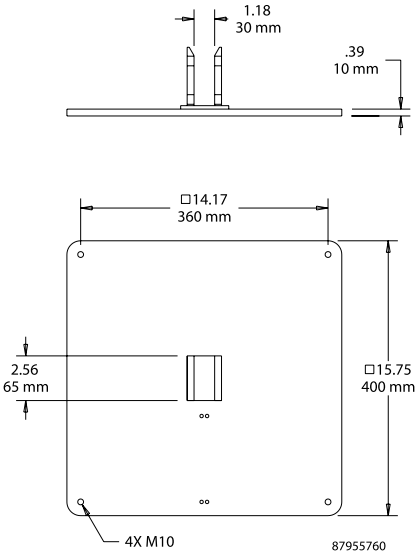


SMALL PEDESTAL BASE

Tubes attach directly to Small Pedestal Base. RAL 9005 black finish. Constructed from 3/8-in. thick steel plate. Includes installation instructions, cable ties and tube setscrews. Surface mounting hardware not provided. Compatible with accessory casters and levelers.
Supports loads per Load Rating Graph.

BULLETIN: CS4

Catalog Number	Weight
S2MPBS	29.1 lb.

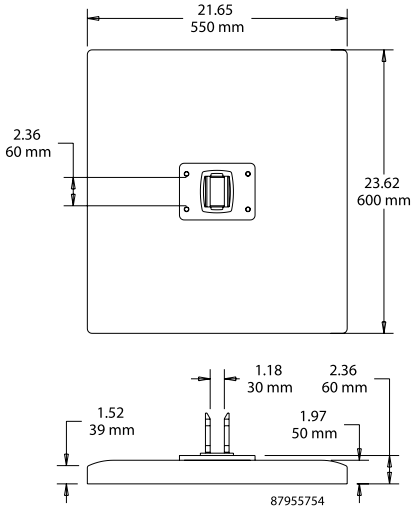


LARGE PEDESTAL BASE

Tubes attach directly to Large Pedestal Base. RAL 9005 black finish. Cast aluminum construction. Includes installation instructions and tube setscrews. Surface mounting hardware not provided. Compatible with accessory casters, levelers and bolt-down kit.
Supports loads per Load Rating Graph.

BULLETIN: CS4

Catalog Number	Weight
S2MPBL	25.7 lb.



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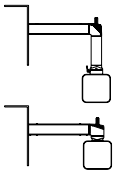
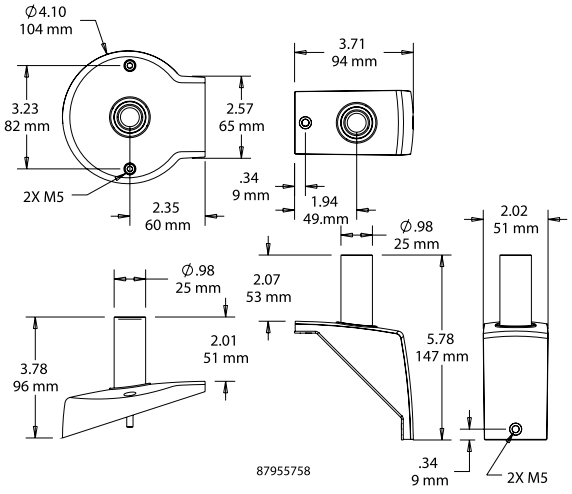
LIGHT SIGNAL ADAPTERS

Light Signal Adapters are available in either round or elbow cover versions and provide a means for attaching signal lights. Signal lights are not included. Gray composite cover caps include a gasket, attachment hardware and post and replace the caps provided with other system components.

BULLETIN: CS4



Catalog Number	Description	Weight
S2MLSAR	Round Cover	0.3 lb.
S2MLSAE	Rectangular Cover	0.3 lb.



ROTATION LIMITERS

Rotation limiters can be retro-fit on coupling and joint components and are adjustable in increments of 13.7 degrees. Limits rotation of couplings and joints which nornally rotate 300 degrees. Kit includes ten steel balls, plug and installation instructions.

BULLETIN: CS4

Catalog Number	Weight
S2MRL	0.1 lb.

TUBE HOLE PLUGS

Plastic hole plugs cover up the set screws in the tubes. Kit includes 50 hole plugs. Hole plugs are not needed to maintain the suspension system's NEMA Type 12 rating but provide an attractive smooth finish for the tube. Gray RAL 9006 color.

BULLETIN: CS4

Catalog Number
S2MTHP

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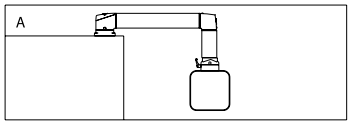
SYSTEM CONFIGURATIONS

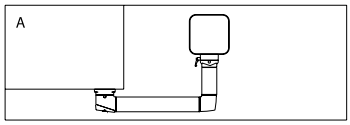
Note to Specifier:

Select suspension system sizing using the SYSPEND 281-MAX load capacity chart.

1. Tube catalog numbers are not included in configuration tables.
2. There are multiple configurations possible with many of the options shown. Components can be inverted in all cases except for Vertical Motion Pedestal Tube. For illustration purposes, configuration A shows how components can be inverted or used with varying enclosure couplings.
3. When using Vertical Motion Pedestal the overall system load is limited to load capacity of Vertical Motion Pedestal.
4. No tube section used vertically should exceed 59.05 inches (1500 mm).



87956903



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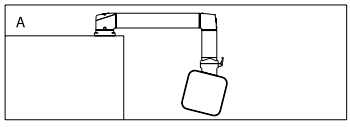

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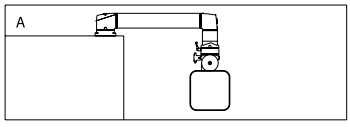
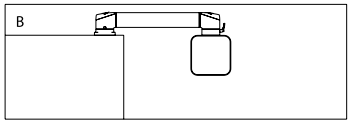


87956964

A

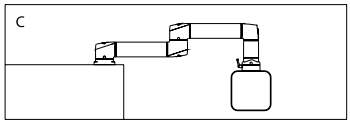
Description	Qty.	Catalog Number
Set-Up joint	1	S2MSJ
Elbow	1	S2ME
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA



87956965

B

Description	Qty.	Catalog Number
Set-Up joint	1	S2MSJ
Flange Elbow Coupling	1	S2MFEC
For tilt, add Angled Adapter to coupling	1	S2MAA

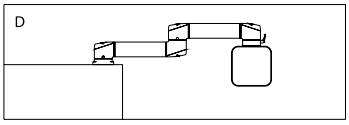


87956966

C

Description	Qty.	Catalog Number
Set-Up joint	1	S2MSJ
Intermediate Joint	1	s2mij
Elbow	1	s2me
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

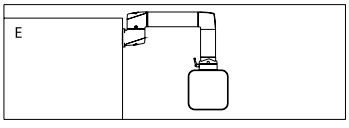
D



87956967

Description	Qty.	Catalog Number
Set-Up joint	1	S2MSJ
Intermediate Joint	1	S2MIJ
Flange Elbow Coupling	1	S2MFEC
For tilt, add Angled Adapter to coupling	1	S2MAA

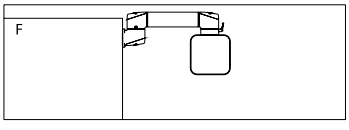
E



87956969

Description	Qty.	Catalog Number
Wall Joint, Horizontal	1	S2MWJH
Elbow	1	S2ME
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

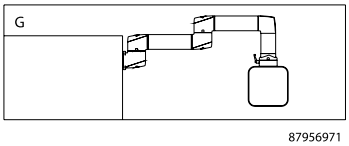
F



87956970

Description	Qty.	Catalog Number
Wall Joint, Horizontal	1	S2MWJH
Flange Elbow Coupling	1	S2MFEC
For tilt, add Angled Adapter to coupling	1	S2MAA

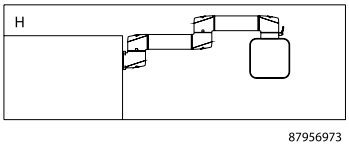
G



87956971

Description	Qty.	Catalog Number
Wall Joint, Horizontal	1	S2MWJH
Intermediate Joint	1	S2MIJ
Elbow	1	S2ME
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

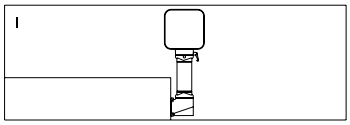
H



87956973

Description	Qty.	Catalog Number
Wall Joint, Horizontal	1	S2MWJH
Intermediate Joint	1	S2MIJ
Flange Elbow Coupling	1	S2MFEC
For tilt, add Angled Adapter to coupling	1	S2MAA

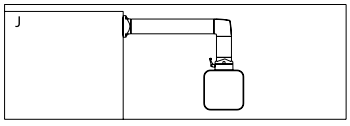
I



87956974

Description	Qty.	Catalog Number
Wall Joint, Vertical	1	S2MWJV
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

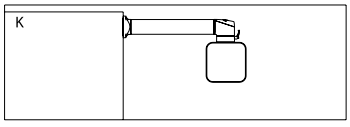
J



87956975

Description	Qty.	Catalog Number
Wall Flange	1	S2MWF
Elbow	1	S2ME
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

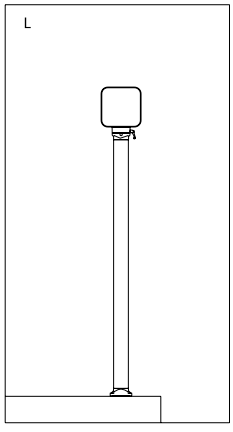
K



87956976

Description	Qty.	Catalog Number
Wall Flange	1	S2MWF
Flange Elbow Coupling	1	S2MFEC
For tilt, add Angled Adapter to coupling	1	S2MAA

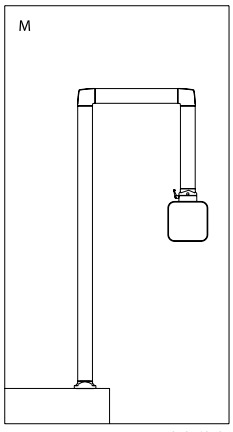
L



87956977

Description	Qty.	Catalog Number
Wall Flange	1	S2MWF
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

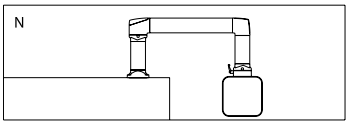
M



87956979

Description	Qty.	Catalog Number
Wall Flange	1	S2MWF
Elbow	2	S2ME
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

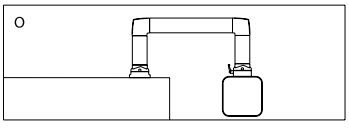
N



87956980

Description	Qty.	Catalog Number
Wall Flange	1	S2MWF
Rotary Elbow	1	S2MER
Elbow	1	S2ME
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

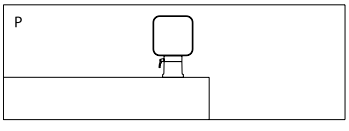
O



87956981

Description	Qty.	Catalog Number
Rotary Base	1	S2MRB
Elbow	2	S2ME
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

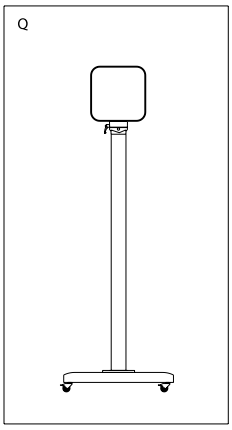
P



87956982

Description	Qty.	Catalog Number
Base Coupling	1	S1MBC
For tilt, add Angled Adapter to coupling	1	S2MAA

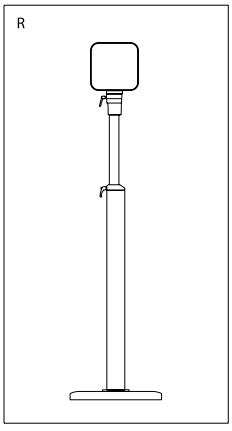
Q



87956983

Description	Qty.	Catalog Number
Large Pedestal Base or Small Pedestal Base	1 1	S2MPBL S2MPBS
Swivel Casters for Pedestal Base	1	CPCC4SC
Flange Coupling or Angled Coupling (Tilted Back) or Angled Coupling (Tilted Forward)	1 1 1	S2MFC S2MACB S2MACF
For tilt, add Angled Adapter to coupling	1	S2MAA

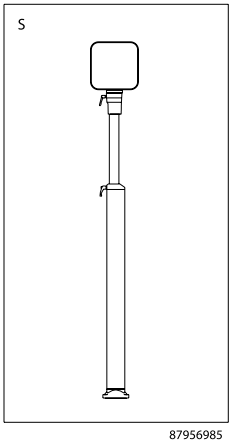
R



87956984

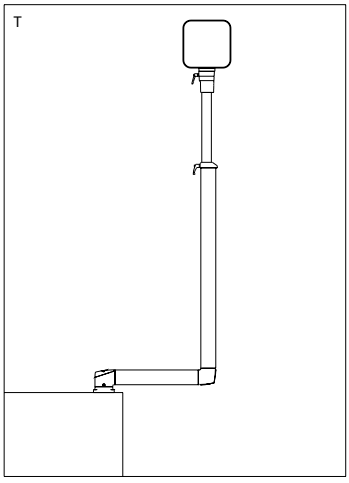
Description	Qty.	Catalog Number
Large Pedestal Base or Small Pedestal Base	1 1	S2MPBL S2MPBS
Flange Coupling, 48-mm Round Tube	1	S2MFC48
Adapter, 48-mm Round Tube	1	S2MA48

S



87956985

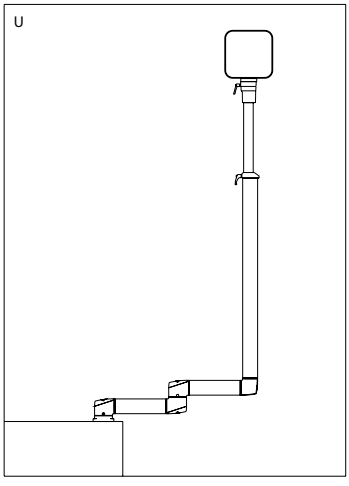
Description	Qty.	Catalog Number
Wall Flange	1	S2MWF
Flange Coupling, 48-mm Round Tube	1	S2MFC48
Adapter, 48-mm Round Tube	1	S2MA48



89104512

T

Description	Qty.	Catalog Number
Set-Up Joint	1	S2MSJ
Elbow	1	S2ME
Flange Coupling, 48mm Round Tube	1	S2MFC48
Adapter, 48mm Round Tube	1	S2MA48



89104513

U

Description	Qty.	Catalog Number
Set-Up Joint	1	S2MSJ
Intermediate Joint	1	S2MIJ
Flange Coupling, 48mm Round Tube	1	S2MFC48
Adapter, 48mm Round Tube	1	S2MA48

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COMPACT PENDANT ARM SERIES 4 SYSTEM 80, TYPE 12

SPECIFICATIONS

- Heavy cast steel and cast aluminum couplings and heavy-wall steel tubing provide excellent structural strength
- Each system includes multiple coupling types and three standard tube lengths (.5 m, 1 m and 2 m) which combine to form numerous configurations
- Steel tubing has 5-mm (0.2-inch) wall thickness. Tubing is cold-formed, welded square and rectangular steel tubes.
- Tubing provides structural integrity and acts as a conduit for equipment wiring
- Removable access plates (provided with set-up joint, elbow and elbow couplings) simplify cable installation inside tubing
- Heavy-duty bearings in all movable joints for convenient, smooth operation and enhanced durability to withstand stresses of repeated use
- Deep tube fittings in all couplings
- Adjustable setscrews allow for accurate alignment of supporting tubes
- Optional pedestal base available
- Gasket is oil-resistant neoprene

INDUSTRY STANDARDS

NEMA/EEMAC Type 12
IEC 60529, IP55
DIN 40050

APPLICATION

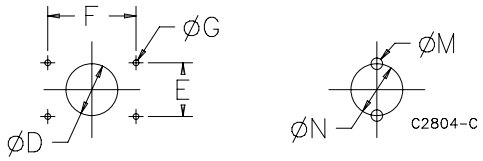
A heftier version of the Series 2 Pendant Arm, the COMPACT Series 4 System 80 Pendant Arms are equally flexible in allowing operators to move controls into and out of position, but they can accommodate heavier weight loads. At 3.3 ft. (1 m), the Series 4 System 80 holds 337 lb. (153.2 kg).

System 80 is recommended for use with CONCEPT HMI and PROLINE Sloped Front Enclosures.

FINISH

Couplings are RAL 7035 light-gray polyester powder paint. Access plates and tubing are light-gray. Bellows are black.

Standard Cutouts for Mounting



Standard Coupling or Standard Elbow Coupling

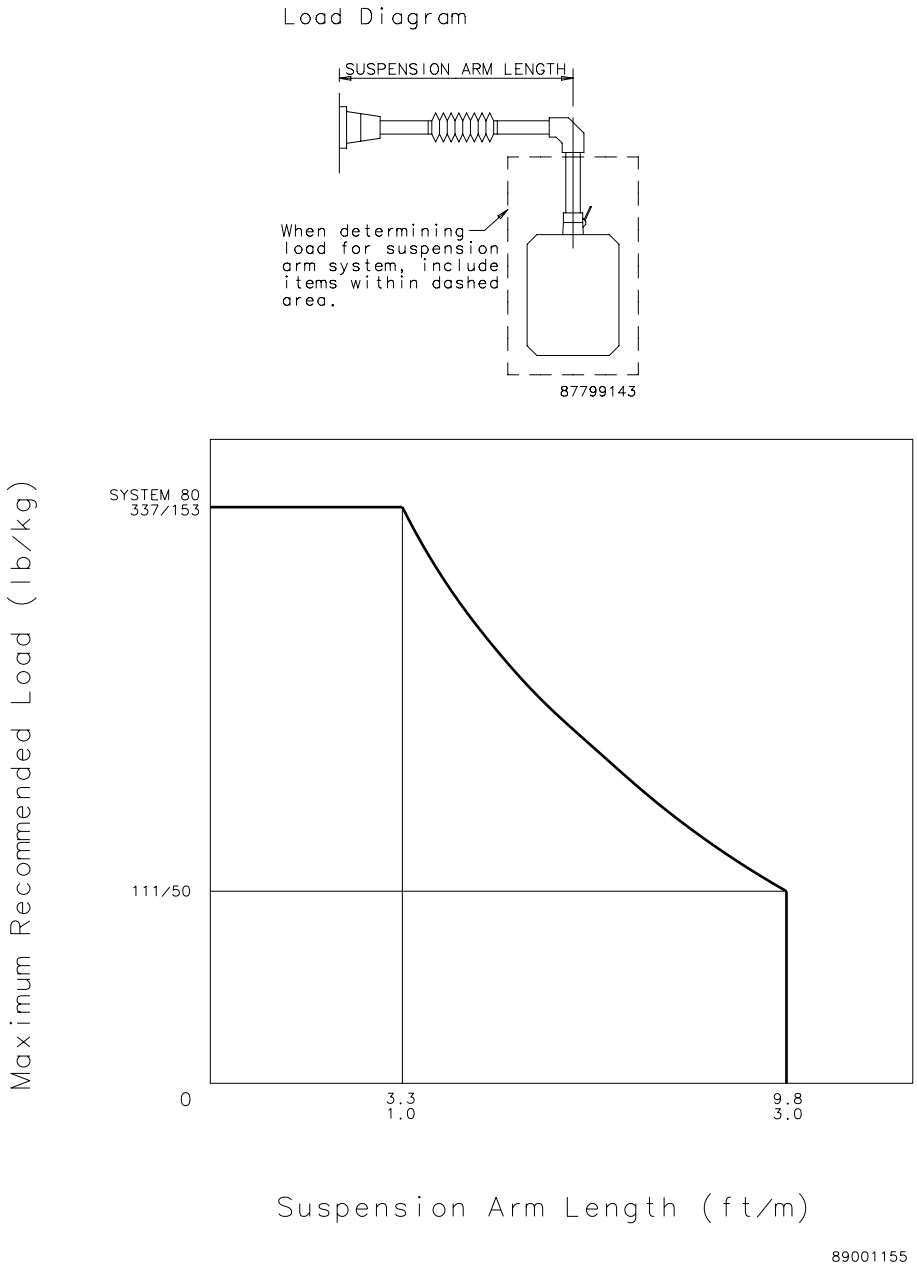
System	Dia. M (mm)	Dia. M (in.)	Dia. N (mm)	Dia. N (in.)
50	8	0.33	51	2.01

Dimensions for Cutouts

System	50 (mm)	50 (in.)	60 (mm)	60 (in.)	80 (mm)	80 (in.)
Set-Up Joint						
Ø D MAX	70	2.75	70	2.75	105	4.13
E	88	3.47	97	3.82	122	4.82
F	88	3.47	97	3.82	122	4.82
Ø G	11	0.43	11	0.43	13	0.51
Wall Joint or Cable Wall Joint						
Ø D MAX	50	1.97	60	2.36	80	3.15
E	50	1.97	60	2.36	80	3.15
F	107	4.21	115	4.53	138	5.43
Ø G	10	0.41	10	0.41	13	0.51
Wall Flange or Base Bracket						
Ø D MAX	70	2.75	70	2.75	105	4.13
E	88	3.47	93	3.66	122	4.80
F	88	3.47	93	3.66	122	4.80
Ø G	11	0.43	11	0.43	13	0.51
Flange Coupling or Flange Elbow Coupling						
Ø D MAX	51	2.01	65	2.56	91	3.58
E	60	2.36	60	2.36	80	3.15
F	60	2.36	60	2.36	80	3.15
Ø G	7	0.26	7	0.26	7	0.26
Angle Adapter Plate						
Ø D MAX	51	2.01	65	2.56	91	3.58
E	80	3.15	80	3.15	80	3.15
F	120	4.72	120	4.72	120	4.72
Ø G	7	0.26	7	0.26	7	0.26

SYSTEM LOAD CAPACITY

The Series 4 Pendant Arm load graph is the result of load capacity tests. Please contact Hoffman for specific application information.



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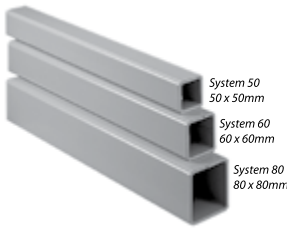
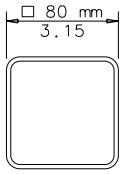
TUBES



Square and rectangular tubes are cold-formed, hollow, welded steel with 5-mm wall thickness. Finish is RAL 7035 light-gray polyester powder paint.
Tubing provides structural integrity and acts as a conduit for equipment wiring. Available in 500-, 1000- and 2000-mm lengths. All pendant arm connections are sized to fit appropriate tube sizes.

BULLETIN: CS4



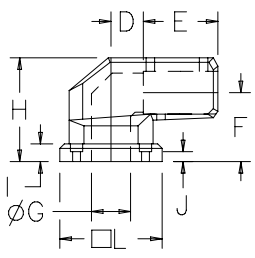
87799136

Catalog Number	System	Size mm/in.	Actual Length mm/in.	Weight (lb.)	External Dimensions mm/in.	Wall Thickness Dimensions mm/in.	Inside Cross Section (sq. cm)	Inside Cross Section (sq. in.)
CCS8T5	80	80 x 80 3.10 x 3.10	489 19.25	13.0	80 sq. 3.15	5 0.20	49	7.60
CCS8T10	80	80 x 80 3.10 x 3.10	991 39.00	24.5	80 sq. 3.15	5 0.20	49	7.60
CCS8T20	80	80 x 80 3.10 x 3.10	1988 78.25	49.0	80 sq. 3.15	5 0.20	49	7.60

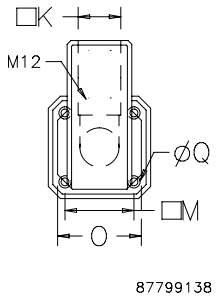
SET-UP JOINT

Cast iron finished with RAL 7035 light-gray polyester powder paint. Mounts equipment to horizontal surface. Permits pendant arm to be rotated or turned 306 degrees. Pivot bearing is maintenance-free. Setscrews, removable access plate and gasket are included. Mounting hardware is not provided.

BULLETIN: CS4



Side View



87799138

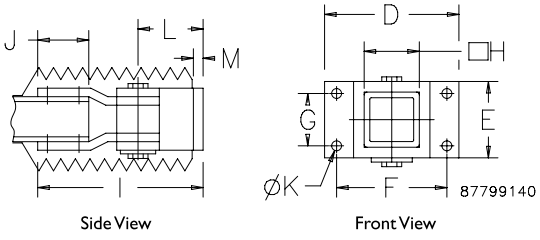
Top View

Catalog Number	System	L each side mm/in.	H mm/in.	D mm/in.	E mm/in.	F mm/in.	Dia. G mm/in.	I mm/in.	J mm/in.	K each side mm/in.	M each side mm/in.	O mm/in.	Dia. Q mm/in.	Weight (lb.)
CCS8SJLG	80	174 6.85	162 6.38	56 2.19	120 4.72	107 4.21	75 2.95	25 0.98	12 0.47	80 3.15	122 4.80	152 5.98	13 0.51	45.5

WALL JOINT

Welded steel plate construction finished with RAL 7035 light-gray polyester powder paint. Mounts equipment to vertical surface. Swivel range is approximately 180 degrees.
Includes bellows with zipper, seals and setscrews. Adjustable tension at pivot point. Rotational limiter is optional. Mounting hardware not provided.

BULLETIN: CS4

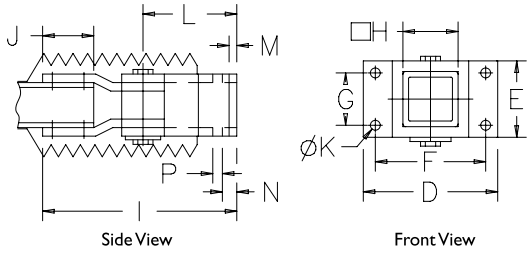


Catalog Number	System	D mm/in.	E mm/in.	F mm/in.	G mm/in.	H each side mm/in.	I mm/in.	J mm/in.	Dia. K mm/in.	L mm/in.	M mm/in.	Weight (lb.)
CCS8WJRLG	80	161	104	138	80	80	300	100	13	135	10	21.6
		6.34	4.09	5.43	3.15	3.15	11.81	3.94	0.51	5.31	0.39	

CABLE WALL JOINT

Welded steel plate construction finished with RAL 7035 light-gray polyester powder paint. Mounts equipment to vertical surface. Provides cable access to inside of pendant system from above or below. Swivel range approximately 180 degrees. Includes bellows with zipper, seal and setscrews. Adjustable tension at pivot point. Rotation limiter is optional. Mounting hardware not provided.

BULLETIN: CS4

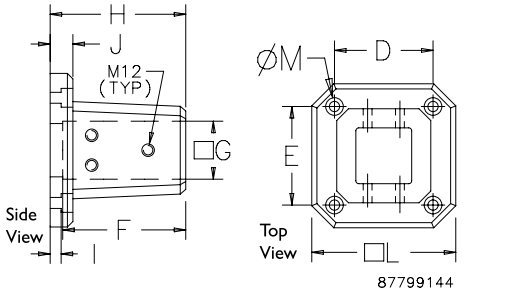


Catalog Number	System	D mm/in.	E mm/in.	F mm/in.	G mm/in.	H each side mm/in.	I mm/in.	J mm/in.	Dia. K mm/in.	L mm/in.	M mm/in.	N mm/in.	P mm/in.	Weight (lb.)
CCS8WJCRLG	80	165	104	138	80	80	330	100	13	165	10	20	60	20.9
		6.50	4.09	5.43	3.15	3.15	12.99	3.94	0.51	6.50	0.39	0.79	2.36	

WALL FLANGE

Wall Flange expands mounting options to include wall-mount as well as horizontal tube applications. Cast iron construction finished with RAL 7035 light-gray polyester powder paint. Setscrews, gasket and seals are included. Mounting hardware not provided.

BULLETIN: CS4



Catalog Number	System	L each side mm/in.	H mm/in.	D mm/in.	E mm/in.	F mm/in.	G each side mm/in.	I mm/in.	J mm/in.	Dia. M mm/in.	Weight (lb.)
CCS8WFLG	80	174	160	122	122	143	80	12	25	13	20.1
		6.85	6.30	4.80	4.80	5.63	3.15	0.47	0.98	0.51	

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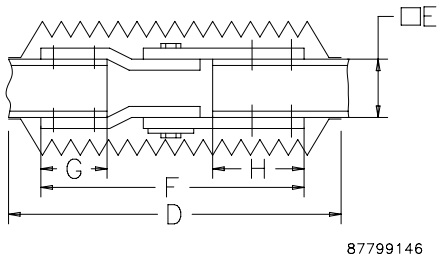
INTERMEDIATE JOINT

Welded steel plate construction finished with RAL 7035 light-gray polyester powder paint. Mounts to pendant tube. Swivel range is approximately 180 degrees. Setscrews and bellows with zipper are included. Rotational limiter is optional.

BULLETIN: CS4

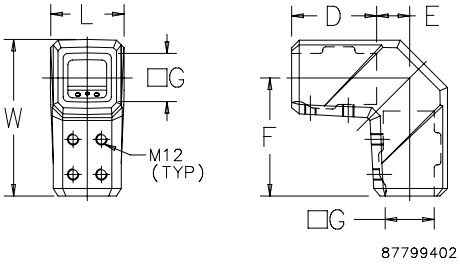


Catalog Number	System	D mm/in.	E each side mm/in.	F mm/in.	G mm/in.	H mm/in.	Weight (lb.)
CCS8IJRLG	80	400	80	330	100	100	21.4
		15.75	3.15	12.99	3.94	3.94	

ELBOW

Cast aluminum with RAL 7035 light-gray polyester powder paint finish. Removable access plate. Setscrews and gaskets are included.

BULLETIN: CS4

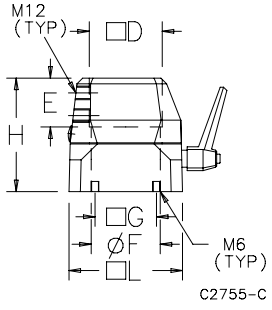


Catalog Number	System	L mm/in.	W mm/in.	D mm/in.	E mm/in.	F mm/in.	G each side mm/in.	Weight (lb.)
CCS8ELLG	80	108	225	120	50	170	80	18.7
		4.25	8.86	4.72	1.97	6.69	3.15	

FLANGE COUPLING

Flange Coupling mounts to enclosure, enabling enclosure to be rotated 300 degrees. Enclosure can be locked in position. Safety stop and maintenance-free bearing. Finish is RAL 7035 light-gray polyester powder paint. Includes installation instructions, setscrews, gaskets and mounting hardware.

BULLETIN: CS4

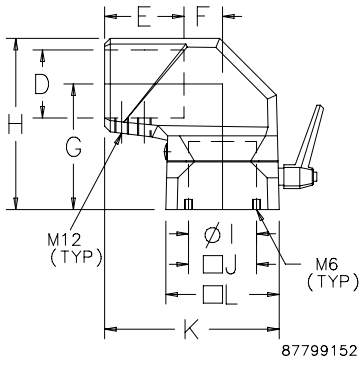


Catalog Number	System	L each side mm/in.	H mm/in.	D each side mm/in.	E mm/in.	Dia. F mm/in.	G each side mm/in.	Weight (lb.)
CCS8FCLG	80	120	110	80	53	91	80	7.2
		4.72	4.33	3.15	2.09	3.58	3.15	

FLANGE ELBOW COUPLING

Coupling mounts to enclosure, enabling enclosure to be rotated 300 degrees. Enclosure can be locked in position. Removable access plates. Finish is RAL 7035 light-gray polyester powder paint. Setscrews, gasket and mounting hardware are included.

BULLETIN: CS4



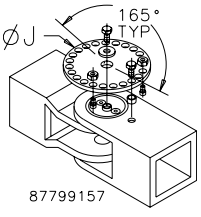
Catalog Number	System	L each side mm/in.	H mm/in.	D each side mm/in.	E mm/in.	F mm/in.	G mm/in.	Dia. I mm/in.	J each side mm/in.	K mm/in.	Weight (lb.)
CCS8FECLG	80	120 4.72	173 6.81	80 3.15	90 3.54	54 2.13	121 4.76	91 3.58	80 3.15	204 8.03	9.5

ROTATION LIMITER

Accessory for use with Wall Joint, Cable Wall Joint and Intermediate Joint. Limits the rotation of these joints which normally rotate 180 degrees. Rotation Limiter provides stops in 15-degree increments. The limiter is a heavy-duty steel disk that attaches to the pivot point on each joint. Moveable stop pins provide adjustment.

BULLETIN: CS4

Catalog Number	System	Dia. J (mm)	Dia. J (in.)	Weight (lb.)
CCS814RL	80	119	4.70	1.3



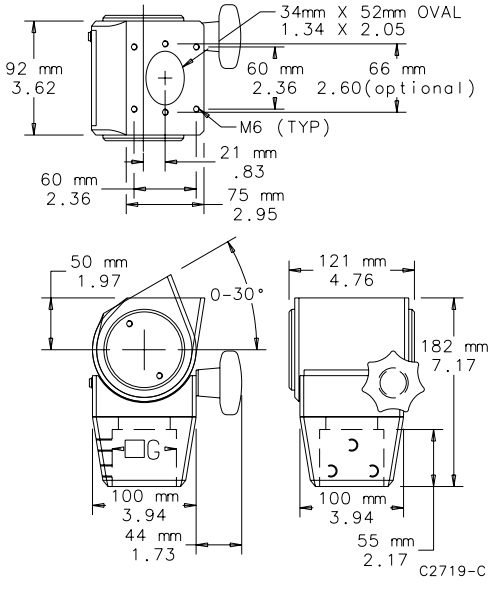
SWIVEL TILT

Mounts between suspension arm and HMI enclosure to provide both swivel and tilt options for machine operator. Cast aluminum assembly finished with RAL 7035 light-gray polyester powder paint. Center opening for control cables. Tilt knob allows infinite tilt adjustment from horizontal to 30 degrees. Swivel allows 300-degree maximum rotation. Setscrews, seals and enclosure mounting screws are included.
Maximum load for overhead applications is 110 lb. (50 kg).

BULLETIN: CS4

Catalog Number	System	G (mm) each side	G (in.) each side	Weight (lb.)
CCS8STBLG				

Not recommended to be used in combination with base with cutout for sloped-front PBSK66 or PBSK66SS.



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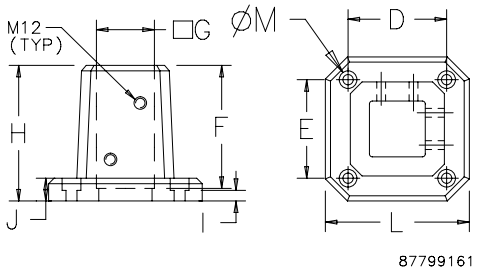
BASE BRACKET

For vertical-tube mounting or to mount tube to floor. Bracket is cast iron finished with RAL 7035 light-gray polyester powder paint. Setscrews, gasket and seals are included. Mounting hardware not provided.

BULLETIN: CS4



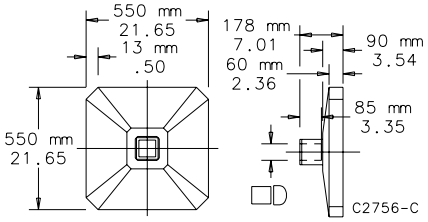
Catalog Number	System	L each side mm/in.	H mm/in.	D mm/in.	E mm/in.	F mm/in.	G each side mm/in.	I mm/in.	J mm/in.	Dia. M mm/in.	Weight (lb.)
CCS8BBLG	80	174 6.85	160 6.30	122 4.80	122 4.80	143 5.63	80 3.15	12 0.47	25 0.98	13 0.51	20.4

PEDESTAL BASE

Cast aluminum one-piece heavy-duty construction with RAL 7035 light-gray polyester powder paint finish. Includes all hardware for attaching tubes. Optional casters or levelers can be installed on pedestal base. Levelers and fixed or swivel casters are available in pairs (must order two pair).

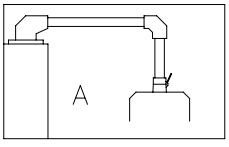
BULLETIN: CS4

Catalog Number	System	D (mm) each side	D (in.) each side	Weight (lb.)
CCS8PBLG	80	80 x 80	3.15 x 3.15	31.5



SYSTEM CONFIGURATIONS

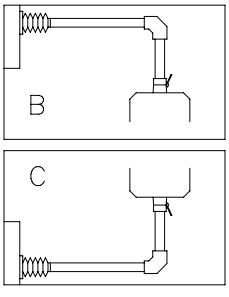
Note to Specifier:
Select suspension system sizing using the Compact Series 4 System 80 load capacity chart.
1. Tube catalog numbers are not included in configuration tables.
2. There are multiple configurations possible with many of the options shown. Components can be inverted. For illustration purposes, configurations may show how components can be inverted or used with varying enclosure couplings.



87799186

A

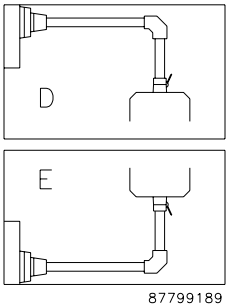
Description	Qty.	Catalog Number
Set-up joint	1	CCS8SJLG
Elbow	1	CCS8ELLG
Flange coupling or Swivel tilt	1 1	CCS8FCLG CCS8STBLG



87799187

B AND C

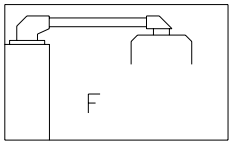
Description	Qty.	Catalog Number
Wall joint or Cable wall joint	1 1	CCS8WJRLG CCS8WJCRLG
Elbow	1	CCS8ELLG
Flange coupling or Swivel tilt	1 1	CCS8FCLG CCS8STBLG



87799189

D AND E

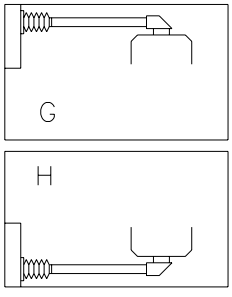
Description	Qty.	Catalog Number
Wall flange	1	CCS8WFLG
Elbow	1	CCS8ELLG
Flange coupling or Swivel tilt	1 1	CCS8FCLG CCS8STBLG



87799190

F

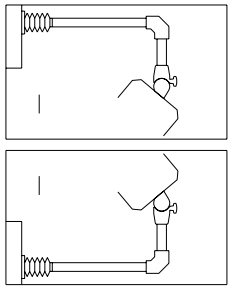
Description	Qty.	Catalog Number
Set-up joint	1	CCS8SJLG
Flange elbow coupling	1	CCS8FECLG



87799191

G AND H

Description	Qty.	Catalog Number
Wall joint or Cable wall joint	1 1	CCS8WJRLG CCS8WJCRLG
Flange elbow coupling	1	CCS8FECLG

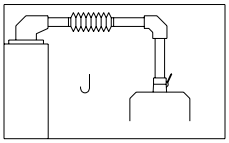


87799193

I

Description	Qty.	Catalog Number
Wall joint or Cable wall joint	1 1	CCS8WJRLG CCS8WJCRLG
Elbow	1	CCS8ELLG
Swivel tilt[a]	1	CCS8STBLG

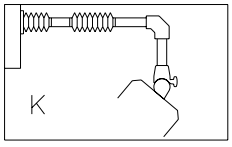
[a]Maximum load for overhead applications is 110 lb. (50 kg) including enclosure.

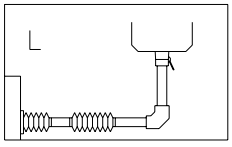


87799194

J

Description	Qty.	Catalog Number
Set-up joint	1	CCS8SJLG
Intermediate joint	1	CCS8IJRLG
Elbow	1	CCS8ELLG
Flange coupling or Swivel tilt	1 1	CCS8FCLG CCS8STBLG



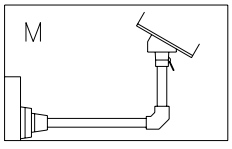


87799195

K AND L

Description	Qty.	Catalog Number
Wall joint or Cable wall joint	1 1	CCS8WJRLG CCS8WJCRLG
Intermediate joint	1	CCS8IJRLG
Elbow	1	CCS8ELLG
Flange coupling or Swivel tilt[a]	1 1	CCS8FCLG CCS8STBLG

[a]Maximum load for overhead applications is 110 lb. (50 kg) including enclosure.

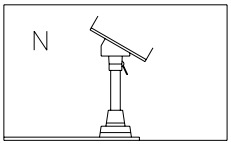


87799197

M

Description	Qty.	Catalog Number
Wall flange	1	CCS8WFLG
Elbow	1	CCS8ELLG
Flange coupling	1	CCS8FCLG

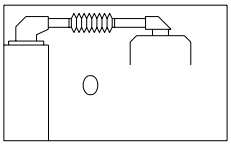
N



87799198

Description	Qty.	Catalog Number
Base bracket	1	CCS8BBLG
Flange coupling	1	CCS8FCLG
Angle adapter 15º or Angle adapter 30º	1 1	CCS568AA15LG CCS568AA30LG

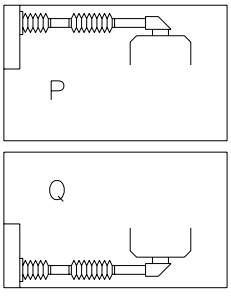
O



87799199

Description	Qty.	Catalog Number
Set-up joint	1	CCS8SJLG
Intermediate joint	1	CCS8IJRLG
Flange elbow coupling	1	CCS8FECLG

P AND Q



87799200

Description	Qty.	Catalog Number
Wall joint or Cable wall joint	1 1	CCS8WJRLG CCS8WJCRLG
Intermediate joint	1	CCS8IJRLG
Flange elbow coupling	1	CCS8FCLG

Notes

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SYSPEND HMI SANITARY SYSTEM

INDUSTRY STANDARDS

Maintains NEMA Type 4, 4X and 12 and IEC IP69K enclosure ratings when properly installed per Hoffman instructions.

APPLICATION

Specifically designed to support the SYSPEND Sanitary HMI Enclosure in sanitary washdown environments, particularly food and beverage manufacturing. The suspension system supports up to 90 lb. (40.8 kg) at 3.3 ft. (1 m). Its modular design with multiple tube lengths and bent tubes allows for application versatility. The entire system meets Type 4X and IP69K requirements for high-pressure, high-temperature washdown applications.

FEATURES

- Type 304 stainless steel construction provides corrosion resistance and ease of cleaning
- SYSPEND-LOK attachment method prevents tubes from turning and pulling out of fittings and provides a watertight connection
- Straight, L- and U-shaped tubes available in various lengths to provide design flexibility
- Swivel and fixed couplings provide rigid connection point between tubes or between tube and enclosure
- Swivel and fixed base brackets provide secure attachment to wall, floor or machine with easy leveling capability
- Swivel fittings provide 330-degree rotation
- Optional base bracket cover can be used on wall, floor or machine* to cover exposed hardware on fixed base bracket (not intended to be mounted directly to a large enclosure)

SPECIFICATIONS

- Tubes and fittings constructed of Type 304 stainless steel
- SYSPEND-LOK Wrench Head included with each fitting to secure fittings to tubes

FINISH

External surfaces have a #3 brushed finish

NOTES

* SYSPEND HMI Sanitary Systems are not intended to be mounted directly to large enclosures.

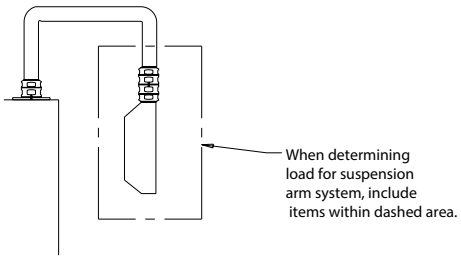
MODIFICATION AND CUSTOMIZATION

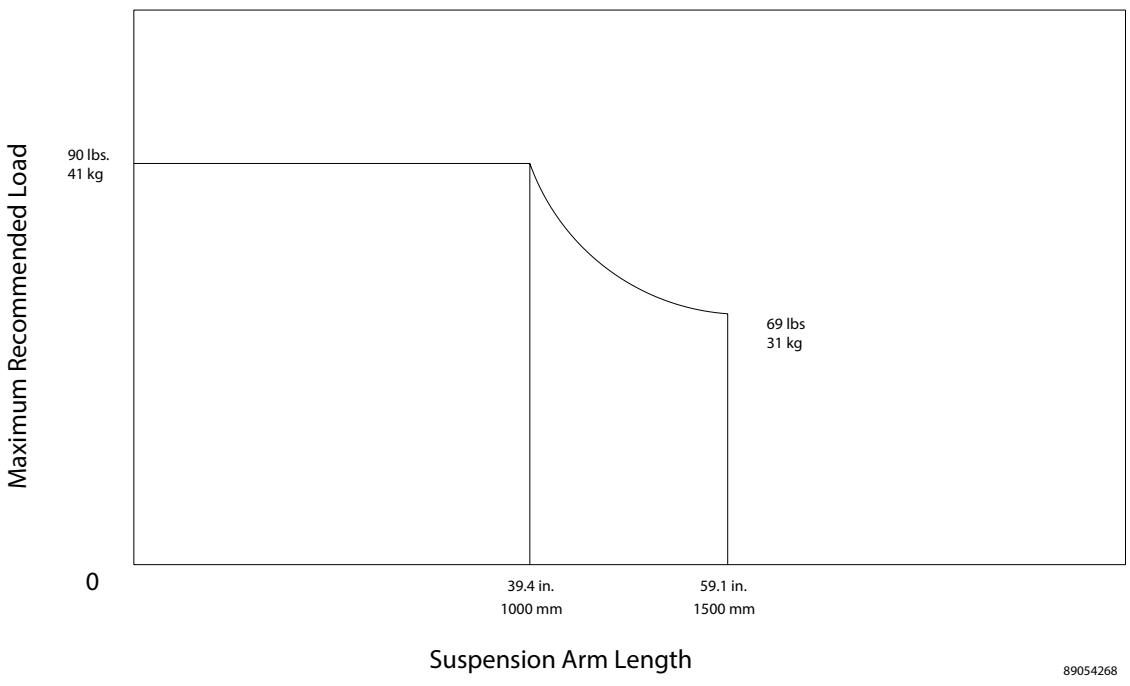
Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.

SYSTEM LOAD CAPACITY

The SYSPEND Sanitary HMI System load graph is the result of load capacity tests. Please contact Hoffman for specific application information.

Load Diagram





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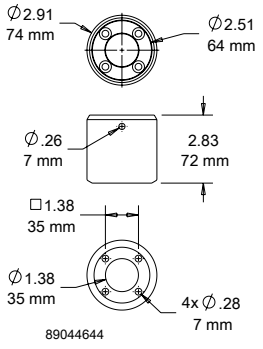
SYSPEND VHDS-MOTION ARM ADAPTER

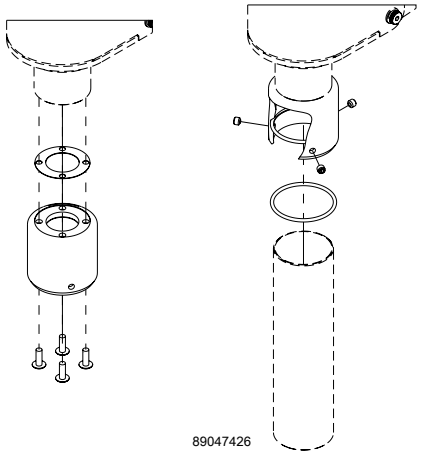
Attaches the SYSPEND Sanitary HMI Enclosure to the VHDS-Motion Arm.

- Type 304 stainless steel
- Attaches with set screws to the SYSPEND Sanitary HMI Enclosure
- Bolts directly to the VHDS-Motion Arm (only campatible with VHDS26 and VHDS36 models with revision level A or greater)

BULLETIN: VM9

Catalog Number	Description	Weight (kg)	Weight (lb.)
SVHDSA	SYSPEND VHDS-Motion Arm Adapter	.73	1.6

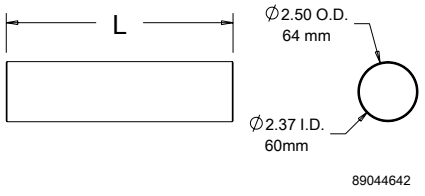




STRAIGHT TUBING

- Type 304 polished stainless steel
- Outer diameter of 64 mm (2.50 in.)
- Inner diameter of 60 mm (2.37 in.)
- 2-mm (.06-in.) wall thickness

BULLETIN: VM9



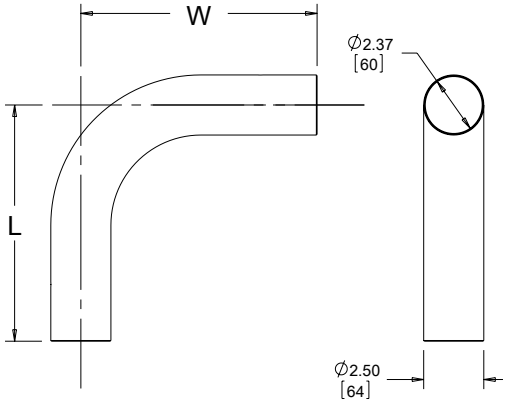
Catalog Number	L (mm)	L (in.)	Weight (kg)	Weight (lb.)
ST250SS	250	9.84	.45	1.0
ST500SS	500	19.68	1.61	3.55
ST750SS	750	29.53	2.27	5.0
ST1000SS	1000	39.37	2.72	6.0
ST1250SS	1250	49.21	3.88	8.55
ST1500SS	1500	59.06	4.58	10.1

L-SHAPED TUBING

- Type 304 polished stainless steel
- Outer diameter of 64 mm (2.50 in.)
- Inner diameter of 60 mm (2.37 in.)
- 2-mm (.06-in.) wall thickness

BULLETIN: VM9

Catalog Number	L mm/in.	W mm/in.	Weight (kg)	Weight (lb.)
ST250250SS	250 9.84	250 9.84	1.41	3.1
ST500240SS	500 19.68	240 9.45	2.20	4.85
ST500500SS	500 19.68	500 19.68	3.28	7.24
ST1000500SS	1000 39.37	500 19.68	5.76	12.7

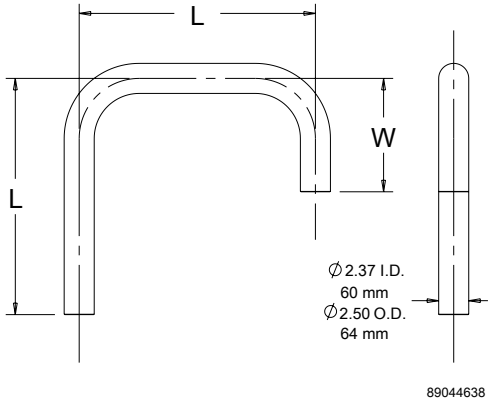


U-SHAPED TUBING

- Type 304 polished stainless steel
- Outer diameter of 64 mm (2.50 in.)
- Inner diameter of 60 mm (2.37 in.)
- 2-mm (.06-in.) wall thickness

BULLETIN: VM9

Catalog Number	L mm/in.	W mm/in.	Weight (kg)	Weight (lb.)
ST500240500SS	500 19.68	240 9.45	3.76	8.3
ST800500800SS	800 31.50	500 19.68	7.26	16.0



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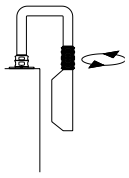
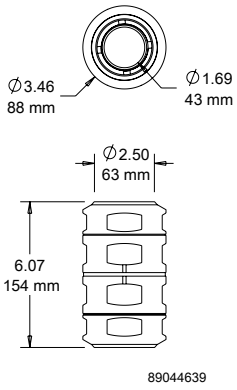
SWIVEL COUPLING

- Provides means of attaching enclosure to tube
- Allows enclosure to rotate 330-degrees
- SYSPEND-LOK attachment method prevents tubes from turning and pulling out of fittings and provides a water-tight connection
- Type 304 polished stainless steel
- Includes SYSPEND-LOK Wrench Head for attaching coupling to tubes (strap wrench or spanner wrench that opens to 80 mm or greater can also be used)

BULLETIN: VM9



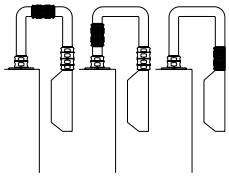
Catalog Number	Description	Weight (kg)	Weight (lb.)
SSCSS	Swivel Coupling	4.54	10



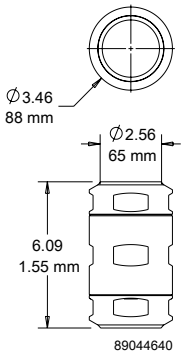
FIXED COUPLING

- Provides secure means of joining two tubes together
- Can also provide attachment of enclosure to tube when enclosure rotation is not desired
- SYSPEND-LOK attachment method prevents tubes from turning and pulling out of fittings and provides a water-tight connection
- Type 304 polished stainless steel
- Includes SYSPEND-LOK Wrench Head for attaching coupling to tubes (strap wrench or spanner wrench that opens to 80 mm or greater can also be used)

BULLETIN: VM9



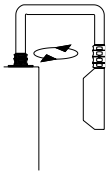
Catalog Number	Description	Weight (kg)	Weight (lb.)
SFCSS	Fixed Coupling	3.54	7.5



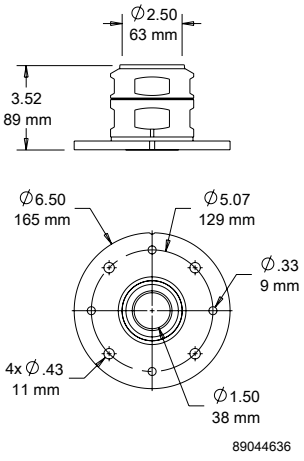
SWIVEL BASE BRACKET

- Provides means of attaching tube to the floor or a machine
- Provides 330-degree rotation
- SYSPEND-LOK attachment method prevents tubes from turning and pulling out of fittings and provides a water-tight connection
- Type 304 polished stainless steel
- Includes SYSPEND-LOK Wrench Head for attaching base bracket to tubes (strap wrench or spanner wrench that opens to 80 mm or greater can also be used)
- Includes 4 set screws that provides means of leveling the entire suspension system
- Surface mounting hardware not included

BULLETIN: VM9



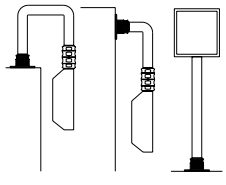
Catalog Number	Description	Weight (kg)	Weight (lb.)
SSBBSS	Swivel Base Bracket	3.72	8.2



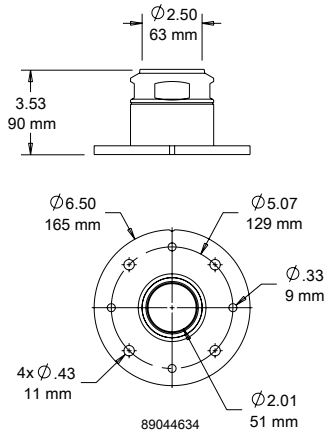
FIXED BASE BRACKET

- Provides means of attaching tube to a wall, floor or machine
- Does not provide rotation
- SYSPEND-LOK attachment method prevents tubes from turning and pulling out of fittings and provides a water-tight connection
- Type 304 polished stainless steel
- Includes SYSPEND-LOK Wrench Head for attaching base bracket to tubes (strap wrench or spanner wrench that opens to 80 mm or greater can also be used)
- Includes 4 set screws that provide means of leveling the entire suspension system
- Surface mounting hardware not included
- Optional bracket cover available to hide all exposed mounting hardware

BULLETIN: VM9



Catalog Number	Description	Weight (kg)	Weight (lb.)
SFBBSS	Fixed Base Bracket	3.63	8



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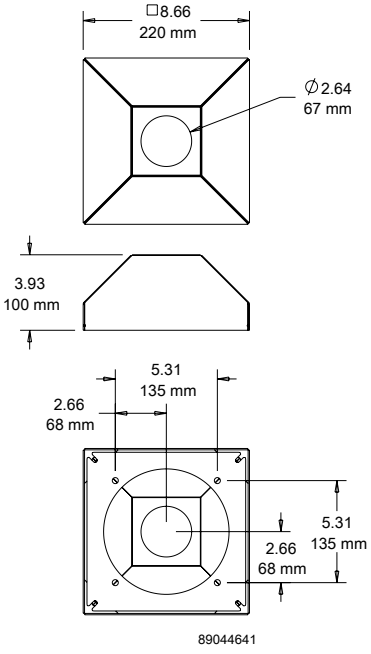
BASE BRACKET COVER

- Covers the fixed base bracket (not compatible with the swivel base bracket)
- Provides means of covering all exposed mounting hardware
- Simply snaps into place over the base bracket
- Type 304 polished stainless steel

BULLETIN: VM9

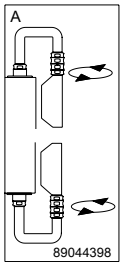
Catalog Number	Description
SBCSS	Base Bracket Cover



SYSPEND SANITARY ENCLOSURE SYSTEM CONFIGURATIONS

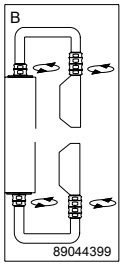
Note to Specifier:
Select suspension system sizing using the SYSPEND Sanitary HMI System load capacity chart.

A



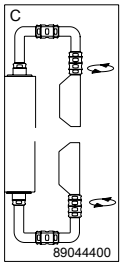
Description	Qty.	Catalog Number
Fixed Base Bracket	1	SFBBSS
Swivel Coupling	1	SSCSS
U-Shaped Tubing	1	ST500240500SS ST800500800SS

B



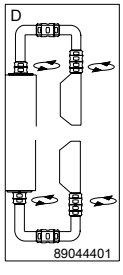
Description	Qty.	Catalog Number
Swivel Base Bracket	1	SSBBSS
Swivel Coupling	1	SSCSS
U-Shaped Tubing	1	ST500240500SS ST800500800SS

C



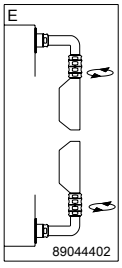
Description	Qty.	Catalog Number
Fixed Base Bracket	1	SFBBSS
Fixed Coupling	1	SFCSS
L-Shaped Tubing	2	ST250250SS ST500240SS ST500500SS ST1000500SS
Swivel Coupling	1	SSCSS

D



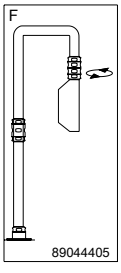
Description	Qty.	Catalog Number
Fixed Coupling	1	SFCSS
L-Shaped Tubing	2	ST250250SS ST500240SS ST500500SS ST1000500SS
Swivel Base Bracket	1	SSBBSS
Swivel Coupling	1	SSCSS

E



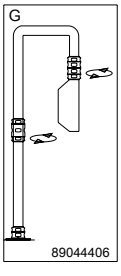
Description	Qty.	Catalog Number
Fixed Base Bracket	1	SFBBSS
L-Shaped Tubing	2	ST250250SS ST500240SS ST500500SS ST1000500SS
Swivel Coupling	1	SSCSS

F



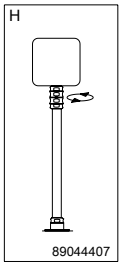
Description	Qty.	Catalog Number
Fixed Base Bracket	1	SFBBSS
Fixed Coupling	1	SFCSS
Swivel Coupling	1	SSCSS
Straight Tubing	1	ST250SS ST500SS ST750SS ST1000SS ST1250SS ST1500SS
U-Shaped Tubing	1	ST500240500SS ST800500800SS
Base Bracket Cover	1	SBCSS

G



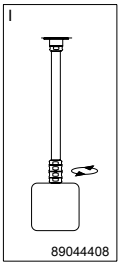
Description	Qty.	Catalog Number
Fixed Base Bracket	1	SFBBSS
Straight Tubing	1	ST250SS ST500SS ST750SS ST1000SS ST1250SS ST1500SS
Swivel Coupling	1	SSCSS
U-Shaped Tubing	1	ST500240500SS ST800500800SS
Base Bracket Cover	1	SBCSS

H



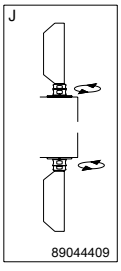
Description	Qty.	Catalog Number
Fixed Base Bracket	1	SFBBSS
Straight Tubing	1	ST250SS ST500SS ST750SS ST1000SS ST1250SS ST1500SS
Swivel Coupling	1	SSCSS
Base Bracket Cover	1	SBCSS

I



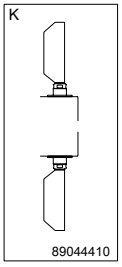
Description	Qty.	Catalog Number
Fixed Base Bracket	1	SFBBSS
Straight Tubing	1	ST250SS ST500SS ST750SS ST1000SS ST1250SS ST1500SS
Swivel Coupling	1	SSCSS

J



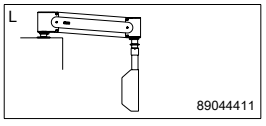
Description	Qty.	Catalog Number
Swivel base Bracket	1	SSBBSS

K

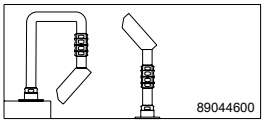


Description	Qty.	Catalog Number
Fixed Base Bracket	1	SFBBSS

L



Description	Qty.	Catalog Number
VHDS Motion Arm Adapter	1	SVHDSA



Enclosure adapter can be flipped for angled viewing.

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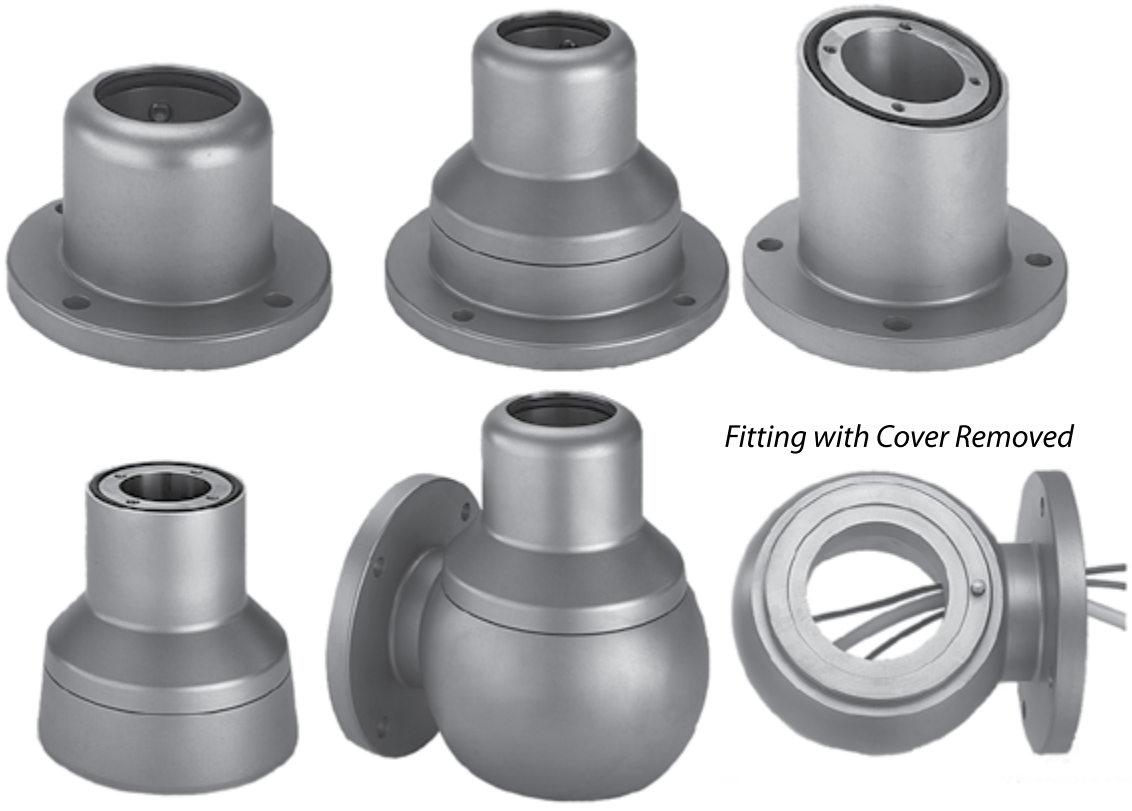
CS480 STAINLESS STEEL PENDANT ARM SYSTEM



Fitting with Cover Removed

INDUSTRY STANDARDS

IEC 60529, IP66

APPLICATION

The CS480 Stainless Steel Pendant Arm System performs extremely well in applications that require corrosion resistance and suspension of process and control equipment for easy cleaning and washdown. CS480 is recommended for use with Stainless Steel HMI Enclosures with CS480 pendant cutout. The CS480 system has a high degree of design configuration flexibility. (For possible design combinations, see the System Combinations Drawings.)
Used for lighter loads, the CS480 system's load rating at 3.3 ft. (1 m) is 89.6 lb. (40.7 kg). Ratings for other loads are shown in the Load Capacity chart.

SPECIFICATIONS

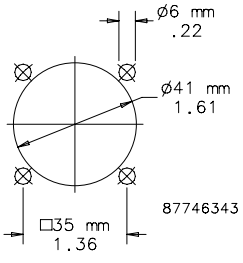
- Tubing clamps into position with setscrews for easy assembly and smooth appearance
- Fixed or swivel mounting, straight or at a 15-degree angle
- 90-degree fittings have a removable cover that allows easy access for wiring
- The coupling hole geometrics for enclosure machining are shown in the Coupling Hole Geometry diagram

FINISH

Tubing: Type 304 polished stainless steel
Fittings: Type 304 polished stainless steel

Brushed stainless steel shown.

Coupling Hole Geometry
for Enclosure Machining



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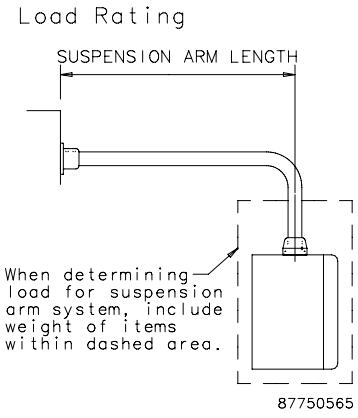
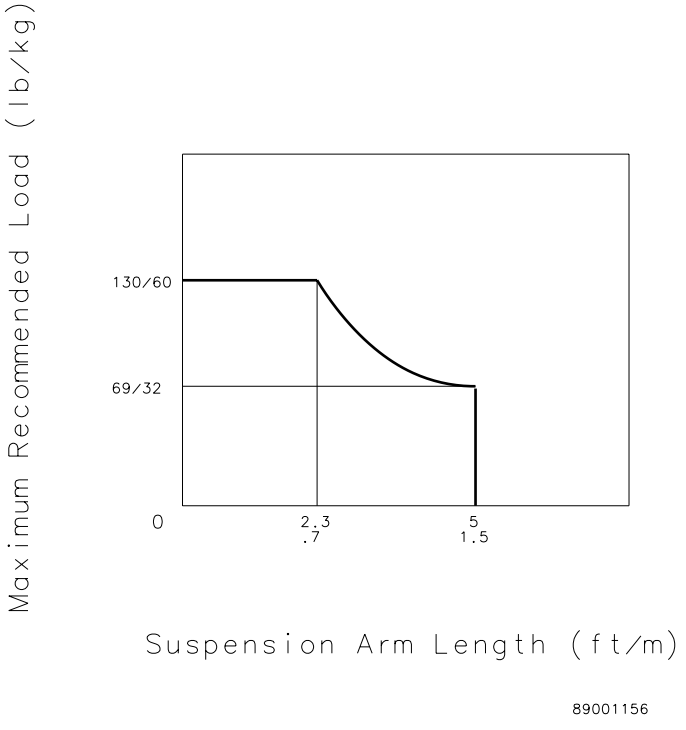
SYSTEM LOAD CAPACITY

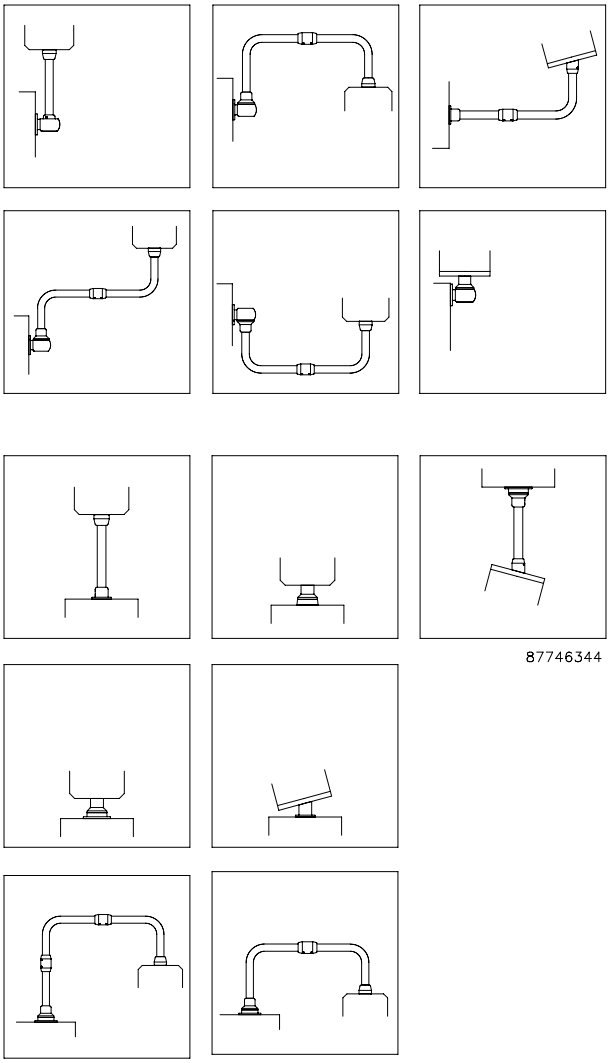
The load capacity of the CS480 Pendant Arm System is shown in the diagram. Choose the CS600 System for larger loads.





SYSTEM COMBINATIONS

The wide variety of components permits a high level of flexibility in configuring the system. Some possible combinations are shown here.



87746344

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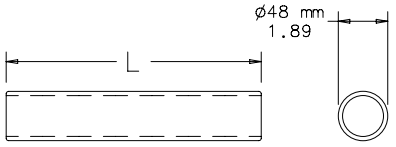
STRAIGHT TUBING

Straight Tubing has an outer diameter of 48.3 mm (1.90 in.) and is made from 3.6-mm wall thickness Type 304 polished stainless steel.

BULLETIN: CCR6

Catalog Number	L mm/in.	Product Weight (kg)	Product Weight (lb.)
CCSS48T25	250 9.84	1.13	2.5
CCSS48T50	500 19.69	2.13	4.7
CCSS48T75	750 29.53	3.18	7.0
CCSS48T100	1000 39.37	4.40	9.7
CCSS48T125	1250 49.21	5.44	12.0
CCSS48T150	1500 59.06	6.67	14.7



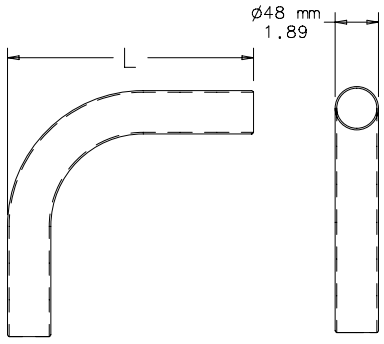
87799211

L-SHAPED TUBING

L-Shaped Tubing has an outer diameter of 48.3 mm (1.90 in.) and is made from 3.6-mm-thick Type 304 polished stainless steel. It is used with coupling sleeves and straight tubing to provide the desired system configuration.

BULLETIN: CCR6

Catalog Number	L mm/in.	Product Weight (kg)	Product Weight (lb.)
CCSS48TLB25	250 x 250 9.84 x 9.84	2.4	5.3
CCSS48TLB50	500 x 500 19.69 x 19.69	4.76	10.5



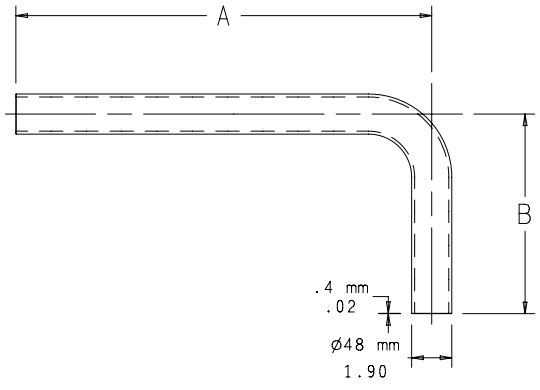
87799212

L-SHAPED STAINLESS STEEL PENDANT TUBES

L-Shaped Pendant Tubes are made of Type 304 stainless steel with an outer diameter of 48 mm (1.90 in.) and have a smooth finish. For use in conjunction with CS480 stainless steel pendant fittings. Use of these tubes does not compromise the enclosure rating.

BULLETIN: CCR6

Catalog Number	A mm/in.	B mm/in.	Product Weight (kg)	Product Weight (lb.)
CCSSTL5024	500 19.69	240 9.45	2.6	5.7
CCSSTL10050	1000 39.37	500 19.69	5.4	11.9



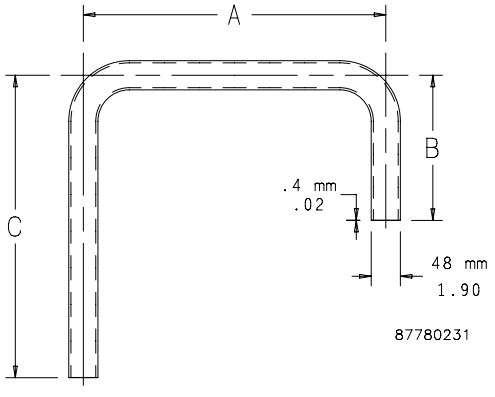
87780230

U-SHAPED STAINLESS STEEL PENDANT TUBES

U-Shaped Pendant Tubes are made of Type 304 stainless steel with an outer diameter of 48 mm (1.90 in.) and have a smooth finish. For use in conjunction with CS480 stainless steel pendant fittings. Use of these tubes does not compromise the enclosure rating.

BULLETIN: CCR6

Catalog Number	AxBxC in./mm	Product Weight (kg)	Product Weight (lb.)
CCSSTU502450	19.69 x 9.45 x 19.69 500 x 240 x 500	4.5	9.9
CCSSTU802480	31.50 x 9.45 x 31.50 800 x 240 x 800	6.7	14.8



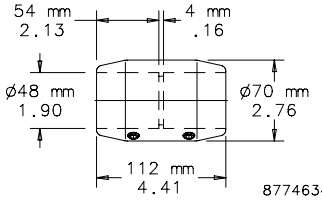
87780231

COUPLING SLEEVE

The Shaped Pendant Tubes joins sections of tubing in the CS480 System. Type 304 polished stainless steel finish. Includes gaskets.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48CS	CS480 system coupling sleeve	1.4	3.5



87746345

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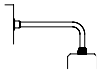
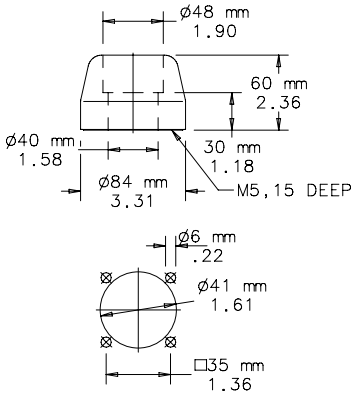
STRAIGHT COUPLING

Flange coupling for attaching enclosures. Turns through 340 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Type 304 polished stainless steel finish. Includes gaskets and mounting hardware.

BULLETIN: CCR6



Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48FC	Straight coupling for enclosure	1.4	3.5



87799214

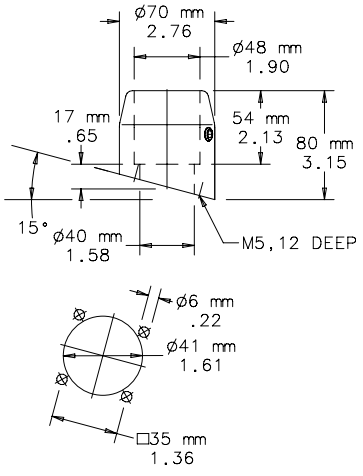
NOTE: Recommended mounting hole size shown.

ANGLE COUPLING

Rigid flange coupling with 15-degree angle of inclination for attaching enclosures. Type 304 polished stainless steel finish. Includes gaskets and mounting hardware.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48AC15	Angle coupling for enclosures	1.0	2.0



87746346

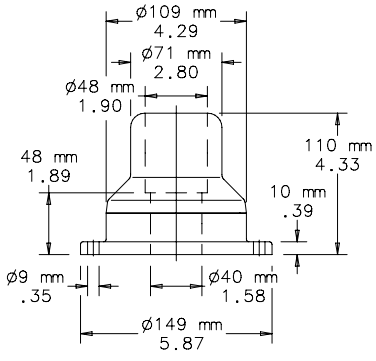
NOTE: Recommended mounting hole size shown.

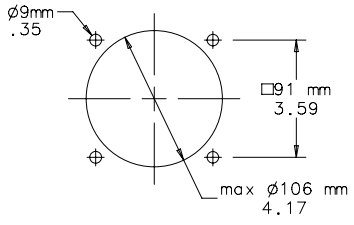
SWIVEL BASE FOR EXTERNAL ATTACHMENT

Swivel Base for mounting to machine or floor. Turns through 340 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Type 304 polished stainless steel finish. Includes gaskets. Base-mounting fasteners not provided.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48BBRE	Swivel base, external	4.2	9.5





87799217

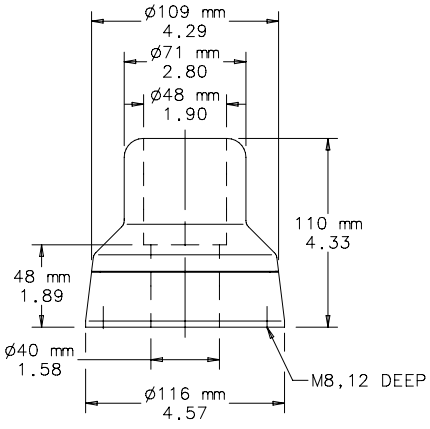
NOTE: Recommended mounting hole size shown.

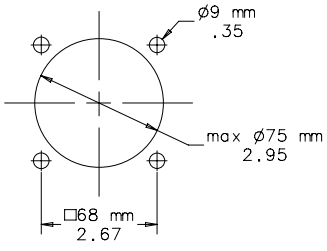
SWIVEL BASE FOR INTERNAL MOUNTING

Swivel Base for mounting to machine or floor. Turns through 340 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Type 304 polished stainless steel finish. Includes gaskets. Base-mounting fasteners not provided.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48BBRI	Swivel base, internal	4.2	9.5





87746348

NOTE: Recommended mounting hole size shown.

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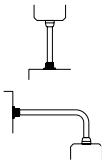
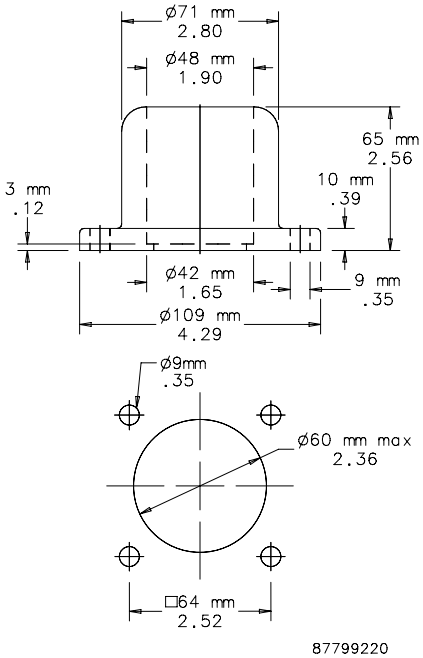
BASE BRACKET/WALL FLANGE

Use as Base Bracket or Wall Flange to mount to vertical or horizontal surfaces. Type 304 polished stainless steel finish. Includes gaskets. Base-mounting fasteners not provided.

BULLETIN: CCR6



Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48BB	Base bracket/wall flange	1.4	3.5



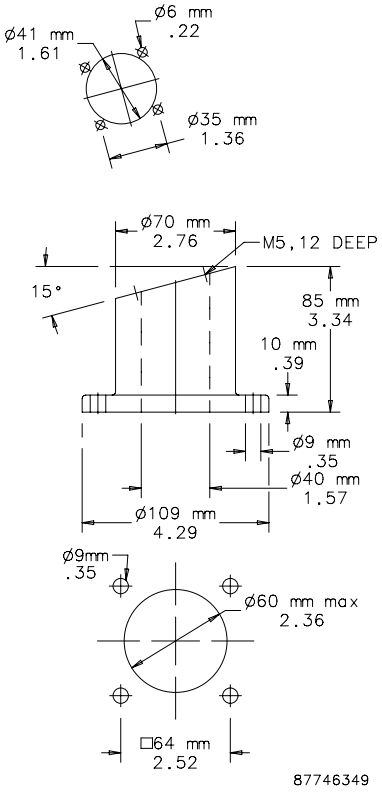
NOTE: Recommended mounting hole size shown.

BASE BRACKET ANGLE COUPLING

Rigid 15-degree coupling for direct mounting of enclosures to horizontal and vertical surfaces. Type 304 polished stainless steel finish. Includes gaskets and enclosure mounting hardware. Base-mounting fasteners not provided.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48ACBB	Base bracket angle coupling	1.9	4.5



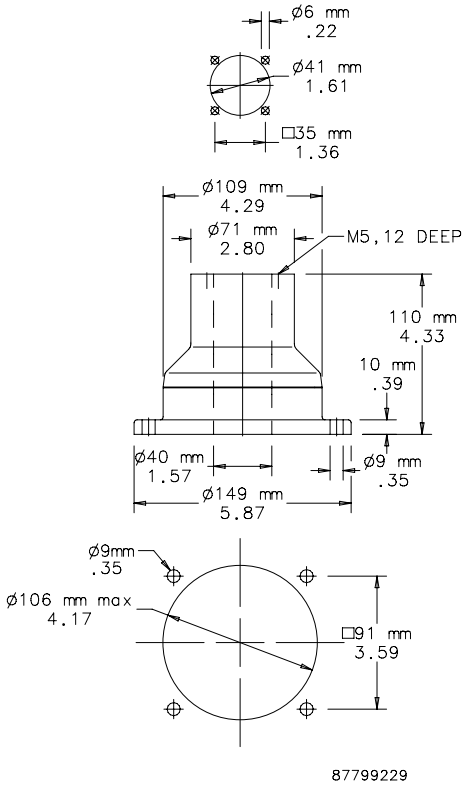
NOTE: Recommended mounting hole size shown.

SWIVEL BASE EXTERNAL BRACKET COUPLING

Swivel Base External Bracket Coupling for mounting enclosures directly to a machine or the floor. Turns through 340 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Type 304 polished stainless steel finish. Includes gaskets and enclosure mounting hardware. Base-mounting fasteners not provided.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48BBCRE	Swivel base external bracket coupling	4.5	9.92



NOTE: Recommended mounting hole size shown.

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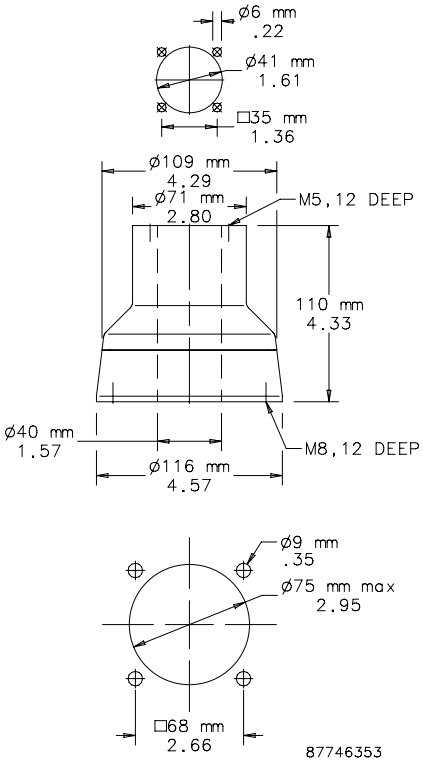
SWIVEL BASE INTERNAL BRACKET COUPLING

Swivel Base Internal Bracket Coupling for directly mounting enclosures to a machine or the floor. Turns through 340 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Type 304 polished stainless steel finish. Includes gaskets and enclosure mounting hardware. Base-mounting fasteners not provided.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48BBCRI	Swivel base internal bracket coupling	4.1	9.03

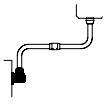


NOTE: Recommended mounting hole size shown.

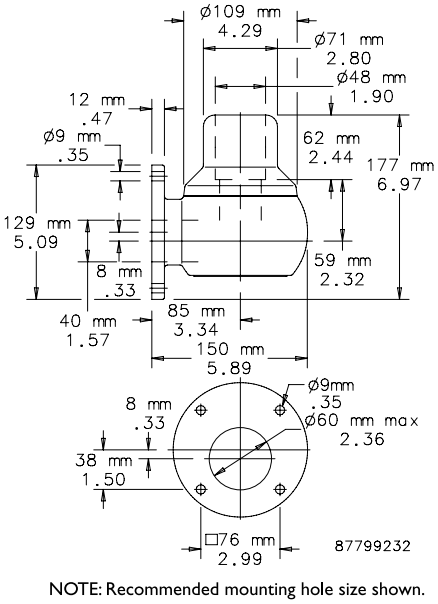
WALL JOINT

Wall Joint with vertical socket for mounting to vertical surfaces. Cover to facilitate wiring. Turns through 340 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Type 304 polished stainless steel finish. Includes gaskets. Wall-mounting fasteners not provided.

BULLETIN: CCR6



Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48WJV	Wall joint, vertical mount	7.3	16.09



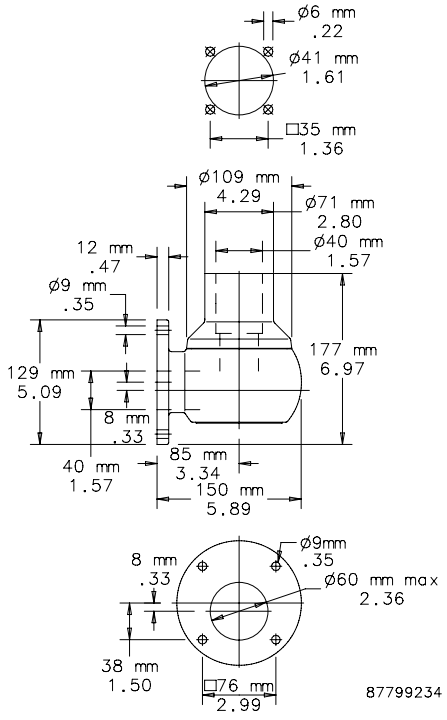
NOTE: Recommended mounting hole size shown.

WALL COUPLING

Swivel Wall Coupling for direct mounting of enclosure to vertical machine surfaces. Turns through 340 degrees with rotation limiter. Cover to facilitate wiring. Preset torque. Maintenance-free bearings. Type 304 polished stainless steel finish. Includes gaskets and enclosure mounting hardware. Wall-mounting fasteners not provided.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48WJC	Wall coupling, vertical mount	7.3	16.09

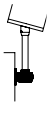


NOTE: Recommended mounting hole size shown.

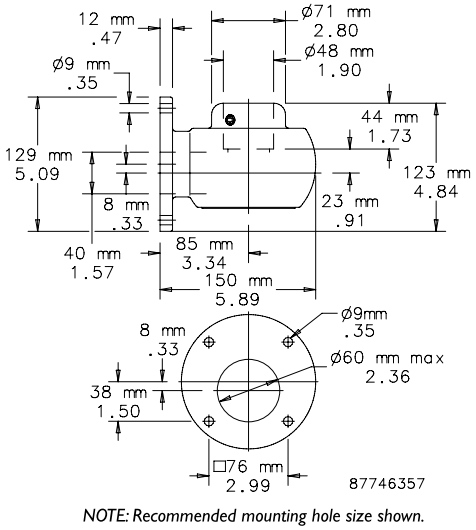
WALL BRACKET

Wall Bracket with vertical socket for attachment to vertical surfaces. Cover to facilitate wiring. Type 304 polished stainless steel finish. Includes gaskets. Wall-mounting fasteners not included.

BULLETIN: CCR6



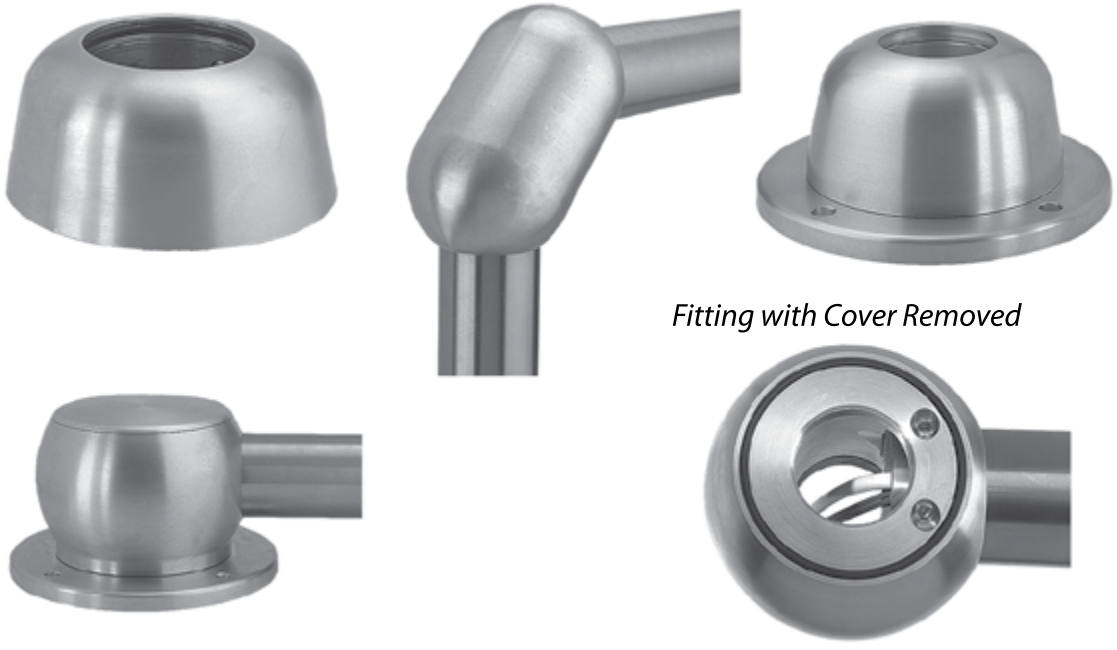
Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSS48WJRV	Wall bracket	7.7	16.25



NOTE: Recommended mounting hole size shown.

nVent | HOFFMAN

CS600 STAINLESS STEEL PENDANT ARM SYSTEM



Fitting with Cover Removed

INDUSTRY STANDARDS

IEC 60529, IP66

APPLICATION

Like the CS480 System, the CS600 Stainless Steel Pendant Arm System performs extremely well in applications that require corrosion resistance and suspension of process and control equipment for easy cleaning and washdown. CS600 is recommended for use with Stainless Steel HMI Enclosures with CS600 pendant cutout. Also like the CS480 System, the CS600 System has a wide variety of available components and a high degree of design configuration flexibility. (For possible design combinations, see the System Combinations Drawings.)

The difference between the CS480 System and the CS600 System is that CS600 is used for heavier loads, with a load rating at 3.3 ft. (1 m) of 134.89 lb. (61.3 kg). Ratings for other loads are shown in the Load Capacity chart.

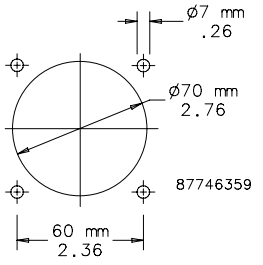
SPECIFICATIONS

- Tubing clamps into position for easy assembly and smooth appearance
- No external screws to trap dirt
- Fixed or swivel mounting, straight or at a 15-degree angle
- 90-degree fittings have a removable cover that allows easy access for wiring
- Anti-vibration capability
- The coupling hole geometries for enclosure machining are shown in the Coupling Hole diagram

FINISH

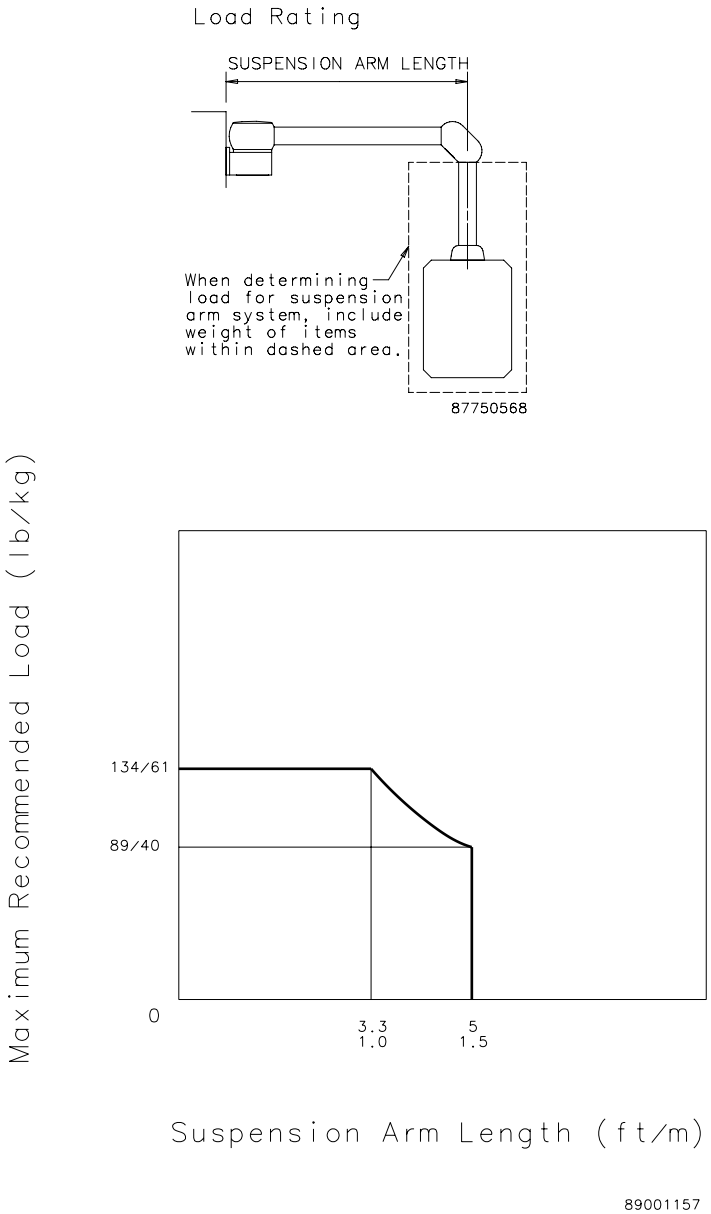
Tubing: Type 304 Stainless Steel
Fittings: Type 304 Stainless Steel

Coupling Hole Geometry
for Enclosure Machining



SYSTEM LOAD CAPACITY

The load capacity of the CS600 Pendant Arm System is shown in the chart and diagram.



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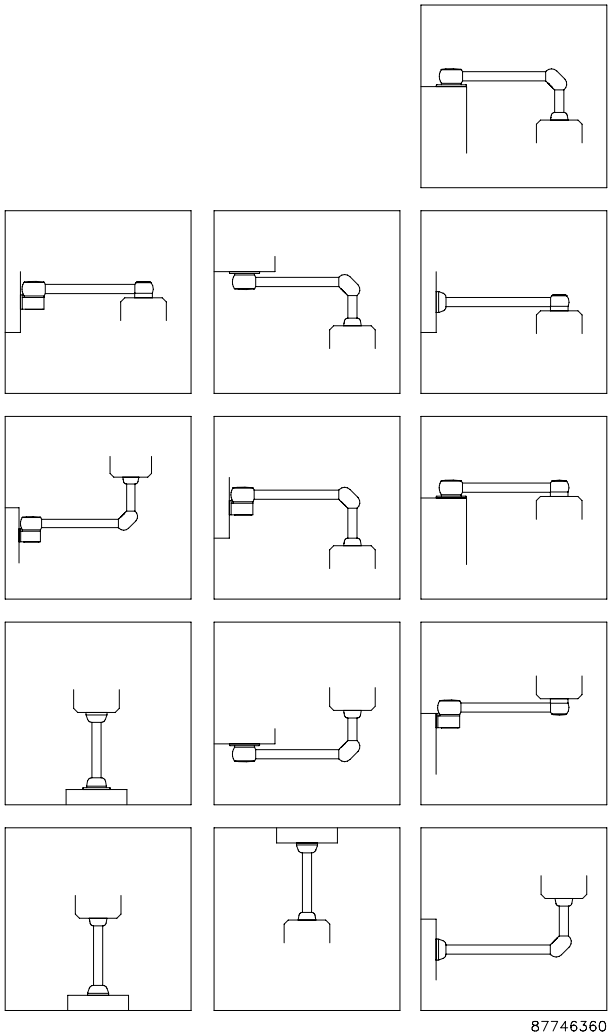
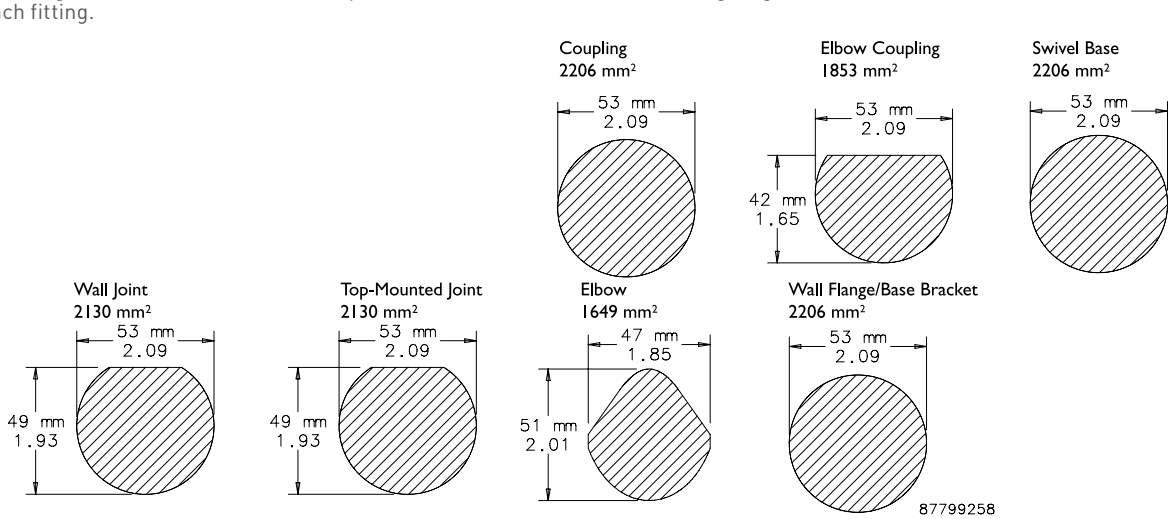
SYSTEM COMBINATIONS

The wide variety of components permits a high level of flexibility in configuring the system. Some possible combinations are shown here.



CABLE ENTRY SPACE

Different fittings offer different amounts of space for cables and leads. The drawing diagram shows the dimensions at the narrowest point inside each fitting.

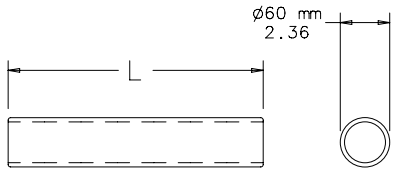


TUBING

Tubes have 60.3-mm (2.37-in.) outer diameter and are made from 3.6-mm wall thickness stainless steel.

BULLETIN: CCR6

Catalog Number	L mm/in.	Product Weight (kg)	Product Weight (lb.)
CCSST25	250 9.84	1.18	2.6
CCSST50	500 19.69	2.36	5.2
CCSST75	750 29.53	3.40	7.5
CCSST100	1000 39.37	4.63	10.2
CCSST125	1250 49.21	5.85	12.9
CCSST150	1500 59.06	15.30	6.94



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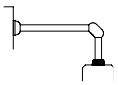
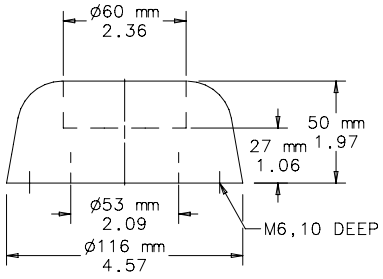
COUPLING

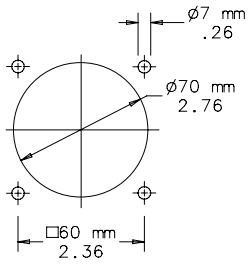
Flange coupling for mounting enclosures. Turns through 300 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Includes gaskets and mounting hardware.

BULLETIN: CCR6



Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSSFC	Stainless steel	2.18	4.8





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NOTE: Recommended mounting hole size shown.

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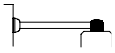
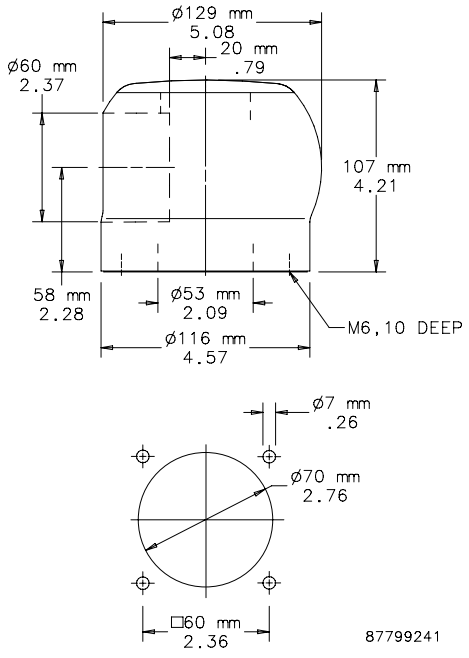
ELBOW COUPLING

Flange Elbow Coupling for attaching enclosures. Assembly aperture cover conceals screws for easier cleaning. Turns through 300 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Includes gaskets and mounting hardware.

BULLETIN: CCR6



Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSSEC	Stainless Steel	6.49	14.3

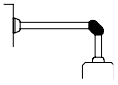


NOTE: Recommended mounting hole size shown.

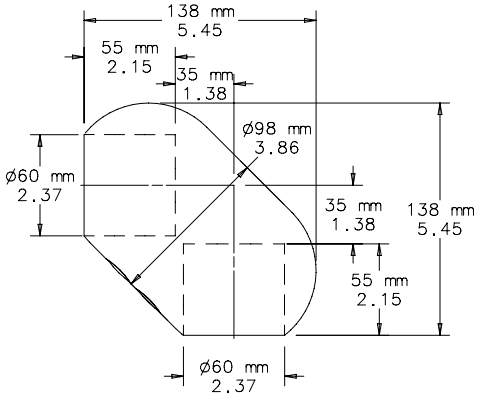
ELBOW

Elbow for connecting two tubes at 90 degrees. Includes screw cover and gaskets.

BULLETIN: CCR6



Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSSE	Stainless Steel	4.45	9.8

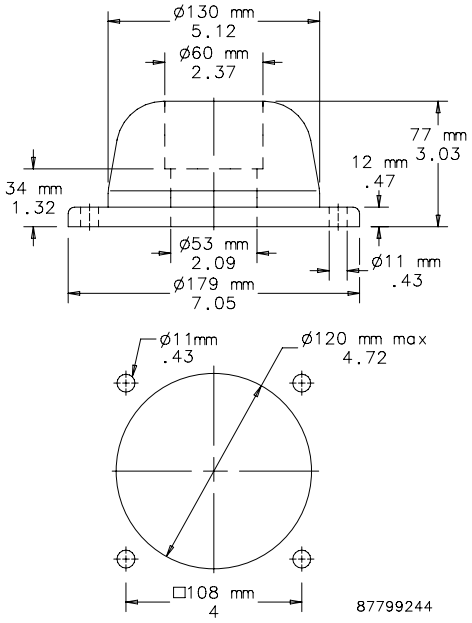


SWIVEL BASE

Swivel Base for mounting to machine or floor. Turns through 300 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Includes gaskets. Base-mounting fasteners not provided.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSSBBT	Stainless Steel	5.72	12.6

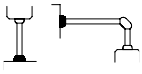


NOTE: Recommended mounting hole size shown.

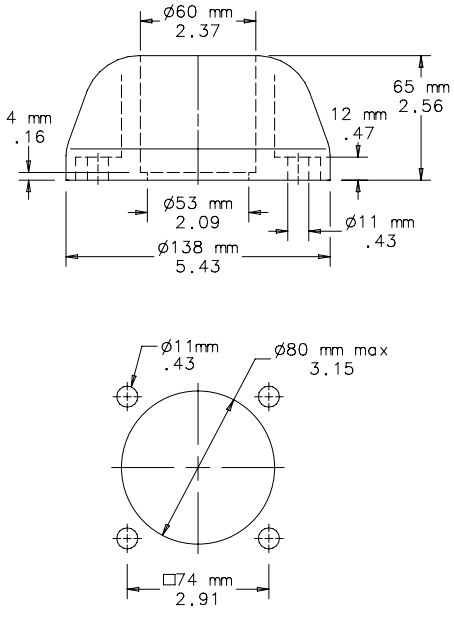
BASE BRACKET/WALL FLANGE

Base Bracket or Wall Flange for mounting to horizontal and vertical surfaces. Includes gaskets. Base-mounting fasteners not provided.

BULLETIN: CCR6



Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSSWFB	Stainless Steel	3.67	8.1



NOTE: Recommended mounting hole size shown.

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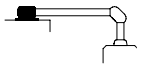
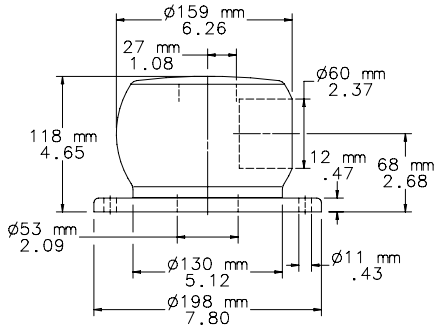
TOP-MOUNTED JOINT

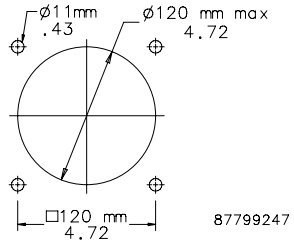
Top-Mounted Joint for mounting to horizontal surfaces. Assembly aperture cover conceals screws for easier cleaning. Turns through 300 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Includes gaskets. Wall-mounting fasteners not provided.

BULLETIN: CCR6



Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSSSJ	Stainless steel	13.65	30.1





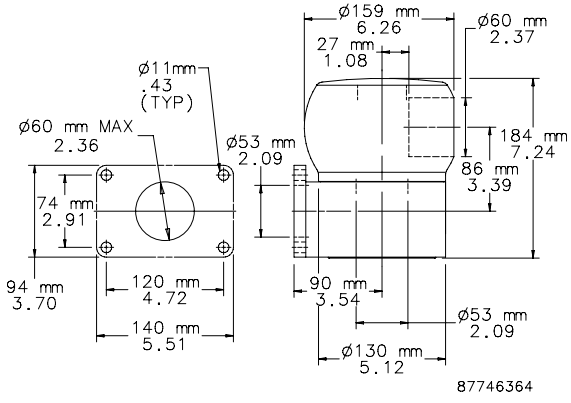
NOTE: Recommended mounting hole size shown.

WALL JOINT

Wall Joint for mounting to vertical surfaces. Assembly aperture cover conceals screws for easier cleaning. Turns through 300 degrees with rotation limiter. Preset torque. Maintenance-free bearings. Includes gaskets. Wall-mounting fasteners not provided.

BULLETIN: CCR6

Catalog Number	Description	Product Weight (kg)	Product Weight (lb.)
CCSSWJ	Stainless steel	16.01	35.3



Notes

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PEDESTALS

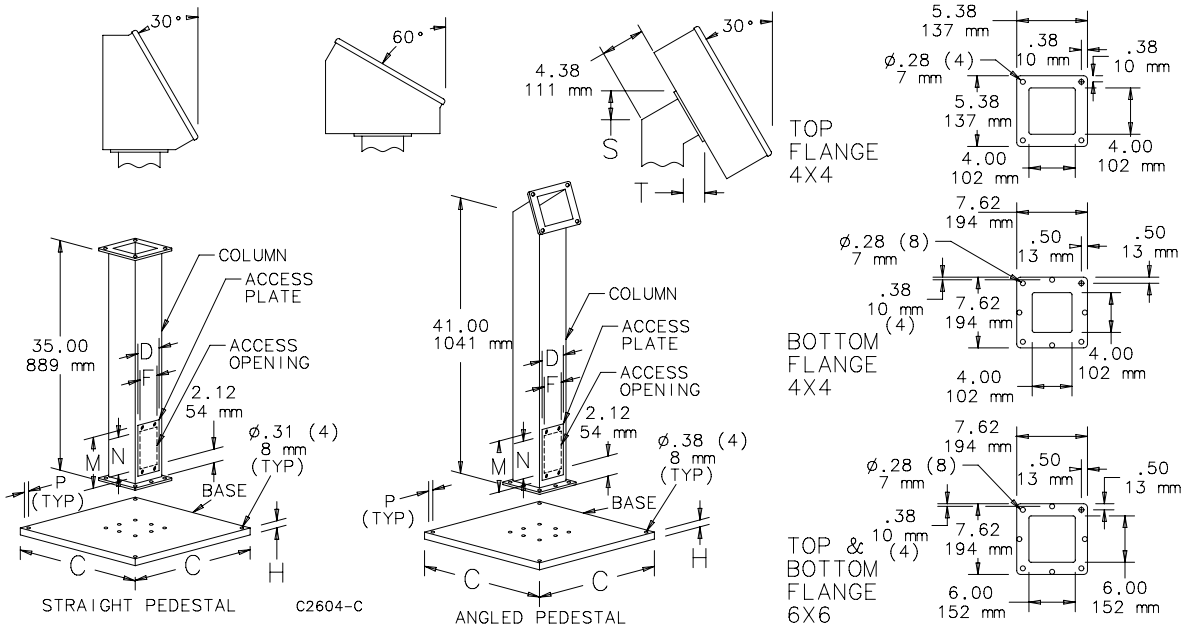
Pedestals enable many types of enclosures and boxes to be floor mounted. Four columns and two bases are available. Columns can be mounted on either base, through the vertical column or directly to the enclosure. A cutout must be made in the enclosure if the wires are to come through the column.

Columns have flanges at each end and a gasketed access plate. Screws, oil-resistant gaskets and box connector fitting are furnished with each column for joining an enclosure to the top of the column. Columns are 14 gauge steel with 10 gauge flanges. 18.00 x 18.00-in. (457 x 457-mm) base is .19-in. (5-mm) steel and 24.00 x 24.00-in. (610 x 610-mm) base is .25-in. (6-mm) steel. Both bases have leveling screws and holes for bolting to the floor. Finish on bases and columns is ANSI 61 gray polyester powder coating over pretreated surfaces. Bases and columns must be ordered separately.

The user would normally remove the mounting brackets from the enclosure if the enclosure is mounted on a pedestal. Hoffman can supply enclosures without mounting brackets and with cutouts. Consult Hoffman for more information.

BULLETIN: P1

Catalog Number	AxBxC mm/in.	Description	C mm/in.	D mm/in.	F mm/in.	H mm/in.	M mm/in.	N mm/in.	P mm/in.	S mm/in.	T mm/in.
A44CC0L	889 x 102 x 102	Straight Pedestal Column	—	95	70	—	184	152	—	—	—
	35.00 x 4.00 x 4.00		—	3.75	2.75	—	7.25	6.00	—	—	—
A44PBC0L	1041 x 102 x 102	Angled Pedestal Column	—	95	70	—	184	152	—	70	52
	41.00 x 4.00 x 4.00		—	3.75	2.75	—	7.25	6.00	—	2.75	2.06
A66CC0L	889 x 152 x 152	Straight Pedestal Column	—	146	121	—	203	171	—	—	—
	35.00 x 6.00 x 6.00		—	5.75	4.75	—	8.00	6.75	—	—	—
A66PBC0L	1041 x 152 x 152	Angled Pedestal Column	—	146	121	—	203	171	—	73	28
	41.00 x 6.00 x 6.00		—	5.75	4.75	—	8.00	6.75	—	2.88	1.12
A18SBASE	457 x 457	Pedestal Base	457	—	—	25	—	—	16	—	—
	18.00 x 18.00		18.00	—	—	1.00	—	—	.62	—	—
A24SBASE	610 x 610	Pedestal Base	610	—	—	28	—	—	17	—	—
	24.00 x 24.00		24.00	—	—	1.12	—	—	.69	—	—



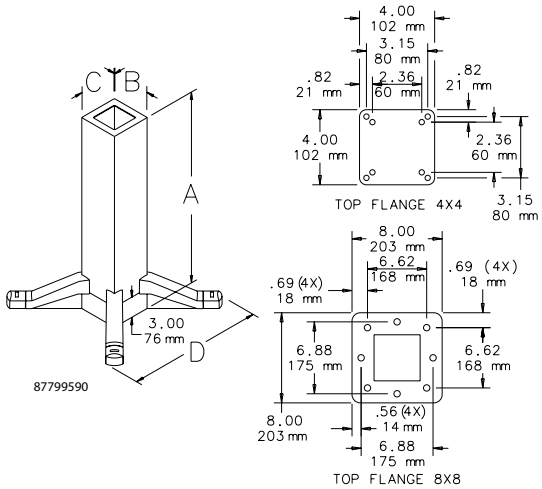
PEDESTAL WITH LEGS

Pedestal is available in two heights. Vertical tube has rigid one-piece construction. Bottom of tube is open. Four sturdy, die-cast legs bolt to vertical tube. Legs have holes for bolting pedestal to the floor. Legs will accept casters in limited applications. Heavy-duty black polymer caps fit on ends of legs to cover bolts or levelers. Pedestal has ANSI 61 medium-gray or RAL 7035 textured light-gray polyester powder paint finish. Tapped mounting holes in the top of pedestal allow attachment to HMI base with cutout, swivel, swivel tilt or angle adapter. Hardware and gasket to attach enclosure are included.

- Use 4.00 x 4.00-in. (102 x 102-mm) pedestal with CONCEPT HMI and INLINE HMI Enclosures
- Use 8.00 x 8.00-in. (203 x 203-mm) pedestal with PROLINE Sloped-Front Enclosures

BULLETIN: P1

Catalog Number	AxBxC mm/in.	Finish	Description	D mm/in.
AP26L44	660 x 102 x 102 26.00 x 4.00 x 4.00	ANSI 61	Steel	600 23.62
AP26L44LG	660 x 102 x 102 26.00 x 4.00 x 4.00	RAL 7035	Steel	600 23.62
AP36L44	914 x 102 x 102 36.00 x 4.00 x 4.00	ANSI 61	Steel	600 23.62
AP36L44LG	914 x 102 x 102 36.00 x 4.00 x 4.00	RAL 7035	Steel	600 23.62
AP26L88	660 x 203 x 203 26.00 x 8.00 x 8.00	ANSI 61	Steel	702 27.62
AP26L88LG	660 x 203 x 203 26.00 x 8.00 x 8.00	RAL 7035	Steel	702 27.62
AP36L88	914 x 203 x 203 36.00 x 8.00 x 8.00	ANSI 61	Steel	702 27.62
AP36L88LG	914 x 203 x 203 36.00 x 8.00 x 8.00	RAL 7035	Steel	702 27.62



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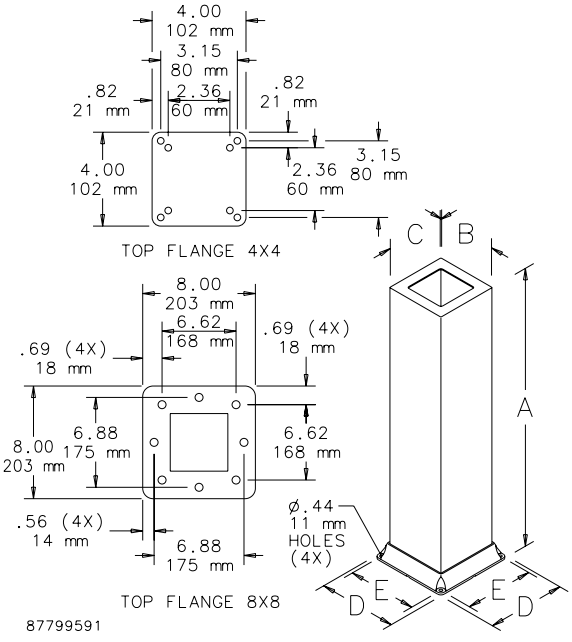
BOLT-DOWN PEDESTAL

Bolt-Down Pedestal is available in two heights. The vertical tube has rigid one-piece construction. Rigid cast aluminum base flanges bolt to the vertical tube. Pedestal has ANSI 61 medium-gray or RAL 7035 textured light-gray polyester powder paint finish. Tapped mounting holes in the top of pedestal allow attachment to operator interface base with cutout, swivel, swivel tilt or angle adapter. Hardware and gasket to attach enclosure are included.

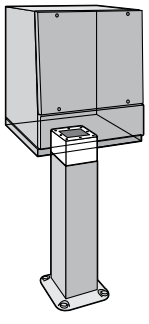
- Use 4.00 x 4.00-in. (102 x 102-mm) pedestal with CONCEPT HMI and INLINE HMI Enclosures
- Use 8.00 x 8.00-in. (203 x 203-mm) pedestal with PROLINE Sloped-Front Enclosures

BULLETIN: P1

Catalog Number	AxBxC mm/in.	Finish	Description	D mm/in.	E mm/in.
AP23B44	584 x 102 x 102 23.00 x 4.00 x 4.00	ANSI 61	Steel	159 6.26	133 5.25
AP23B44LG	584 x 102 x 102 23.00 x 4.00 x 4.00	RAL 7035	Steel	159 6.26	133 5.25
AP33B44	838 x 102 x 102 33.00 x 4.00 x 4.00	ANSI 61	Steel	159 6.26	133 5.25
AP33B44LG	838 x 102 x 102 33.00 x 4.00 x 4.00	RAL 7035	Steel	159 6.26	133 5.25
AP23B88	584 x 203 x 203 23.00 x 8.00 x 8.00	ANSI 61	Steel	260 10.25	235 9.25
AP23B88LG	584 x 203 x 203 23.00 x 8.00 x 8.00	RAL 7035	Steel	260 10.25	235 9.25
AP33B88	838 x 203 x 203 33.00 x 8.00 x 8.00	ANSI 61	Steel	260 10.25	235 9.25
AP33B88LG	838 x 203 x 203 33.00 x 8.00 x 8.00	RAL 7035	Steel	260 10.25	235 9.25



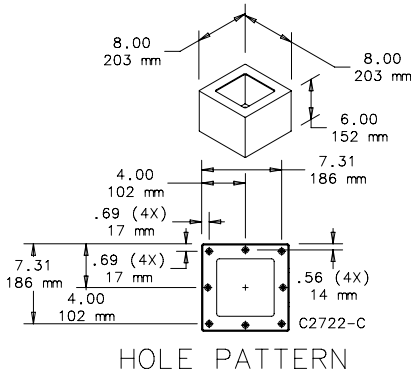
EXTENSION



Pedestal Extension can be used with pedestals to provide additional 6 in. (152 mm) of height for standing position. ANSI 61 medium-gray polyester powder paint or RAL 7035 textured light-gray polyester powder paint.

BULLETIN: P1

Catalog Number	AxBxC in./mm	Finish	Description
APE688	6.00 x 8.00 x 8.00 152 x 203 x 203	ANSI 61	Steel
APE688LG	6.00 x 8.00 x 8.00 152 x 203 x 203	RAL 7035	Steel

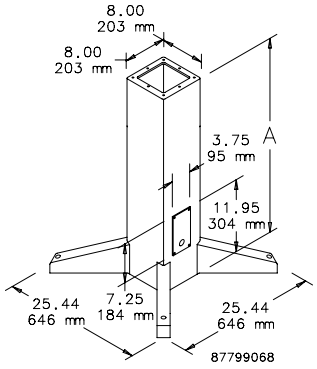


STAINLESS STEEL PEDESTAL

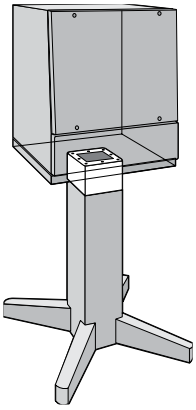
Pedestal is 36-in. (914-mm) tall and provides optimal viewing and operating height. Tube is 14 gauge Type 304 one-piece construction. Legs are 7 gauge Type 304 for rigidity. Cable access plate and leg levelers are included. Leg levelers can be removed for anchoring pedestal to floor. Pedestal has smooth vertical brushed finish. *Pedestal will accept pedestal accessories that are not stainless steel. These include swivel tilt, swivel and angle adapters.*

BULLETIN: P1S

Catalog Number	A in./mm	Description
AP36SS	36.00 914	Stainless steel



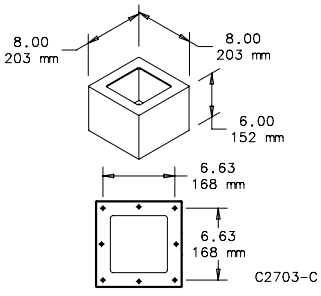
STAINLESS STEEL EXTENSION



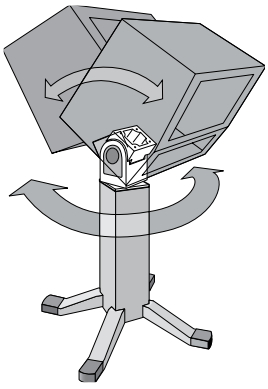
Pedestal Extension can be ordered separately to provide additional 6 in. (152 mm) of height for standing position. Extension is 14 gauge Type 304 stainless steel with a smooth brushed finish.
Extension will accept pedestal accessories that are not stainless steel. These include swivel tilt, swivel and angle adapters.

BULLETIN: P1S

Catalog Number	Description
APE6SS	Stainless steel



SWIVEL TILT

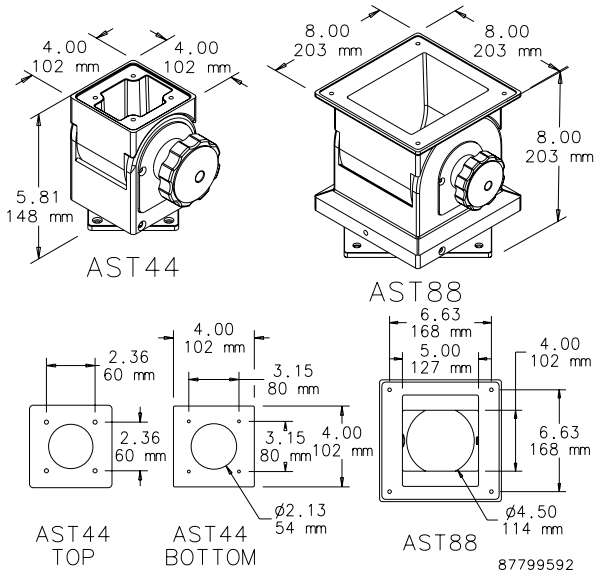


The use of a combination swivel and tilt mechanism allows a machine operator to rotate and also tilt an HMI enclosure for optimum viewing and safe operation. The Swivel Tilt is designed for use between the bottom of an HMI enclosure and a pedestal (enclosure reinforcement may be required).

Do not use the Swivel Tilt between an overhead support and an enclosure.

The swivel feature allows maximum rotation of 350 degrees. Integral stops are provided at 30-degree increments between 60 degrees and 180 degrees of rotation. Swivel can be locked in any position. Tilt feature allows forward and backward movement up to 30 degrees from horizontal. Tilt lock has a large release knob that allows quick incremental adjustment. Top and bottom flanges allow easy installation on pedestals. A large center opening accommodates control cables that have attached plugs. Swivel Tilt is cast aluminum with an anodized finish. Mounting hardware and gaskets are furnished.

BULLETIN: P1



Catalog Number	AxBxC mm/in.	Maximum Enclosure Size A x B x C mm/in.	Maximum Load Including Enclosure (kg)	Maximum Load Including Enclosure (lb.)
AST44	148 x 102 x 102 5.81 x 4.00 x 4.00	610 x 610 x 406 24.00 x 24.00 x 16.00	34.0	75
AST88	203 x 203 x 203 8.00 x 8.00 x 8.00	838 x 610 x 610 33.0 x 24.00 x 24.00	68.0	150

The loads listed assume that the additional load is centered on the front or back of the enclosure. Please contact Hoffman for specific application information.

SWIVEL

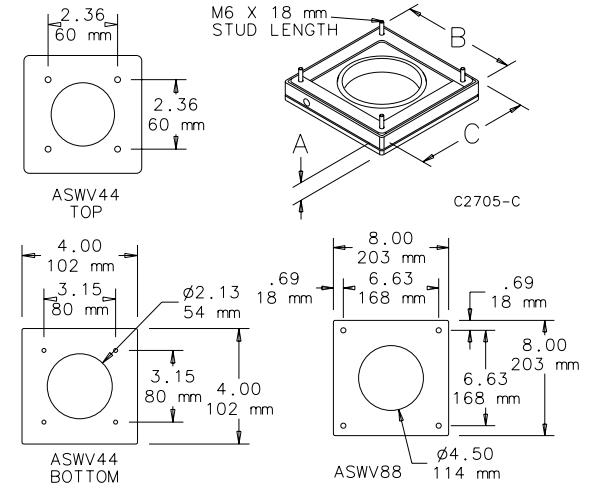
A swivel mechanism can be used to provide a machine operator a way to easily rotate an operator interface enclosure to a convenient operating position. Maximum rotation is 350 degrees. The low-profile swivel has a large center opening in addition to a large, wobble-free bearing surface. Swivel mechanism can be locked in any position. The swivel mechanism is designed for use between the bottom of an operator interface enclosure and a pedestal.

Do not use the Swivel between an overhead support and an enclosure.

The Swivel is cast aluminum with an anodized finish. Mounting hardware and gaskets are furnished.

Integral stops are provided at 30-degree increments between 60 degrees and 180 degrees of rotation on catalog number ASWV88 only.

BULLETIN: P1



Catalog Number	AxBxC mm/in.	Maximum Enclosure Size A x B x C mm/in.	Maximum Load Including Enclosure (kg)	Maximum Load Including Enclosure (lb.)
ASWV44	27 x 102 x 102 1.06 x 4.00 x 4.00	610 x 610 x 406 24.00 x 24.00 x 16.00	45.4	100
ASWV88	33 x 203 x 203 1.28 x 8.00 x 8.00	838 x 610 x 610 33.00 x 24.00 x 24.00	90.7	200

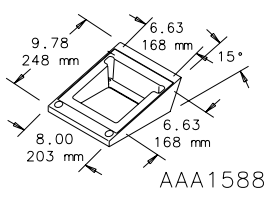
The loads listed assume that the additional load is centered on the front or back of the enclosure. Please contact Hoffman for specific application information.

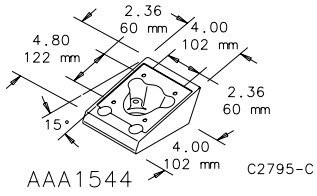
ANGLE ADAPTER

Angle Adapter fits top of pedestal and provides a fixed tilt of 15 degrees from horizontal for enclosure mounting. Angle Adapter is aluminum with large cable opening and has clear anodized aluminum finish. Mounting hardware is included.

BULLETIN: P1

Catalog Number	Fits
AAA1544	4 x 4 pedestal
AAA1588	8 x 8 pedestal





HANDLES

Handles attach to sides, top or bottom of sloped front to provide maximum operator control when using the suspension system, swivel or swivel tilt. Location dimples on the sides of sloped fronts indicate drill-hole location for standard mounting. Handles attach inside enclosure.

BULLETIN: P1

Catalog Number	Description	Fits
PUHK	(2) die-cast aluminum handles (9.75 in./248 mm)	PROLINE Sloped-Fronts
PUHKA	(2) tubular steel handles with soft coating (9.75 in./248 mm)	PROLINE Sloped-Fronts

PEDESTAL CASTER KITS

Casters can be used on pedestals in limited applications. They are attached to the die-cast legs of steel Pedestals. Four dual-wheel casters replace furnished levelers.

BULLETIN: C1, DEC1

Catalog Number	Description	Number of Casters	Height (in.)	Height (mm)	Wheel Dia. (in.)	Wheel Dia. (mm)	Load Rating Ea. (lb.)	Load Rating Ea. (kg)
AC4M6SV	Casters, swivel type with brakes	2	3.72	94	3.00	76	210	95
AC4M6ST	Casters, stationary type	2	3.72	94	3.00	76	210	95

Two sets of AC4M6SV and AC4M6ST casters are required.

Height columns show height of caster when installed.

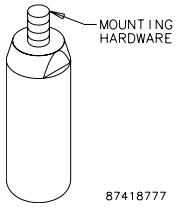
STAINLESS STEEL LEGS

Legs mount to the bottom of a solid base to elevate the enclosure 4 in. (100 mm) from the floor. The legs are made of Type 304 stainless steel and are appropriate for hose-down applications. Mounting hardware is included.

NOTE: These legs will not fit on the PROLINE G2 Fully-Sealed Plinth Base.

BULLETIN: P20S

Catalog Number	Description
PLEGSS	(4) Stainless Steel Legs



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CHAPTER 10
THERMAL MANAGEMENT

SPECTRACOOL SLIM FIT AIR CONDITIONERS

Designed and developed to meet the requirements of worldwide industrial customers. With filterless operation, slim-fit design, global certifications and our new remote access controller, these air conditioners make automation cooling easy for system designers and operations maintenance teams around the world.

FILTER FANS

Filter Fans cool a wide range of heat loads in applications ranging from industrial drives to process equipment and controls. With more than 175 models, Type 12, Type 3R and Type 1 options, a wide range of airflow capabilities and various mounting options, Filter Fans are available for diverse environments.

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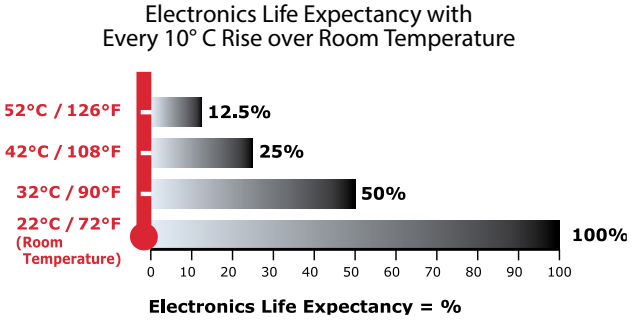
10

WHY COOL ELECTRICAL EQUIPMENT IN THE FIRST PLACE?

Keeping your electrical equipment cool is essential to extending their life and keeping your business running.

HEAT RUINS ELECTRICAL EQUIPMENT

The life expectancy of electrical equipment is cut in half every 10 C / 18 F they operate above room temperature. Operating electrical equipment above certain temperatures can void manufacturers' warranties, making proper cooling essential. Cooling vital electrical equipment increases service life and reduces capital expenses over the long-term.



SOURCES OF HEAT

Damaging heat can come from a variety of sources. Inside the cabinet, heat can come from:

- AC power supplies
- Controllers, drives and servos
- Transformers and rectifiers
- Processors and server racks
- Radio equipment
- And other electrical components

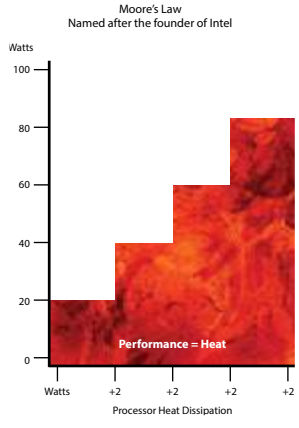
Heat also comes from sources outside the enclosure such as:

- Solar heat gain
- Welding processes
- Paint oven
- Blast furnace
- Foundry equipment

TREND TOWARD MORE DAMAGING HEAT

For the foreseeable future, the trend is toward increasing levels of heat in electrical equipment, not decreasing, because the market's thirst for more information processing capacity and speed continues to grow. This trend is known as "Moore's Law."

More powerful data-processing electrical equipment generates extra heat with virtually every new system that is designed. There is no guarantee that an application which did not require much, if any, cooling in the past will not need cooling in the future. The new system likely has more functionality and will probably require some form of cooling as a result.



THE CONSEQUENCES OF DAMAGING HEAT

Heat build-up can adversely affect industrial controls and sensitive electrical systems as follows:

- De-rated drive performance
- I/C-based devices experience intermittent fluctuations
- MTBF decreases exponentially
- Catastrophic failure

The costs when a factory line or electrical system fails can include:

- Productivity losses
- Component replacement costs
- Late shipments
- Customer dissatisfaction
- Lost revenue
- Cell phone tower outage
- Breach in homeland security

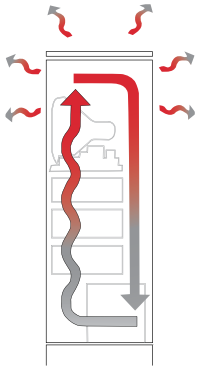
Direct costs to a business can be as much as $50,000 per hour of system downtime.

CONDUCTIVE ENCLOSURE COOLING

This is a passive way to cool electrical equipment. It simply allows the heat to radiate through the cabinet walls.

Conductive enclosure cooling works well with electrical systems that have small heat loads (<50 W) and cool air around the enclosure (<78 F/25 C).

If heat is an issue, one option within this type of cooling is to increase cabinet size to create more surface area to speed the transfer of heat. However, growing cabinet size is often not a practical solution because of space limitations and the greater heat loads associated with today's high-power electronics.

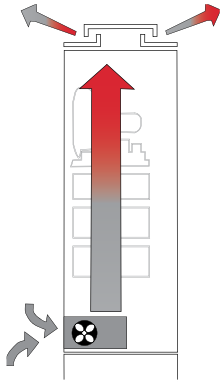


FRESH AIR ENCLOSURE COOLING

This is an active way to manage heat in electrical applications. This type of cooling ventilates fresh air through the cabinet, exhausting heat away from the hot components.

Fresh air enclosure cooling may be used when the electrical system is deployed in a relatively clean and cool environment such as an office building, data networking center or light-duty factory. Options for cooling electrical enclosures with fresh air include filter fans, fan trays, motorized impellers and packaged blowers.

Fresh air enclosure cooling is known as an "open-loop system" because no significant seal is maintained to protect electrical components from harmful elements such as dirt, water, metal filings and corrosive fumes.



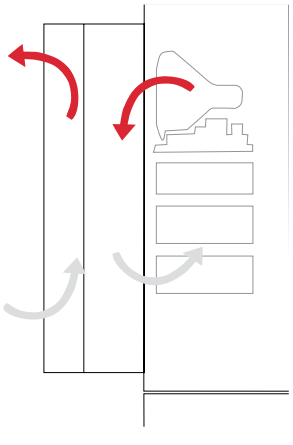
SEALED ENCLOSURE COOLING

This is another active way to cool electrical components. This type of cooling maintains the seal of the enclosure—using an air conditioner or heat exchanger as examples—to remove heat from inside the electrical cabinet.

Protective cooling is generally required when the electrical application:
(1) operates in high temperatures, typically over 95 F/35 C,
(2) is deployed in a harsh environment such as an outdoor telecom base station, wastewater treatment plant, metal working operation, oil rig platform, paper mill, foundry and/or
(3) generates a high heat load from its own components, usually more than 500 W.

Options for sealed enclosure cooling include air conditioners, air-to-air heat exchangers, air-to-water heat exchangers, thermoelectric coolers and vortex coolers.

Sealed enclosure cooling is known as a "closed-loop system" because the seal of the electrical cabinet is maintained, allowing no elements which can damage the electrical equipment inside the enclosure.



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SEALED VS. FRESH AIR ENCLOSURE COOLING

Since heat dissipation is often not a solution, we will limit our choices to sealed vs. fresh air enclosure cooling.

Use the environmental and electrical system criteria in the table below to determine whether sealed or fresh air enclosure cooling is most appropriate for your application.

Protective vs. Fresh Air Cooling

Specifying protective cooling that keeps your electrical components sealed from the outside environment versus using fresh air cooling to remove damaging heat depends on the following profile of your system application (check one side or the other for each of the six choices):

FRESH			PROTECTIVE	
Clean Air / Some Dust / Dripping Water	☐	**SYSTEM OPERATING ENVIRONMENT**	☐	Dirty / Wet / Metal Filings / Outdoors / Corrosive Fumes
Moderate to Low (typically under 35 C / 95 F)	☐	**TEMPERATURE OUTSIDE OF THE ENCLOSURE**	☐	Hot (typically over 35 C / 95 F)
Somewhat to Well-Above Ambient Temperature	☐	**TEMPERATURE RATING OF THE ELECTRICAL COMPONENTS**	☐	Below to Somewhat Above Ambient Temperature
Moderate to Low	☐	**HUMIDITY OUTSIDE OF THE ENCLOSURE**	☐	High Relative Humidity
Wide	☐	**TEMPERATURE RANGE FOR THE ELECTRICAL COMPONENTS**	☐	Narrow / Precise
Moderate to Low (typically under 3000 Watts)	☐	**SYSTEM POWER DRAW / HEAT LOAD**	☐	Moderate to High (typically over 3000 Watts)

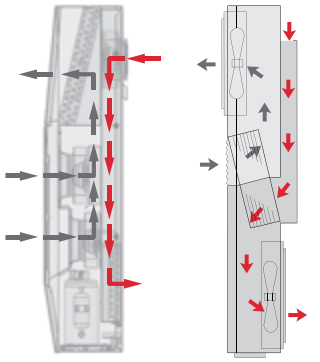
If most of your assessments fell on the fresh air side, then a filter fan, fan tray, motorized impeller or blower is probably the correct cooling solution for your application. However, if most of your assessments were on the protective side, then an air conditioner or heat exchanger found in the Is likely the right cooling solution for your electrical system.

INTRODUCTION

Assuming that sealed enclosure cooling is needed for the application, there are two basic choices—air conditioners or heat exchangers.

An air conditioner should be specified when:
- The temperature inside the enclosure must be maintained at or below the ambient temperature
- Humidity must be removed
- A moderate to high heat load is being produced by the electrical system

A heat exchanger can be used to transfer heat from inside the enclosure to the outside atmosphere when:
- The electrical components can operate at a temperature above the ambient air temperature
- Humidity is not a factor
- A low to moderate heat load is being produced by the electrical system



Air Conditioner Heat Exchanger

AIR CONDITIONER COOLING CAPACITY OVERVIEW

The cooling capacity of an air conditioner needs to match or exceed the amount of total heat load generated by the electrical system.

Total heat load comes from two sources:
(a) the electrical components themselves which is called "internal heat load" and
(b) the ambient heat outside the enclosure which is known as the "heat transfer load."

Most engineers and cooling suppliers determine internal heat load. However, the impact from the heat transfer load is easily overlooked. Heat transfer load can significantly add to the total heat load of the system, especially if the outside air temperature is high and/or the enclosure is located in the sun.

Thus, the **total heat load** to be removed from the electrical enclosure by the air conditioner is the sum of the **internal heat load** and the **heat transfer load.**

TOTAL HEAT LOAD = INTERNAL HEAT LOAD + HEAT TRANSFER LOAD

PART A: DETERMINE INTERNAL HEAT LOAD

The internal heat load comes from the amount of waste heat generated inside the enclosure by the electrical components and is expressed in Watts (W).

There are several methods to determine internal heat load, depending on data availability.

Method 1. Heat Load Data from Each Electrical Component Manufacturer
One way to estimate internal load is to gather heat load data from the manufacturers of the electrical components inside the cabinet. They may know the amount of heat their equipment is generating. If more than one control or other electrical components are inside the enclosure, it will be necessary to add together all the estimates of heat load to determine total internal heat load.

Method 2. Component Power – Component Efficiency

A second method is to establish the Watts of power used by each electrical component. Derive Watts of power by multiplying the amp draw of each device by its voltage. Then subtract the efficiency of each component from its estimated power use. Add up the outcomes to get the total internal heat load.

INTERNAL HEAT LOAD = COMPONENT POWER (W) - COMPONENT EFFICIENCY (for each electrical device)

For example:
An electrical system uses two components that draw 115 VAC at 15 amps. Each has a rated efficiency of 90%. Put another way, 10% of each device is inefficient. Unused power becomes generated heat. Thus the estimated internal heat load is:

Device Power = 115 x 15 = 1725 W
Total Power = 2 x 1725 = 3450
Less Efficiency = 3450 x (1 - .90)
Total Heat Load = 345 W

Method 3. Incoming – Outgoing Power
A third approach is to estimate the power going into the enclosure and the power coming out of it. The difference becomes the estimated amount of internal heat load. The amps and volts of each electrical line going in are multiplied to determine Watts, then they're added together. The same is done for the electrical line(s) coming out of the application. The outgoing Watts are then subtracted from the incoming Watts.

INTERNAL HEAT LOAD = INCOMING POWER (W) – OUTGOING POWER (W)

For example:
An enclosure has three input lines of 230 VAC at 11, 6 and 4 A. It has one output control line of 115 VAC at 9 A.

Incoming Power = (230 x 11) + (230 x 6) + (230 x 4) = 4830 W
Outgoing Power = 115 x 9 = 1035 W
Total Heat Load = 4830 – 1035 = 3795 W

Method 4. Automated Equipment Horsepower
This fourth method applies only to industrial automation equipment that operates with horsepower (hp) such as variable frequency drives (VFDs). 1 hp = 745.6 W. Thus, the internal heat load from a 3-hp VFD is 2237 W, less its efficiency which is typically 93-95%.

For example:
A cabinet has three 5-hp VFDs with 95% efficiency.

VFD Watts = 5 hp x 745.6 x 3 = 11184
Adjusted Watts = 11184 x (1 - .95) = 559
Total Heat Load = 559 x 1.25 = 699 W

1.25 is an assumed "safety" margin for other minor heat-producing components.

PART B: DETERMINING HEAT TRANSFER LOAD OVERVIEW

Heat transfer load is the ambient heat outside the enclosure conducting itself through the cabinet walls toward the electrical (heat energy travels from the hottest to coldest location).

When an air conditioner cools the enclosure temperature lower than the ambient air outside, additional heat load is drawn into the cabinet which the air conditioner needs to remove. The higher the ambient temperature and/or the presence of solar heat gain (the "greenhouse effect") on the enclosure, the more cooling capacity is required.

Determining heat transfer load requires that you know the **total surface area** of the cabinet, less any non-conductive surface area such as the enclosure side mounted to a wall. It also requires that you determine **ΔT**, which is the difference between maximum ambient temperature and the maximum temperature rating of the electrical components.

There are two methods for determining heat transfer load—the simple chart method and the equation method.

SIMPLE CHART METHOD

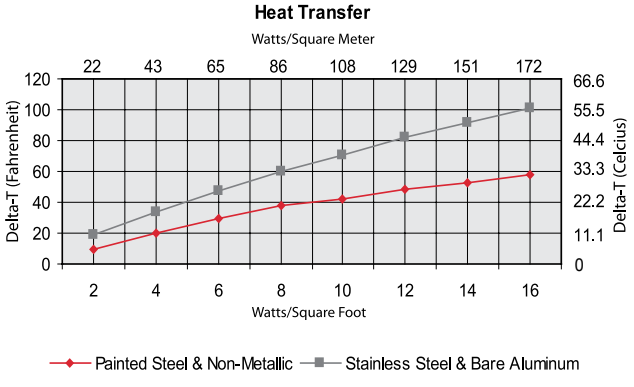
This method is reasonably accurate for most indoor industrial systems where there is no unusual air movement and insulation is not typically used inside the enclosure. The process also provides a ballpark result for outside plant and telecommunications applications, taking into account solar heat gain. However, it does not incorporate the impact of wind or cabinet insulation. If either is present, then the equation method is more precise.

Step A. Determine ΔT in °F or °C.
Step B. Find the heat transfer per ft.^{2} or m^2 on the chart below, using ΔT and the proper cabinet material curve.
Step C. Multiply the heat transfer per ft.^{2} or m^2 by the total surface area of the enclosure that will conduct heat. (Remember to exclude surfaces such as a side mounted to a wall.)

SURFACE AREA (ft.^{2}) = [2AB (in.) + 2BC (in.) + 2AC (in.)] ÷ 144

SURFACE AREA (m^2) =
[2AB (mm) + 2BC (mm) + 2AC (mm)] ÷ 1000000

Total Heat Transfer Load =
Heat Transfer per ft.^{2} or m^2 x Cabinet Surface Area

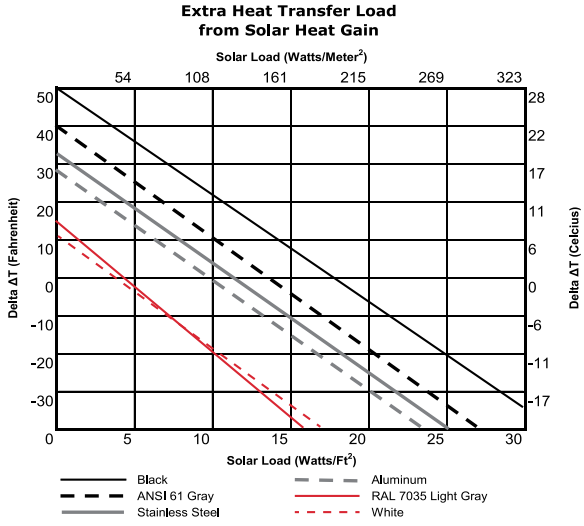


For example:
A painted steel cabinet has 80 ft.^{2} of surface area and will be located in a maximum ambient temperature of 95 F. The rated temperature of the electrical equipment is 75 F.

ΔT = 95 - 75 = 20 F
Heat Transfer = 4 W/ft.^{2} (from chart)

Total Heat Transfer Load = 80 x 4 = 320 W

The estimate for heat transfer load ends here, unless the electrical system will be deployed outdoors. Then solar heat gain needs to be added to the total heat transfer load calculated above. Solar heat gain is determined much the same way as heat transfer per ft.^{2} or m^2, using a similar chart.



For example: The painted cabinet above is in ANSI 61 gray. Thus, 7 W/ft.^{2} need to be added to the heat transfer load which is 560 W (7 x 80 ft.^{2}). Total Heat Transfer Load consequently becomes 720 W.

The result does not include insulation which can significantly reduce heat transfer load.

EQUATION METHOD

Heat transfer load may also be determined by equation. This method should be used when at least one of the following criteria are found in the electrical system:

- Moderate to high airflow within the cabinet
- Outdoor applications that involve breezes or gusty winds
- Insulation used within the cabinet to offset the impact of solar heat gain

The governing equations for heat transfer load are:

English System (°F, inches and feet):
$q = (T_o - T_i) \div [(1/h_o) + (1/h_i) + R]$

Metric System (°C, millimeters and meters):
$(q = (T_o - T_i) \div [(1/h_o) + (1/h_i) + R] \times 5.67$

Definition of Variables—
q = Heat transfer load per unit of surface area
T_o = Maximum ambient temperature outside the enclosure
T_i = Maximum rated temperature of the electrical components
h_o = Convective heat transfer coefficient outside the cabinet
Still air: h = 1.6
Relatively calm day: h = 2.5
Windy day (approx. 15 mph): h = 6.0

h_i = Convective heat transfer coefficient inside the cabinet
Still air: h = 1.6
Moderate air movement: h = 2.0
Blower (approx. 8 $ft.^3$/sec.): h = 3.0

R = Value of insulation lining the interior of the enclosure walls
No insulation: R = 0.0
1/2 in. or 12 mm: R = 2.0
1 in. or 25 mm: R = 4.0
1-1/2 in. or 38 mm: R = 6.0
2 in. or 51 mm: R = 8.0

$q = (125 - 75) \div [(1/6) + (1/2) + 4]$
$q = (50) \div (.16 + .5 + 4)$
$q = 50 \div 4.66$
$q = 10.7$ BTU/hr./$ft.^2$

Total Heat Transfer Load
$10.7 \times 72 = 770$ BTU/hr. or $770 \div 3.413 = 226$ W

Since the cabinet is outdoors, and assuming it is painted ANSI 61 gray and located in the sun, extra solar load needs to be added to the outcome above which is 504 Watts (7 W per $ft.^2 \times 72$ $ft.^2$).

Total Heat Transfer Load with Extra from Solar Heat Gain
226 + 504 = 730 W

DETERMINE TOTAL HEAT LOAD

Total heat load to be removed from the electrical enclosure by the air conditioner is the sum of **internal heat load** plus **heat transfer load**.

TOTAL HEAT LOAD (C) = INTERNAL HEAT LOAD (A) + HEAT TRANSFER LOAD (B)

Thus, one adds together the result from Part A to the outcome from Part B.

For example:

The internal heat load from one of the examples above was 3795 Watts. The heat transfer load from the other example above was 730 W. Therefore, total heat load is 3795 + 730 = 4525 W.

To convert Watts into BTU/hr. to determine air conditioner capacity in the English system, multiply by 3.413.
4525 W is then 15444 BTU/hr.

Power input, protection level and dimensions of the air conditioner also need to fit system requirements.

Caution! Do not simply match the nominal cooling capacity of the air conditioner model with the total heat load result above. Be sure to know the maximum ambient temperature outside the enclosure as well as the rated temperature of the electrical components. Apply these temperatures to the performance curves provided by the cooling manufacturer to select an appropriately sized air conditioner. Failure to do so may under-size your air conditioner as much as 20% - 25%, thereby under-cooling the electrical components and making the application vulnerable to potential over-heating issues.

HEAT EXCHANGER COOLING CAPACITY OVERVIEW

Cooling with an air-to-air heat exchanger assumes the electrical components in your system are able to operate **above** the ambient temperature outside the enclosure. If this is not the case, then an air conditioner must be used.

Selecting a heat exchanger is similar to specifying an air conditioner in that the cooling capacity of the unit must remove the **internal heat load** from the electrical enclosure.

However, since the conductive cooling nature of the cabinet itself removes some of the heat from the system, **heat transfer** should be subtracted from internal heat load (versus added in the case of air conditioners).

Because the cooling capacity of heat exchangers is expressed in terms of Watts/°F or Watts/°C, an extra step is necessary to convert net heat load into a result used to select the appropriate heat exchanger. Divide the net heat load by the **ΔT** which is the difference between the maximum ambient temperature outside the enclosure and the maximum temperature rating of the electrical components.

HEAT EXCHANGER CAPACITY (C) = [INTERNAL HEAT LOAD (A) – HEAT TRANSFER (B)] / ΔT

DETERMINE INTERNAL HEAT LOAD

Internal heat load stems from the amount of waste heat generated inside the enclosure by the electrical components and is expressed in Watts.

To determine internal heat load, follow one of the four options outlined in the air conditioner "Determine Internal Heat Load" section on page 172.

DETERMINE HEAT TRANSFER

In air-to-air heat exchangers, heat transfer is actually cabinet heat loss because the heat inside the enclosure is conducting itself through the cabinet walls toward the cooler temperature outside the enclosure. That is why heat transfer is subtracted from internal heat load to arrive at total net heat load.

To determine heat transfer you need to know the **total surface area** of the cabinet, less any non-conductive surface area such as the enclosure side mounted to a wall. You must also determine **ΔT** which is the difference between maximum ambient temperature and the maximum temperature rating of the electrical components.

There are two methods to determine heat transfer—the **simple chart method** and the **equation method**. The simple chart method may be used for nearly all indoor heat exchanger applications. The equation method needs to be applied when air movement outside or inside the electrical enclosure is high, or for outdoor applications.

Here are the steps for the simple chart method:

Step A. Determine ΔT in °F or °C.
Step B. Find the heat transfer per $ft.^2$ or m^2 from the Heat Transfer graph on page 173, using ΔT and the proper cabinet material curve.
Step C. Multiply the heat transfer per $ft.^2$ or m^2 by the total surface area of the enclosure that will conduct heat. (Remember to exclude surfaces such as a side mounted to a wall.)

SURFACE AREA ($ft.^2$) = [2AB (in.) + 2BC (in.) + 2AC (in.)] ÷ 144

SURFACE AREA (m^2) = [2AB (mm) + 2BC (mm) + 2AC (mm)] ÷ 1,000,000

Heat Transfer (Cabinet Heat Loss) = Heat Transfer per $ft.^2$ or m^2 x Enclosure Surface Area

The estimate for heat transfer ends here, unless the electrical system will be deployed outdoors, or airflow inside or outside the enclosure is high. Then the equation method needs to be used to determine heat transfer (cabinet heat loss).

For the equation method, follow the steps on page 173 in the air conditioner selection section. The result will be a negative number; the negative sign should be ignored when deducting heat transfer from internal heat load.

Caution! If the result of the equation method is a positive number, then this means that you want the electrical temperature inside the cabinet to be lower than the temperature outside the enclosure. In this case, an air conditioner should be specified for the electrical system.

DETERMINE HEAT EXCHANGER CAPACITY

Air-to-air heat exchanger capacities are not provided in terms of Watts or BTUs/hr. of cooling like air conditioners. Instead, they are expressed in terms of Watts/°F or Watts/°C. Thus, the final step in determining heat exchanger capacity is to divide the total net heat load by ΔT. Then select the heat exchanger with the same or higher Watts/°F or Watts/°C as the outcome of this process.

—Indoor Industrial Example—

An electrical system uses two components that draw 230 VAC at 7.5 A. Each has a rated efficiency of 90%. They are protected in a painted steel cabinet that is 60 in. (1524 mm) tall, 36 in. (914 mm) wide and 18 in. (457 mm) deep. The system will be located in a maximum ambient temperature of 80 F (27 C). The rated temperature of the electrical is 95 F (35 C).

HEAT EXCHANGER CAPACITY (C) =
[INTERNAL HEAT LOAD (A) – HEAT TRANSFER (B)] ÷ ΔT

Internal heat load (A) may be determined using the "Component Power – Component Efficiency" method on page 172, given the available information. In this example, the estimated heat load is:

Device Power = 230 x 7.5 = 1725 W
Total Power = 2 x 1725 = 3450
Less Efficiency = 3450 x (1 - .90)
Internal Heat Load = 345 W

Heat transfer (B) is derived using the simple chart method, since this is an indoor industrial application. Both cabinet surface area and ΔT are needed to determine heat transfer. Cabinet surface area is 54 $ft.^2$ or 5.02 m^2 (from surface area formula on page 173). ΔT is 15 F (8 C)—the difference between ambient temperature and the rated temperature of the electrical equipment.

Heat Transfer (Cabinet Heat Loss) =
Heat Transfer per $ft.^2$ or m^2 x Enclosure Surface Area

Using the painted steel curve on the Heat Transfer chart on page 173, heat transfer per $ft.^2$ or m^2 is 3 W/$ft.^2$ or 32.5 W/m^2.
Heat Transfer = 3 W/$ft.^2$ x 54 $ft.^2$ = 162 W

Now that we know internal heat load, heat transfer and ΔT, we can determine heat exchanger capacity as follows:

HEAT EXCHANGER CAPACITY (C) =
[345 WATTS (A) – 162 WATTS (B)] ÷ 15 F (or 8 C)

HEAT EXCHANGER CAPACITY (C) = 12 W/°F or 22 W/°C

The result is **minimum** heat exchanger capacity. If no heat exchanger model is similar to the result, choose the next largest size to ensure adequate electrical cooling.

Power input, protection level and dimensions of the heat exchanger also need to fit the system.

—Outdoor Example—

A telecom system draws a total of 5,000 W; its efficiency is 85%. It is protected in a steel cabinet that is 72 $ft.^2$ (6.69 m^2) and painted with RAL 7035 light-gray paint. The enclosure walls are lined inside with 1 in. (25 mm) of insulation. The application will be deployed in a maximum ambient outdoor temperature of 104 F (40 C) with occasional winds reaching 15+ mph. The rated temperature of the electrical equipment is 114 F (46 C). Air circulation inside the cabinet is moderate.

HEAT EXCHANGER CAPACITY (C) =
[INTERNAL HEAT LOAD (A) – HEAT TRANSFER (B)] ÷ DELTA ΔT

Internal heat load (A) is determined using the "Component Power – Component Efficiency" method on page 172. In this example, the estimated heat load is as follows:

Total System Power = 5000 W
Less Efficiency = 5000 x (1 - .85)
Internal Heat Load = 750 W

Heat transfer (B) is derived using the equation method, since this is an outdoor application. For brevity, we will assume the English system (°F, inches and feet).

$q = (T_o - T_i) \div [(1/h_o) + (1/h_i) + R]$

"q" is heat transfer per surface area. For an explanation of the other variables, see "Equation Method" on page 174.

q = (104 - 114) ÷ [(1/6) + (1/2) + 4]

q = -2.14 W/$ft.^2$

Total Heat Transfer = 2.14 x 72 $ft.^2$ = 154 W
(negative sign is ignored)

ΔT is 10 F — the difference between ambient temperature and the rated temperature of the electrical equipment.

HEAT EXCHANGER CAPACITY (C) =
[750 W (A) – 154 W (B)] ÷ 10 F

HEAT EXCHANGER CAPACITY (C) = 60 W/°F

As in the indoor industrial example, the above result is **minimum** heat exchanger capacity. If no heat exchanger model is similar to the result, choose the next largest size to ensure adequate electrical cooling.

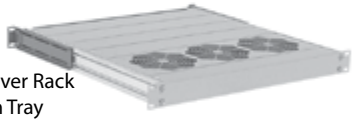
Power input, protection level and dimensions of the heat exchanger also need to fit the system.

INTRODUCTION

There are many standard air movers for electrical cooling on the market today. Common options include:

Compact Axial Fans

Filter Fan



Server Rack Fan Tray

Motorized Impeller

Centrifugal Blower

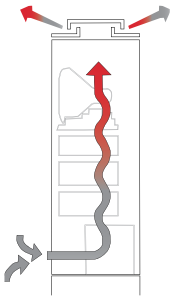
As one may conclude by looking at the products, each fresh air cooling solution can vary in terms of:

- General vs. concentrated airflow
- Amount of air volume (CFM or M^3/Hr.)
- Ability to overcome airflow restriction caused by electrical components (static pressure—Inches of H_2O or Pascals)
- Component price
- Power input (AC or DC volt)
- Ability to protect the electrical equipment from dust and water

However, before we begin to briefly review the advantages and disadvantages of each air mover, we first need to understand two important concepts, airflow and static pressure, because each fresh air cooling solution can be quite different with these factors.

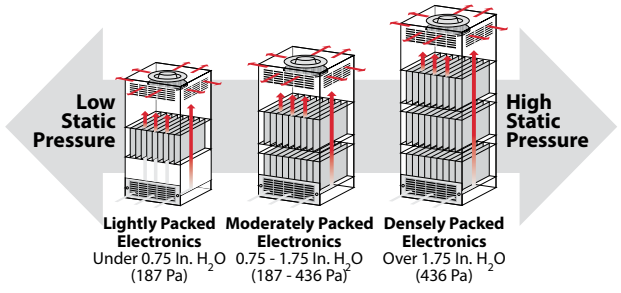
WHAT IS AIRFLOW?

Airflow is the volume of air that a fan, impeller or blower can move. In the English system, airflow is measured in cubic feet per minute or CFM. In the Metric system, airflow is defined as cubic meters per hour or M^3/Hr. Electrical systems with low heat loads (100 to 1000 Watts) require less airflow to cool the components. Cabinets with moderate to high heat loads (more than 1000 Watts) need more airflow.



WHAT IS STATIC PRESSURE?

Static pressure is air restriction created by the components inside the enclosure. In the English system, static pressure is expressed in Inches of Water or In. H_2O. In the Metric system, static pressure is Pascals or Pa. Systems with loosely packed components have low static pressure (0.24 to 0.50 In. H_2O) and use a smaller, less powerful air mover such as a tube axial fan or filter fan for cooling. However, cabinets that are moderately to densely packed with electrical equipment (0.75 In. H_2O or more) require a larger, more powerful air mover or multiple air movers.

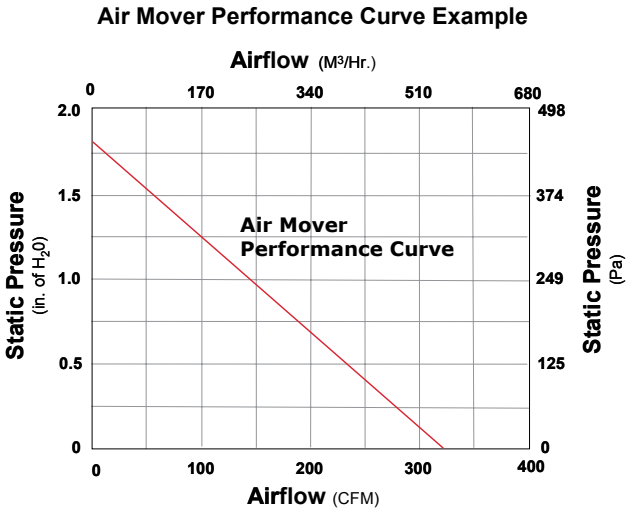


HOW IS PERFORMANCE CHARACTERIZED?

Each air mover is commonly rated based on its airflow and static pressure capability known as a "performance curve."

In a 0 static pressure electrical system, the air mover provides 325 CFM of airflow. Conversely, at 1.6 In. of H_2O static pressure (a moderately packed cabinet), the air mover provides 0 airflow.

Air mover manufacturers determine the performance curve for each of their products by placing the unit in a test chamber to determine its precise airflow and static pressure.



WHAT ARE THE CAPABILITIES OF EACH AIR MOVER?

Each air mover such as a tube axial fan, filter fan, fan tray, motorized impeller and centrifugal blower performs in a different way. A summary of the characteristics and applications for each of these popular fresh air cooling products is outlined in the table below.

Axial fans, filter fans and fan trays generally provide low to moderate airflow in electrical systems with low static pressure. Most are used with VAC applications. Filter fans provide an extra level of enclosure protection against dust infiltration (Type 12 or IP54) and water infiltration (Type 3R or IP55). With the exception of fan trays, tube axial fans and filter fans are relatively inexpensive.

Motorized impellers offer moderate to high airflow and work well in electrical cabinets with moderate to high static pressure. They often provide general cooling throughout an enclosure. Motorized impellers are available in VAC and VDC inputs and are reasonably priced

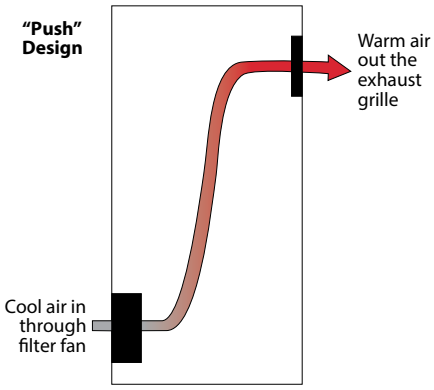
Centrifugal blowers deliver moderate to high airflow and overcome the system impedance that builds up in electrical cabinets with moderate to high static pressure. They're primarily available for VAC power input and are relatively higher priced.

Characteristics of Popular Air Movers

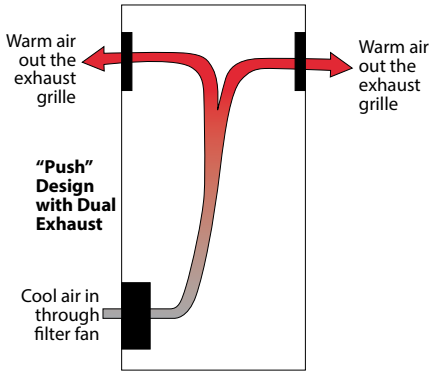
Characteristics	Axial Fans	Filter Fans	Fan Trays	Motorized Impellers	Centrifugal Blowers
Airflow	Low	Low - Moderate	Low - Moderate	Moderate - High	Moderate - High
Static Pressure	Low	Low	Low	Moderate - High	Moderate - High
Voltage Input	AC (some DC)	AC and DC	AC (some DC)	AC and DC	AC
Protection	None	Type 12 & 3R	None	None	None
Per Piece Price	Low	Moderate	High	Moderate	High
Typical Application	Spot electrical cooling	Industrial electrical cabinet cooling	Datacom card and server rack cooling	General cooling of moderate to high static pressure cabinets	Concentrated or general cooling of high static pressure systems

AIRFLOW DESIGN OPTIONS

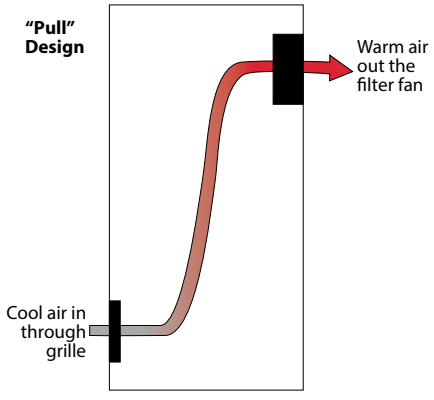
A typical air mover system design "pushes" cool air into the bottom of the electrical cabinet and exhausts the warm air out the top



To reduce exhaust grille static pressure and improve cool airflow, some engineers use two exhaust grilles in their airflow design.

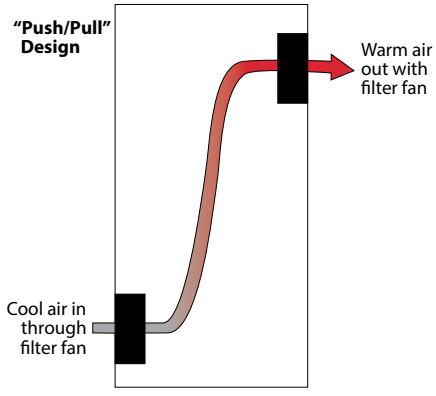


Another option is to use a reverse airflow fan and mount it high in the enclosure to "pull" cool air through the enclosure.

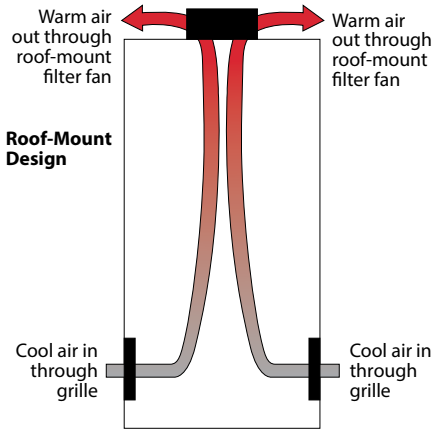


The "pull" approach is less desirable because it de-pressurizes the enclosure. If poor seals are in the cabinet at a door or modular panel, for example, damaging dust could be sucked inside and onto the electrical components. However, space constraints at the bottom of the enclosure may force the engineer to design a "pull" system.

For electrical systems with higher static pressure, filter fans are sometimes used in a "push/pull" approach. The reason is that two filter fans designed in "series" overcome twice the static pressure compared to one filter fan working alone with an exhaust grille.



Roof-mount air movers are also available. Engineers occasionally employ them due to space constraints lower in the enclosure or for other reasons. Two exhaust grilles are recommended to ensure adequate airflow through the enclosure.



Roof-mount air mover designs also pose the risk of pulling dust into the enclosure through poor seals.

CHOOSING AN AIR MOVER

Three overall considerations are applied when selecting a filter fan: voltage input, enclosure protection and airflow requirement.

POWER INPUT

Narrowing the choice of filter fans based on voltage input is quite simple. If the voltage available in the electrical system to power the filter fan is AC, then an VAC filter fan is chosen. If the voltage for the application is DC, then a VDC filter fan is specified.

The voltage level of the filter fan's power input also needs to be taken into consideration. For example, if the voltage input is 115 VAC, then a 115 VAC filter fan should be specified. If the voltage input is 24 VDC, then a 24 VDC impeller is required. Filter fans are commonly available in 115, 230 and 460 3-phase 50/60 Hz VAC as well as 24 VDC. Some manufacturers such as Hoffman offer 48 VDC due to the trend toward using this power input in some electrical systems.

ENCLOSURE PROTECTION

Another important consideration is selecting an air mover that maintains the protection level of the electrical enclosure.

U.S. standards of protection generally include:

Type 1 – For indoor use to protect against contact with the enclosed equipment
Type 12 - For indoor use to protect against dust, falling dirt and dripping non-corrosive liquid such as water
Type 3R – For outdoor use to protect against rain and sleet
Type 4 – For outdoor or indoor use to protect against windblown dust and rain, splashing water and hose-directed water
Type 4X – For outdoor or indoor use to protect against corrosion, windblown dust and rain, splashing water and hose-directed water

European standards of protection include:

IP54 – Dust must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact; water splashing against the enclosure from any direction shall have no harmful effect.
IP55 – Dust must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact; and water projected by a nozzle against enclosure from any direction shall have no harmful effects.
IP65 – No ingress of dust; complete protection against contact; and water projected by a nozzle against enclosure from any direction shall have no harmful effects.

AIRFLOW

Choosing a filter fan with the right airflow or cooling capacity is as important as voltage input and enclosure protection. However, the process is a little more involved.

Generally, smaller heat loads in the electrical system will require a filter fan with a lower airflow rate (CFM or M^3/Hr.). Moderate to high heat loads will need a larger, more powerful filter fan or multiple filter fans to move enough air to cool the electrical components.

The following 5-step process results in a filter fan specification that should generally work in your electrical system.

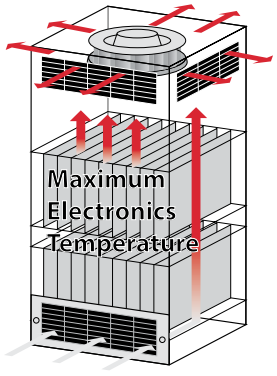
1. Determine Delta-T
2. Determine Internal Heat Load
3. Determine Free Airflow
4. Estimate System Impedance
5. Select Your Filter Fan

These five steps yield a ballpark result. A filter fan sample should always be tested in the actual electrical system itself to confirm that its performance provides adequate airflow.

The next section outlines the 5-step filter fan selection process in more detail.

STEP 1. DETERMINE DELTA-T (ΔT)

Delta-T is the difference between **maximum desired temperature for the electrical equipment** and **maximum temperature outside the enclosure**. It is important to determine ΔT because cooler air will usually require less filter fan airflow whereas warmer air will typically require more airflow.



Maximum Ambient Temperature

Maximum desired temperature for the electrical equipment is identified by reviewing the component manufacturer's specifications. They will often indicate that the equipment should not operate above a certain temperature such as 35 C (95 F).

Maximum temperature **outside the enclosure** is determined by forecasting the highest potential temperature of the air around the electrical cabinet. If the application is in an indoor environment such as an air conditioned factory, the maximum temperature outside the enclosure is the temperature of the facility, such as 25 C (77 F). If the electrical system is outdoors, the maximum temperature around the cabinet is the hottest weather that the application experiences, which may be 45 C (116 F) if it's deployed on a roof top for example.

ΔT =
maximum temperature desired for the electrical equipment - maximum expected ambient temperature

For example:

ΔT =
35 C (95 F) [maximum electrical equipment temperature] -
25 C [maximum ambient temperature]
ΔT = 10 C (18 F)

STEP 2. DETERMINE INTERNAL HEAT LOAD

Heat load stems from the amount of waste heat generated inside the enclosure by the electrical components and is expressed in Watts. There are several methods to determine internal heat load, depending on data availability.

A. Heat Load Data from Each Electrical Component Manufacturer
One way to estimate internal load is to gather heat load data from the manufacturers of the electrical components inside the cabinet. If more than one control or other components are inside the enclosure, it will be necessary to add together the multiple estimates of heat load to determine total internal heat load.

B. Component Power – Component Efficiency
A second method is to establish the Watts of power used by each electrical component. Derive Watts by multiplying the amp draw of each device with its voltage. Then subtract the efficiency of each component from its estimated power use, adding up the outcomes for total internal heat load.

INTERNAL HEAT LOAD = COMPONENT POWER (Watts) - COMPONENT EFFICIENCY (for each electrical device)
For example:
An electrical system uses two components that draw 115 VAC at 9.5 amps. Each has a rated efficiency of 90 percent (10 percent of each device is inefficient). Unused amounts of power become generated heat. Thus, the estimated internal heat load is:

Device Power = 115 x 9.5 = 1100 Watts
Total Power = 2 x 1100 = 2200
Less Efficiency = 2200 x (1 - .90)
Total Heat Load = 220 Watts

C. Incoming – Outgoing Power
A third approach is to estimate the power going into the enclosure and the power coming out of it. The difference is the estimated amount of internal heat load. Multiply the amps and volts of each electrical line going in to determine Watts and then add them together. Do the same for the electrical line(s) coming out of the application. The outgoing watts are subsequently subtracted from the incoming watts.

INTERNAL HEAT LOAD = INCOMING POWER (Watts) – OUTGOING POWER (Watts)
For example:
An enclosure has three input lines of 230 VAC at 11, 6 and 4 amps. It has one output control line of 115 VAC at 9 amps.
Incoming Power = (230 x 11) + (230 x 6) + (230 x 4) = 4830 Watts
Outgoing Power = (115 x 9) = 1035 Watts
Total Heat Load = 4830 – 1035 = 3795 Watts

D. Automated Equipment Horsepower
The fourth method applies only to industrial automation equipment that operates with horsepower such as variable frequency drives (VFDs). 1 horsepower = 745.6 Watts. Thus, the internal heat load from a 3 horsepower VFD is 2237 Watts, less its efficiency which is typically 93 – 95 percent.
For example:
A cabinet has three 5 Hp VFDs with 95% efficiency.
VFD Watts = 5 Hp x 745.6 x 3 = 11184
Adjusted Watts = 11184 x (1 - .95) = 559
Total Heat Load = 559 x 1.25 = 699 Watts

Note: 1.25 is an assumed "safety" margin for other minor heat-producing components.

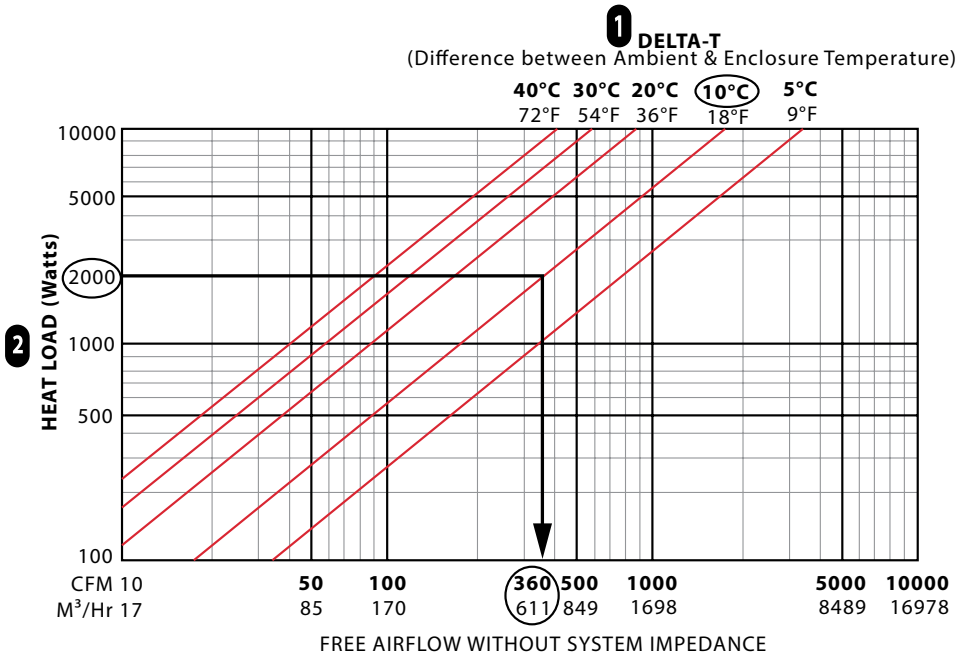
STEP 3. DETERMINE FREE AIRFLOW

Determining free airflow applies the results from steps 1 and 2 to the chart below. Recall that free airflow is the unimpeded airflow through the enclosure without any interference from electrical components or filter fan exhaust grilles.

Select the diagonal ΔT line that closely matches the ΔT of your electrical system. Using the example from step 1, ΔT is 10 C (18 F).

Then find your cabinet's heat load along the Y-axis of the chart. In the example from step 2, heat load is 2000 Watts.

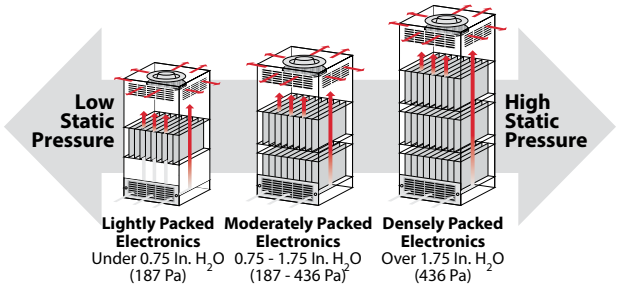
Find where heat load intersects with ΔT to determine free airflow on the X-axis. Continuing the example, free airflow in this case is 360 CFM or 611 M^3/Hr.



Now we need to account for system impedance, i.e., the amount of airflow interference created by the electrical components inside the cabinet. A filter fan with **more than** 360 CFM or 611 M^3/Hr. of free airflow will actually be needed for this system's design.

STEP 4. ESTIMATE SYSTEM IMPEDANCE

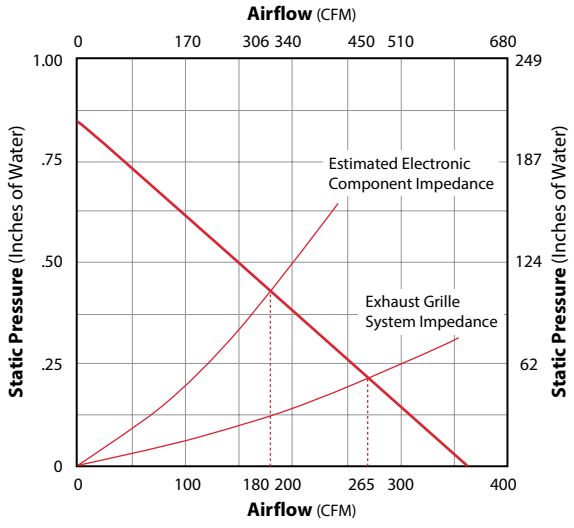
Static pressure or system impedance can impact the cooling performance of an air mover. Filter fans work well in electrical cabinets with low static pressure such as a large enclosure with a bare drive and few other components. They do not have enough force to push air through a cabinet with a moderate or high system impedance.



If your system design appears like the middle or right hand example, then a motorized impeller or blower is probably a better solution for the application than a filter fan.

Assuming a filter fan can cool your application, the exhaust grille and electrical components inside the enclosure will reduce airflow through the system. Filter fan manufacturers will show the effect of the exhaust grille on the performance curve. However, they do not indicate the impedance curve of the electrical system because filter fan makers do not know this information. Only the specifying electrical engineer or system designer can determine this. If it is not possible to measure the exact static pressure inside an electrical cabinet, you must make an estimate and draw an approximation.

Impact of System Impedance on Free Airflow of a 376 CFM (638 M³/Hr.) Filter Fan



In the example shown, the free airflow of a 376 CFM (638 M^3/Hr.) air mover decreases to 265 CFM with the exhaust grille kit and down to 180 CFM when used in an actual application. Thus, a model with a performance curve similar to the one in the next graph would be too small to keep our electrical system cool because our actual target airflow is 360 CFM.

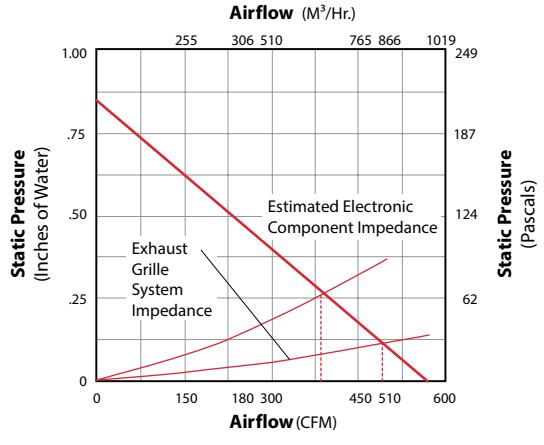
STEP 5. SELECT YOUR AIR MOVER

In this final step, we bring together the results of free airflow (step 3) and system impedance (step 4), using the air mover performance charts. Applying the example, we need to select a motorized impeller that delivers a minimum of 360 CFM (611 M^3/Hr.).

Identify alternative air mover models with free airflow ratings that are greater than the step 3 outcome of 360 CFM (611 M^3/Hr.) to compensate for airflow losses created by static pressure in the system. A judgmental system impedance curve is overlaid onto the performance charts of each of the optional models, and then the model with the CFM or M^3/Hr. closest to the target airflow is selected.

In the performance curve shown here, 571 CFM is commonly the largest filter fan in the electrical cooling industry. Based on the estimated electrical component impedance overlaid by our imaginary engineer, it should deliver the cooling performance required by the system.

Performance Curve of a 571 CFM (969 M³/Hr.) Filter Fan with Exhaust Grille and System Impedance



FRIENDLY REMINDER

This 5-step process for selecting an air mover yields a ballpark result. Be sure to test a sample of the air mover in the electrical system prototype at maximum ambient and heat load conditions to verify adequate cool airflow.

STANDARDS ORGANIZATION SUMMARY AND DIRECTORY OVERVIEW

What's in a Rating?

As a way of standardizing enclosure performance, organizations like NEMA, UL, CSA, IEC and VDE use rating systems to identify an enclosure's ability to resist external environmental influences. Resistance to everything from dripping liquid to hose-down to total submersion is defined by the ratings systems. While these ratings are all intended to provide information to help you make a safer, more-informed product choice, there are differences among them.

North American Standards Organizations

In North America, NEMA, UL and CSA are the commonly recognized standards organizations. Their ratings are based on similar application descriptions and expected performance. UL and CSA both require enclosure testing by qualified evaluators in their certified labs. They also send site inspectors to make sure a manufacturer adheres to prescribed manufacturing methods and material specifications. NEMA, on the other hand, does not require independent testing and leaves compliance completely up to the manufacturer.

North American enclosure rating systems also include a rating that indicates corrosion resistance. This rating is based on the enclosure's ability to withstand prolonged exposure to salt water spray.

While the corrosion resistance rating is a good indicator that an enclosure can resist corrosion, it does not provide information on how a specific corrosive agent will affect a given enclosure material. It is best to conduct a full analysis of the specific application and environment to determine the best enclosure choice.

International Standards Organizations

Like NEMA, IEC does not require independent testing and leaves compliance completely up to the manufacturer. Nevertheless, there are differences in how enclosure performance is interpreted. For example, UL and CSA test requirements specify that an enclosure fails the water-tight test if even a single drop of water enters the enclosure. In the IEC standards for each level of ingress protection (IP), a certain amount of water is allowed to enter the enclosure.

IEC 60529 IP ratings do not specify construction requirements or degrees of protection against corrosive atmospheres, risk of explosion or conditions such as moisture or corrosive vapors. NEMA Type ratings, on the other hand, do specify construction and performance requirements for most environmental conditions. For this reason, and because the tests and evaluations for other characteristics are not identical, the IEC enclosure classification designations cannot be exactly equated with NEMA enclosure Type numbers.

CE

For industrial control equipment, the CE Mark is not intended to be applied to empty enclosures because such enclosures are inactive components of a final assembly. The responsibility of ensuring compliance with all applicable EU directives and harmonized standards belongs with the final equipment manufacturer.

EAC

EAC Standard has been approved in Russian Federation and CIS countries and is quite similar to the EN/CE standards. The EAC collection of standards covers general and technical specifications as well as safety requirements.

At the time of this printing, the following countries use EAC Standard with some individual additions: Russia, Belarus, Ukraine, Moldova, Kazakhstan, Azerbaijan, Armenia, Kyrgyzstan, Uzbekistan, Tajikistan, Georgia, Turkmenistan

EAC certification is required in order to gain customs clearance for products at the Russian borders. The EAC certificate indicates compliance with the Russian standards. EAC is valid only for Russian Federation and may not be accepted in CIS countries. There are similar, but independent regulations in each CIS country.

PROTECTION LEVELS

NEMA, UL and CSA Ratings **Enclosure Type Descriptions for Non-Hazardous Locations**

	Type	NEMA	UL	CSA
Indoor	Type 1	Enclosures are intended for indoor use primarily to provide a degree of protection against contact with the enclosed equipment or locations where unusual service conditions do not exist.	Indoor use primarily to provide protection against contact with the enclosed equipment and against a limited amount of falling dirt.	General purpose enclosure. Protects against accidental contact with live parts.
Indoor	Type 12	Enclosures are intended for indoor use primarily to provide a degree of protection against dust, falling dirt and dripping noncorrosive liquids.	Indoor use to provide a degree of protection against dust, dirt, fiber flyings, dripping water and external condensation of noncorrosive liquids.	Indoor use; provides a degree of protection against circulating dust, lint, fibers and flyings; dripping and light splashing of non-corrosive liquids; not provided with knockouts.
Indoor	Type 12K	Enclosures with knockouts are intended for indoor use primarily to provide a degree of protection against dust, falling dirt and dripping noncorrosive liquids.	Indoor use to provide a degree of protection against dust, dirt, fiber flyings, dripping water and external condensation of noncorrosive liquids.	Indoor use; provides a degree of protection against circulating dust, lint, fibers and flyings; dripping and light splashing of noncorrosive liquids; not provided with knockouts.
Indoor	Type 13	Enclosures are intended for indoor use primarily to provide a degree of protection against dust, spraying of water, oil and noncorrosive coolant.	Indoor use to provide a degree of protection against lint, dust seepage, external condensation and spraying of water, oil and noncorrosive liquids.	Indoor use; provides a degree of protection against circulating dust, lint, fibers and flyings; seepage and spraying of non-corrosive liquids, including oils and coolants.
Outdoor	Type 3	Enclosures are intended for outdoor use primarily to provide a degree of protection against windblown dust, rain and sleet; undamaged by the formation of ice on the enclosure.	Outdoor use to provide a degree of protection against windblown dust and windblown rain; undamaged by the formation of ice on the enclosure.	Indoor or outdoor use; provides a degree of protection against rain, snow and windblown dust; undamaged by the external formation of ice on the enclosure.
Outdoor	Type 3R	Enclosures are intended for outdoor use primarily to provide a degree of protection against falling rain and sleet; undamaged by the formation of ice on the enclosure.	Outdoor use to provide a degree of protection against falling rain; undamaged by the formation of ice on the enclosure.	Indoor or outdoor use; provides a degree of protection against rain and snow; undamaged by the external formation of ice on the enclosure.
Outdoor	Type 3RX	Enclosures are intended for outdoor use primarily to provide a degree of protection against corrosion, falling rain and sleet; undamaged by the formation of ice on the enclosure.	Not specifically defined.	Not specifically defined.
Outdoor	Type 4	Enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust and rain, splashing water and hose directed water; undamaged by the formation of ice on the enclosure.	Either indoor or outdoor use to provide a degree of protection against falling rain, splashing water and hose-directed water; undamaged by the formation of ice on the enclosure.	Indoor or outdoor use; provides a degree of protection against rain, snow, windblown dust, splashing and hose-directed water; undamaged by the external formation of ice on the enclosure.
Outdoor	Type 4X	Enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water and hose-directed water; undamaged by the formation of ice on the enclosure.	Either indoor or outdoor use to provide a degree of protection against falling rain, splashing water and hose-directed water; undamaged by the formation of ice on the enclosure; resists corrosion.	Indoor or outdoor use; provides a degree of protection against rain, snow, windblown dust, splashing and hose-directed water; undamaged by the external formation of ice on the enclosure; resists corrosion.
Outdoor	Type 6	Enclosures are intended for use indoors or outdoors where occasional submersion is encountered; limited depth; undamaged by the formation of ice on the enclosure.	Indoor or outdoor use to provide a degree of protection against entry of water during temporary submersion at a limited depth; undamaged by the external formation of ice on the enclosure.	Indoor or outdoor use; provides a degree of protection against the entry of water during temporary submersion at a limited depth. Undamaged by the external formation of ice on the enclosure; resists corrosion.

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- Some enclosures may have multiple ratings. For instance: 4, 12—Outdoor use; able to be used indoors with modifications; 4X, 3RX—Outdoor use; able to be used indoors with modifications; 4, 9—Can be used in both hazardous and non-hazardous locations

IP Rating Descriptions **Example Rating**

If 1st IP number is...	and the 2nd IP number is...	Then the IP rating is
2	3	IP23
(protection against solid objects)	(protection against liquids)	An enclosure with this designation provides protection against touch with a finger, penetration of solid objects greater than 12 mm and spraying water.

First Numeral (Solid Objects and Dust)

IP	Protection of Persons	Protection of Equipment
0	No Protection	No Protection
1	Protected against contact with large areas of the body (back of hand)	Protected against objects over 50 mm in diameter
2	Protected against contact with fingers	Protected against solid objects over 12 mm in diameter
3	Protected against tools and wires over 2.5 mm in diameter	Protected against solid objects over 2.5 mm in diameter
4	Protected against tools and wires over 1 mm in diameter	Protected against solid objects over 1 mm in diameter
5	Protected against tools and wires over 1 mm in diameter	Protected against dust (limited ingress, no harmful deposit)
6	Protected against tools and wires over 1 mm in diameter	Totally protected against dust

Second Numeral (Liquid)

IP	Protection of Equipment
0	No Protection
1	Protected against vertically falling drops of water, e.g. condensation
2	Protected against direct sprays of water up to 15 degrees from vertical
3	Protected against sprays up to 60 degrees from vertical
4	Protected against water sprayed from all directions (limited ingress permitted)
5	Protected against low-pressure jets of water from all directions (limited ingress permitted)
6	Protected against strong jets of water
7	Protected against the effects of immersion between 15 cm and 1 m
8	Protected against long periods of immersion under pressure
9	Protected against high pressure and temperature water jets

SCCR REQUIREMENTS PER UL (CONDENSED VERSION)

Article 409 of the 2008 National Electric Code (NFPA 70) requires industrial control panels to be marked with a short circuit current rating. As specified in the National Electric Code, UL508A-2001 Supplement SB, the Standard of Safety for Industrial Control Equipment, provides an accepted method for determining the short-circuit current rating of the control panel.

The SCCR rating for our air conditioners and heat exchangers has a default value of 5 kA.

You may use a 5 or 10 kVA isolation transformer between the customer's panel and our air conditioner and not have an effect on the customer's 65 kA rating.

You may use a fuse or circuit breaker with a 5 kA short circuit rating on the line side of the ACU and its branch circuit protective device and not have an effect on the customer's 65 kA rating.

The current limiting fuse or circuit breaker used on the line side of the branch circuit protection for the ACU must have a SCCR equal to or greater than that of the panel rating. Additionally, for a current limiting fuse, the customer would need to verify that the let-through current (Ip * 10^3) of the fuse is less than or equal to 5KA by referencing table SB4.2 of UL 508A. If a circuit breaker is used as feeder protection, it **must** be marked Current Limiting type from the manufacturer, and the panel builder would need to verify based on the manufacturers published curves that the let-through current is less than or equal to 5kA. Examples of these curves are included in UL 508A supplement SB.

You can run separate circuits for the panel and the air conditioner as long as each is labeled with their individual SCCR ratings. (5 kA and 65 kA)

If the customer does not implement one of the options above, then the resulting SCCR rating would be the 5 kA rating of the ACU, if that is the lowest rated component in the panel.

Testing represents another option; however, if the customer does not implement these options, then the resulting short circuit rating of the panel is based on the lowest short circuit current rating of all power circuit components installed in the panel.

REMOTE ACCESS CONTROL (RAC)

Application

Hoffman's Spectracool Remote Access Control (RAC) system is an integrated, parametric controller designed to work seamlessly with our enclosure air conditioner (A/C) units for the purpose of remotely monitoring and managing anywhere from a single A/C unit to an entire network of Spectracool air conditioners from virtually anywhere in the world with a secure internet connection.

Electrical Engineering Maintenance, IT System Managers and others can ensure that their systems are always running at optimal levels using the Spectracool Remote Access Control System to help increase productivity and improve overall system reliability. Whether you have a single A/C unit 1,000 miles away in a remote location, or have hundreds of units in a local factory, the Spectracool Remote Access Control System can reduce the number of people needed to monitor and control your enclosure cooling systems to a single individual.

Specification

- Supports most standard wire and wireless routers
- Works with most Hoffman Air Conditioners
- Input voltage range: 9.5V to 95V
- Operating voltage: 24V
- Operating temperature: -40 C to 65 C
- Storage temperature: -40 C to 85 C
- Supports up to 2 temperature sensors
  - Sensor temperature range: -50 C to 105 C
  - Sensor accuracy: ±0.2 C
  - Sensor input: Analog or NTC
- Supports up to 10 alarms
  - Door open alarm
  - High temperature alarm
  - Low temperature alarm
  - Air inlet temperature sensor failure alarm
  - Air outlet temperature sensor failure alarm
  - High pressure warning
  - Low pressure alarm
  - Frost alarm
  - Lost communication alarm (LC)
  - Lost communication alarm (LC1)
- Interfaces
  - USB port to interface with PC for system configurations
  - Ethernet port to interface with local network for remote access
  - RS485 Bus
  - Input voltage
- Supports multiple communication protocols
  - SNMP, Modbus TCP, Ethernet/IP, and Profinet protocol

Models with °C Controller Operating Parameters

Parameter	Description	Default Value (°C)	Range (°C)
r01	Cooling set-point	35	20 to 55
r02	Cooling differential	5	-
P08	Door Open and/or smoke detected	28	4 or 28

Models with °C Controller Alarm Parameters

Parameter	Description	Default Value (°C)	Range (°C)
P16	High temperature Alarm	55	-
P19	Low temperature Alarm	14	-

Models with °F Controller Operating Parameters

Parameter	Description	Default Value (°F)	Range (°F)
r01	Cooling set-point	80	72 to 120
r02	Cooling differential	7	-
P08	Door open and/or smoke detected	28	4 or 28
A04	Heating set-point*	50*	32 to 60
A05	Heating differential*	7*	-

Cooling turns on at r01 + r02, and off at r01
Heating turns on at A04, and off at A04 + A05
*Functional only on units with heater option

Models with °F Controller Alarm Parameters

Parameter	Description	Default Value (°F)	Range (°F)
P16	High temperature Alarm	125	-
P19	Low temperature Alarm	40	-

Alarm Condition Display

Parameter	Description	Cause	Result	Alarm Relay
TP	High temperature Alarm	Door open and/or smoke detected	Unit turns off for duration of alarm	Relay contacts close
LA	Low temperature Alarm	MALF high pressure switch opens	No effect on function	N/A
E1	Air inlet temperature Sensor Alarm	Sensor Failure	Unit turns off for duration of alarm	Relay contacts close
E2	Air Outlet temperature Sensor Alarm	Sensor Failure	Unit turns off for duration of alarm	Relay contacts close
Ht	High temperature Alarm	Cabinet over temperature	No effect on function	Relay contacts close
Lt	Low temperature Alarm	Cabinet under temperature	No effect on function	Relay contacts close
A1	Frost Alarm	Evaporator coil frozen	Compressor and evaporator fan off for duration of alarm	Relay contacts close

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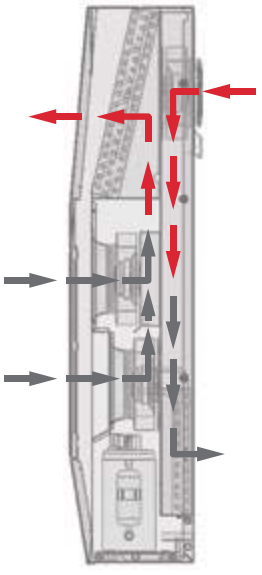
SPECTRACOOL INDOOR/OUTDOOR

G57
20000 BTU/Hr.
5861 Watt

G52
8000/12000 BTU/Hr.
2300/3500 Watt

G28
4000/6000 BTU/Hr.
1172/1758 Watt



INDUSTRY STANDARDS

UL/cUL Listed; Type 12, 3R, 4; 4X optional; File No. SA6453

CE
EAC
IP 56 Internal Loop
IP 34 on External Loop
Telcordia GR-487 capable (Outdoor)

APPLICATION

- Industrial automation
- Telecommunications equipment
- Waste water treatment systems
- Package handling equipment
- Security and defense systems
- And more

FEATURES

- Energy-efficient rotary compressor on most models
- R407c and R134a earth-friendly refrigerants
- 115, 230 and 400/460 VAC 3-phase power input on most models
- UL Listed to save customers time and money with agency approvals
- Outdoor model operating temperature range from -40 F/-40 C to 131 F/55 C
- Exterior and partially recessed mounting options
- Attractive industrial design with minimal use of visible fasteners
- Reliable mechanical thermostat on enclosure side of the unit; indoor air conditioner models include digital display on ambient side
- Dual condenser-side air movers for performance redundancy on G52 and G57 models
- Galvanized sheet-metal cover for rugged factory and outdoor environments
- Easy-mount flanges for simple installation
- Cut-out adapter options for enclosures with GENESIS and T-Series air conditioners, enable users to easily transition to the new unit
- Dust-resistant condenser coil allows the unit to be run filterless in most applications
- Cleanable, reusable aluminum mesh filter protects coils for maximum cooling performance
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Standard Indoor Air Conditioner models also include:
  - Active condensate management with heater strip
  - Power-off relay for door switch and other system requirements
  - Malfunction switch
- Standard Outdoor Air Conditioner models also include:
  - Telcordia GR-487 capable
  - Corrosion-resistant components
  - Malfunction switch
  - Compressor heater
  - Head pressure control
  - Up to 2000 Watt (G28, G52) and 3000 Watt (G57) enclosure heater

SPECIFICATIONS

- Nominal cooling capacity:
  G28 4000 & 6000 BTU/Hr. (1172 and 1758 W)
  G52 8000 & 12000 BTU/Hr. (2344 and 3516 W)
  G57 20000 BTU/Hr. (5861 W)
- Outdoor model operating temperature range from -40 F/-40 C to 131 F/55 C

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint
- Other colors and textures available

NOTES

Visit **nVent.com/HOFFMAN** to download 2D and 3D CAD drawings into the overall design of your electrical system.

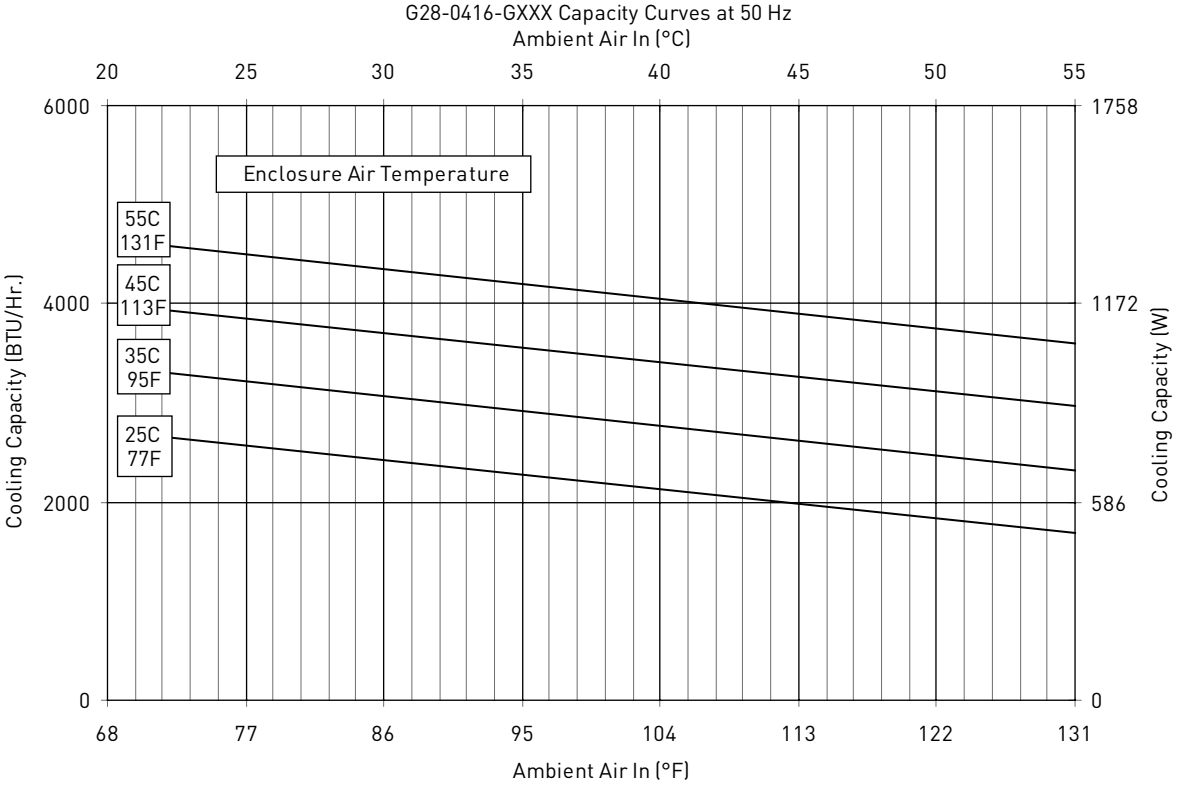
EtherNet/IP ODVA PI PROFIBUS • PROFINET

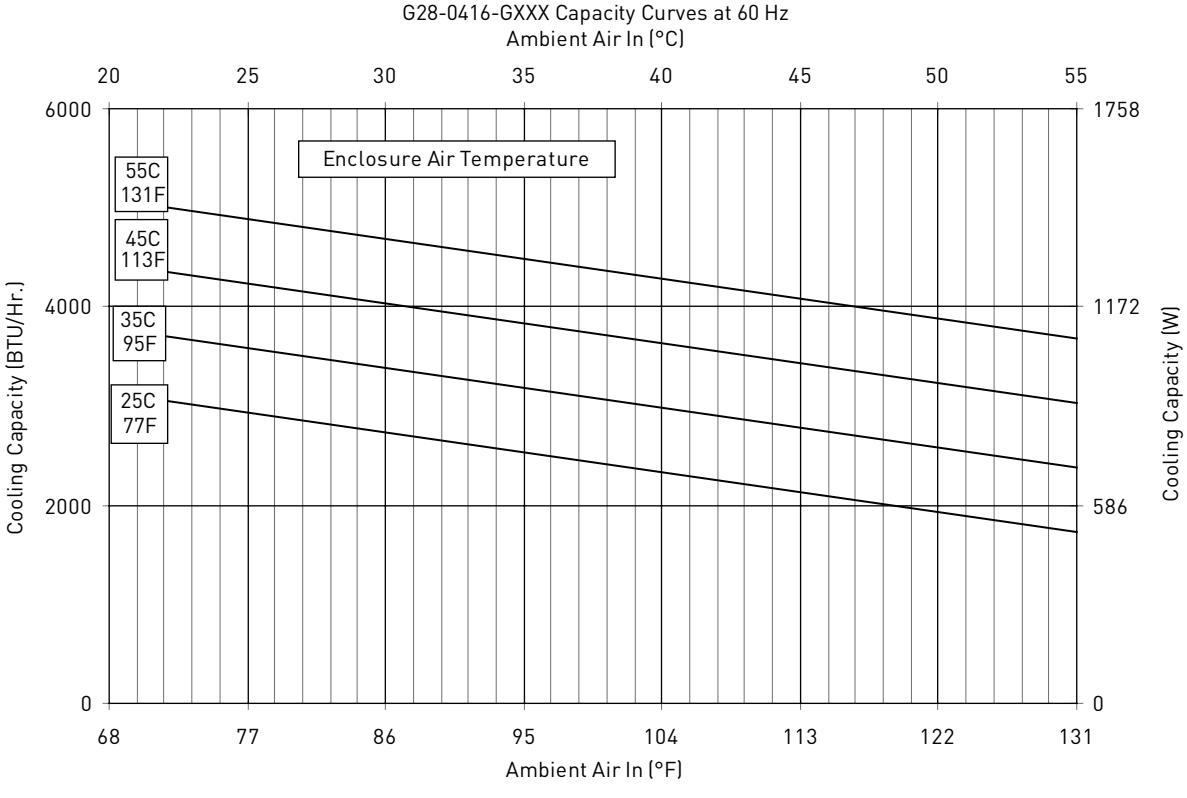
Performance Data **G28 Models 4000/6000 BTU/Hr. (1172/1758 Watt)**

CATALOG NUMBER						
Indoor Model	G280416G050	G280426G050	G280446G050	G280616G050	G280626G050	G280646G050
Indoor Model Stainless Steel Type 4X	G280416G051	G280426G051	G280446G051	G280616G051	G280626G051	G280646G051
Indoor Model with Remote Access Control*	G280416G060	G280426G060	G280446G060	G280616G060	G280626G060	G280646G060
Outdoor Model without Heat Pkg.	G280416G100	G280426G100	G280446G100	G280616G100	G280626G100	G280646G100
Outdoor Model Partial Recessed Mount	G280416G101	G280426G101	G280446G101	G280616G101	G280626G101	G280646G101
Outdoor Model without Heat Pkg. Stainless Steel Type 4X	G280416G102	G280426G102	G280446G102	G280616G102	G280626G102	G280646G102
Outdoor Model with Heat Pkg.	G280416G150	G280426G150	—	G280616G150	G280626G150	—
Outdoor Model with Heat Pkg. Stainless Steel Type 4X	G280416G151	G280426G151	—	G280616G151	G280626G151	—
COOLING PERFORMANCE						
Nominal:						
BTU/Hr.	**4000**	**4600/4900**	**4600/4900**	**6000/6400**	**6000/6400**	**5400/6000**
Watts	**1172**	**1347/1435**	**1347/1435**	**1757/1874**	**1757/1874**	**1581/1757**
At 131 F/131 F (55 C/55 C):						
BTU/Hr. (50/60 Hz)	3700	4600/4900	4600/4900	6000/6400	6000/6400	5400/6000
W (50/60 Hz)	1084	1347/1435	1347/1435	1757/1874	1757/1874	1581/1757
At 95 F/95 F (35 C/35 C):						
BTU/Hr. (50/60 Hz)	3300/3410	4300/4600	4324/4655	5600/6000	5600/6000	5054/5685
W (50/60 Hz)	967/1000	1260/1364	1267/1364	1641/1758	1641/1758	1481/1666
Refrigerant	R134A	R407C	R134A	R407C	R407C	R134A
Refrigerant Charge (ounces/grams)	12/340	20/567	16/454	20/567	20/567	16/454
Operating Temperature Range:						
Maximum (°F/°C)	131 F/55 C	131 F/55 C	131 F/55 C	131 F/55 C	131 F/55 C	131 F/55 C
Minimum (°F/°C)	-40 F/-40 C	-40 F/-40 C	-40 F/-40 C	-40 F/-40 C	-40 F/-40 C	-40 F/-40 C
Air Flow at 0 Static Pressure:						
Internal loop 50 Hz (CFM / m^3/hr.)	151/256	189/321	189/321	189/321	189/321	189/321
External loop 50 Hz (CFM / m^3/hr.)	284/482	291/494	291/494	291/494	291/494	291/494
Internal loop 60 Hz (CFM / m^3/hr.)	183/310	221/375	221/375	221/375	221/375	221/375
External loop 60 Hz (CFM / m^3/hr.)	290/492	300/509	300/509	300/509	300/509	300/509
Max. Heater W (Outdoor Models)	2000	2000		2000	2000	
ELECTRICAL DATA						
Rated Voltage	**115**	**230**	**400/460 3~**	**115**	**230**	**400/460 3~**
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	465/1055	1058/1334	680/874	1138.5/1311	1058/1334	680/874
Max. Nominal Current (A at 50/60 Hz)	10.4/10.1	4.6/5.8	1.7/1.9	9.9/11.4	4.6/5.8	1.7/1.9
Starting Current (A)	36.2	17.7	7.7	36.2	17.7	7.7
Agency Approvals	UL/cUL Listed CE EAC					
Power Input Description	Terminal Block					
ENCLOSURE PROTECTION						
UL Type	Type 12, 3R, 4 Standard Type 4X Stainless Steel Optional					
CONTROLLER						
Description	Basic Mechanical Thermostat					
Thermostat Location	Enclosure Side on All Base Models					
Factory Thermostat Setting (°F/°C)	80/27	80/27	80/27	80/27	80/27	80/27
SOUND LEVEL						
At 1.5 Meters	68 dB(A)					
UNIT CONSTRUCTION						
Material	Galvanized Sheet Metal Standard (Optional: Stainless Steel)					
Finish	Powder Coat RAL 7035 Light Gray Standard					
ACCESSORIES						
EASYSWAP Adaptor Plenum (GENESIS M28)	Enables SPECTRACOOL to be mounted to GENESIS M28 air conditioner cutout Catalog Number PLM28G28					
EASYSWAP Adaptor Plenum (T-Series T29)	Enables SPECTRACOOL to be mounted to T-Series T29 air conditioner cutout Catalog Number PLT29G28					
UNIT DIMENSIONS						
Height (in./mm)	28.55/725.1					
Width (in./mm)	16.97/431.1					
Depth (in./mm)	10.10/256.6					
Weight (lb./kg)	84/38	84/38	84/38	84/38	84/38	84/38

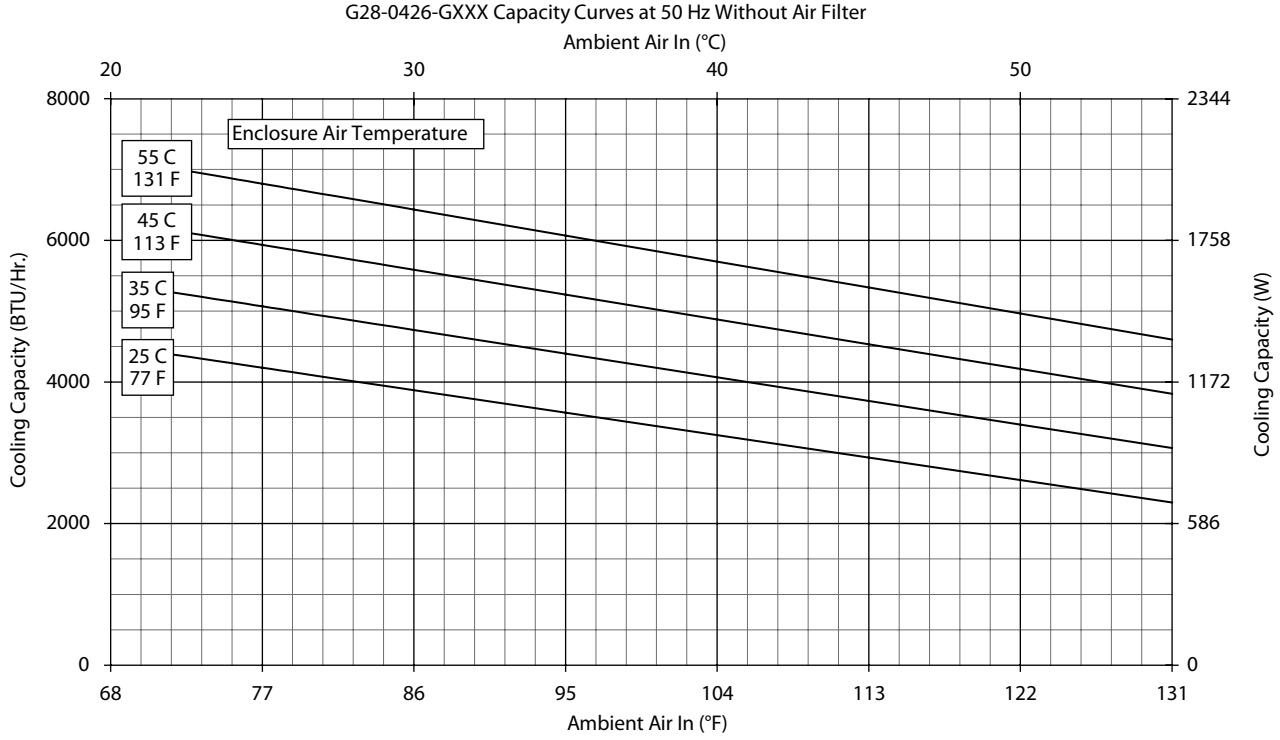
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

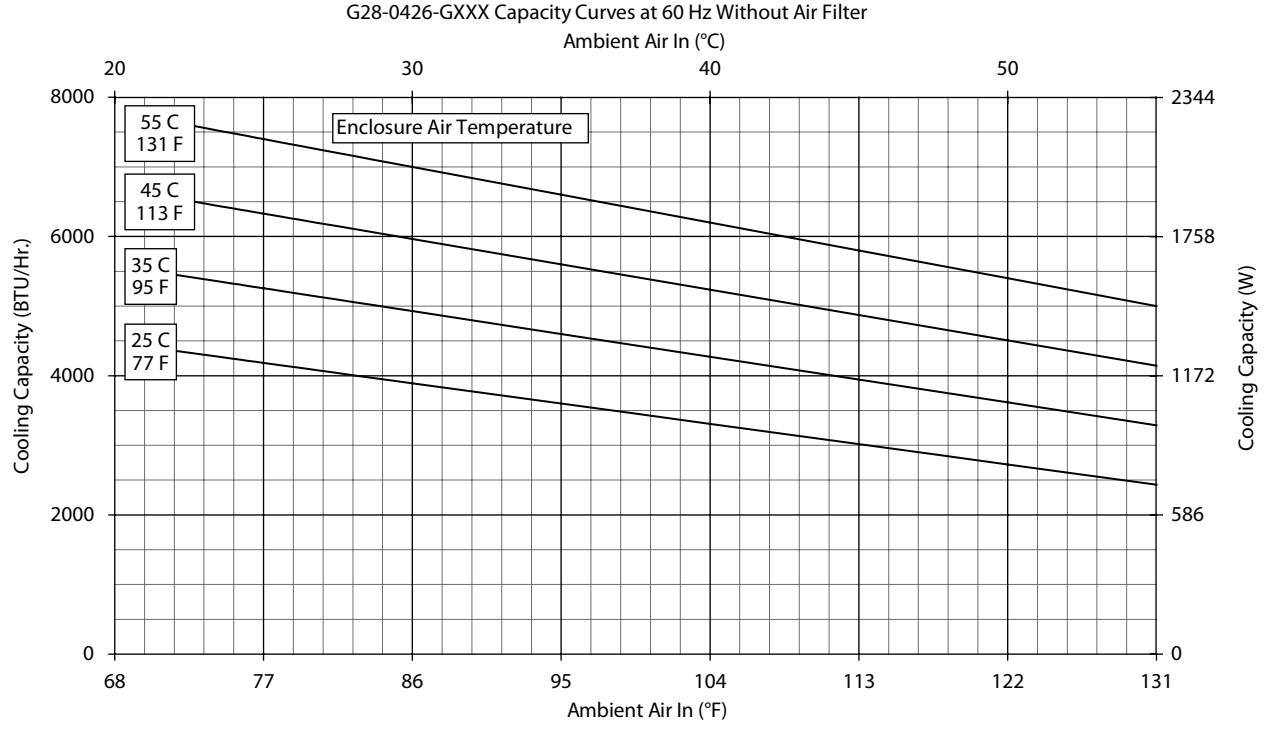
Performance Curves for G28 Models 4000 BTU/Hr. (1347/1435 Watt)





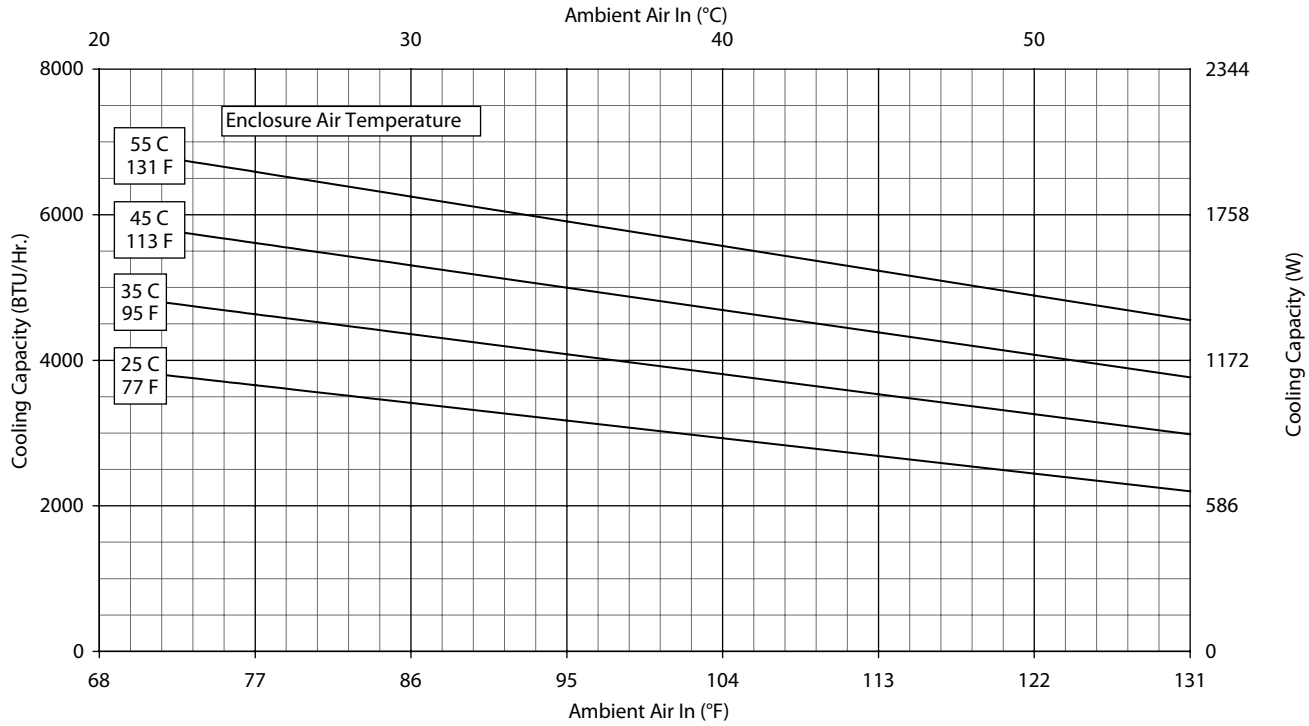
Performance Curves for G28 Models 4000 BTU/Hr. (1347/1435 Watt)



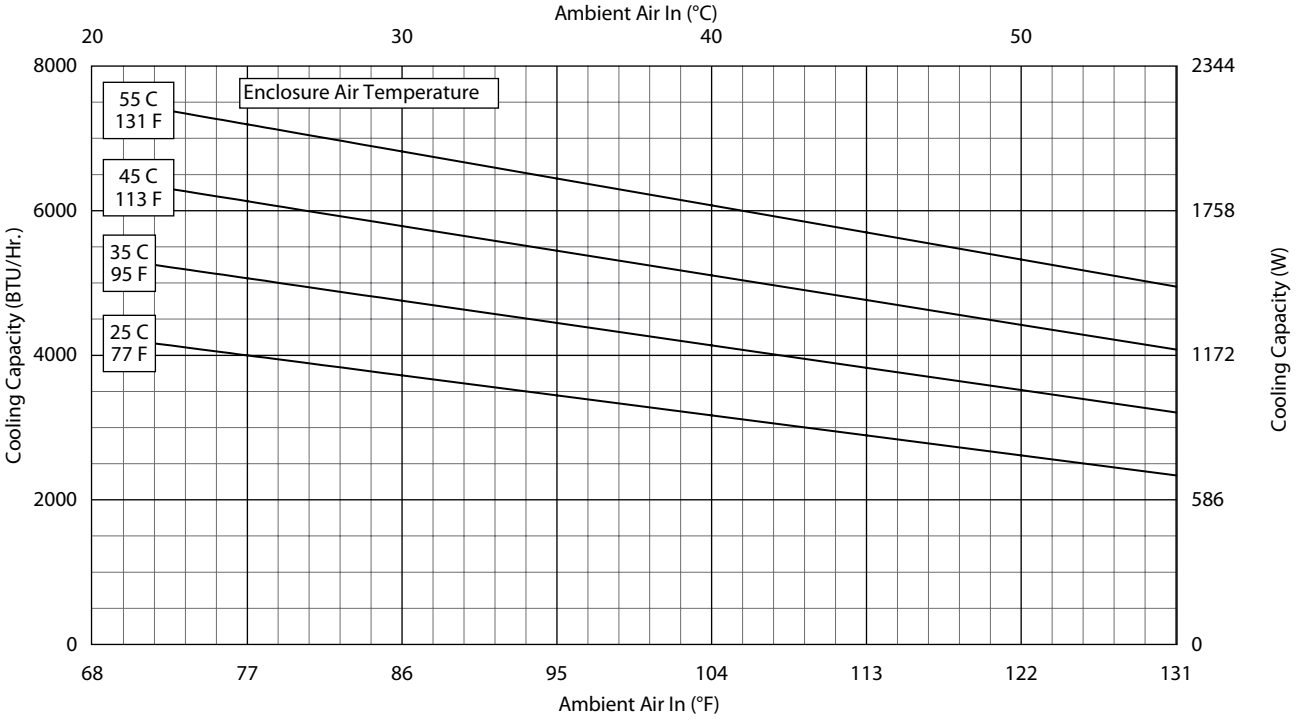


Performance Curves for G28 Models 4000 BTU/Hr. (1347/1435 Watt)

G28-0446-GXXX- Capacity Curves at 50 Hz; Without Filter

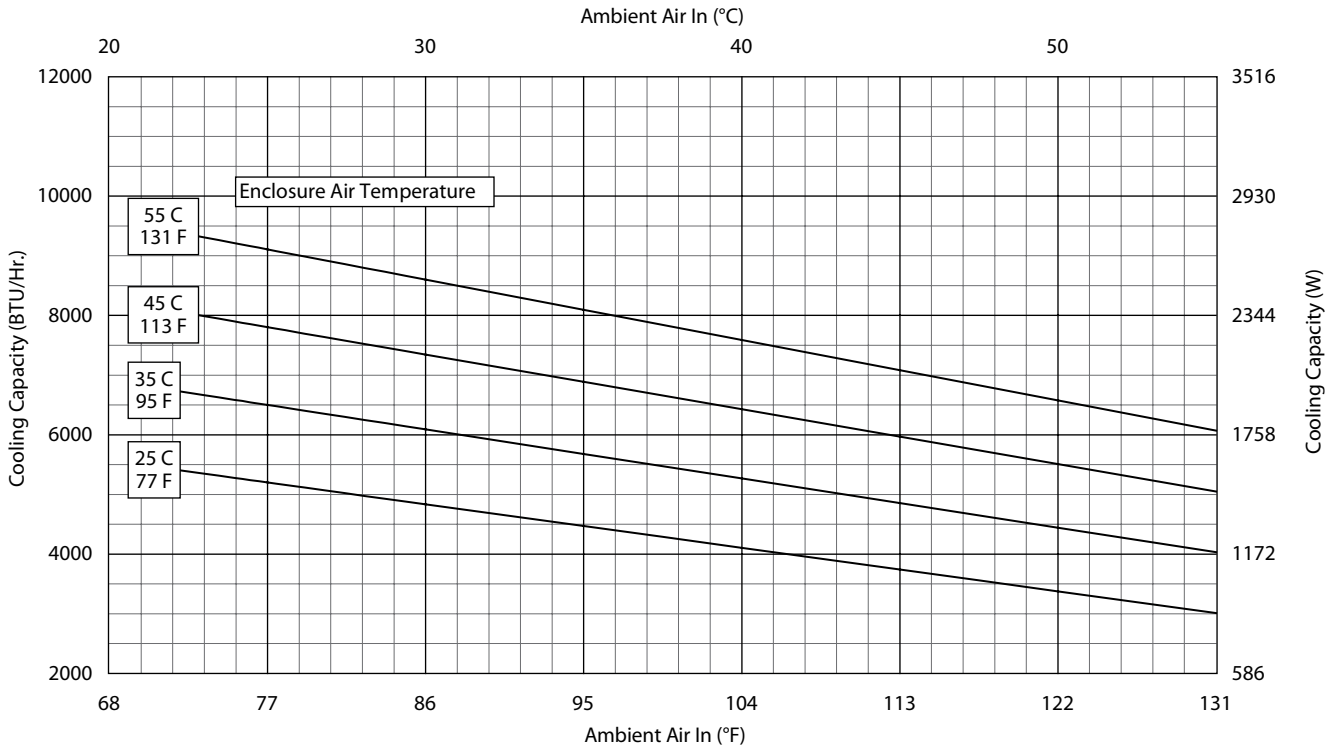


G28-0446-GXXX- Capacity Curves at 60 Hz; Without Filter

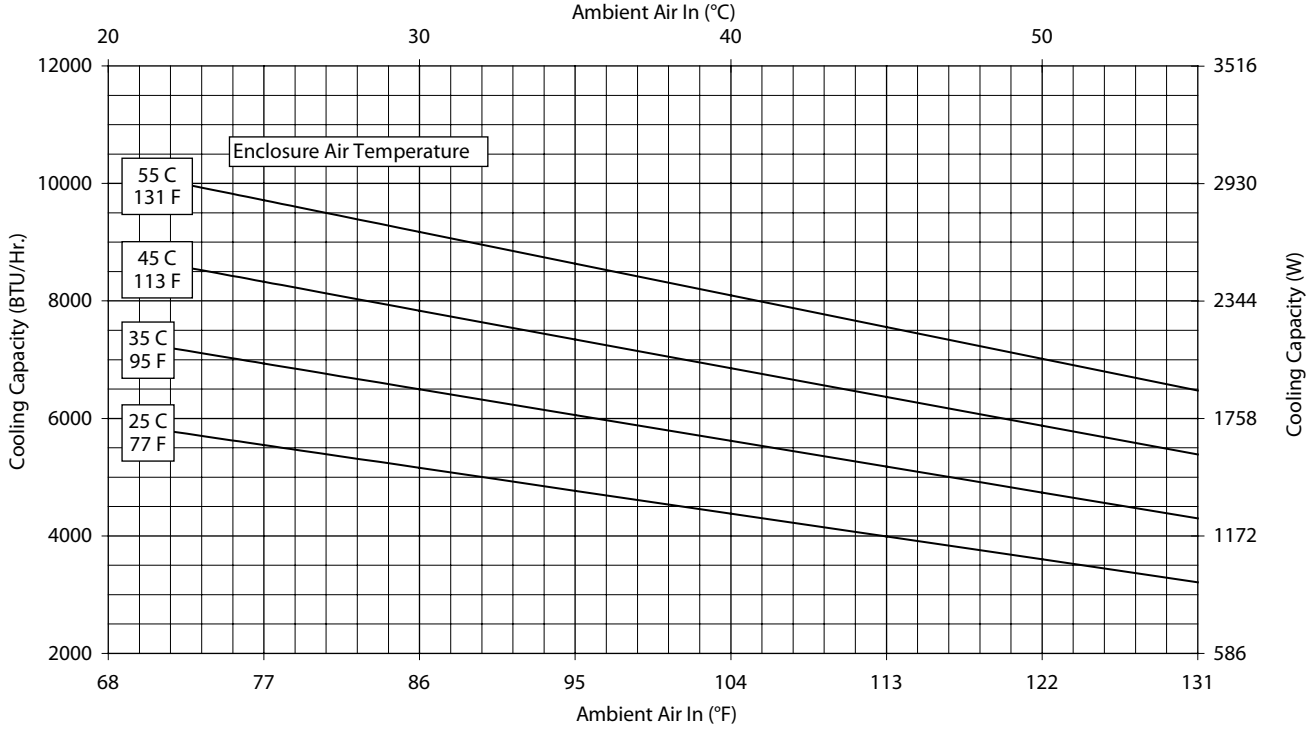


Performance Curves for G28 Models 4000/6000 BTU/Hr. (1172/1758 Watt)

G28-06(1/2)6-GXXX Capacity Curves at 50 Hz Without Filter

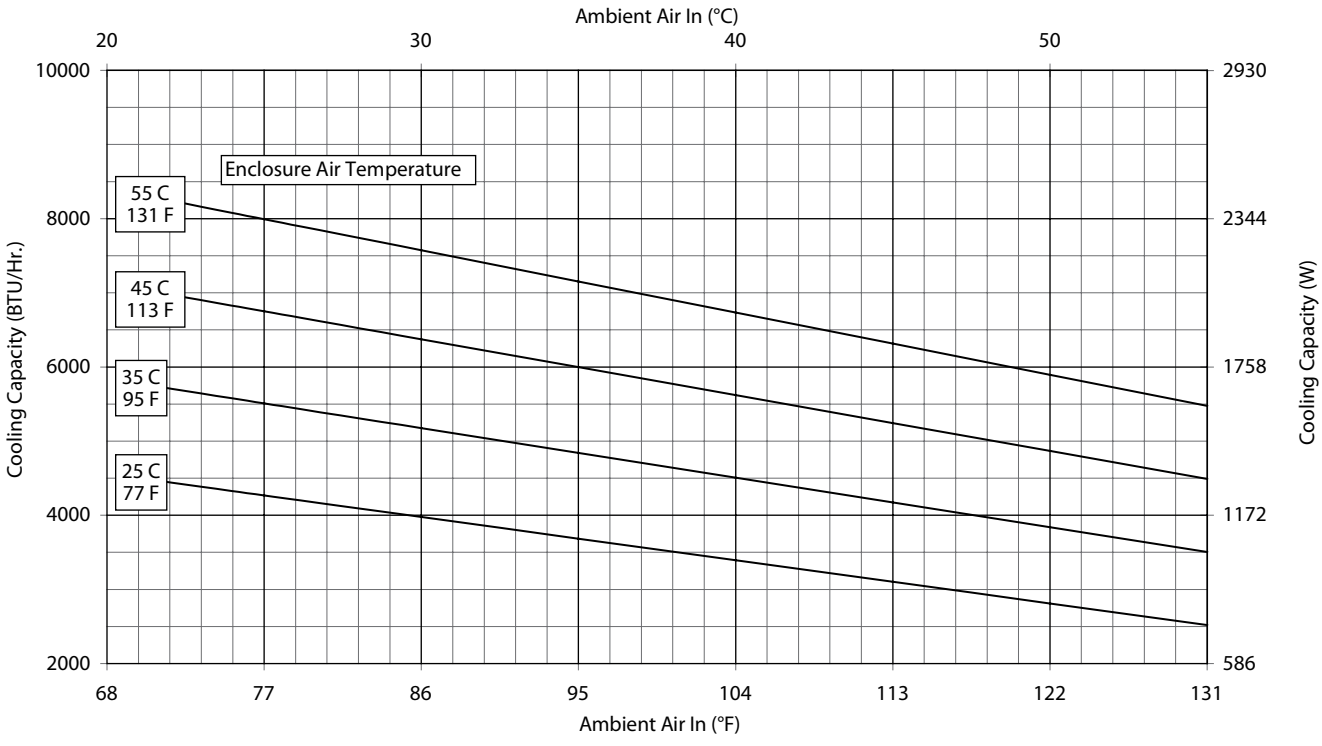


G28-06(1/2)6-G002-P#2 Capacity Curves at 60 Hz Without Filter

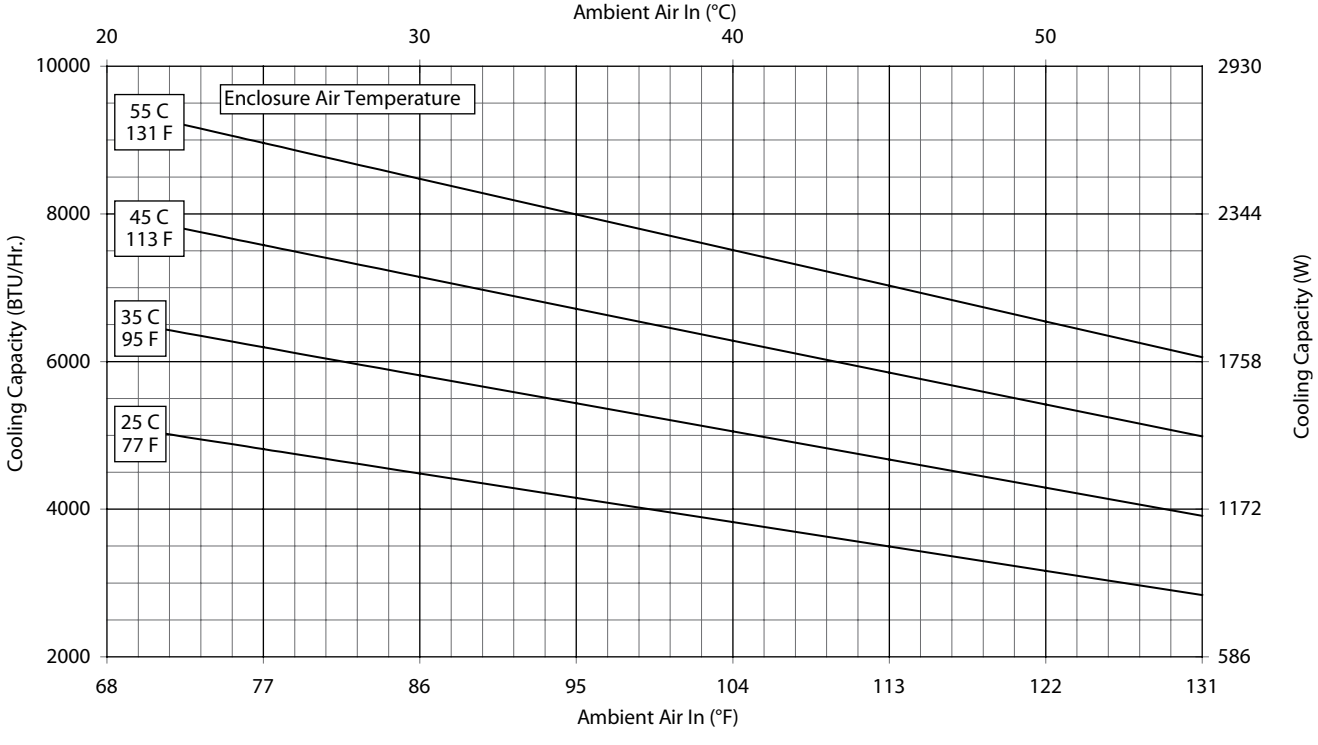


Performance Curves for G28 Models 6000 BTU/Hr. (1758 Watt)

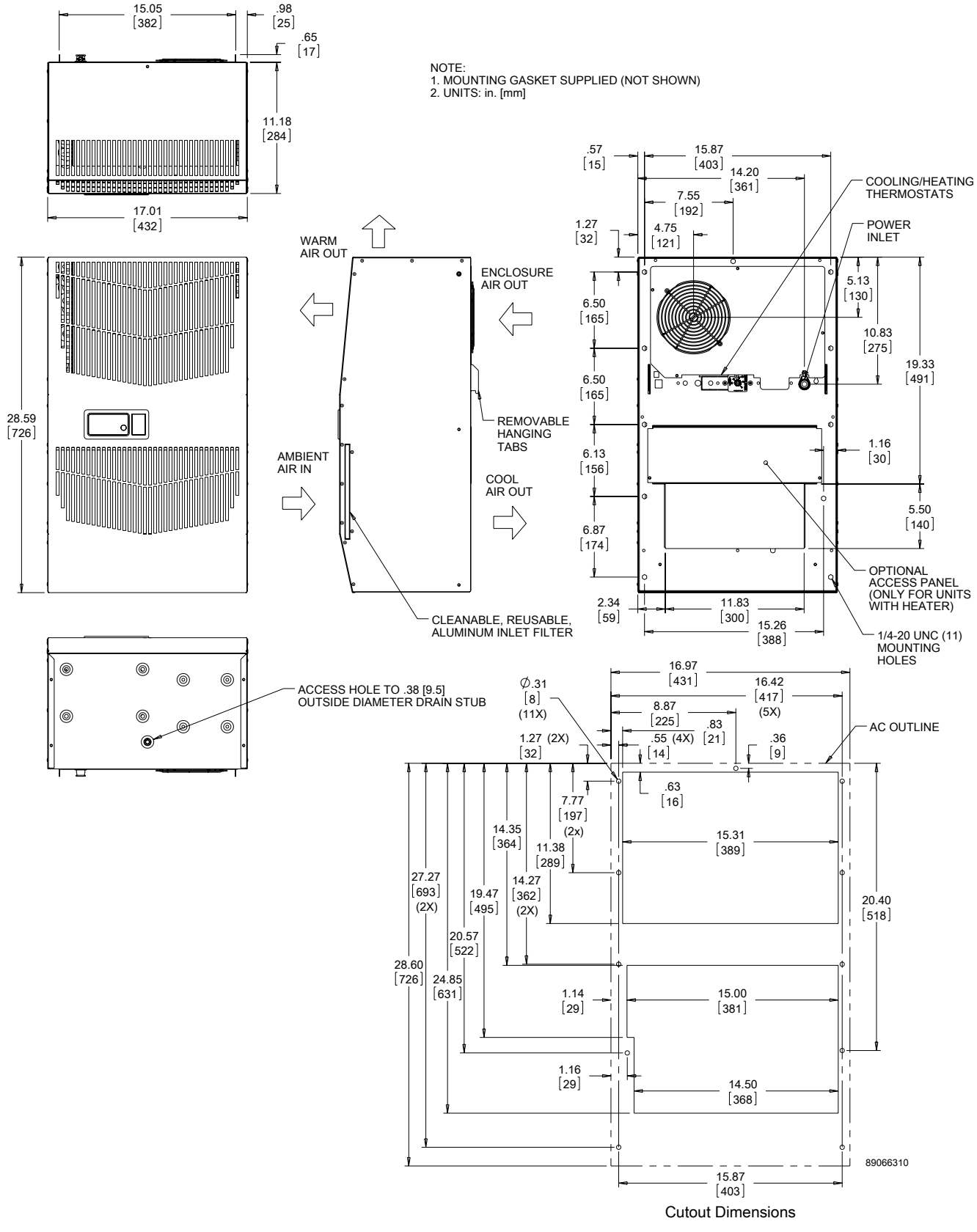
G28-0646-GXXX Performance Curve 400VAC/50Hz Without Air Filter



G28-0646-GXXX Performance Curve 460VAC/60Hz Without Air Filter



G28 Models 4000 BTU/Hr. 115 V (1172 Watt)



Cutout Dimensions

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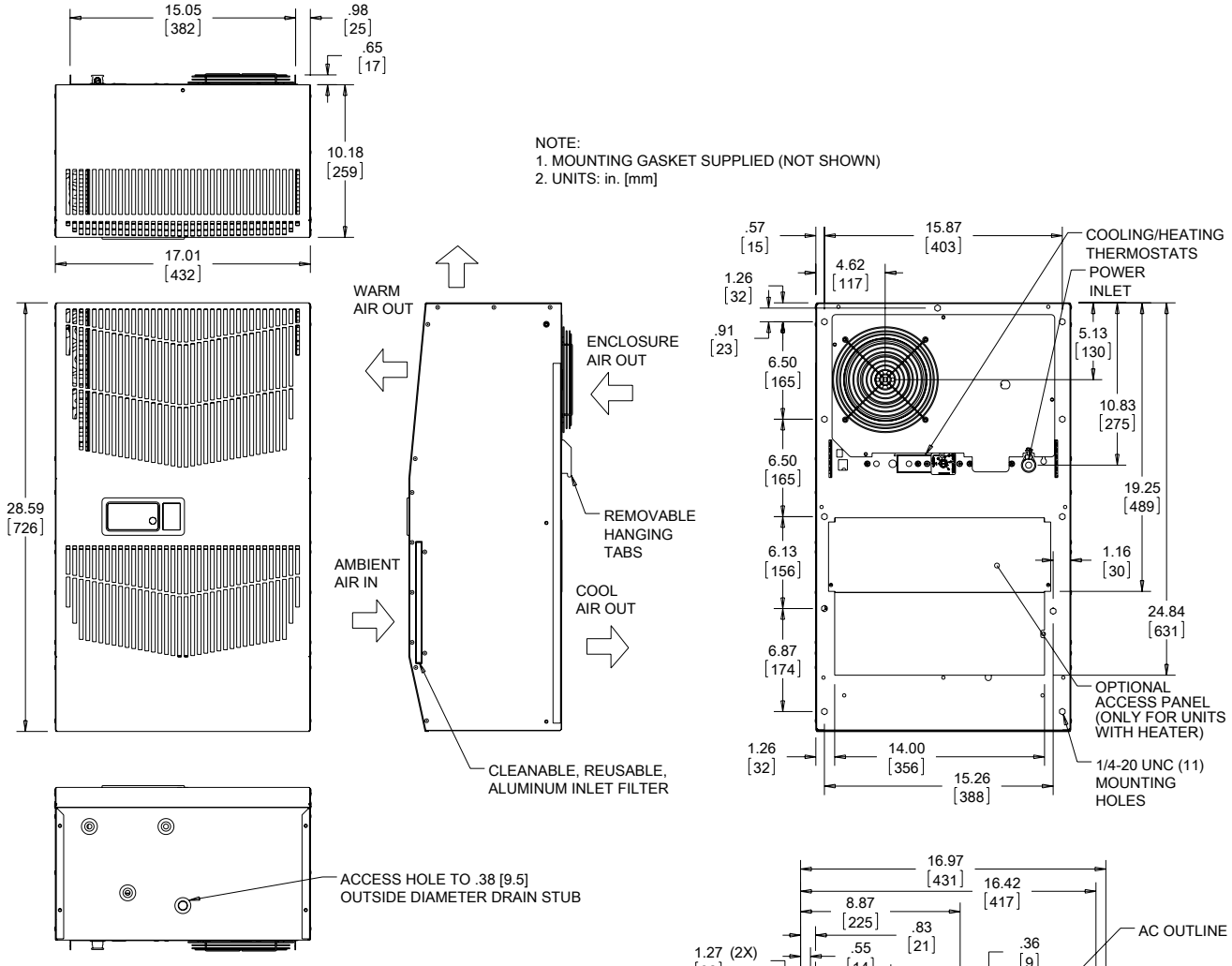
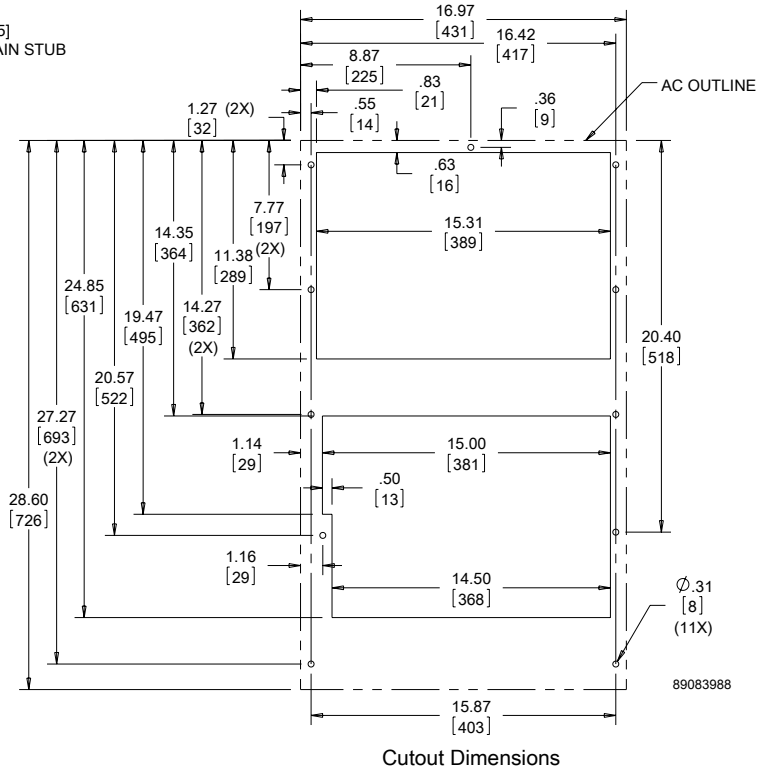
G28 Models 4000 BTU/Hr. 230/460 V, 6000 BTU/Hr. 115/230/460 V (1172/1757 Watt)





Cutout Dimensions

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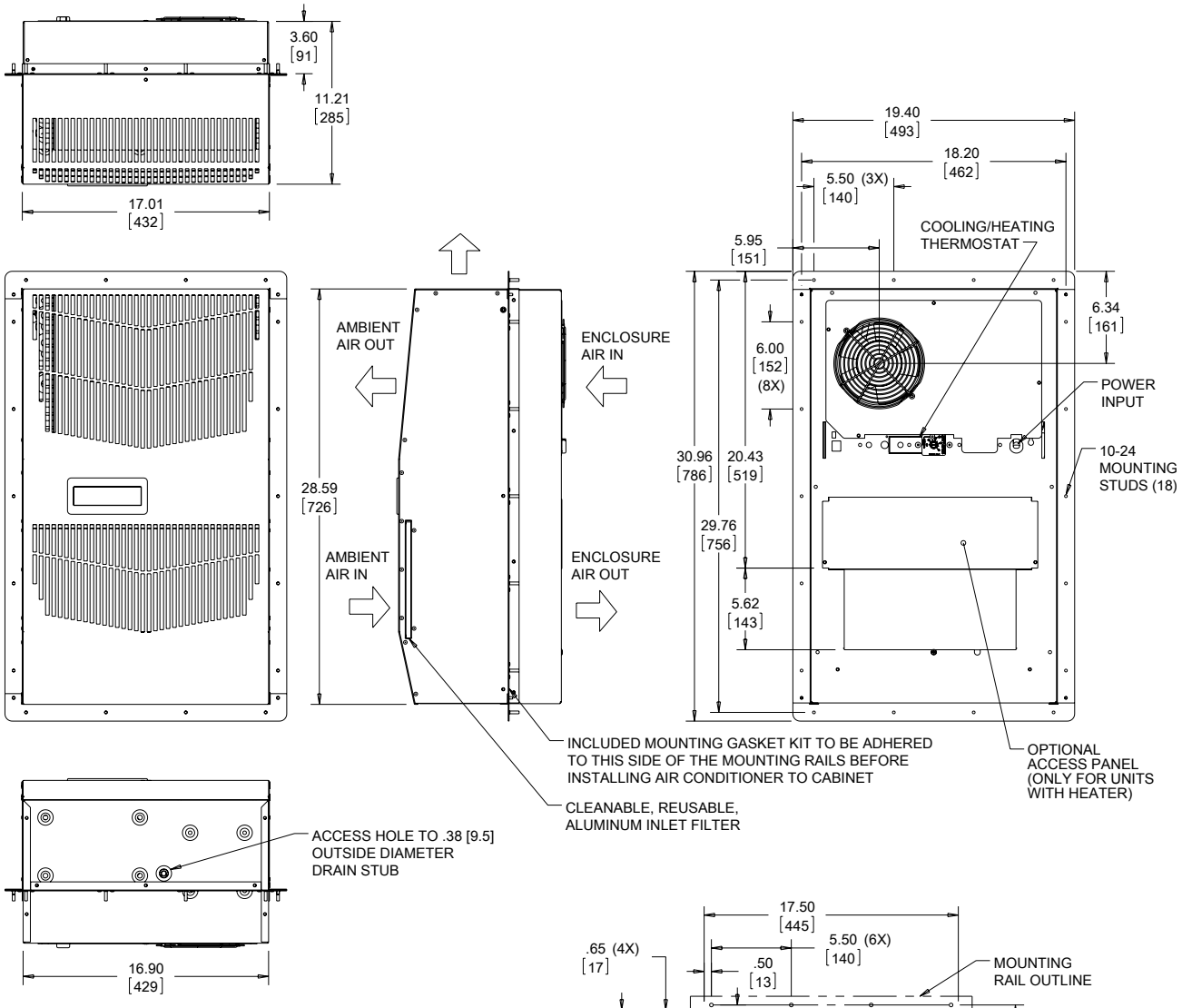
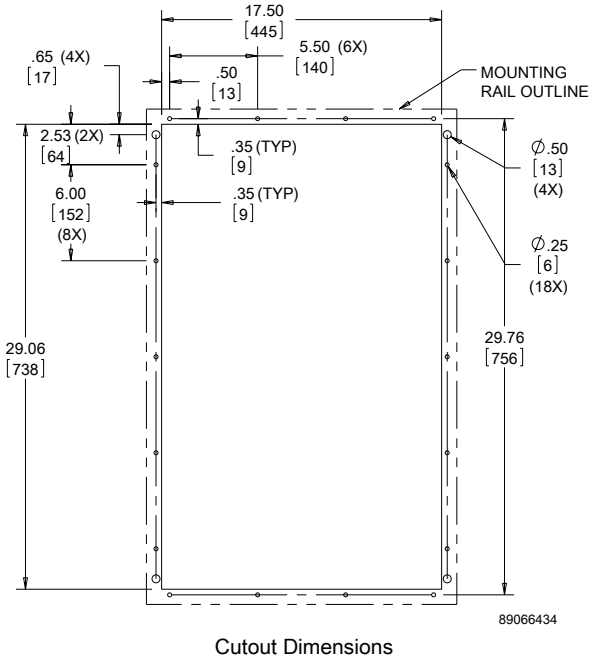
G28 Models 4000 BTU/Hr. 115 V (1172 Watt) Partial Recess





Cutout Dimensions

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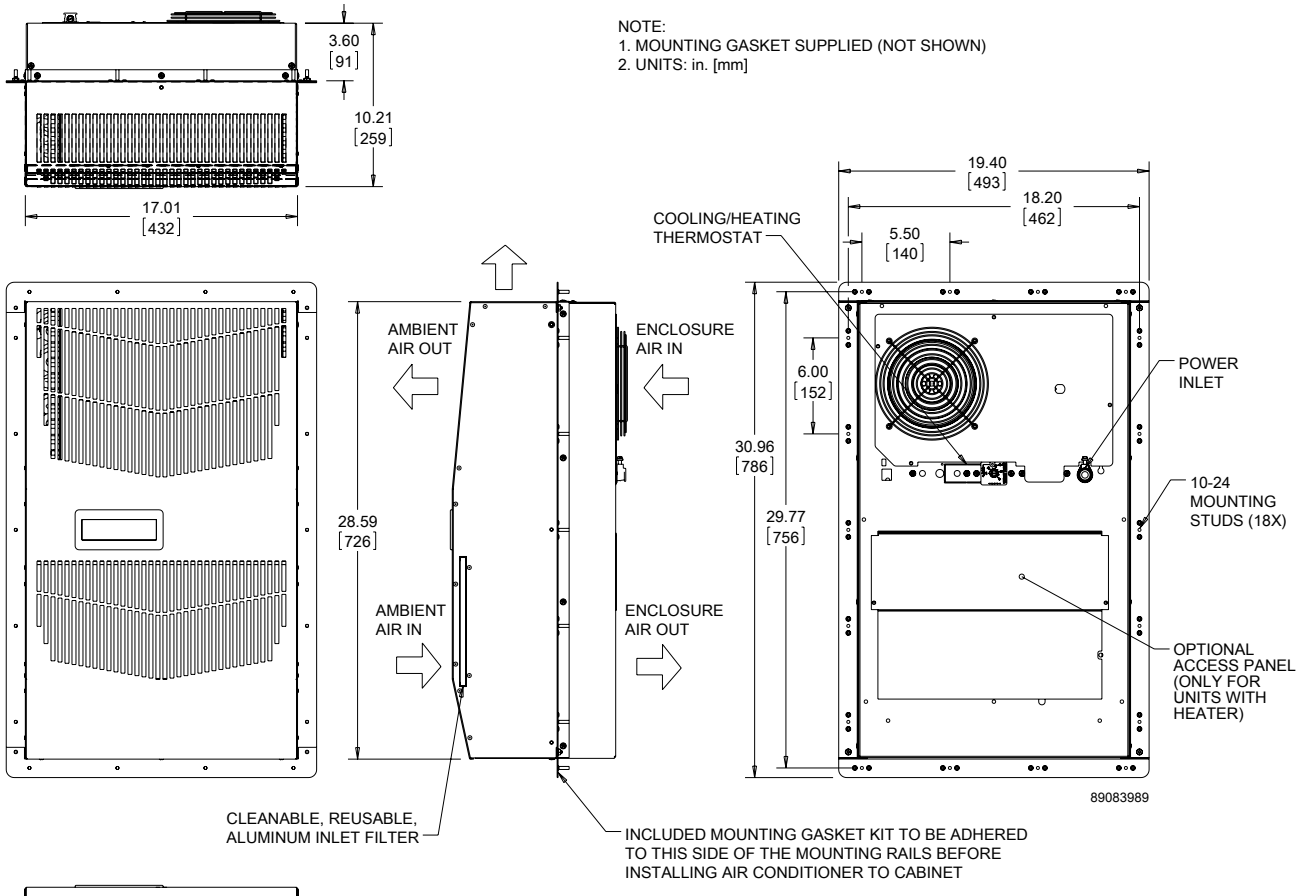
G28 Model 4000 BTU/Hr. 230/460 V, 6000 BTU/Hr. 115/230/460 V (1172/1758 Watt) Partial Recess



Cutout Dimensions

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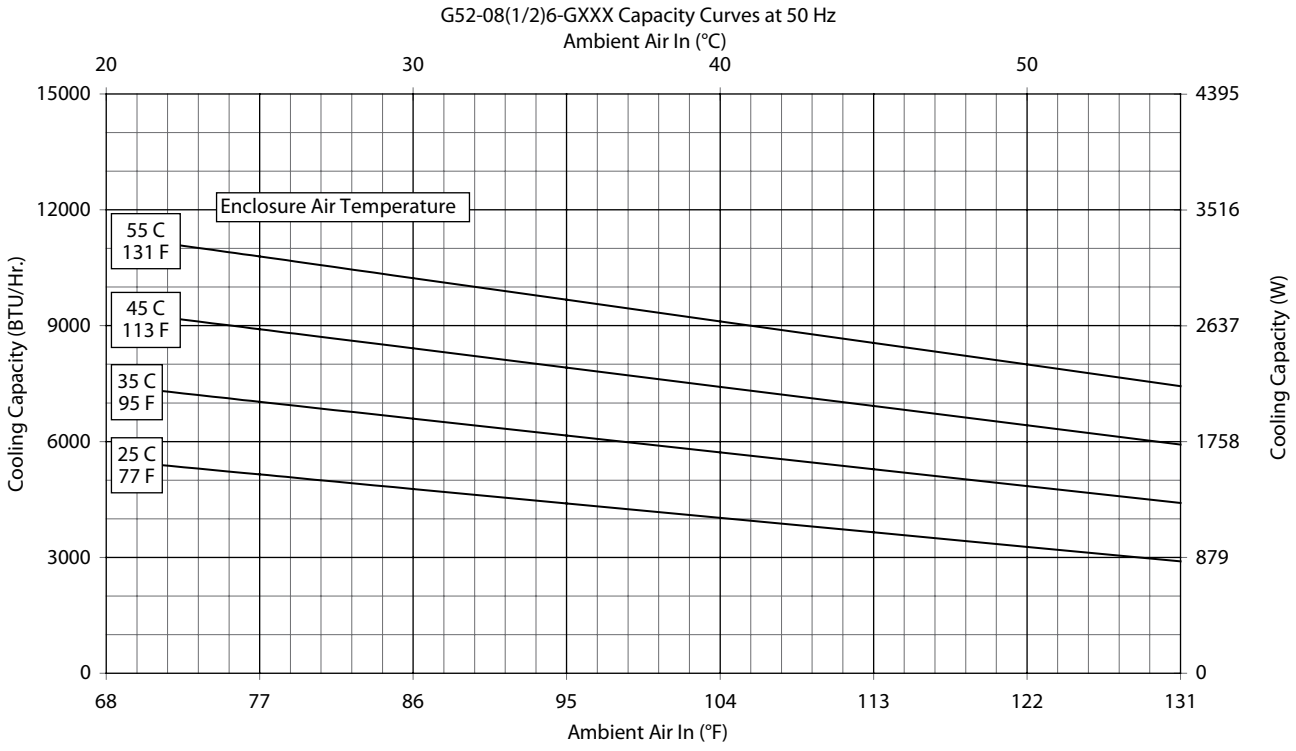
Performance Data **G52 Models 8000/12000 BTU/Hr. (2300/3500 Watt)**

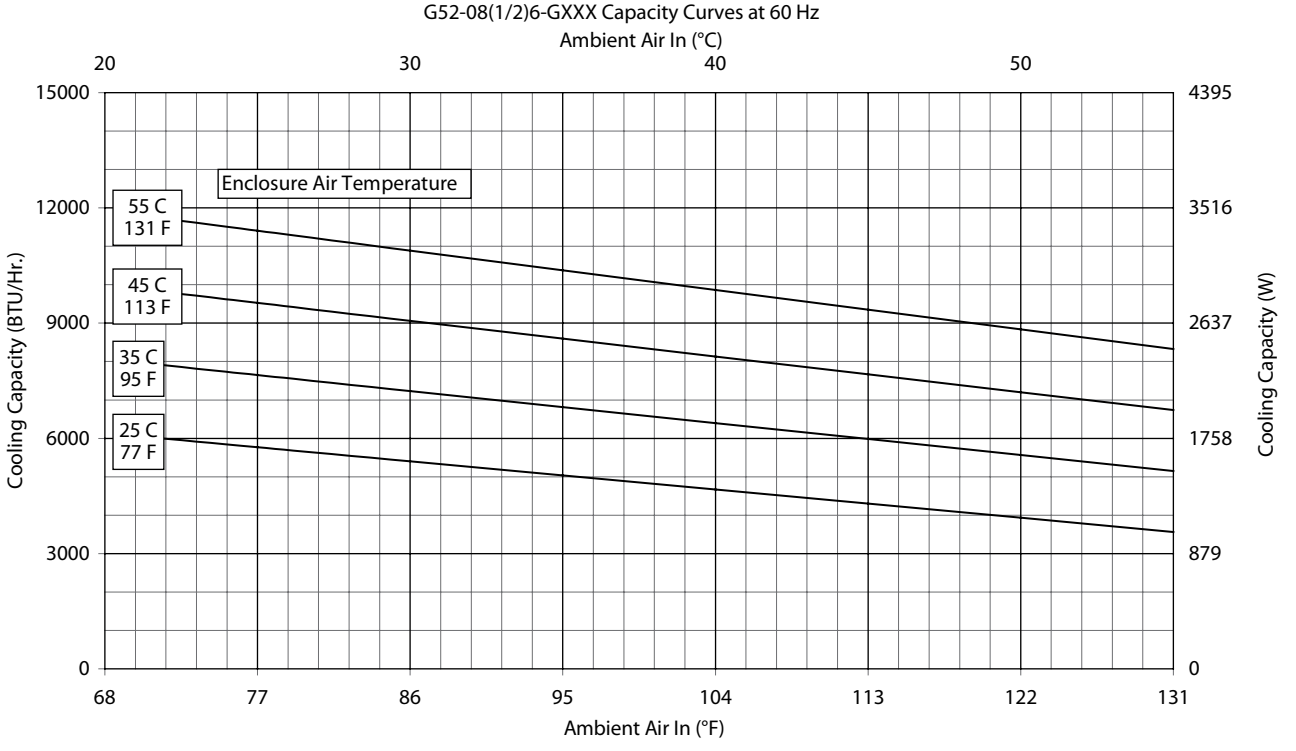
CATALOG NUMBER						
Indoor Model	G520816G050	G520826G050	G520846G050	G521216G050	G521226G050	G521246G050
Indoor Model Stainless Steel Type 4X	G520816G051	G520826G051	G520846G051	G521216G051	G521226G051	G521246G051
Indoor Model with Remote Access Control*	G520816G060	G520826G060	G520846G060	G521216G060	G521226G060	G521246G060
Outdoor Model without Heat Pkg.	G520816G100	G520826G100	G520846G100	G521216G100	G521226G100	G521246G100
Outdoor Model Partial Recessed Mount	G520816G101	G520826G101	G520846G101	G521216G101	G521226G101	G521246G101
Outdoor Model without Heat Pkg. Stainless Steel Type 4X	G520816G102	G520826G102	G520846G102	G521216G102	G521226G102	G521246G102
Outdoor Model with Heat Pkg.	G520816G150	G520826G150	G520846G150	G521216G150	G521226G150	G521246G150
Outdoor Model with Heat Pkg. Stainless Steel Type 4X	G520816G151	G520826G151	G520846G151	G521216G151	G521226G151	G521246G151
COOLING PERFORMANCE						
Nominal:						
BTU/Hr.	**8000**	**8000**	**8000**	**12000**	**12000**	**12000**
Watts	**2300**	**2300**	**2300**	**3500**	**3500**	**3500**
At 131 F/131 F (55 C/55 C):						
BTU/Hr.	7300/8200	7300/8200	8800/9800	12000/12500	12000/12500	11100/12000
Watts	2139/2403	2139/2403	2578/2871	3516/3662	3516/3662	3252/3516
At 95 F/95 F (35 C/35 C):						
BTU/Hr.	6000/6800	6000/6800	7400/8200	9900/10700	9900/10700	9900/10700
Watts	1758/1992	1758/1992	2168/2402	2900/3135	2900/3135	2900/3135
Refrigerant	R134a	R134a	R134a	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	24/680	24/680	24/680	38/1077	38/1077	38/1077
Operating Temperature Range:						
Maximum (°F/°C)	131/55	131/55	131/55	131/55	131/55	131/55
Indoor Minimum (°F/°C)	50/10	50/10	50/10	50/10	50/10	50/10
Outdoor Minimum (°F/°C)	-40/-40	-40/-40	-40/-40	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:						
Internal loop 50 Hz (CFM / m^3/hr.)	285/484	285/484	285/484	287/487	287/487	287/487
External loop 50 Hz (CFM / m^3/hr.)	650/1104	650/1104	650/1104	635/1078	635/1078	635/1078
Internal loop 60 Hz (CFM / m^3/hr.)	310/527	310/527	310/527	305/518	305/518	305/518
External loop 60 Hz (CFM / m^3/hr.)	700/1189	700/1189	700/1189	650/1104	650/1104	650/1104
Max. Heater W (Outdoor Models):	2000	2000	NA	2000	2000	NA
ELECTRICAL DATA						
Rated Voltage	**115**	**230/208-230**	**400/460 3~**	**115**	**230/208-230**	**400/460 3~**
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W)	1250/1415	1250/1415	806/957**	2100/2427	1830/2130	910/1106**
Max. Nominal Current (A at 50/60 Hz)	11.2/12.3	5.6/7.0-6.2	3.1/3.2	16.1/21.0	9.1/10.6-9.5	3.6/3.5
Starting Current (A)	48	27	16	57	38	16
Agency Approvals	UL/cUL Listed CE EAC Others available upon request					
Power Input Description	Terminal Block					
ENCLOSURE PROTECTION						
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional					
International Rating	IP56 internal loop IP34 external loop					
CONTROLLER						
Description	Basic mechanical thermostat with digital display					
Thermostat Location	Enclosure side on all base models					
Digital Display Location:						
Indoor Models	Ambient side					
Outdoor Models	Enclosure side					
Factory Thermostat Setting (F/C)	80/27					
SOUND LEVEL						
At 1.5 Meters	68 dB(A)					
UNIT CONSTRUCTION						
Material	Galvanized sheet metal standard Stainless steel optional					
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available					
ACCESSORIES						
EASYSWAP Adaptor Plenum (GENESIS M52)	Enables SPECTRACOOL to be mounted to a GENESIS M52 air conditioner cutout Catalog Number PLM52G52					
UNIT DIMENSIONS						
Height (in./mm)	52.69/1338					
Width (in./mm)	17.12/435					
Depth (in./mm)	11.66/296					
Weight (lb./kg)	128/58.1	128/58.1	138/62.6	131/59.4	131/59.4	141/64.0

*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

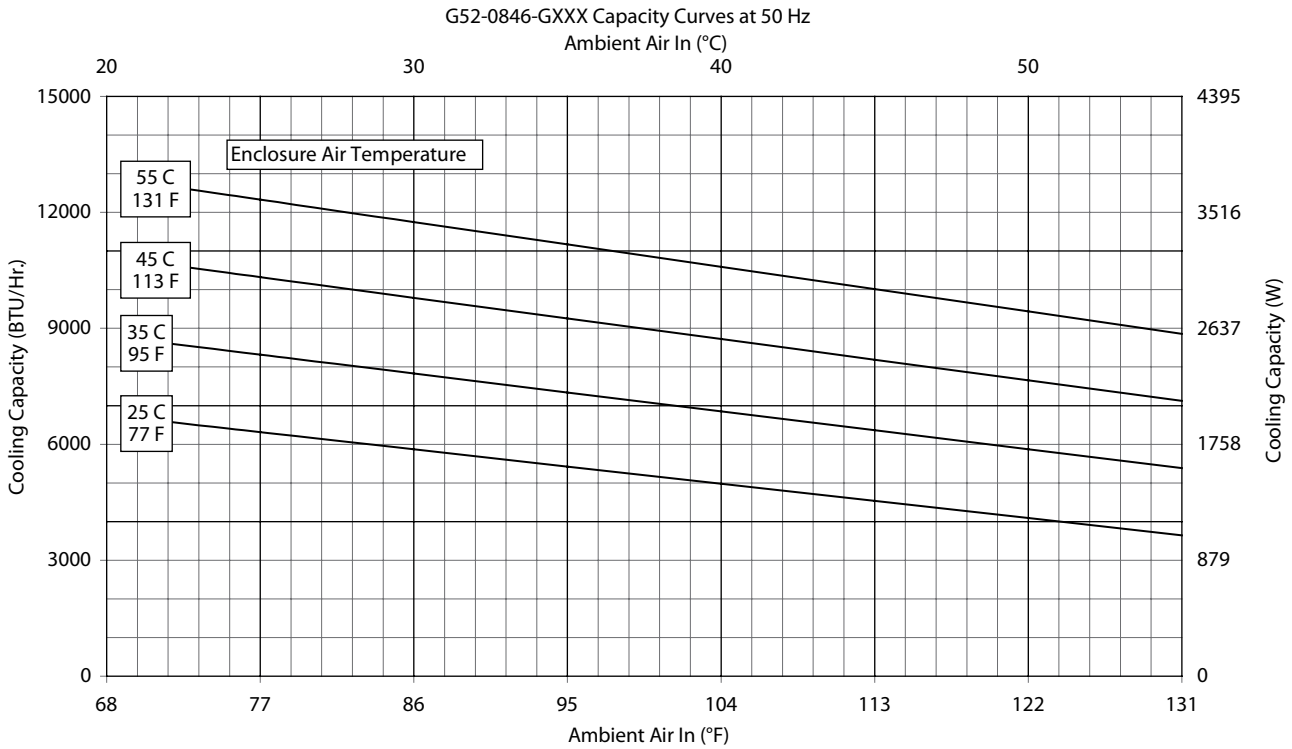
**Watts based on .65 power factor.

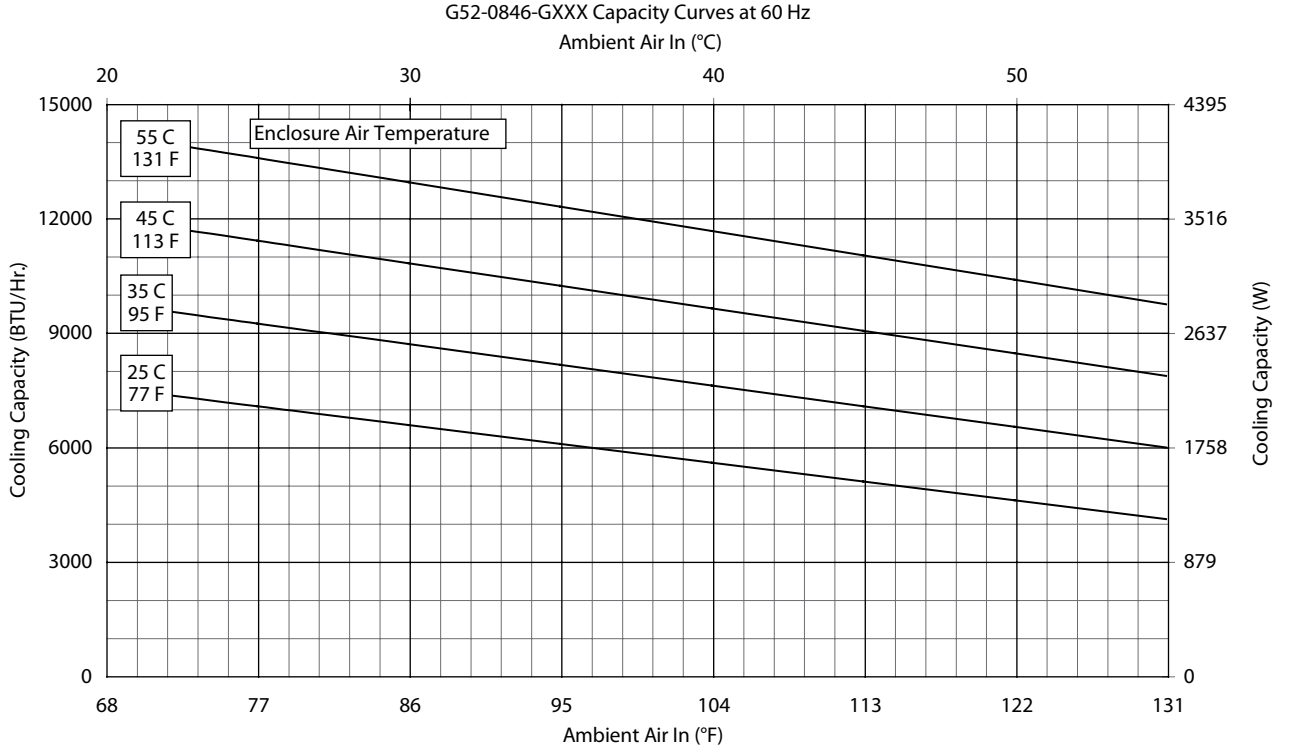
Performance Curves for G52 Models 8000 BTU/Hr. (23 Watt)



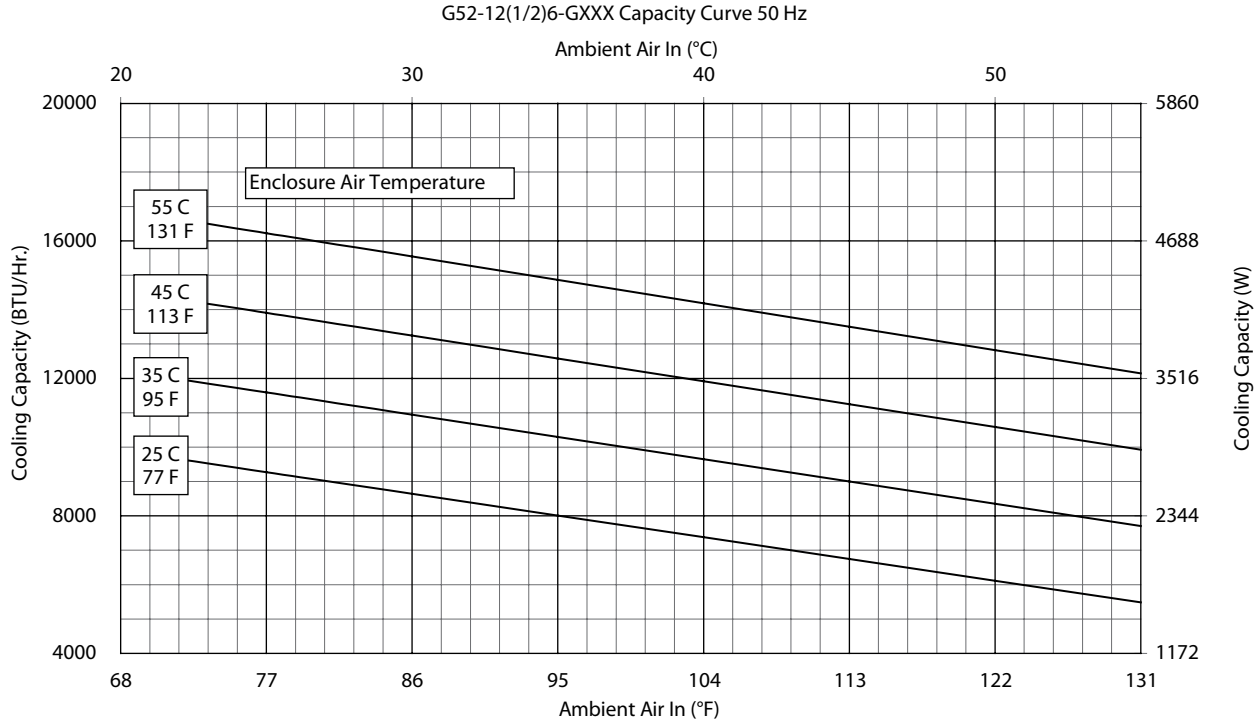


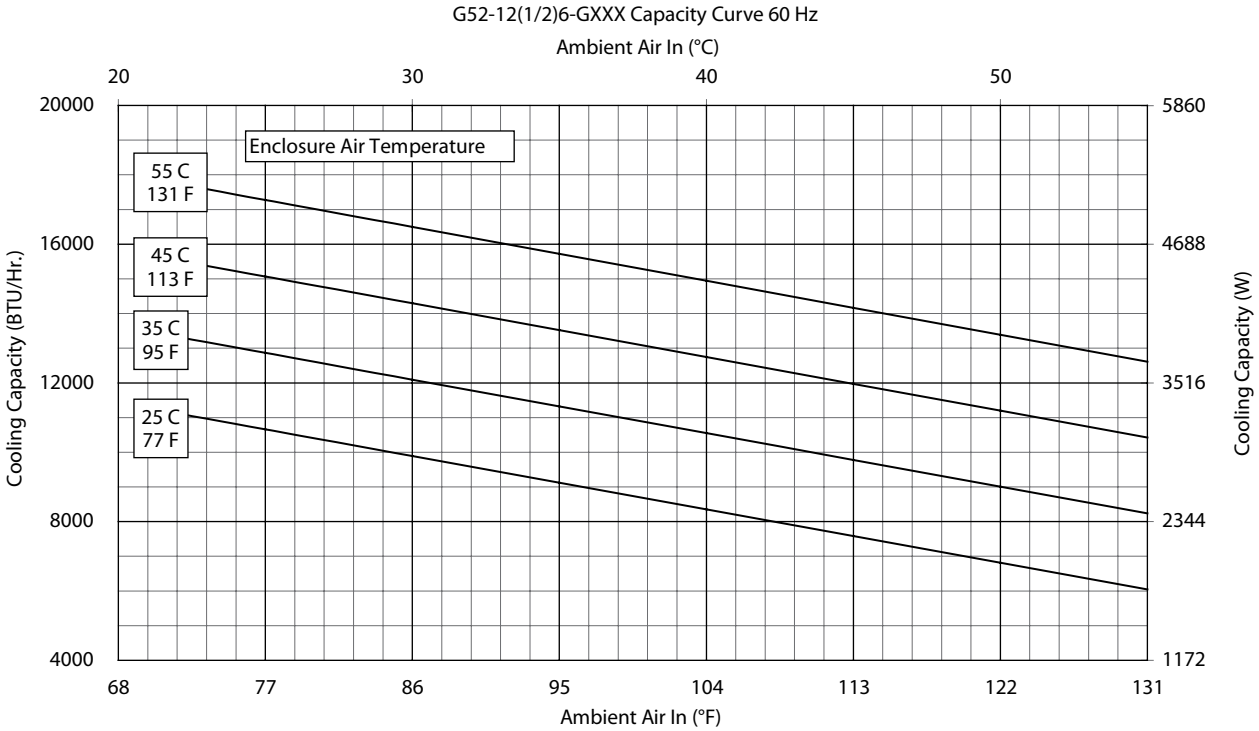
Performance Curves for G52 Models 8000 BTU/Hr. (2300 Watt)



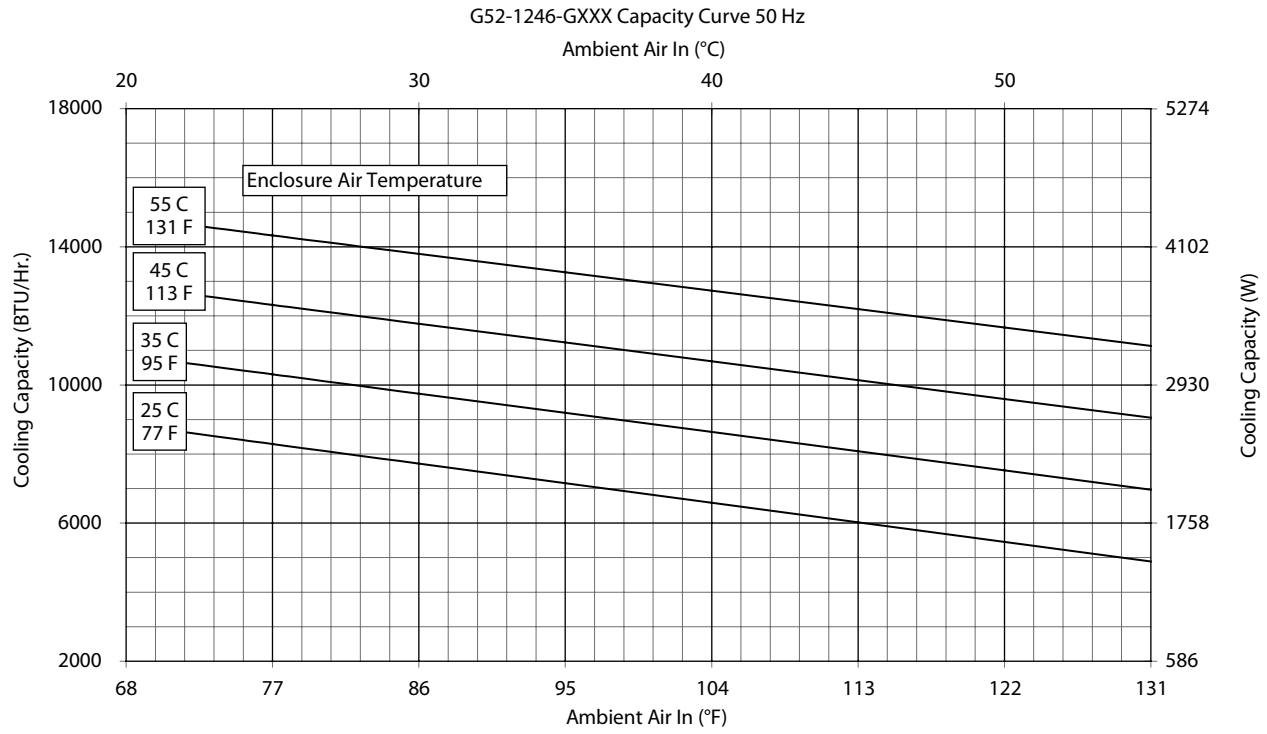


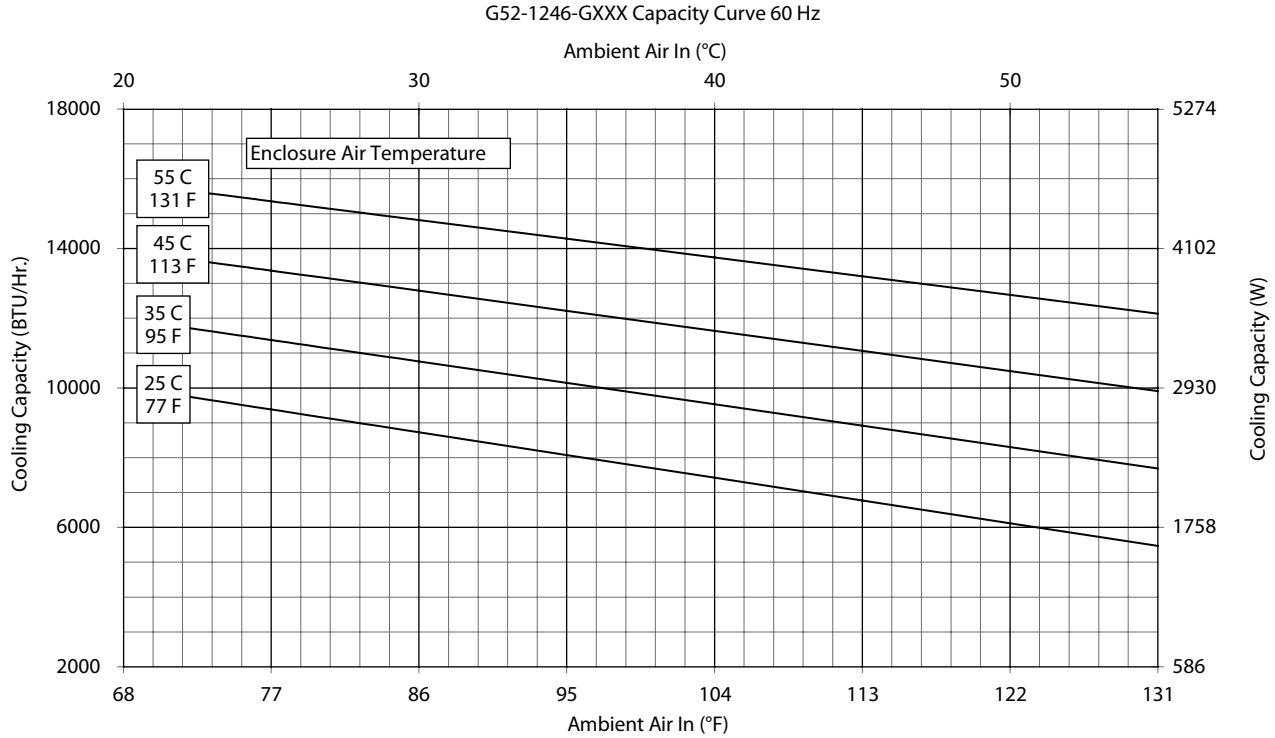
Performance Curves for G52 Models 12000 BTU/Hr. (3500 Watt)



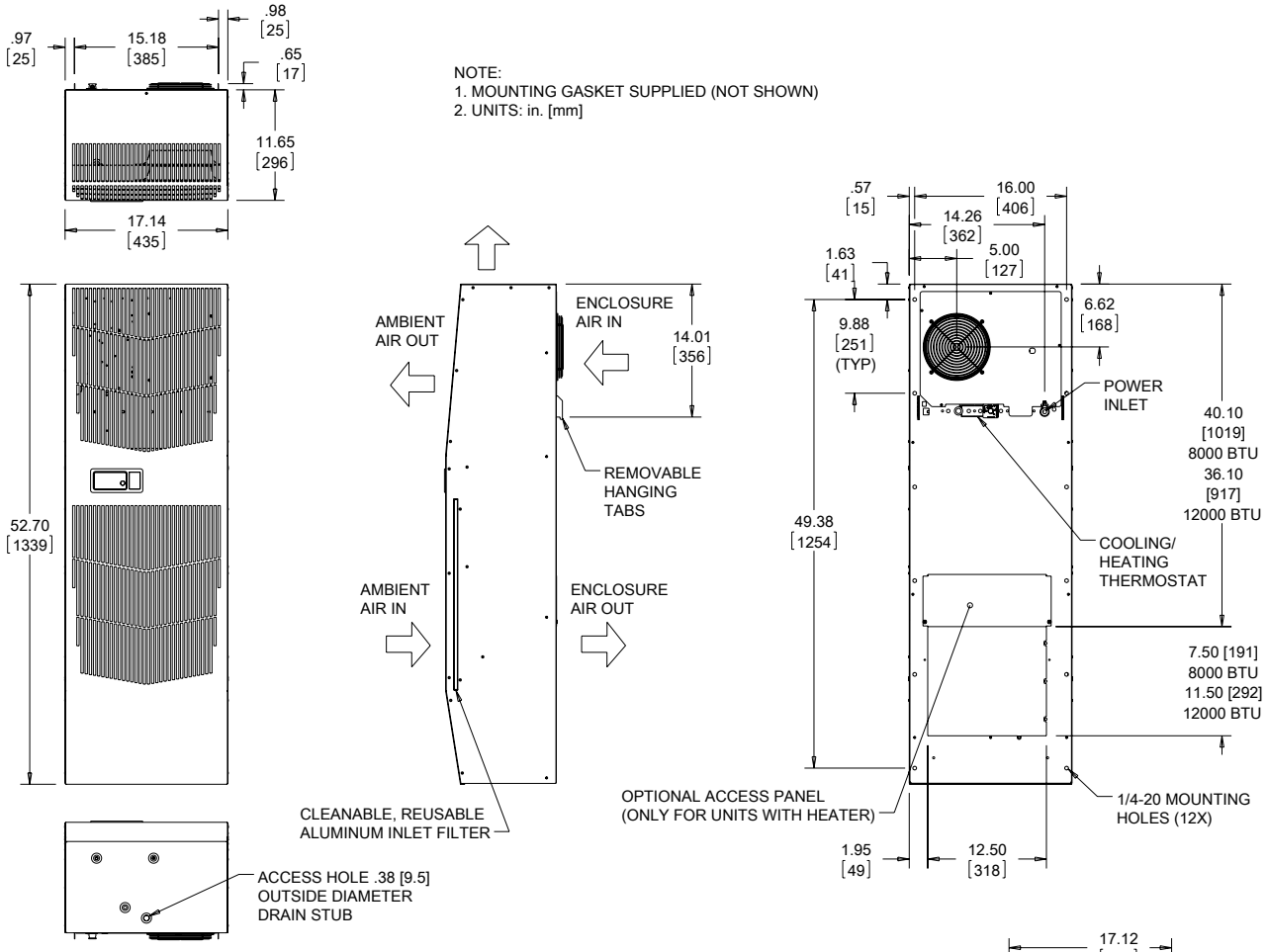


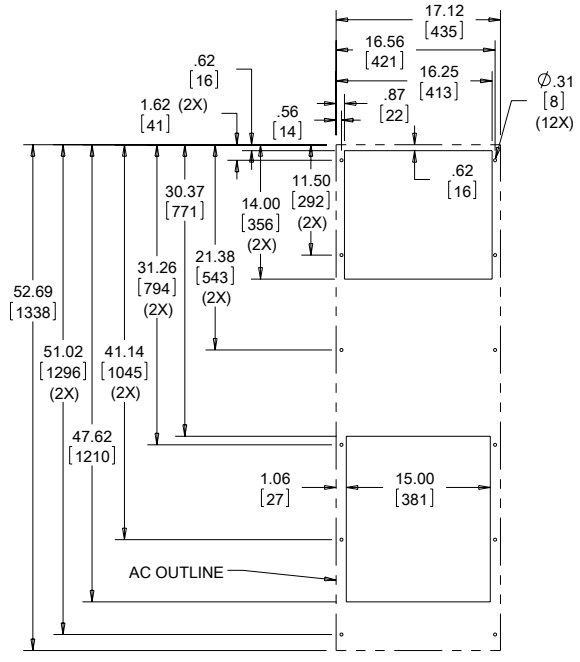
Performance Curves for G52 Models 12000 BTU/Hr. (3516 Watt)



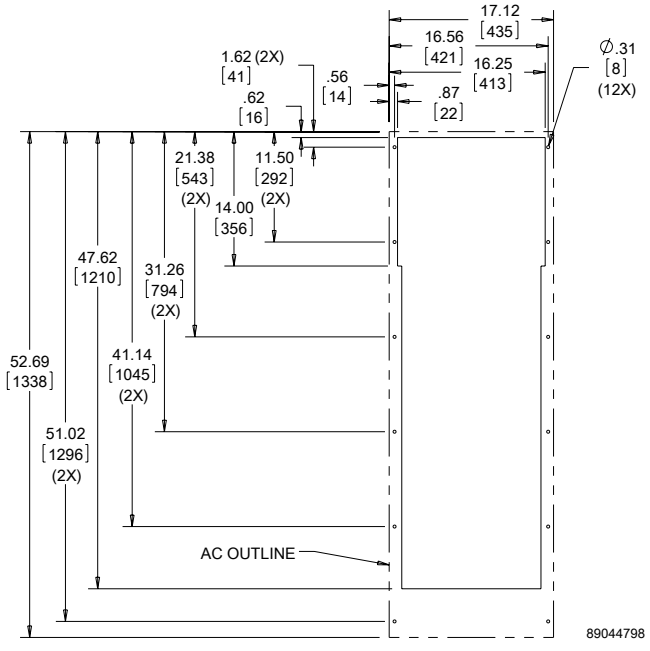


G52 Models 8000/12000 BTU/Hr. (2300/3500 Watt)





Cutout Dimensions (Standard)



Cutout Dimensions (G520846G150, G520846G151, G521246G150, G521246G151 only)

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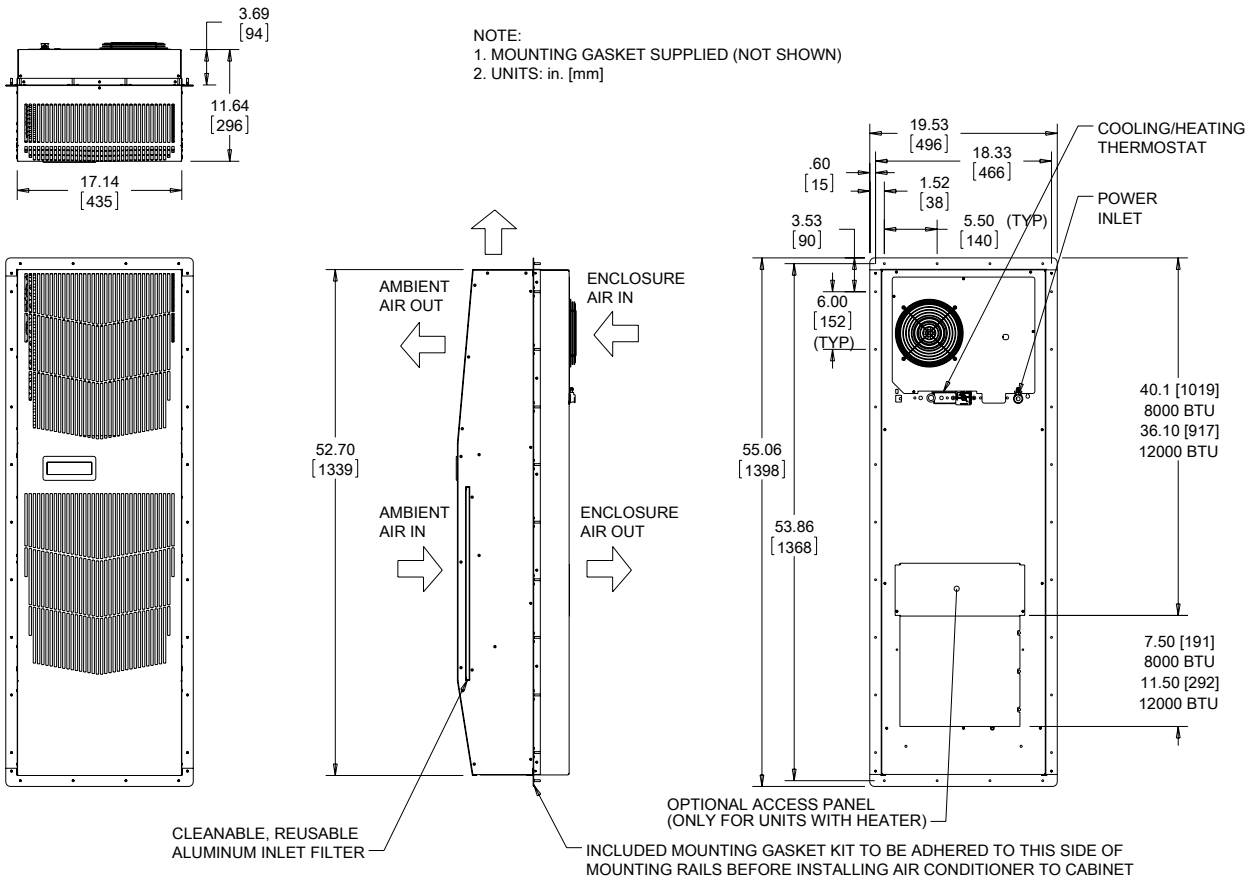
G52 Models 8000/12000 BTU/Hr. (2344/3516 Watt) with Partial Recess



Cutout Dimensions

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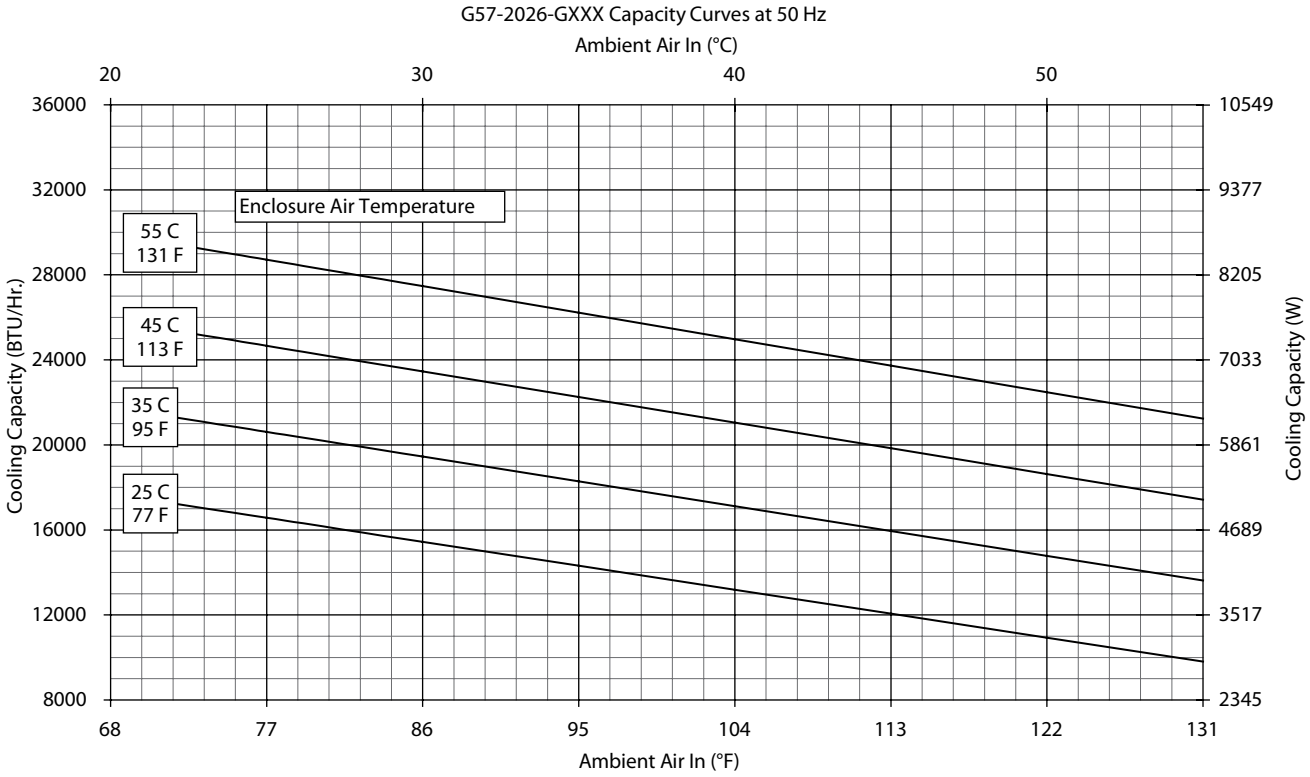
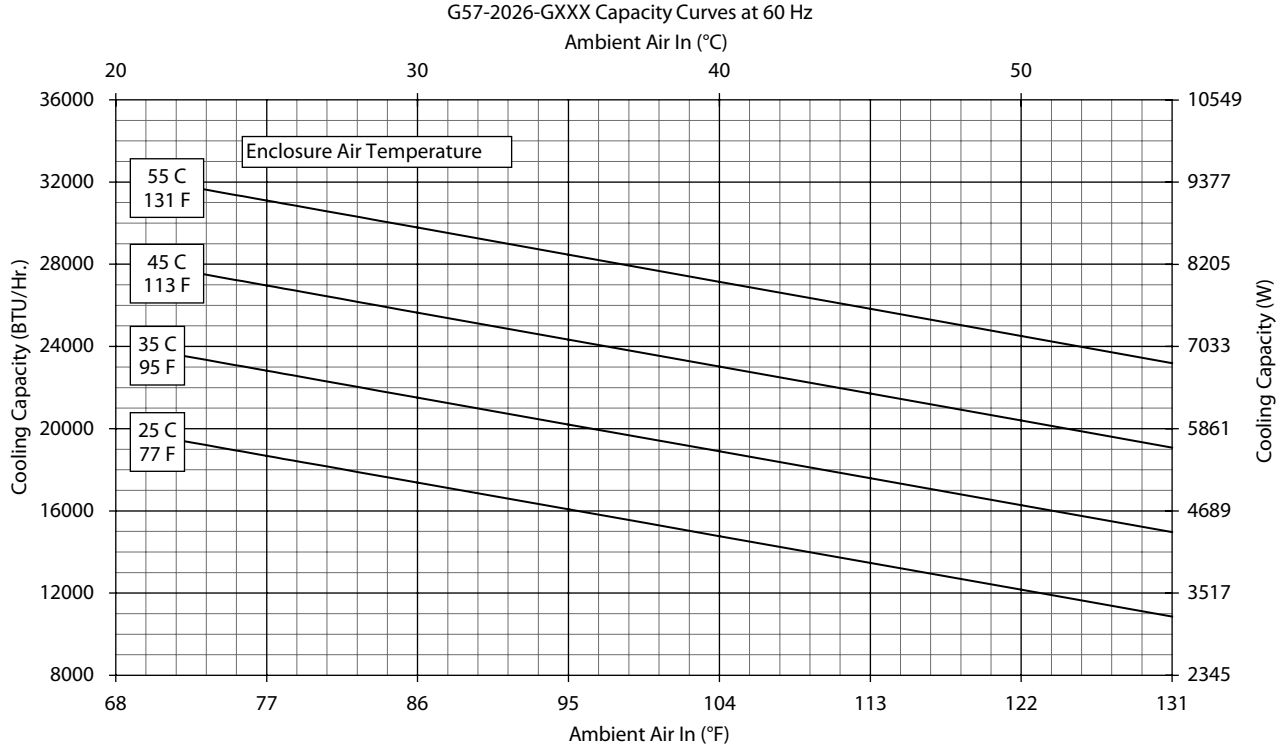
Performance Data **G57 Models 20000 BTU/Hr. (5861 Watt)**

CATALOG NUMBER		
Indoor Model	G572026G050	G572046G050
Indoor Model Stainless Steel Type 4X	G572026G051	G572046G051
Indoor Model with Remote Access Control*	G572026G060	G572046G060
Outdoor Model without Heat Pkg.	G572026G100	G572046G100
Outdoor Model Partial Recessed Mount	G572026G101	G572046G101
Outdoor Model with Heat Pkg.	G572026G150	G572046G150
Outdoor Model without Heat Pkg. Stainless Steel Type 4X	G572026G102	G572046G102
Outdoor Model with Heat Pkg. Stainless Steel Type 4X	G572026G151	G572046G151
COOLING PERFORMANCE		
Nominal:		
BTU/Hr.	**20000**	**20000**
Watts	**5861**	**5861**
At 131 F/131 F (55 C/55 C):		
BTU/Hr. (50/60 Hz)	17500/19600	21400/23400
W (50/60 Hz)	5129/5744	6272/6857
At 95 F/95 F (35 C/35 C):		
BTU/Hr. (50/60 Hz)	16000/18000	19300/21400
W (50/60 Hz)	4689/5275	5656/6272
Refrigerant	R407c	R407c
Refrigerant Charge (ounces/grams)	50/1417	48/1361
Operating Temperature Range:		
Maximum (°F/°C)	131/55	131/55
Indoor Minimum (°F/°C)	50/10	50/10
Outdoor Minimum (°F/°C)	-40/-40	-40/-40
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	513/872	513/872
External loop 50 Hz (CFM / m^3/hr.)	919/1562	919/1562
Internal loop 60 Hz (CFM / m^3/hr.)	587/998	587/998
External loop 60 Hz (CFM / m^3/hr.)	1055/1794	1055/1794
Max. Heater W (Outdoor Models)	3000	3000
ELECTRICAL DATA		
Rated Voltage	**230/230**	**400/460 3~**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consuption (W at 50/60 Hz)	4508/5106	2400/3128
Max. Nominal Current (A at 50/60 Hz)	19.6/22.2	6.0/6.8
Starting Current (A)	63	27
Agency Approvals	UL/cUL Listed CE EAC Others available upon request	
Power Input Description	Terminal Block	
ENCLOSURE PROTECTION		
UL Type	Type 12, 3R, 4 standard Type 4X stainless steel optional	
International Rating	IP56 internal loop IP34 external loop	
CONTROLLER		
Description	Basic mechanical thermostat with digital display	
Thermostat Location	Enclosure side on all base models	
Digital Display Location:		
Indoor Models	Ambient side	
Outdoor Models	Enclosure side	
Factory Thermostat Setting (°F/°C)	80/27	
SOUND LEVEL		
At 1.5 Meters	74.1 dB(A)	
UNIT CONSTRUCTION		
Material	Galvanized sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
ACCESSORIES		
EASYSWAP Adaptor Plenum (T-Series T53)	Enables SPECTRACOOL to be mounted to a T-Series T53 air conditioner cutout part #57721601SP	
UNIT DIMENSIONS		
Height (in./mm)	57.69/1465.4	
Width (in./mm)	20.87/530.1	
Depth (in./mm)	15.28/388.1	
Weight (lb./kg)	197/89	

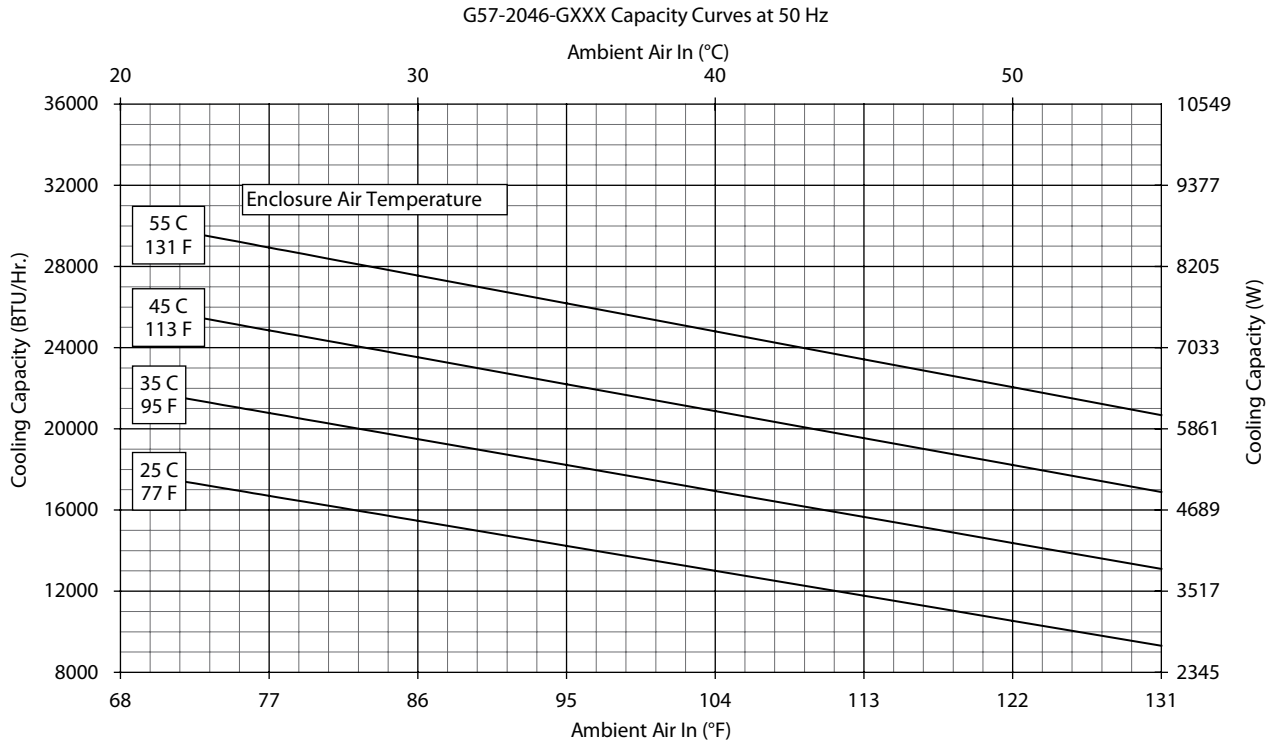
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

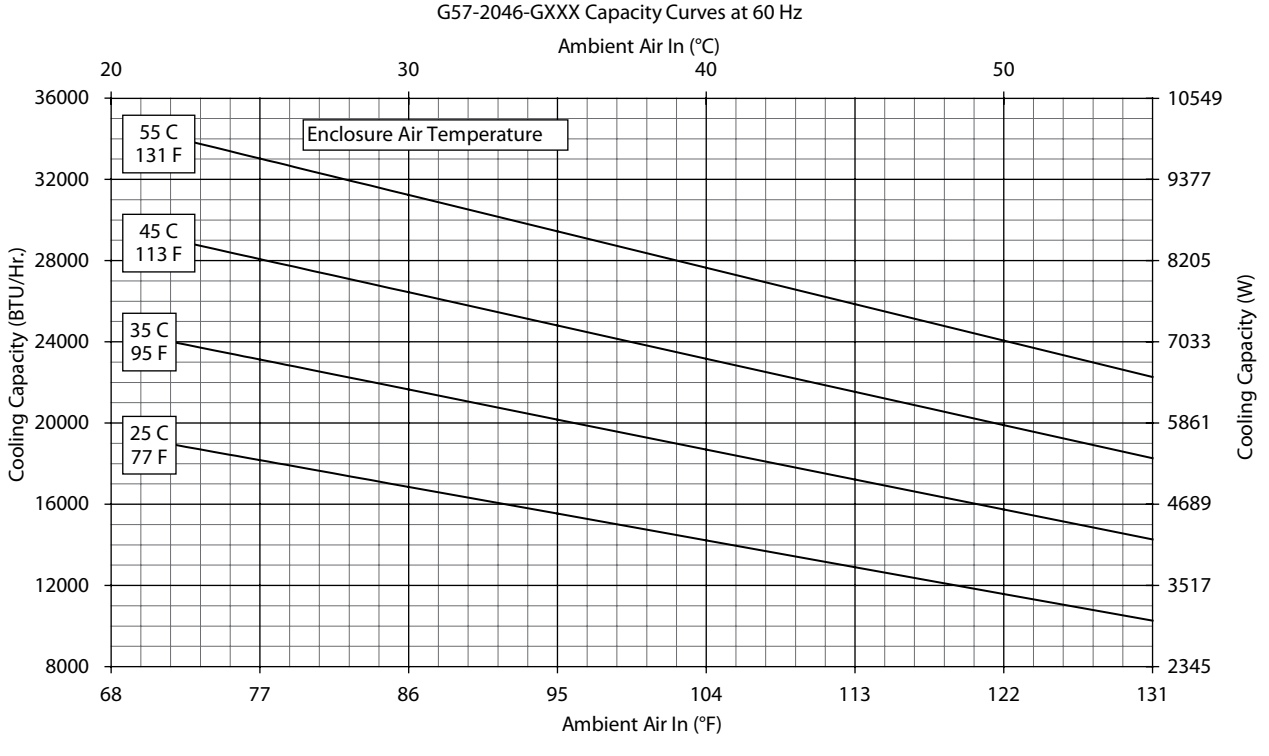
Performance Curves for G57 Models 20000 BTU/Hr.



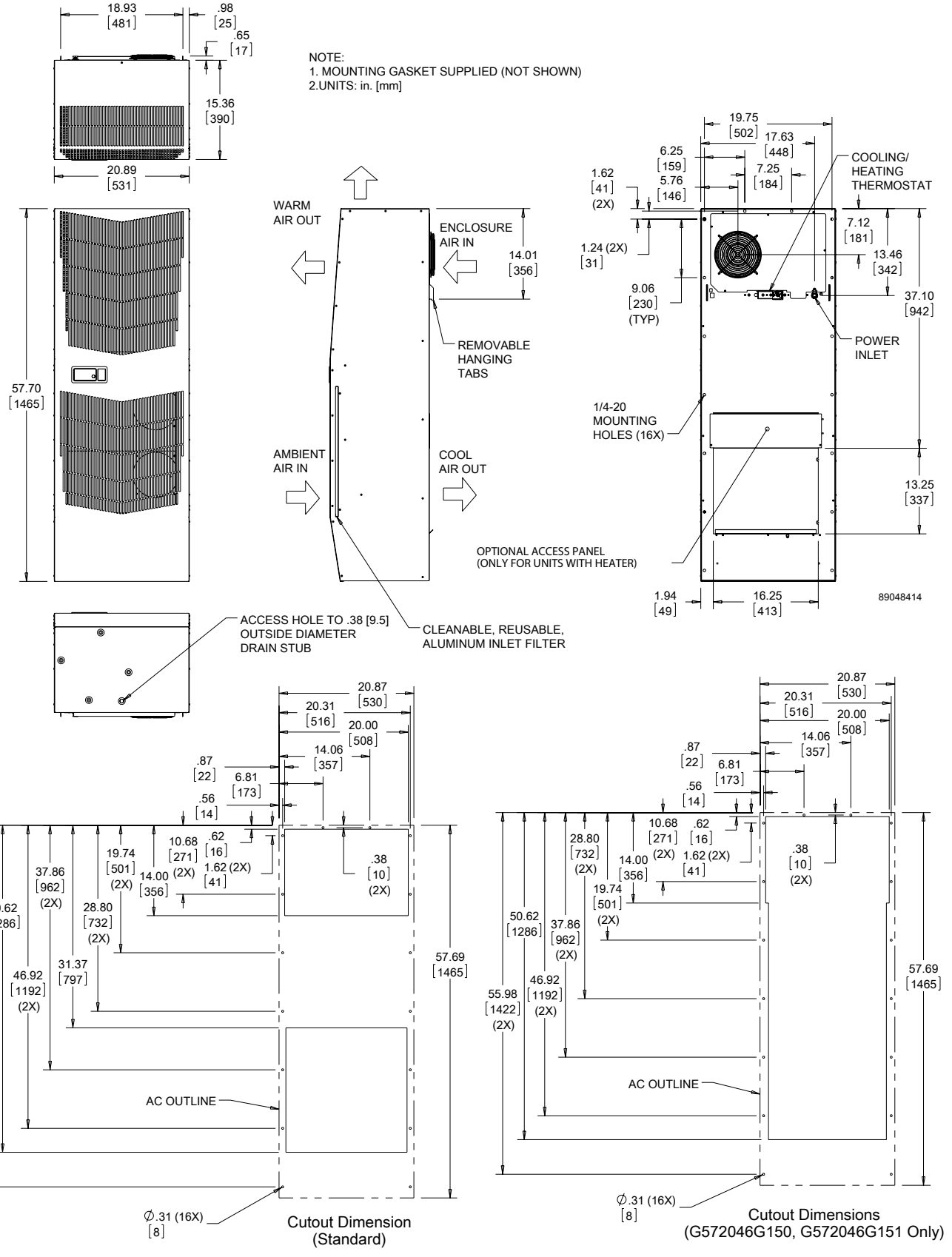


Performance Curves for G57 Models 20000 BTU/Hr.





G57 Models 20000 BTU/Hr. (5861 Watt)



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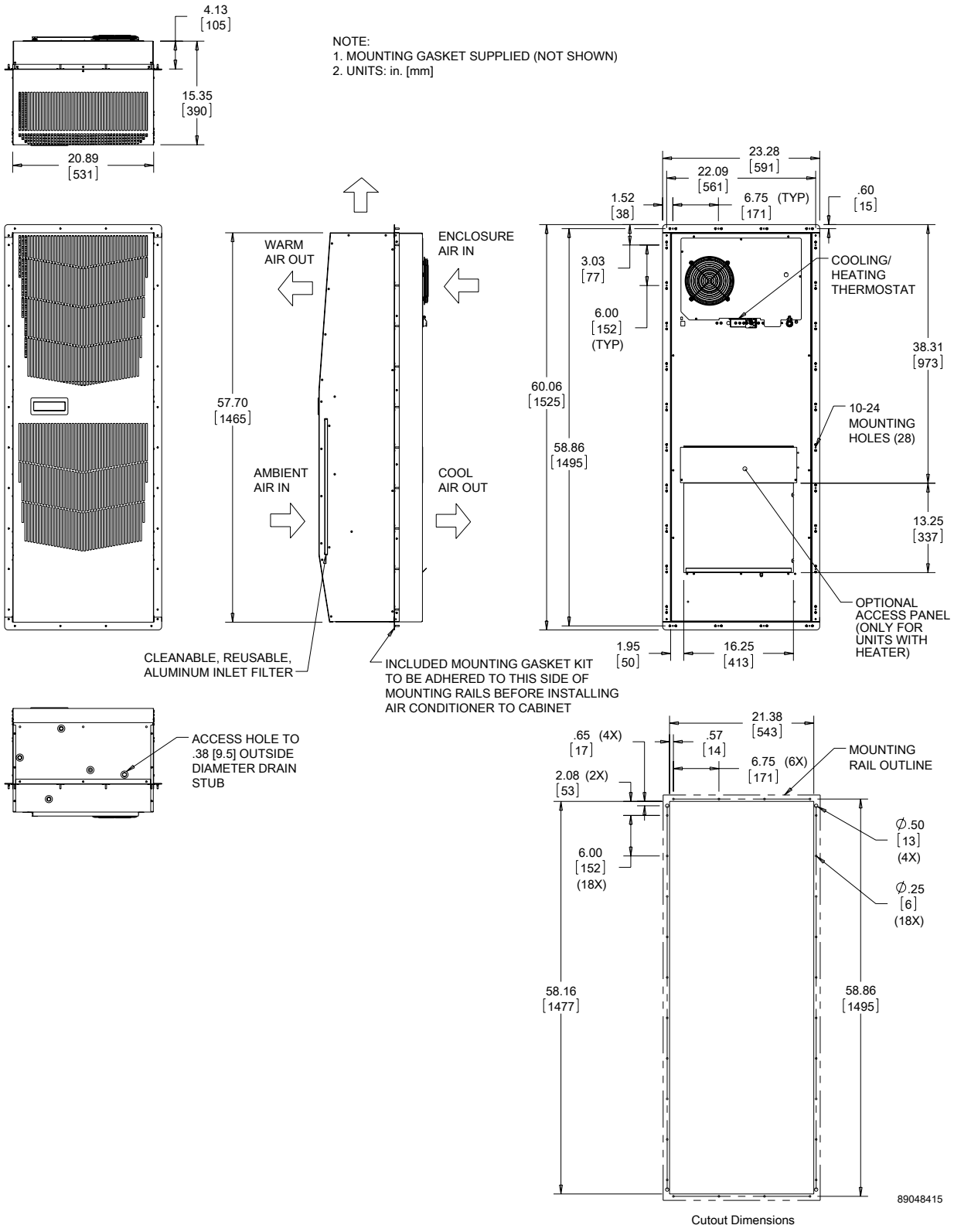
G57 Models 20000 BTU/Hr. (5861 Watt) With Partial Recess



Cutout Dimensions

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Notes

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SPECTRACOOL SLIM FIT INDOOR

S06
1000/1700 BTU/Hr.
300/500 Watt

S10
3400/5000 BTU/Hr.
1000/1500 Watt

S16
6800/8500/13500 BTU/Hr.
2000/2500/4000 Watt

INDUSTRY STANDARDS

UL/cUL Listed Type 12; File No.SA6453

CE
EAC
IP 54 Internal Loop
IP34 External Loop

APPLICATION

- Industrial Automation
- Machine Tool
- Automotive
- Packaging handling equipment
- Material handling

FEATURES

- Slim fit design
- Standard cutout dimension for easy exchange
- Energy efficient rotary compressor
- R134a earth-friendly refrigerant
- Models for 115, 230, and 400/460 3-phase VAC power input
- UL Listed to save customers time and money with agency approvals
- Active condensate management to prevent dripping water
- Aesthetic design plastic cover to optimize air flow
- Three mounting options; fully recessed, partial recessed and surface mount
- Remote access control option for monitoring units worldwide
- Easy filter replacement for extremely dusty environments
- Dust resistant coils for filterless operation
- Every unit functionally tested before shipping
- Standard Indoor Air Conditioner models also include:
  - Door switch

SPECIFICATIONS

- Nominal cooling capacity
  - S06 1000 and 1500 BTU/hr. (300 and 500 W)
  - S10 3400 and 5000 BTU/hr. (1000 and 1500 W)
  - S16 6800, 8500, and 13500 BTU/hr. (2000, 2500, and 4000 W)
- Operating temperature range from 50 F / 10 C to 131 F / 55 C

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint

NOTES

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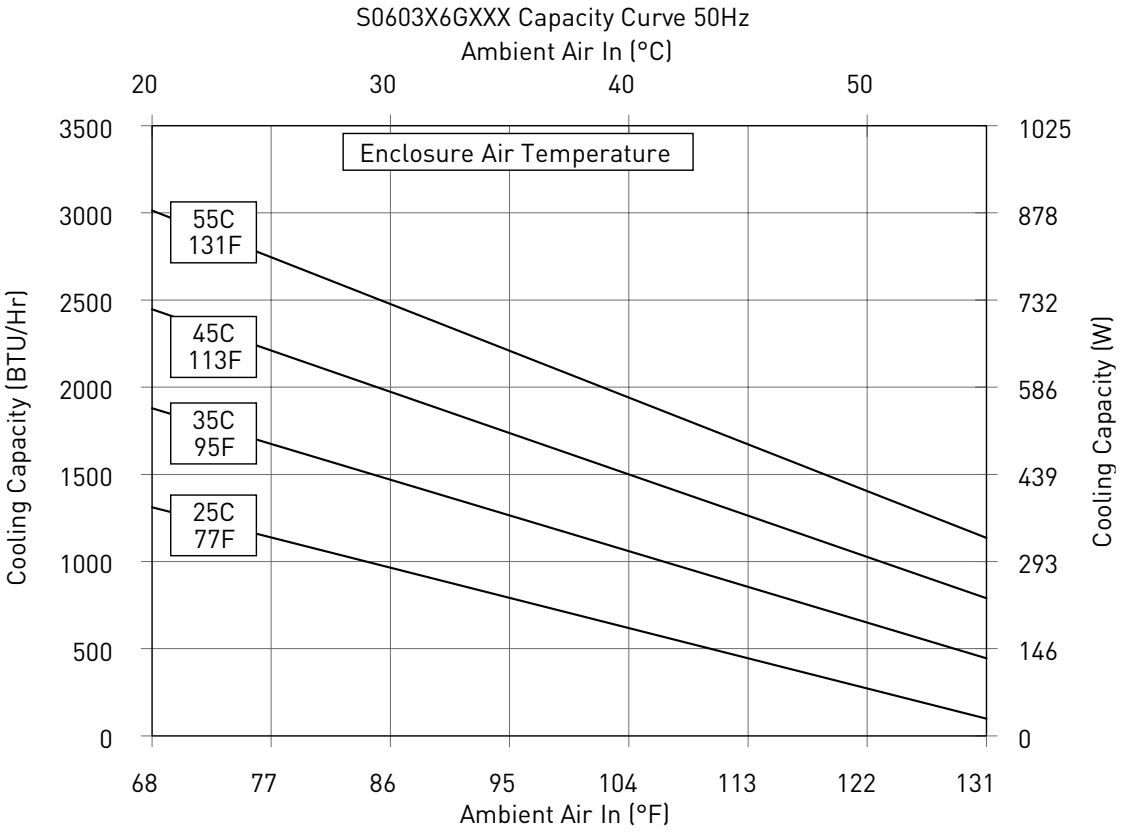
EtherNet/IP ODVA PI PROFIBUS • PROFINET

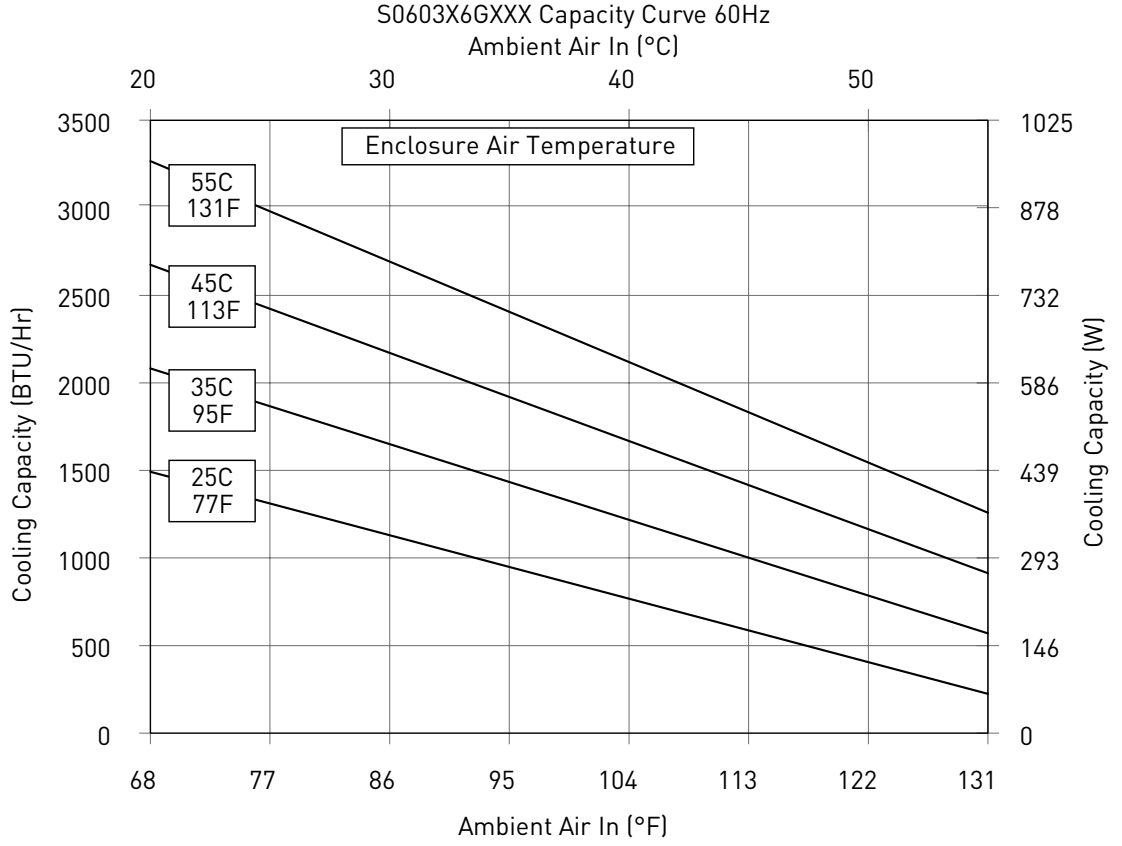
Performance Data **S06 1000/1700 BTU/Hr. (300/500 Watt)**

CATALOG NUMBER				
Indoor Model	S060316G050	S060326G050	S060516G050	S060526G050
Indoor Model with Remote Access Control*	S060316G060	S060326G060	S060516G060	S060526G060
COOLING PERFORMANCE				
Nominal:				
BTU/Hr.	**1000**	**1000**	**1700**	**1700**
Watts	**300**	**300**	**500**	**500**
At 95 F / 95 F (35 C / 35 C)				
BTU/Hr. (50/60 Hz)	1260/1430	1260/1430	1880/2190	1880/2190
W (50/60 Hz)	370/420	370/420	550/640	550/640
Refrigerant	R134a	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	4.7/133	4.5/128	5.7/162	5.7/162
Operating Temperature Range:				
Maximum (°F/°C)	125/52 (50 Hz) 131/55 (60 Hz)	131/55	131/55	131/55
Minimum (°F/°C)	50/10	50/10	50/10	50/10
Air Flow at 0 Static Pressure:				
Internal loop 50 Hz (CFM / m^3/hr.)	64/109	64/109	116/197	116/197
External loop 50 Hz (CFM / m^3/hr.)	76/129	76/129	111/189	111/189
Internal loop 60 Hz (CFM / m^3/hr.)	73/124	73/124	137/233	137/233
External loop 60 Hz (CFM / m^3/hr.)	92/156	92/156	129/219	129/219
ELECTRICAL DATA				
Rated Voltage	**110 / 115**	**230**	**115**	**230**
Frequency (Hz)	50/60	50/60	50/60	50/60
Operating Range	+/-10%	+/-10%	+/-10%	+/-10%
Max. Power Consumption (W)	270/300	300/320	450/470	450/480
Max. Nominal Current (A)	4.0/3.8	1.8/1.7	6.5/6.1	2.6/2.9
Starting Current (A)	13/13	6/6	21/20	9/10
Agency Approvals	UL/cUL Listed, CE, EAC			
Power Input Description	Terminal Block	Terminal Block	Terminal Block	Terminal Block
ENCLOSURE PROTECTION				
UL Type	Type 12			
International Rating	IP54 internal loop IP34 external loop			
CONTROLLER				
Description	Smart controller with display			
Thermostat Location	Ambient Side			
Factory Thermostat Setting (°F/°C)	95 / 35			
SOUND LEVEL				
At 1.5 Meters	65 dB(A)	65 dB(A)	66 dB(A)	66 dB(A)
UNIT CONSTRUCTION				
Material	Galvanized Sheet Metal Standard			
Finish	Powder Coat Semi-textured RAL 7035 Light Gray Standard			
UNIT DIMENSIONS				
Height (in./mm)	21.6 / 550			
Width (in./mm)	11.0 / 280			
Depth (in./mm)	5.5 / 140	5.5 / 140	8.1 / 206	8.1 / 206
Weight (lb./kg)	28 /13	28 /13	33 /15	33 /15

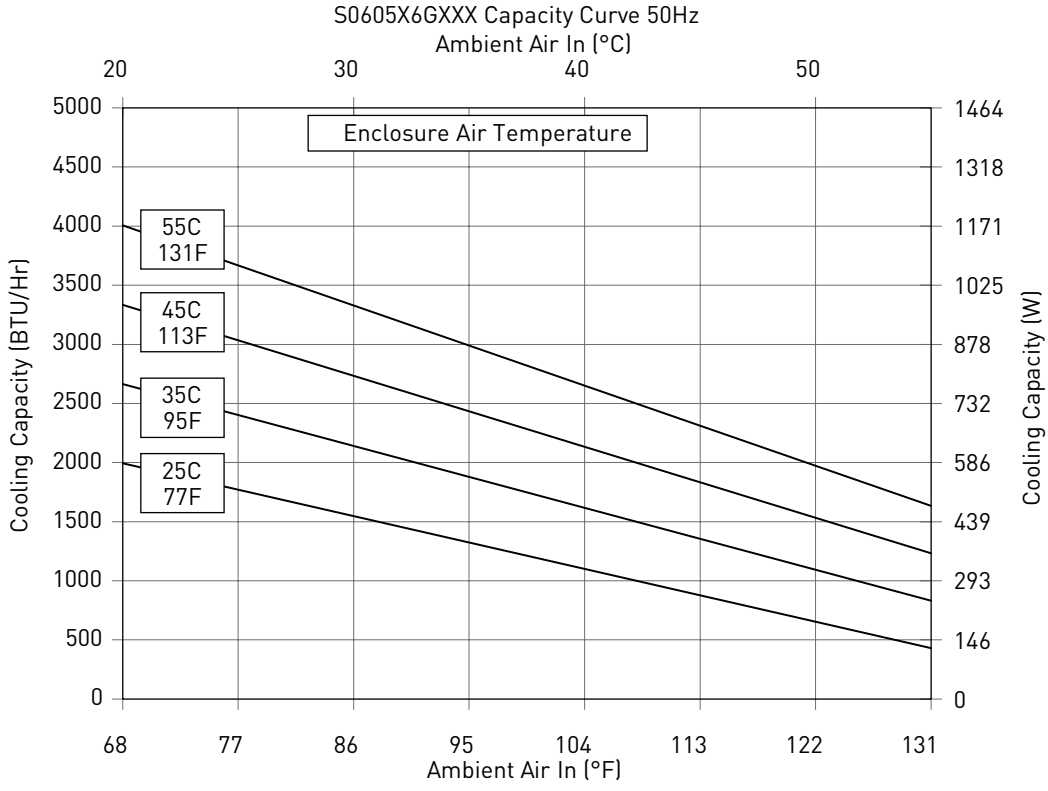
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

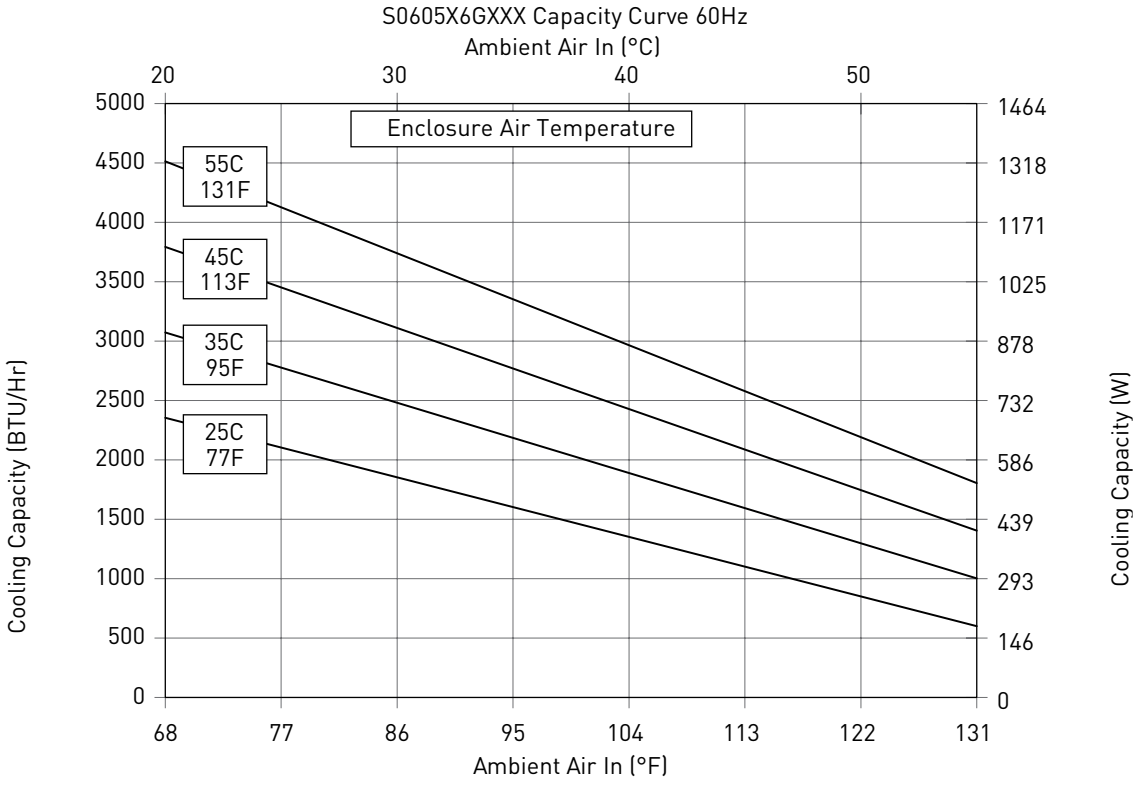
Performance Curves for S06 Models 1000 BTU/Hr. (300 Watt)



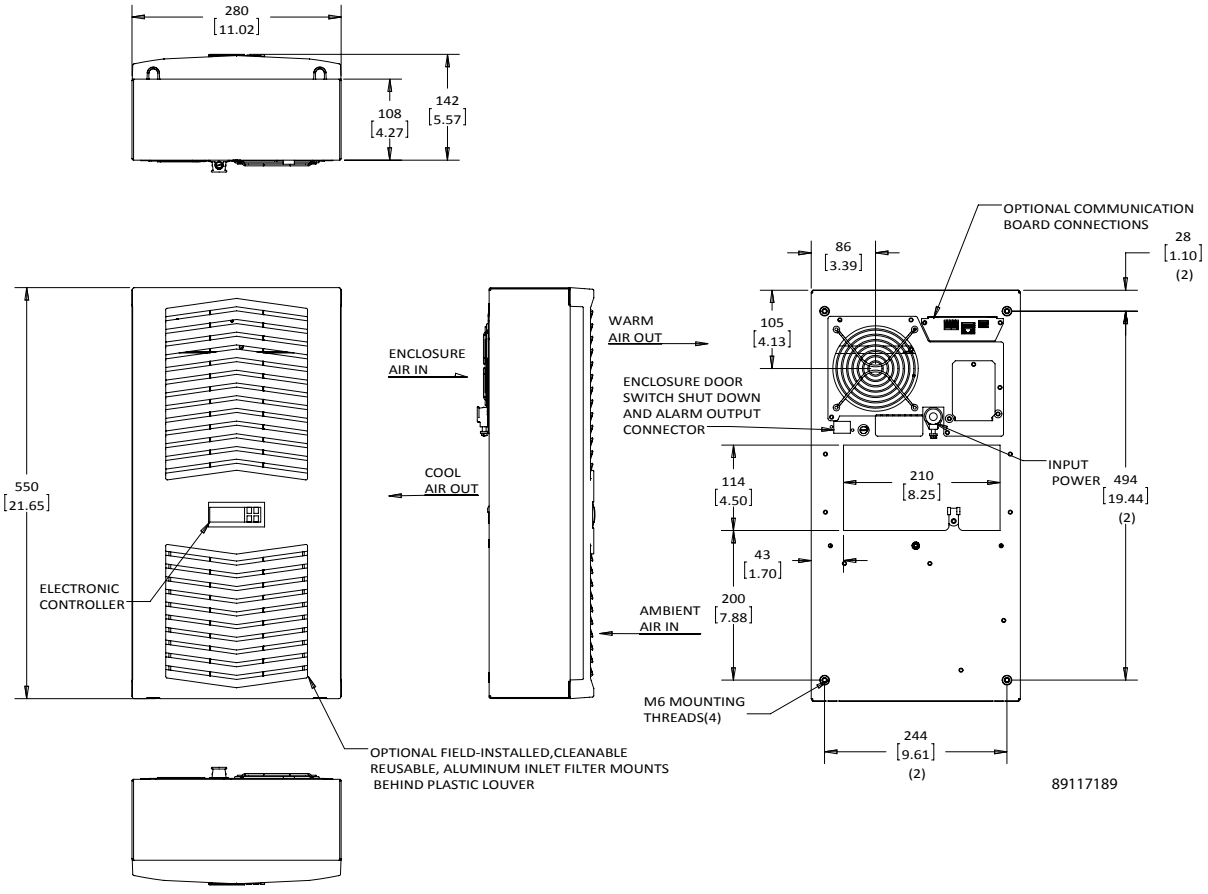


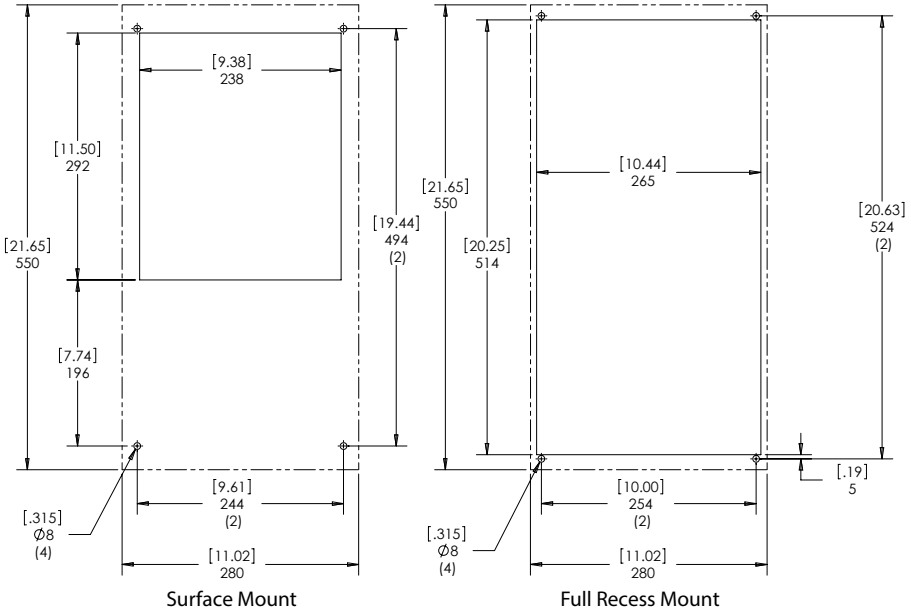
Performance Curves for S06 Models 1700 BTU/Hr. (500 Watt)





S06 Models 1000 BTU/Hr. (300 Watt)

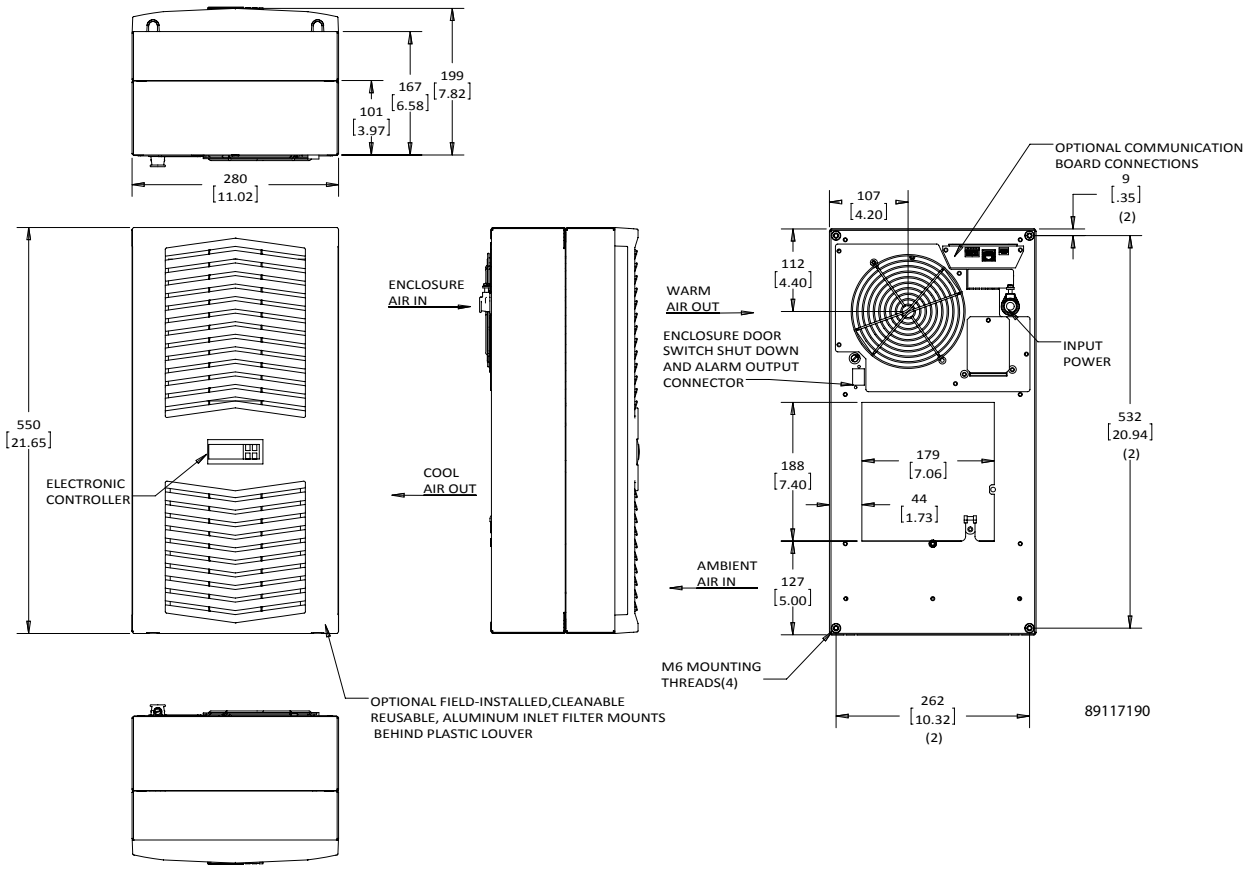


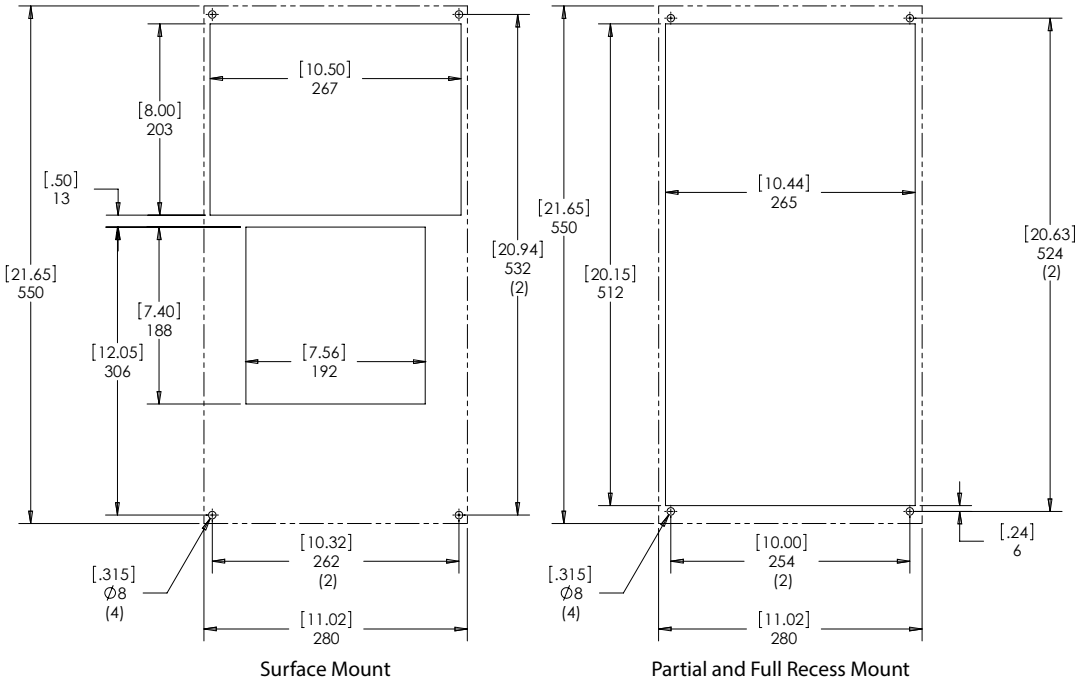


Cutout Dimensions

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

S06 Models 1700 BTU/Hr. (500 Watt)





Surface Mount

Partial and Full Recess Mount

Cutout Dimensions

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

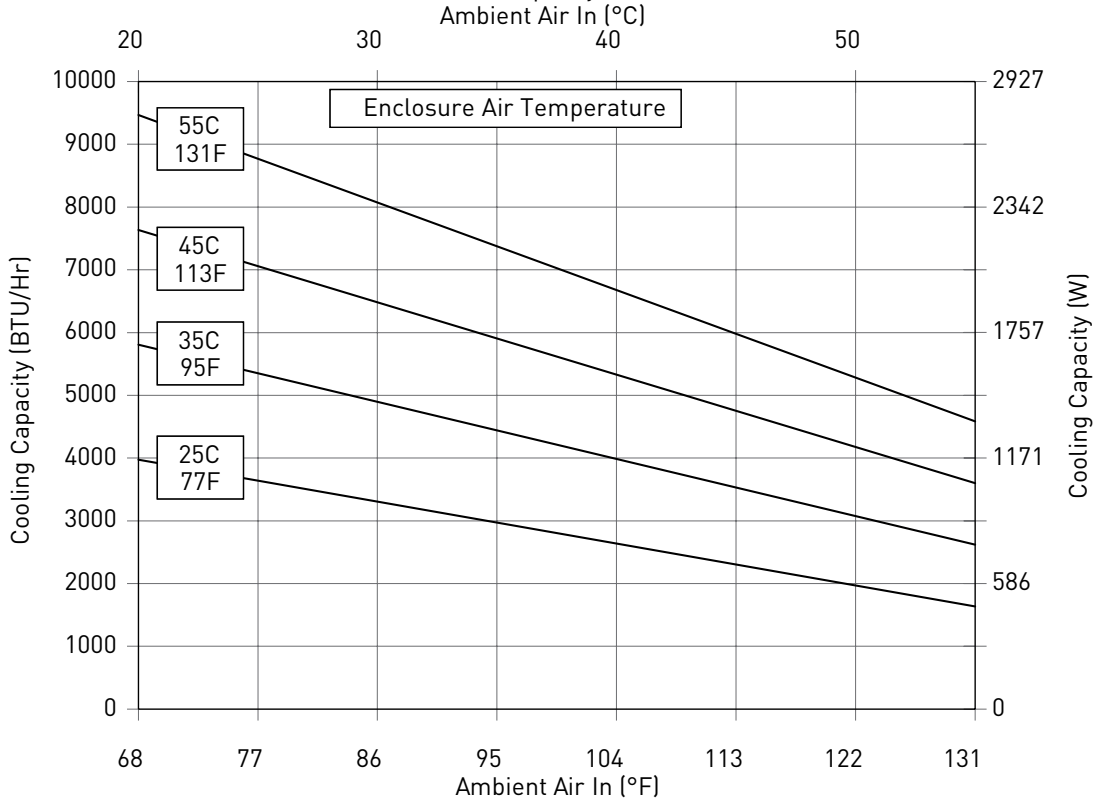
Performance Data **S10 3400/5000 BTU/Hr. (1000/1500 Watt)**

CATALOG NUMBER						
Indoor Model	S101016G050	S101026G050	S101046G050	S101516G050	S101526G050	S101546G050
Indoor Model with Remote Access Control*	S101016G060	S101026G060	S101046G060	S101516G060	S101526G060	S101546G060
COOLING PERFORMANCE						
Nominal:						
BTU/Hr.	3400	3400	3400	5000	5000	5000
Watts	1000	1000	1000	1500	1500	1500
At 95 F / 95 F (35 C / 35 C)						
BTU/Hr. (50/60 Hz)	4440/4710	4440/4710	4440/4710	6150/6420	6150/6420	6150/6420
W (50/60 Hz)	1300/1380	1300/1380	1300/1380	1800/1880	1800/1880	1800/1880
Refrigerant	R134a	R134a	R134a	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	10/283	10/283	10/283	15/425	15/425	18/510
Operating Temperature Range:						
Maximum (°F/°C)	131/55	131/55	131/55	131/55	131/55	131/55
Minimum (°F/°C)	50/10	50/10	50/10	50/10	50/10	50/10
Air Flow at 0 Static Pressure:						
Internal loop 50 Hz (CFM / m^3/hr.)	206/350	206/350	206/350	201/342	201/342	201/342
External loop 50 Hz (CFM / m^3/hr.)	334/567	334/567	334/567	339/576	339/576	339/576
Internal loop 60 Hz (CFM / m^3/hr.)	230/391	230/391	230/391	230/391	230/391	230/391
External loop 60 Hz (CFM / m^3/hr.)	344/584	344/584	344/584	341/579	341/579	341/579
ELECTRICAL DATA						
Rated Voltage	**115**	**230**	**400 / 460 1~**	**115**	**230**	**400 / 460 3~**
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Operating Range	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%
Max. Power Consumption (W)	810/1010	670/800	750/960	850/1040	850/1040	930/1130
Max. Nominal Current (A)	9.6/10.2	4.1/5.5	2.1/2.4	9.6/10.2	5.1/6.7	2.1/2.4
Starting Current (A)	32/34	14/18	7/8	32/34	17/22	7/8
Agency Approvals	UL/cUL Listed, CE, EAC					
Power Input Description	Terminal Block	Terminal Block	Terminal Block	Terminal Block	Terminal Block	Terminal Block
ENCLOSURE PROTECTION						
UL Type	Type 12					
International Rating	IP54 internal loop IP34 external loop					
CONTROLLER						
Description	Smart controller with display					
Thermostat Location	Ambient Side					
Factory Thermostat Setting (°F/°C)	95 / 35					
SOUND LEVEL						
At 1.5 Meters	69 dB(A)	69 dB(A)	69 dB(A)	70dB(A)	70dB(A)	70dB(A)
UNIT CONSTRUCTION						
Material	Galvanized Sheet Metal Standard					
Finish	Powder Coat Semi-textured RAL 7035 Light Gray Standard					
UNIT DIMENSIONS						
Height (in./mm)	37.4 / 950					
Width (in./mm)	15.7 / 400					
Depth (in./mm)	10.2 / 259					
Weight (lb./kg)	86/39	86/39	99/45	95/43	95/43	95/43

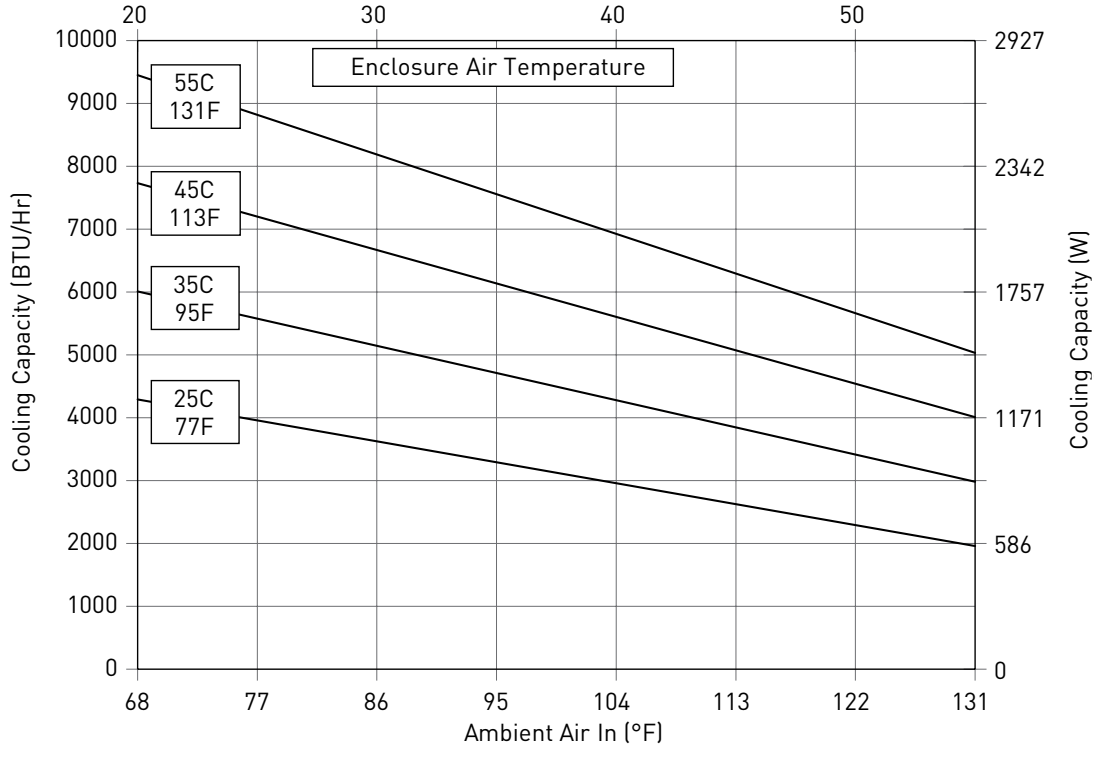
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

Performance Curves for S10 Models 3400 BTU/Hr. (1000 Watt)

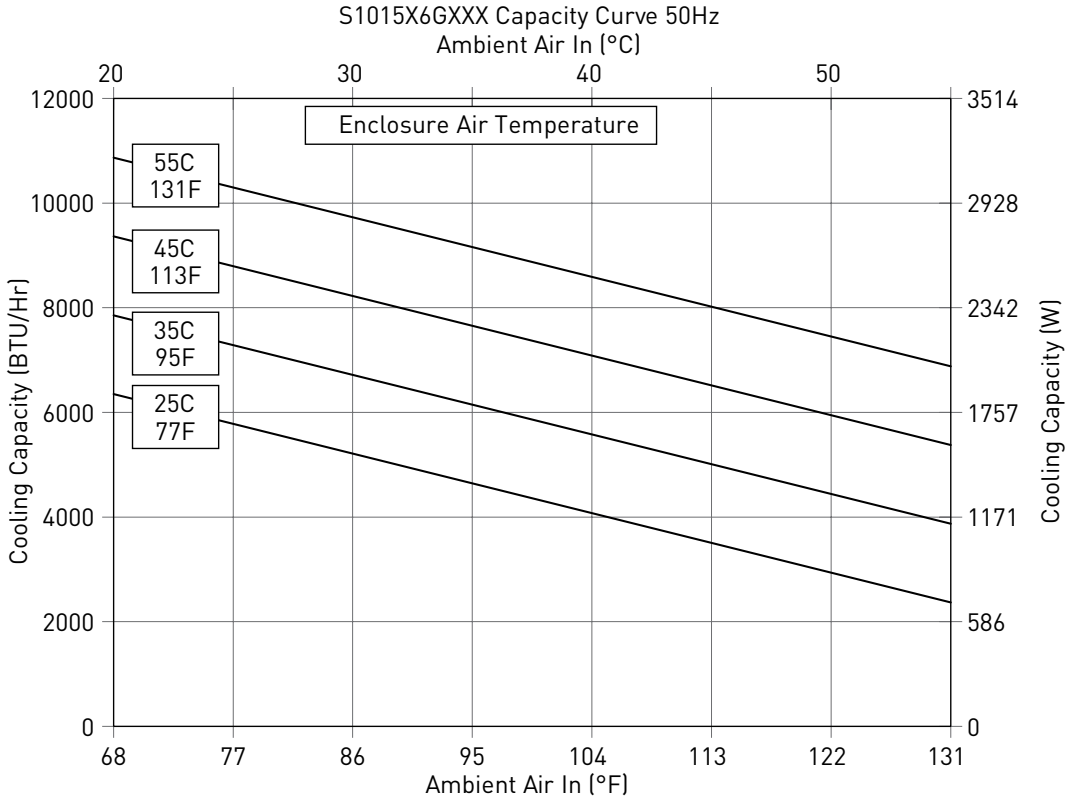
S1010X6GXXX Capacity Curve 50Hz

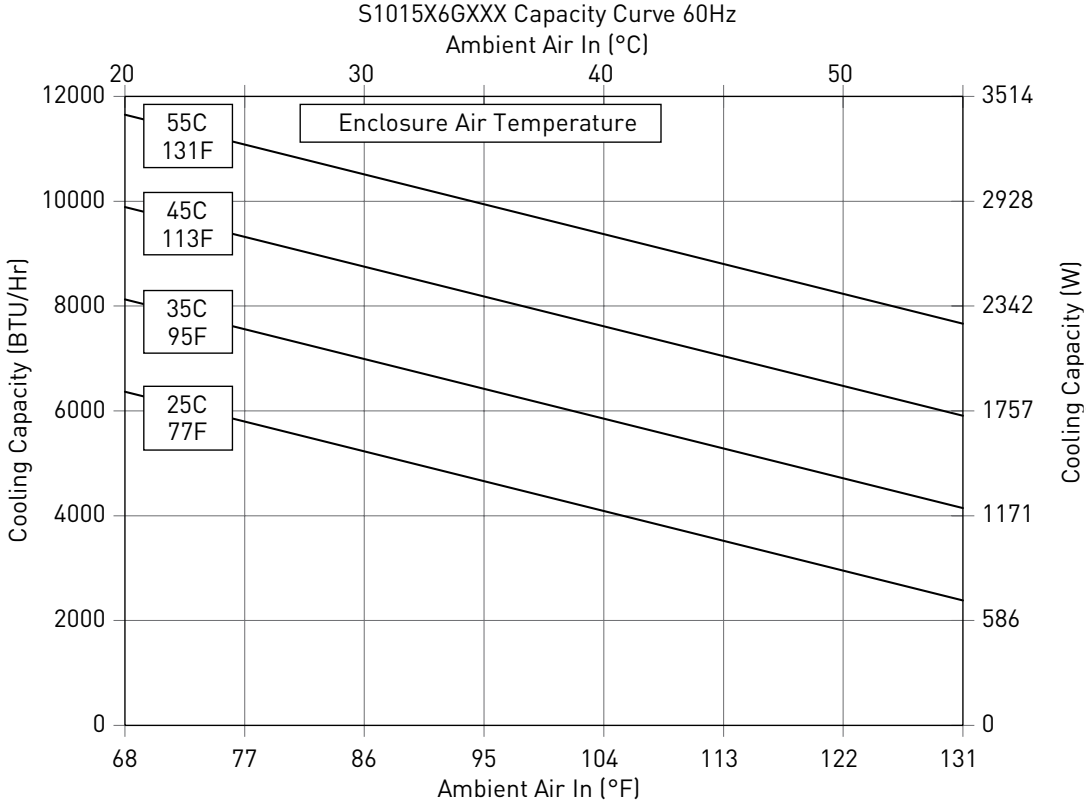


S1010X6GXXX Capacity Curve 60Hz

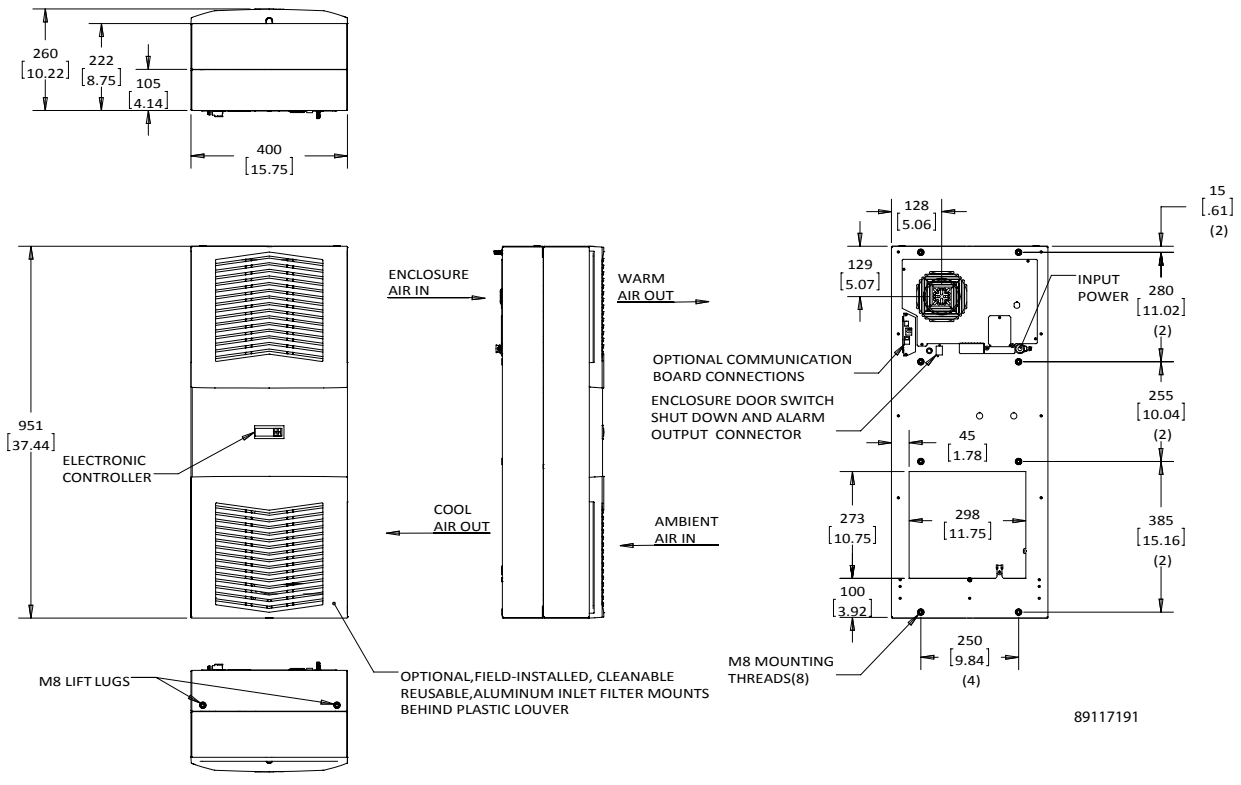


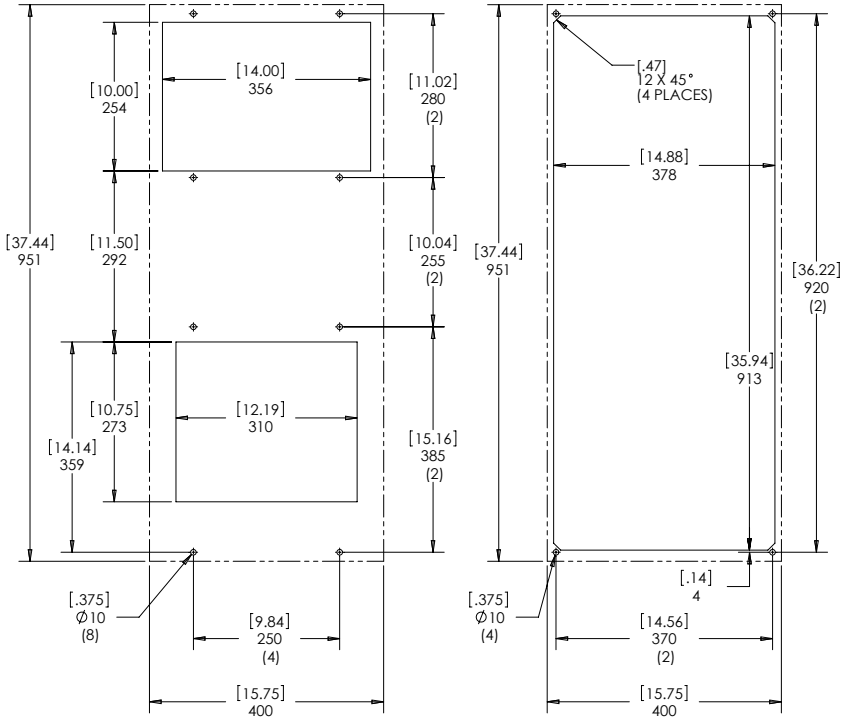
Performance Curves for S10 Models 5000 BTU/Hr. (1500 Watt)





S10 Models 3400/5000 BTU/Hr. (1000/1500 Watt)





Surface Mount | Partial and Full Recess Mount

Cutout Dimensions

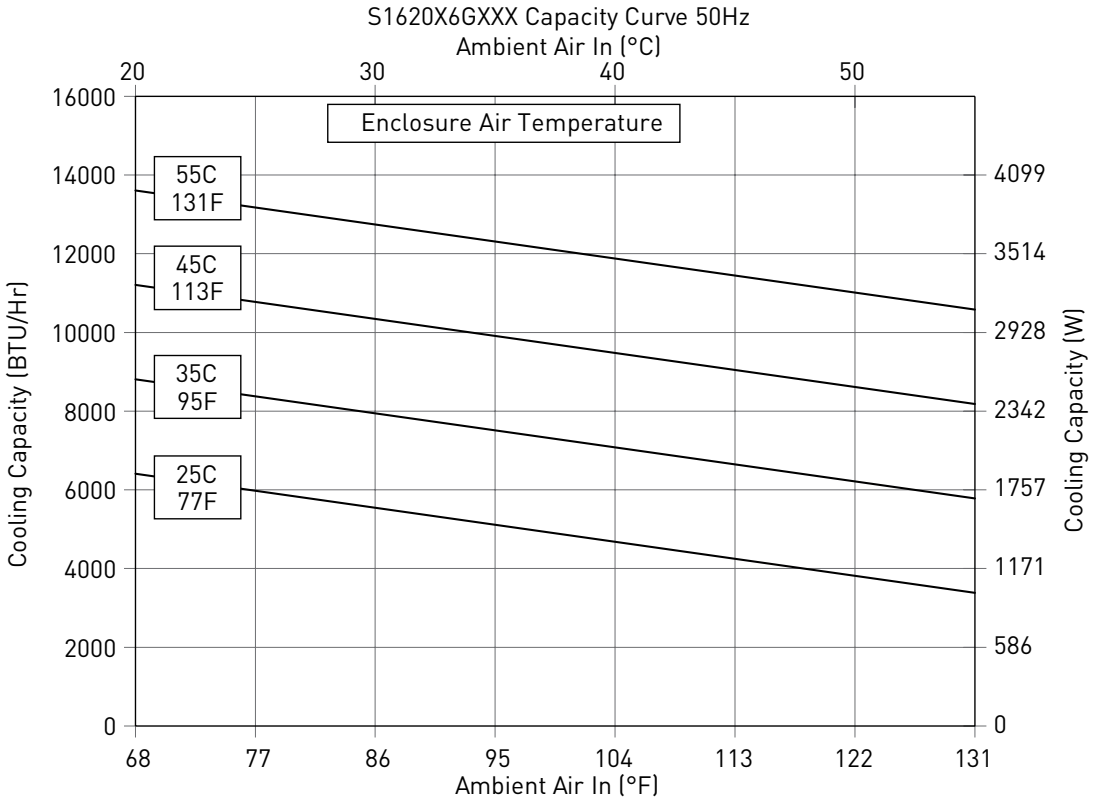
Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

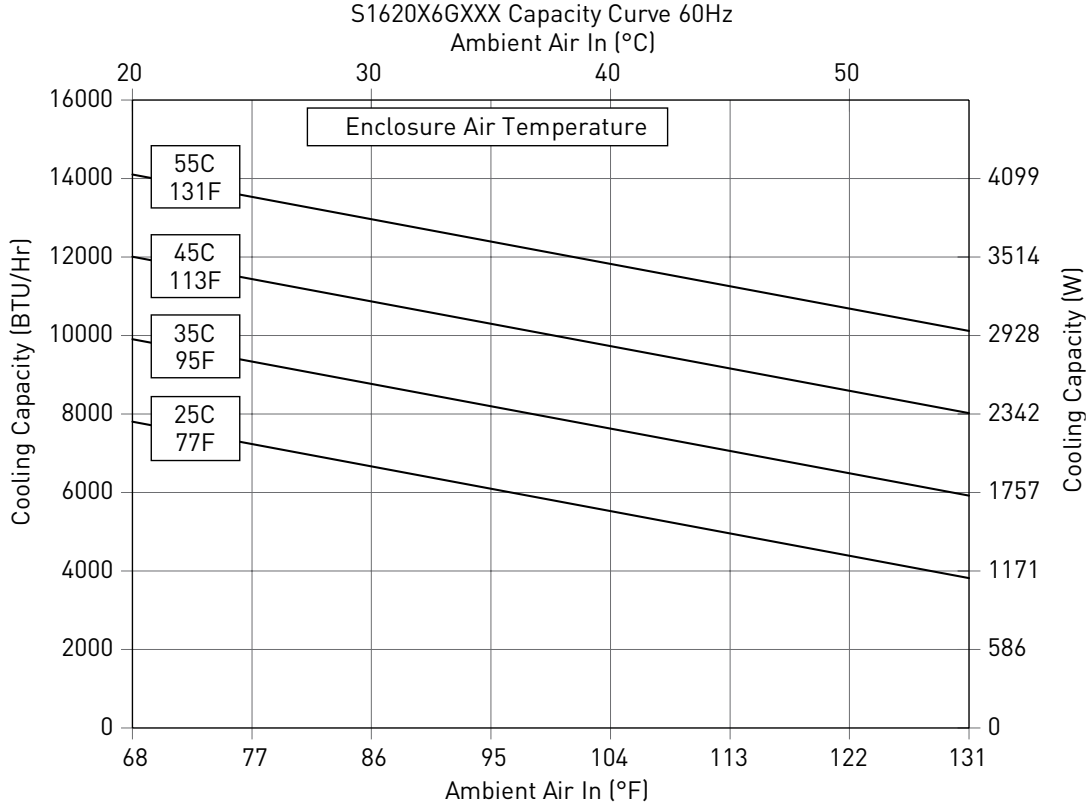
Performance Data **S16 6800/8500/13500 BTU/Hr. (2000/2500/4000 Watt)**

CATALOG NUMBER							
Indoor Model	S162016G050	S162026G050	S162046G050	S162516G050	S162526G050	S162546G050	S164046G050
Indoor Model with Remote Access Control*	S162016G060	S162026G060	S162046G060	S162516G060	S162526G060	S162546G060	S164046G060
COOLING PERFORMANCE							
Nominal:							
BTU/Hr.	6800	6800	6800	8500	8500	8500	13500
Watts	2000	2000	2000	2500	2500	2500	4000
At 95 F / 95 F (35 C / 35 C)							
BTU/Hr. (50/60 Hz)	7510/8200	7510/8200	7510/8200	9150/9560	9150/9560	9150/9560	13700/15400
W (50/60 Hz)	2200/2400	2200/2400	2200/2400	2680/2800	2680/2800	2680/2800	4000/4500
Refrigerant	R134a	R134a	R134a	R134a	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	25/709	25/709	25/709	26/737	26/737	30/850	44/1247
Operating Temperature Range:							
Maximum (°F/°C)	131/55	131/55	131/55	131/55	131/55	131/55	131/55
Minimum (°F/°C)	50/10	50/10	50/10	50/10	50/10	50/10	50/10
Air Flow at 0 Static Pressure:							
Internal loop 50 Hz (CFM / m^3/hr.)	267/454	267/454	267/454	263/447	263/447	263/447	291/494
External loop 50 Hz (CFM / m^3/hr.)	373/634	373/634	373/634	650/1104	650/1104	650/1104	630/1070
Internal loop 60 Hz (CFM / m^3/hr.)	285/484	285/484	285/484	274/466	274/466	274/466	339/576
External loop 60 Hz (CFM / m^3/hr.)	385/654	385/654	385/654	673/1143	673/1143	673/1143	697/1184
ELECTRICAL DATA							
Rated Voltage	**115**	**230**	**400 / 460 3~**	**115**	**230**	**400 / 460 3~**	**400 / 460 3~**
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Operating Range	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%
Max. Power Consumption (W)	930/1090	940/1140	900/1180	1230/1420	1320/1650	1150/1510	1790/2310
Max. Nominal Current (A)	11.1/12.5	5.7/7.2	2.2/2.6	16.1/16.9	8.0/10.1	3.2/3.4	4.2/4.4
Starting Current (A)	37/41	19/24	7/9	53/56	26/33	11/11	14/15
Agency Approvals	UL/cUL Listed, CE, EAC						
Power Input Description	Terminal Block	Terminal Block	Terminal Block	Terminal Block	Terminal Block	Terminal Block	Terminal Block
ENCLOSURE PROTECTION							
UL Type	Type 12						
International Rating	IP54 internal loop IP34 external loop						
CONTROLLER							
Description	Smart controller with display						
Thermostat Location	Ambient Side						
Factory Thermostat Setting (°F/°C)	95 / 35						
SOUND LEVEL							
At 1.5 Meters	67 dB(A)	67 dB(A)	67 dB(A)	71 dB(A)	71 dB(A)	71 dB(A)	70 dB(A)
UNIT CONSTRUCTION							
Material	Galvanized Sheet Metal Standard						
Finish	Powder Coat Semi-textured RAL 7035 Light Gray Standard						
UNIT DIMENSIONS							
Height (in./mm)	62.2/1580						
Width (in./mm)	15.7/400	15.7/400	15.7/400	15.7/400	15.7/400	15.7/400	19.7/500
Depth (in./mm)	11.6/295	11.6/295	11.6/295	11.6/295	11.6/295	11.6/295	13.4/340
Weight (lb./kg)	150/68	150/68	150/68	154/70	154/70	154/70	203/92

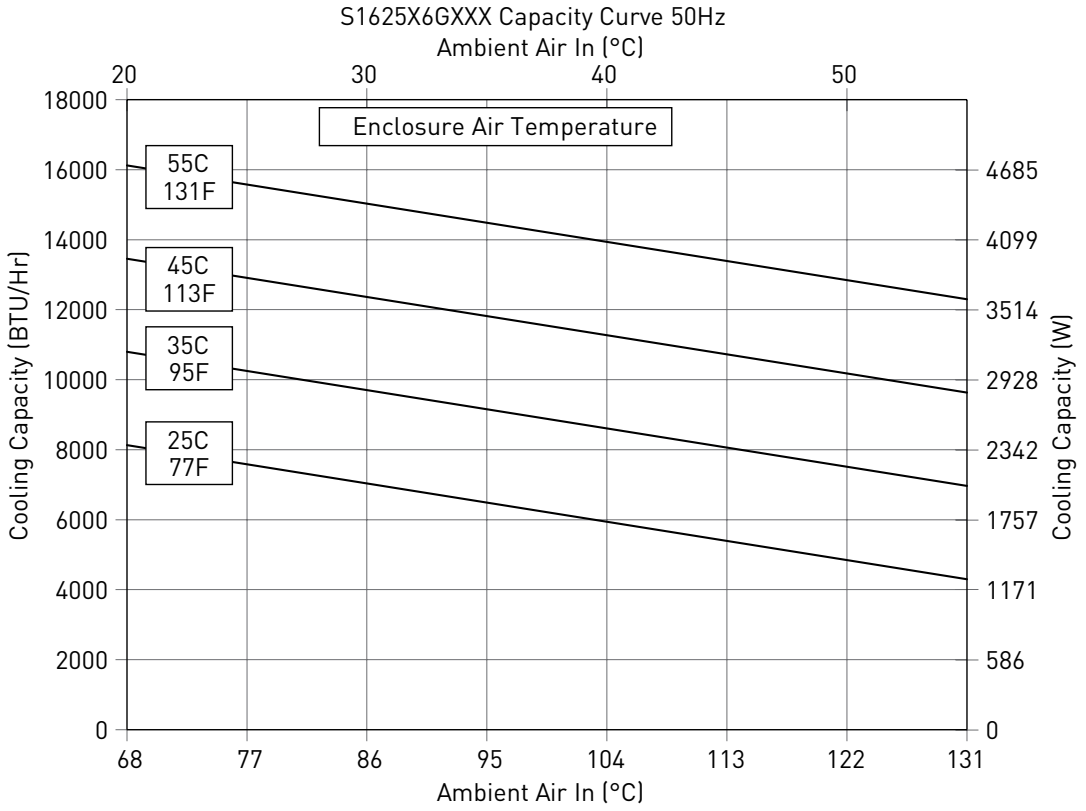
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

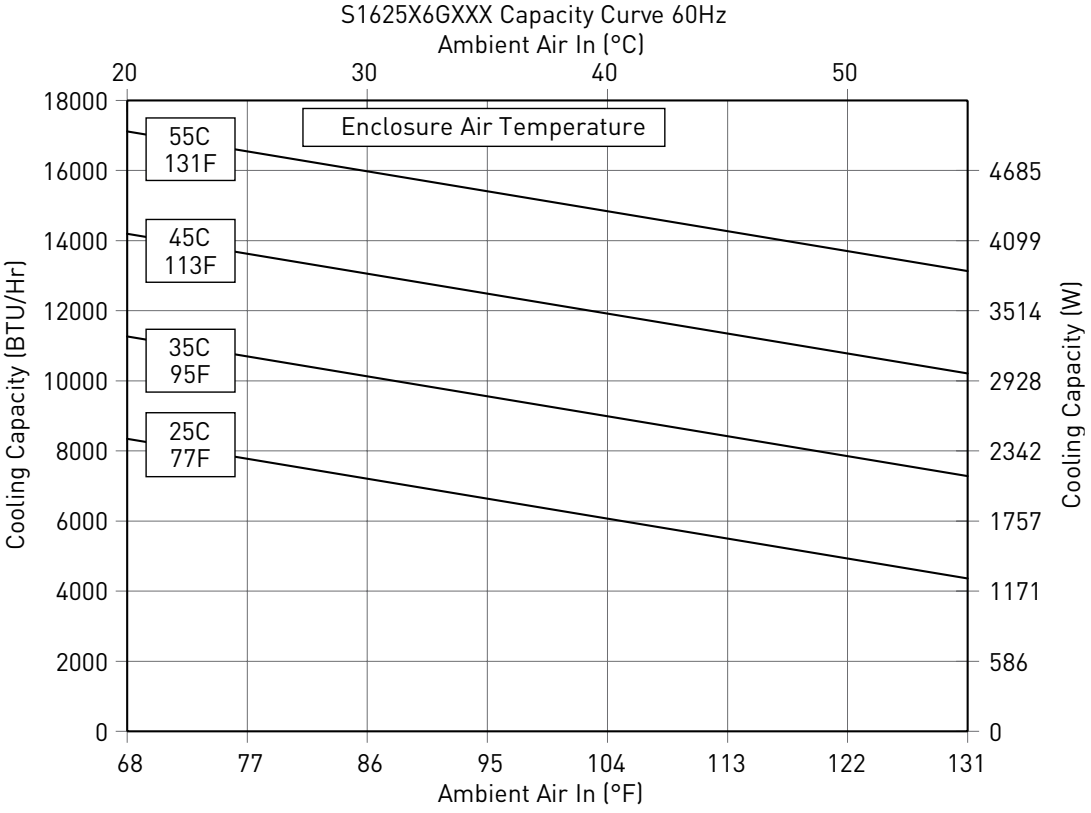
Performance Curves for S16 Models 6800 BTU/Hr. (2000 Watt)



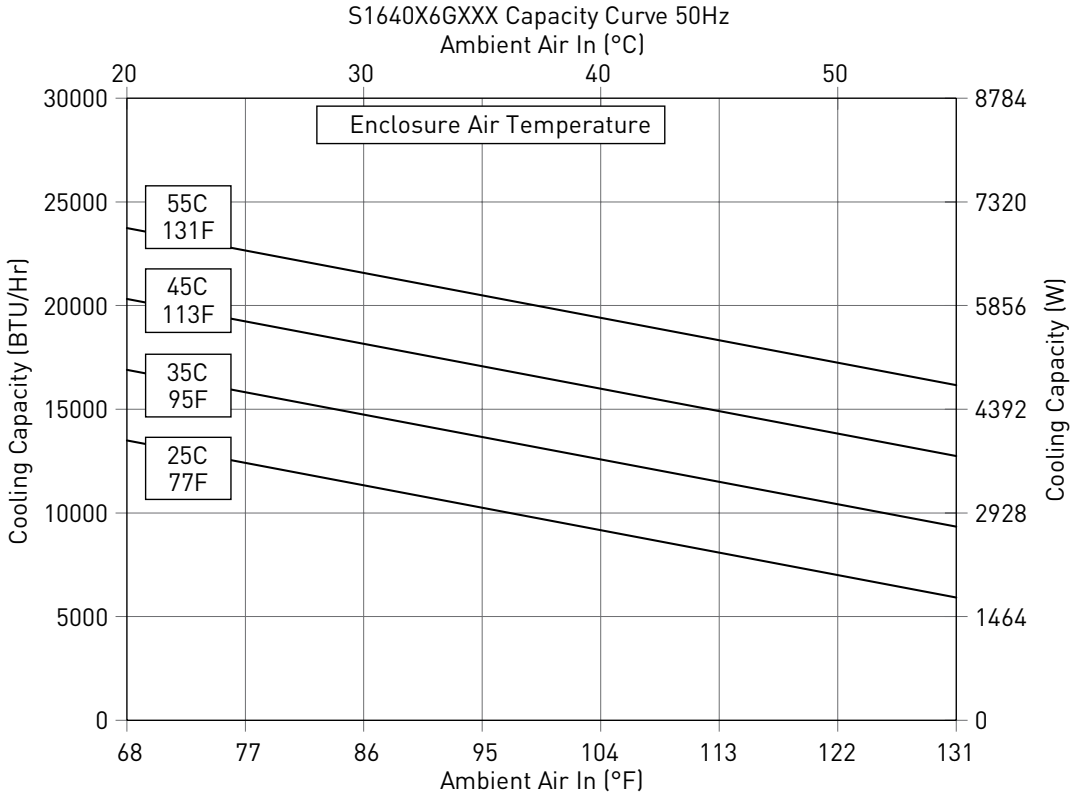


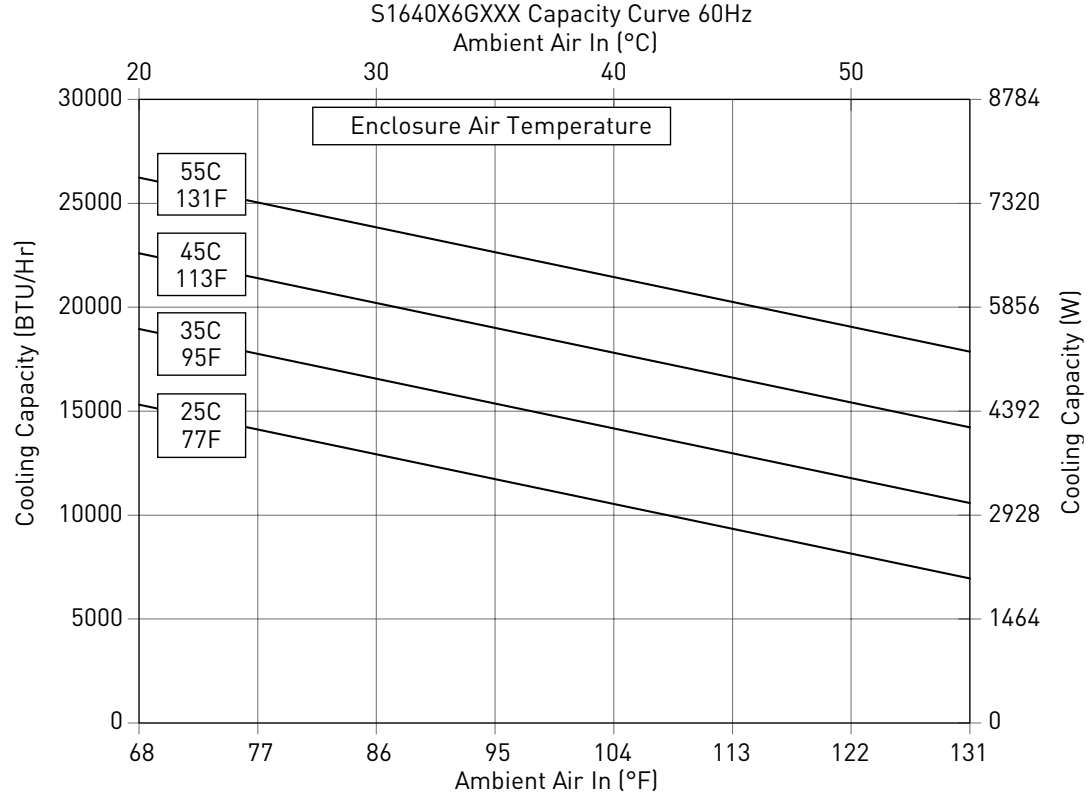
Performance Curves for S16 Models 8500 BTU/Hr. (2500 Watt)



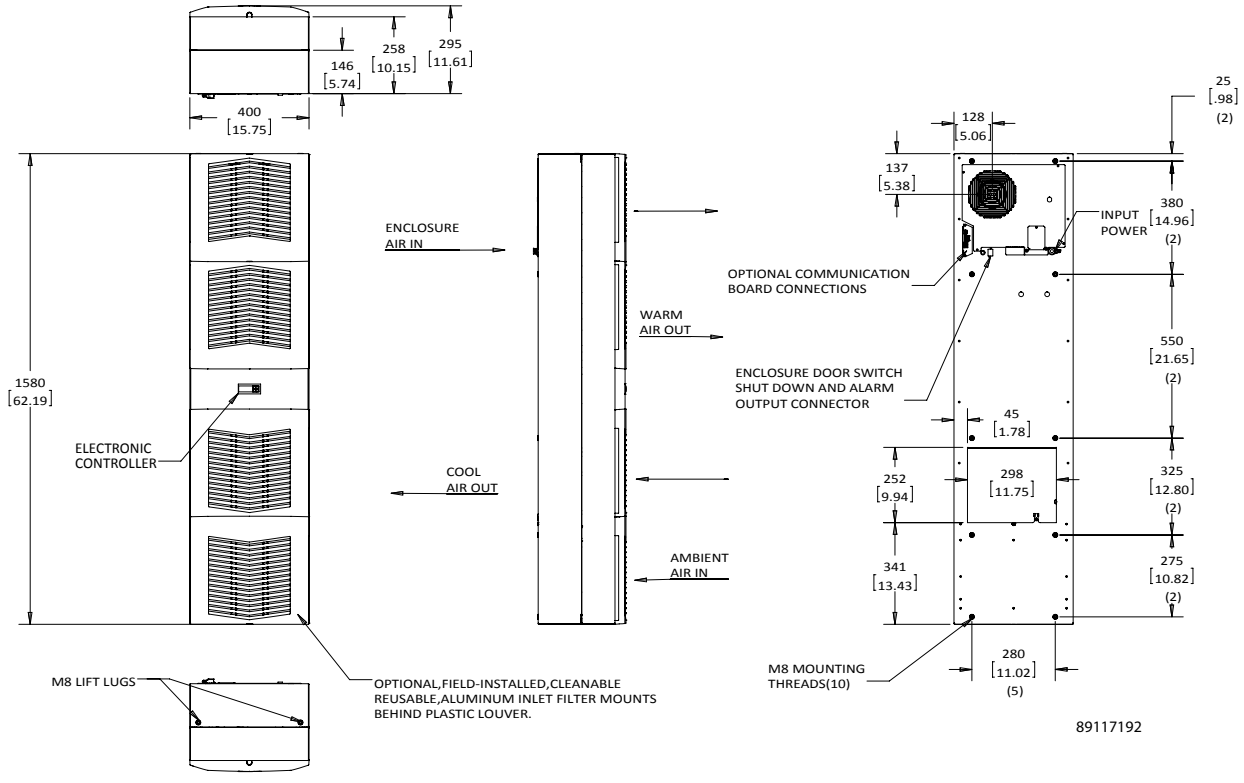


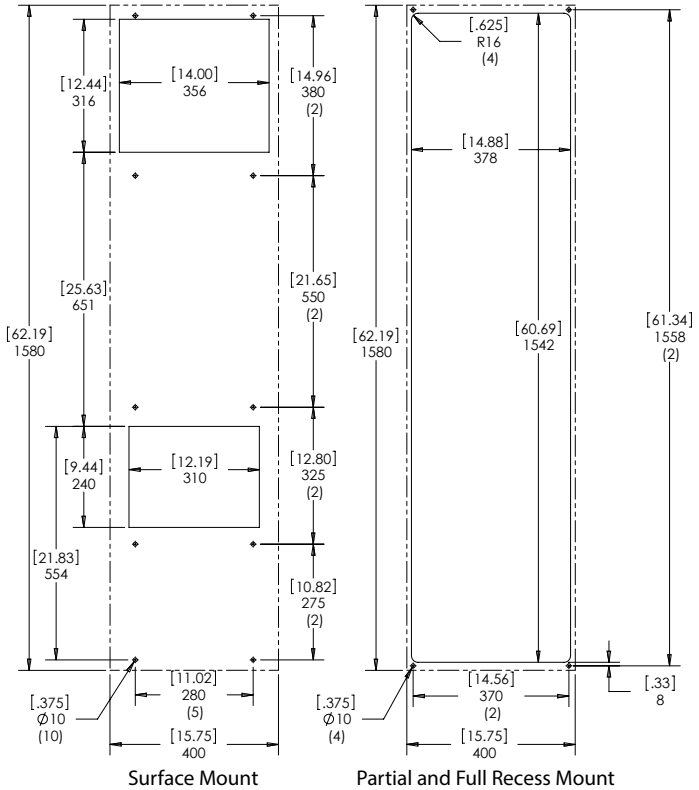
Performance Curves for S16 Models 13500 BTU/Hr. (4000 Watt)





S16 Models 6800/8500 BTU/Hr. (2000/2500 Watt)





Surface Mount Partial and Full Recess Mount

Cutout Dimensions

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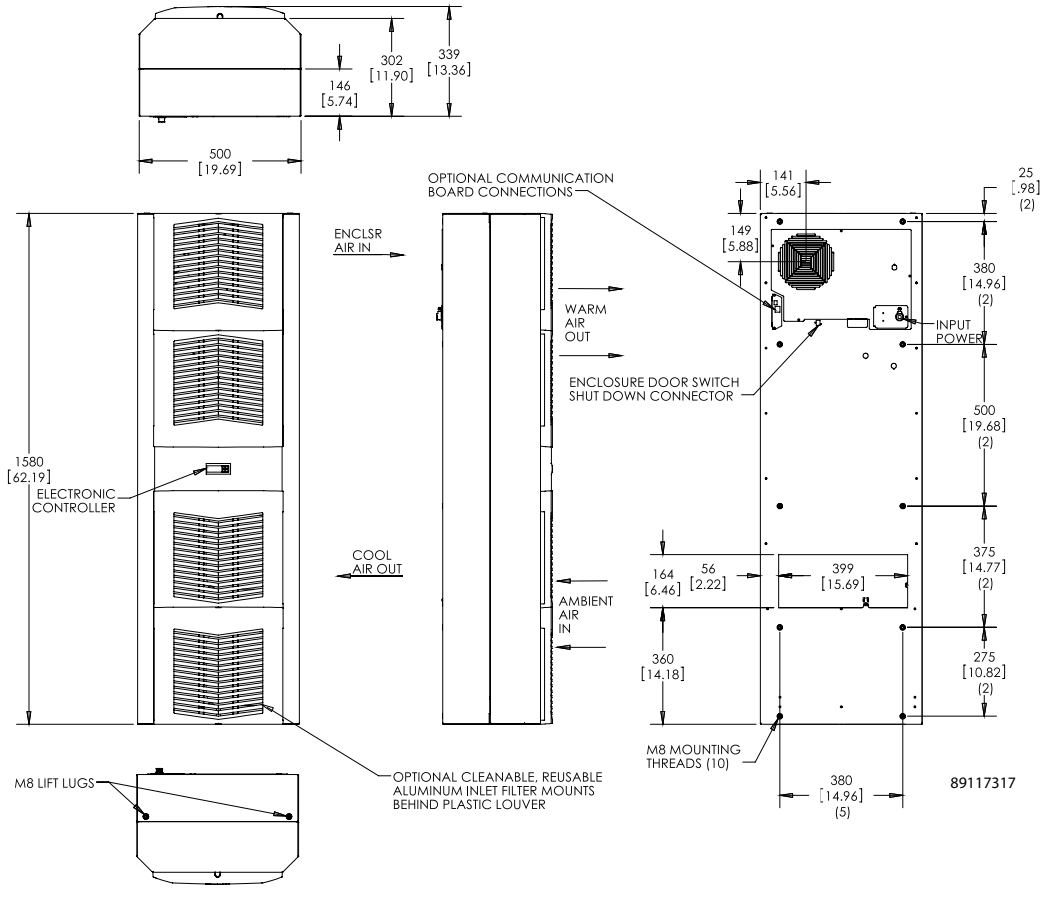
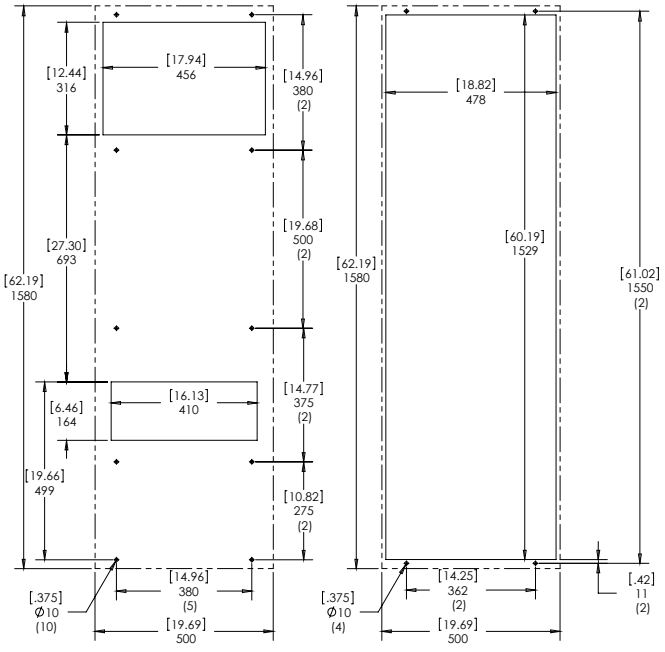
S16 Models 13500 BTU/Hr. (4000 Watt)





Surface Mount Partial Recess Mount

Cutout Dimensions

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SPECTRACOOL NARROW COMPACT INDOOR

N16 115/230 Volt
800 BTU/Hr.
234 Watt

N21 115/230 Volt
2000 BTU/Hr.
586 Watt

INDUSTRY STANDARDS

UL/cUL Listed; Type 12, 3R, 4, 4X optional; File No. SA6453
UR/cUR Recognized on select models for N16 and N21

CE
IP 54 Internal Loop
IP 34 External Loop
EAC
Telcordia GR-487 capable
Reference performance data tables for agency approvals applied to each model.

APPLICATION

- Industrial automation
- Package handling equipment
- Security and defense systems

FEATURES

- Narrow design accommodates 12-in. deep cabinets
- R134a earth-friendly refrigerants
- Models for 115, 230 and 400/460 VAC power input
- UL Listed to save customers time and money with agency approvals
- Attractive industrial design with minimal use of visible fasteners
- Reliable mechanical thermostat is located behind the cover of the unit; Air Conditioner models include digital display on ambient side
- Galvanized sheet-metal cover for rugged factory environments
- Easy-mount flanges for simple installation
- Cutout adapter options for enclosures with GENESIS air conditioners enable users to easily transition to the new unit
- Dust-resistant condenser coil allows the unit to be run filterless in most applications
- Cleanable, reusable aluminum mesh filter protects coils for maximum cooling performance
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Standard Indoor Air Conditioner models also include:
  - Active condensate management
  - Power-off relay for door switch and other system requirements
  - Malfunction switch

SPECIFICATIONS

- Nominal cooling capacity:
  N16 800 BTU/Hr. (234 W)
  N21 2000 BTU/Hr. (586 W)
- Operating temperature range from 50 F/10 C to 125 F/52 C

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint
- Other colors and textures available

NOTES

Visit **nVent.com/HOFFMAN** to download 2D and 3D CAD drawings into the overall design of your electrical system.

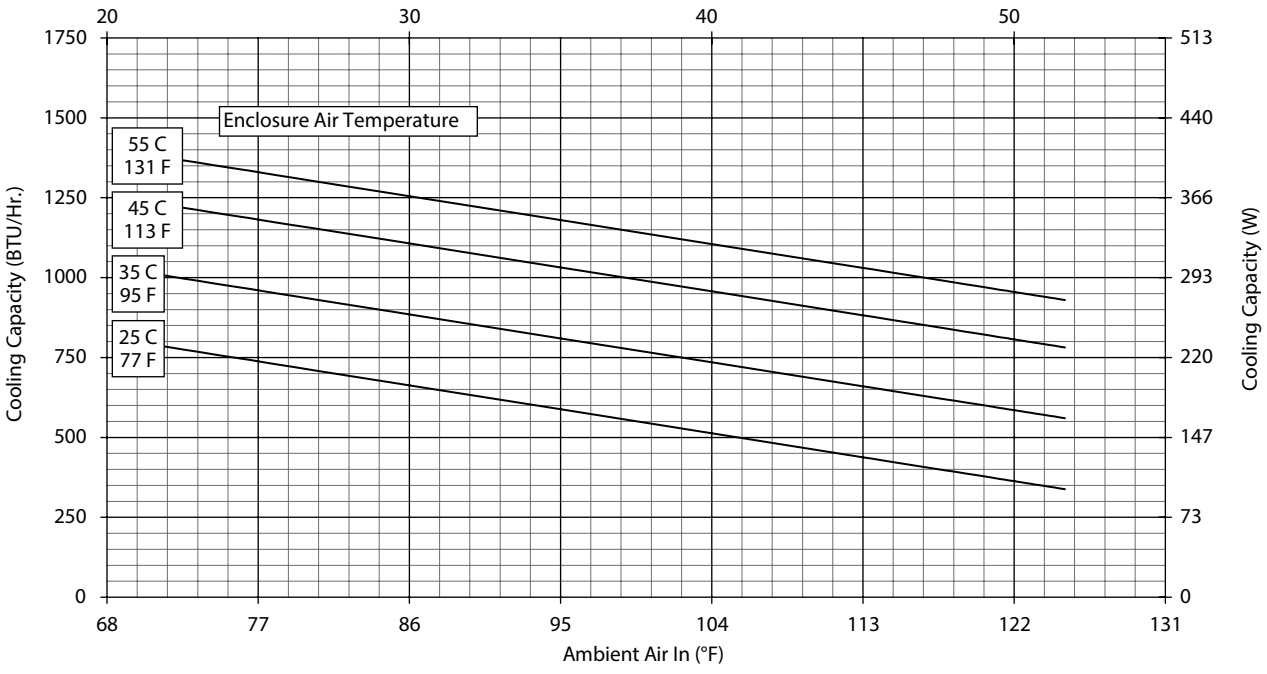
Performance Data **N16 800 BTU/Hr. (234 Watt) Models**

CATALOG NUMBER		
Indoor Model	N160116G050	N160126G050
Indoor Model Stainless Steel Type 4X	N160116G051	N160126G051
Indoor Model with Remote Access Control*	N160116G060	N160126G060
COOLING PERFORMANCE		
Nominal:		
BTU/Hr.	**800/800**	**800/900**
Watts	**235/235**	**235/264**
At 131 F/131 F (55 C/55 C):		
BTU/Hr. (50/60 Hz)	819	920/960
W (50/60 Hz)	240	270/281
At 95 F/95 F (35 C/35 C):		
BTU/Hr. (50 /60 Hz)	948	810/955
W (50/60 Hz)	278	237/280
Refrigerant	R134A	R134A
Refrigerant Charge (ounces/grams)	4/113	3.8/107
Operating Temperature Range:		
Maximum (ºF/ºC)	131/55	125/131/52/55
Minimum (ºF/ºC)	-40/-40	-40/-40
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	25/42	25/42
External loop 50 Hz (CFM / m^3/hr.)	48/82	48/82
Internal loop 60 Hz (CFM / m^3/hr.)	30/51	30/51
External loop 60 Hz (CFM / m^3/hr.)	53/90	53/90
Max. Heater W (Outdoor Models)	150	150
ELECTRICAL DATA		
Rated Voltage	**100/115**	**220/230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	360/403	330/345
Max. Nominal Current (A at 50/60 Hz)	3.6/3.5	1.5/1.5
Starting Current (A)	8.0/9.2	3.3/3.1
Agency Approvals	cUL Listed CE EAC Others available upon request	
Power Input Description	Terminal Block	Terminal Block
ENCLOSURE PROTECTION		
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional	
CONTROLLER		
Description	Basic mechanical thermostat	
Thermostat Location	Enclosure behind front panel	
Factory Thermostat Setting (ºF/ºC)	80/27	
SOUND LEVEL		
At 1.5 Meters	63 dB(A)	
UNIT CONSTRUCTION		
Material	Galvanized sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	16.51/419	
Width (in./mm)	7.52/191	
Depth (in./mm)	6.30/160	
Weight (lb./kg)	27/12	

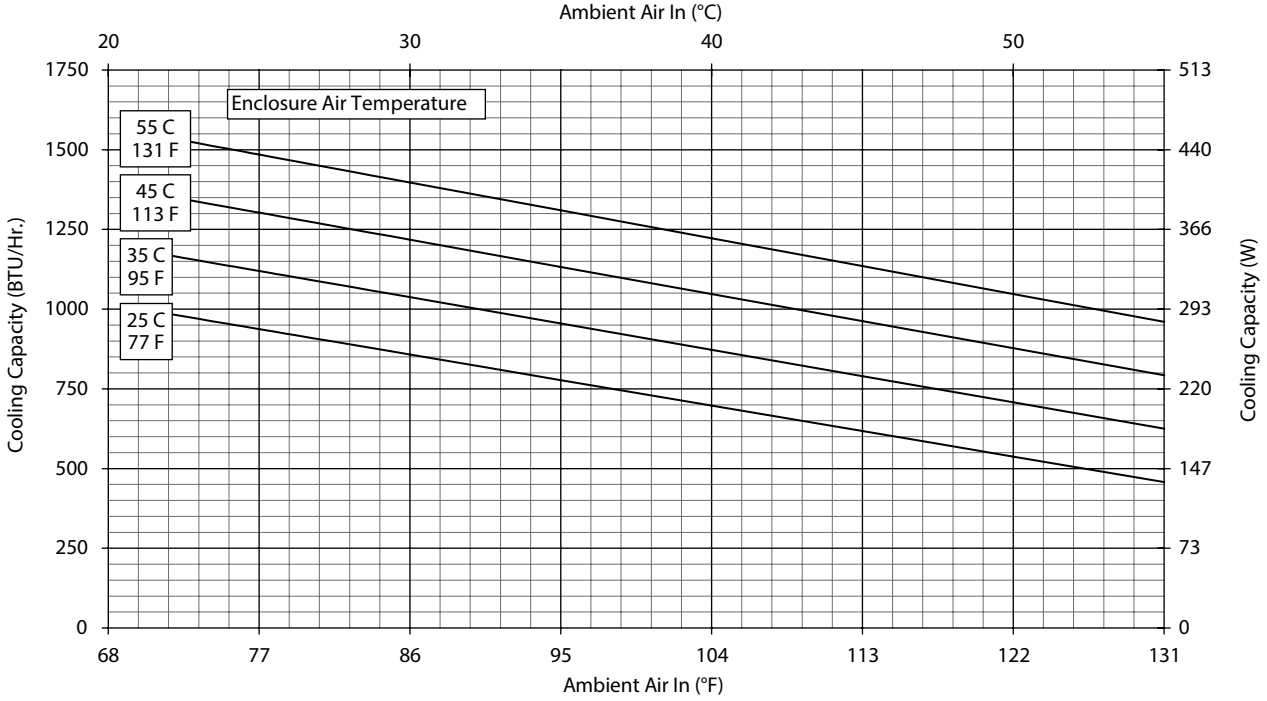
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

Performance Curves for N16 Models 800 BTU/Hr. (234 Watt)

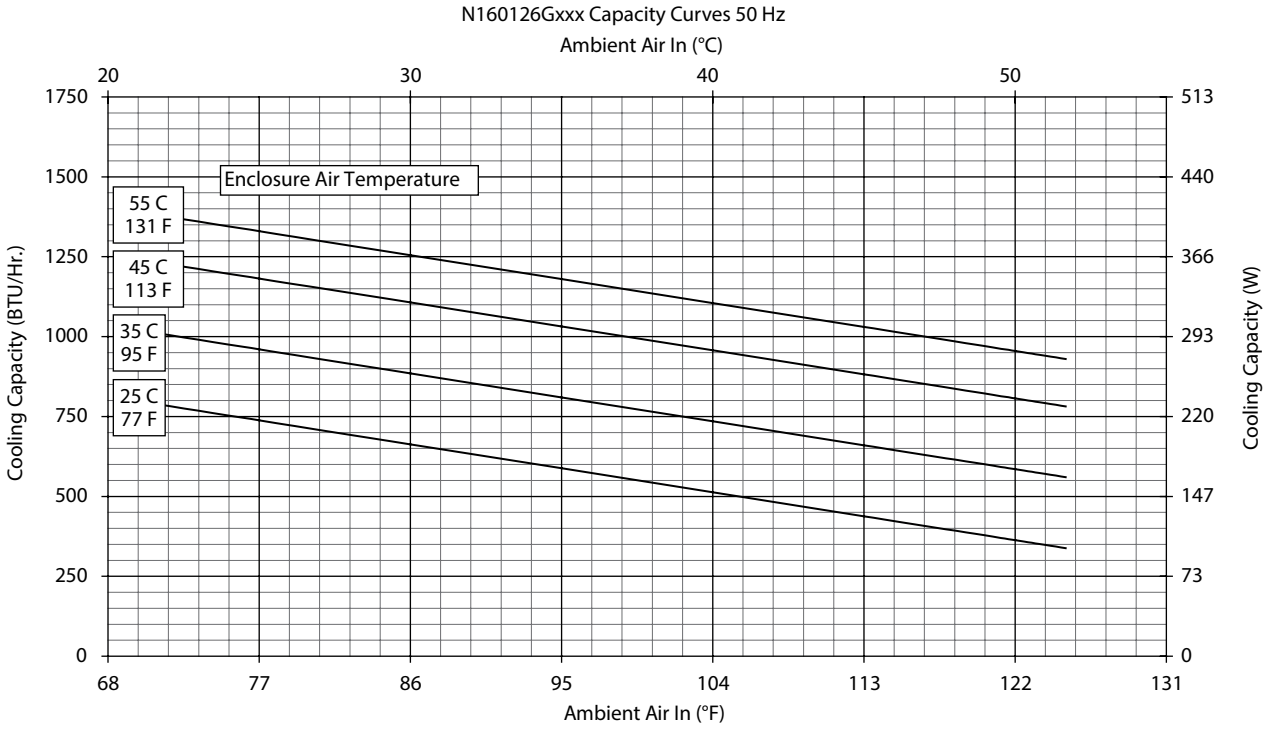
N160116Gxxx Capacity Curves 50 Hz

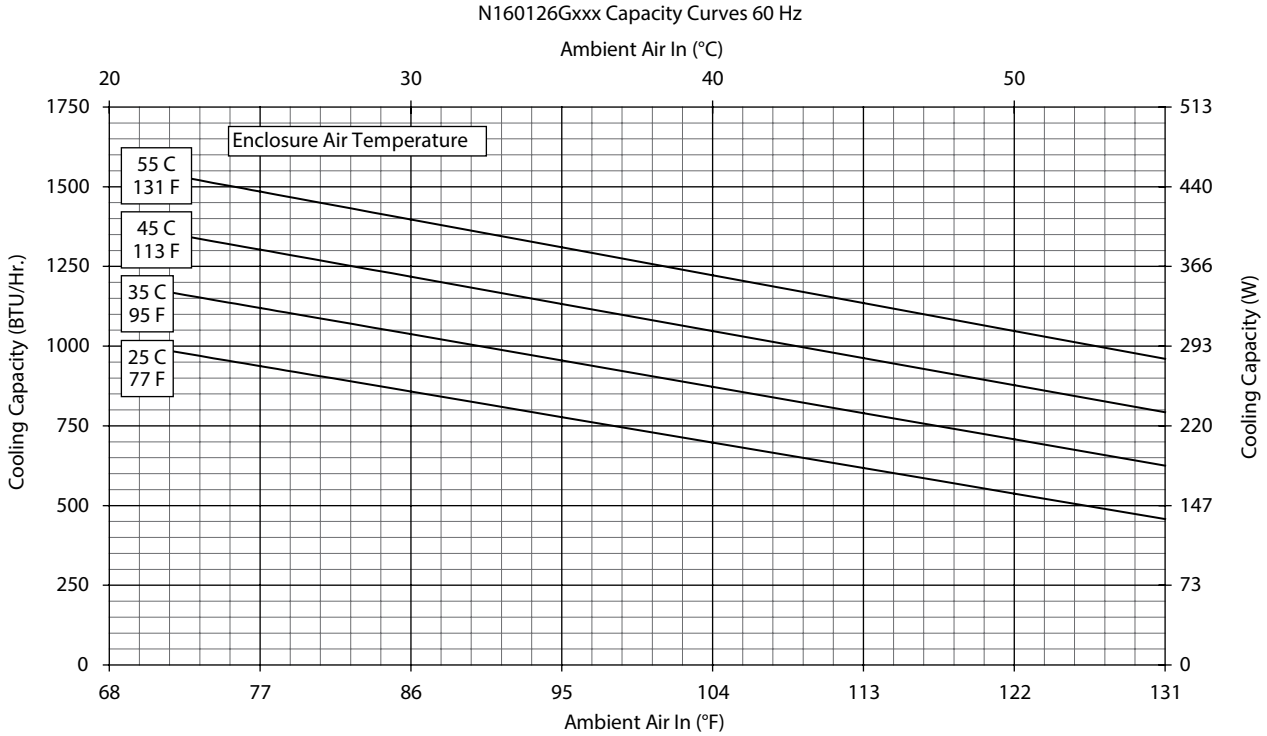


N160116Gxxx Capacity Curves 60 Hz

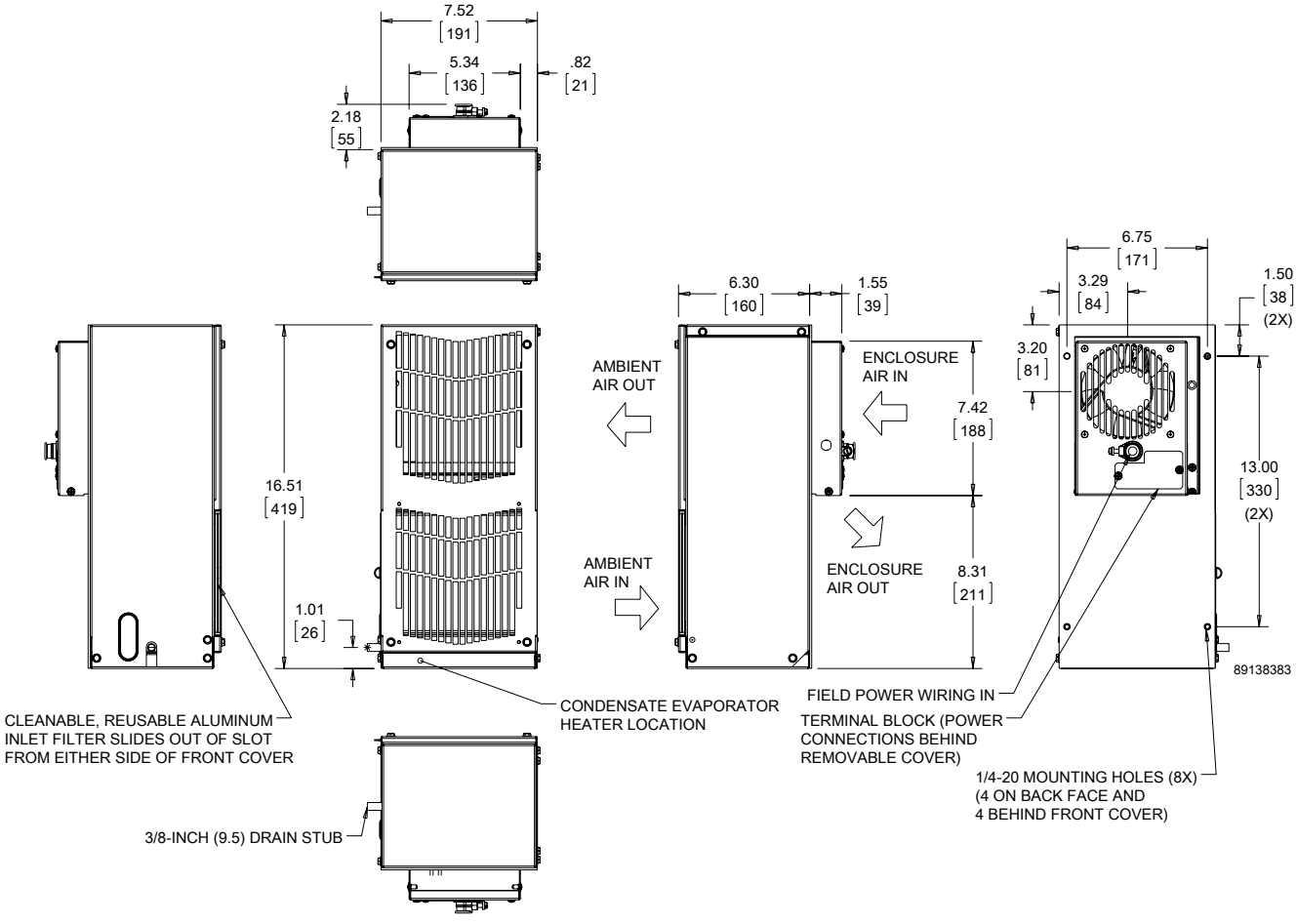


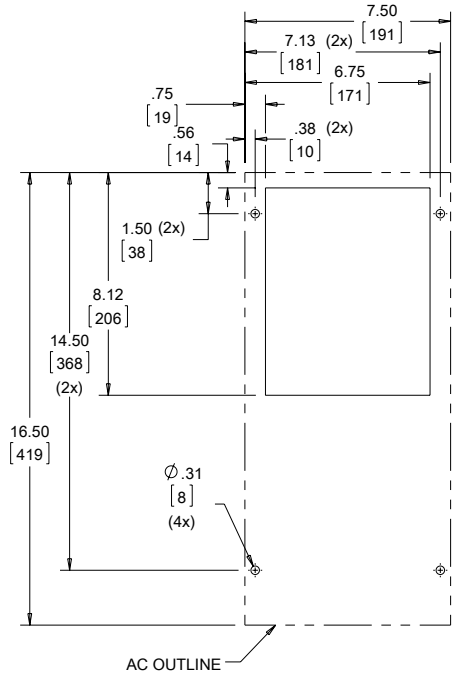
Performance Curves for N16 Models 800 BTU/Hr. (234 Watt)





N16 800 BTU/Hr. (234 Watt)





Cutout Dimensions
(Externally Mounted)

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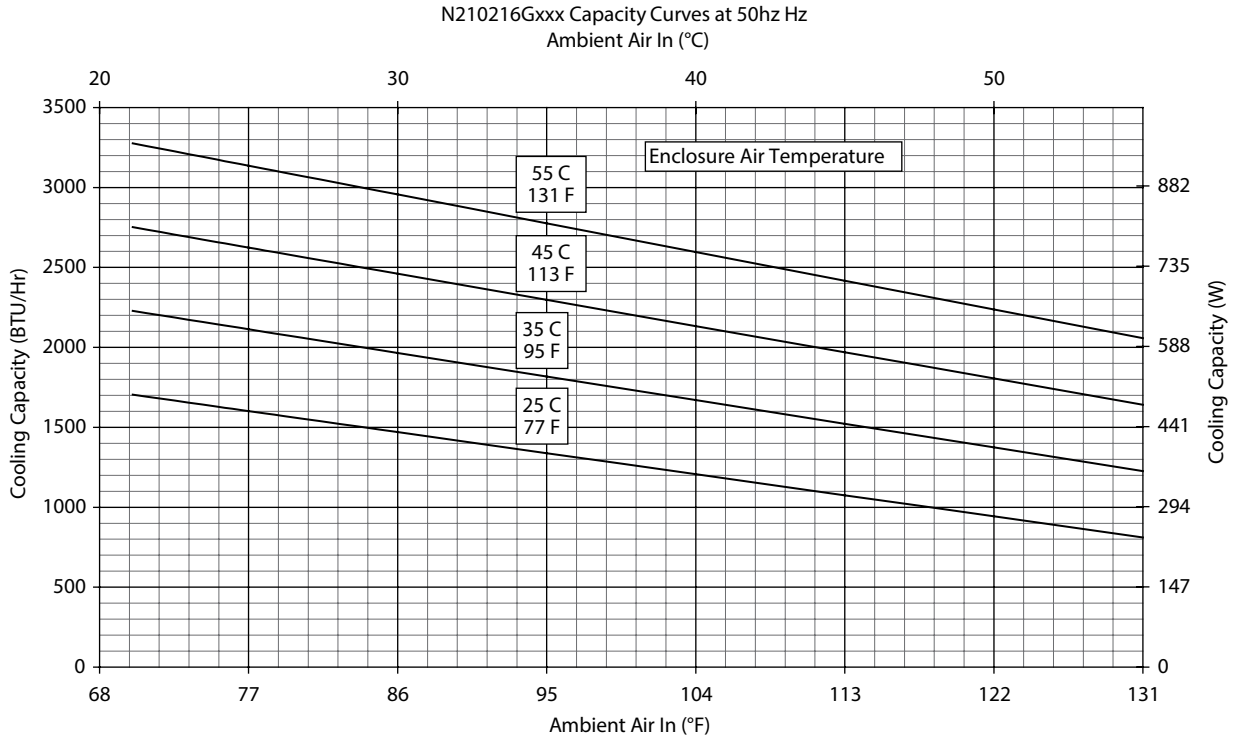
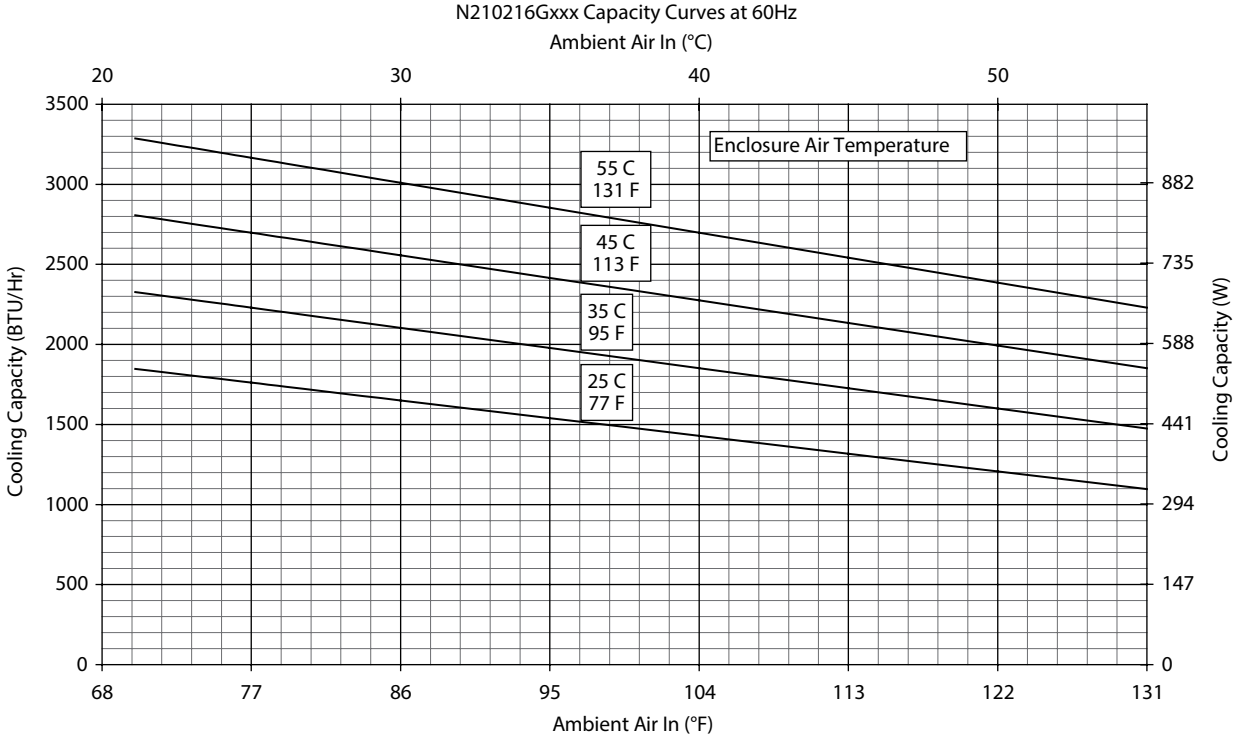
Performance Data **N21 2000 BTU/Hr. (586 Watt) Models**

CATALOG NUMBER			
Indoor Model	N210216G050	N210226G050	N210246G050
Indoor Model Stainless Steel Type 4X	N210216G051	N210226G051	N210246G051
Indoor Model with Remote Access Control*	N210216G060	N210226G060	N210246G060
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**1800/2000**	**1800/2000**	**1800/2000**
Watts	**528/586**	**528/586**	**528/586**
At 131 F/131 F (55 C/55 C):			
BTU/Hr. (50/60 Hz)	2000/2175	2000/2175	2000/2175
W (50/60 Hz)	586/637	586/637	586/637
At 95 F/95 F (35 C/35 C):			
BTU/Hr. (50/60 Hz)	1950/2200	1950/2200	1950/2200
W (50/60 Hz)	571/645	571/645	571/645
Refrigerant	R134A	R134A	R134A
Refrigerant Charge (ounces/grams)	6.5/184	6.5/184	6.5/184
Operating Temperature Range:			
Maximum (°F/°C)	131/55	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / m^3/hr.)	77/131	77/131	77/131
External loop 50 Hz (CFM / m^3/hr.)	150/255	150/255	150/255
Internal loop 60 Hz (CFM / m^3/hr.)	91/155	91/155	91/155
External loop 60 Hz (CFM / m^3/hr.)	165/280	165/280	165/280
Max. Heater W (Outdoor Models)	500	500	500
ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	700/805	805	874
Max. Nominal Current (A at 50/60 Hz)	7.0/7.0	3.5/3.5	1.9
Starting Current (A)	19	7.6	7.2
Agency Approvals	cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC
Power Input Description	Terminal Block	Terminal Block	Terminal Block
ENCLOSURE PROTECTION			
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional		
CONTROLLER			
Description	Basic mechanical thermostat		
Thermostat Location	Enclosure side on all base models		
Factory Thermostat Setting (°F/°C)	80/27		
SOUND LEVEL			
At 1.5 Meters	66 dB(A)		
UNIT CONSTRUCTION			
Material	Galvanized sheet metal standard Stainless steel optional		
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available		
UNIT DIMENSIONS			
Height (in./mm)	20.92/531	20.92/531	25.17/614
Width (in./mm)	10.00/254	10.00/254	10.00/254
Depth (in./mm)	9.90/251	9.90/251	9.90/251
Weight (lb./kg)	56/25	56/25	66/30

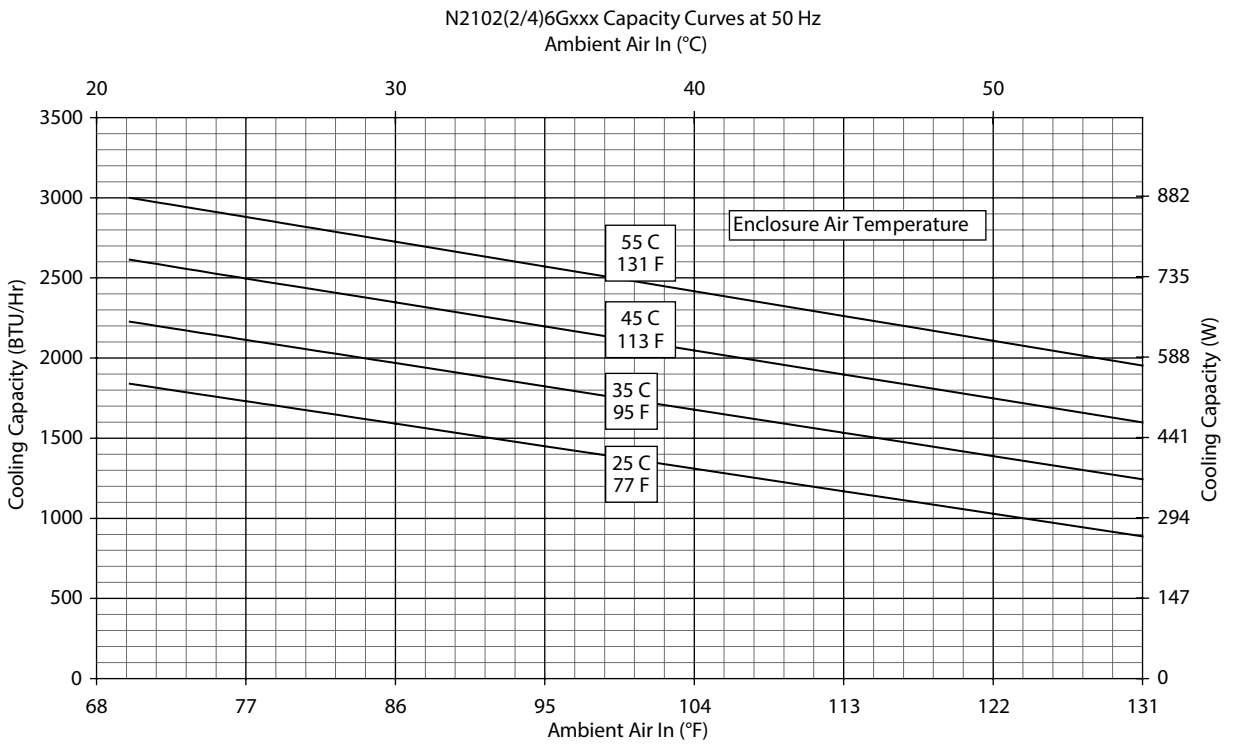
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

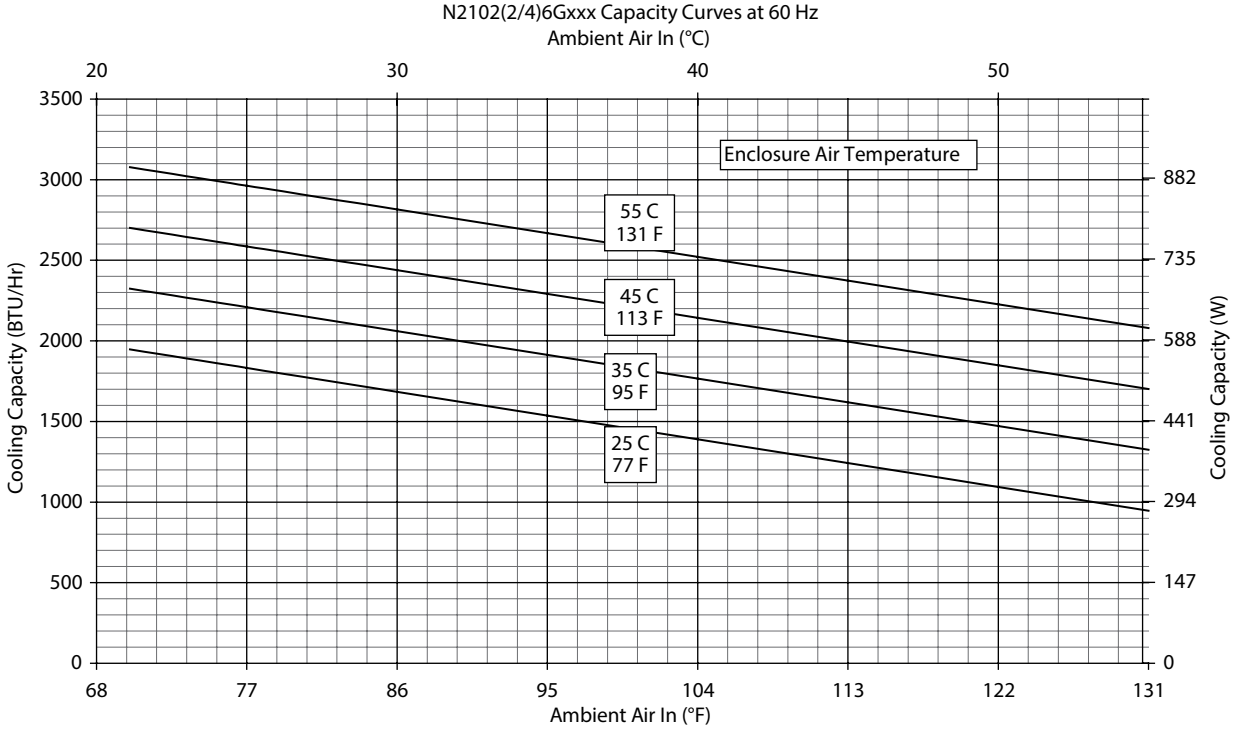
Performance Curves for N21 Models 2000 BTU/Hr. (586 Watt)



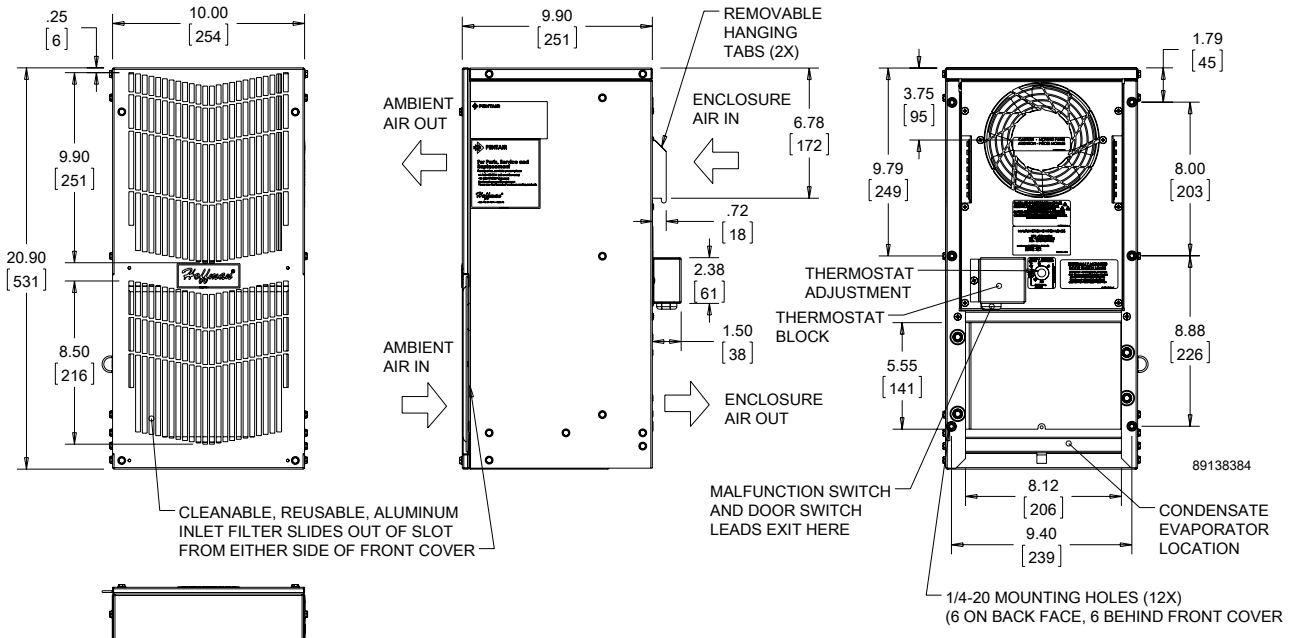


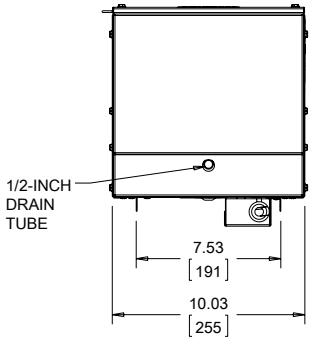
Performance Curves for N21 Models 2000 BTU/Hr. (586 Watt)

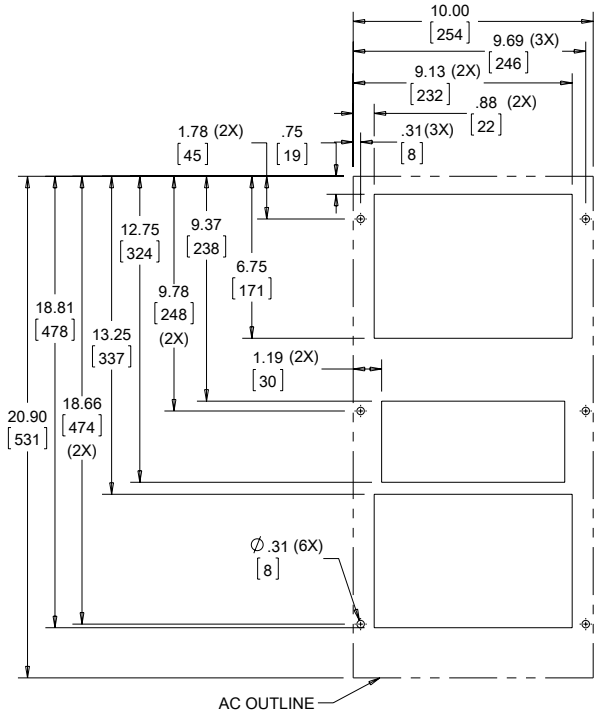




N21 115/230V Models 2000 BTU/Hr. (586 Watt)







Cutout Dimensions (Externally Mounted)

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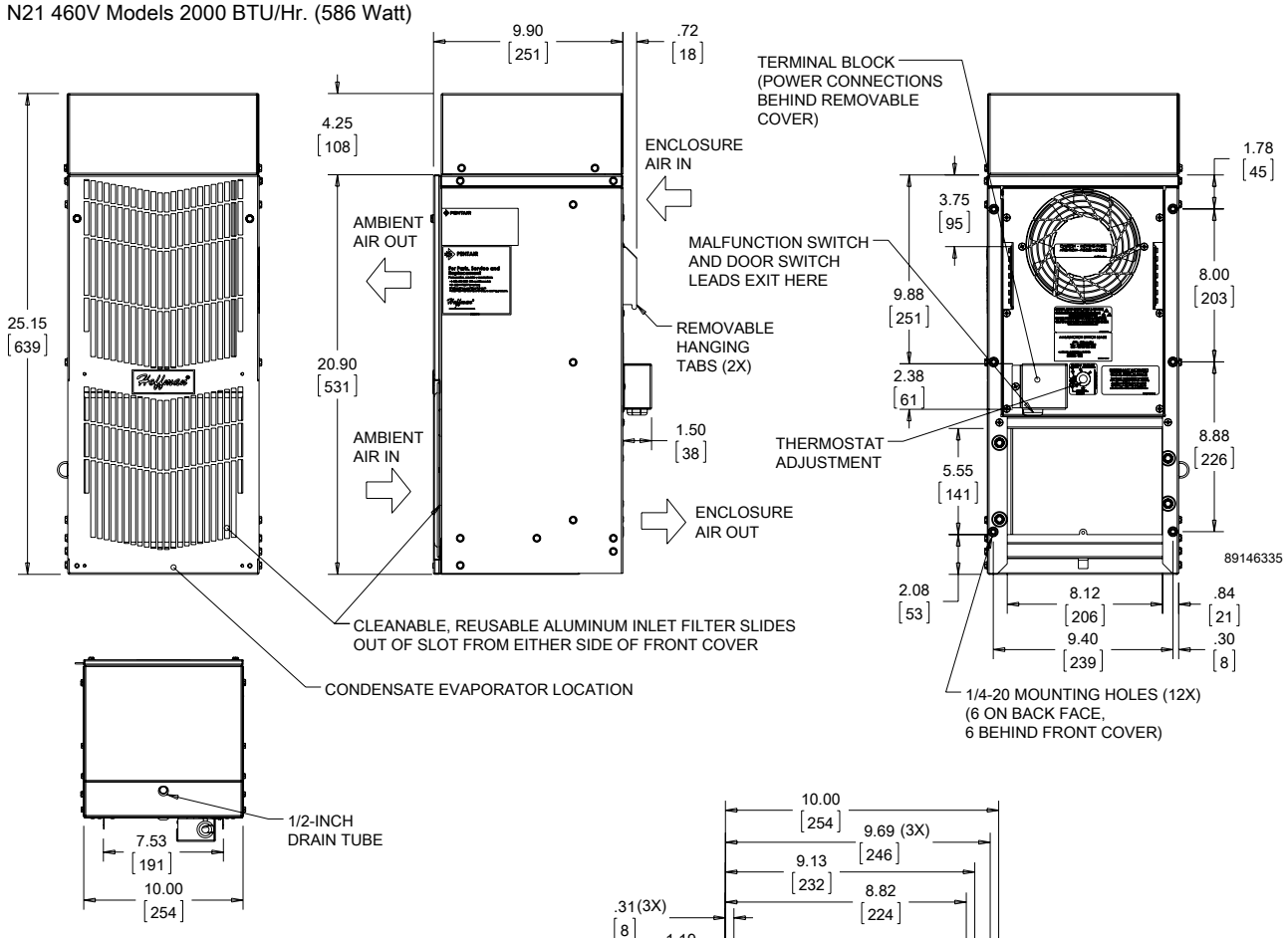
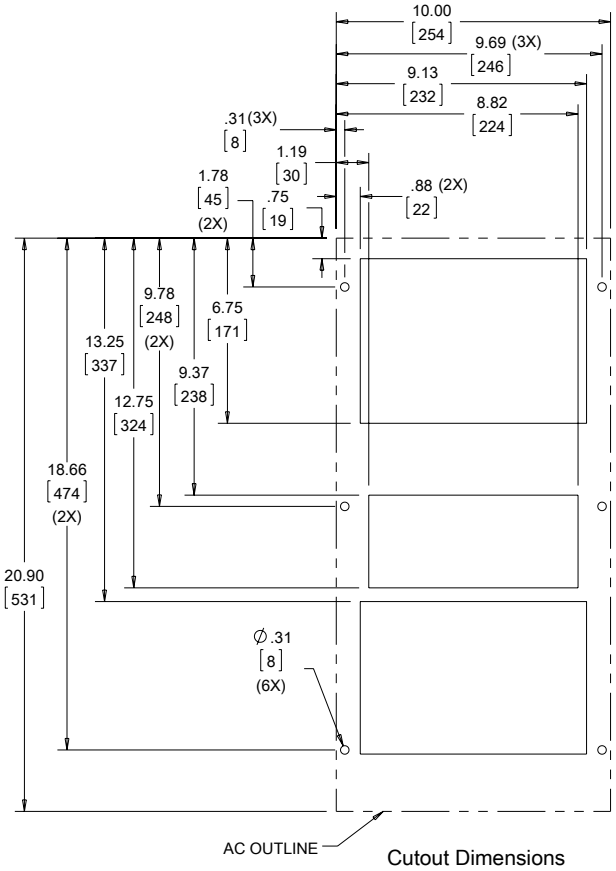
N21 460V Models 2000 BTU/Hr. (586 Watt)





Cutout Dimensions

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SPECTRACOOL NARROW INDOOR/OUTDOOR

N43	N36	N28
11000 BTU/Hr.	6000/8000 BTU/Hr.	4000 BTU/Hr.
3223 Watt	1758/2344 Watt	1172 Watt

INDUSTRY STANDARDS

UL/cUL Listed; Type 12, 3R, 4; 4X optional; File No. SA6453

CE
IP 56 Internal Loop
IP 34 on External Loop
Telcordia GR-487 capable (Outdoor)

APPLICATION

- Industrial automation
- Waste water treatment systems
- Package handling equipment
- Security and defense systems

FEATURES

- Narrow design accommodates 12-in. (300-mm) deep cabinets
- Energy efficient reciprocating compressor on N28 models
- Energy efficient rotary compressor on N36 and N43 models
- R407c and R134a earth-friendly refrigerants
- Models for 115, 230 and 400/460 3-phase VAC power input
- UL Listed to save customers time and money with agency approvals
- Outdoor model operating temperature range from -40 F/-40 C to 131 F/55 C (125 F/52 C on N28 Series)
- Attractive industrial design with minimal use of visible fasteners
- Reliable mechanical thermostat on enclosure side of the unit; indoor Air Conditioner models include digital display on ambient side
- Galvanized sheet-metal cover for rugged factory and outdoor environments
- Easy-mount flanges for simple installation
- Cut-out adapter options for enclosures with GENESIS air conditioners enable users to easily transition to the new unit
- Dust-resistant condenser coil allows the unit to be run filterless in most applications
- Cleanable, reusable aluminum mesh filter protects coils for maximum cooling performance
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Standard Indoor Air Conditioner models also include:
  - Active condensate management with heater strip
  - Power-off relay for door switch and other system requirements
  - Malfunction switch
- Standard Outdoor Air Conditioner models also include:
  - Telcordia GR-487 capable
  - Corrosion-resistant components
  - Malfunction switch
  - Compressor heater
  - Head pressure control
  - 1300 W enclosure heater

SPECIFICATIONS

- Nominal cooling capacity:
  N28 4000 BTU/Hr. (1172 W)
  N36 6000 & 8000 BTU/Hr. (1758 and 2344 W)
  N43 11000 BTU/Hr. (3223 W)
- Outdoor model operating temperature range from -40 F/-40 C to 131 F/55 C (125 F/52 C on N28 Series)

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint
- Other colors and textures available

NOTES

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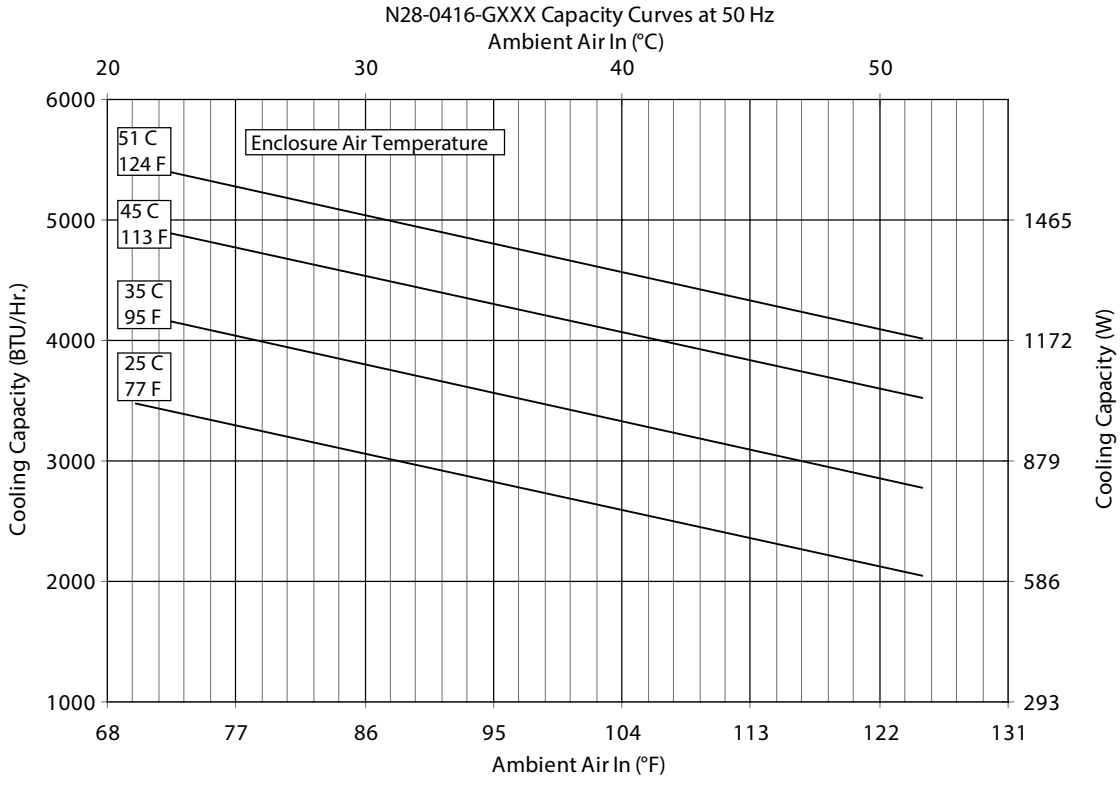
EtherNet/IP ODVA PI PROFIBUS • PROFINET

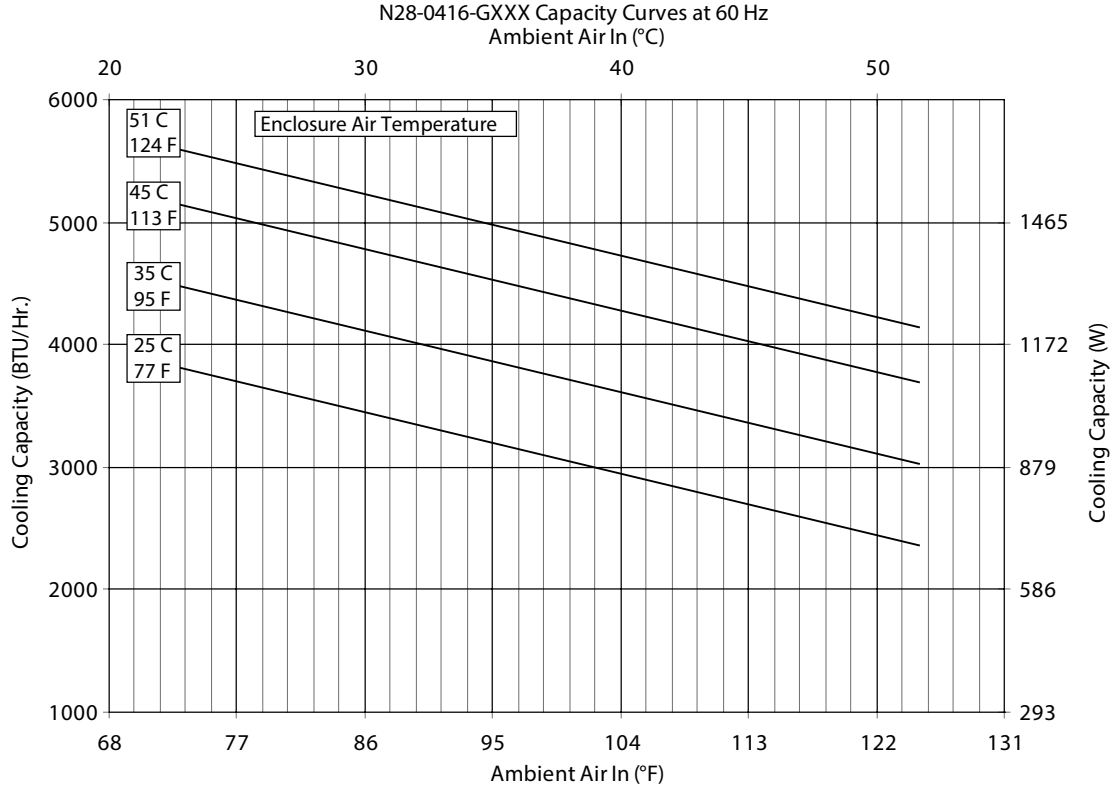
Performance Data **N28 4000 BTU/Hr. (1172 Watt)**

CATALOG NUMBER			
Indoor Model	N280416G050	N280426G050	N280446G050
Indoor Model Stainless Steel Type 4X	N280416G051	N280426G051	N280446G051
Indoor Model with Remote Access Control*	N280416G060	N280426G060	N280446G060
Outdoor Model without Heat Pkg.	N280416G100	N280426G100	N280446G100
Outdoor Model without Heat Pkg. Stainless Steel Type 4X	N280416G102	N280426G102	N280446G102
Outdoor Model with Heat Pkg.	N280416G150	N280426G150	—
Outdoor Model with Heat Pkg. Stainless Steel Type 4X	N280416G151	N280426G151	—
COOLING PERFORMANCE			
Nominal:			
BTUs/Hr.	**3800 / 4000**	**3800 / 4000**	**3800 / 4000**
Watts	**1114 / 1172**	**1114 / 1172**	**1114 / 1172**
At 125 F / 125 F (50 C / 50 C):			
BTU/Hr. (50 / 60 Hz)	3940 / 4104	4269 / 4703	4269 / 4703
Watts (50 / 60 Hz)	1150 / 1000	1250 / 1378	1250 / 1378
At 95 F / 95 F (35 C / 35 C):			
BTU/Hr. (50 /60 Hz)	3754 / 4011	3700 / 4291	3700 / 4291
Watts (50 / 60 Hz)	1100 / 1175	1086 / 1257	1086 / 1257
Refrigerant	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	10 / 283	11 / 312	11 / 312
Operating Temperature Range:			
Maximum (°F / °C)	125 / 52	125 / 52	125 / 52
Minimum (°F / °C)	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / M^3/Hr)	138 / 234	138 / 234	138 / 234
External loop 50 Hz (CFM / M^3/Hr)	268 / 455	268 / 455	268 / 455
Internal loop 60 Hz (CFM / M^3/Hr)	143 / 243	143 / 243	143 / 243
External loop 60 Hz (CFM / M^3/Hr)	288 / 489	288 / 489	288 / 489
Max. Heater W (Outdoor Models)	1300	1300	N/A
ELECTRICAL DATA			
Rated Voltage	**110 / 115**	**230**	**460V 1PH**
Frequency (Hz)	50 / 60	50 / 60	50 / 60
Operating Range	+/-10%	+/-10%	+/-10%
Max. Power Consumption (Watts at 50 / 60 Hz)	971 / 1116	975 / 1104	1104
Max. Nominal Current (Amps at 50 / 60 Hz)	10.6 / 10.0	4.9 / 5.0	2.5
Starting Current (Amps)	40	24.5	12.5
Agency Approvals		cUL Listed CE Others available upon request	
Power Input Description		Terminal Block	
ENCLOSURE PROTECTION			
UL Type		Type 12, 3R, 4 Standard Type 4X Stainless Steel Optional	
CONTROLLER			
Description		Basic Mechanical Thermostat	
Thermostat Location		Enclosure Side	
Factory Thermostat Setting (°F / °C)		80 / 27	
SOUND LEVEL			
At 1.5 Meters	64.4 dBA	65.5 dBA	65.5 dBA
UNIT CONSTRUCTION			
Material		Galvanized sheet metal standard Stainless steel optional	
Finish		RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available	
ACCESSORIES			
EASYSWAP Adaptor Plenum (GENESIS M33)		Enables SPECTRACOOL to be mounted to a GENESIS M33 air conditioner cutout Catalog Number PLM33N28	
UNIT DIMENSIONS			
Height (in / mm)		28 / 711.2	
Width (in / mm)		11.50 / 292.1	
Depth (in / mm)		14.00 / 355.6	
Weight (lb / kg)	84 / 38	84 / 38	92 / 41.7

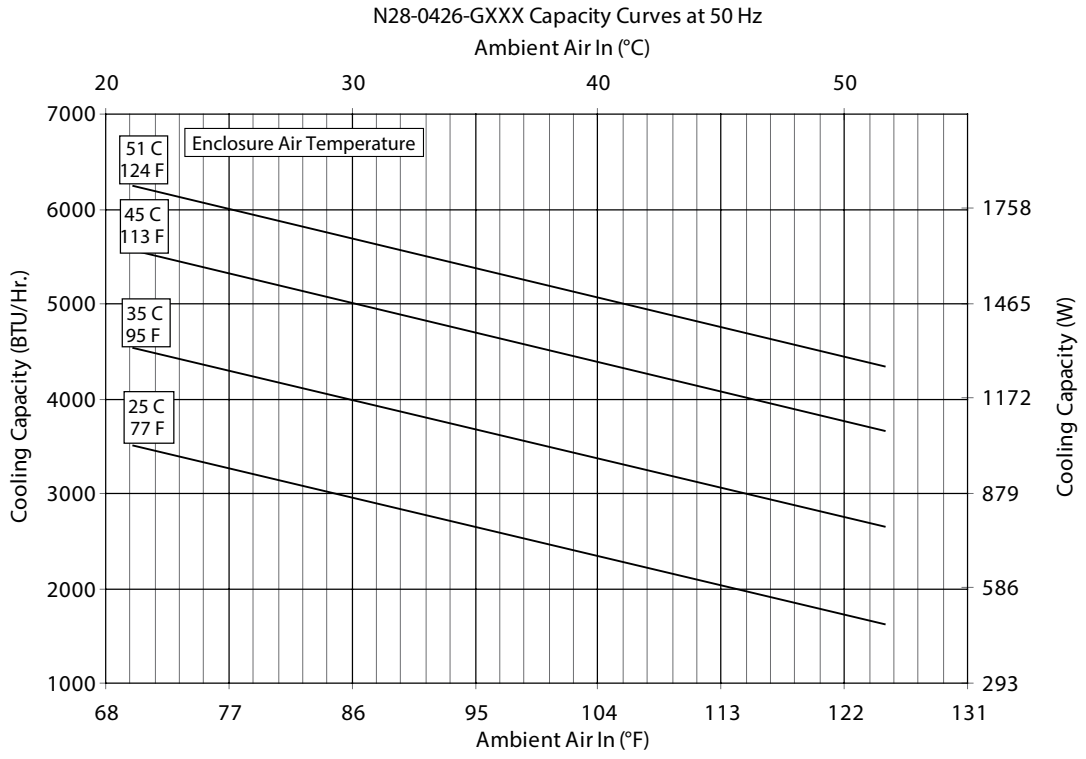
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

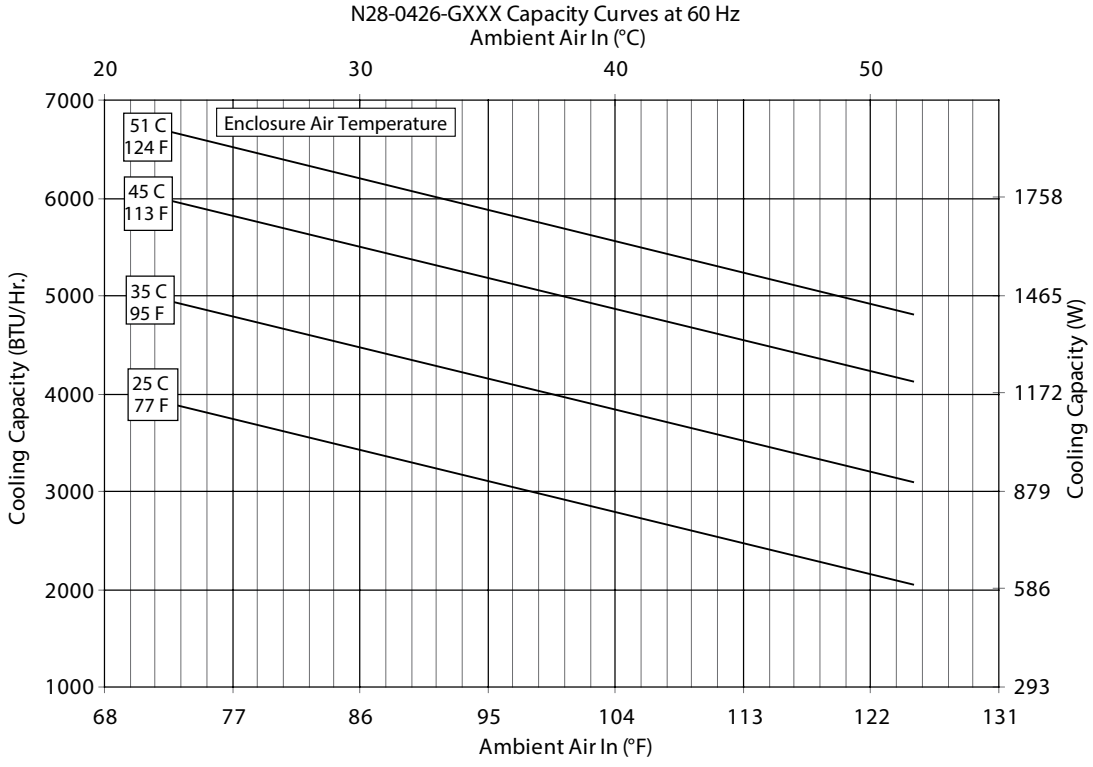
Performance Curves for N28 Models 4000 BTU/Hr. (1172 Watt)



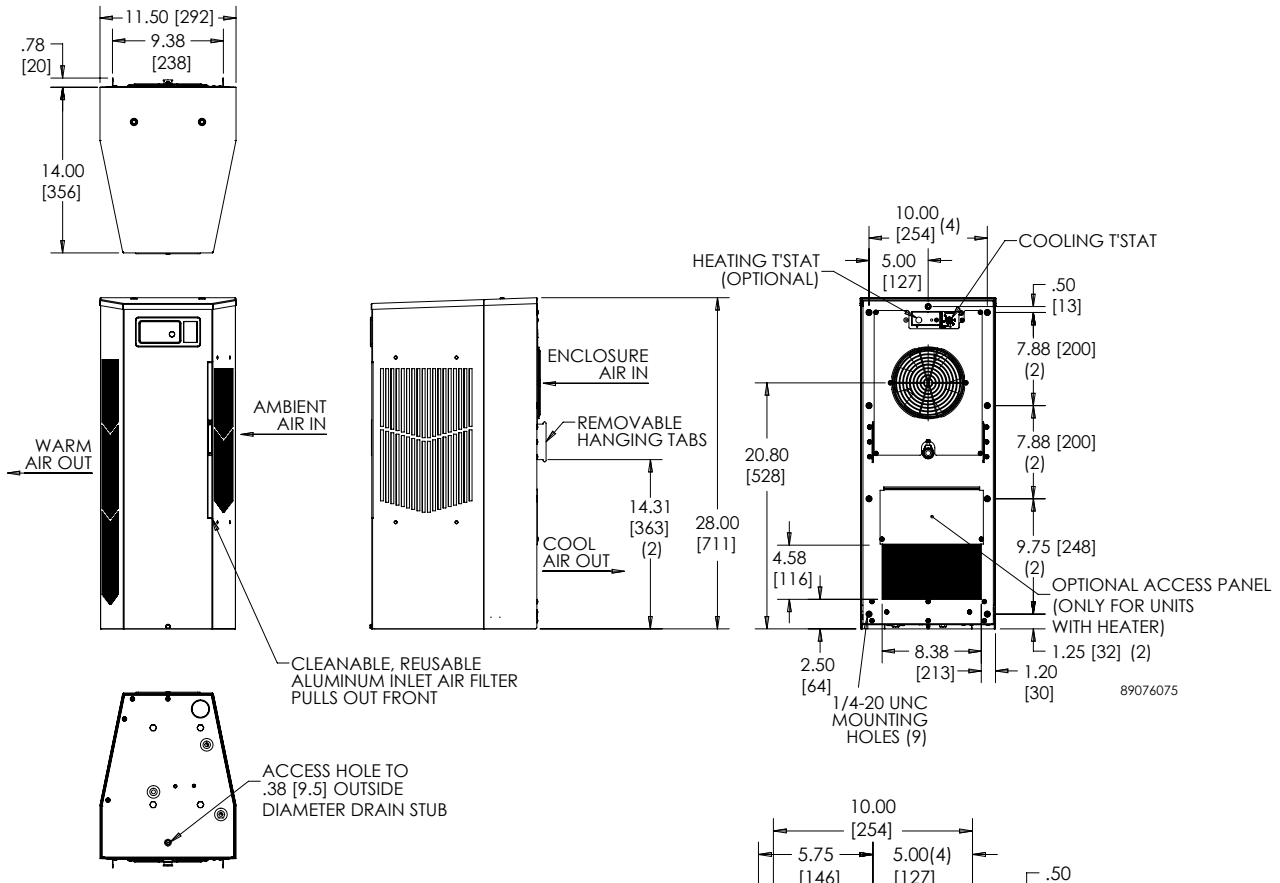


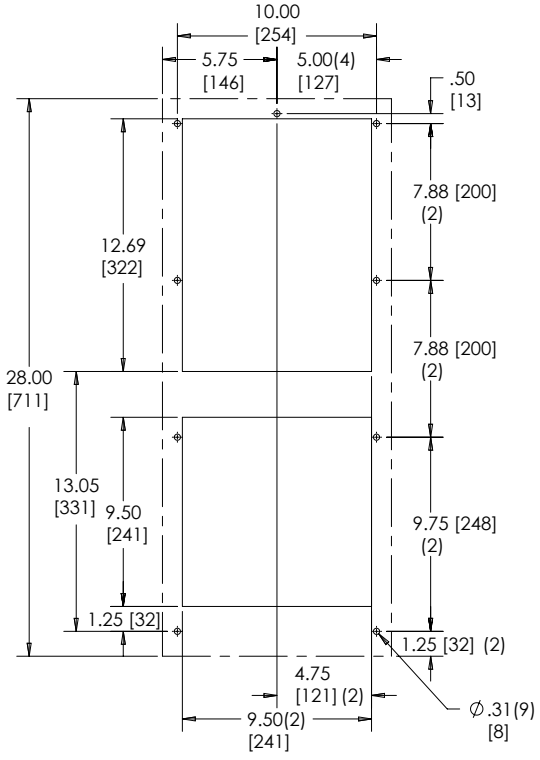
Performance Curves for N28 Models 4000 BTU/Hr. (1172 Watt)





N28 Models 4000 BTU/Hr. (1172 Watt)





Cutout Dimensions

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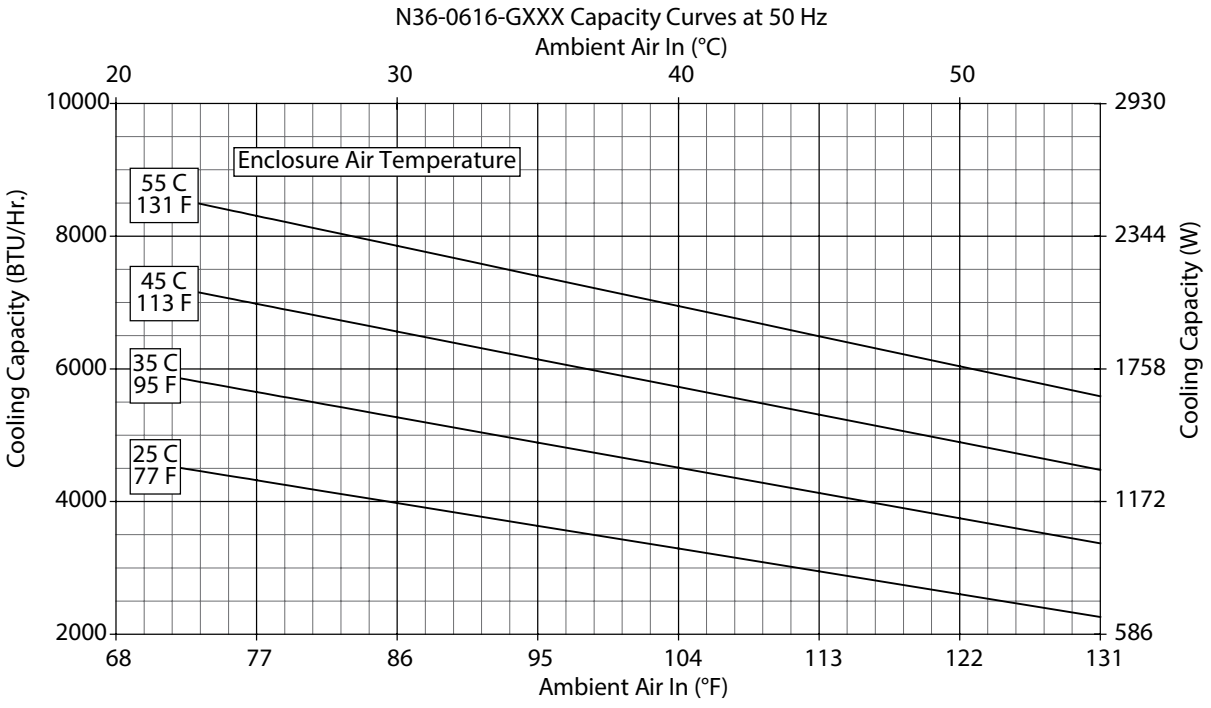
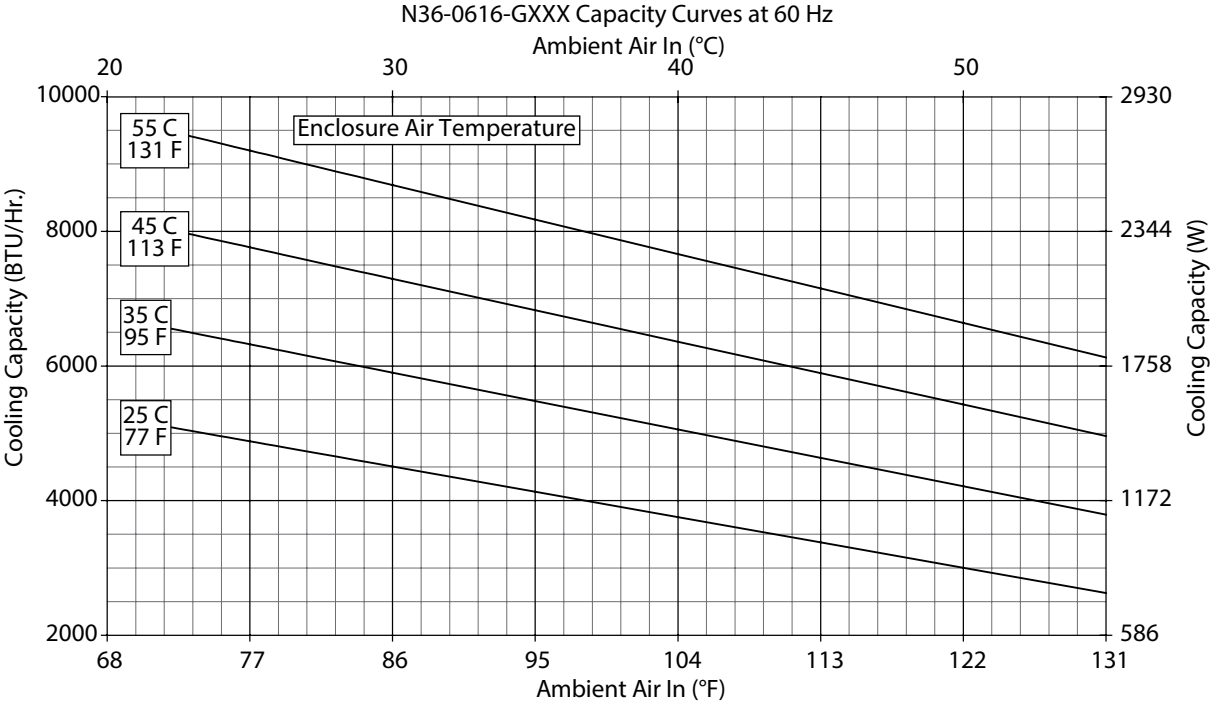
Performance Data **N36 6000/8000 BTU/Hr. (1758/2344 Watt)**

CATALOG NUMBER						
Indoor Model	N360616G050	N360626G050	N360646G050	N360816G050	N360826G050	N360846G050
Indoor Model Stainless Steel Type 4X	N360616G051	N360626G051	N360646G051	N360816G051	N360826G051	N360846G051
Indoor Model with Remote Access Control*	N360616G060	N360626G060	N360646G060	N360816G060	N360826G060	N360846G060
Outdoor Model without Heat Pkg.	N360616G100	N360626G100	N360646G100	N360816G100	N360826G100	N360846G100
Outdoor Model without Heat Pkg. Stainless Steel Type 4X	N360616G102	N360626G102	N360646G102	N360816G102	N360826G102	N360846G102
Outdoor Model with Heat Pkg.	N360616G150	N360626G150	N360646G150	N360816G150	N360826G150	N360846G150
Outdoor Model with Heat Pkg. Stainless Steel Type 4X	N360616G151	N360626G151	N360646G151	N360816G151	N360826G151	N360846G151
COOLING PERFORMANCE						
Nominal:						
BTU/Hr.	**5400 / 6000**	**5400 / 6000**	**5400 / 6000**	**8250 / 8500**	**8250 / 8500**	**8250 / 8500**
Watts	**1581 / 1757**	**1581 / 1757**	**1581 / 1757**	**2416 / 2489**	**2313 / 2635**	**2284 / 2401**
At 131 F / 131 F (55 C / 55 C):						
BTU/Hr. (50 / 60 Hz)	5585 / 6180	5469 / 5965	5300 / 6089	8213 / 8453	7874 / 8063	7777 / 8166
Watts (50 / 60 Hz)	1637 / 1811	1603 / 1748	1553 / 1785	2405 / 2475	2306 / 2361	2277 / 2391
At 95 F / 95 F (35 C / 35 C):						
BTU/Hr. (50 /60 Hz)	4909 / 5485	5159 / 5621	5572 / 6026	7028 / 7626	6660 / 7411	6877 / 7525
Watts (50 / 60 Hz)	1439 / 1607	1512 / 1647	1633 / 1766	2058 / 2233	1950 / 2170	2014 / 2203
Refrigerant	R134a	R134a	R134a	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	20 / 567	22 / 624	16 / 454	36 / 1021	36 / 1021	36 / 1021
Operating Temperature Range:						
Maximum (°F / °C)	131 / 55	131 / 55	131 / 55	131 / 55	131 / 55	131 / 55
Minimum (°F / °C)	-40 / -40	-40 / -40	-40 / -40	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:						
Internal loop 50 Hz (CFM / M^3/Hr.)	251 / 426	250 / 425	250 / 425	250 / 425	245 / 416	243 / 413
External loop 50 Hz (CFM / M^3/Hr.)	284 / 483	338 / 574	338 / 574	313 / 532	347 / 589	365 / 620
Internal loop 60 Hz (CFM / M^3/Hr.)	261 / 443	261 / 443	261 / 443	263 / 447	258 / 439	254 / 432
External loop 60 Hz (CFM / M^3/Hr.)	311 / 528	356 / 605	356 / 605	338 / 574	382 / 648	394 / 669
Max. Heater W (Outdoor Models)	1300	1300	1300	1300	1300	1300
ELECTRICAL DATA						
Rated Voltage	**115**	**230**	**400 / 460 3~**	**115**	**230**	**400 / 460 3~**
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
Operating Range	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%
Max. Power Consumption (Watts at 50 / 60 Hz)	911 / 1108	908 / 1073	697 / 895	1334 / 1530	1265 / 1403	572 / 628
Max. Nominal Current (Amps at 50 / 60 Hz)	9.1 / 10.1	4.5 / 4.7	1.59 / 1.69	11.6 / 13.3	5.5/6.1	2.9/3.0
Starting Current (Amps)	39.2	23.0	8.1	48.3	27.0	16.0
Agency Approvals	cUL Listed CE Others available upon request					
Power Input Description	Terminal Block					
ENCLOSURE PROTECTION						
UL Type	Type 12, 3R, 4 Standard Type 4X Stainless Steel Optional					
CONTROLLER						
Description	Basic Mechanical Thermostat					
Thermostat Location	Enclosure Side					
Factory Thermostat Setting (°F / °C)	80 / 27					
SOUND LEVEL						
At 1.5 Meters	66.9 dBA	66.7 dBA	68.2 dBA	66.0 dBA	66.0 dBA	66.0 dBA
UNIT CONSTRUCTION						
Material	Galvanized sheet metal standard Stainless steel optional					
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available					
ACCESSORIES						
EASYSWAP Adaptor Plenum (GENESIS M36)	Enables SPECTRACOOL to be mounted to a GENESIS M36 air conditioner cutout Catalog Number PLM36N36					
UNIT DIMENSIONS						
Height (in. / mm)	36.00 / 914.4					
Width (in. / mm)	11.50 / 292.1					
Depth (in. / mm)	14.00 / 355.6					
Weight (lb. / kg)	100 / 45	100 / 45	104 / 47	106 / 48	106 / 48	114 / 52

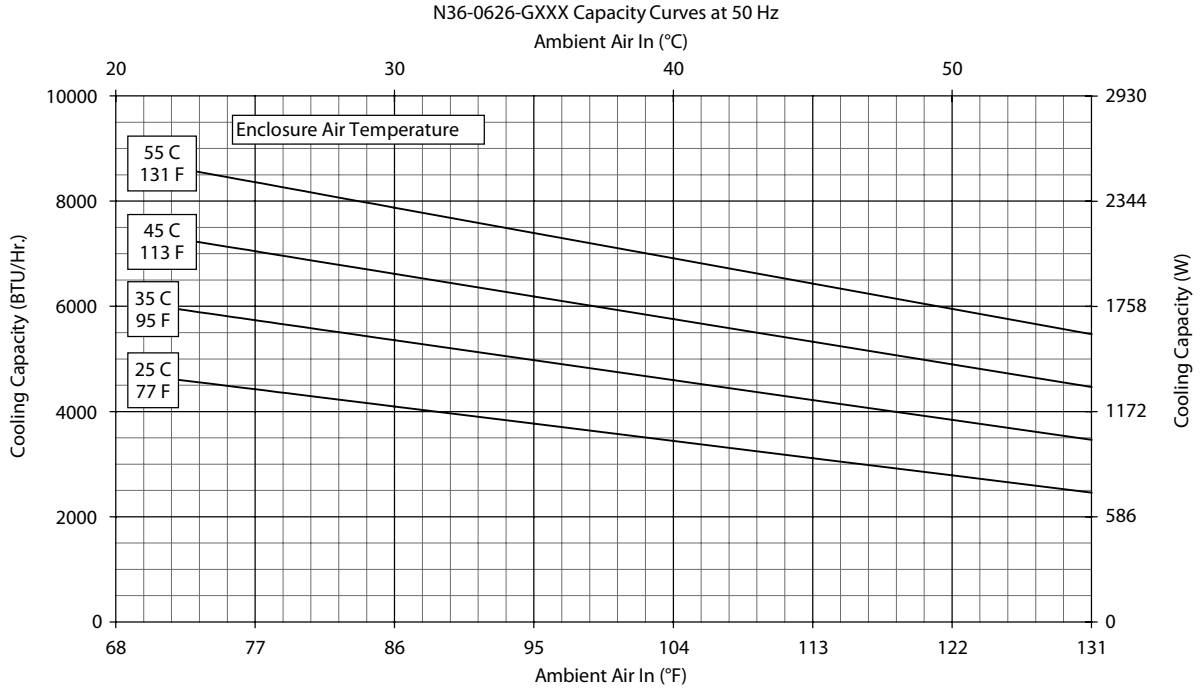
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

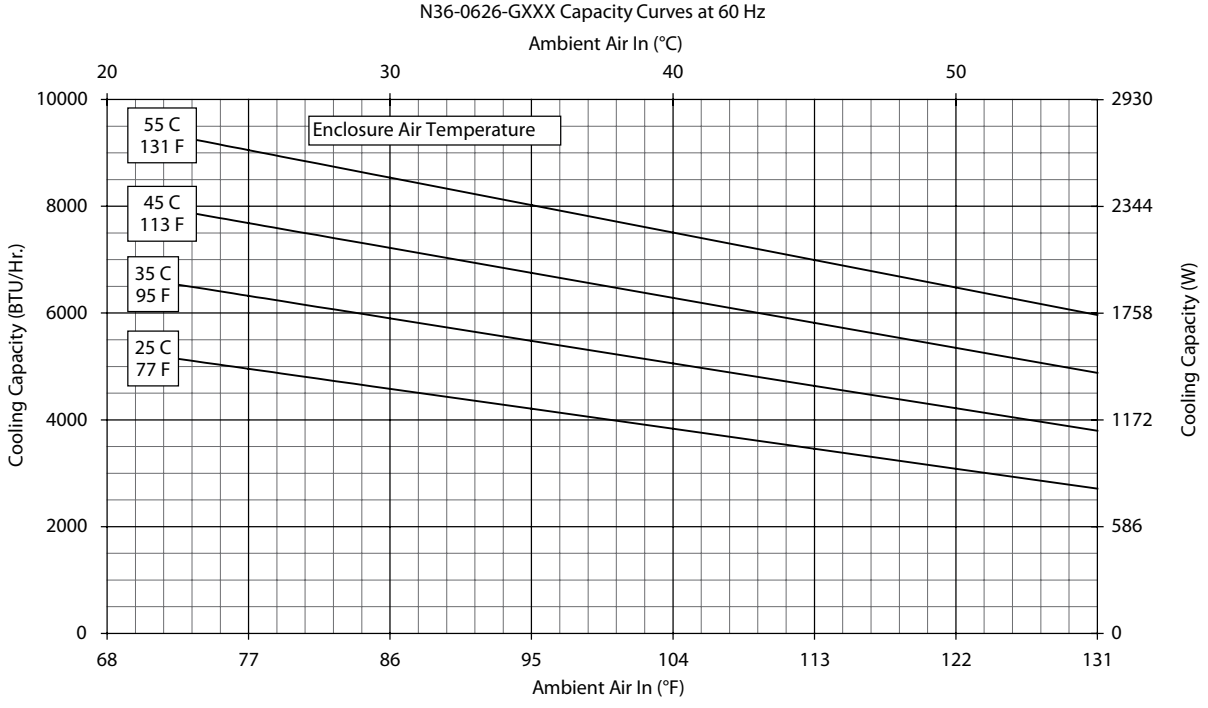
Performance Curves for N36 Models 6000 BTU/Hr. (1758 Watt)



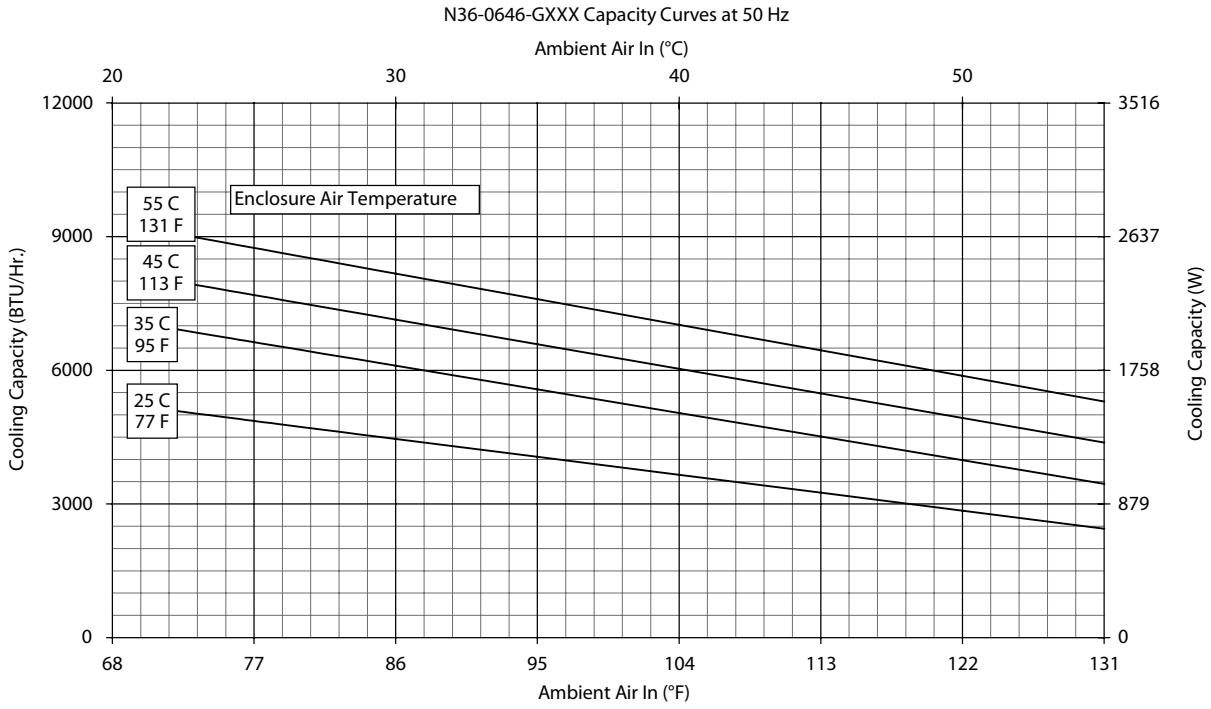


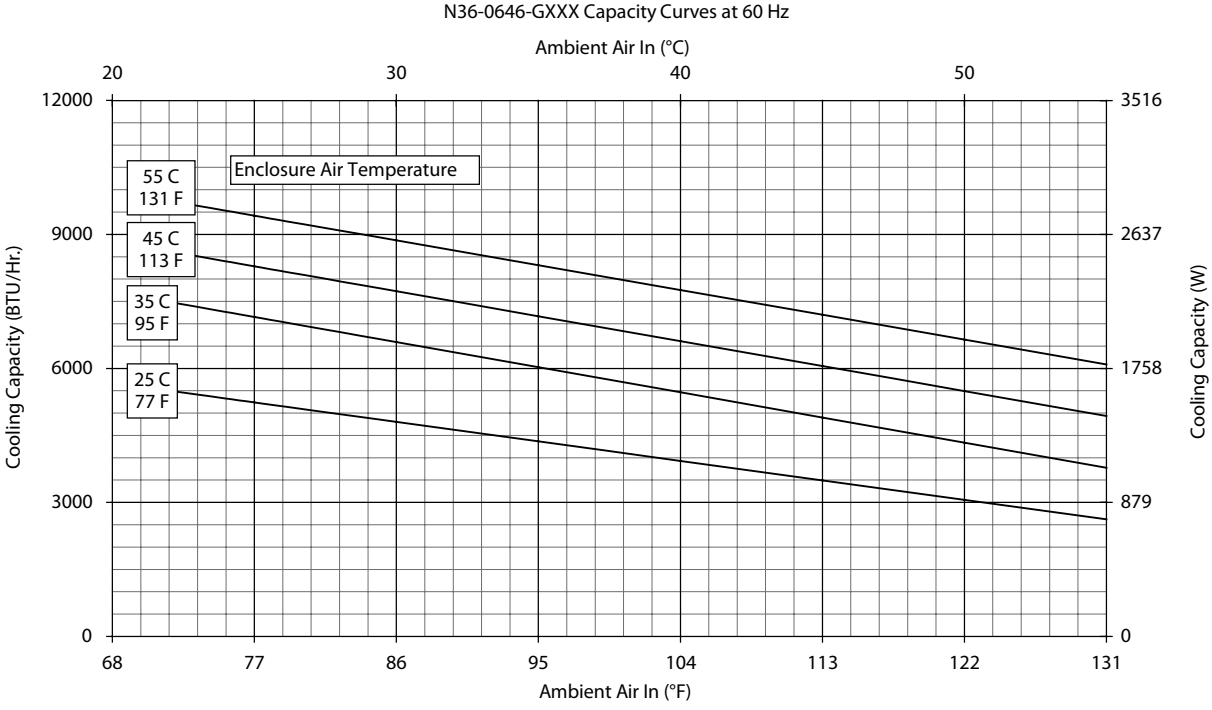
Performance Curves for N36 Models 6000 BTU/Hr. (1758 Watt)



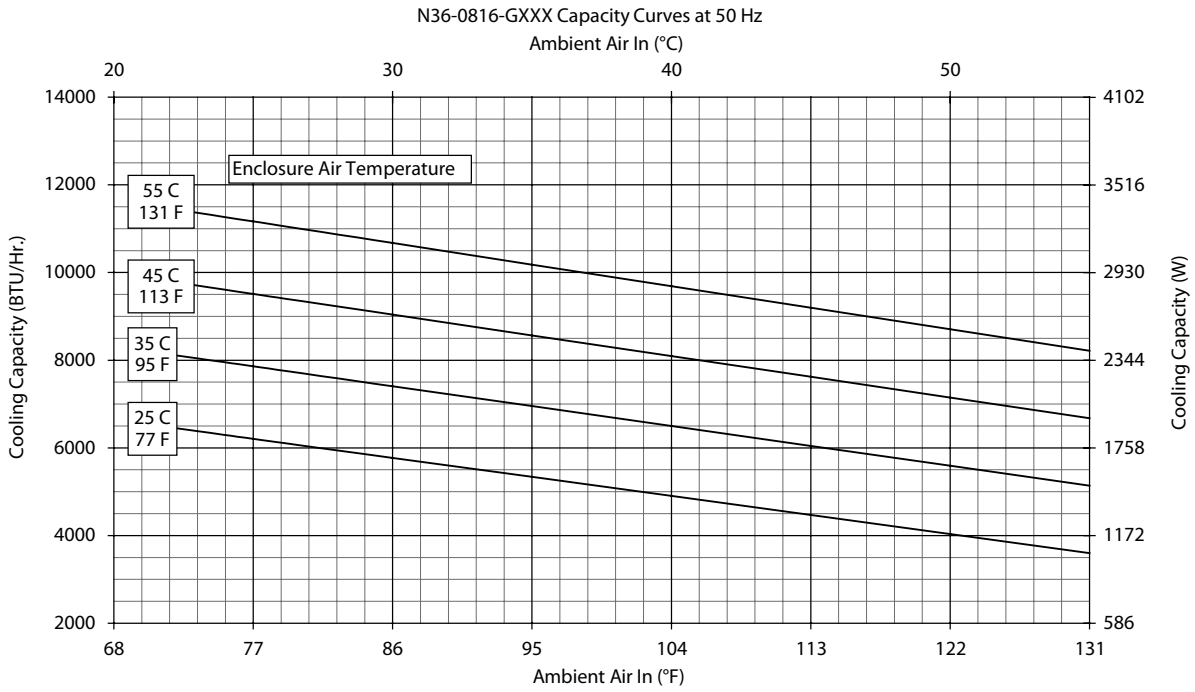


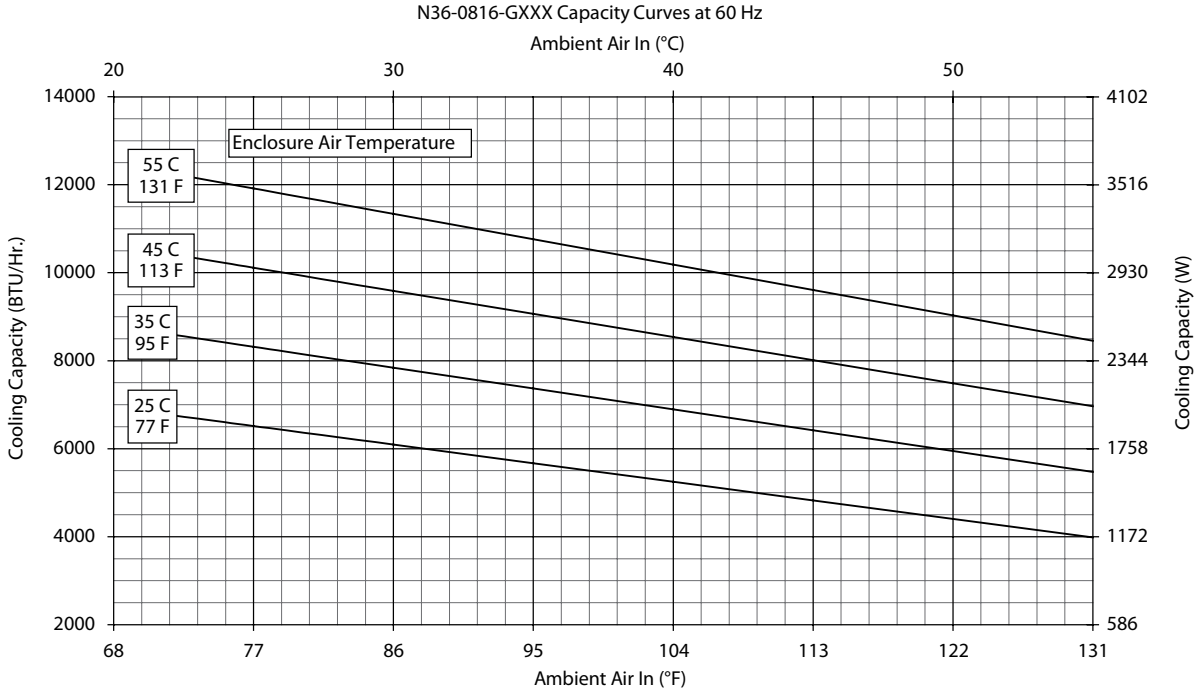
Performance Curves for N36 Models 6000 BTU/Hr. (1758 Watt)



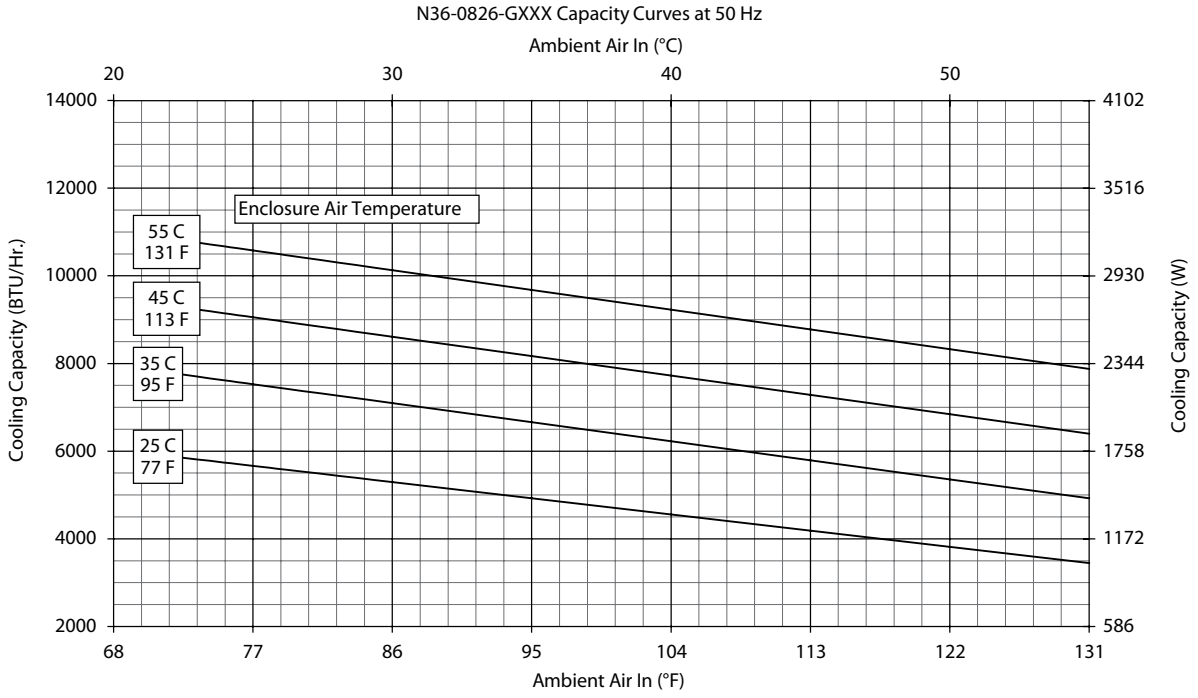


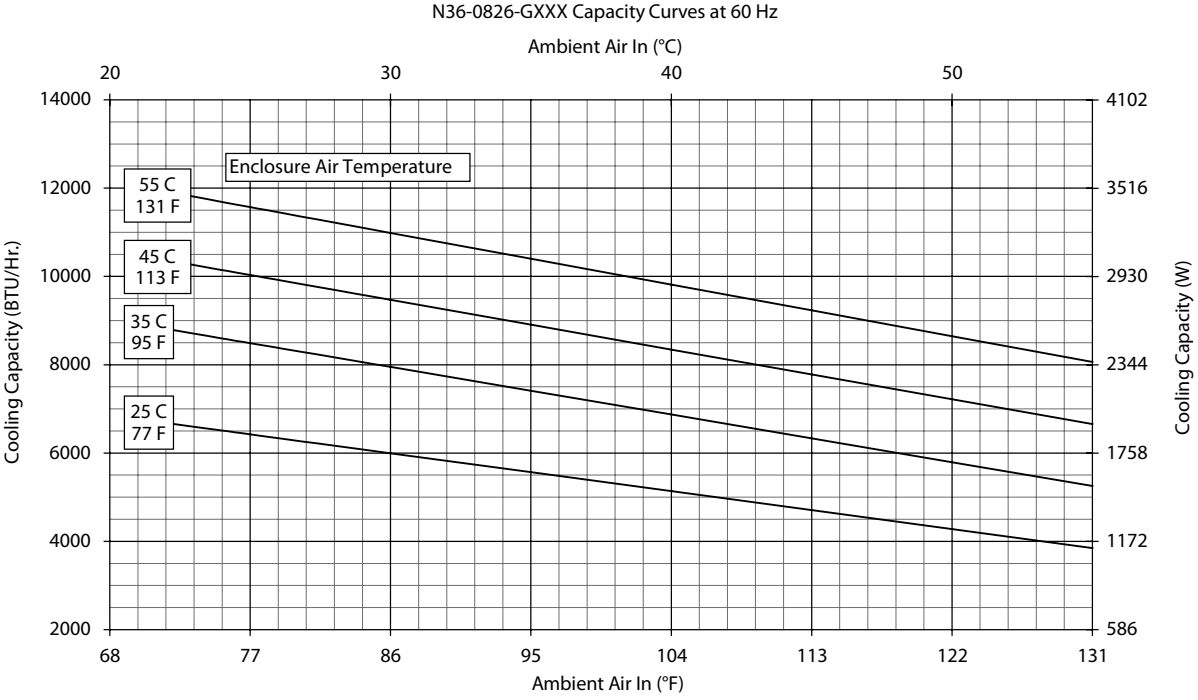
Performance Curves for N36 Models 8000 BTU/Hr. (2344 Watt)



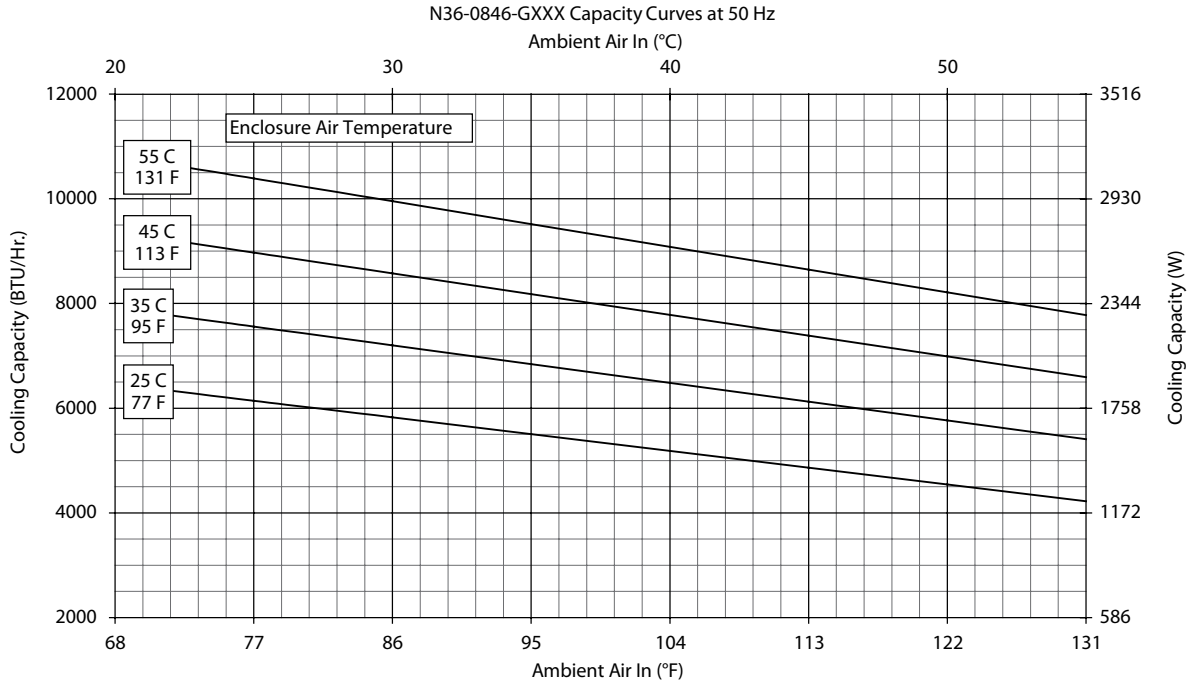


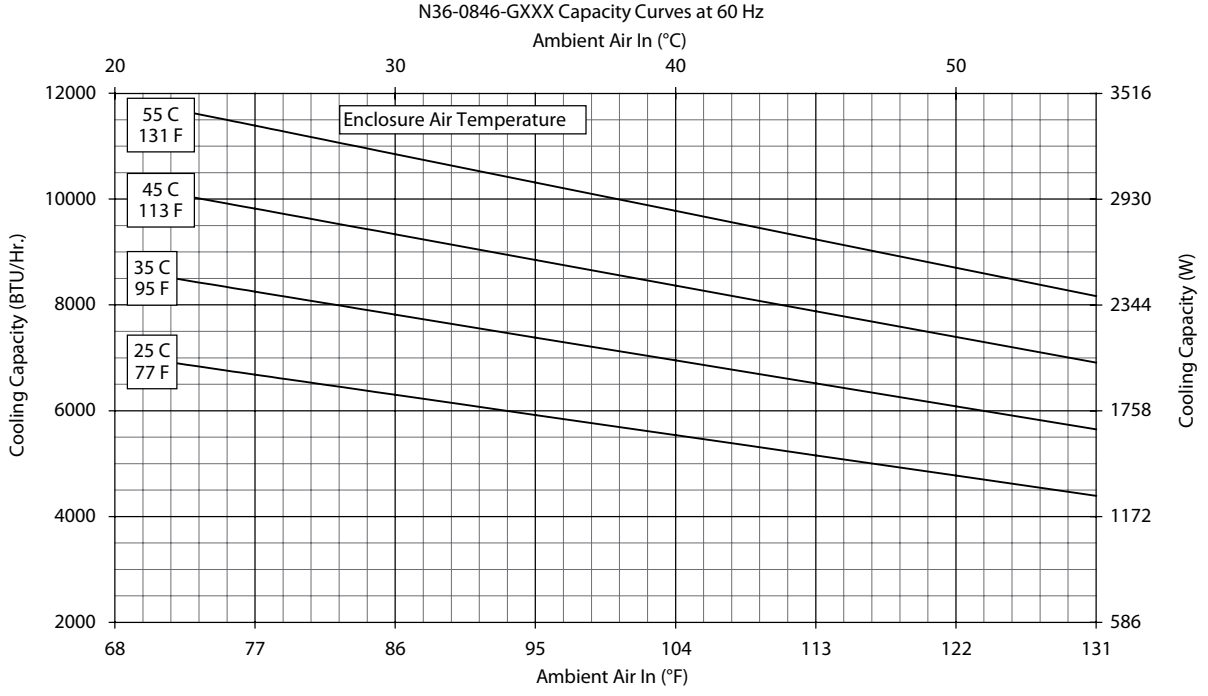
Performance Curves for N36 Models 8000 BTU/Hr. (2344 Watt)



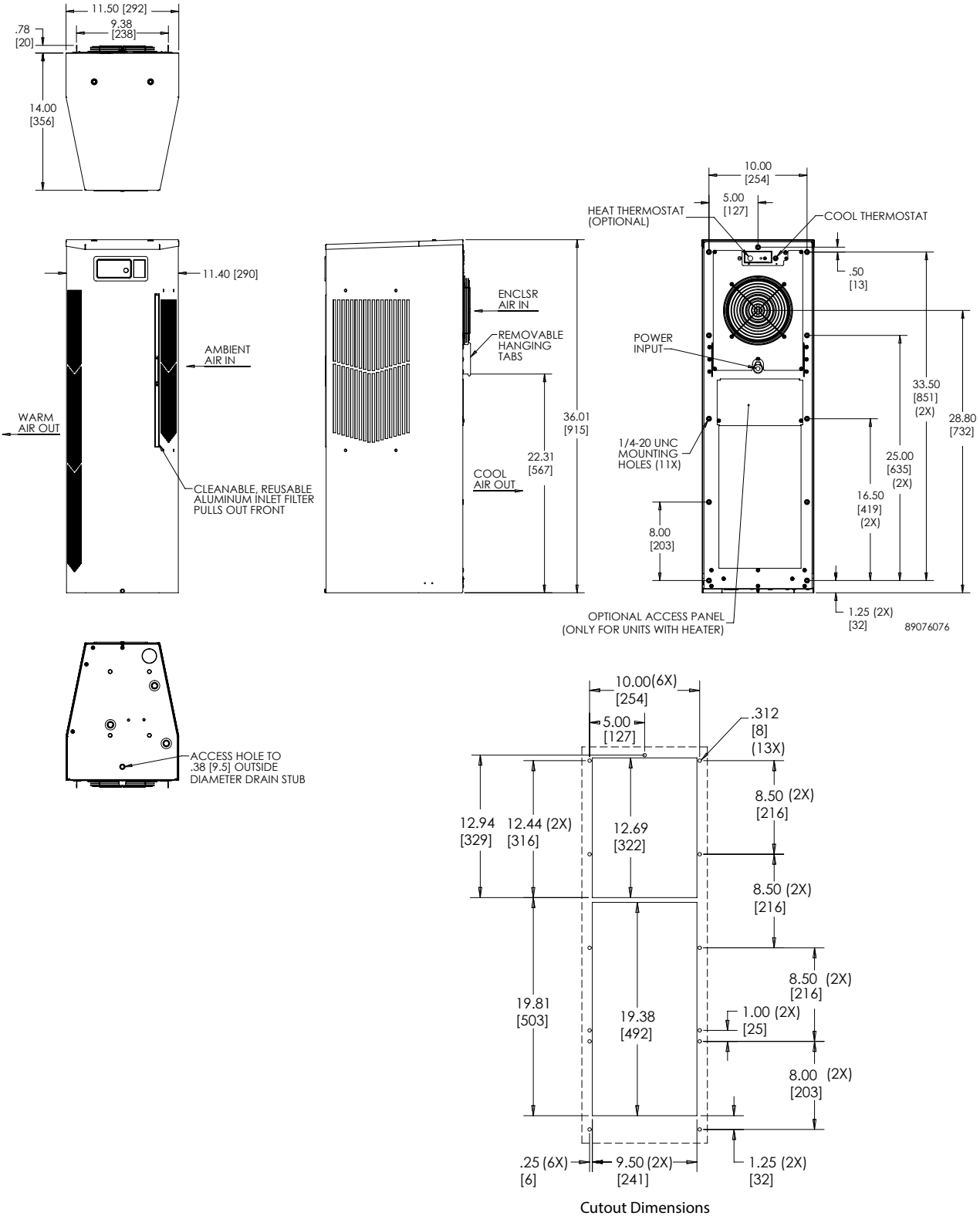


Performance Curves for N36 Models 8000 BTU/Hr. (2344 Watt)





N36 6000/8000 BTU/Hr. (1758/2344 Watt)



Cutout Dimensions

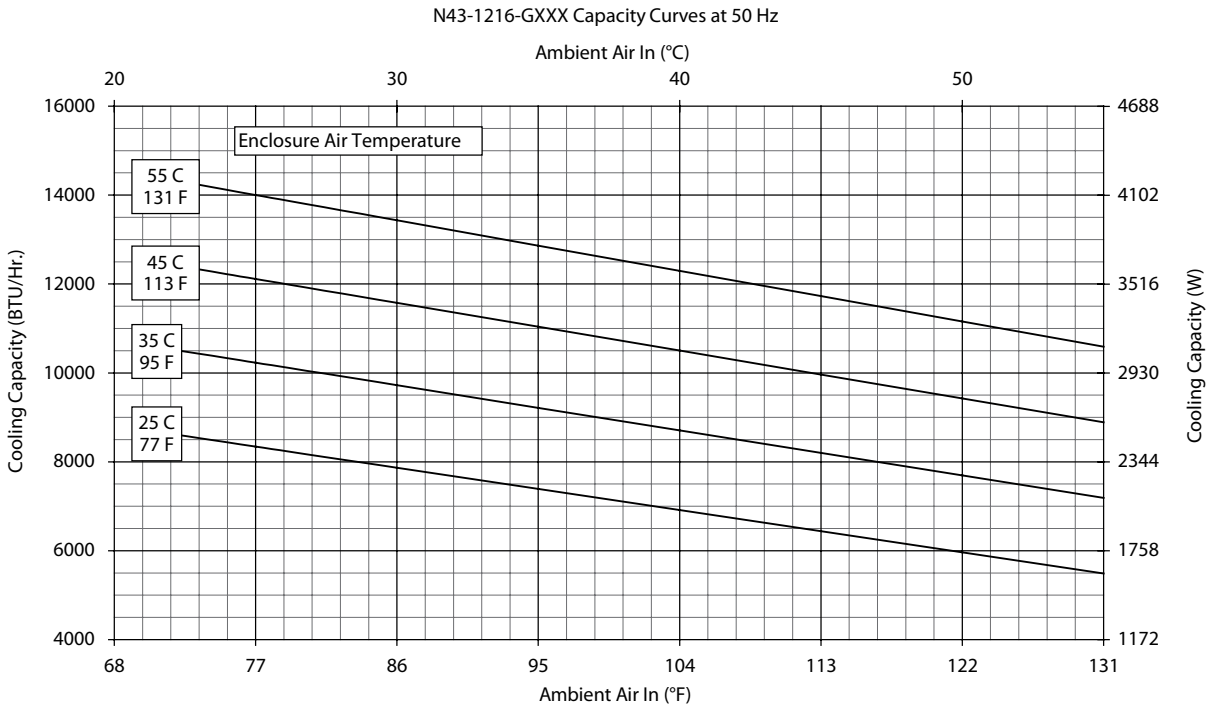
Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

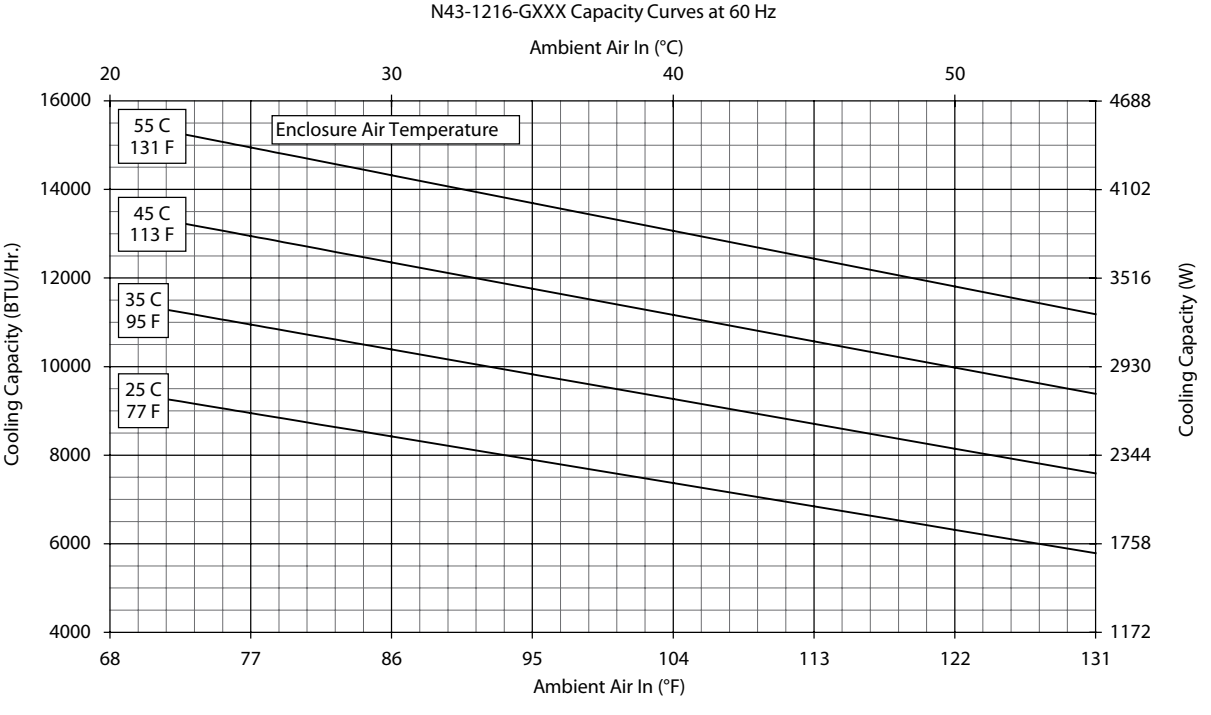
Performance Data **N43 11000 BTU/Hr. (3223 Watt)**

CATALOG NUMBER			
Indoor Model	N431216G050	N431226G050	N431246G050
Indoor Model Stainless Steel Type 4X	N431216G051	N431226G051	N431246G051
Indoor Model with Remote Access Control*	N431216G060	N431226G060	N431246G060
Outdoor Model without Heat Pkg.	N431216G100	N431226G100	N431246G100
Outdoor Model without Heat Pkg. Stainless Steel Type 4X	N431216G102	N431226G102	N431246G102
Outdoor Model with Heat Pkg.	N431216G150	N431226G150	N431246G150
Outdoor Model with Heat Pkg. Stainless Steel Type 4X	N431216G151	N431226G151	N431246G151
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**10400 / 11000**	**10400 / 11000**	**10400 / 11000**
Watts	**3047 / 3223**	**2900 / 3223**	**2900 / 3223**
At 131 F / 131 F (55 C / 55 C):			
BTU/Hr. (50 / 60 Hz)	10588 / 11180	9946 / 11052	10048 / 10797
Watts (50 / 60 Hz)	3103 / 3277	2915 / 3239	2945 / 3164
At 95 F / 95 F (35 C / 35 C):			
BTU/Hr. (50 /60 Hz)	9475 / 10023	8967 / 9644	8587 / 9559
Watts (50 / 60 Hz)	2777 / 2937	2628 / 2826	2517 / 2801
Refrigerant	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	36 / 1021	38 / 1077	41 / 1162
Operating Temperature Range:			
Maximum (°F / °C)	131 / 55	131 / 55	131 / 55
Minimum (°F / °C)	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / M^3/Hr)	239 / 406	259 / 440	254 / 432
External loop 50 Hz (CFM / M^3/Hr)	494 / 839	489 / 831	341 / 579
Internal loop 60 Hz (CFM / M^3/Hr)	250 / 425	267 / 454	260 / 442
External loop 60 Hz (CFM / M^3/Hr)	528 / 897	525 / 892	564 / 958
Max. Heater W (Outdoor Models)	1300	1300	1300
ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**400 / 460 3~**
Frequency (Hz)	50 / 60	50 / 60	50 / 60
Operating Range	+/-10%	+/-10%	+/-10%
Max. Power Consumption (Watts at 50 / 60 Hz)	1802 / 2446	1802 / 2446	1283 / 1644
Max. Nominal Current (Amps at 50 / 60 Hz)	16.6 / 22.0	8.7 / 9.1	3.1 / 3.3
Starting Current (Amps)	57	38	16
Agency Approvals		cUL Listed CE Others available upon request	
Power Input Description		Terminal Block	
ENCLOSURE PROTECTION			
UL Type		Type 12, 3R, 4 Standard Type 4X Stainless Steel Optional	
CONTROLLER			
Description		Basic Mechanical Thermostat	
Thermostat Location		Enclosure Side	
Factory Thermostat Setting (°F / °C)		80 / 27	
SOUND LEVEL			
At 1.5 Meters	68.4 dBA	68.4 dBA	69.6 dBA
UNIT CONSTRUCTION			
Material		Galvanized sheet metal standard Stainless steel optional	
Finish		RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available	
UNIT DIMENSIONS			
Height (in / mm)		43.00 / 1092.2	
Width (in / mm)		11.50 / 292.1	
Depth (in / mm)		14.00 / 355.6	
Weight (lb / kg)	127/57.6	127/57.6	138/62.6

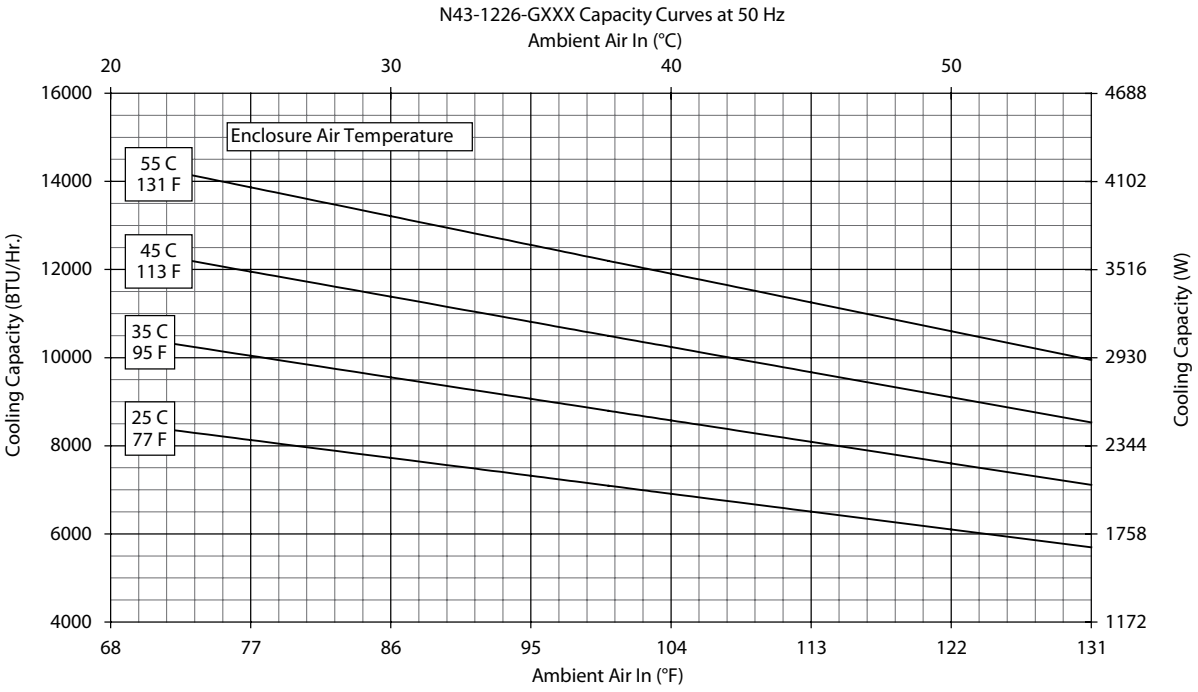
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

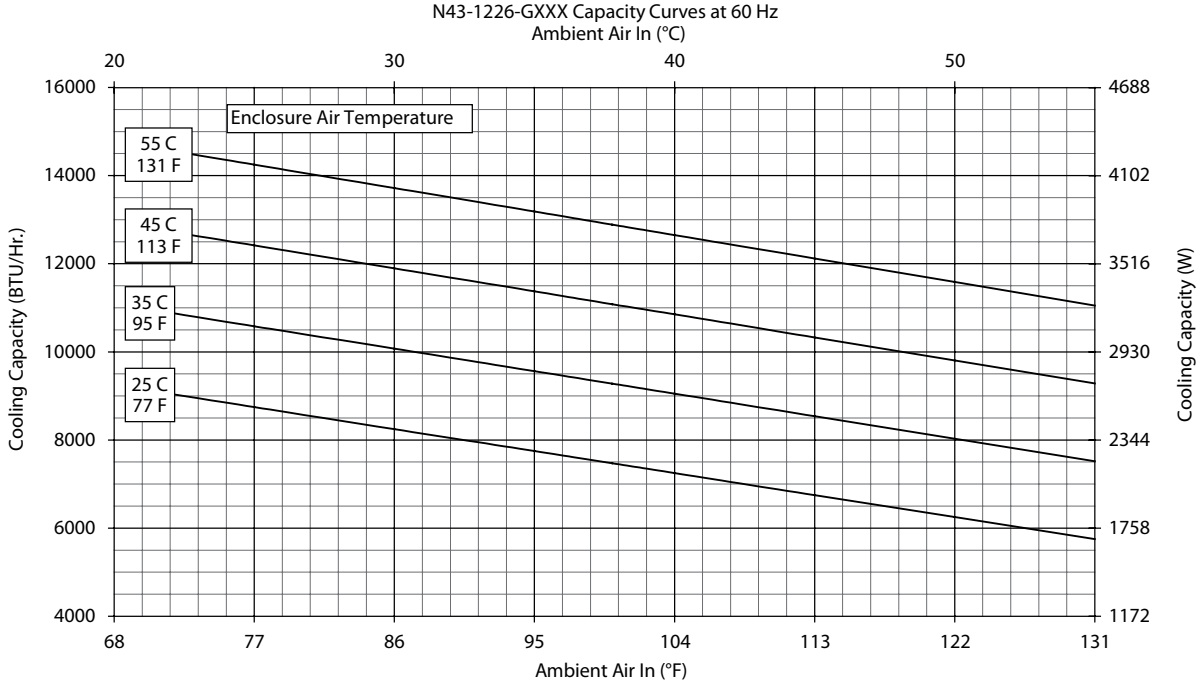
Performance Curves for N43 Models 11000 BTU/Hr. (3223 Watt)



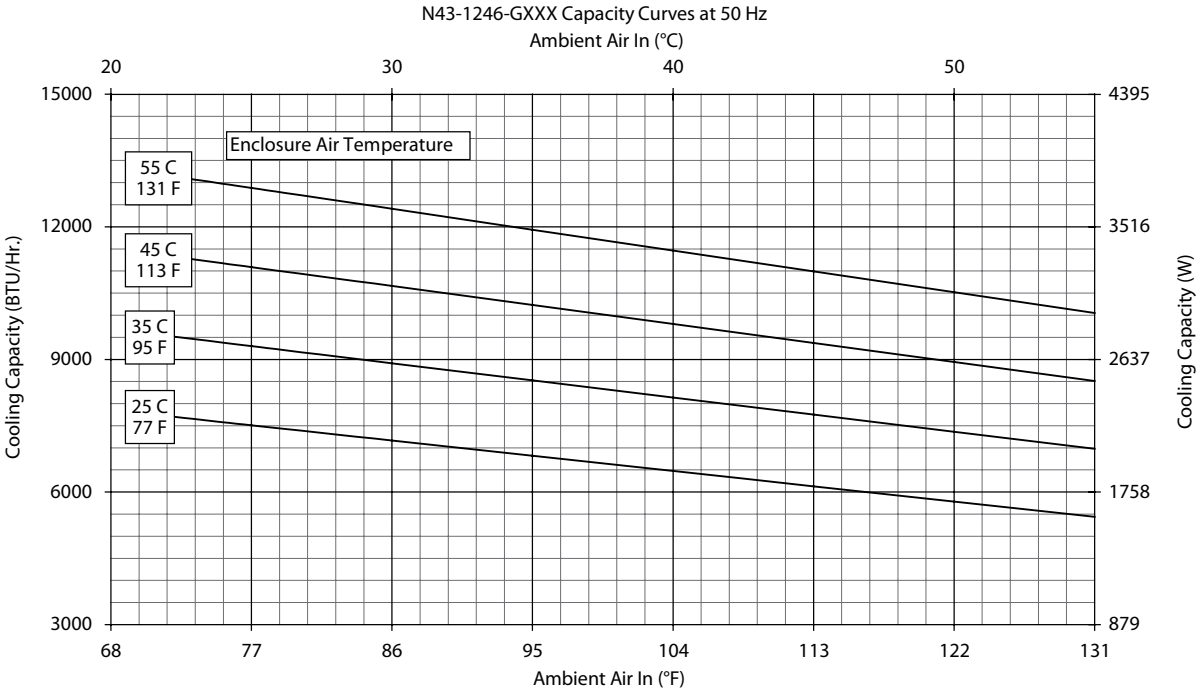


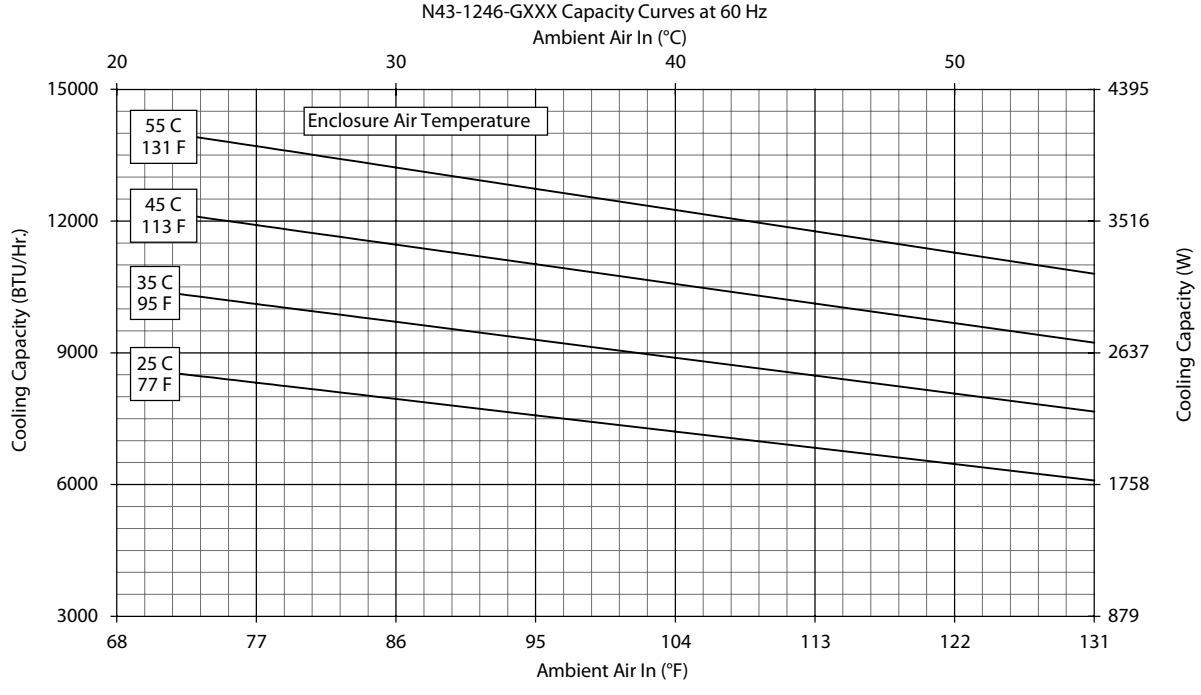
Performance Curves for N43 Models 11000 BTU/Hr. (3223 Watt)



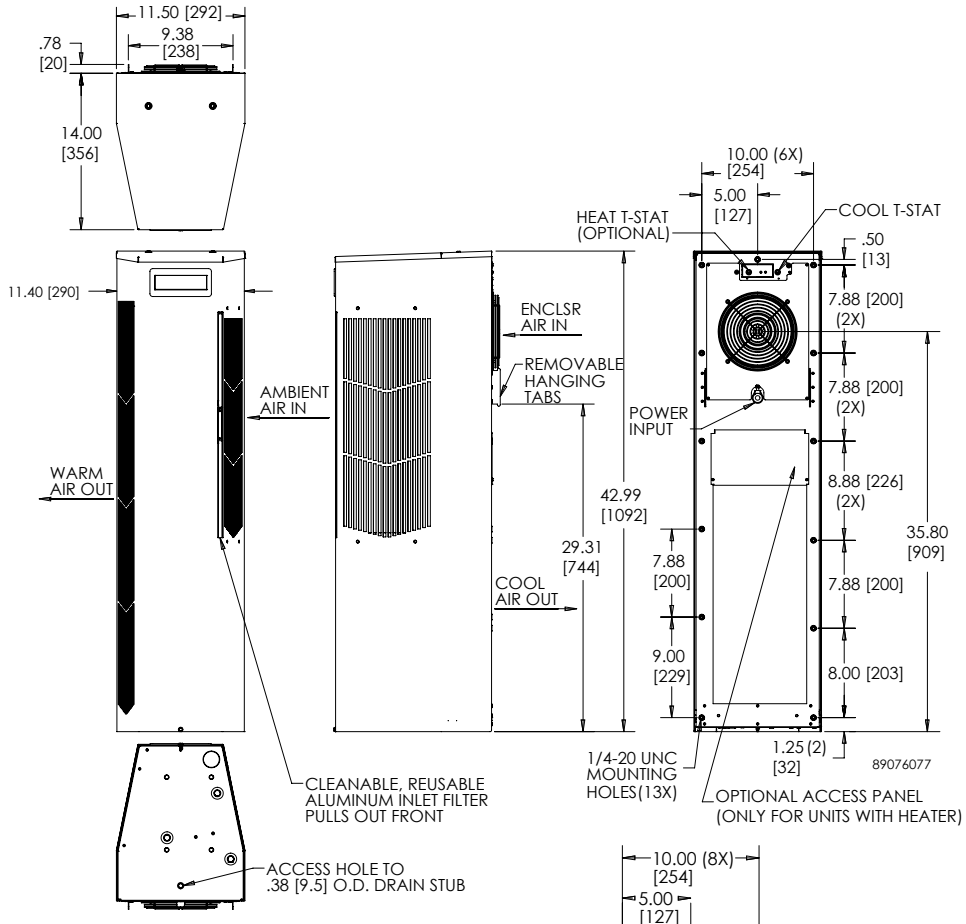


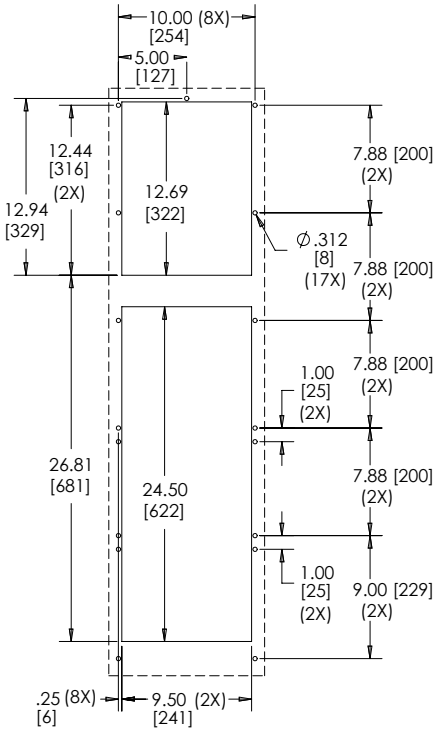
Performance Curves for N43 Models 11000 BTU/Hr. (3223 Watt)





N43 12000 BTU/Hr. (3516 Watt)





CUTOUT INSTRUCTIONS

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SPECTRACOOL COMPACT INDOOR

INDUSTRY STANDARDS

UL/cUL Listed; Type 12; File No. SA6453 for N17
UL/cUL Listed; Type 12, 3R, 4, 4X optional; File No. SA6453 and UR/cUR Recognized on select models for N16 and N21

CE
IP 54 Internal Loop
IP 34 External Loop
EAC
Telcordia GR-487 capable
Reference performance data tables for agency approvals applied to each model.

APPLICATION

- Industrial automation
- Package handling equipment
- Security and defense systems

FEATURES

- Narrow design accommodates 12-in. deep cabinets
- R134a earth-friendly refrigerants
- Models for 115, 230 and 400/460 VAC power input
- UL Listed to save customers time and money with agency approvals
- Attractive industrial design with minimal use of visible fasteners
- Reliable mechanical thermostat is located behind the cover of the unit; Air Conditioner models include digital display on ambient side
- Galvanized sheet-metal cover for rugged factory environments
- Easy-mount flanges for simple installation
- Cutout adapter options for enclosures with GENESIS air conditioners enable users to easily transition to the new unit
- Dust-resistant condenser coil allows the unit to be run filterless in most applications
- Cleanable, reusable aluminum mesh filter protects coils for maximum cooling performance
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Standard Indoor Air Conditioner models also include:
  - Active condensate management
  - Power-off relay for door switch and other system requirements
  - Malfunction switch

SPECIFICATIONS

- Nominal cooling capacity:
  N17 1000 BTU/Hr. (293 W)
  N17 1800 BTU/Hr. (527 W)
- Operating temperature range from 50 F/10 C to 125 F/52 C

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint
- Other colors and textures available

NOTES

Visit **nVent.com/HOFFMAN** to download 2D and 3D CAD drawings into the overall design of your electrical system.

EtherNet/IP ODVA PI PROFIBUS • PROFINET

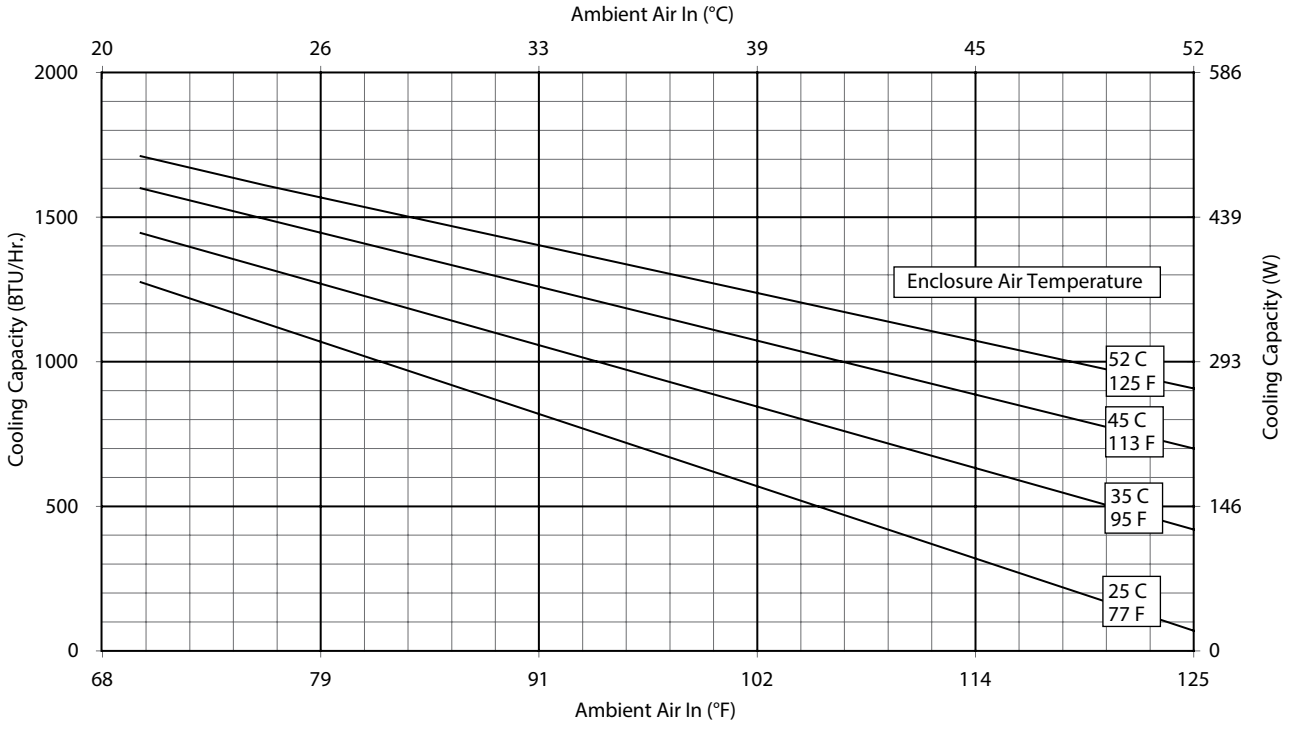
Performance Data **N17 Models 1000/1800 BTU/Hr. (300/527 Watt)**

CATALOG NUMBER						
Indoor Model	N170116G010	N170126G010	N170146G010	N170216G010	N170226G010	N170246G010
Indoor Model with Remote Access Control*	N170116G020	N170126G020	N170146G020	N170216G020	N170226G020	N170246G020
COOLING PERFORMANCE						
Nominal:						
BTU/Hr.	**908/1025**	**908/1025**	**908/1025**	**1500/1800**	**1500/1800**	**1500/1800**
Watts	**266/300**	**266/300**	**266/300**	**440/527**	**440/527**	**440/527**
Refrigerant	R-134a	R-134a	R-134a	R-134a	R-134a	R-134a
Refrigerant Charge (ounces/grams)	5/142	5/142	5/142	5.5/156	5.5/156	5.5/156
Operating Temperature Range:						
Maximum (°F/°C)	125/52	125/52	125/52	125/52	125/52	125/52
Minimum (°F/°C)	50/10	50/10	50/10	50/10	50/10	50/10
Airflow at 0 Static Pressure:						
Internal loop 50 Hz (CFM / m^3/hr.)	57/97	57/97	57/97	61/104	61/104	61/104
External loop 50 Hz (CFM / m^3/hr.)	96/163	96/163	96/163	98/167	98/167	98/167
Internal loop 60 Hz (CFM / m^3/hr.)	67/114	67/114	67/114	72/122	72/122	72/122
External loop 60 Hz (CFM / m^3/hr.)	114/194	114/194	114/194	118/200	118/200	118/200
ELECTRICAL DATA						
Rated Voltage	**110/115**	**220/208-230**	**400/460**	**110/115**	**220/208-230**	**400/460**
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	337/356	345/376	375/407	642/728	639/667	543/603
Max. Nominal Current (A at 50/60 Hz)	4.4/3.9	1.2/1.2	2.3/2.1	7.0/7.1	4.0/3.5	2.0/2.0
Starting Current (A)	18	4.25	8.5	28	14.4	7.2
Agency Approvals	UL/cUL Listed CE					
Power Input Description	Terminal Block					
ENCLOSURE PROTECTION						
UL Type	Type 12					
IP	IP 54 Internal Loop IP 34 External Loop					
CONTROLLER (...G010 Models)						
Thermostat Location	Behind Cover, Right Side					
Factory Thermostat Setting (°F/°C)	80/27					
CONTROLLER (...G020 Models)						
Thermostat Location	Ambient Side					
Factory Thermostat Setting (°F/°C)	80/27					
SOUND LEVEL						
At 1.5 Meters	65.0 dBA					
UNIT CONSTRUCTION						
Material	Galvanized sheet metal standard					
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available					
ACCESSORIES						
EASYSWAP Adaptor Plenum (GENESIS M13)	Enables SPECTRACOOL to be mounted to a GENESIS M13 air conditioner cutout Catalog Number PLM13N17 NOTE: EASYSWAP adaptor plenum not required for M17. It is the same cutout as N17.					
UNIT DIMENSIONS						
Height (in./mm)	17.64/448.1	22.14/562.4	17.64/448.1	17.64/448.1	17.64/448.1	22.14/562.4
Width (in./mm)	12.0/304.8	12.0/304.8	12.0/304.8	12.0/304.8	12.0/304.8	12.0/304.8
Depth (in./mm)	8.4/213.4	8.4/213.4	8.4/213.4	8.4/213.4	8.4/213.4	8.4/213.4
Weight (lb./kg)	50/23	66/30	50/23	54/25	54/25	73/33

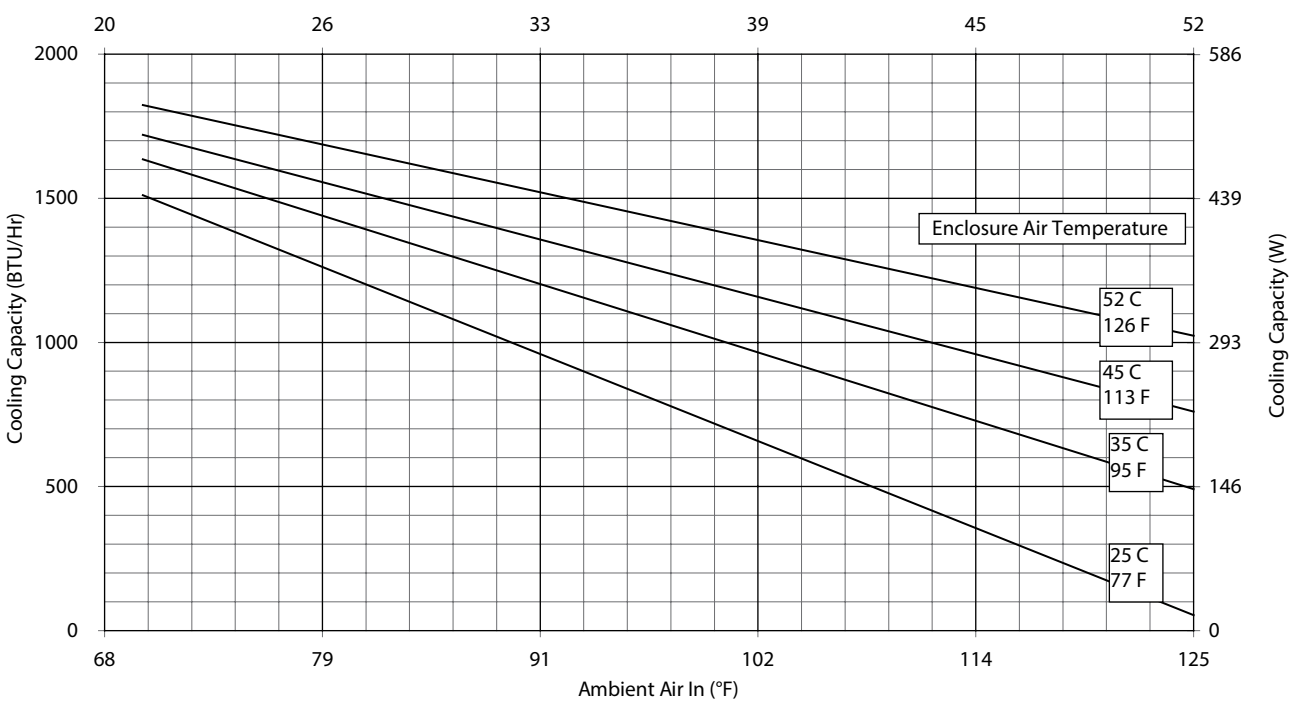
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

Performance Curves for N17 Models 1000 BTU/Hr. (293 Watt)

N17-0116-GXXX Capacity Curves at 50 Hz

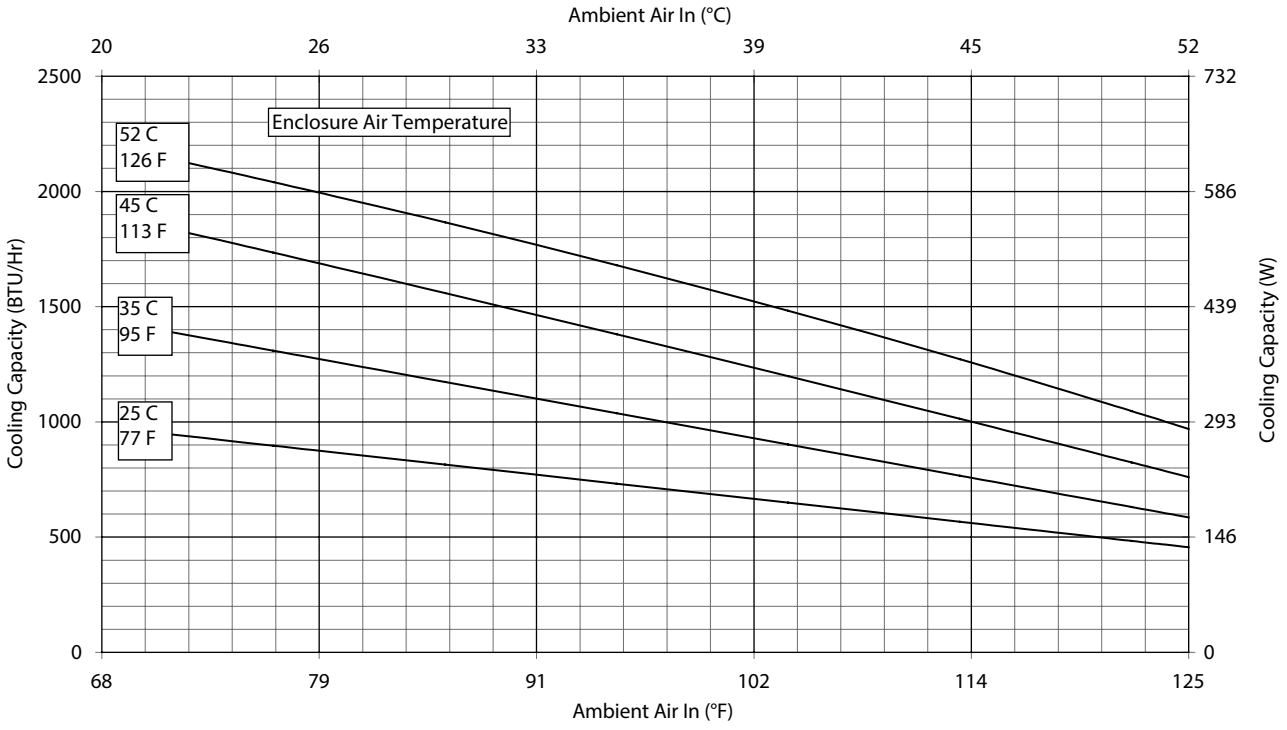


N17-0116-GXXX Capacity Curves at 60 Hz

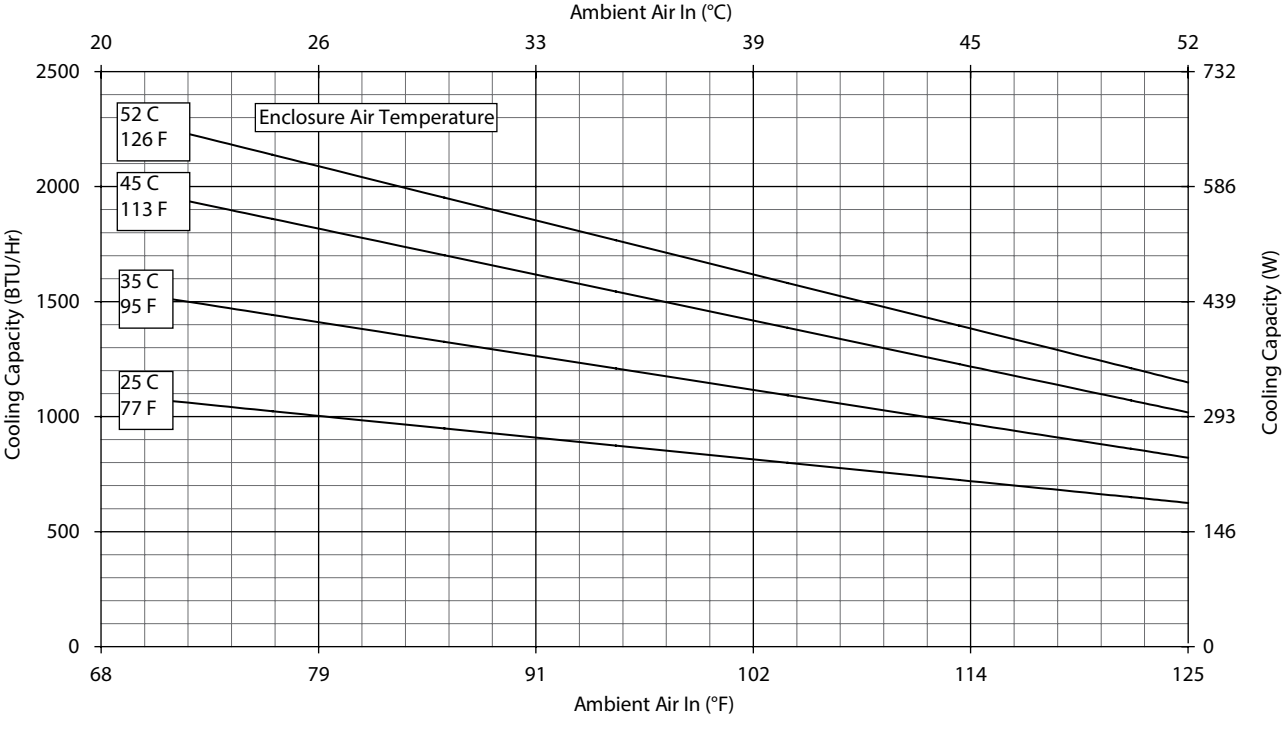


Performance Curves for N17 Models 1000/2000 BTU/Hr. (293/585 Watt)

N17-01(2/4)6-GXXX Capacity Curves at 50 Hz

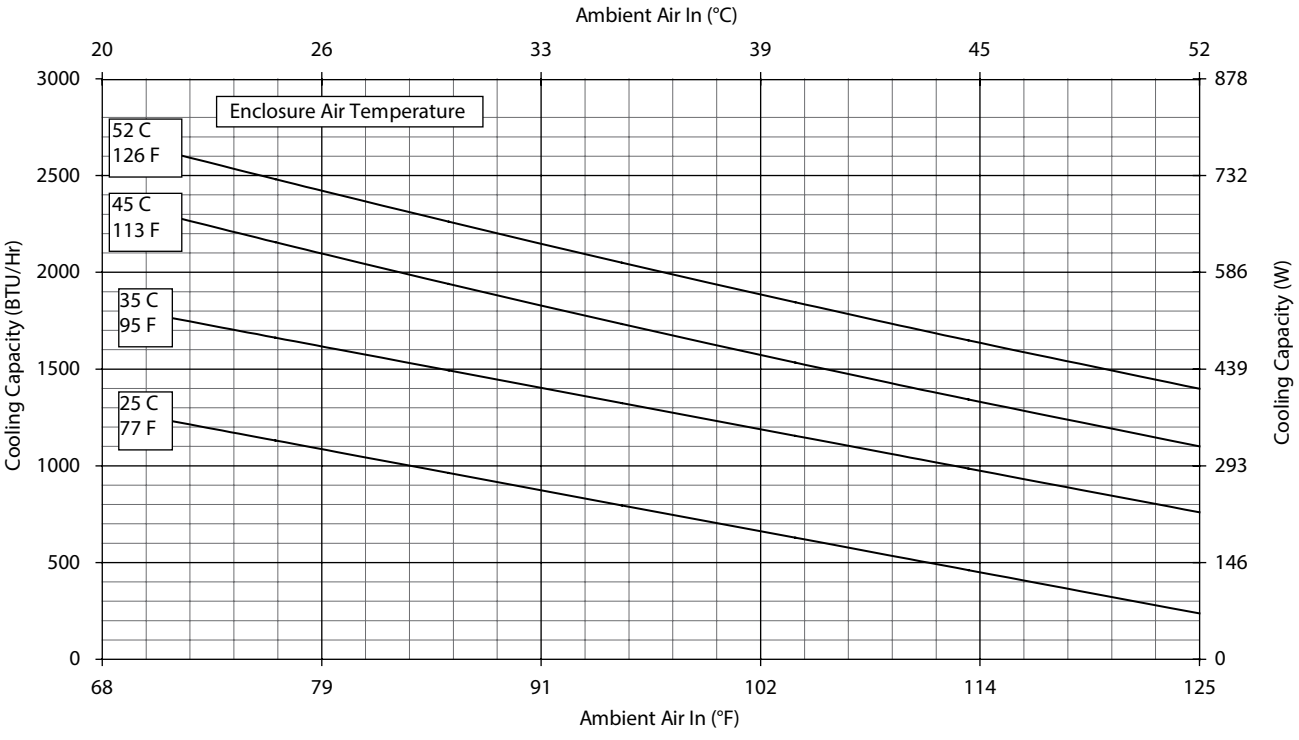


N17-01(2/4)6-GXXX Capacity Curves at 60 Hz

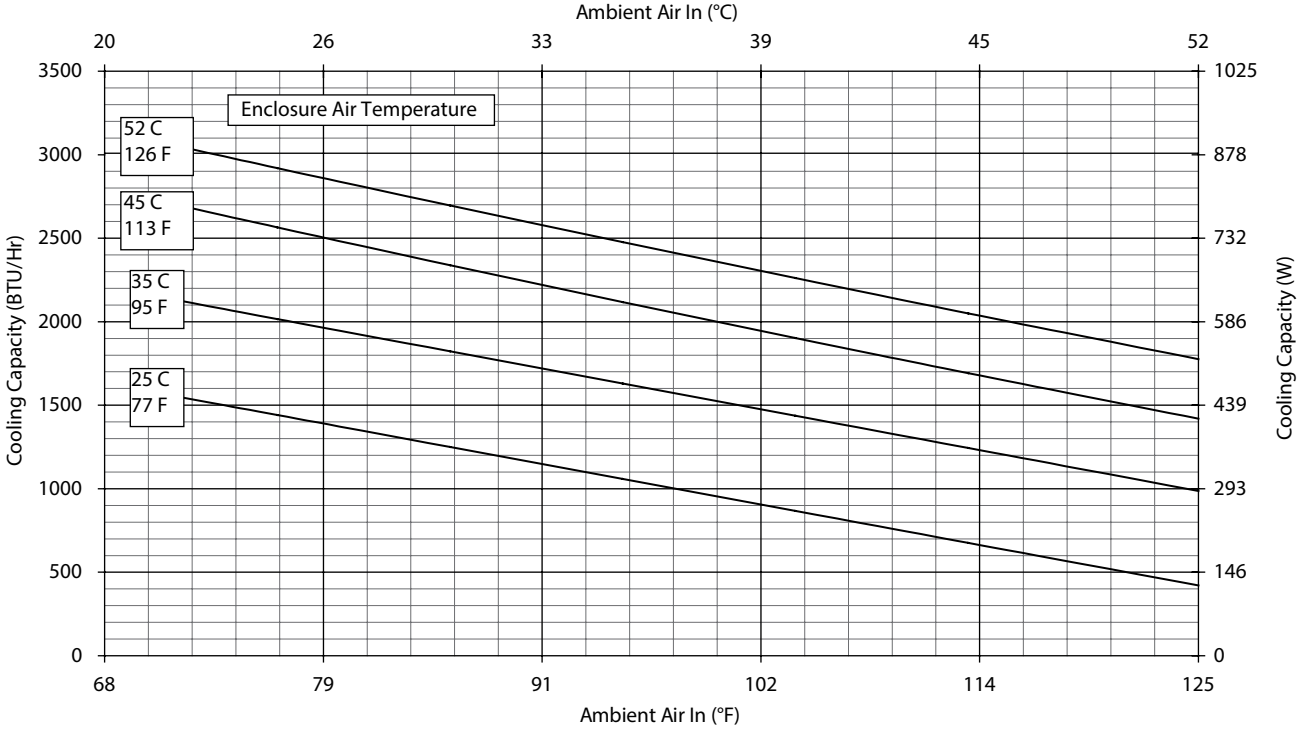


Performance Curves for N17 Models 1000 BTU/Hr. (293 Watt)

N17-0216-GXXX Capacity Curves at 50 Hz

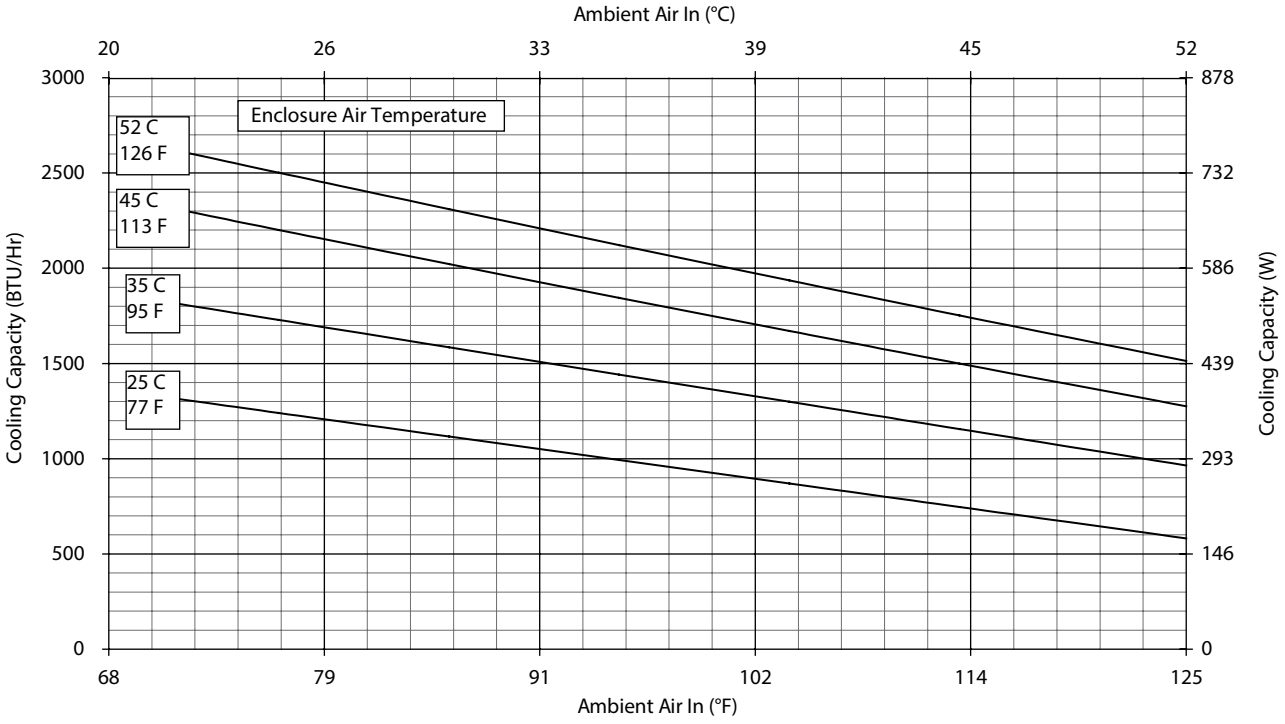


N17-0216-GXXX Capacity Curves at 60 Hz

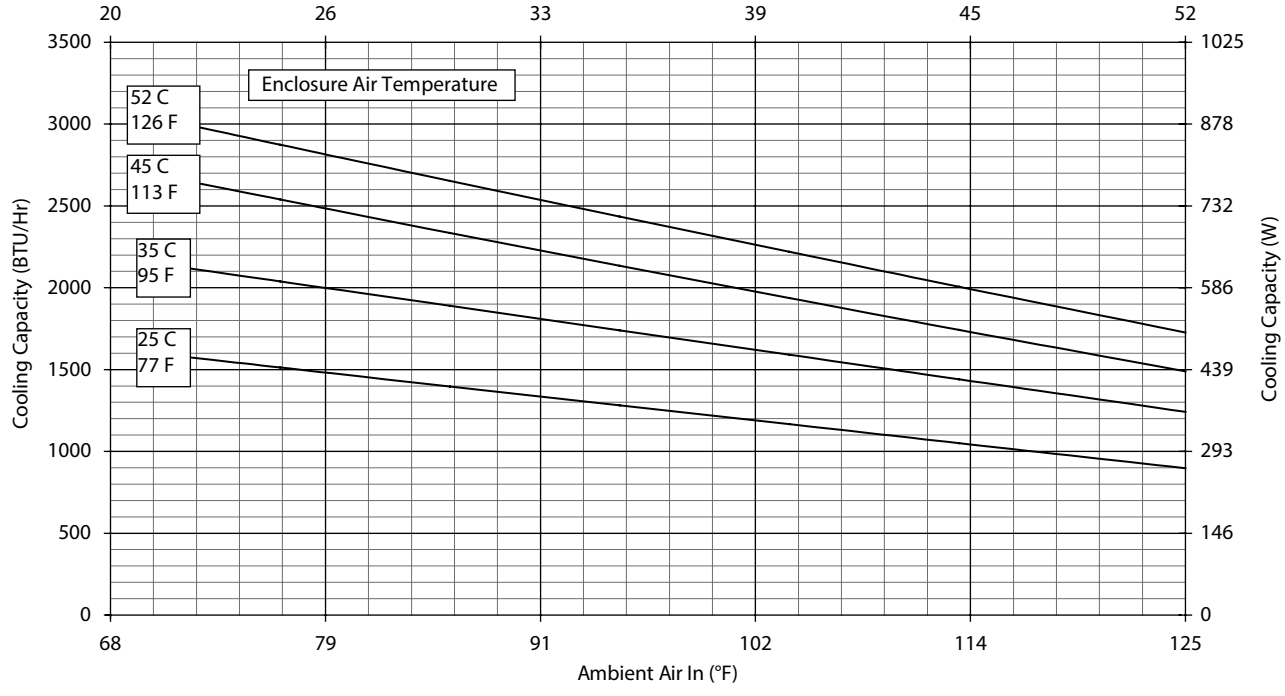


Performance Curves for N17 Models 1000/2000 BTU/Hr. (293/585 Watt)

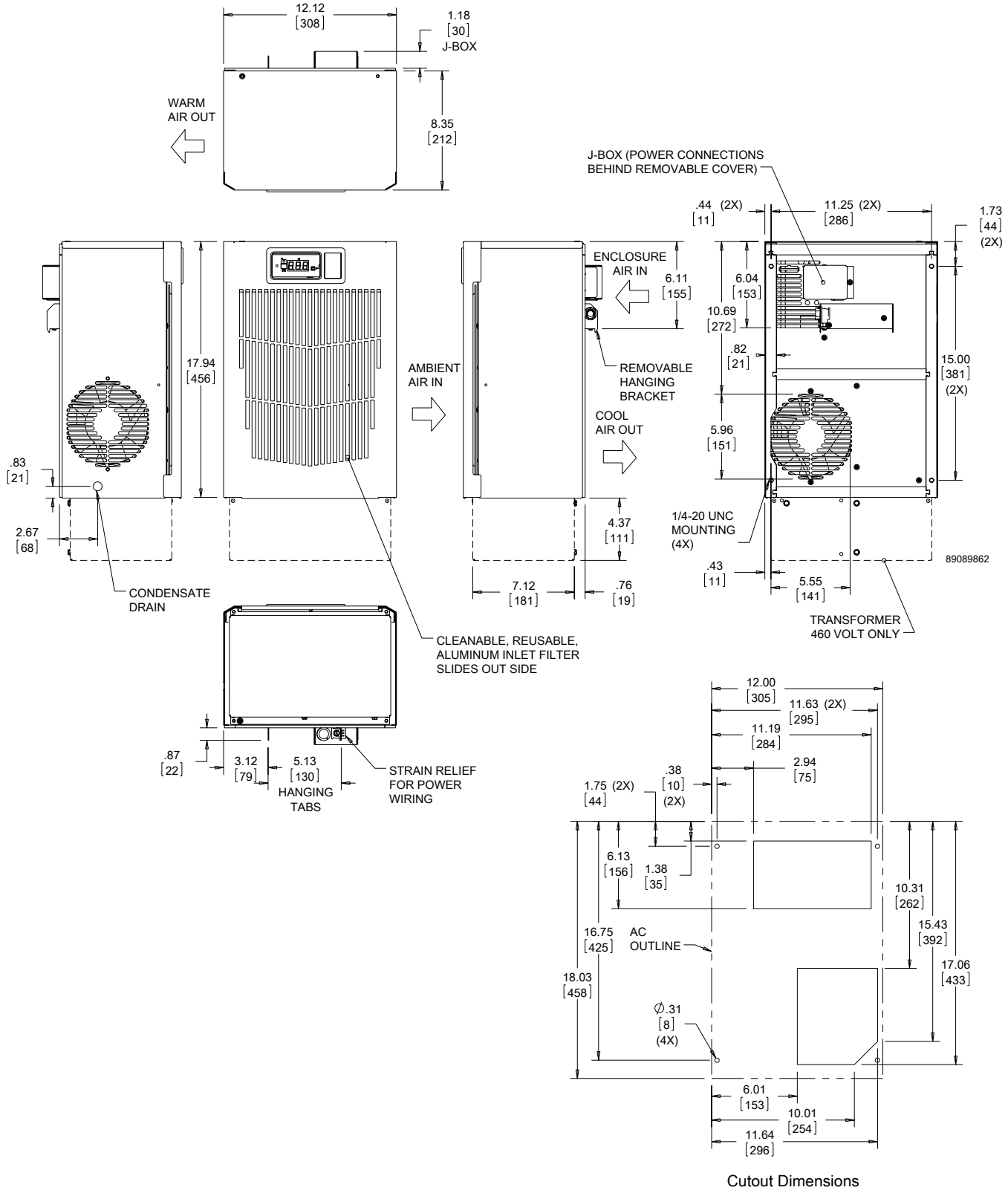
N17-02(2/4)6-GXXX Capacity Curves at 50 Hz



N17-02(2/4)6-GXXX Capacity Curves at 60 Hz



N17 Models 1000/1800 BTU/Hr. (300/527 Watt)



Cutout Dimensions

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Notes

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SPECTRACOOL HAZARDOUS LOCATION INDOOR/OUTDOOR

NHZ43
11000 BTU/Hr.
3223 Watt

NHZ36
6000/8000 BTU/Hr.
1758/2344 Watt

NHZ28
4000 BTU/Hr.
1172 Watt

INDUSTRY STANDARDS

UL/cUL Listed; Type 4; 4X; File No. E469720

CE
Class 1 Div 2 Groups A, B, C, D T4A

APPLICATION

- Onshore and Offshore Oil and Gas
- Chemical and petrochemical
- Mining
- Pharmaceutical
- Any location with potentially hazardous atmospheres created by vapor

FEATURES

- Engineered specifically for hazardous location cooling. Not rebuilt from light industrial air conditioners
- Attractive design with no heavy cast enclosure and minimal use of visible fasteners
- Does not require purge and pressurized system
- Corrosion resistant coating on ambient side components for Type 4X models
- Corrosion resistant coating on ambient and enclosure side components for Type 4X Offshore models
- Dust resistant coils for filterless operation in most environments
- Cleanable, reusable aluminum mesh filter protects coils for extremely dusty and dirty atmospheres
- Digital temperature control
- Narrow design to accommodate 12-in (300-mm) deep cabinets
- R134a earth-friendly refrigerants
- Models for 115, 230 and 400/460 3-phase VAC power input
- UL Listed to save customers time and money with agency approvals
- Easy-Mount flanges for simple installation
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Standard Type 4/4X models include:
  - Active condensate management with heater strip
  - Compresser Heater
  - Head Pressure Control
  - Power-off relay for door switch and other system requirements
  - Malfunction switch

SPECIFICATIONS

- Nominal cooling capacities:
  NHZ28 4000 BTU/hr. (1172 W)
  NHZ36 6000 & 8000 BTU/hr. (1758 and 2344 W)
  NHZ43 11000 BTU/hr. (3223 W)
- Outdoor model operating temperature range from -40 F/ -40 C to 131 F/ 55 C (125 F/52 C on NHZ28 Series and NHZ43 Series 115V)

FINISH

- Type 4 models RAL 7035 light-gray, semi-textured powder-coat paint
- Type 4X and Offshore models Stainless Steel 316L

NOTES

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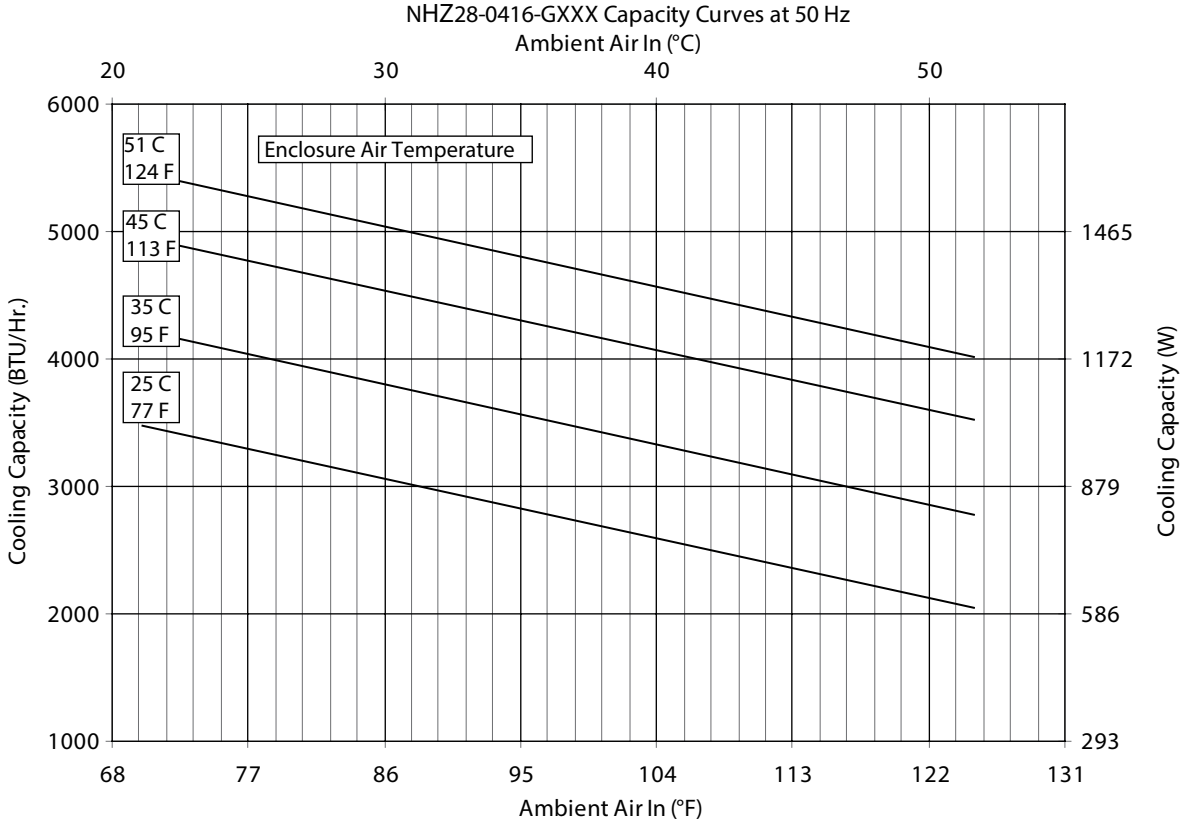
EtherNet/IP ODVA PI PROFIBUS • PROFINET

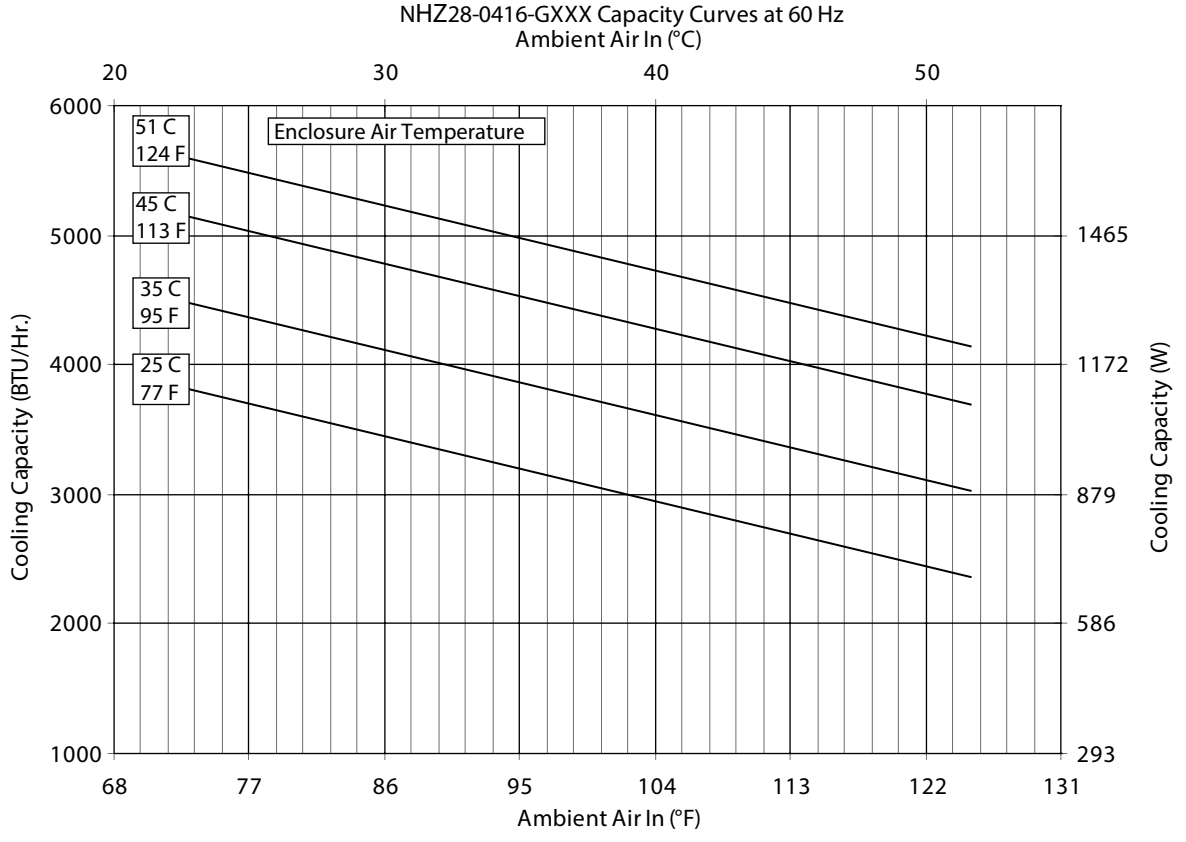
Performance Data **NHZ28 4000 BTU/Hr. (1172 Watt)**

CATALOG NUMBER			
Painted Galvanized Steel Type 4	NHZ280416G300	NHZ280426G300	NHZ280446G300
Painted Galvanized Steel Type 4 with Remote Access Control*	NHZ280416G360	NHZ280426G360	NHZ280446G360
Stainless Steel Type 4X	NHZ280416G400	NHZ280426G400	NHZ280446G400
Stainless Steel Type 4X with Remote Access Control*	NHZ280416G460	NHZ280426G460	NHZ280446G460
Stainless Steel Type 4X Offshore	NHZ280416G500	NHZ280426G500	NHZ280446G500
COOLING PERFORMANCE			
Nominal:			
BTUs/Hr.	**3800 / 4000**	**3800 / 4000**	**4000**
Watts	**1114 / 1172**	**1114 / 1172**	**1172**
At 125 F / 125 F (52 C / 52 C):			
BTU/Hr. (50 / 60 Hz)	3940 / 4104	4269 / 4703	4703
Watts (50 / 60 Hz)	1150 / 1000	1250 / 1378	1378
At 95 F / 95 F (35 C / 35 C):			
BTU/Hr. (50 /60 Hz)	3754 / 4011	3700 / 4291	4291
Watts (50 / 60 Hz)	1100 / 1175	1086 / 1257	1257
Refrigerant	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	10 / 283	11 / 312	11 / 312
Operating Temperature Range:			
Maximum (°F / °C)	125/52	125/52	125/52
Minimum (°F / °C)	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / M^3/Hr)	138 / 234	N/A	N/A
External loop 50 Hz (CFM / M^3/Hr)	268 / 455	N/A	N/A
Internal loop 60 Hz (CFM / M^3/Hr)	143 / 362	143 / 243	143 / 243
External loop 60 Hz (CFM / M^3/Hr)	288 / 728	288 / 489	288 / 489
ELECTRICAL DATA			
Rated Voltage	**110 / 115**	**230**	**400-460/460**
Frequency (Hz)	50 / 60	50 / 60	50 / 60
Operating Range	+/-10%	+/-10%	+/-10%
Max. Power Consumption (Watts at 50 / 60 Hz)	930 / 1001	972 / 1106	972 / 1106
Max. Nominal Current (Amps at 50 / 60 Hz)	10.2 / 9.4	4.9 / 5.0	2.4 / 2.5
Starting Current (Amps)	40	24.5	12.5
Agency Approvals		cUL Listed CE Others available upon request	
Power Input Description		Terminal Block	
ENCLOSURE PROTECTION			
UL Type		Type 4, 4X Standard	
CONTROLLER			
Description		Digital Controller	
Controller Location		Enclosure Side	
Factory Controller Setting (°F / °C)		80 / 27	
SOUND LEVEL			
At 1.5 Meters	66.1 dBA	65.5 dBA	65.5 dBA
UNIT CONSTRUCTION			
Material		Galvanized Sheet Metal Type 4 Models Stainless steel 316L Type 4X and Offshore Models	
Finish		RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available	
UNIT DIMENSIONS			
Height (in / mm)		28 / 711.2	
Width (in / mm)		11.50 / 292.1	
Depth (in / mm)		14.00 / 355.6	
Weight (lb / kg)	84/38	84/38	98/44

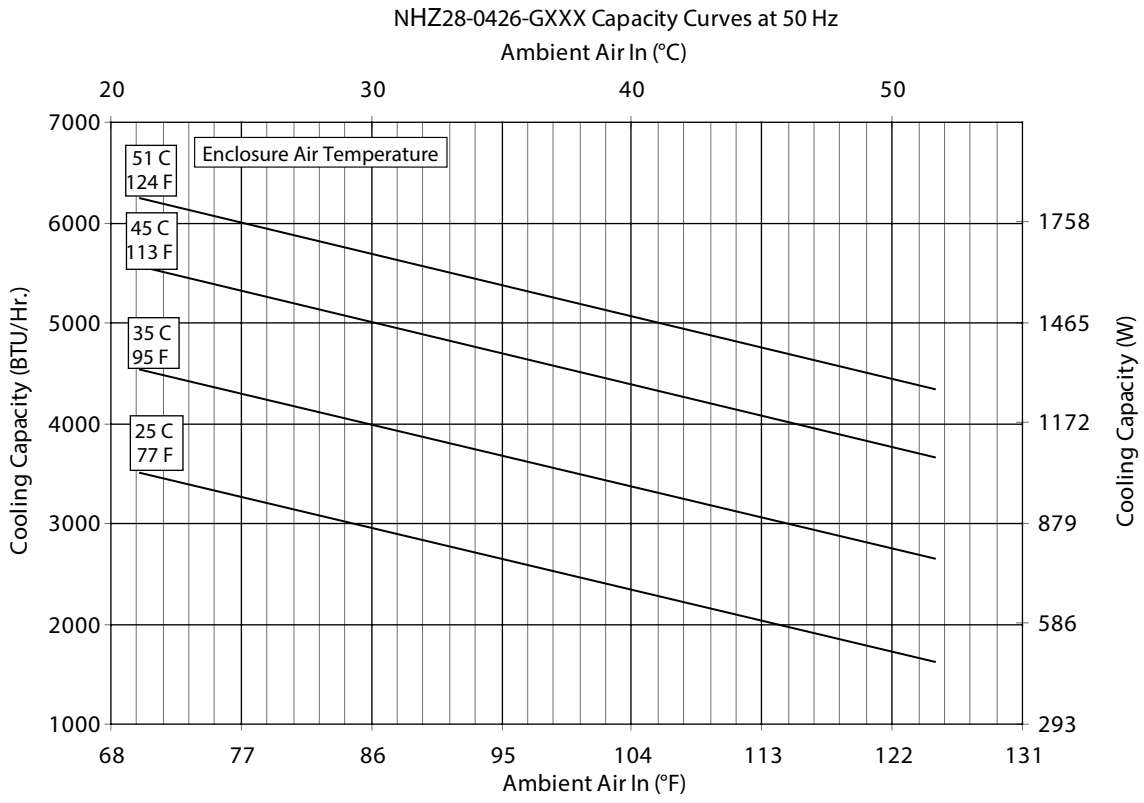
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

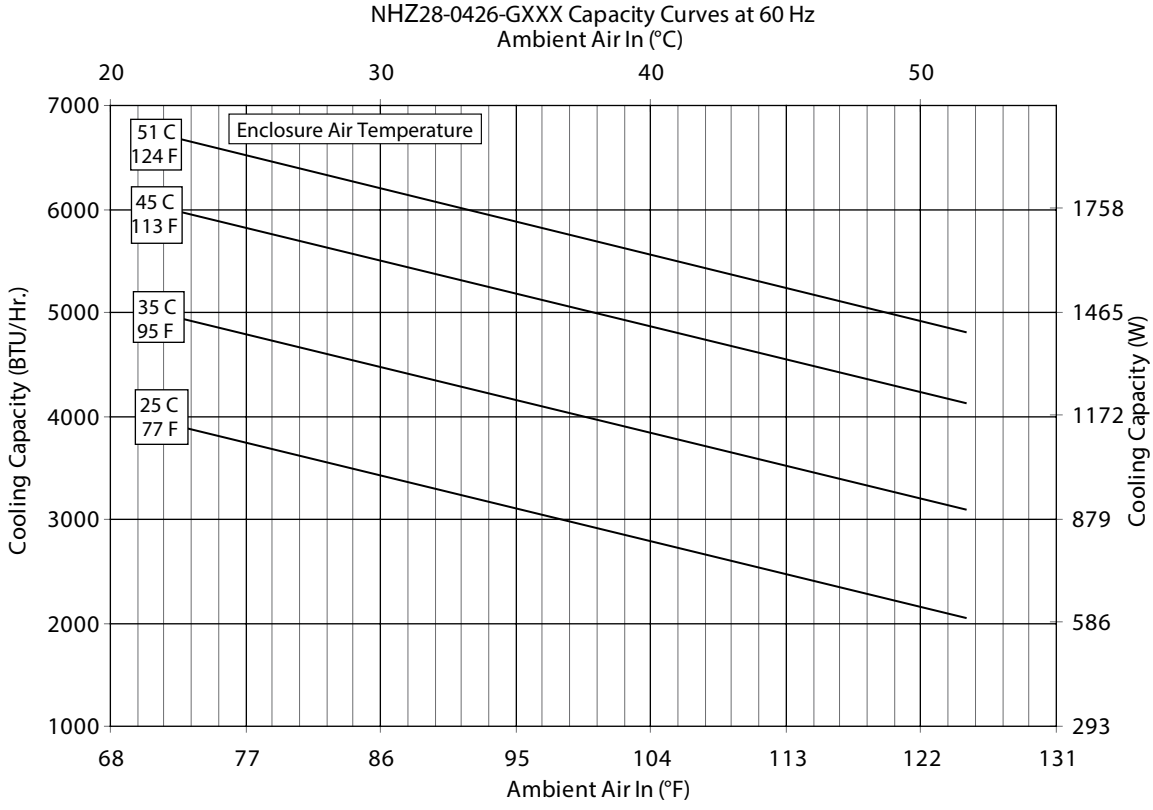
Performance Curves for NHZ28 Models 4000 BTU/Hr. (1172 Watt)



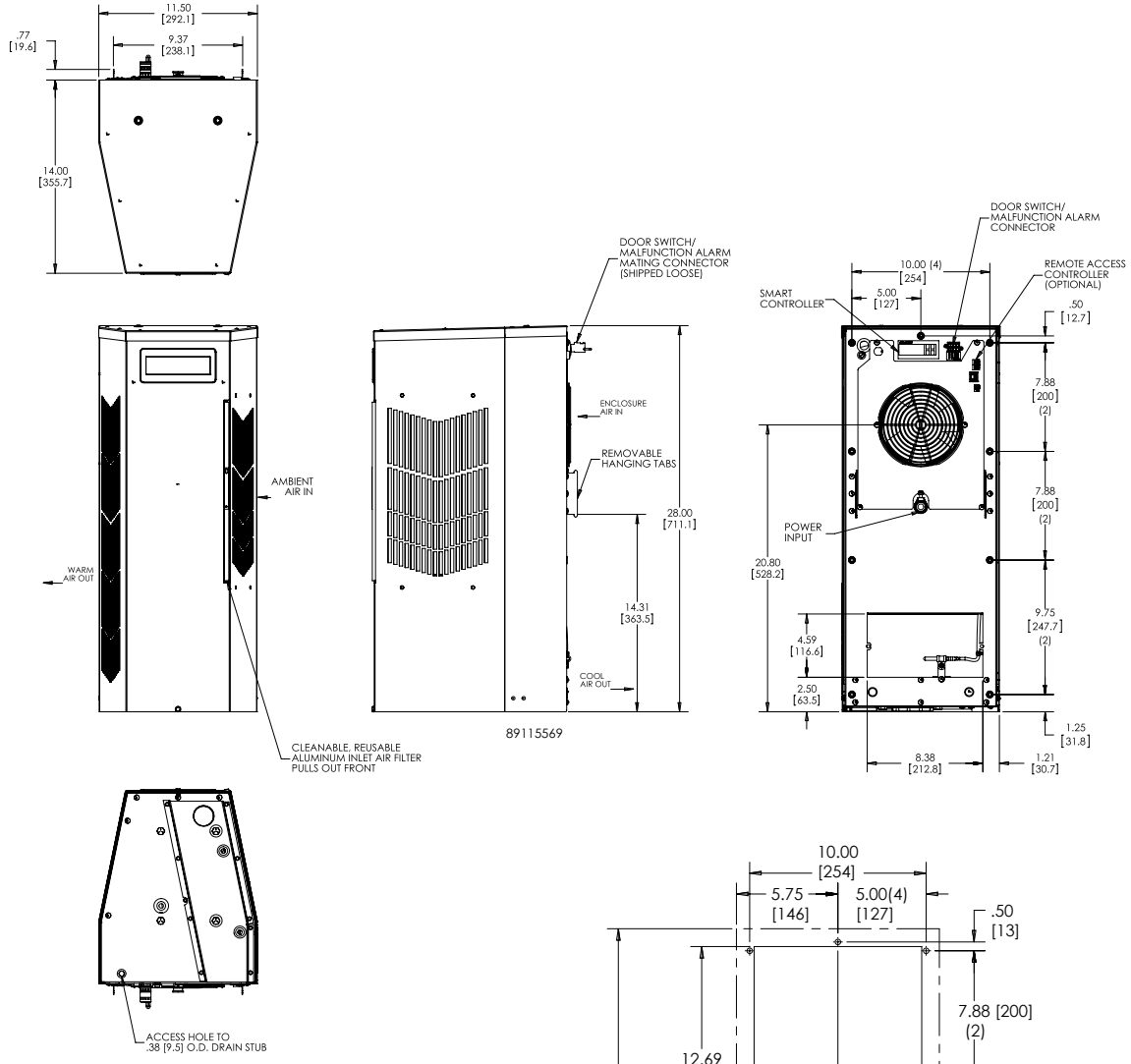


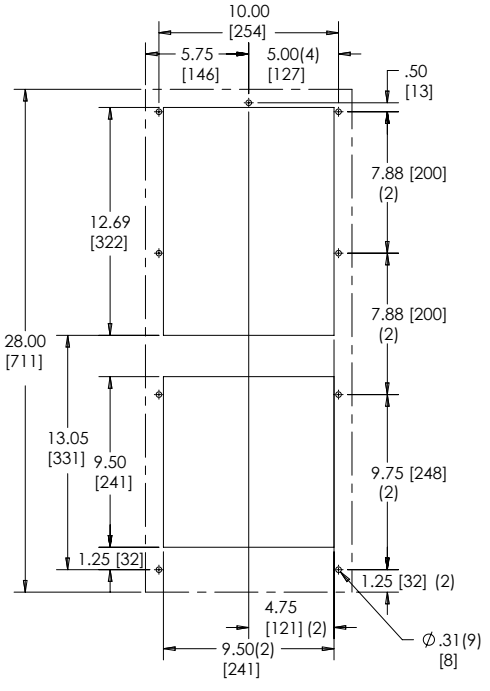
Performance Curves for NHZ28 Models 4000 BTU/Hr. (1172 Watt)





NHZ28 Models 4000 BTU/Hr. (1172 Watt)





Cutout Dimensions

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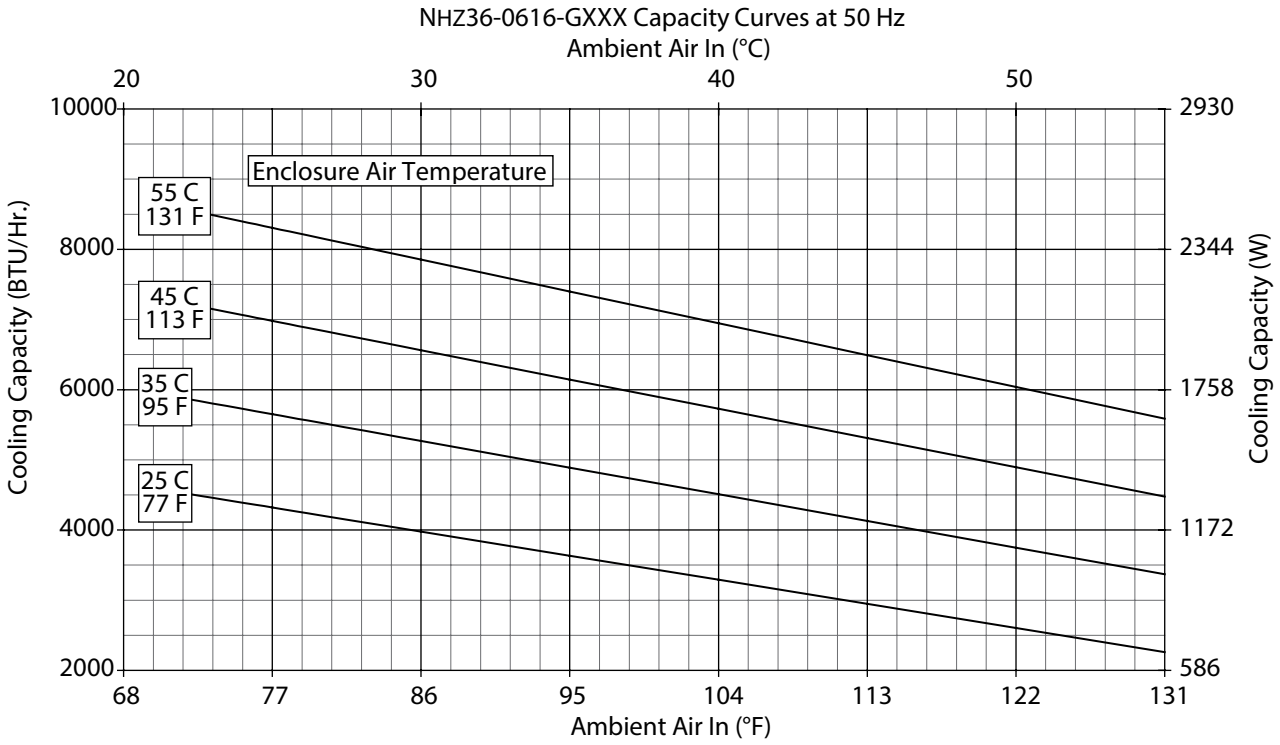
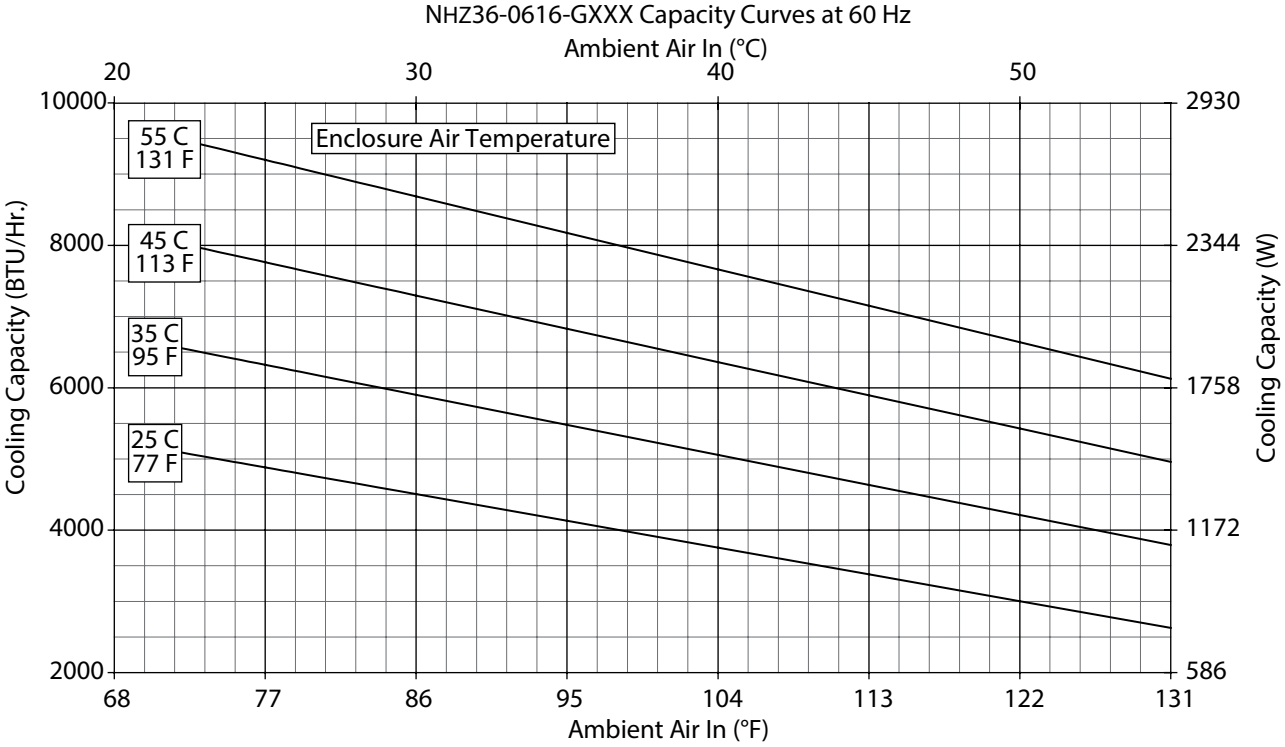
Performance Data **NHZ36 6000/8000 BTU/Hr. (1758/2344 Watt)**

CATALOG NUMBER						
Painted Galvanized Steel Type 4	NHZ360616G300	NHZ360626G300	NHZ360646G300	NHZ360816G300	NHZ360826G300	NHZ360846G300
Painted Galvanized Steel Type 4 with Remote Access Control*	NHZ360616G360	NHZ360626G360	NHZ360646G360	NHZ360816G360	NHZ360826G360	NHZ360846G360
Stainless Steel Type 4X	NHZ360616G400	NHZ360626G400	NHZ360646G400	NHZ360816G400	NHZ360826G400	NHZ360846G400
Stainless Steel Type 4X with Remote Access Control*	NHZ360616G460	NHZ360626G460	NHZ360646G460	NHZ360816G460	NHZ360826G460	NHZ360846G460
Stainless Steel Type 4X Offshore	NHZ360616G500	NHZ360626G500	NHZ360646G500	NHZ360816G500	NHZ360826G500	NHZ360846G500
COOLING PERFORMANCE						
Nominal:						
BTUs/Hr.	**5400 / 6000**	**5400 / 6000**	**5400 / 6000**	**8250 / 8500**	**8250 / 8500**	**8250 / 8500**
Watts	**1581 / 1757**	**1581 / 1757**	**1581 / 1757**	**2416 / 2489**	**2416 / 2489**	**2416 / 2489**
At 131 F / 131 F (55 C / 55 C):						
BTU/Hr. (50 / 60 Hz)	5585 / 6180	5469 / 5965	5300 / 6089	8213 / 8453	7874 / 8063	7777 / 8166
Watts (50 / 60 Hz)	1637 / 1811	1603 / 1748	1553 / 1785	2405 / 2475	2306 / 2361	2277 / 2391
At 95 F / 95 F (35 C / 35 C):						
BTU/Hr. (50 /60 Hz)	4909 / 5485	5159 / 5621	5572 / 6026	7028 / 7626	6660 / 7411	6877 / 7525
Watts (50 / 60 Hz)	1439 / 1607	1512 / 1647	1633 / 1766	2058 / 2233	1950 / 2170	2014 / 2203
Refrigerant	R134a	R134a	R134a	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	20 / 567	22 / 624	16 / 454	36 / 1021	36 / 1021	36 / 1021
Operating Temperature Range:						
Maximum (°F / °C)	131 / 55	131 / 55	131 / 55	131 / 55	131 / 55	131 / 55
Minimum (°F / °C)	-40 / -40	-40 / -40	-40 / -40	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:						
Internal loop 50 Hz (CFM / M^3/Hr)	251 / 426	250 / 425	250 / 425	250 / 425	245 / 416	243 / 413
External loop 50 Hz (CFM / M^3/Hr)	284 / 483	338 / 574	338 / 574	313 / 532	347 / 589	365 / 620
Internal loop 60 Hz (CFM / M^3/Hr)	261 / 443	261 / 443	261 / 443	263 / 447	258 / 439	254 / 432
External loop 60 Hz (CFM / M^3/Hr)	311 / 528	356 / 605	356 / 605	338 / 574	382 / 648	394 / 669
ELECTRICAL DATA						
Rated Voltage	115	230	400 / 460 3~	115	230	400 / 460 3~
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
Operating Range	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%
Max. Power Consumption (Watts at 50 / 60 Hz)	911 / 1108	908 / 1073	691 / 783	1206 / 1422	1265 / 1403	572 / 628
Max. Nominal Current (Amps at 50 / 60 Hz)	9.1 / 10.1	4.5 / 4.7	1.7 / 1.8	11.2 / 12.4	5.5/6.2	3.0 / 3.4
Starting Current (Amps)	39.2	23	8.1	48.3	27	16
Agency Approvals	cUL Listed CE Others available upon request					
Power Input Description	Terminal Block					
ENCLOSURE PROTECTION						
UL Type	Type 4, 4X Standard					
CONTROLLER						
Description	Digital Controller					
Controller Location	Enclosure Side					
Factory Controller Setting (°F / °C)	80 / 27					
SOUND LEVEL						
At 1.5 Meters	66.9 dBA	66.7 dBA	68.2 dBA	66.0 dBA	66.0 dBA	66.0 dBA
UNIT CONSTRUCTION						
Material	Galvanized Sheet Metal Type 4 Models Stainless steel 316L Type 4X and Offshore Models					
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available					
UNIT DIMENSIONS						
Height (in / mm)	36.00 / 914.4					
Width (in / mm)	11.50 / 292.1					
Depth (in / mm)	14.00 / 355.6					
Weight (lb / kg)	100 / 45	100 / 45	104 / 47	106 / 48	106 / 48	114 / 52

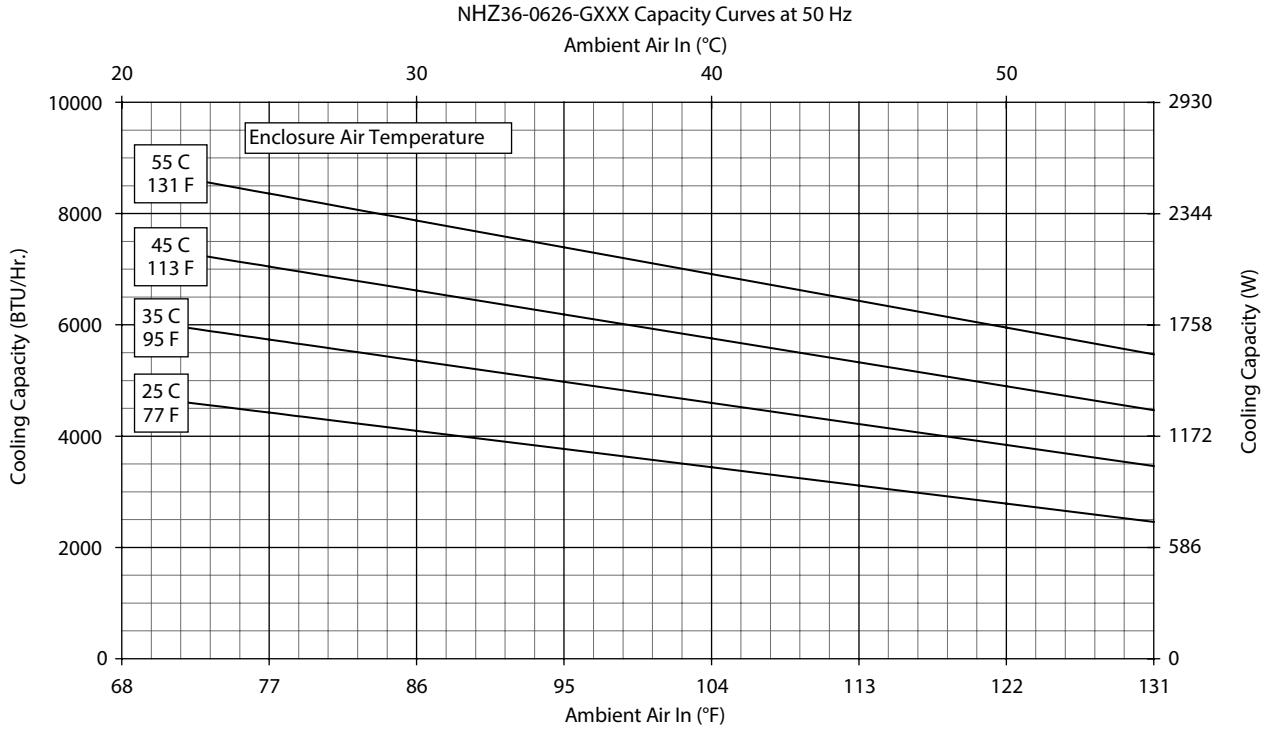
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

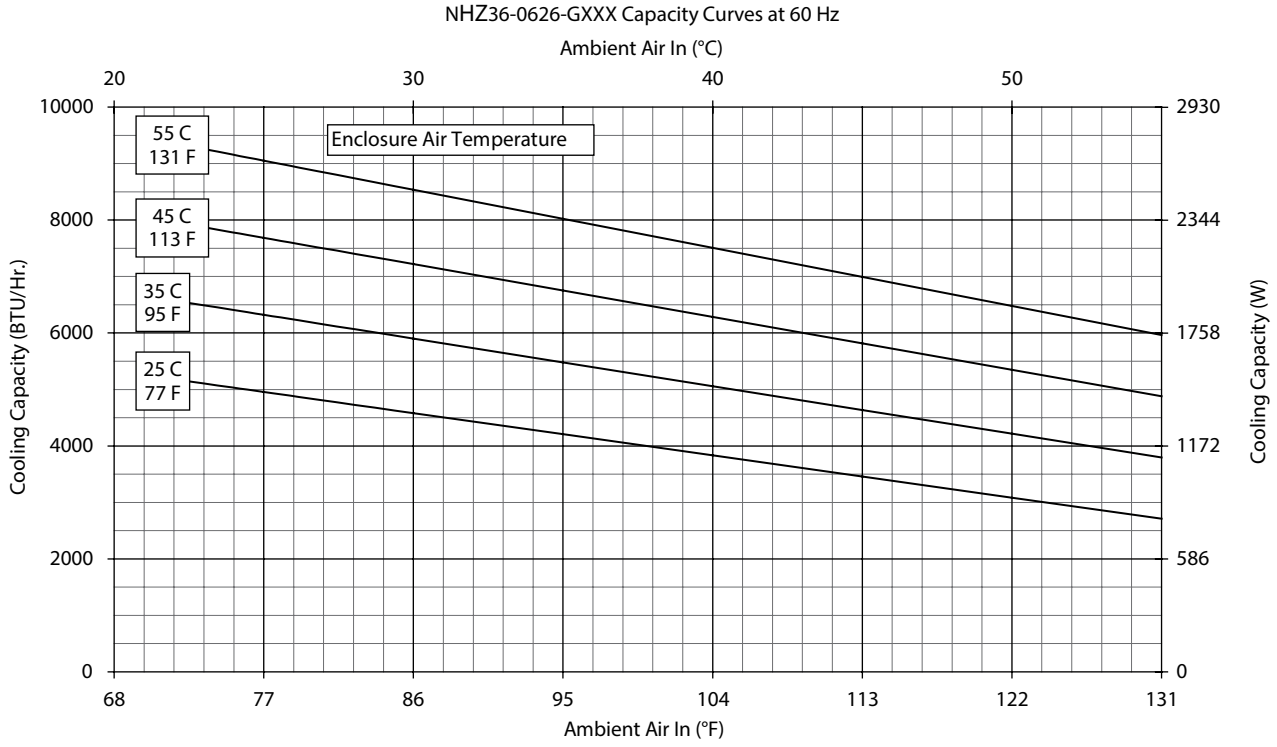
Performance Curves for NHZ36 Models 6000 BTU/Hr. (1758 Watt)





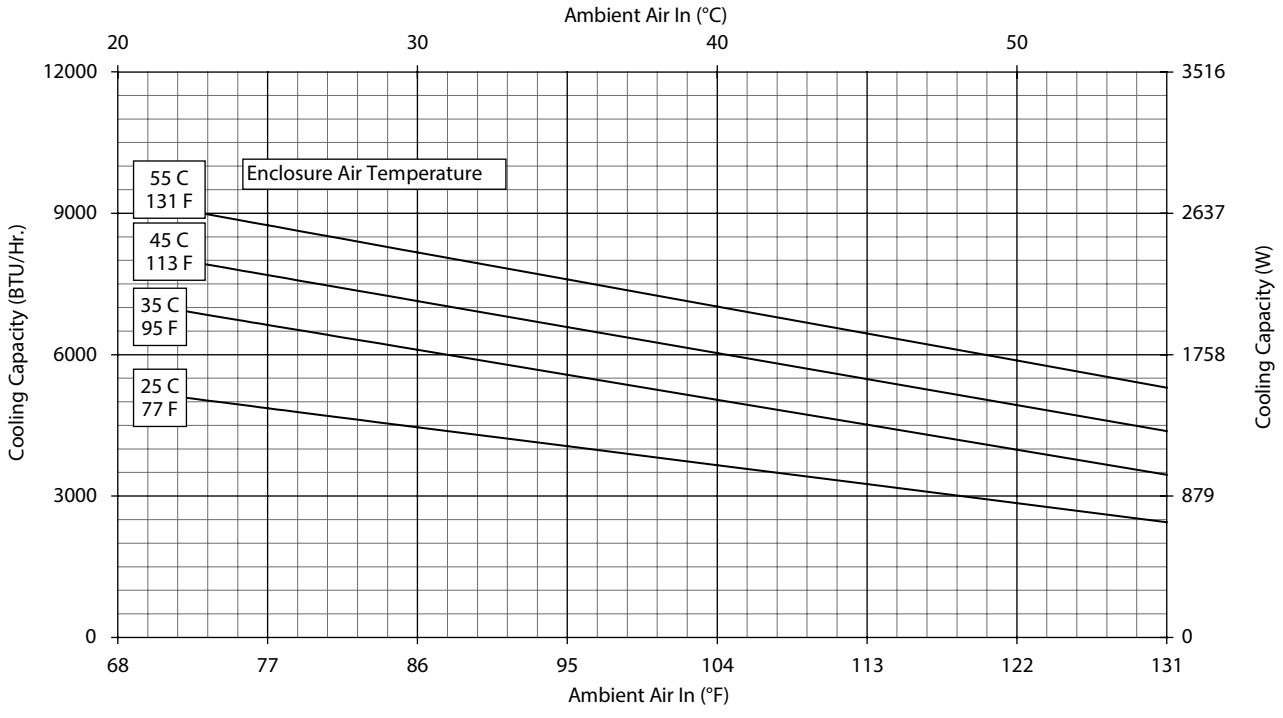
Performance Curves for NHZ36 Models 6000 BTU/Hr. (1758 Watt)



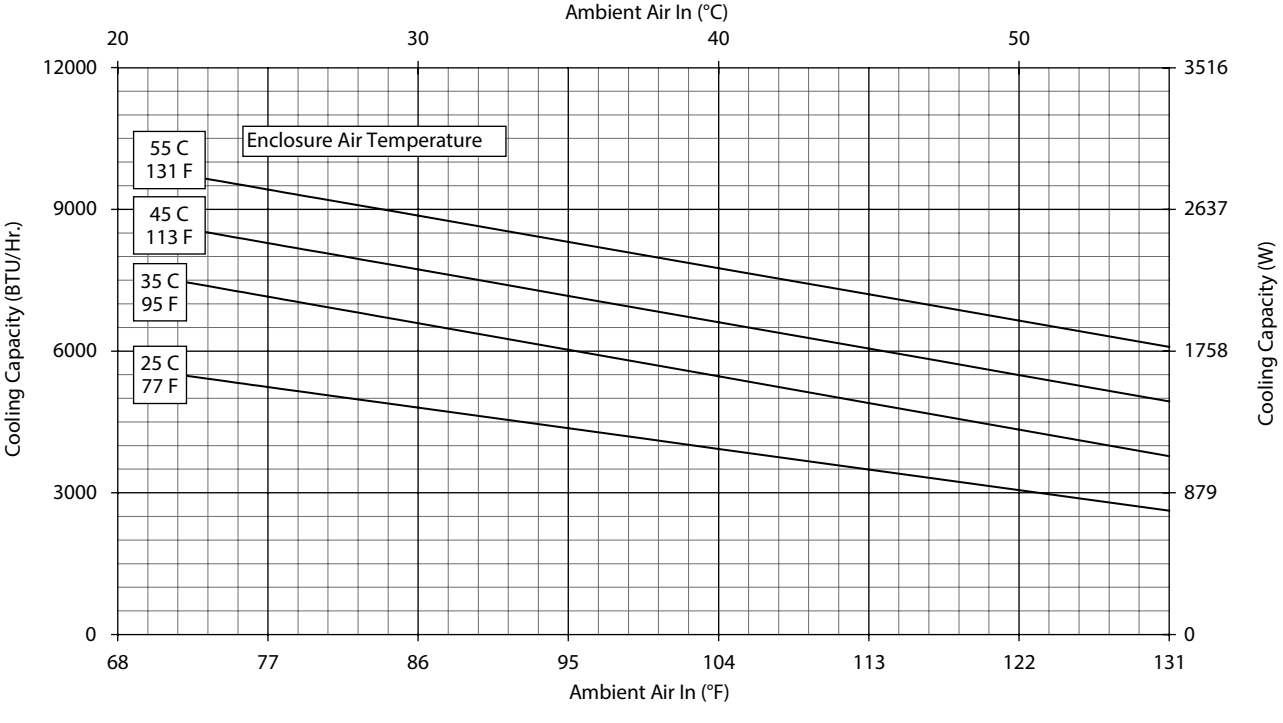


Performance Curves for NHZ36 Models 6000 BTU/Hr. (1758 Watt)

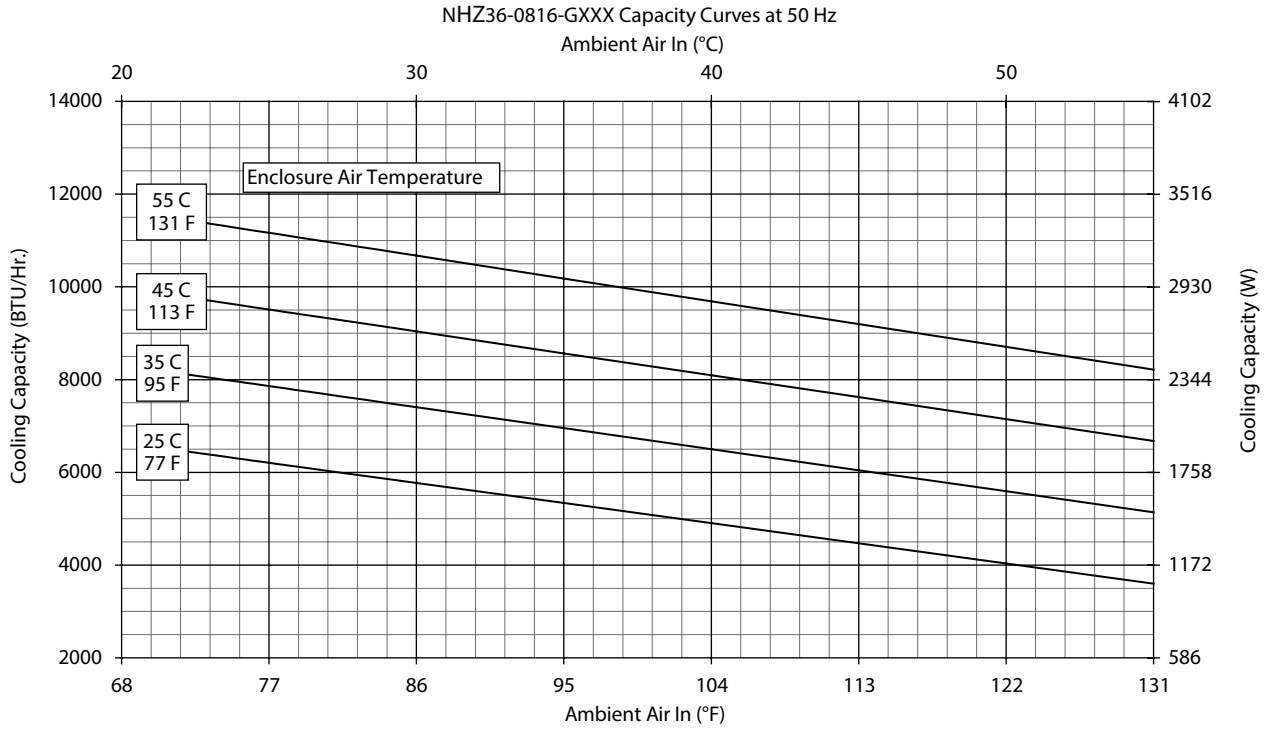
NHZ36-0646-GXXX Capacity Curves at 50 Hz

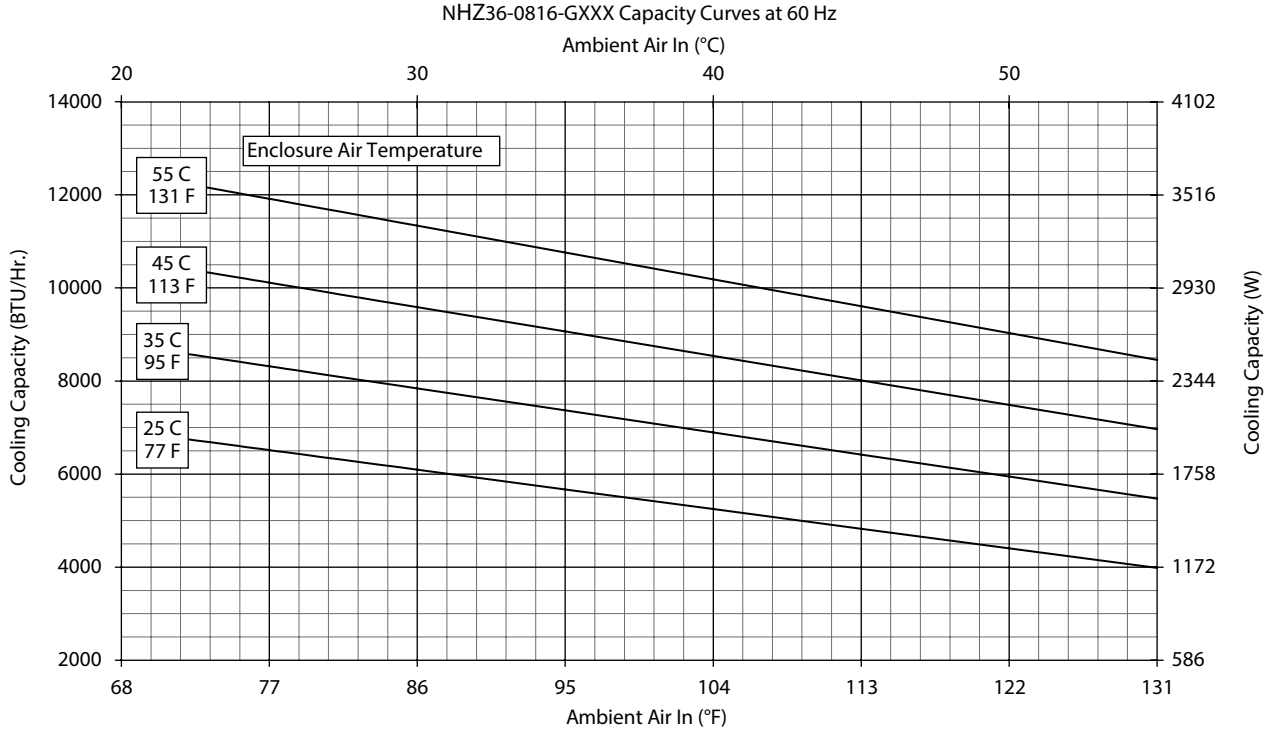


NHZ36-0646-GXXX Capacity Curves at 60 Hz

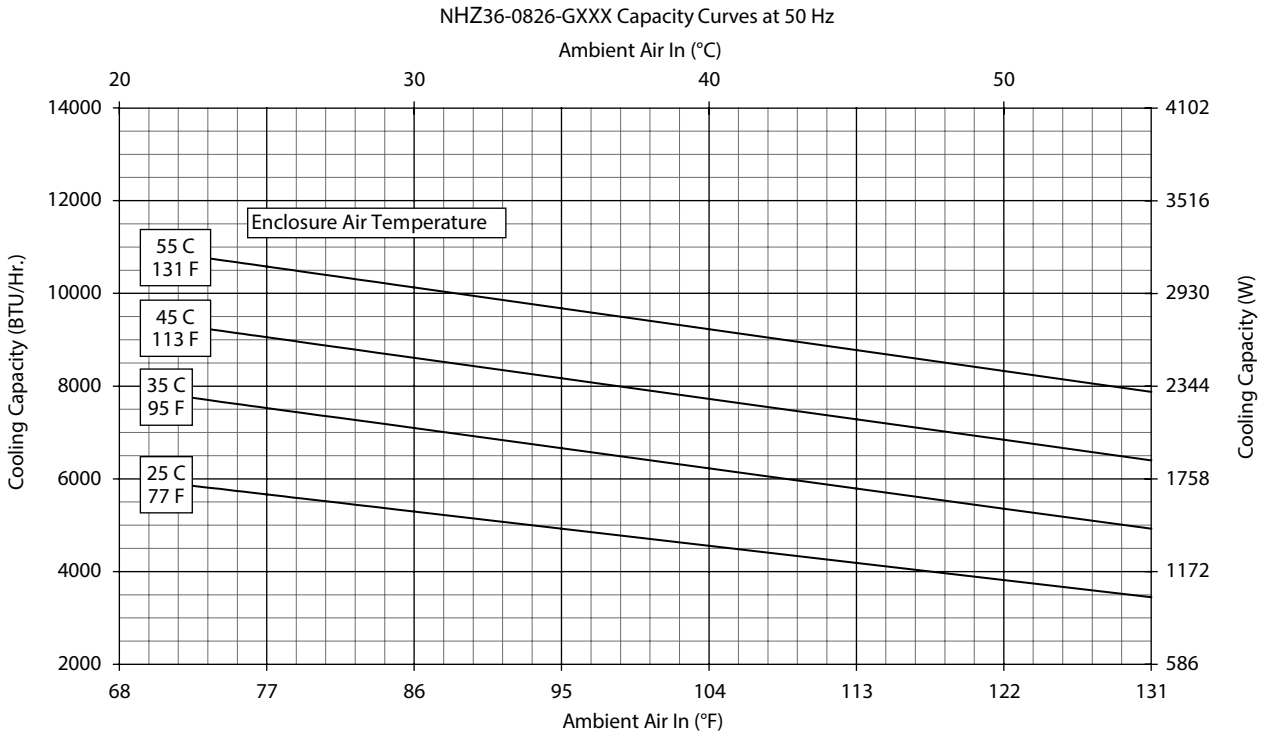


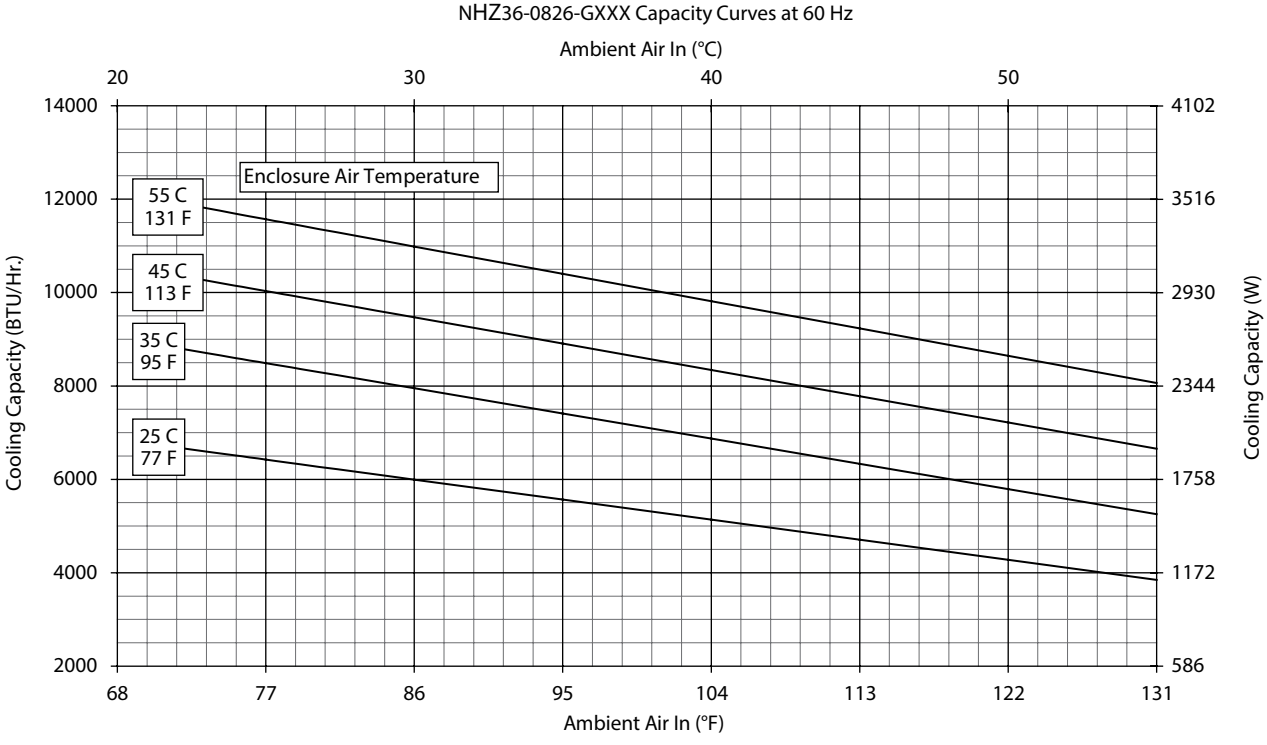
Performance Curves for NHZ36 Models 8000 BTU/Hr. (2344 Watt)



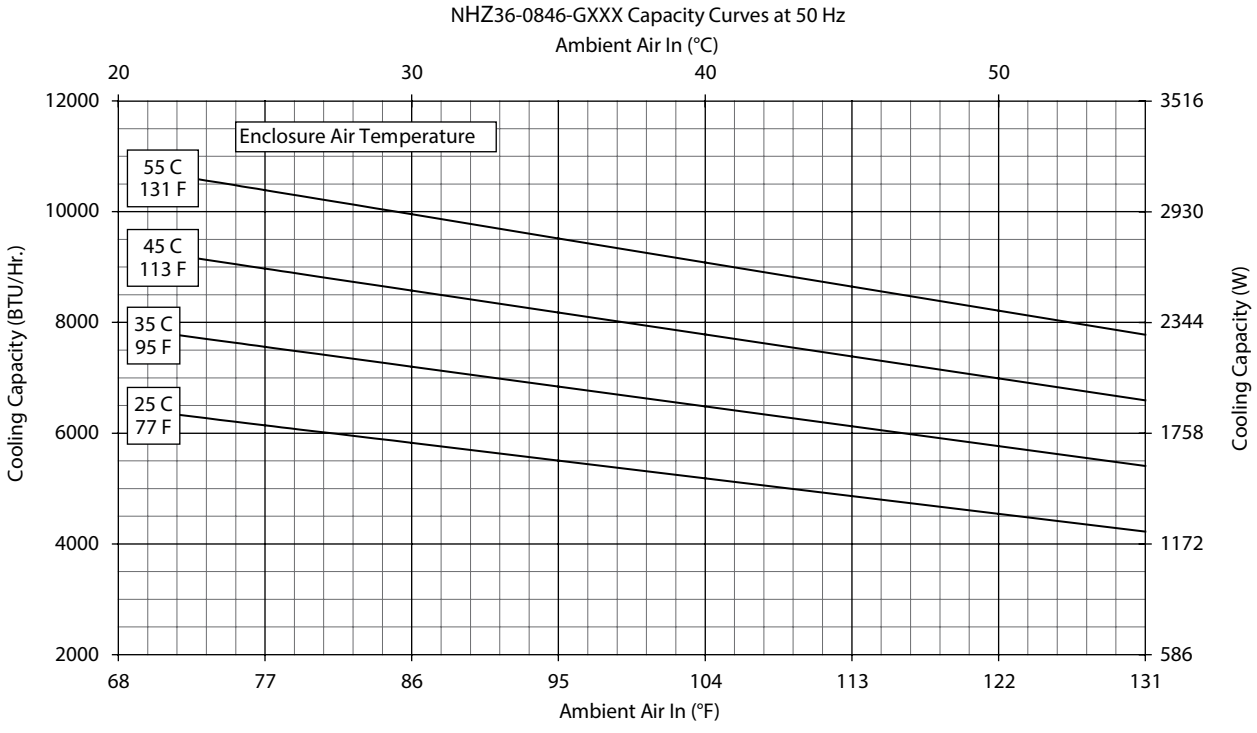


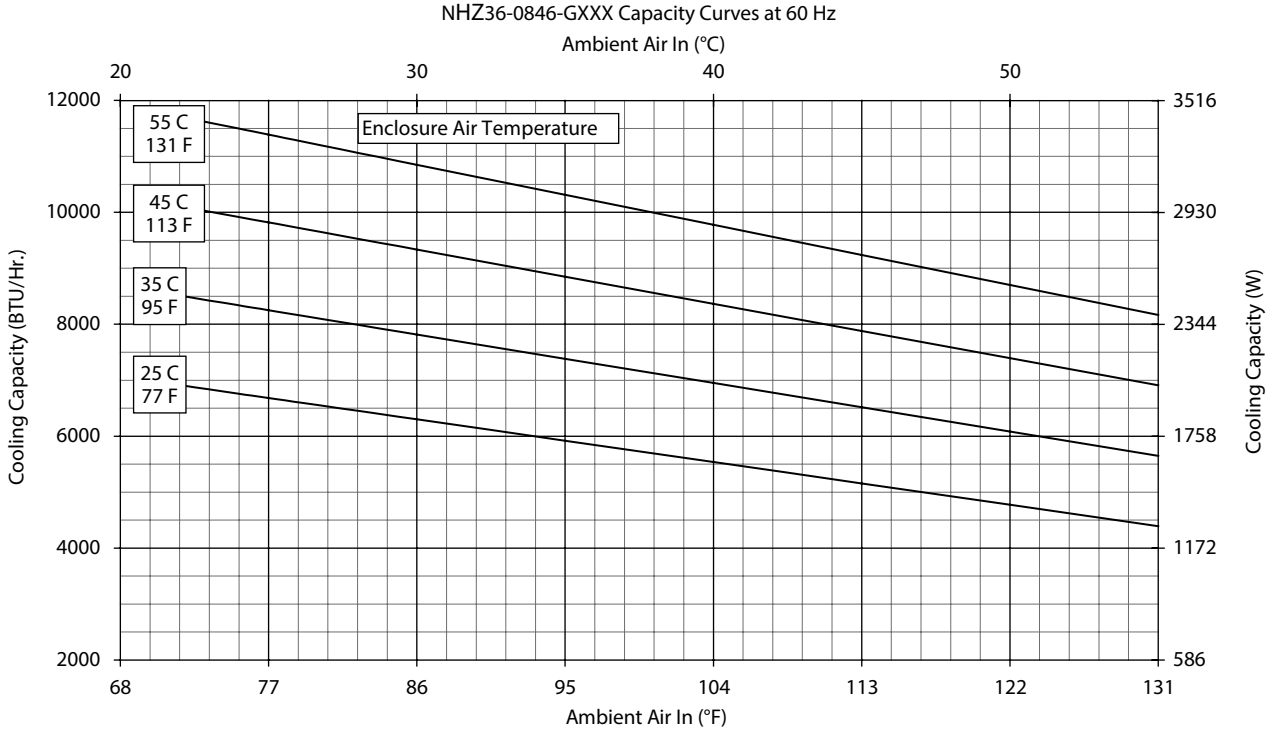
Performance Curves for NHZ36 Models 8000 BTU/Hr. (2344 Watt)



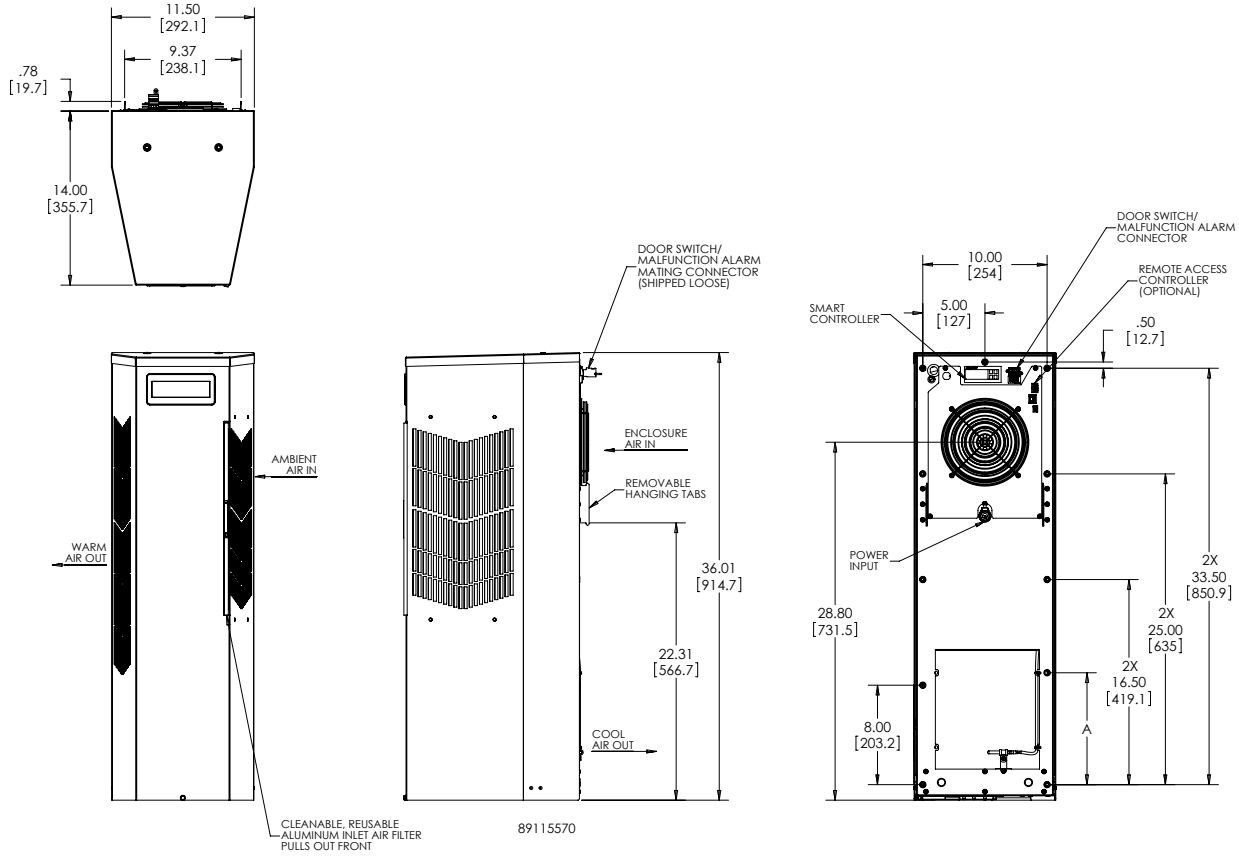


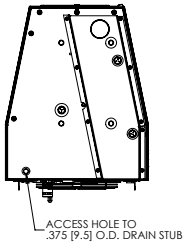
Performance Curves for NHZ36 Models 8000 BTU/Hr. (2344 Watt)

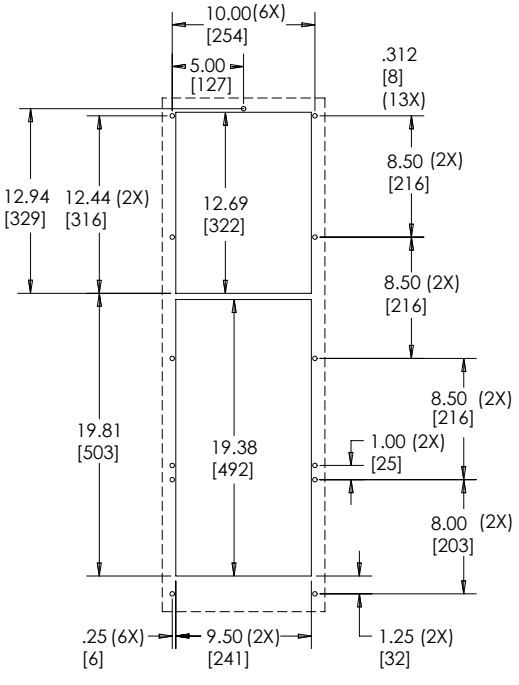




NHZ36 6000/8000 BTU/Hr. (1758/2344 Watt)







Cutout Dimensions

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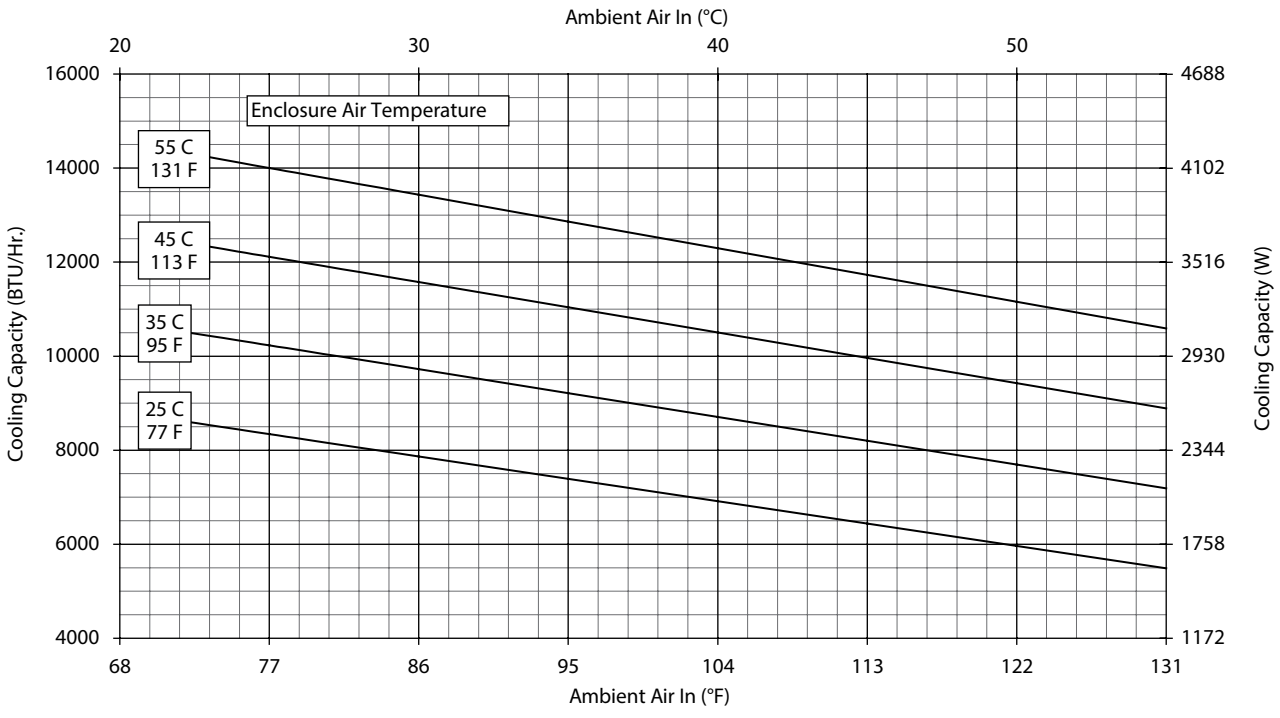
Performance Data **NHZ43 11000 BTU/Hr. (3223 Watt)**

CATALOG NUMBER			
Painted Galvanized Steel Type 4	NHZ431216G300	NHZ431226G300	NHZ431246G300
Painted Galvanized Steel Type 4 with Remote Access Control*	NHZ431216G360	NHZ431226G360	NHZ431246G360
Stainless Steel Type 4X	NHZ431216G400	NHZ431226G400	NHZ431246G400
Stainless Steel Type 4X with Remote Access Control*	NHZ431216G460	NHZ431226G460	NHZ431246G460
Stainless Steel Type 4X Offshore	NHZ431216G500	NHZ431226G500	NHZ431246G500
COOLING PERFORMANCE			
Nominal:			
BTUs/Hr.	**10400 / 11000**	**10400 / 11000**	**10400 / 11000**
Watts	**3047 / 3223**	**2900 / 3223**	**2900 / 3223**
At 131 F / 131 F (55 C / 55 C):			
BTU/Hr. (50 / 60 Hz)	10588 / 11180	9946 / 11052	10048 / 10797
Watts (50 / 60 Hz)	3103 / 3277	2915 / 3239	2945 / 3164
At 95 F / 95 F (35 C / 35 C):			
BTU/Hr. (50 /60 Hz)	9475 / 10023	8967 / 9644	8587 / 9559
Watts (50 / 60 Hz)	2777 / 2937	2628 / 2826	2517 / 2801
Refrigerant	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	36 / 1021	38 / 1077	41 / 1162
Operating Temperature Range:			
Maximum (°F / °C)	125 / 52	131 / 55	131 / 55
Minimum (°F / °C)	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / M^3/Hr)	239 / 406	259 / 440	254 / 432
External loop 50 Hz (CFM / M^3/Hr)	494 / 839	489 / 831	341 / 579
Internal loop 60 Hz (CFM / M^3/Hr)	250 / 425	267 / 454	260 / 442
External loop 60 Hz (CFM / M^3/Hr)	528 / 897	525 / 892	564 / 958
ELECTRICAL DATA			
Rated Voltage	115	230	400 / 460 3~
Frequency (Hz)	50 / 60	50 / 60	50 / 60
Operating Range	+/-10%	+/-10%	+/-10%
Max. Power Consumption (Watts at 50 / 60 Hz)	1620 / 2061	1802 / 2446	1294 / 1421
Max. Nominal Current (Amps at 50 / 60 Hz)	15.1 / 18.2	9.0 / 9.1	3.4 / 3.5
Starting Current (Amps)	57	38	16
Agency Approvals		cUL Listed CE Others available upon request	
Power Input Description		Terminal Block	
ENCLOSURE PROTECTION			
UL Type		Type 4, 4X Standard	
CONTROLLER			
Description		Digital Controller	
Controller Location		Enclosure Side	
Factory Controller Setting (°F / °C)		80 / 27	
SOUND LEVEL			
At 1.5 Meters	68.4 dBA	68.4 dBA	69.6 dBA
UNIT CONSTRUCTION			
Material		Galvanized Sheet Metal Type 4 Models Stainless steel 316L Type 4X and Offshore Models	
Finish		RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available	
UNIT DIMENSIONS			
Height (in / mm)		43.00 / 1092.2	
Width (in / mm)		11.50 / 292.1	
Depth (in / mm)		14.00 / 355.6	
Weight (lb / kg)	127/57.6	127/57.6	138/62.6

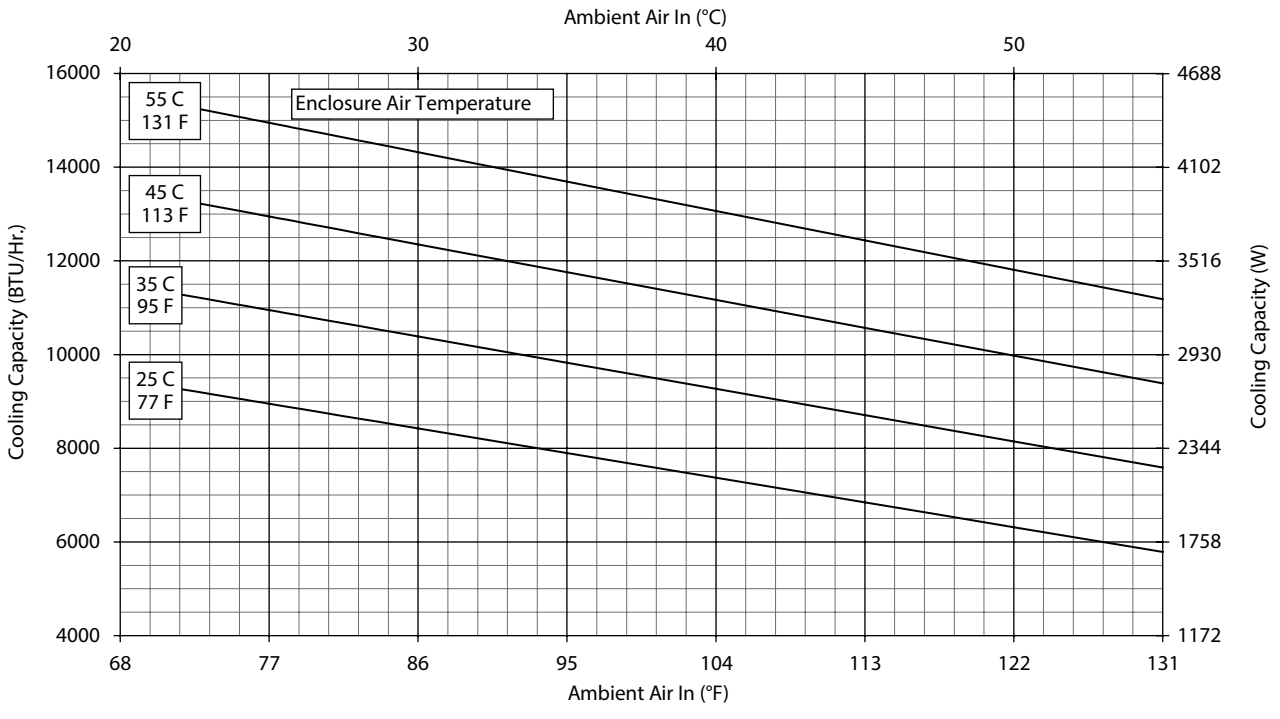
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

Performance Curves for NHZ43 Models 11000 BTU/Hr. (3223 Watt)

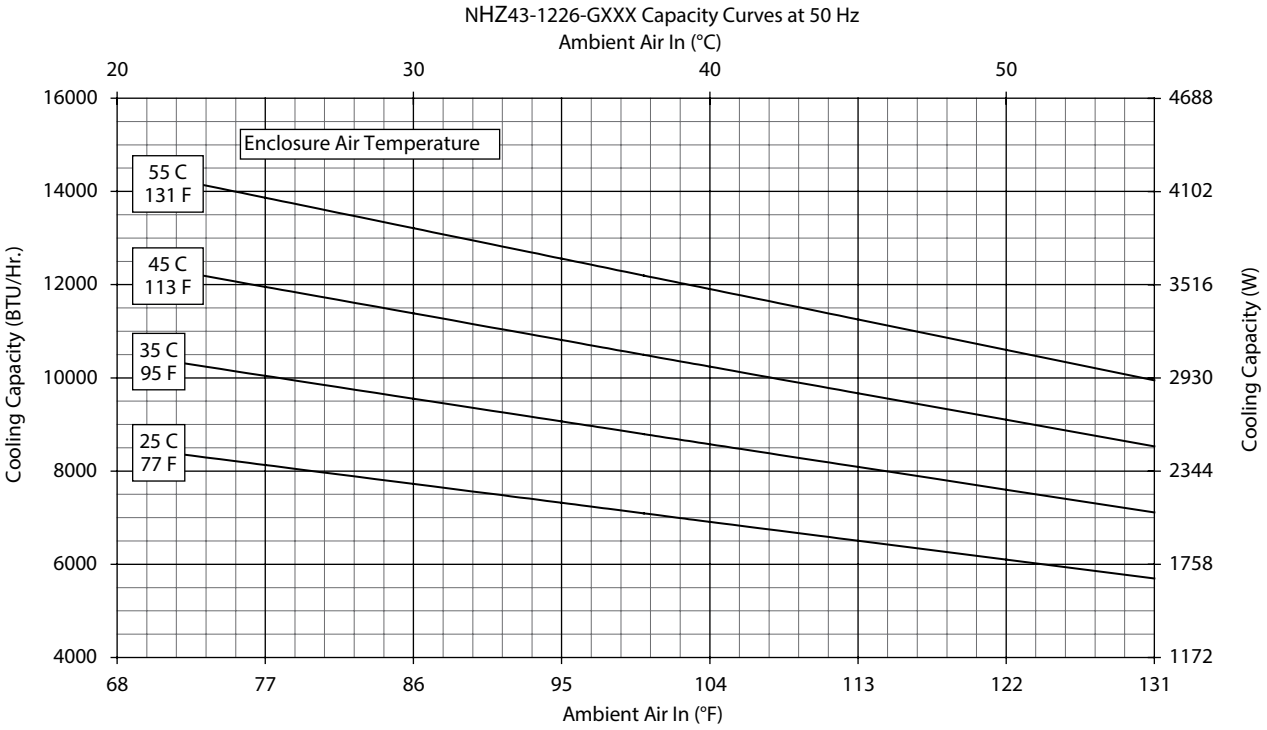
NHZ43-1216-GXXX Capacity Curves at 50 Hz

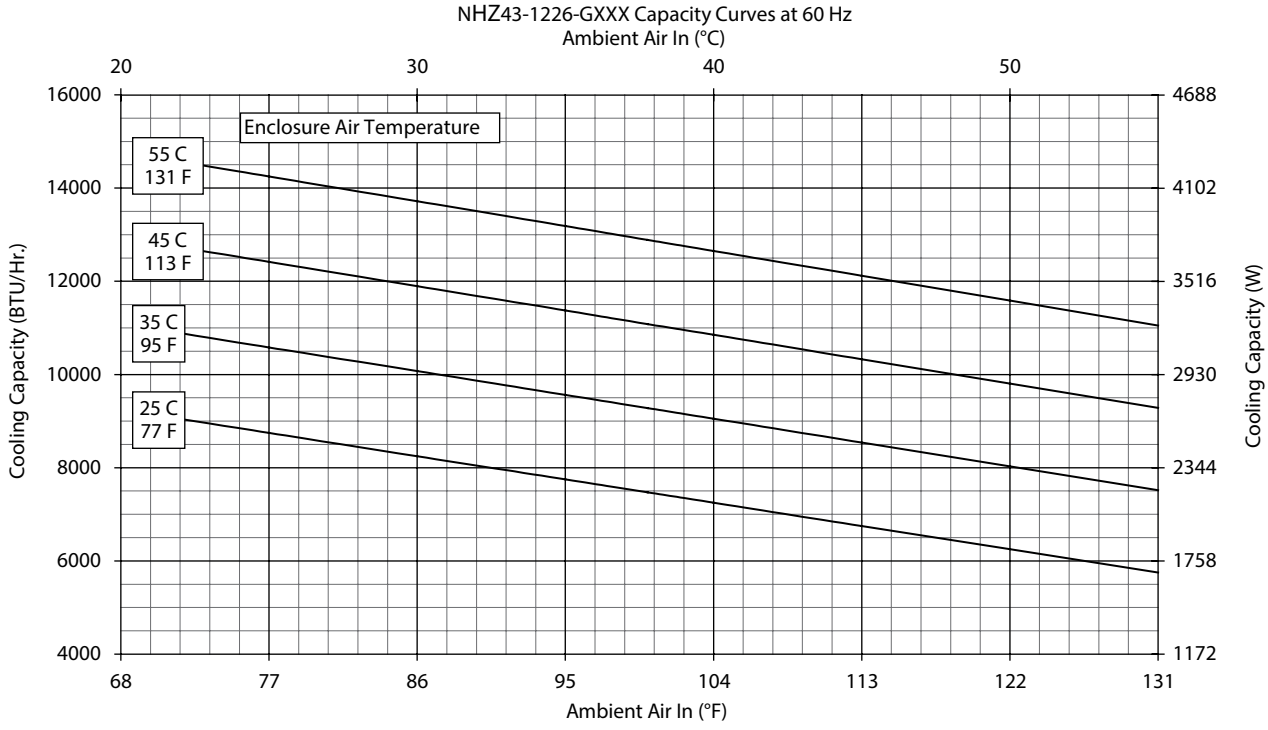


NHZ43-1216-GXXX Capacity Curves at 60 Hz

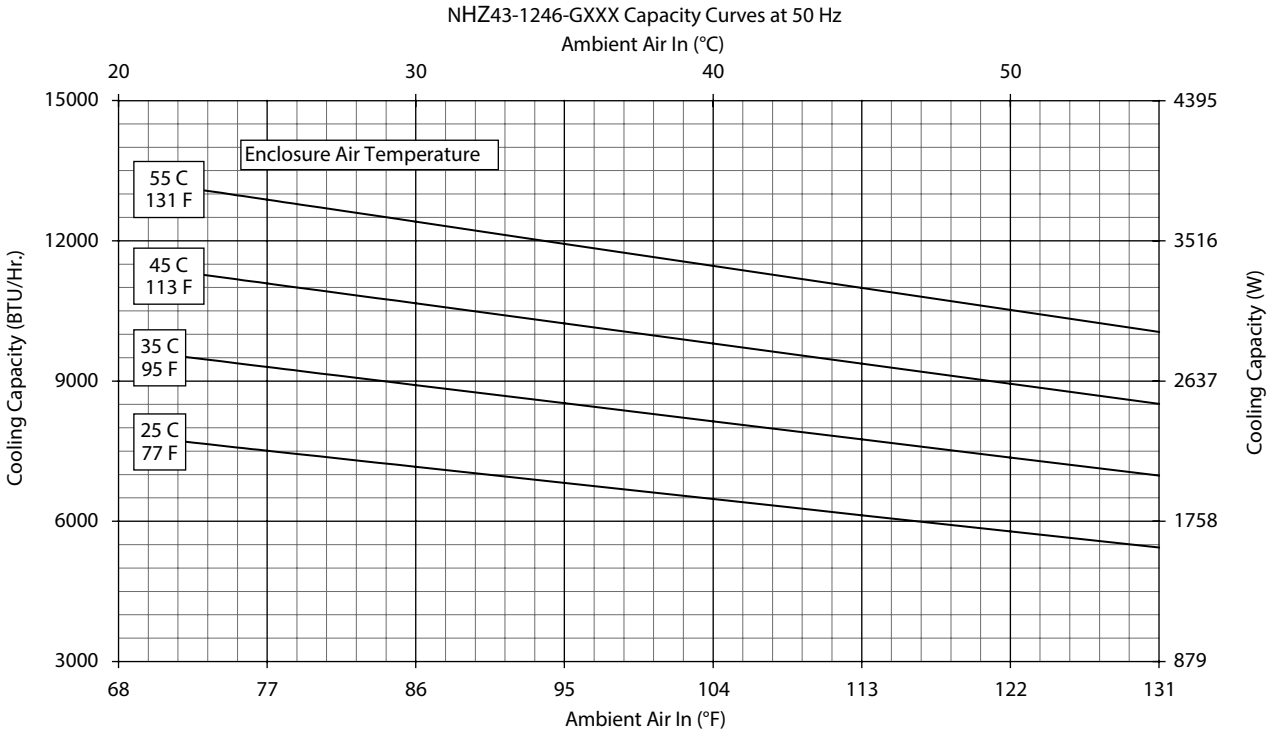


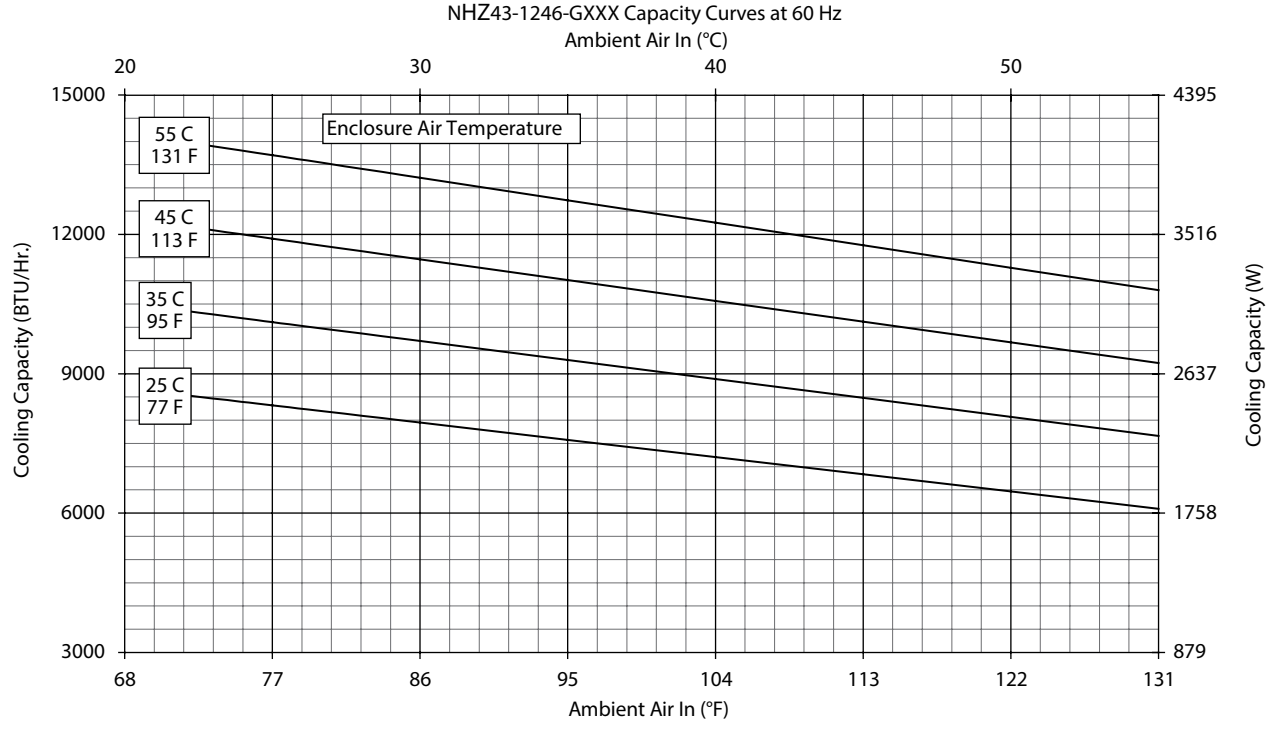
Performance Curves for NHZ43 Models 11000 BTU/Hr. (3223 Watt)



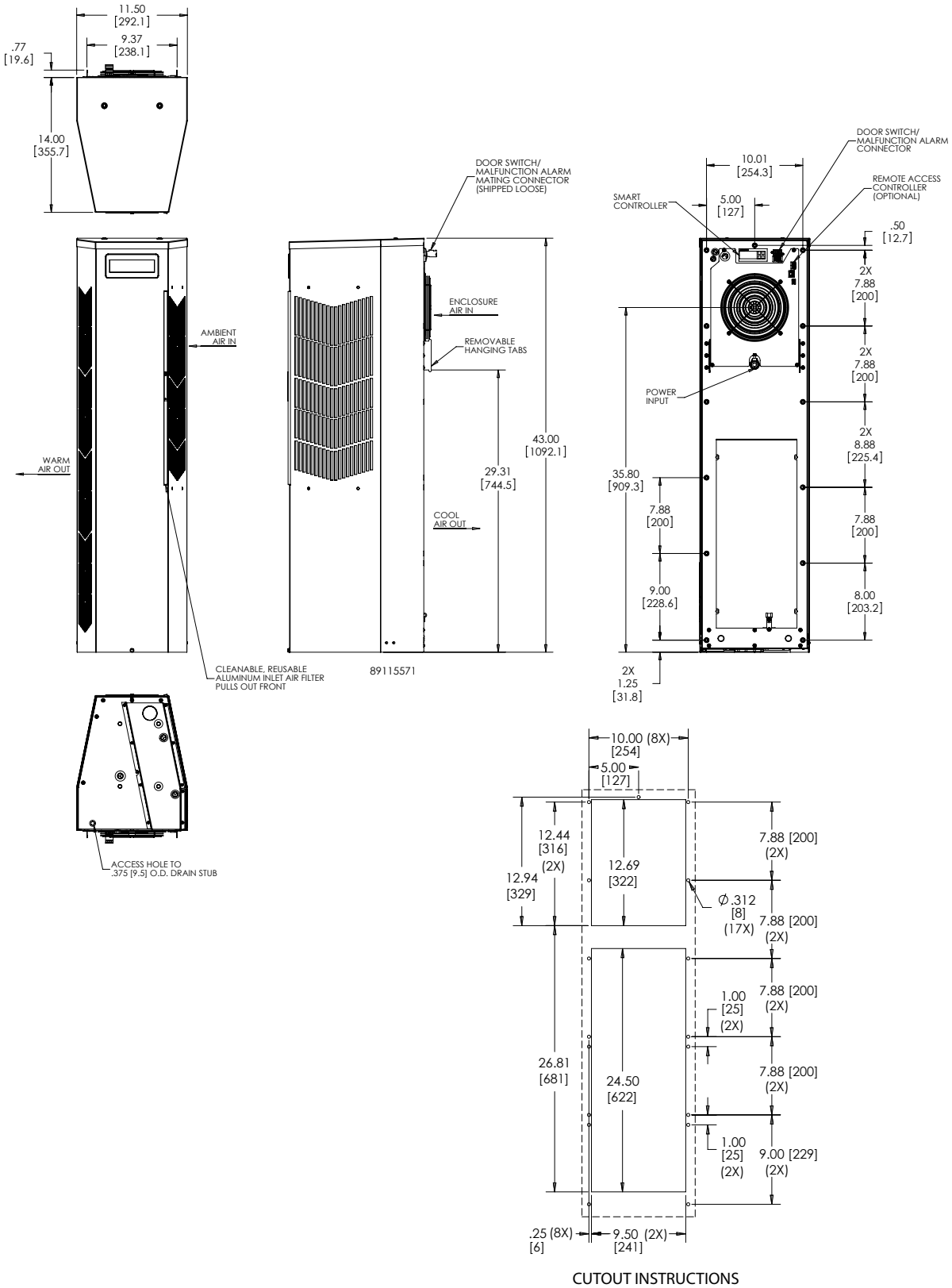


Performance Curves for NHZ43 Models 11000 BTU/Hr. (3223 Watt)





NHZ43 11000 BTU/Hr. (3223 Watt)



CUTOUT INSTRUCTIONS

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

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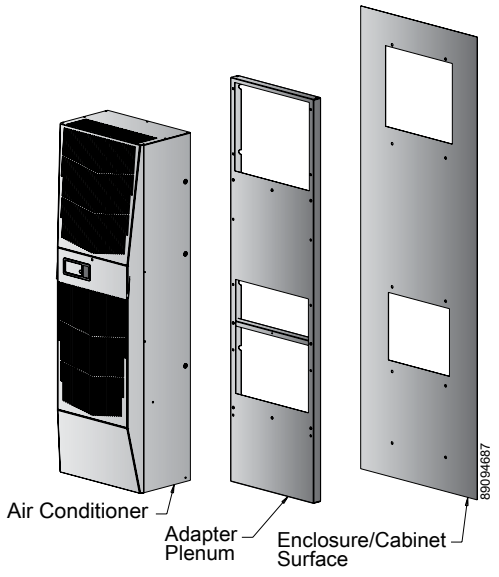
EASY SWAP ADAPTOR PLENUMS FOR AIR CONDITIONERS



INDUSTRY STANDARDS

Maintains NEMA Type 12 rating when properly installed on a Type 12 enclosure.
NEMA Type 12
IP 54

APPLICATION

When existing air conditioners are damaged or have reached end-of-life, EASY SWAP Adaptor Plenums provide a quick and easy means for attaching newer Hoffman air conditioners to the cutout left on the enclosure.

FEATURES

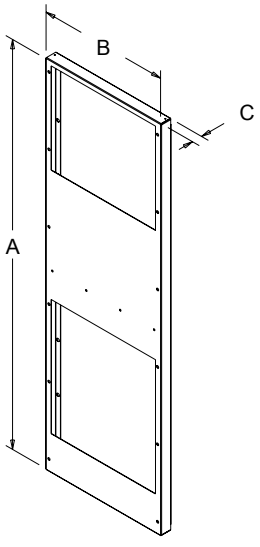
- No modification of the enclosure required - designed to match the enclosure cutout and mounting holes of the air conditioner being replaced
- Plenum design allows for optimum air flow (vs. a flat plate that can block the air intake and air outtake left by the older air conditioner)
- Gasket included

SPECIFICATIONS

- 18 gauge steel

FINISH

- Painted to match the standard Hoffman air conditioner color (light gray)
- Other colors available upon request



EASY SWAP Adaptor Plenum Cross Reference

Air Conditioner Manufacturer To Replace	Air Conditioner Series To Replace	Air Conditioner Part Number To Replace	Use This Hoffman Air Conditioner Catalog Number	With This Adaptor Plenum Catalog Number	Adaptor Plenum Dimensions AxBxC* (in./mm)
Hoffman/McLean	Genesis	M130116G1014	**N160116G050**	PLM13N16	17.65x14.25x2.62 448x362x67
Hoffman/McLean	Genesis	M130126G1008	**N160126G050**	PLM13N16	17.65x14.25x2.62 448x362x67
Hoffman/McLean	Genesis	M130146G1400	**N170146G010**	PLM13N17	17.65x14.25x1.50 448x362x38
Hoffman/McLean	Genesis	M170216G009	**N210216G050**	PL17N21	20.87x12.00x1.50 530x305x38
Hoffman/McLean	Genesis	M170226G004	**N210226G050**	PL17N21	20.87x12.00x1.50 530x305x38

Air Conditioner Manufacturer To Replace	Air Conditioner Series To Replace	Air Conditioner Part Number To Replace	Use This Hoffman Air Conditioner Catalog Number	With This Adaptor Plenum Catalog Number	Adaptor Plenum Dimensions AxBxC* (in./mm)
Hoffman/McLean	Genesis	M170246G400	**N170246G010**	Not Required	---
Hoffman/McLean	Genesis	M280216G013	**N170216G010**	PLM28N17	28.50x17.00x1.50 724x432x38
Hoffman/McLean	Genesis	M280226G004	**N170226G010**	PLM28N17	28.50x17.00x1.50 724x432x38
Hoffman/McLean	Genesis	M280246G400	**N170246G010**	PLM28N17	28.50x17.00x1.50 724x432x38
Hoffman/McLean	Genesis	M280416G007	**G280416G050**	PLM28G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	Genesis	M280426G032	**G280426G050**	PLM28G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	Genesis	M280446G400	**G280446G050**	PLM28G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	Genesis	M280616G005	**G280616G050**	PLM28G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	Genesis	M280626G005	**G280626G050**	PLM28G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	Genesis	M280646G400	**G280646G050**	PLM28G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	Genesis	M330416G010	**N280416G050**	PLM33N28	34.31x12.00x1.50 871x305x38
Hoffman/McLean	Genesis	M330426G009	**N280426G050**	PLM33N28	34.31x12.00x1.50 871x305x38
Hoffman/McLean	Genesis	M330446G400	**N280446G050**	PLM33N28	34.31x12.00x1.50 871x305x38
Hoffman/McLean	Genesis	M360616G307	**N360616G050**	PLM36N36	38.75x15.00x1.50 984x381x38
Hoffman/McLean	Genesis	M360626G306	**N360626G050**	PLM36N36	38.75x15.00x1.50 984x381x38
Hoffman/McLean	Genesis	M360646G400	**N360646G050**	PLM36N36	38.75x15.00x1.50 984x381x38
Hoffman/McLean	Genesis	M520816032	**G520816G050**	PLM52G52	52.56x17.03x1.50 1335x433x38
Hoffman/McLean	Genesis	M520826015	**G520826G050**	PLM52G52	52.56x17.03x1.50 1335x433x38
Hoffman/McLean	Genesis	M520846G002	**G520846G050**	PLM52G52	52.56x17.03x1.50 1335x433x38
Hoffman/McLean	Genesis	M521046G002	**G521246G050**	PLM52G52	52.56x17.03x1.50 1335x433x38
Hoffman/McLean	Genesis	M521216017	**G521216G050**	PLM52G52	52.56x17.03x1.50 1335x433x38
Hoffman/McLean	Genesis	M521226034	**G521226G050**	PLM52G52	52.56x17.03x1.50 1335x433x38
Hoffman/McLean	T-Series	T290416G100	**G280416G050**	PLT29G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	T-Series	T290416G150	**G280416G150**	PLT29G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	T-Series	T290426G100	**G280426G050**	PLT29G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	T-Series	T290426G150	**G280426G150**	PLT29G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	T-Series	T290446G400	**G280446G050**	PLT29G28	28.50x17.00x1.50 724x432x38
Hoffman/McLean	HC52	HC52 SERIES	**G57XXXXXXXX**	PLHC52G57	57.60x22.97x1.50 1463x583x38
Hoffman/McLean	HC52	HC52 SERIES	**T53XXXXXXXX**	PLHC52T53	52.85x23.00x1.50 1342x584x38
Hoffman/McLean	Proair	CR23SS	**N21SS**	PLCR23N21SS	23.00x10.00x1.50 548x254x38
Hoffman/McLean	Proair	CR23 (painted)	**N21**	PLCR23N21	23.00x10.00x1.50 548x254x38
Hoffman/McLean	SpectraCool	N17SS	**N21SS**	PL17N21SS	20.87x12.00x1.50 530x305x38
Hoffman/McLean	SpectraCool	N17 (painted)	**N21**	PL17N21	20.87x12.00x1.50 530x305x38

*Prior to ordering, ensure Adaptor Plenum dimensions do not exceed available space on the enclosure mounting surface.
Please contact Customer Service for support in finding an appropriate cross for older Hoffman/McLean models not shown above.

For a list of EASY SWAP Adaptor Plenums to fit other manufacturers' air conditioners, please visit nVent.com/HOFFMAN

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T-SERIES COMPACT OUTDOOR

T15
800 BTU/Hr.
234 Watts

T20
2000 BTU/Hr.
586 Watts

INDUSTRY STANDARDS

UL/cUL Listed; Type 12, 3R, 4; 4X optional; File No. SA6453
UR/cUR Recognized

UR/cUR Recognized on select models, reference performance data tables.
CE
EAC
Telcordia GR-487 capable

APPLICATION

- Industrial automation
- Telecommunications equipment
- Package handling equipment
- Security and defense systems
- And more

FEATURES

- Stock models equipped with head pressure control for low-ambient operation, compressor heater, coated condenser coil, malfunction switch, thermostat and heater package
- R134A earth-friendly refrigerant
- Models for 115, 230 and 460 VAC power input
- UL Listed to save customers time and money with agency approvals (some models UL recognized)
- Outdoor model operating temperature range from -40 F/-40 C to 131 F/55 C
- Exterior and fully recessed mounting options on many models
- Compact footprint to minimize real estate and maximize capacity
- Reliable mechanical thermostat on enclosure side of the unit
- Dual condenser-side air movers for performance redundancy
- Painted galvanized sheet-metal cover for rugged factory and outdoor environments
- Easy-mount flanges for simple installation
- Cleanable, reusable aluminum mesh filter protects coils for maximum cooling performance
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Standard Outdoor Air Conditioner models also include:
  - Telcordia GR-487 capable
  - Thermostat
  - Corrosion-resistant components
  - Malfunction switch
  - Compressor heater
  - Head pressure control
  - Enclosure heater

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint
- Other colors and textures available

OPTIONS

- Thermostat Malfunction Package
- Special Voltage Package
- Outdoor Package
- Harsh Environment Package*
- Stainless Steel Package*
- Heater Package

* PROAIR A/C may be more appropriate. Refer to PROAIR A/C Chapter. Consult the Factory for availability and catalog number.

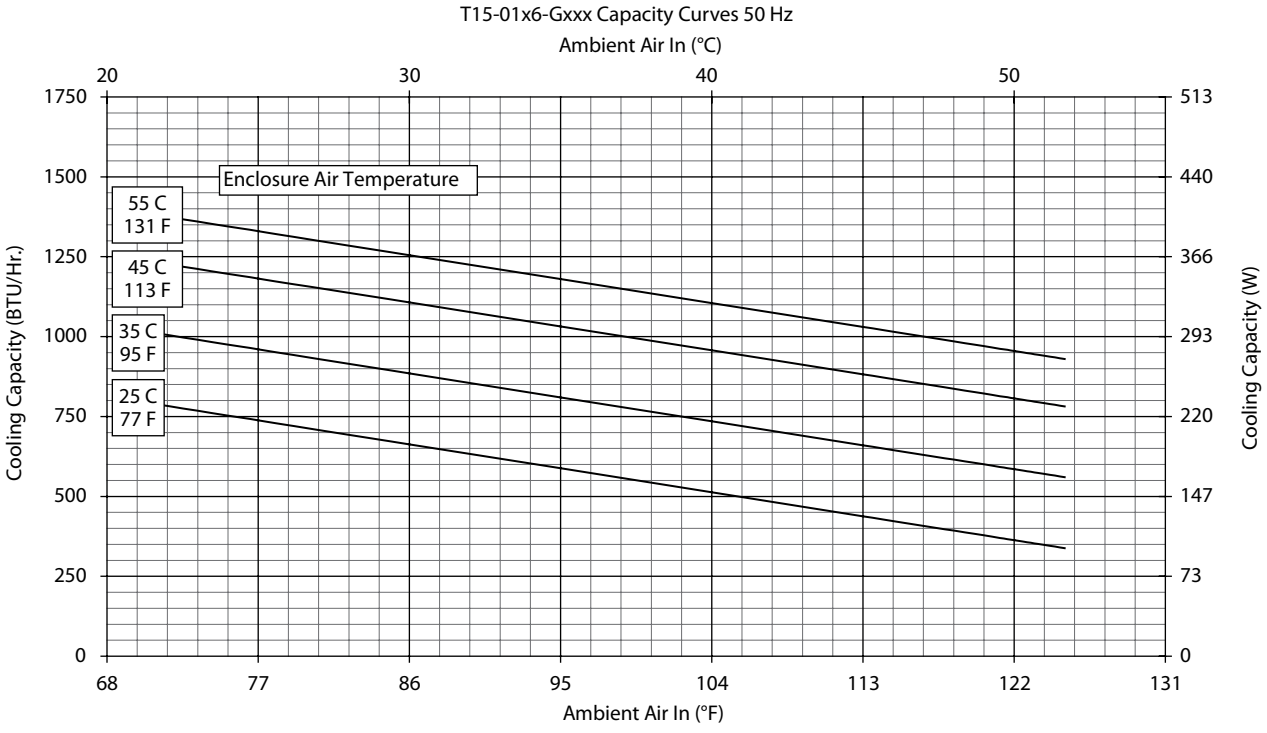
NOTES

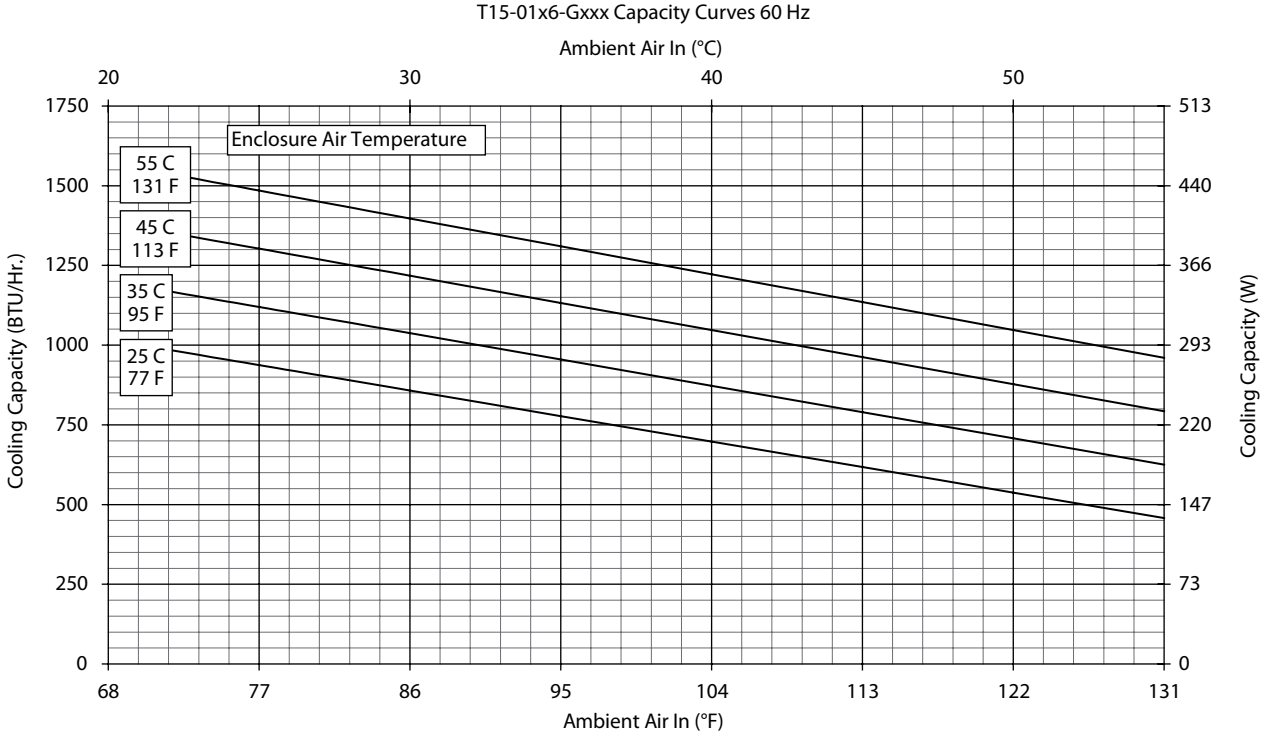
Visit **nVent.com/HOFFMAN** to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **T15 800 BTU/Hr. (234 Watt) Models**

CATALOG NUMBER		
Indoor Model	T150116G120	T150126G120
Outdoor Model without Heat Pkg.	T150116G100	T150126G100
Outdoor Model with Heat Pkg.	T150116G150	T150126G150
Outdoor Model/SST/Corrosion/4X	T150116G152	T150126G104
Outdoor Model/SST/Corrosion/4X/Heater	T150116G151	—
COOLING PERFORMANCE		
Nominal:		
BTU/Hr.	**800/800**	**800/900**
Watts	**235/235**	**235/264**
At 131 F/131 F (55 C/55 C):		
BTU/Hr. (50/60 Hz)	819	920/960
W (50/60 Hz)	240	270/281
At 95 F/95 F (35 C/35 C):		
BTU/Hr. (50 /60 Hz)	948	810/955
W (50/60 Hz)	278	237/280
Refrigerant	R-134A	R-134A
Refrigerant Charge (ounces/grams)	4/113	3.8/107
Operating Temperature Range:		
Maximum (°F/°C)	131/55	125/131/52/55
Minimum (°F/°C)	-40/-40	-40/-40
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	25/42	25/42
External loop 50 Hz (CFM / m^3/hr.)	48/82	48/82
Internal loop 60 Hz (CFM / m^3/hr.)	30/51	30/51
External loop 60 Hz (CFM / m^3/hr.)	53/90	53/90
Max. Heater W (Outdoor Models)	150	150
ELECTRICAL DATA		
Rated Voltage	**100/115**	**220/230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	360/403	330/345
Max. Nominal Current (A at 50/60 Hz)	3.6/3.5	1.5/1.5
Starting Current (A)	8.0/9.2	3.3/3.1
Agency Approvals	UL/cUL Listed CE EAC Others available upon request	
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional	
CONTROLLER		
Description	Basic mechanical thermostat	
Thermostat Location	Enclosure behind front panel	
Factory Thermostat Setting (°F/°C)	80/27	
SOUND LEVEL		
At 1.5 Meters	63 dB(A)	
UNIT CONSTRUCTION		
Material	Galvanized sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	15.75/400	
Width (in./mm)	7.5/191	
Depth (in./mm)	6.3/160	
Weight (lb./kg)	27/12	

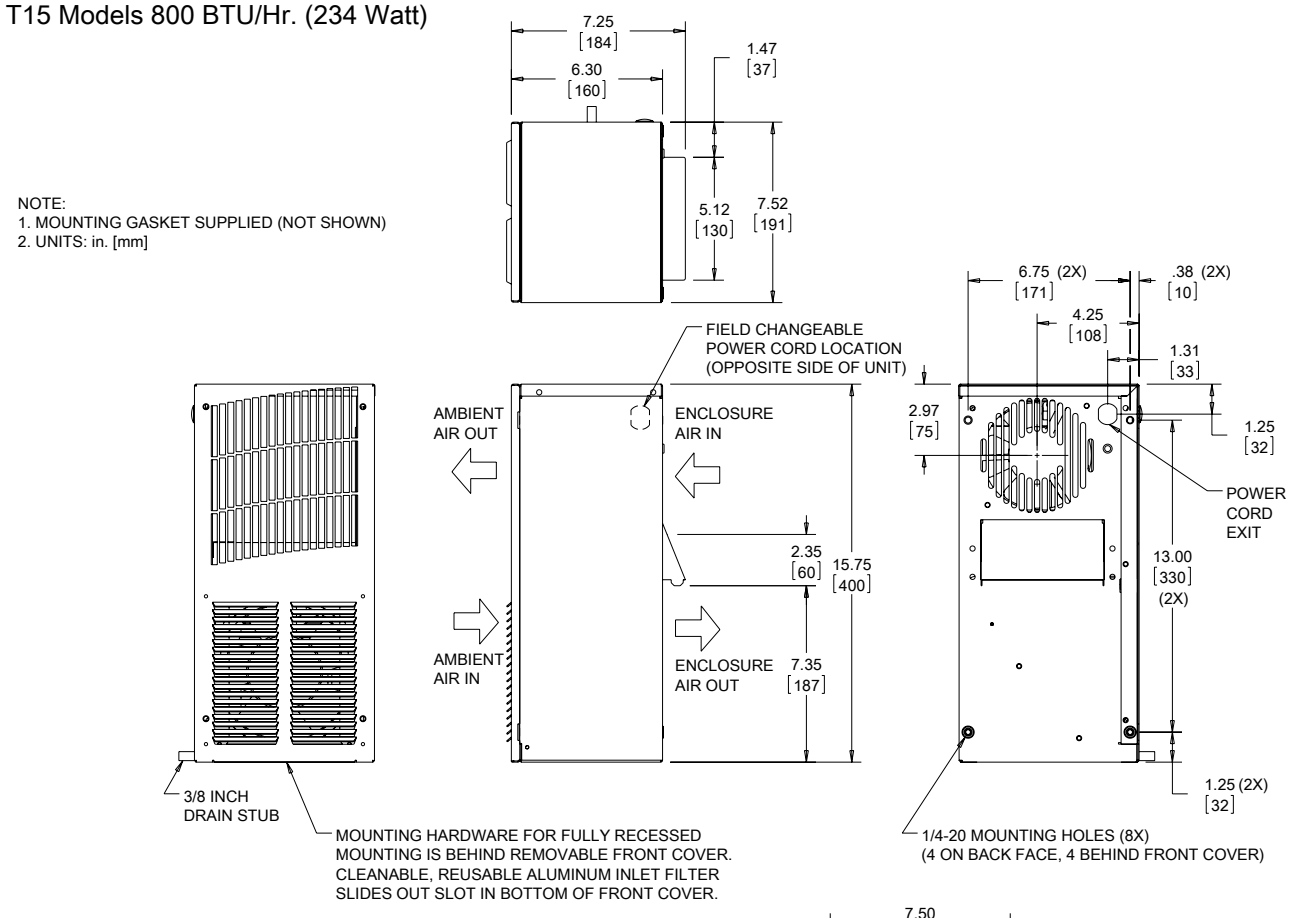
Performance Curves for T15 Models 800 BTU/Hr. (234 Watt)

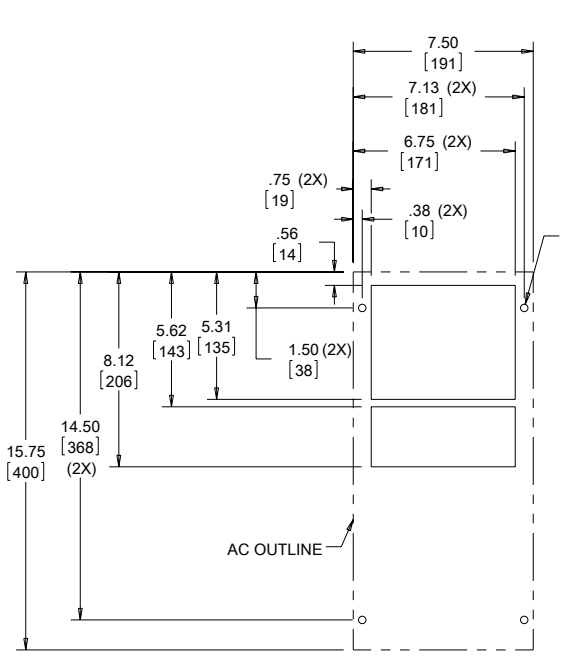




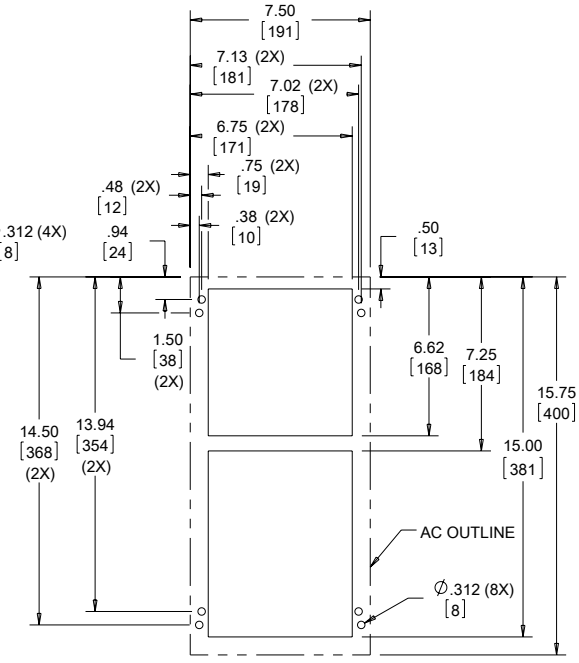
T15 Models 800 BTU/Hr. (234 Watt)

NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]





Cutout Dimensions (Externally Mounted)



Cutout Dimensions (Internally Mounted)

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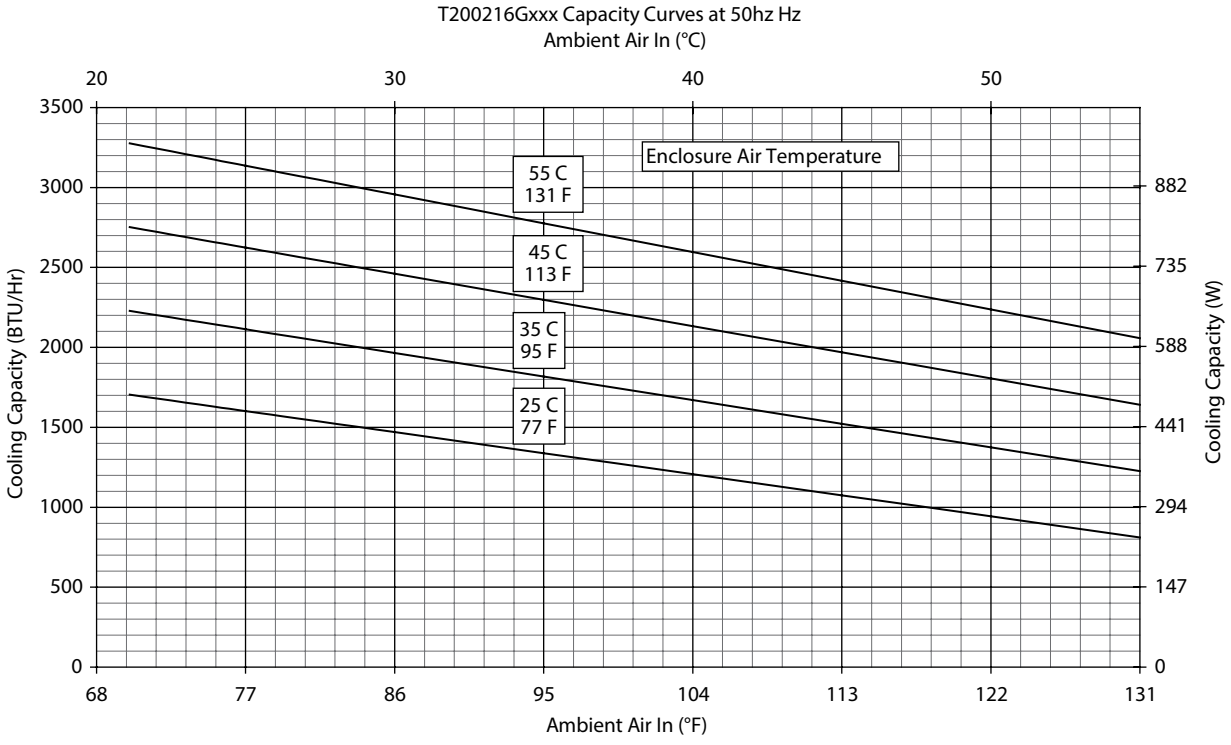
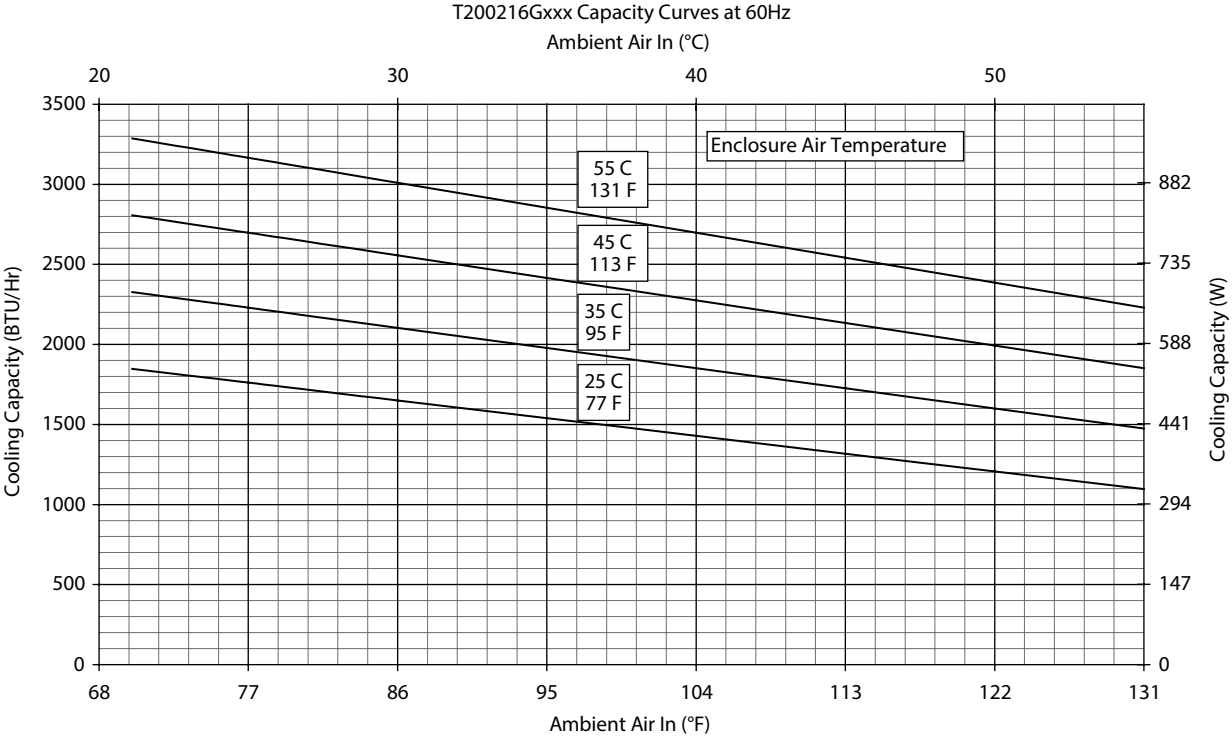
Performance Data **T20 2000 BTU/Hr. (586 Watt) Models**

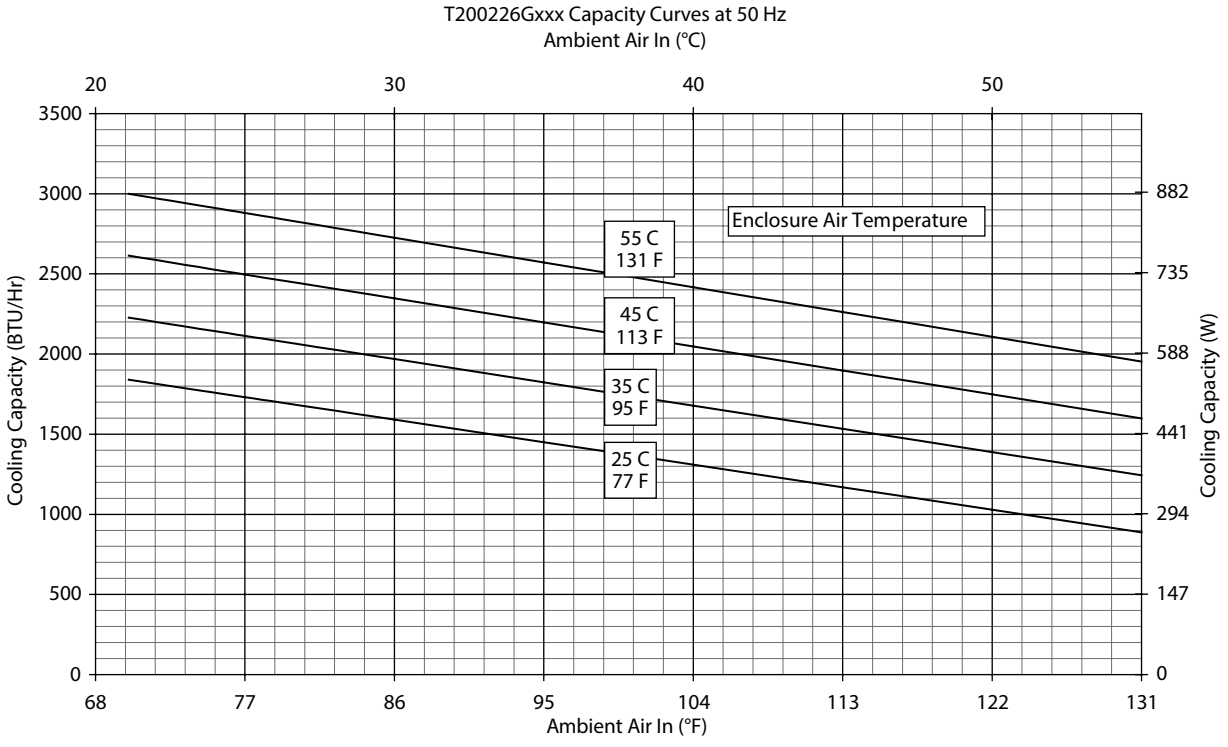
CATALOG NUMBER			
Outdoor Model without Heat Pkg.	T200216G100	T200226G100	T200246G400
Outdoor Model with Heat Pkg.	T200216G150	T200226G150	—
Outdoor Model/SST/Corrosion/4X	T200216G155	T200226G103	T200246G401
Outdoor Model/SST/Corrosion/4X/Heater	T200216G157	T200226G158	—
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**1800/2000**	**1800/2000**	**1800/2000**
Watts	**528/586**	**528/586**	**528/586**
At 131 F/131 F (55 C/55 C):			
BTU/Hr. (50/60 Hz)	2000/2175	2000/2175	2000/2175
W (50/60 Hz)	586/637	586/637	586/637
At 95 F/95 F (35 C/35 C):			
BTU/Hr. (50/60 Hz)	1950/2200	1950/2200	1950/2200
W (50/60 Hz)	571/645	571/645	571/645
Refrigerant	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	6.5/184	6.5/184	6.5/184
Operating Temperature Range:			
Maximum (°F/°C)	131/55	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / m^3/hr.)	77/131	77/131	77/131
External loop 50 Hz (CFM / m^3/hr.)	150/255	150/255	150/255
Internal loop 60 Hz (CFM / m^3/hr.)	91/155	91/155	91/155
External loop 60 Hz (CFM / m^3/hr.)	165/280	165/280	165/280
Max. Heater W (Outdoor Models)	500	500	500
ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	700/805	805	874
Max. Nominal Current (A at 50/60 Hz)	7.0/7.0	3.5/3.5	1.9
Starting Current (A)	19	7.6	7.2
Agency Approvals	UL/cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION			
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional		
CONTROLLER			
Description	Basic mechanical thermostat		
Thermostat Location	Enclosure side on all base models		
Factory Thermostat Setting (°F/°C)	80/27		
SOUND LEVEL			
At 1.5 Meters	66 dB(A)		
UNIT CONSTRUCTION			
Material	Galvanized sheet metal standard Stainless steel optional		
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		
UNIT DIMENSIONS			
Height (in./mm)	20/508	20/508	24.25/615.95
Width (in./mm)	10/254	10/254	10/254
Depth (in./mm)	9.9/251	9.9/251	9.9/251
Weight (lb./kg)	56/25	56/25	66/30

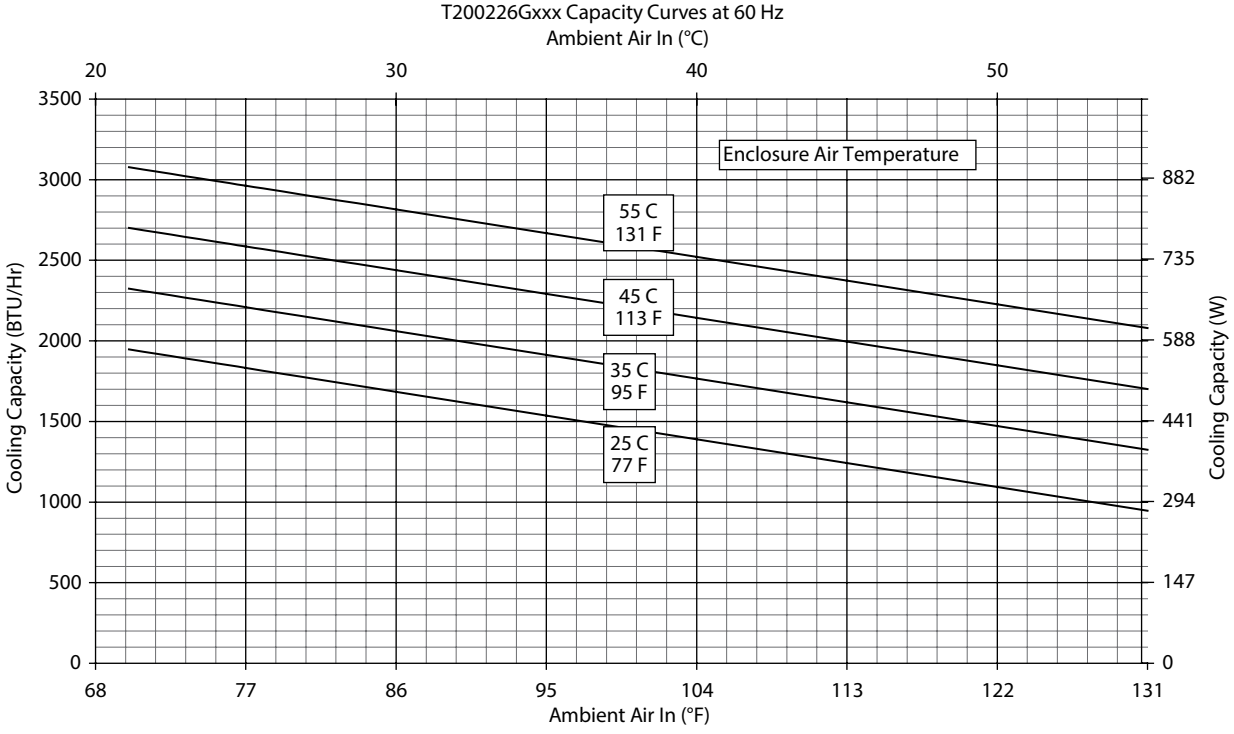
Performance Curves for T20 Models 2000 BTU/Hr. (586 Watt)



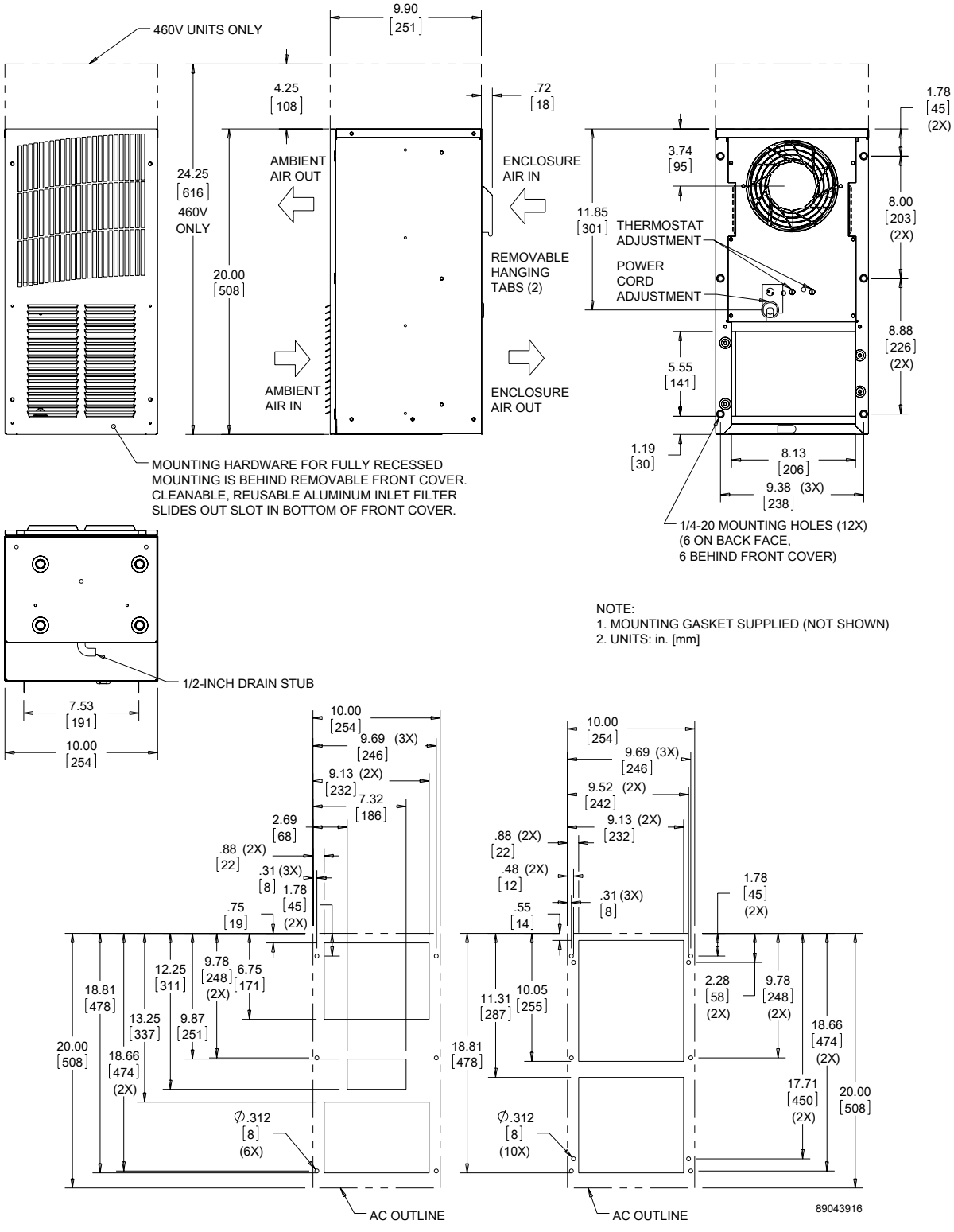


Performance Curves for T20 Models 2000 BTU/Hr. (586 Watt)





T20 Models 2000 BTU/Hr. (586 Watt)



Cutout Dimensions (Externally Mounted)

Cutout Dimensions (Internally Mounted)

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

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T-SERIES MID-SIZE OUTDOOR

T29
4000 BTU/Hr.
1173 Watts

T43
6000, 8000, 10000 BTU/Hr.
1758, 2344, 2930 Watts

T50
12000 BTU/Hr.
3516 Watts

T53
19000 BTU/Hr.
5567 Watts

INDUSTRY STANDARDS

UL/cUL Listed; Type 12, 3R, 4; 4X optional; File No. SA6453
UR/cUR Recognized

UR/cUR Recognized on select models, reference performance data tables.
CE
EAC
Telcordia GR-487 capable

APPLICATION

- Industrial automation
- Telecommunications equipment
- Package handling equipment
- Security and defense systems
- And more

FEATURES

- Stock models equipped with head pressure control for low-ambient operation, compressor heater, coated condenser coil, malfunction switch, thermostat and heater package
- R134A or R-407C earth-friendly refrigerant
- Models for 115, 230 and 460 VAC power input
- UL Listed to save customers time and money with agency approvals (some models UL recognized)
- Outdoor model operating temperature range from -40 F/-40 C to 131 F/55 C
- Exterior and fully recessed mounting options on many models
- Compact footprint to minimize real estate and maximize capacity
- Reliable mechanical thermostat on enclosure side of the unit
- Dual condenser-side air movers for performance redundancy
- Painted galvanized sheet-metal cover for rugged factory and outdoor environments
- Easy-mount flanges for simple installation
- Cleanable, reusable aluminum mesh filter protects coils for maximum cooling performance
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Standard Outdoor Air Conditioner models also include:
  - Telcordia GR-487 capable
  - Thermostat
  - Corrosion-resistant components
  - Malfunction switch
  - Compressor heater
  - Head pressure control
  - Enclosure heater

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint
- Other colors and textures available

OPTIONS

- Thermostat Malfunction Package
- Special Voltage Package
- Outdoor Package
- Harsh Environment Package*
- Stainless Steel Package*
- Heater Package

* PROAIR Harsh Environment air conditioner may be more appropriate. Refer to PROAIR Harsh Environment air conditioner catalog section. Consult the Factory for availability and catalog number.

NOTES

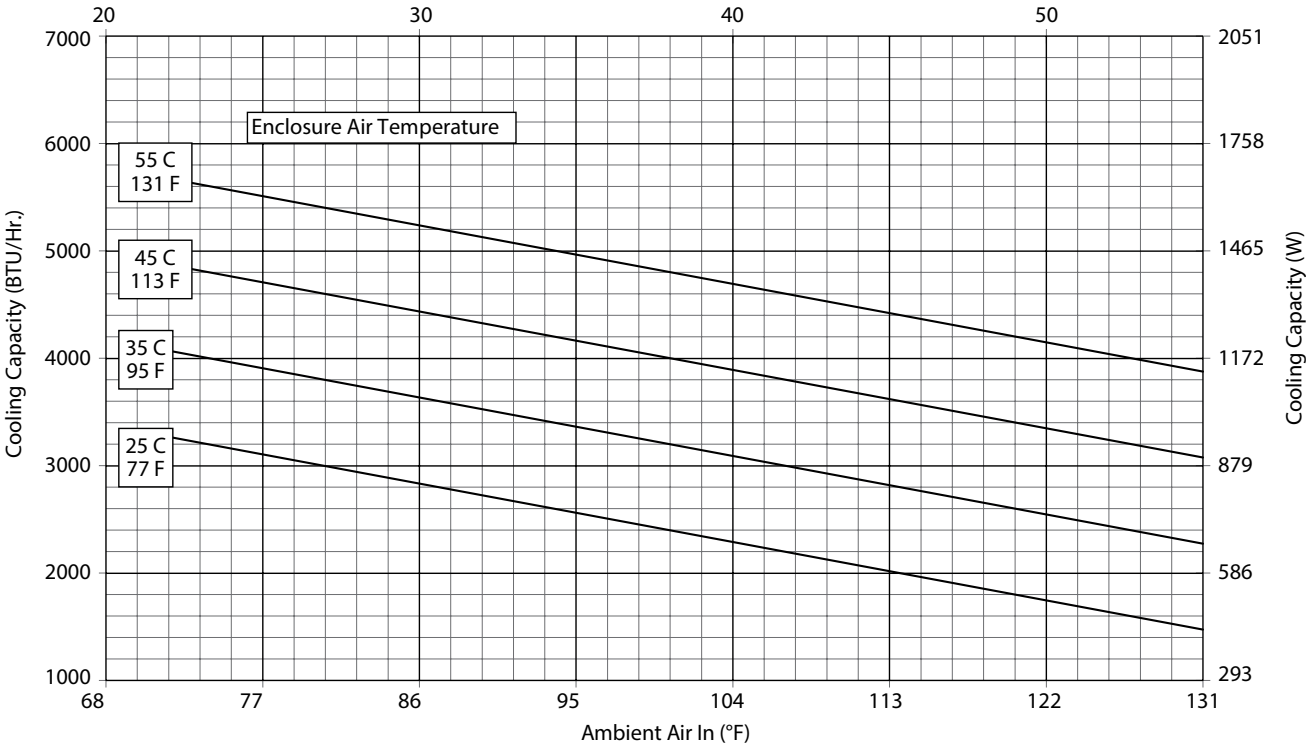
Visit **nVent.com/HOFFMAN** to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **T29 4000 BTU/Hr. (1173 Watt) Models**

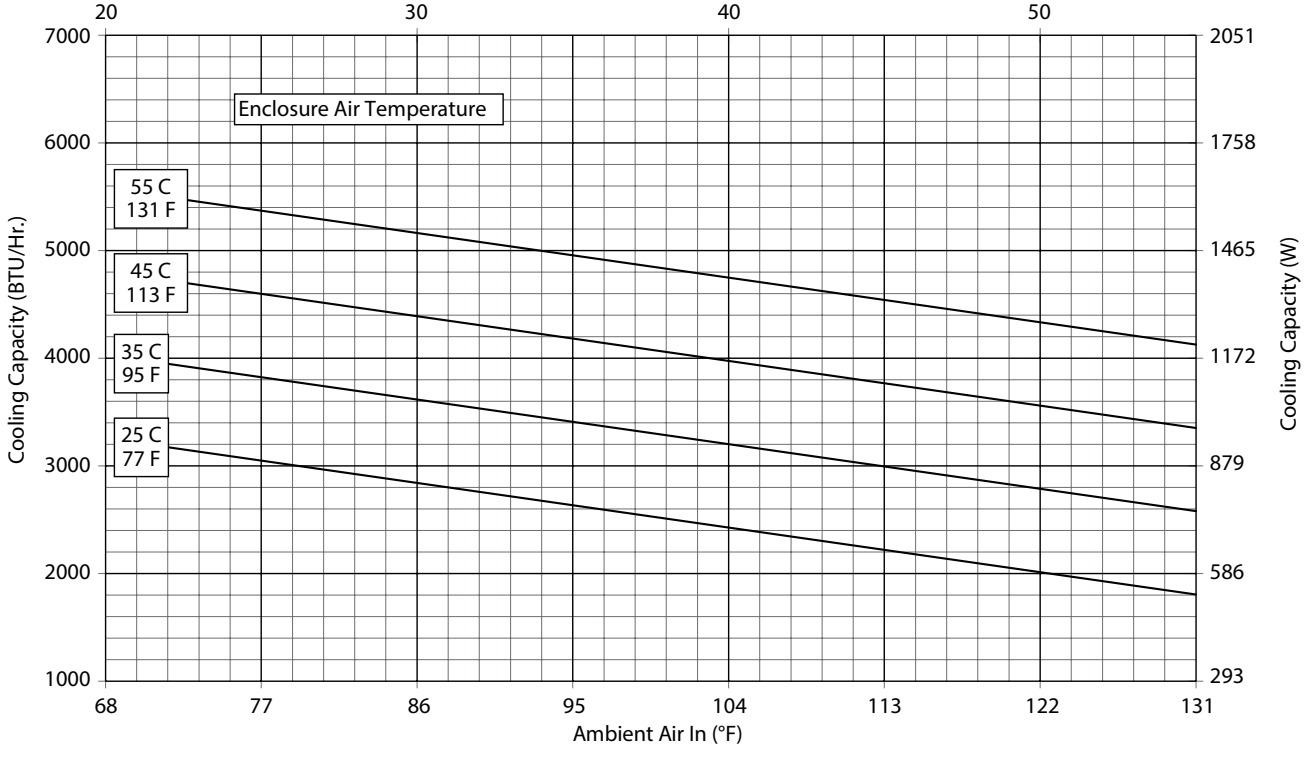
CATALOG NUMBER			
Outdoor Model without Heat Pkg.	T290416G100	T290426G100	T290446G400
Outdoor Model with Heat Pkg.	T290416G150	T290426G150	—
Outdoor Model/SST/Corrosion/4X	T290416G159	T290426G161	—
Outdoor Model/SST/Corrosion/4X/Heater	T290416G156	T290426G160	T290446G403
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**3600/4000**	**3600/4000**	**3600/4000**
Watts	**1055/1172**	**1055/1172**	**1055/1172**
At 131 F/131 F (55 C/55 C):			
BTU/Hr. (50/60 Hz)	3950/4250	3950/4250	3950/4250
W (50/60 Hz)	1157/1245	1157/1245	1157/1245
At 95 F/95 F (35 C/35 C):			
BTU/Hr. (50 /60 Hz)	3500/3900	3500/3900	3500/3900
W (50/60 Hz)	1025/1143	1025/1143	1025/1143
Refrigerant	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	12.5/354	14.3/404	14.3/404
Operating Temperature Range:			
Maximum (°F/°C)	131/55	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / m^3/hr.)	172/292	172/292	172/292
External loop 50 Hz (CFM / m^3/hr.)	195/331	195/331	195/331
Internal loop 60 Hz (CFM / m^3/hr.)	205/348	205/348	205/348
External loop 60 Hz (CFM / m^3/hr.)	235/399	235/399	235/399
Max. Heater W (Outdoor Models)	1000	1000	
ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1163/1222	1587/1564	1748
Max. Nominal Current (A at 50/60 Hz)	13.8/12.8	6.9/6.8	3.8
Starting Current ()	48	23	12
Agency Approvals	UL/cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-20 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION			
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional		
CONTROLLER			
Description	Basic mechanical thermostat		
Thermostat Location	Enclosure side on all base models		
Factory Thermostat Setting (°F/°C)	80/27		
SOUND LEVEL			
At 1.5 Meters	67 dB(A)		
UNIT CONSTRUCTION			
Material	Galvanized sheet metal standard Stainless steel optional		
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		
UNIT DIMENSIONS			
Height (in./mm)	29/737		29/737
Width (in./mm)	17/432		17/432
Depth (in./mm)	11.3/287		11.3/287
Weight (lb./kg)	107/48.6		127/58

Performance Curves for T29 Models 4000 BTU/Hr. (1173 Watt)

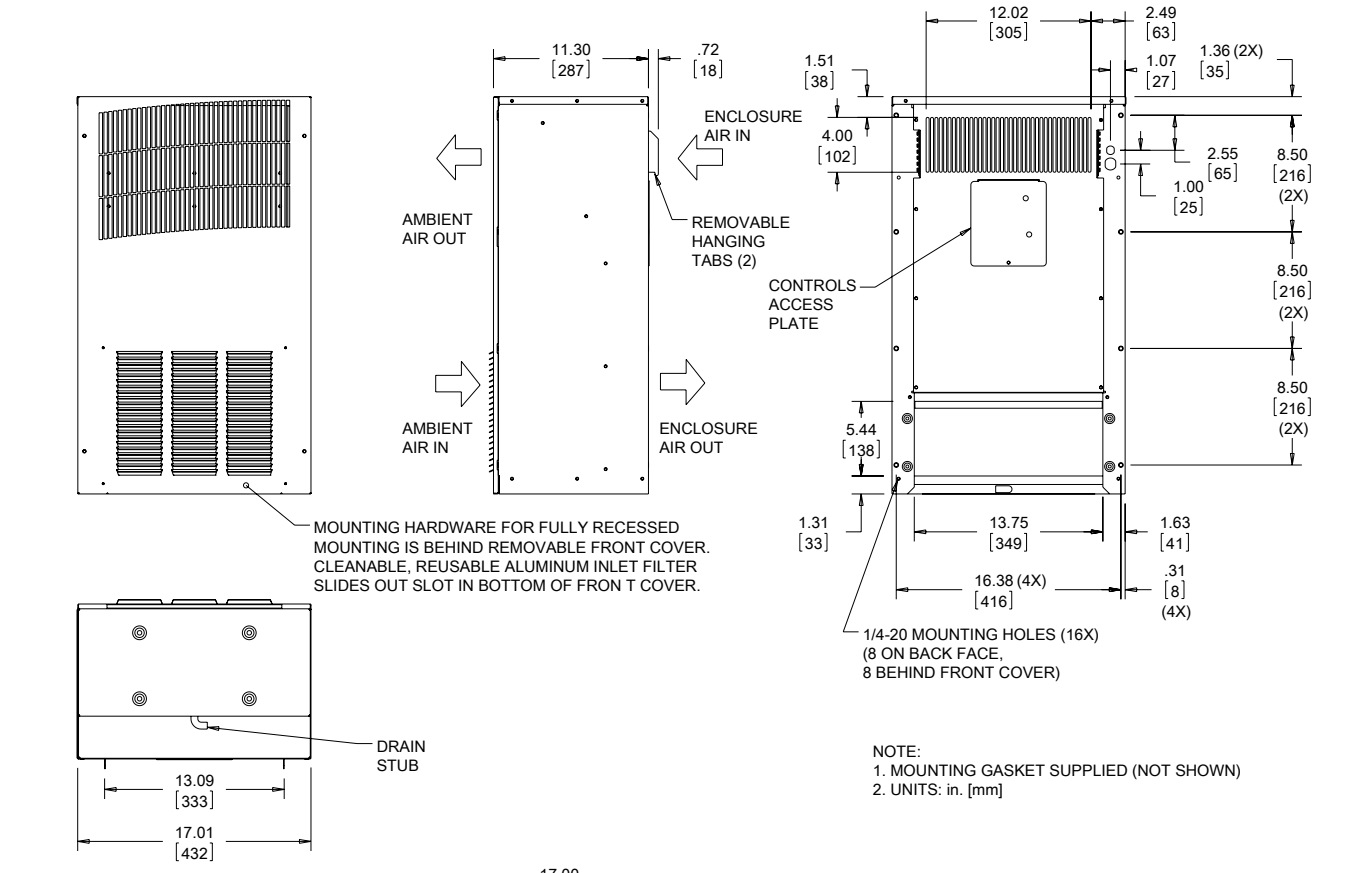
T29-04x6-Gxxx Capacity Curves 50 Hz



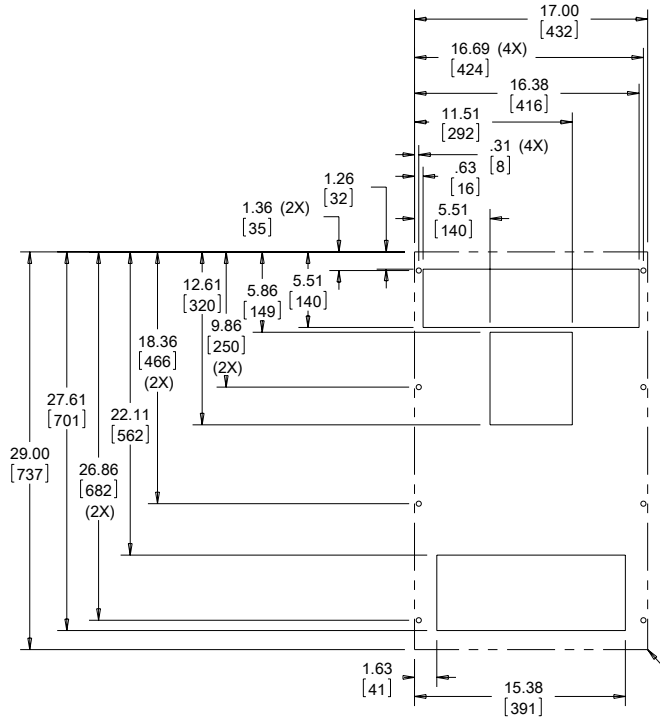
T29-04x6-Gxx Capacity Curves 60 Hz



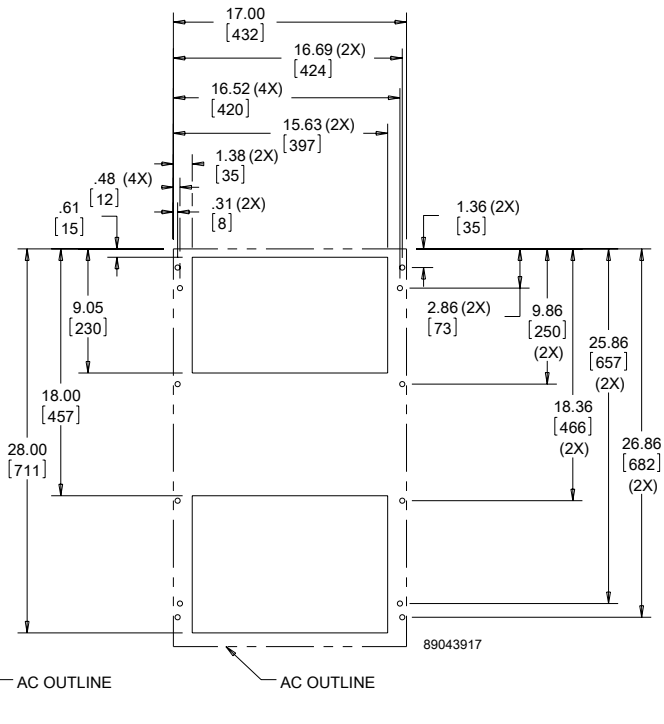
T29 Models 4000 BTU/Hr. (1173 Watt)



NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]



Cutout Dimensions (Externally Mounted)



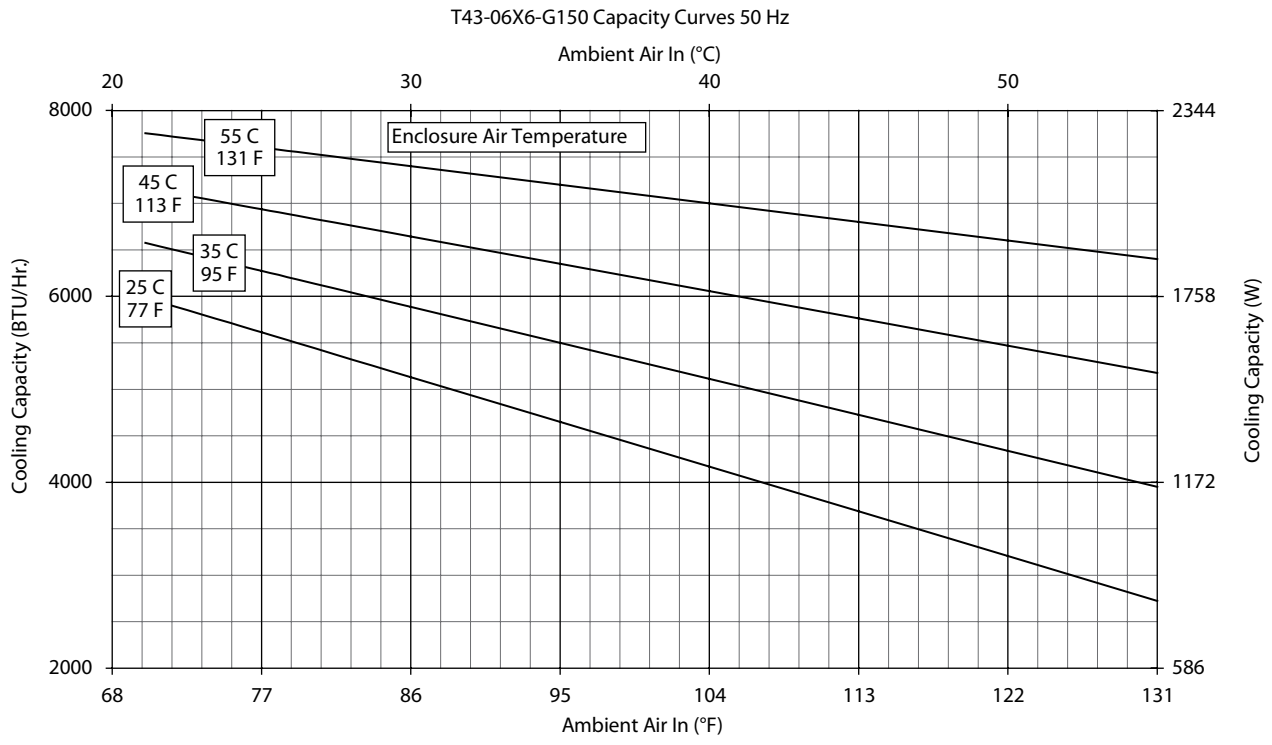
Cutout Dimensions (Internally Mounted)

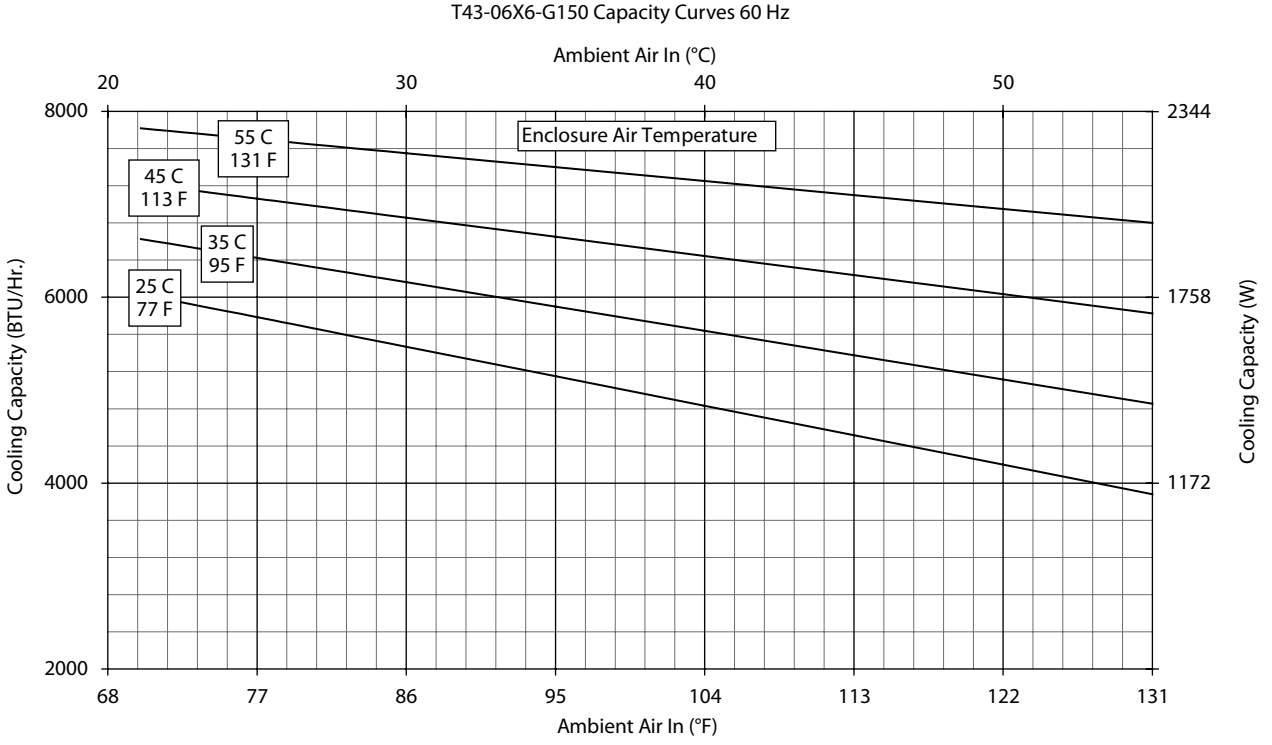
Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **T43 6000 BTU/Hr. (1758 Watt) Models**

CATALOG NUMBER			
Outdoor Model without Heat Pkg.	T430616G100	T430626G100	T430646G400
Outdoor Model with Heat Pkg.	T430616G150	T430626G150	T430626G153
Outdoor Model/SST/Corrosion/4X	T430616G102	T430626G159	—
Outdoor Model/SST/Corrosion/4X/Heater	—	—	—
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**6310/6680**	**6520/6770**	**6520/6770**
Watts	**1848/1958**	**1910/1985**	**1910/1985**
At 131 F/131 F (55 C/55 C):			
BTU/Hr. (50/60 Hz)	6400/6680	6520/6774	6520/6774
W (50/60 Hz)	1875/1957	1910/1985	1910/1985
At 95 F/95 F (35 C/35 C):			
BTU/Hr. (50 /60 Hz)	5500/5900	5461/5846	5461/5846
W (50/60 Hz)	1611/1729	1600/1713	1600/1713
Refrigerant	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	30/850	30/850	30/850
Operating Temperature Range:			
Maximum (°F/°C)	131/55	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / m^3/hr.)	310/527	310/527	310/527
External loop 50 Hz (CFM / m^3/hr.)	345/586	345/586	345/586
Internal loop 60 Hz (CFM / m^3/hr.)	320/544	320/544	320/544
External loop 60 Hz (CFM / m^3/hr.)	355/603	355/603	355/603
Max. Heater W (Outdoor Models)	1000	1000	N/A
ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1058/989	1012/874	1104/966
Max. Nominal Current (A at 50/60 Hz)	9.2/8.6	4.4/3.8	2.4/2.1
Starting Current (A)	57.2	27	14
Agency Approvals	UL/cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-20 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION			
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional		
International Rating	IP56 on the internal loop; IP34 on the external loop		
CONTROLLER			
Description	Basic mechanical thermostat		
Thermostat Location	Enclosure side on all base models		
Factory Thermostat Setting (°F/°C)	80/27		
SOUND LEVEL			
At 1.5 Meters	65.7 dB(A)		
UNIT CONSTRUCTION			
Material	Galvanized sheet metal standard Stainless steel optional		
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		
UNIT DIMENSIONS			
Height (in./mm)	43/1092		
Width (in./mm)	15.75/400		
Depth (in./mm)	10.9/279		
Weight (lb./kg)	125/57		

Performance Curves for T43 Models 6000 BTU/Hr. (1758 Watt)



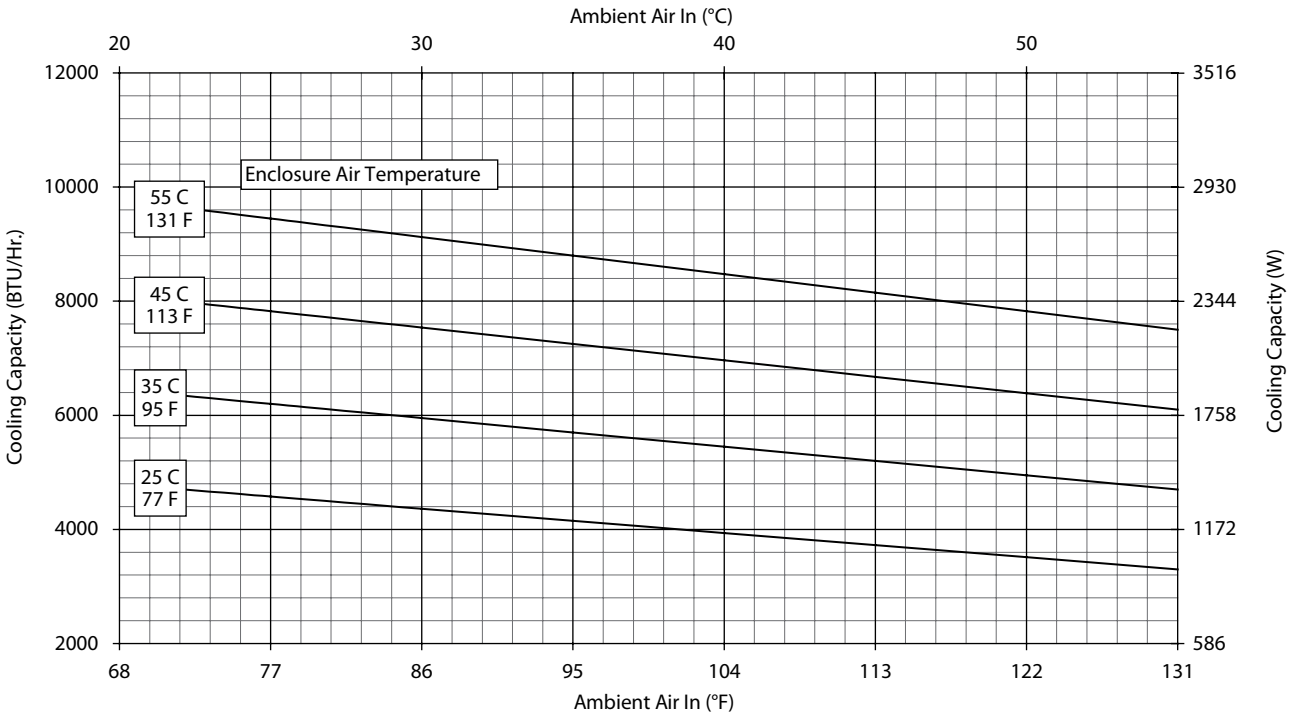


Performance Data **T43 8000 BTU/Hr. (2344 Watt) Models**

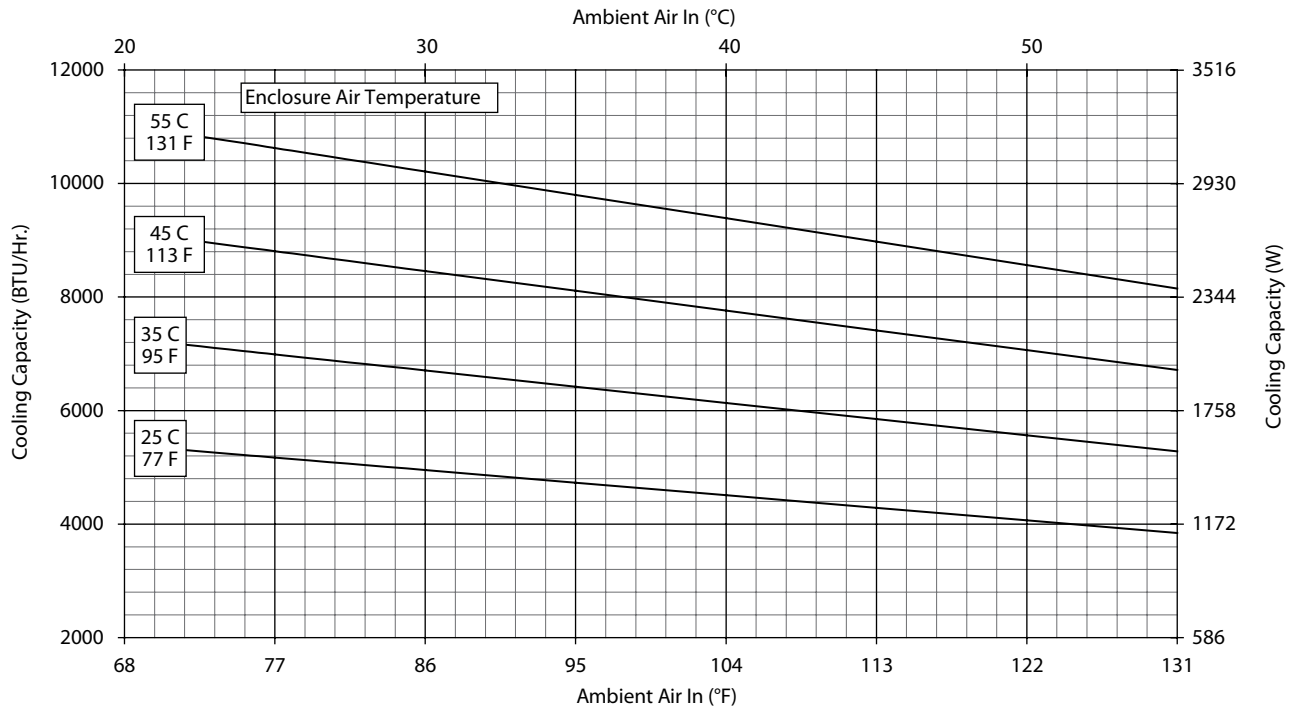
CATALOG NUMBER			
Outdoor Model without Heat Pkg.	T430816G100	T430826G100	T430846G400
Outdoor Model with Heat Pkg.	T430816G150	T430826G150	T430846G403
Outdoor Model/SST/Corrosion/4X	T430816G153	T430826G108	T430846G402
Outdoor Model/SST/Corrosion/4X/Heater	—	—	—
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**7900/8600**	**7400/8200**	**7400/8200**
Watts	**2310/2500**	**2160/2400**	**2160/2400**
At 131 F/131 F (55 C/55 C):			
BTU/Hr. (50/60 Hz)	7937/8629	7484/8215	7484/8215
W (50/60 Hz)	2326/2528	2193/2407	2193/2407
At 95 F/95 F (35 C/35 C):			
BTU/Hr. (50 /60 Hz)	6401/7100	5940/6705	5940/6705
W (50/60 Hz)	1875/2080	1740/1965	1740/1965
Refrigerant	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	36/1022	36/1022	36/1022
Operating Temperature Range:			
Maximum (°F/°C)	131/55	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / m^3/hr.)	273/464	273/464	273/464
External loop 50 Hz (CFM / m^3/hr.)	310/527	310/527	310/527
Internal loop 60 Hz (CFM / m^3/hr.)	290/493	290/493	290/493
External loop 60 Hz (CFM / m^3/hr.)	315/535	315/535	315/535
Max. Heater W (Outdoor Models)	1000	1000	N/A
ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1196/1288	1196/1242	1334/1380
Max. Nominal Current (A at 50/60 Hz)	10.4/11.2	5.2/5.4	2.9/3.0
Starting Current (A)	48.3	27	14
Agency Approvals	UL/cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-20 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION			
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional		
International Rating	IP56 on the internal loop; IP34 on the external loop		
CONTROLLER			
Description	Basic mechanical thermostat		
Thermostat Location	Enclosure side on all base models		
Factory Thermostat Setting (°F/°C)	80/27		
SOUND LEVEL			
At 1.5 Meters	65.7 dB(A)		
UNIT CONSTRUCTION			
Material	Galvanized sheet metal standard Stainless steel optional		
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		
UNIT DIMENSIONS			
Height (in./mm)	43/1092		
Width (in./mm)	15.75/400		
Depth (in./mm)	10.9/279		
Weight (lb./kg)	125/57		

Performance Curves for T43 Models 8000 BTU/Hr. (2344 Watt)

T43-08X6-G150 Capacity Curves 50 Hz



T43-08X6-G150 Capacity Curves 60 Hz

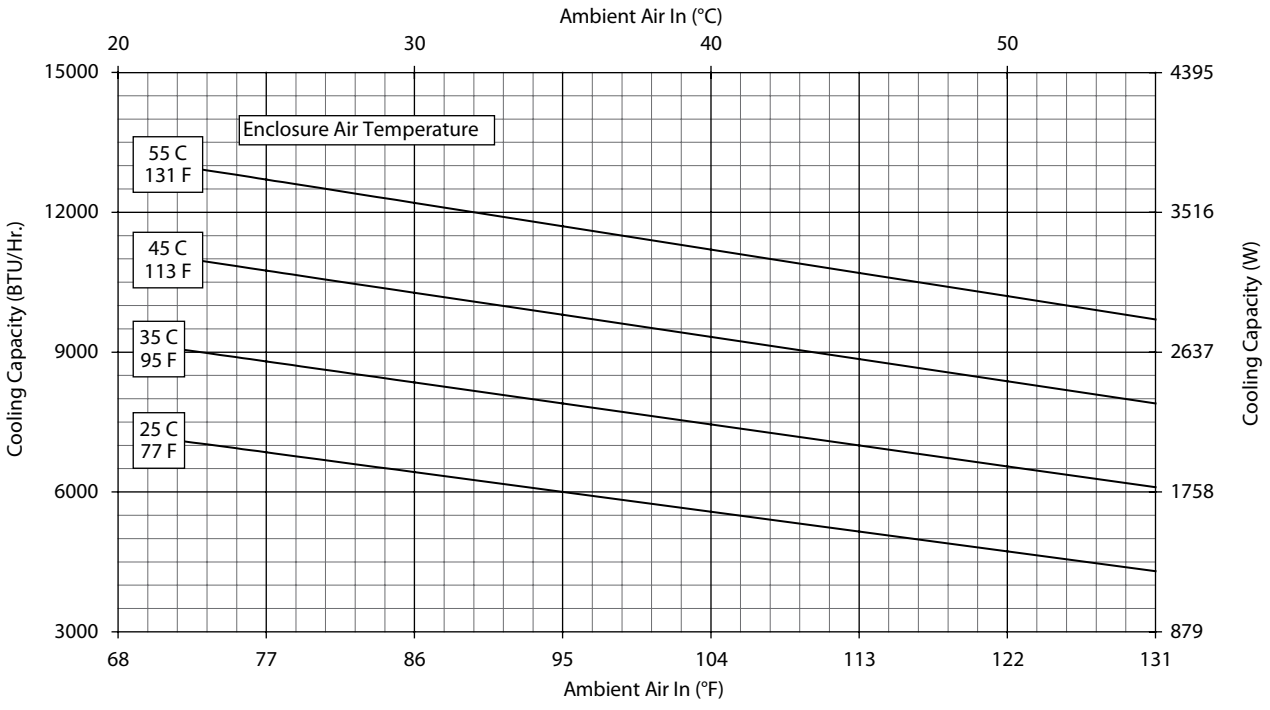


Performance Data **T43 10000 BTU/Hr. (2930 Watt) Models**

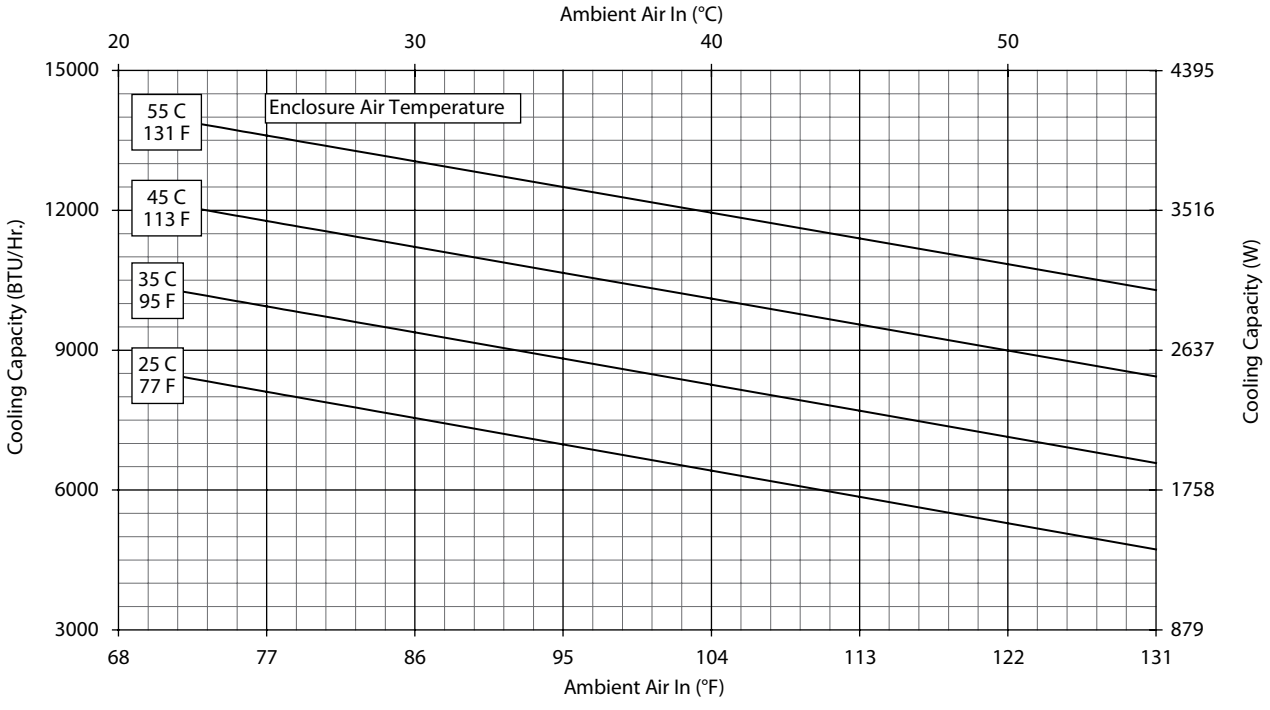
CATALOG NUMBER			
Outdoor Model without Heat Pkg.	T431016G100	T431026G100	T431046G400
Outdoor Model with Heat Pkg.	T431016G150	T431026G150	—
Outdoor Model/SST/Corrosion/4X	T431016G102	T431026G104	T431046G406
Outdoor Model/SST/Corrosion/4X/Heater	T431016G153	T431026G152	—
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**9670/10300**	**10100/10500**	**10100/10500**
Watts	**2831/3016**	**2957/3075**	**2957/3075**
At 131 F/131 F (55 C/55 C):			
BTU/Hr. (50/60 Hz)	9667/10290	10039/10669	10039/10669
W (50/60 Hz)	2832/3015	2941/3126	2941/3126
At 95 F/95 F (35 C/35 C):			
BTU/Hr. (50/60 Hz)	7663/8397	8458/8837	8458/8837
W (50/60 Hz)	2245/2460	2478/2589	2478/2589
Refrigerant	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	32/907	32/907	32/907
Operating Temperature Range:			
Maximum (°F/°C)	131/55	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / m^3/hr.)	272/462	320/544	320/544
External loop 50 Hz (CFM / m^3/hr.)	510/866	568/965	568/965
Internal loop 60 Hz (CFM / m^3/hr.)	290/493	330/561	330/561
External loop 60 Hz (CFM / m^3/hr.)	565/960	636/1081	636/1081
Max. Heater W (Outdoor Models)	1000	1000	N/A
ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1828.5/2288.5	2070	1334/1380
Max. Nominal Current (A at 50/60 Hz)	15.9/19.9	9	5
Starting Current (A)	57	38	20
Agency Approvals	UL/cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-30 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION			
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional		
International Rating	IP56 on the internal loop; IP34 on the external loop		
CONTROLLER			
Description	Basic mechanical thermostat		
Thermostat Location	Enclosure side on all base models		
Factory Thermostat Setting (°F/°C)	80/27		
SOUND LEVEL			
At 1.5 Meters	73.3 dB(A)		
UNIT CONSTRUCTION			
Material	Galvanized sheet metal standard Stainless steel optional		
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		
UNIT DIMENSIONS			
Height (in./mm)	43/1092		
Width (in./mm)	15.75/400		
Depth (in./mm)	10.9/279		
Weight (lb./kg)	125/57		

Performance Curves for T43 Models 10000 BTU/Hr. (2930 Watt)

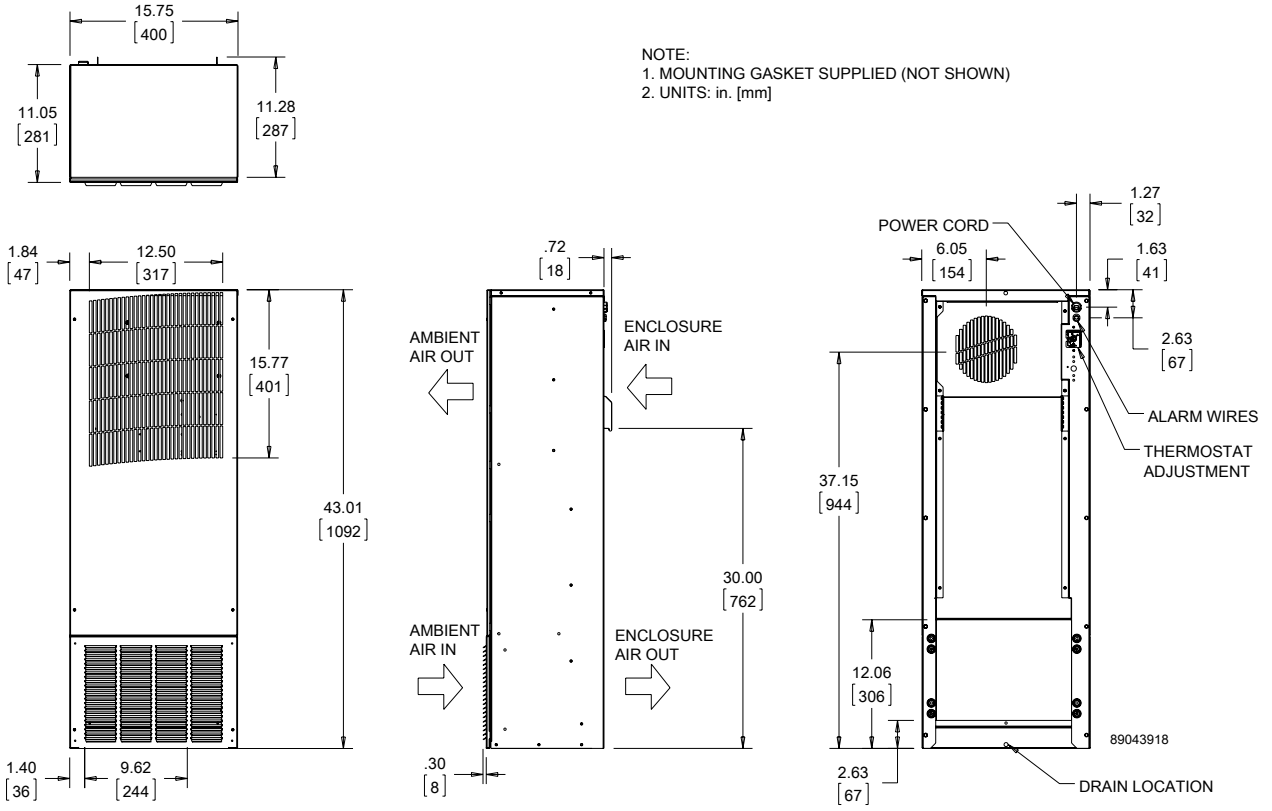
T43-10X6-G150 Capacity Curves 50 Hz

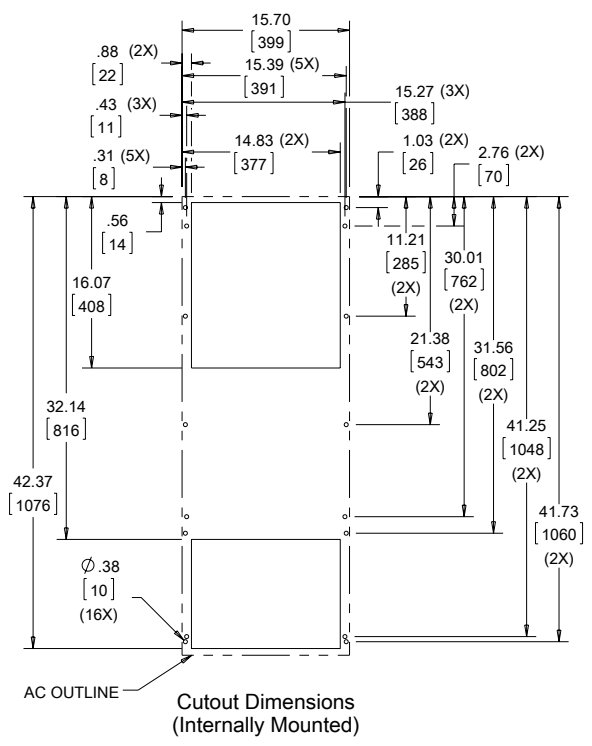


T43-10X6-G150 Capacity Curves 60 Hz

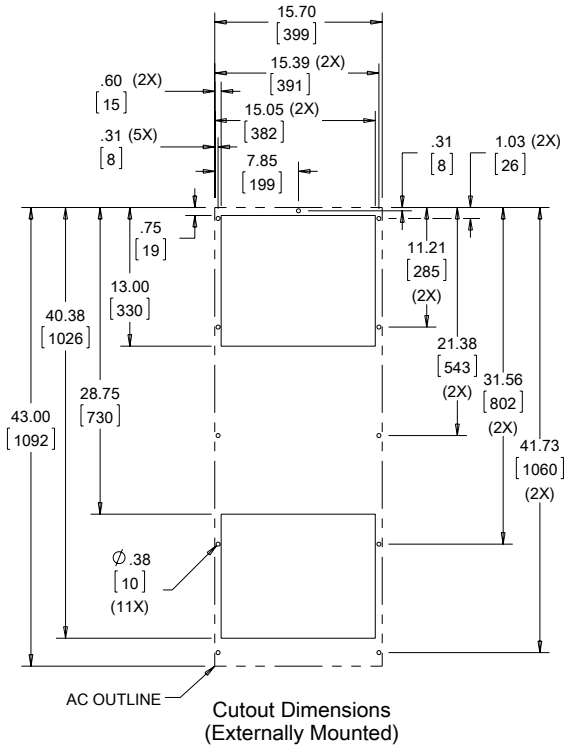


T43 6000-10000 Models BTU/HR. (1758 - 2930 Watt)





Cutout Dimensions
(Internally Mounted)



Cutout Dimensions
(Externally Mounted)

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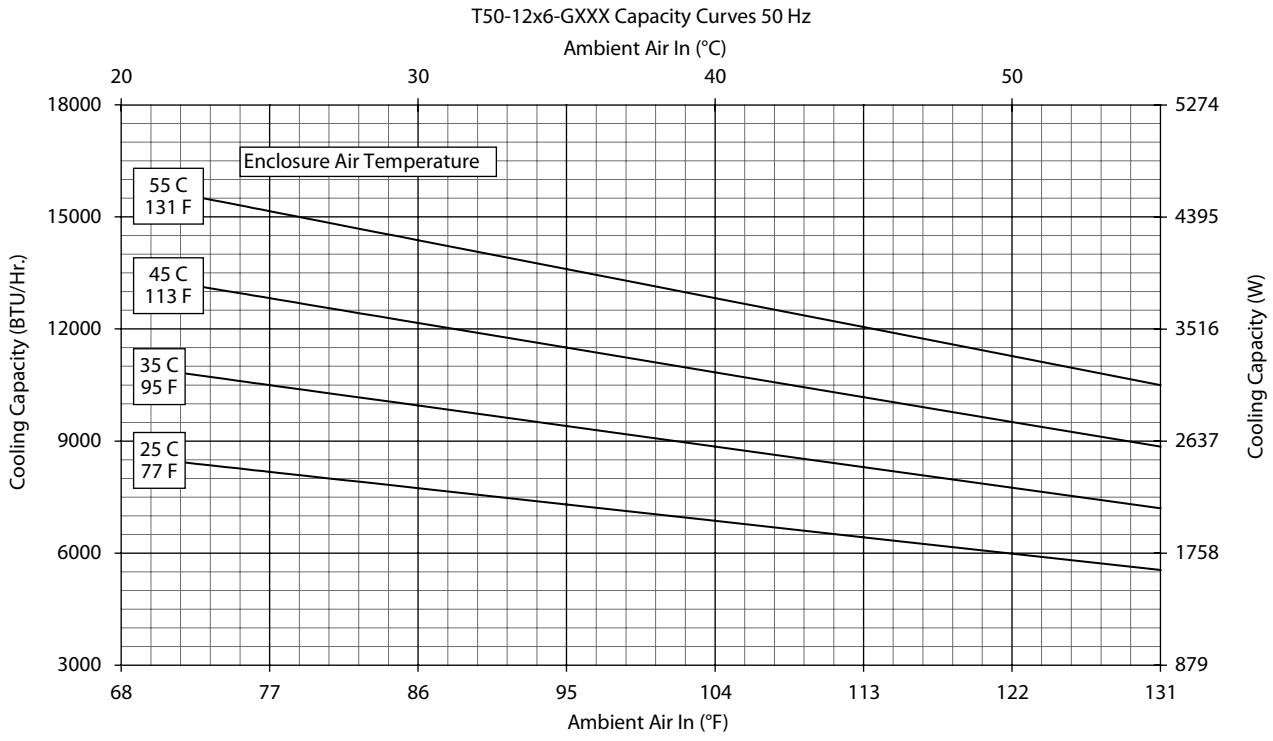
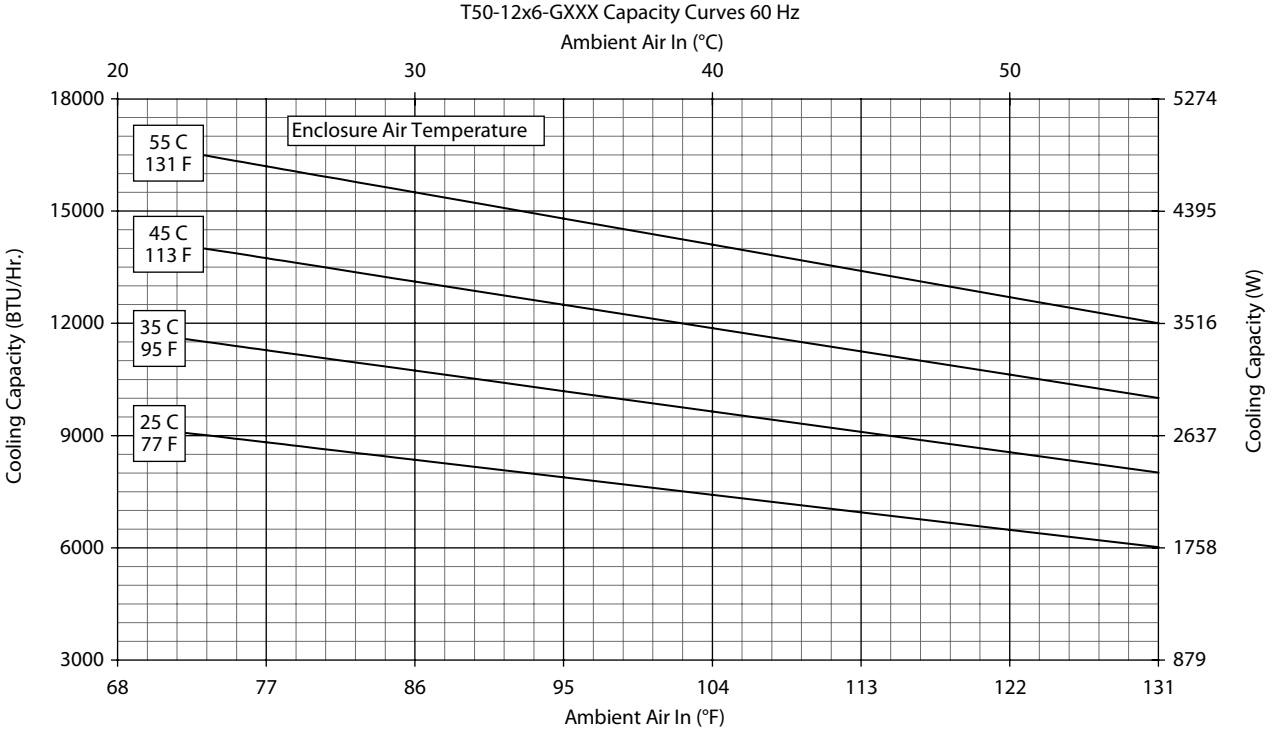
Performance Data **T50 12000 BTU/Hr. (3516 Watt) Models**

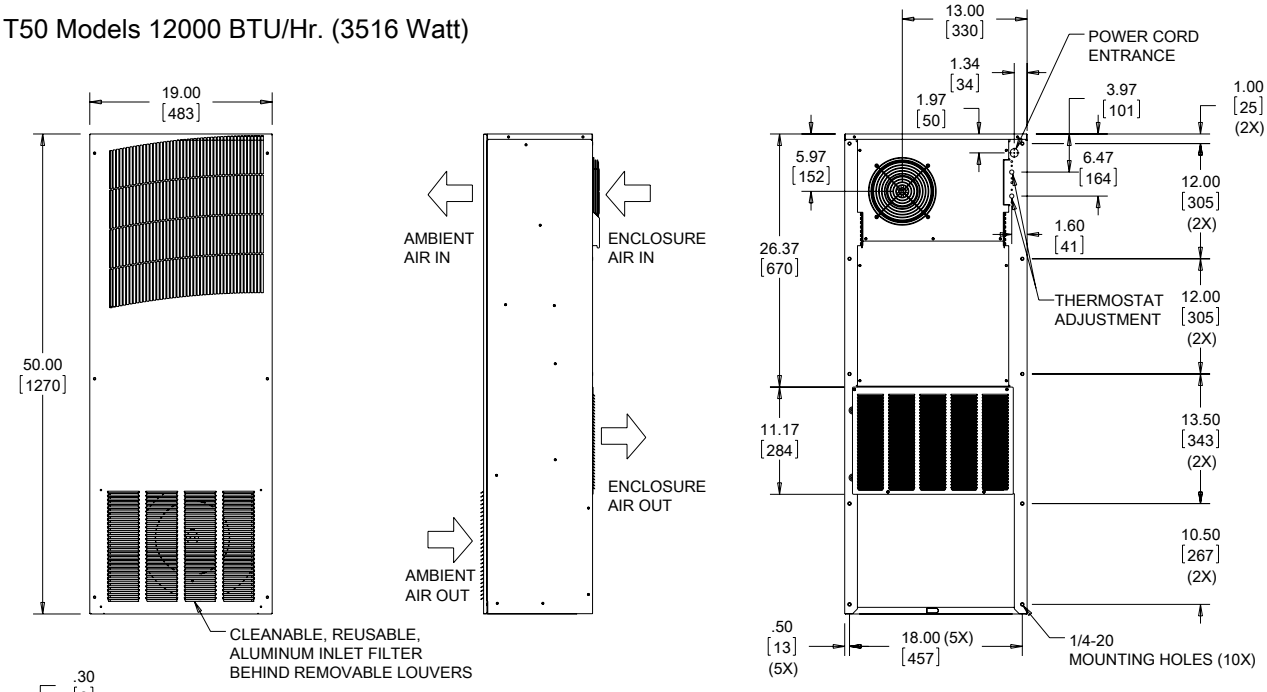
CATALOG NUMBER		
Outdoor Model without Heat Pkg.	T501226G100	T501246G400
Outdoor Model with Heat Pkg.	T501226G150	—
Outdoor Model/SST/Corrosion/4X	T501226G125	T501246G401
Outdoor Model/SST/Corrosion/4X/Heater	T501226G156	—
COOLING PERFORMANCE		
Nominal:		
BTU/Hr.	**11000/12000**	**11000/12000**
Watts	**3223/3516**	**3223/3516**
At 131 F/131 F (55 C/55 C):		
BTU/Hr. (50/60 Hz)	10030/12000	10030/12000
W (50/60 Hz)	2939/3516	2939/3516
At 95 F/95 F (35 C/35 C):		
BTU/Hr. (50 /60 Hz)	9300/10050	9300/10050
W (50/60 Hz)	2725/2945	2725/2945
Refrigerant	R-134A	R-134A
Refrigerant Charge (ounces/grams)	46/1300	46/1300
Operating Temperature Range:		
Maximum (°F/°C)	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	300/510	300/510
External loop 50 Hz (CFM / m^3/hr.)	520/883	520/883
Internal loop 60 Hz (CFM / m^3/hr.)	368/626	368/626
External loop 60 Hz (CFM / m^3/hr.)	625/1062	625/1062
Max. Heater W (Outdoor Models)	1500	1500
ELECTRICAL DATA		
Rated Voltage	**220/230**	**460V 1PH**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1804/2139	2070/2346
Max. Nominal Current (A at 50/60 Hz)	8.2/9.3	4.5/5.1
Starting Current (A)	38	20
Agency Approvals	UL/cUL Listed CE EAC	cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION		
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional	
CONTROLLER		
Description	Basic mechanical thermostat	
Thermostat Location	Enclosure side on all base models	
Factory Thermostat Setting (°F/°C)	80/27	
SOUND LEVEL		
At 1.5 Meters	68 dB(A)	
UNIT CONSTRUCTION		
Material	Galvanized sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	50/1270	
Width (in./mm)	19/483	
Depth (in./mm)	11.05/281	
Weight (lb./kg)	164/75	

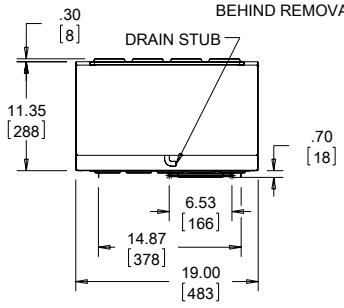
Performance Curves for T50 Models 12000 BTU/Hr. (3516 Watt)



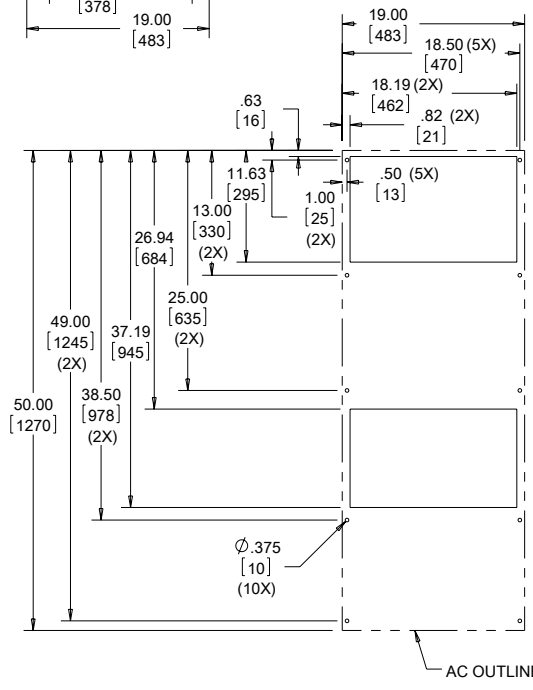


T50 Models 12000 BTU/Hr. (3516 Watt)

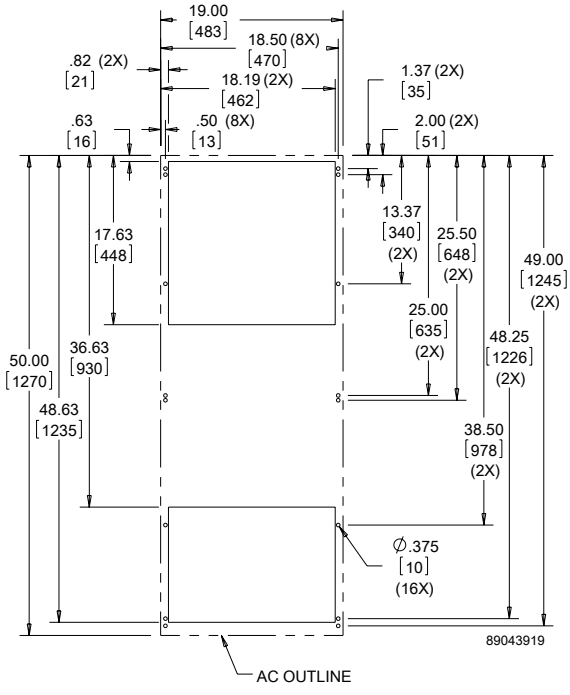




NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]



Cutout Dimensions
(Externally Mounted)



Cutout Dimensions
(Internally Mounted)

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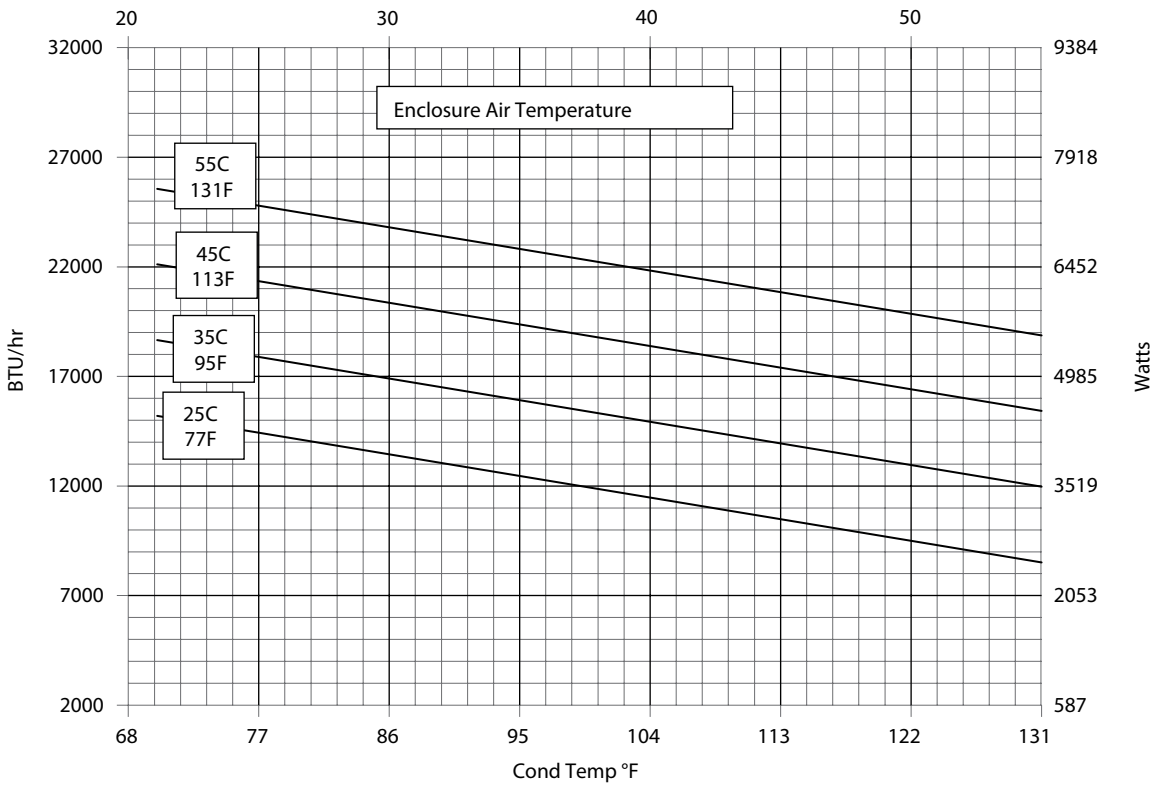
Performance Data **T53 19000 BTU/Hr. (5567 Watt) Models**

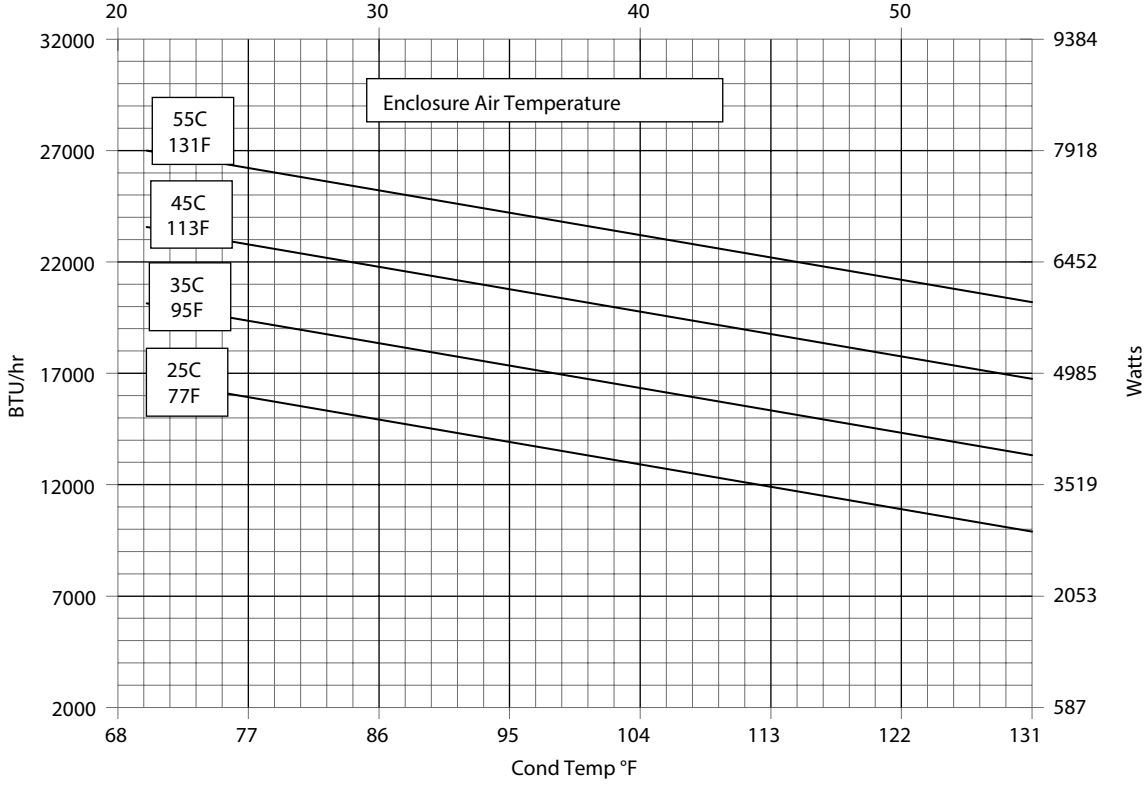
CATALOG NUMBER		
Outdoor Model without Heat Pkg.	T531926G100	T531946G400
Outdoor Model with Heat Pkg.	T531926G150	—
Outdoor Model/SST/Corrosion/4X	T531926G109	—
Outdoor Model/SST/Corrosion/4X/Heater	T531926G151	—
COOLING PERFORMANCE		
Nominal:		
BTU/Hr.	**18400/20400**	**18400/20400**
Watts	**5392/5978**	**5392/5978**
At 131 F/131 F (55 C/55 C):		
BTU/Hr. (50/60 Hz)	18488/20431	18488/20431
W (50/60 Hz)	5418/5987	5418/5987
At 95 F/95 F (35 C/35 C):		
BTU/Hr. (50 /60 Hz)	15833/18087	15833/18087
W (50/60 Hz)	4640/5300	4640/5300
Refrigerant	407C	407C
Refrigerant Charge (ounces/grams)	42/1191	42/1191
Operating Temperature Range:		
Maximum (°F/°C)	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	449/763	449/763
External loop 50 Hz (CFM / m^3/hr.)	1204/2046	1204/2046
Internal loop 60 Hz (CFM / m^3/hr.)	519/882	519/882
External loop 60 Hz (CFM / m^3/hr.)	1300/2209	1300/2209
Max. Heater W (Outdoor Models)	3000	
ELECTRICAL DATA		
Rated Voltage	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	3105/3703	3404/4094
Max. Nominal Current (A at 50/60 Hz)	13.5/16.1	7.4/8.9
Starting Current (A)	54	28
Agency Approvals	UL/cUL Listed CE EAC	cUR Recognized CE EAC
Power Input Description	Terminal block	
ENCLOSURE PROTECTION		
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional	
CONTROLLER		
Description	Basic mechanical thermostat	
Thermostat Location	Enclosure side on all base models	
Factory Thermostat Setting (°F/°C)	80/27	
SOUND LEVEL		
At 1.5 Meters	76 dB(A)	
UNIT CONSTRUCTION		
Material	Galvanized sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	53.0/1346.2	
Width (in./mm)	21.0/533.4	
Depth (in./mm)	13.0/330.2	
Weight (lb./kg)	197/90	237/108

Performance Curves for T53 Models 19000 BTU/Hr. (5567 Watt)

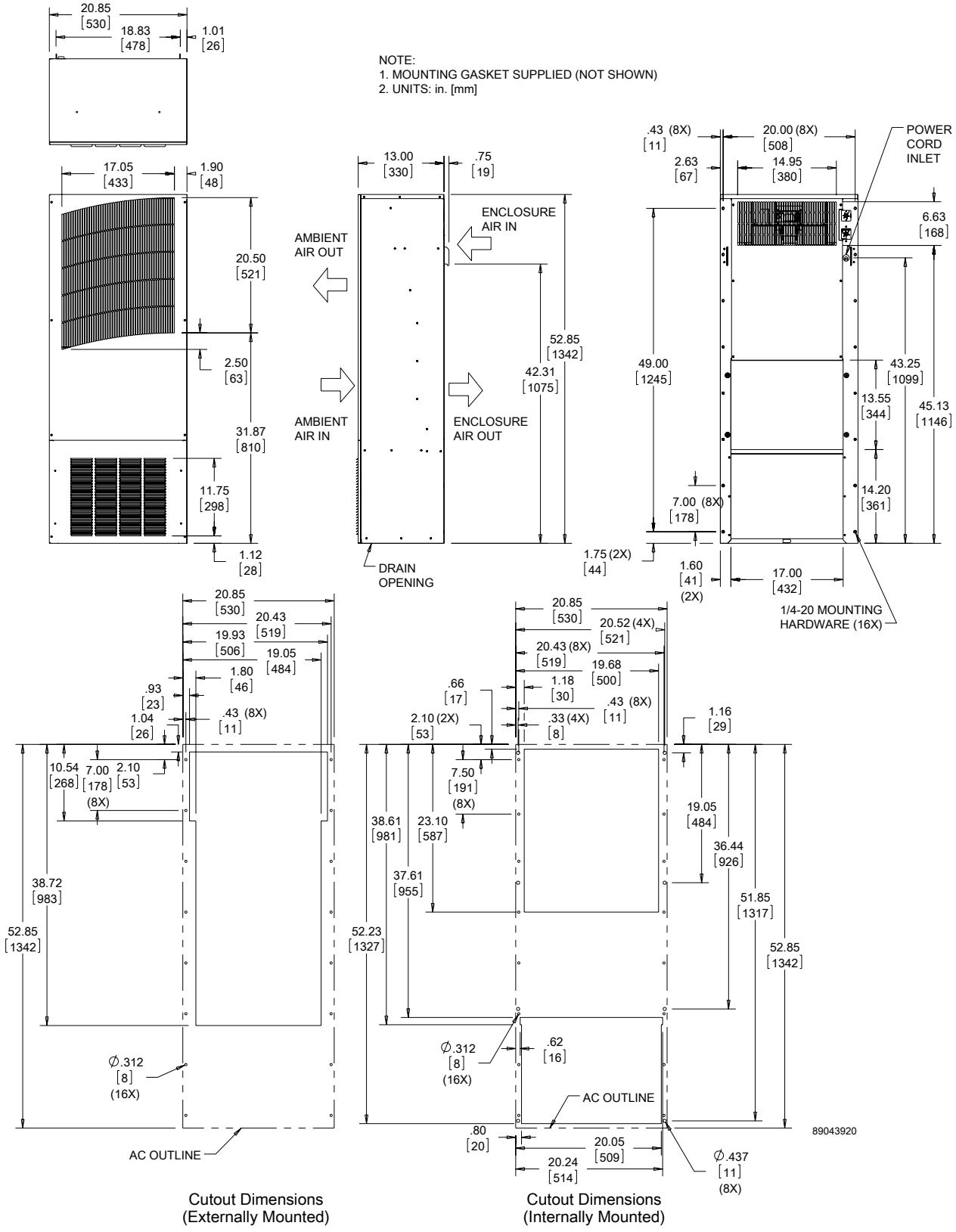
T53-19x6-GXXX Capacity Curves at 50Hz



T53-19x6-GXXX Capacity Curves at 60Hz



T53 Models 19000 BTU/Hr. (5567 Watt)



Cutout Dimensions (Externally Mounted)

Cutout Dimensions (Internally Mounted)

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Notes

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T-SERIES LARGE CAPACITY OUTDOOR

T62
20000 BTU/Hr.
5860 Watts

T70-36
36000 BTU/Hr.
10548 Watts

T70-60
59000 BTU/Hr.
17287 Watts

INDUSTRY STANDARDS

UL/cUL Listed; Type 12, 3R, 4; 4X optional; File No. SA6453
UR/cUR Recognized

UR/cUR Recognized on select models, reference performance data tables.
CE
EAC
Telcordia GR-487 capable

APPLICATION

- Industrial automation
- Telecommunications equipment
- Package handling equipment
- Security and defense systems
- And more

FEATURES

- Stock models equipped with head pressure control for low-ambient operation, compressor heater, coated condenser coil, malfunction switch, thermostat and heater package
- R-407C earth-friendly refrigerant
- Models for 230 and 460 VAC power input
- UL Listed to save customers time and money with agency approvals (some models UL recognized)
- Outdoor model operating temperature range from -40 F/-40 C to 131 F/55 C
- Exterior and fully recessed mounting options on many models
- Compact footprint to minimize real estate and maximize capacity
- Reliable mechanical thermostat on enclosure side of the unit
- Dual condenser-side air movers for performance redundancy
- Painted galvanized sheet-metal cover for rugged factory and outdoor environments
- Easy-mount flanges for simple installation
- Cleanable, reusable aluminum mesh filter protects coils for maximum cooling performance
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Standard Outdoor Air Conditioner models also include:
  - Telcordia GR-487 capable
  - Thermostat
  - Corrosion-resistant components
  - Malfunction switch
  - Compressor heater
  - Head pressure control
  - Enclosure heater

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint
- Other colors and textures available

OPTIONS

- Thermostat Malfunction Package
- Special Voltage Package
- Outdoor Package
- Harsh Environment Package*
- Stainless Steel Package*
- Heater Package

* PROAIR A/C may be more appropriate. Refer to PROAIR A/C Chapter. Consult the Factory for availability and catalog number.

NOTES

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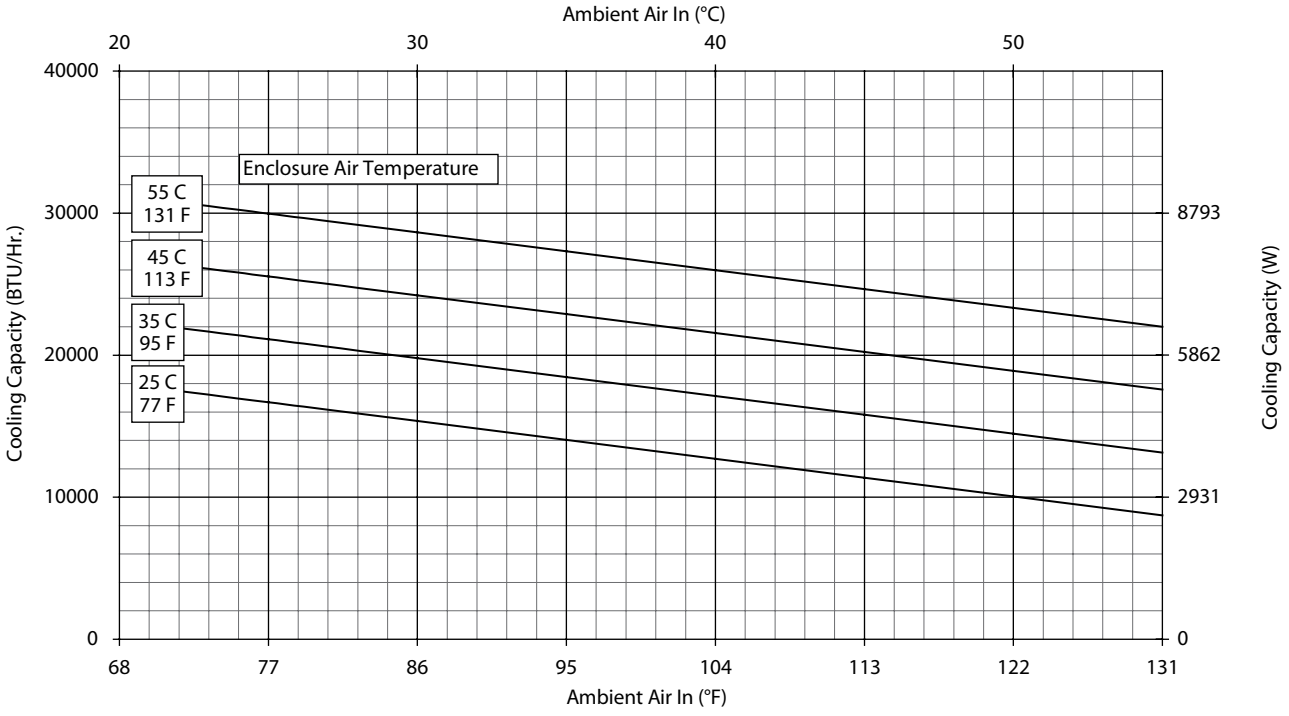
Performance Data **T62 20000 BTU/Hr. (5860 Watt) Models**

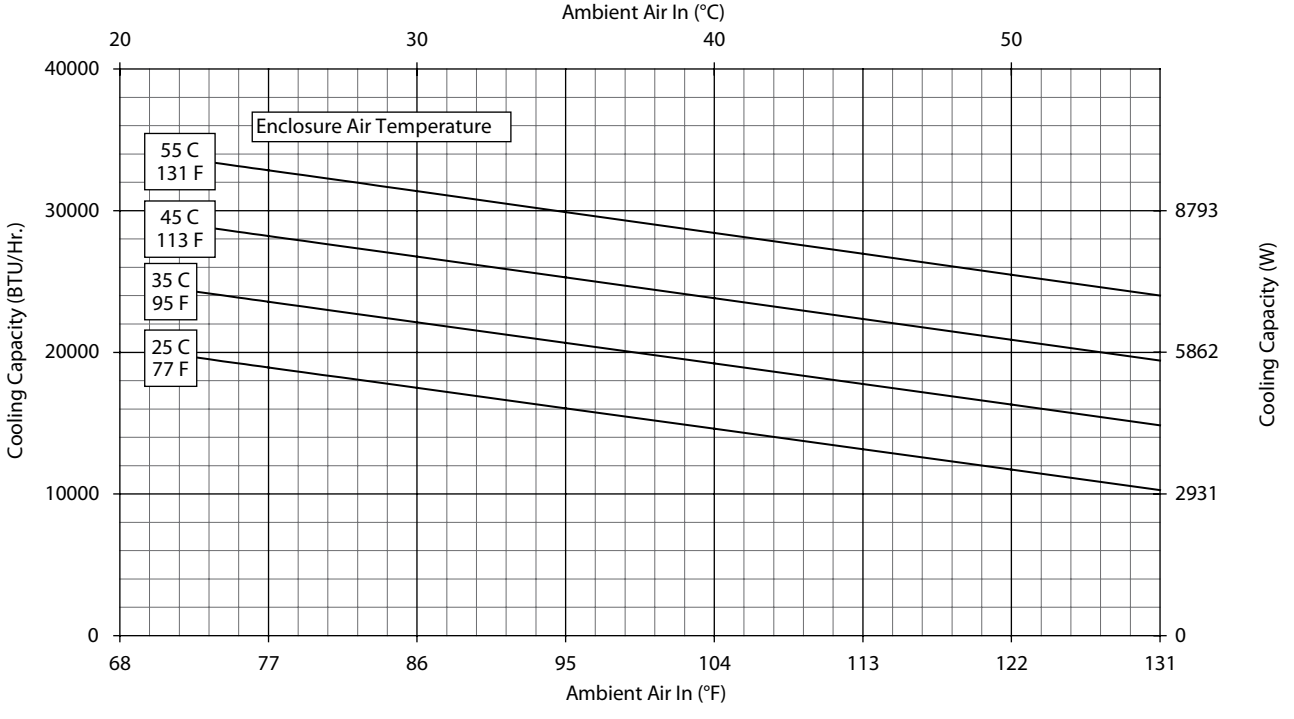
CATALOG NUMBER		
Outdoor Model with Heat Pkg.	T622226G150	T622246G400
Outdoor Model/SST/Corrosion/4X	T622226G102	
Outdoor Model/SST/Corrosion/4X/Heater	T622226G151	
COOLING PERFORMANCE		
Nominal:		
BTU/Hr.	**20500/23500**	**20500/23500**
Watts	**6007/6886**	**6007/6886**
At 131 F/131 F (55 C/55 C):		
BTU/Hr. (50/60 Hz)	20860/23927	20860/23927
W (50/60 Hz)	6113/7012	6113/7012
At 95 F/95 F (35 C/35 C):		
BTU/Hr. (50 /60 Hz)	18258/20256	18258/20256
W (50/60 Hz)	5351/5936	5351/5936
Refrigerant	R-407C	
Refrigerant Charge (ounces/grams)	42/1300	42/1300
Operating Temperature Range:		
Maximum (°F/°C)	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	570/968	570/968
External loop 50 Hz (CFM / m^3/hr.)	1443/2452	1443/2452
Internal loop 60 Hz (CFM / m^3/hr.)	673/1143	673/1143
External loop 60 Hz (CFM / m^3/hr.)	1797/3053	1797/3053
Max. Heater W (Outdoor Models)	2000	Up to 3000 (Optional)
ELECTRICAL DATA		
Rated Voltage	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	4370/5060	7000/9200
Max. Nominal Current (A at 50/60 Hz)	19/22	10.5/12
Starting Current (A)	60	30
Agency Approvals	UL/cUL Listed CE EAC	cUR Recognized CE EAC
Power Input Description	Terminal block	Terminal block
ENCLOSURE PROTECTION		
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional	
CONTROLLER		
Description	Basic mechanical thermostat	
Thermostat Location	Enclosure ide on all base models	
Factory Thermostat Setting (°F/°C)	80/27	
SOUND LEVEL		
At 1.5 Meters	71 dB(A)	
UNIT CONSTRUCTION		
Material	Galvanized sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	61.77/1568.96	61.77/1568.96
Width (in./mm)	19.91/505.71	19.91/505.71
Depth (in./mm)	17.36/440.94	17.36/440.94
Weight (lb./kg)	218/99.1	258/117

Performance Curves for T62 Models 20000 BTU/Hr. (5860 Watt)

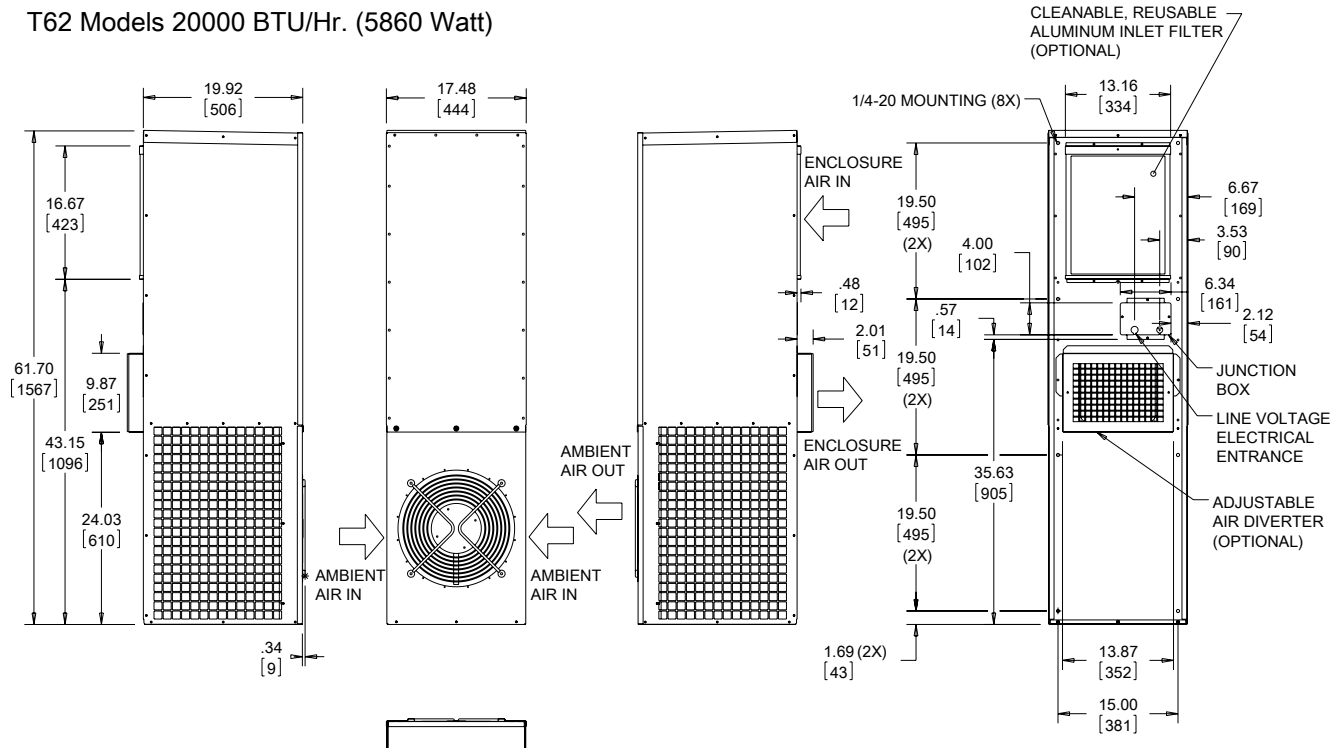
T62-22x6-GXXX R-407c Capacity Curves 50 Hz

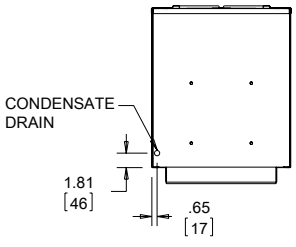


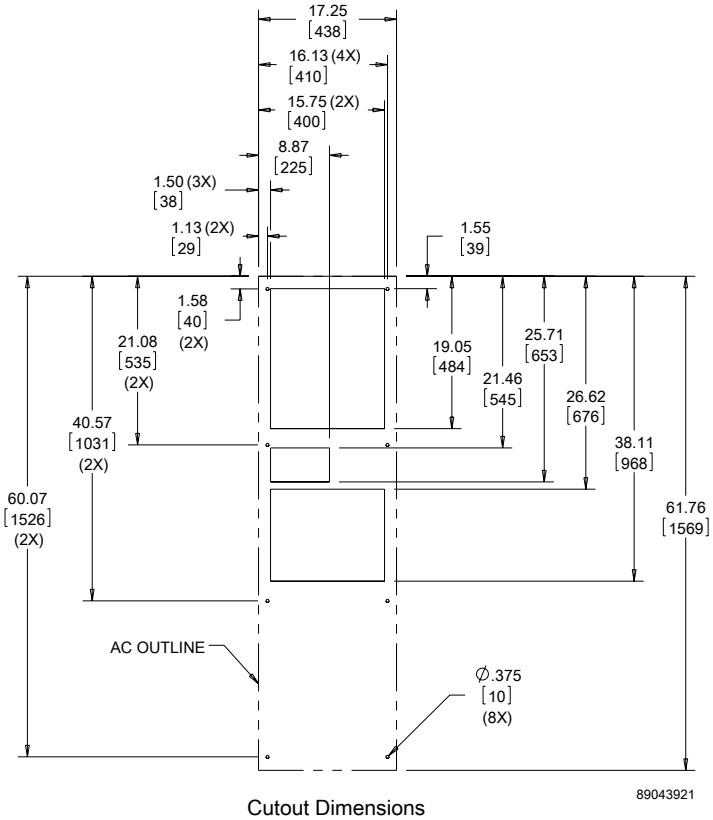
T62-22x6-GXXX R-407c Capacity Curves 60 Hz



T62 Models 20000 BTU/Hr. (5860 Watt)







NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN.
2. UNITS: in. [mm]

Cutout Dimensions

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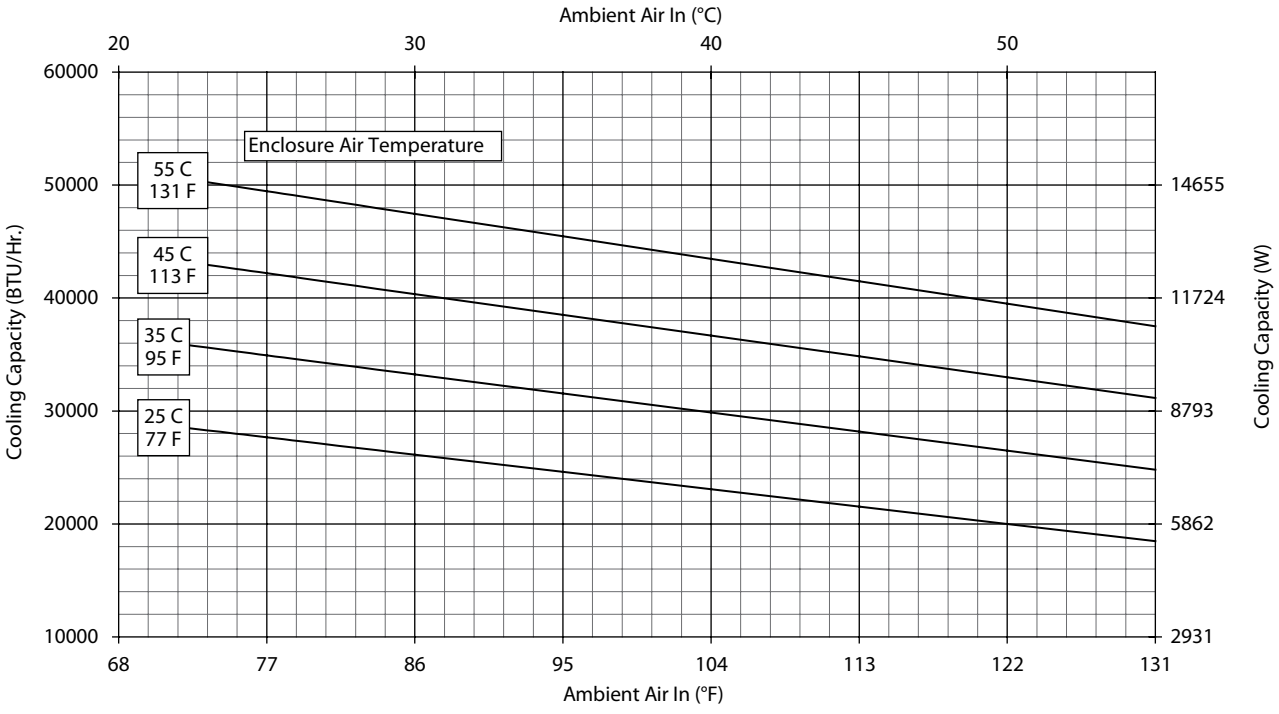
Performance Data **T70-36 36000 BTU/Hr. (10548 Watt) Models**

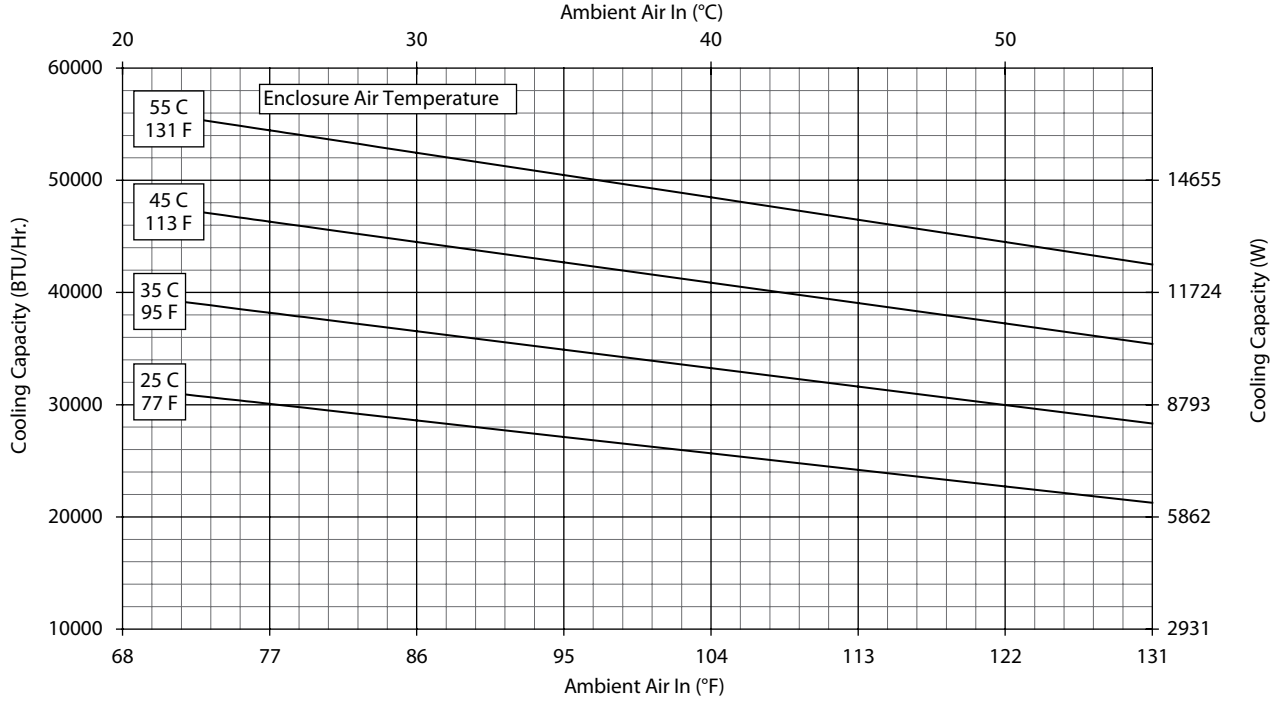
CATALOG NUMBER	T703626G150	T703646G400
COOLING PERFORMANCE		
Nominal:		
BTU/Hr.	**39000/43000**	
Watts	**11430/12602**	
At 131 F/131 F (55 C/55 C):		
BTU/Hr. (50/60 Hz)	38613/42930	
W (50/60 Hz)	11316/12570	
At 95 F/95 F (35 C/35 C):		
BTU/Hr. (50 /60 Hz)	31364/36130	
W (50/60 Hz)	9192/10579	
Refrigerant	R-407C	
Refrigerant Charge (ounces/grams)	110/3118	
Operating Temperature Range:		
Maximum (°F/°C)	131/55	
Minimum (°F/°C)Minimum (°F/°C)	-40/-40	
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	1085/1843	
External loop 50 Hz (CFM / m^3/hr.)	2176/3697	
Internal loop 60 Hz (CFM / m^3/hr.)	1171/1989	
External loop 60 Hz (CFM / m^3/hr.)	2347/3987	
Max. Heater W (Outdoor Models)	2000 Standard (5000 Optional)	
ELECTRICAL DATA		
Rated Voltage	**230**	**460**
Frequency (Hz)	50/60	60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	8280	8280
Max. Nominal Current (A at 50/60 Hz)	36	18
Starting Current (A)	104	52
Agency Approvals	UL/cUL Listed CE EAC Others available upon request	
Power Input Description	Terminal block	
ENCLOSURE PROTECTION		
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional	
International Rating	UL/cUL Listed	
CONTROLLER		
Description	Basic mechanical thermostat	
Thermostat Location	Enclosure side on all base models	
Factory Thermostat Setting (°F/°C)	80/27	
SOUND LEVEL		
At 1.5 Meters	66 dB(A)	
UNIT CONSTRUCTION		
Material	Galvanized sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	69.8/1772	
Width (in./mm)	22.8/578	
Depth (in./mm)	20.94/532	
Weight (lb./kg)	260/118	

Performance Curves for T70 Models 36000 BTU/Hr. (10548 Watt)

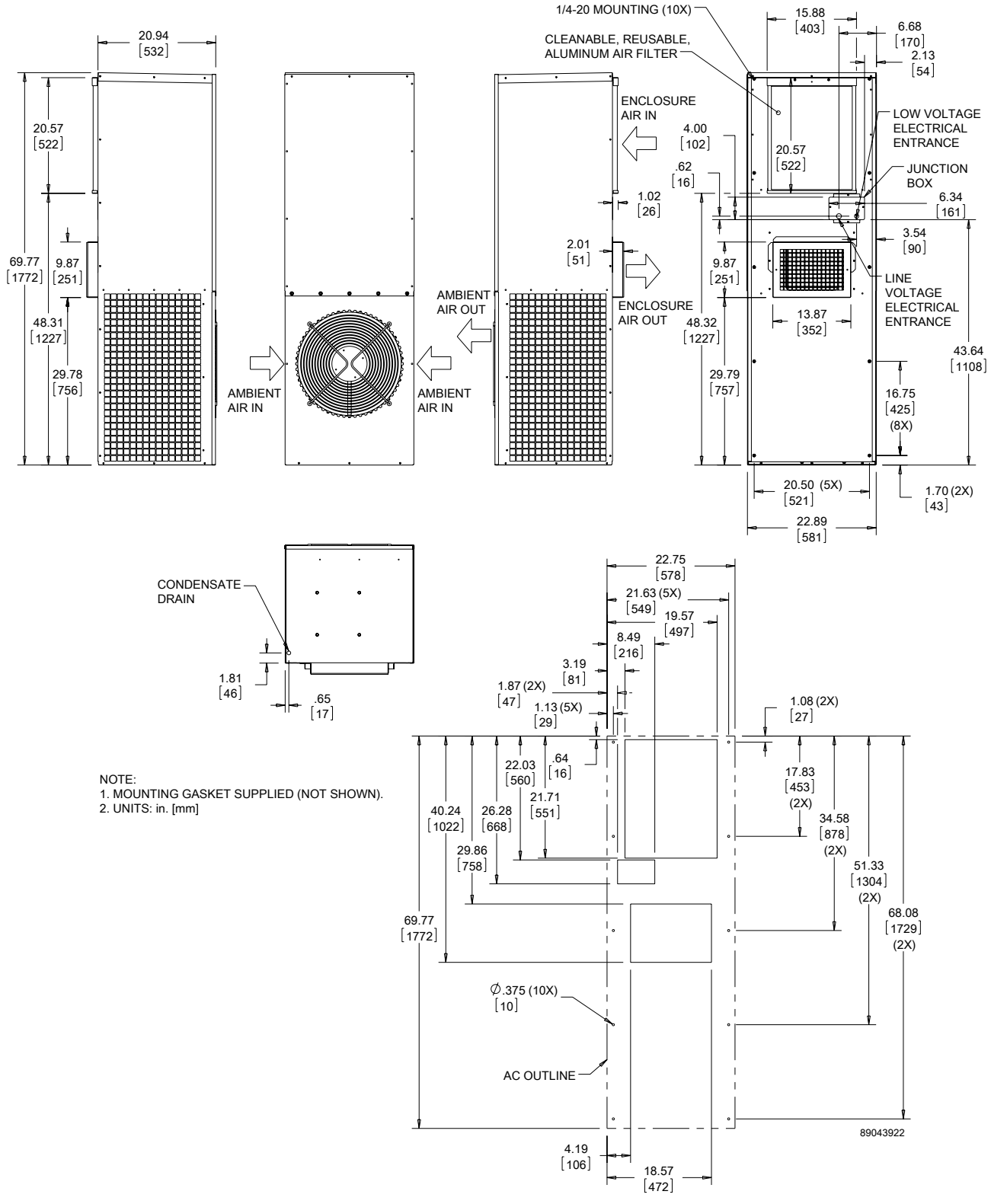
T70-36X6-GXXX R-407c Capacity Curves 50 Hz



T70-36X6-GXXX R-407c Capacity Curves 60 Hz



T70 Models 36000 BTU/Hr. (10548 Watt)



NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN).
2. UNITS: in. [mm]

Cutout Dimensions

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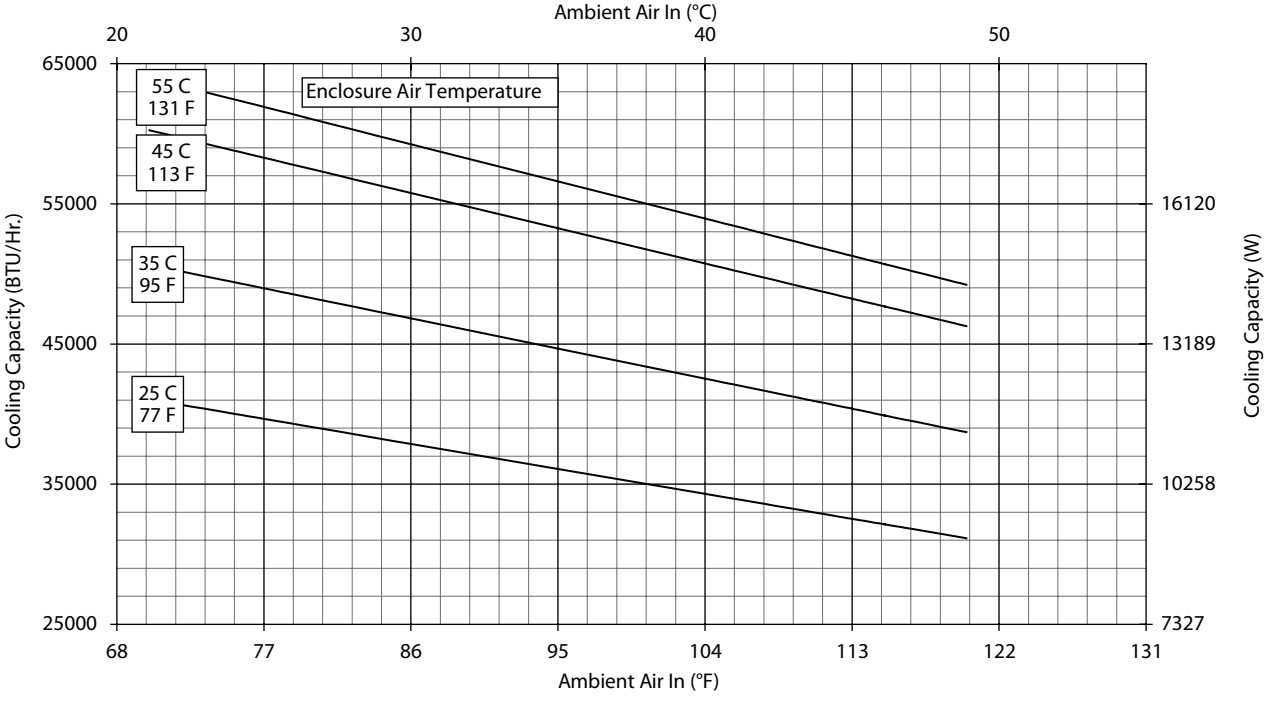
Performance Data **T70-60 59000 BTU/Hr. (17287 Watt) Models**

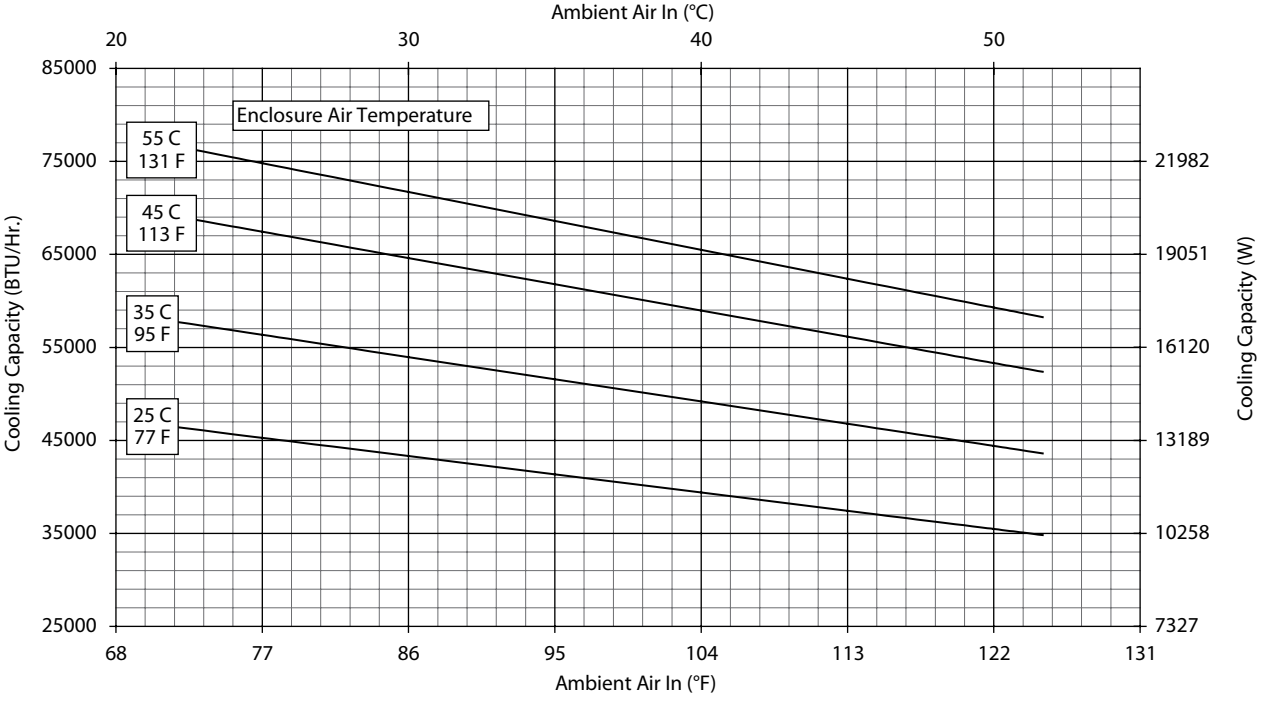
CATALOG NUMBER	T706026G150	T706046G400
COOLING PERFORMANCE		
Nominal:		
BTU/Hr.	**51900/60000**	
Watts	**15210/17584**	
At 122 F/122 F (50 C/50 C):		
BTU/Hr. (50/60 Hz)	51900/60000	
W (50/60 Hz)	15210/17584	
At 95 F/95 F (35 C/35 C):		
BTU/Hr. (50 /60 Hz)	47122/54500	
W (50/60 Hz)	13810/15972	
Refrigerant	R-407C	
Refrigerant Charge (ounces/grams)	150/4252	
Operating Temperature Range:		
Maximum (°F/°C)	122/50	
Minimum (°F/°C)	-40/-40	
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	1510/2565	
External loop 50 Hz (CFM / m^3/hr.)	2716/4614	
Internal loop 60 Hz (CFM / m^3/hr.)	1629/2767	
External loop 60 Hz (CFM / m^3/hr.)	2931/4979	
Max. Heater W (Outdoor Models)		
ELECTRICAL DATA		
Rated Voltage	**200/230**	**420/460**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	7000/9200	6426/7038
Max. Nominal Current (A at 50/60 Hz)	35/40	15.3
Starting Current (A)	144	144
Agency Approvals	UL/cUL Listed CE EAC Others available upon request	
Power Input Description	Terminal block	
ENCLOSURE PROTECTION		
UL Type	Type 12, 3R, 4 standard Type 4X Stainless steel optional	
International Rating	IP56 on the internal loop; IP34 on the external loop	
Description	Basic mechanical thermostat	
CONTROLLER		
Thermostat Location	Enclosure side on all base models	
Factory Thermostat Setting (°F/°C)	80/27	
SOUND LEVEL		
At 1.5 Meters	66 dB(A)	
UNIT CONSTRUCTION		
Material	Galvanized sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	69.77/1772	
Width (in./mm)	35.86/911	
Depth (in./mm)	22.94/583	
Weight (lb./kg)	419/190.5	

Performance Curves for T70 Models 59000 BTU/Hr. (17287 Watt)

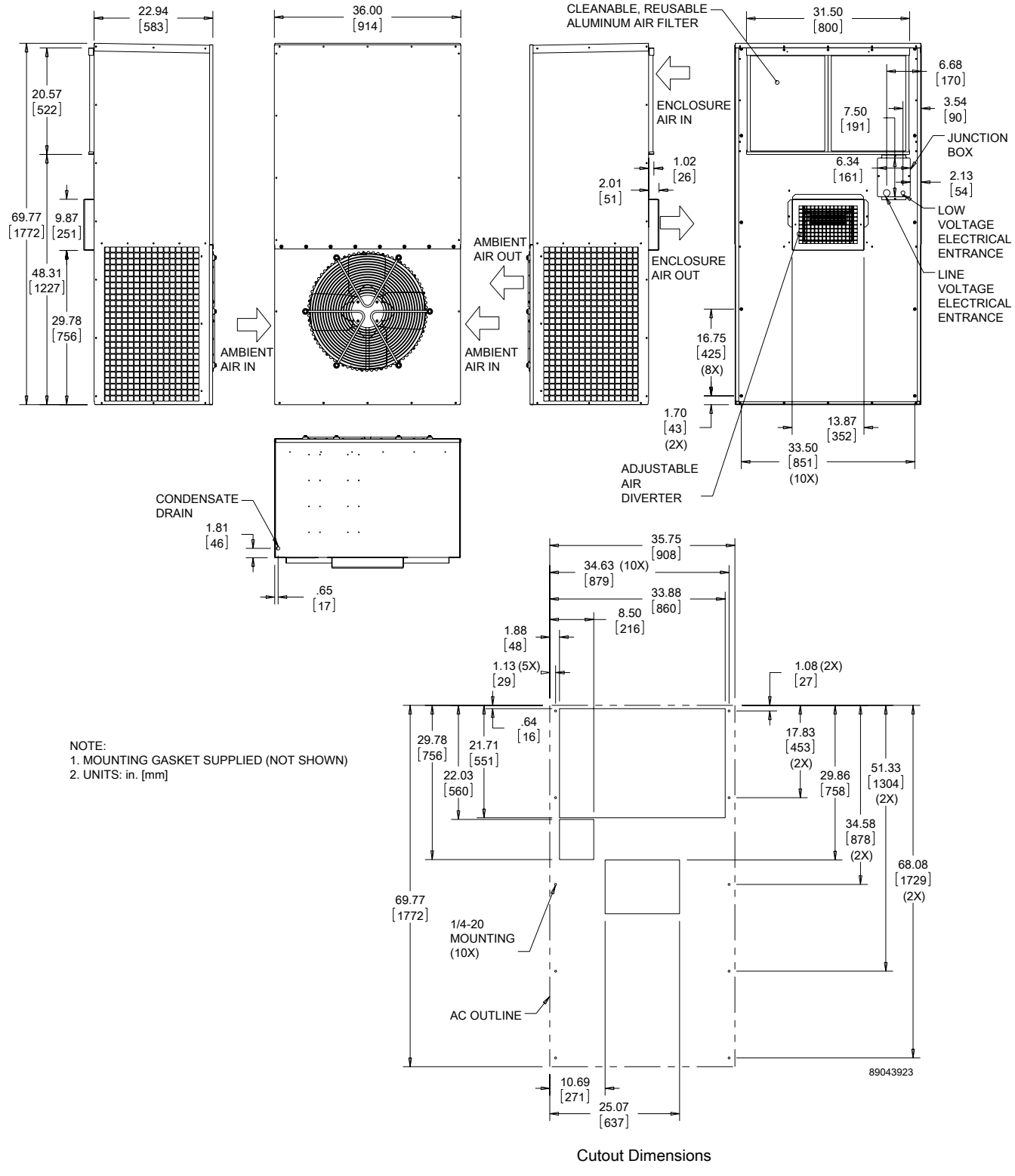
T70-60X6-GXXX R-407c Capacity Curves 50 Hz



T70-60X6-GXXX R-407c Capacity Curves 60 Hz



T70 Models 59000 BTU/Hr. (17287 Watt)



NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]

Cutout Dimensions

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GENESIS TOP-MOUNT INDOOR

HB16
8000 BTU/Hr.
2051 Watt

MHB11
2200-4000 BTU/Hr.
645-1172 Watt

INDUSTRY STANDARDS

UL/cUL Listed; Type 12; File No. SA6453
UR/cUR Recognized

Maintains U/cUL Type 12 rating when properly installed on a UL/cUL Type 12 enclosure.
UR/cUR Recognized on select models, reference performance data tables.
CE
EAC

APPLICATION

- Industrial automation
- Package handling equipment
- Security and defense systems
- Ideal for use where there is little or no clearance around the enclosure

FEATURES

- Robust reciprocating compressor
- R134a and R407c earth-friendly refrigerant
- Models for 115, 230 and 460 single-phase VAC power input
- UL Listed or Recognized to save customers time and money with agency approvals
- Operating temperature range from 50 F/10 C to 125 F/52 C
- Attractive industrial design with minimal use of visible fasteners
- Reliable mechanical thermostat located behind the filter of the unit
- Low-carbon mild-steel sheet-metal cover for rugged factory environments
- Cleanable, reusable aluminum mesh filter protects coils for maximum cooling performance
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Standard Indoor Air Conditioner models also include:
  - Electro-Mechanical Thermostat
  - Surge Suppressor
  - Condensate Management System On MHB11 models

FINISH

- RAL 7042 gray, semi-gloss powder-coat paint standard
- Other colors and textures available

OPTIONS

- Thermostat Malfunction Package
- Special Voltage Package
  * Consult the factory for availability and catalog number

NOTES

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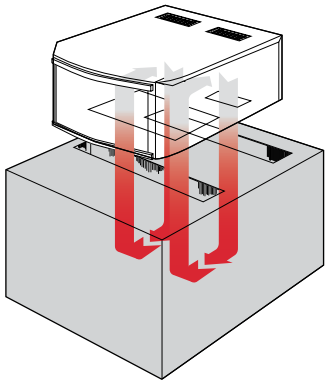


Top-Mount to Enclosure

Performance Data **MHB11 Models 2200 BTU/Hr. (645 Watt)**

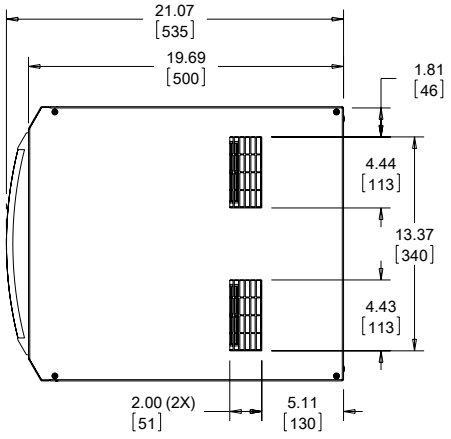
CATALOG NUMBER	MHB110216G306	MHB110226G306	MHB110246G400
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**2200/2200**	**2200/2200**	**2200/2200**
Watts	**645/645**	**645/645**	**645/645**
Refrigerant	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	11/312	11/312	11/312
Operating Temperature Range:			
Maximum (°F/°C)	125/52	125/52	125/52
Minimum (°F/°C)	50/10	50/10	50/10
Airflow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / m^3/hr.)	158/268	170/289	170/289
External loop 50 Hz (CFM / m^3/hr.)	222/377	218/370	218/370
Internal loop 60 Hz (CFM / m^3/hr.)	177/301	192/326	192/326
External loop 60 Hz (CFM / m^3/hr.)	252/428	245/416	245/416
ELECTRICAL DATA			
Rated Voltage	**115**	**220/230**	**440/460V 1PH**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1127/1035	1210/1058	1320/1150
Max. Nominal Current (A at 50/60 Hz)	9.8/9.0	5.5/4.6	3.0/2.5
Starting Current (A)	28	14.4	7.4
Agency Approvals	UL/cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION			
UL Type	Type 12 standard		
CONTROLLER			
Description	Basic mechanical thermostat		
Thermostat Location	Behind filter		
Factory Thermostat Setting (°F/°C)	80/27		
SOUND LEVEL			
At 1.5 Meters	62 dB(A)		
UNIT CONSTRUCTION			
Material	Mild steel sheet metal standard Stainless steel optional		
Finish	RAL 7042 gray, semi-gloss powder-coat paint standard		
UNIT DIMENSIONS			
Height (in./mm)	10.25/260	10.25/260	10.25/260
Width (in./mm)	17/432	17/432	17/432
Depth (in./mm)	21.08/535	21.08/535	21.08/535
Weight (lb./kg)	90/41	90/41	110/50

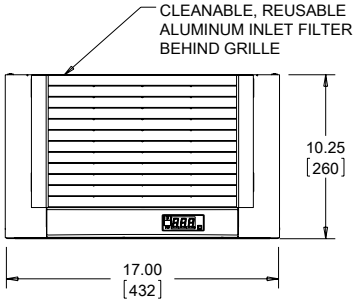
Performance Data **MHB11 Models 4000 BTU/Hr. (1172 Watt)**

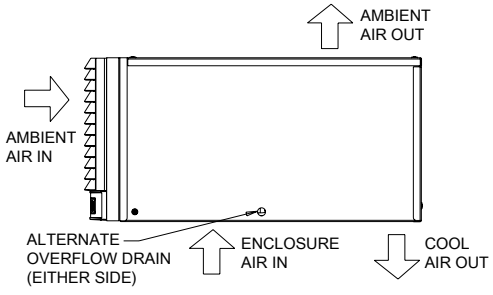
CATALOG NUMBER	MHB110416G307	MHB110426G306	MHB110446G400
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**3300/4000**	**3300/4000**	**3300/4000**
Watts	**967/1172**	**967/1172**	**967/1172**
Refrigerant	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	13/369	13/369	13/369
Operating Temperature Range:			
Maximum (°F/°C)	125/52	125/52	125/52
Minimum (°F/°C)	50/10	50/10	50/10
Airflow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / m^3/hr.)	158/268	170/289	170/289
External loop 50 Hz (CFM / m^3/hr.)	222/377	218/370	218/370
Internal loop 60 Hz (CFM / m^3/hr.)	177/301	192/326	192/326
External loop 60 Hz (CFM / m^3/hr.)	252/428	245/416	245/416
ELECTRICAL DATA			
Rated Voltage	**110/115**	**220/230**	**440/460V 1PH**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1617/1564	1760/1725	1936/1886
Max. Nominal Current (A at 50/60 Hz)	14.7/13.6	8.0/7.5	4.4/4.1
Starting Current (A)	48	23	12
Agency Approvals	UL/cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-20 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION			
UL Type	Type 12 standard		
CONTROLLER			
Description	Basic mechanical thermostat		
Thermostat Location	Behind filter		
Factory Thermostat Setting (°F/°C)	80/27		
SOUND LEVEL			
At 1.5 Meters	62 dB(A)		
UNIT CONSTRUCTION			
Material	Mild steel sheet metal standard Stainless steel optional		
Finish	RAL 7042 gray, semi-gloss powder-coat paint standard		
UNIT DIMENSIONS			
Height (in./mm)	10.25/260	10.25/260	10.25/260
Width (in./mm)	17/432	17/432	17/432
Depth (in./mm)	21.08/535	21.08/535	21.08/535
Weight (lb./kg)	108/49	108/49	128/58

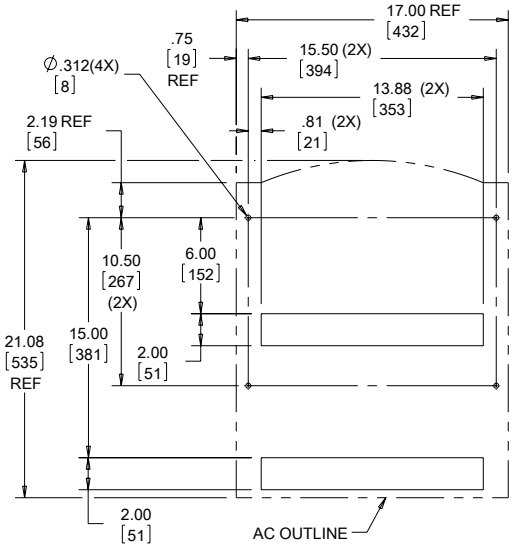
MHB11 Models 2200-4000 BTU/Hr. (645-1172 Watt)

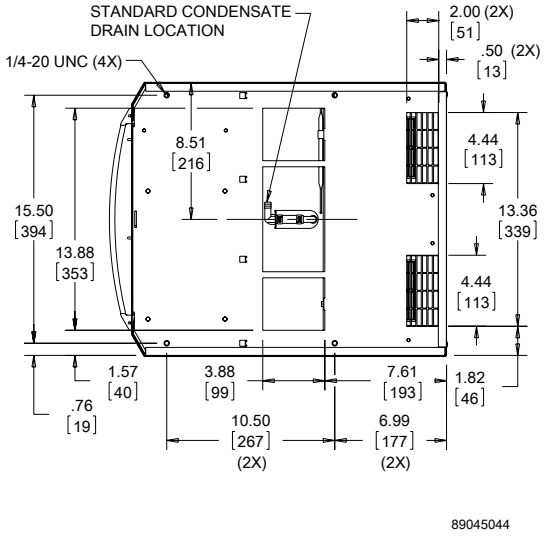
NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]
3. CUTOUT DIMENSIONS FOR STANDARD UNITS ONLY











Cutout Dimensions

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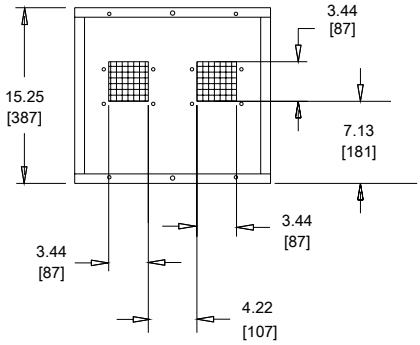
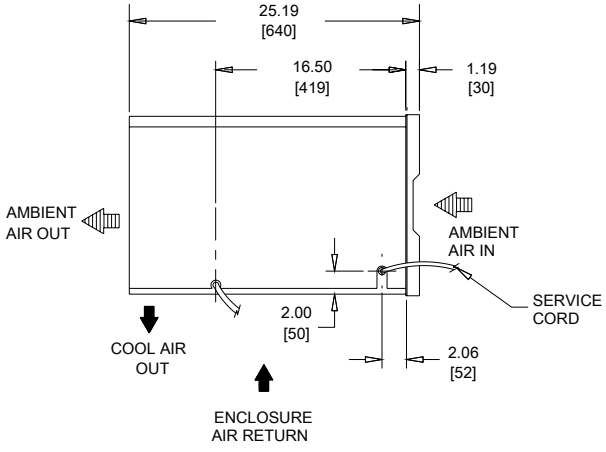
Performance Data **HB16 Models 8000 BTU/Hr. (2051 Watt)**

MODEL NUMBER			
Indoor Model	HB160816G040	HB160826G040	HB160846G040
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**7000/8000**	**7000/8000**	**7000/8000**
Watts	**2051/2344**	**2051/2344**	**2051/2344**
At 125 F/125 F (52 C/52 C):			
BTU/Hr. (50/60 Hz)	6975/8137	7075/8133	7075/8133
Watts (50/60 Hz)	2044/2385	2073/2384	2073/2384
At 95 F/95 F (35 C/35 C):			
BTU/Hr. (50/60 Hz)	6959/8236	6958/7774	6958/7774
W (50/60 Hz)	2039/2414	2039/2278	2039/2278
Refrigerant	R-407C	R-407C	R-407C
Refrigerant Charge (ounces/grams)	24/680	24/680	24/680
Operating Temperature Range:			
Maximum (°F/°C)	125/52	125/52	125/52
Minimum (°F/°C)	50/10	50/10	50/10
ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**460**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1822/2223	1785/2105	2162
Max. Nominal Current (A at 50/60 Hz)	18.7/20.4	8.5/9.3	4.3/4.7
Starting Current (A)	67	29	15
Agency Approvals		UL/cUL Listed CE EAC	
Power Input Description	6-ft. cord with NEMA 5-20 plug	6-ft. cord with NEMA 5-20 plug	6-ft. cord with NEMA L8-20 plug
ENCLOSURE PROTECTION			
UL Type		Type 12 Standard	
CONTROLLER			
Description		Basic Mechanical Thermostat	
Thermostat Location		Enclosure Side on All Base Models	
Factory Thermostat Setting (°F/°C)	80/27	80/27	80/27
UNIT CONSTRUCTION			
Material		Galvanized Sheet Metal Standard (Optional: Stainless Steel)	
Finish		RAL 7042 gray, semi-gloss powder-coat paint standard Other colors and textures available	
UNIT DIMENSIONS			
Height (in./mm)	15.25/387.35	15.25/387.35	15.25/387.35
Width (in./mm)	17.00/431.80	17.00/431.80	17.00/431.80
Depth (in./mm)	25.19/639.76	25.19/639.76	25.19/639.76
Weight (lb./kg)	145.00/69.78	145.00/69.78	170.00/77.00

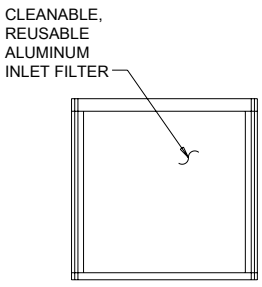
HB16 Models 8000 BTUs/Hr. (2051 Watts)



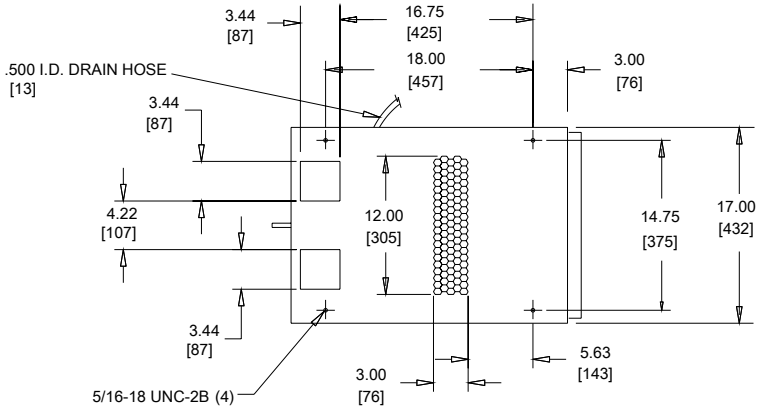
Rear View



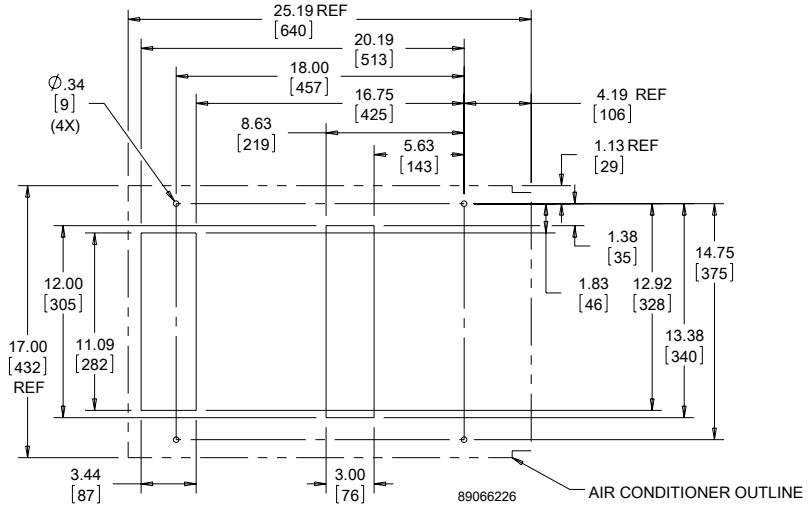
Side View



Front View



Bottom View



Cutout

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PROAIR HARSH ENVIRONMENT

CR23
1600 BTU/Hr.
469 Watt

CR29
2700 and 4000 BTU/Hr.
791 and 1172 Watts

CR43
6000 & 8000 BTU/Hr.
1758 and 2344 Watts

INDUSTRY STANDARDS

UL/cUL Listed; Type 12, 3R, 4; 4X optional; File No. SA6453
UR/cUR Recognized

UR/cUR Recognized on select models, reference performance data tables.
CE
EAC

APPLICATION

- Industrial automation
- Package handling equipment
- Food and beverage
- Wastewater treatment
- Security and defense systems
- And more

FEATURES

- Robust reciprocating compressor
- Easy maintenance: hinged front cover allows quick access to all components; condenser coil can be cleaned while unit is still mounted to the cabinet
- R134a or R407c earth-friendly refrigerant
- Models for 115, 230 and 460 single phase VAC power input
- UL Listed or Recognized to save customers time and money with agency approvals
- Operating temperature range from -40 F/-40 C to 131 F/55 C (with optional low-ambient package)
- Attractive industrial design with minimal use of visible fasteners
- Reliable mechanical thermostat located behind the filter of the unit
- Low-carbon mild-steel sheet-metal cover for rugged factory and outdoor environments
- Easy-mount flanges for simple installation
- Cleanable reusable aluminum mesh filter protects coils for maximum cooling performance
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- High-performance fans and blowers designed for densely packed enclosures
- Standard Indoor Air Conditioner models also include:
  - Electro-Mechanical Thermostat
  - Surge Suppressor

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint standard
- Stainless steel Type 304 or 316 finishes available on Type 4X models
- Other colors and textures available

OPTIONS

- Thermostat Malfunction Package
- Special Voltage Package
- Outdoor Package*
- Harsh Environment Package*
- Stainless Steel Package*
- Heater Package*

* T-Series may be more appropriate. Refer to T-Series A/C section. Consult the factory for availability and catalog number.

NOTES

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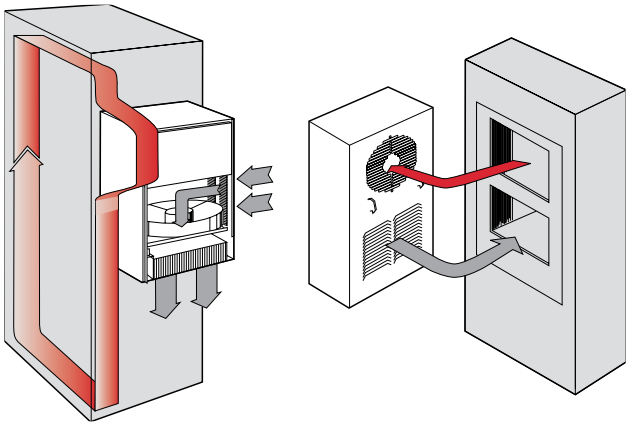
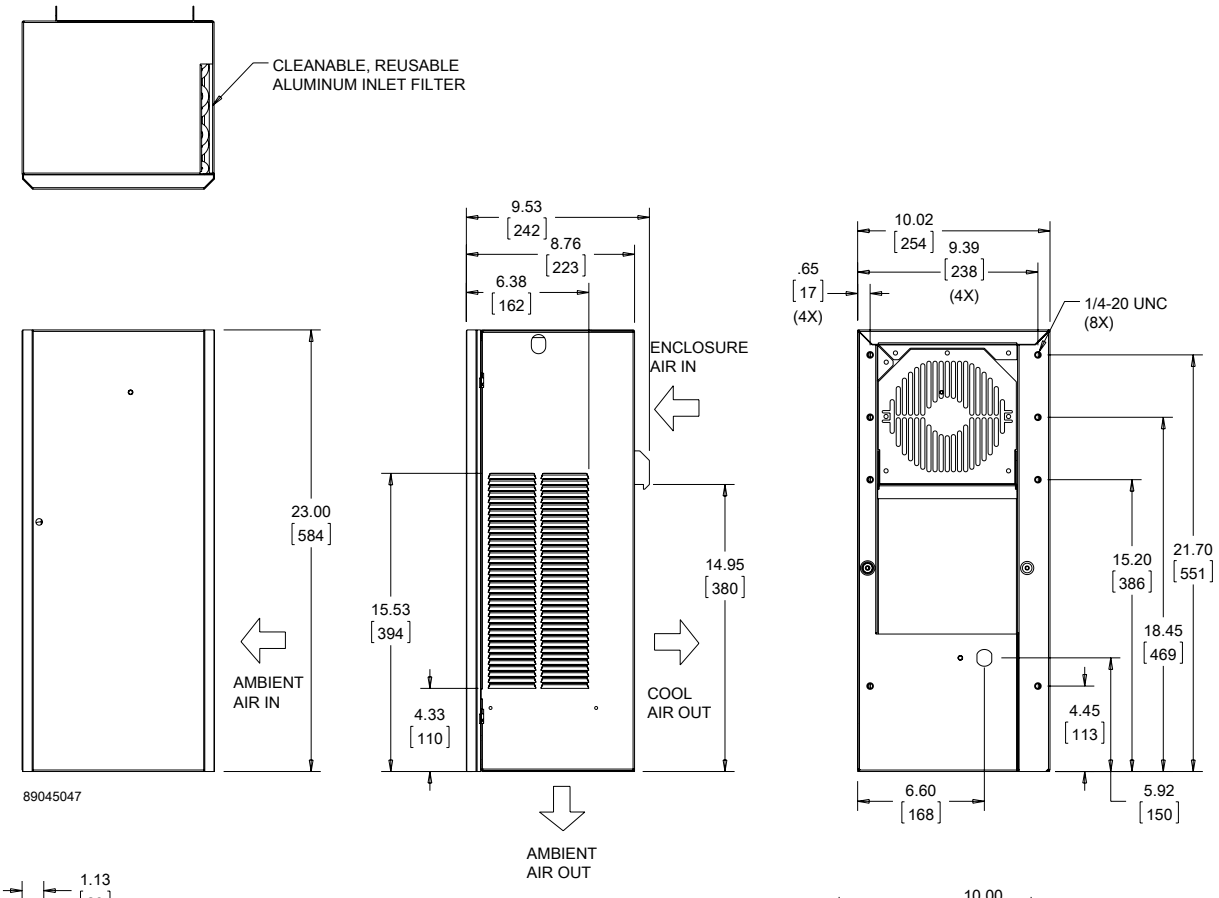
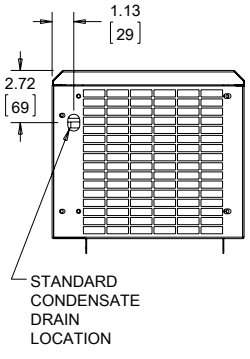
Performance Data **CR23 Models 1600 BTU/Hr. (469 Watt)**

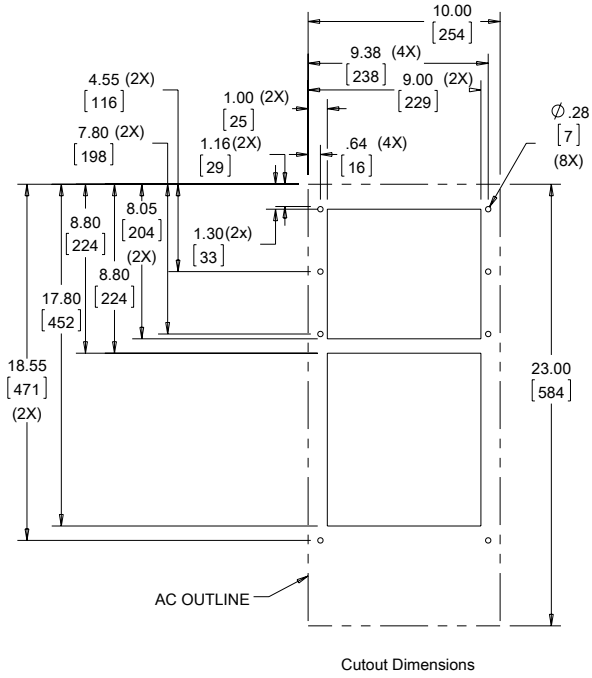
CATALOG NUMBER			
Indoor Model	CR230216G002	CR230226G002	CR230246G400
Indoor Level 2 Controller	CR230216G016	—	—
Outdoor Type 3R	CR230216G013	CR230226G030	—
Outdoor/SST/Corrosion Type 3R	CR230216G007	CR230226G009	—
Outdoor/SST/Level 2 Type 3R	CR230216G017	CR230226G016	—
Indoor/Outdoor/SST/Corrosion Type 4X	CR230216G015	CR230226G014	CR230226G037
COOLING PERFORMANCE			
Nominal:			
BTU/Hr.	**1400/1600**	**1400/1600**	**1400/1600**
Watts	**410/469**	**410/469**	**410/469**
Refrigerant	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	10/284	10/284	10/284
Operating Temperature Range:			
Maximum (°F/°C)	131/55	131/55	131/55
Minimum (°F/°C) (Low Ambient Pkg)	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / m^3/hr.)	117/199	117/199	117/199
External loop 50 Hz (CFM / m^3/hr.)	86/146	86/146	86/146
Internal loop 60 Hz (CFM / m^3/hr.)	130/221	130/221	130/221
External loop 60 Hz (CFM / m^3/hr.)	95/161	95/161	95/161
ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	471.5/517.5	506	552
Max. Nominal Current (A at 50/60 Hz)	4.1/4.0	2.7/2.5	1.4/1.3
Starting Current (A)	18	13.2	7.7
Agency Approvals	UL/cUL Listed CE EAC		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION			
UL Type	Type 12, 3R standard Type 4, 4X Stainless steel optional		
CONTROLLER			
Description	Basic mechanical thermostat		
Thermostat Location	Behind cover		
Factory Thermostat Setting (°F/°C)	80/27		
SOUND LEVEL			
At 1.5 Meters	62 dB(A)		
UNIT CONSTRUCTION			
Material	Mild steel sheet metal standard Stainless steel optional		
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		
UNIT DIMENSIONS			
Height (in./mm)	23/584		23/584
Width (in./mm)	10/254		10/254
Depth (in./mm)	8.75/222		8.75/222
Weight (lb./kg)	57/26		67/30



CR23 Models 1600 BTU/Hr. (469 Watt)







Cutout Dimensions

NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]

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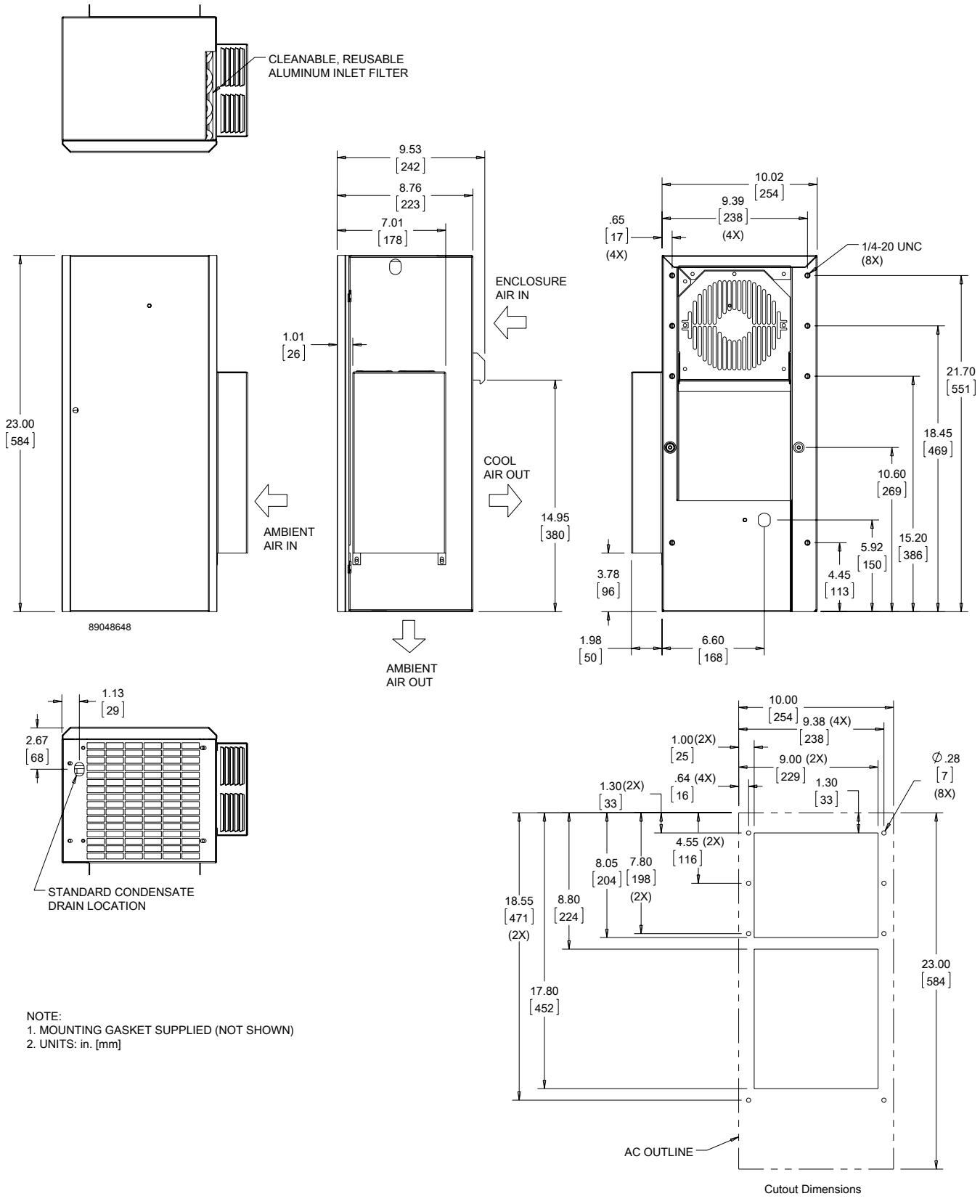
CR23 Models 1600 BTU/Hr. (469 Watt) With Type 4X Hood



NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]

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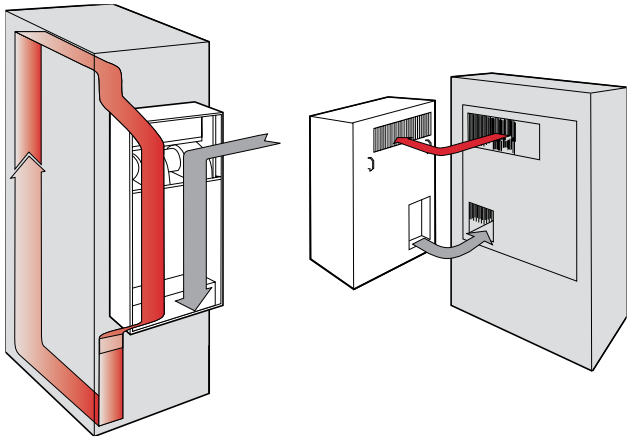
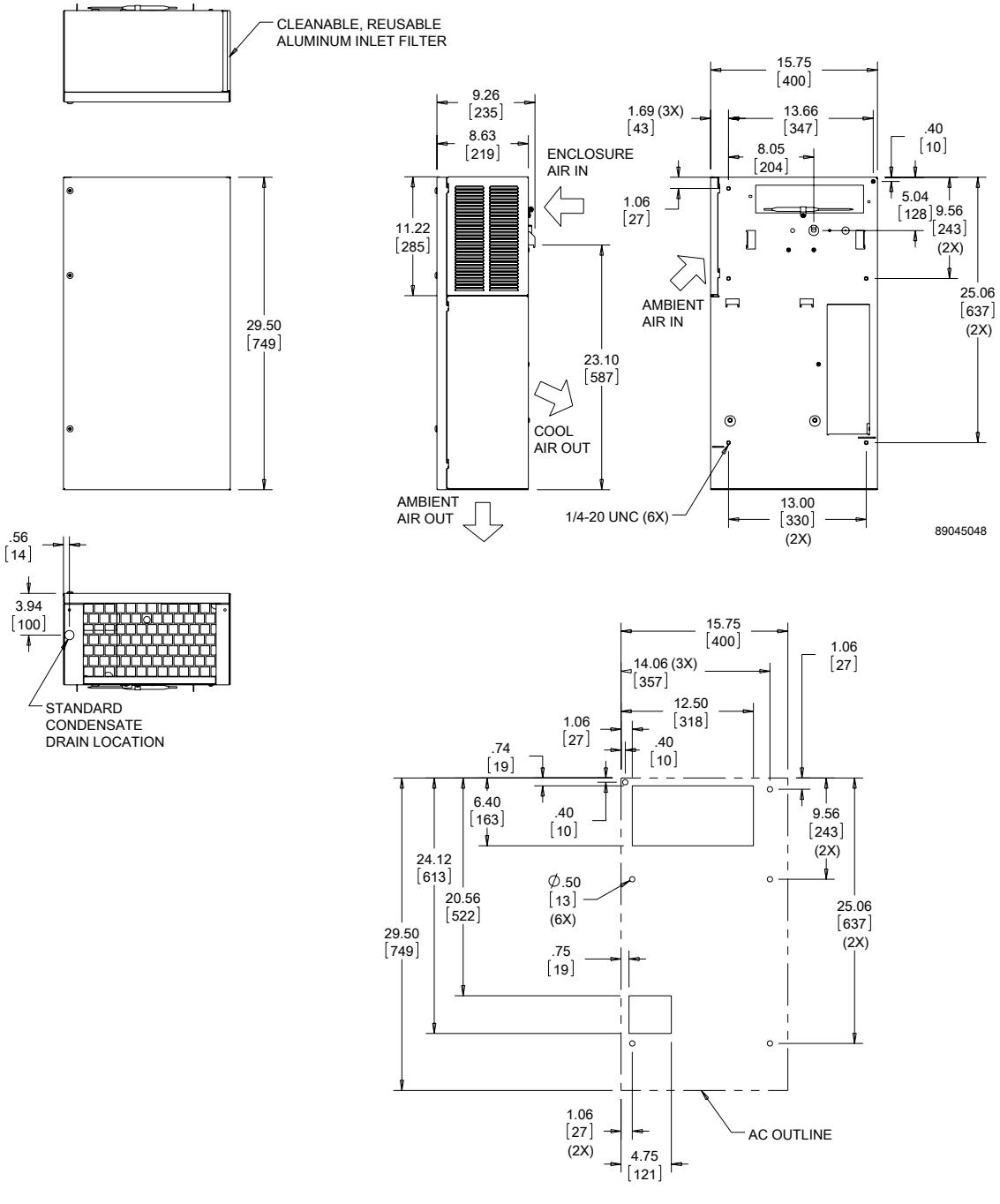
Performance Data **CR29 Models 2700/4000 BTU/Hr. (791/1172 Watt)**

CATALOG NUMBER						
Indoor Model	CR290216G002	CR290226G002	CR290246G400	CR290416G002	CR290426G002	CR290446G400
Indoor Level 2 Controller	CR290216G030	CR290226G030	CR290226G041	CR290416G047	CR290426G027	—
Outdoor Type 3R	CR290216G035	CR290226G020	—	CR290416G045	CR290426G022	—
Outdoor/SST/Corrosion Type 3R	CR290216G013	CR290226G010	CR290246G401	CR290416G030	CR290426G017	—
Outdoor/SST/Level 2 Type 3R	—	—	CR290226G058	CR290416G052	—	CR290426G101
Indoor/Outdoor/SST/Corrosion Type 4X	CR290216G036	CR290226G037	CR290226G045	CR290416G068	CR290426G054	CR290426G061
COOLING PERFORMANCE						
Nominal:						
BTU/Hr.	**2600/3000**	**2600/2700**	**2600/2700**	**3500/4000**	**3500/4000**	**3500/4000**
Watts	**761/879**	**761/791**	**761/791**	**1025/1172**	**1025/1172**	**1026/1172**
Refrigerant	R-134A	R-134A	R-134A	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	11/312	11/312	11/312	11/312	11/312	11/312
Operating Temperature Range:						
Maximum (°F/°C)	131/55	131/55	131/55	131/55	131/55	131/55
Minimum (°F/°C) (Low Ambient Pkg)	-40/-40	-40/-40	-40/-40	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:						
Internal loop 50 Hz (CFM / m^3/hr.)	141/239	141/239	141/239	141/239	141/239	141/239
External loop 50 Hz (CFM / m^3/hr.)	235/399	235/399	235/399	235/399	235/399	235/399
Internal loop 60 Hz (CFM / m^3/hr.)	157/266	157/266	157/266	157/266	157/266	157/266
External loop 60 Hz (CFM / m^3/hr.)	261/443	261/443	261/443	261/443	261/443	261/443
ELECTRICAL DATA						
Rated Voltage	**115**	**230**	**460V 1PH**	**115**	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1058/897	851/828	920/874	1116/1253	1081/1127	1104/1150
Max. Nominal Current (A at 50/60 Hz)	9.2/7.8	3.7/3.6	2.0/1.9	12.7/12.1	4.7/4.9	2.4/2.5
Starting Current (A)	31.5	15	7.7	44.5	18	9
Agency Approvals	UL/cUL Listed CE EAC		cUR Recognized CE EAC	UL/cUL Listed CE EAC		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads	6-ft. cord with NEMA 5-20 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION						
UL Type	Type 12, 3R standard Type 4, 4X Stainless steel optional			Type 12, 3R standard 4, 4X Stainless steel optional		
CONTROLLER						
Description	Basic mechanical thermostat			Basic mechanical thermostat		
Thermostat Location	Behind cover			Behind cover		
Factory Thermostat Setting (°F/°C)	80/27			80/27		
SOUND LEVEL						
At 1.5 Meters	68 dB(A)			68 dB(A)		
UNIT CONSTRUCTION						
Material	Mild steel sheet metal standard Stainless steel optional			Mild steel sheet metal standard Stainless steel optional		
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard			RAL 7035 light-gray, semi-textured powder-coat paint standard		
UNIT DIMENSIONS						
Height (in./mm)	29.5/749			29.5/749		
Width (in./mm)	15.75/400			15.75/400		
Depth (in./mm)	8.63/219			8.63/219		
Weight (lb./kg)	98/44	98/44	108/49	118/54	118/54	128/58



CR29 Models 2700/4000 BTU/Hr. (791/1172 Watt)

NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]



Cutout Dimensions

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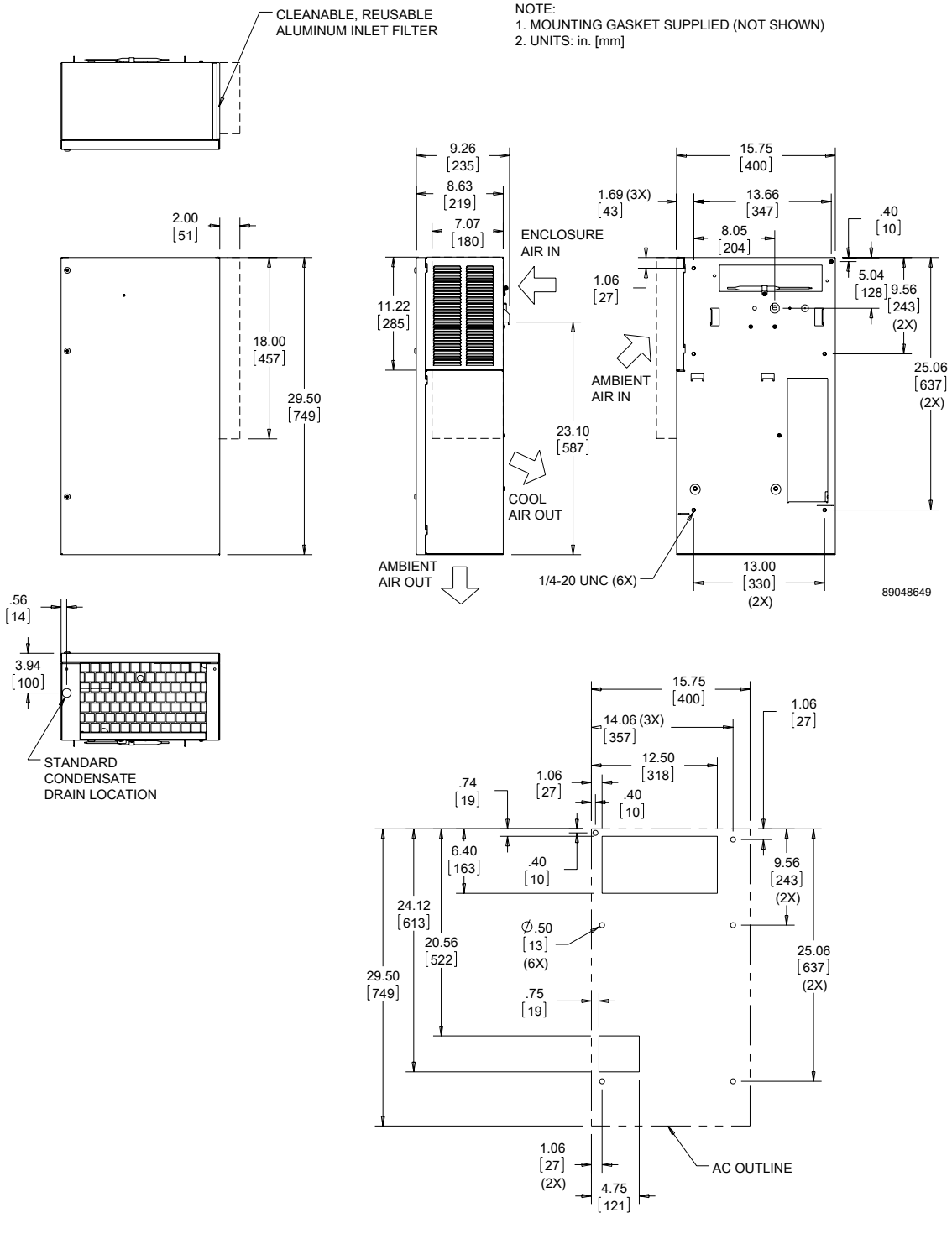
CR29 Models 2700/4000 BTU/Hr. (791/1172 Watt) With Type 4X Hood



Cutout Dimensions

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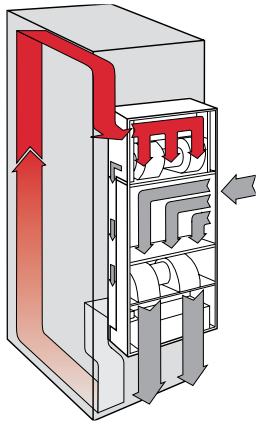
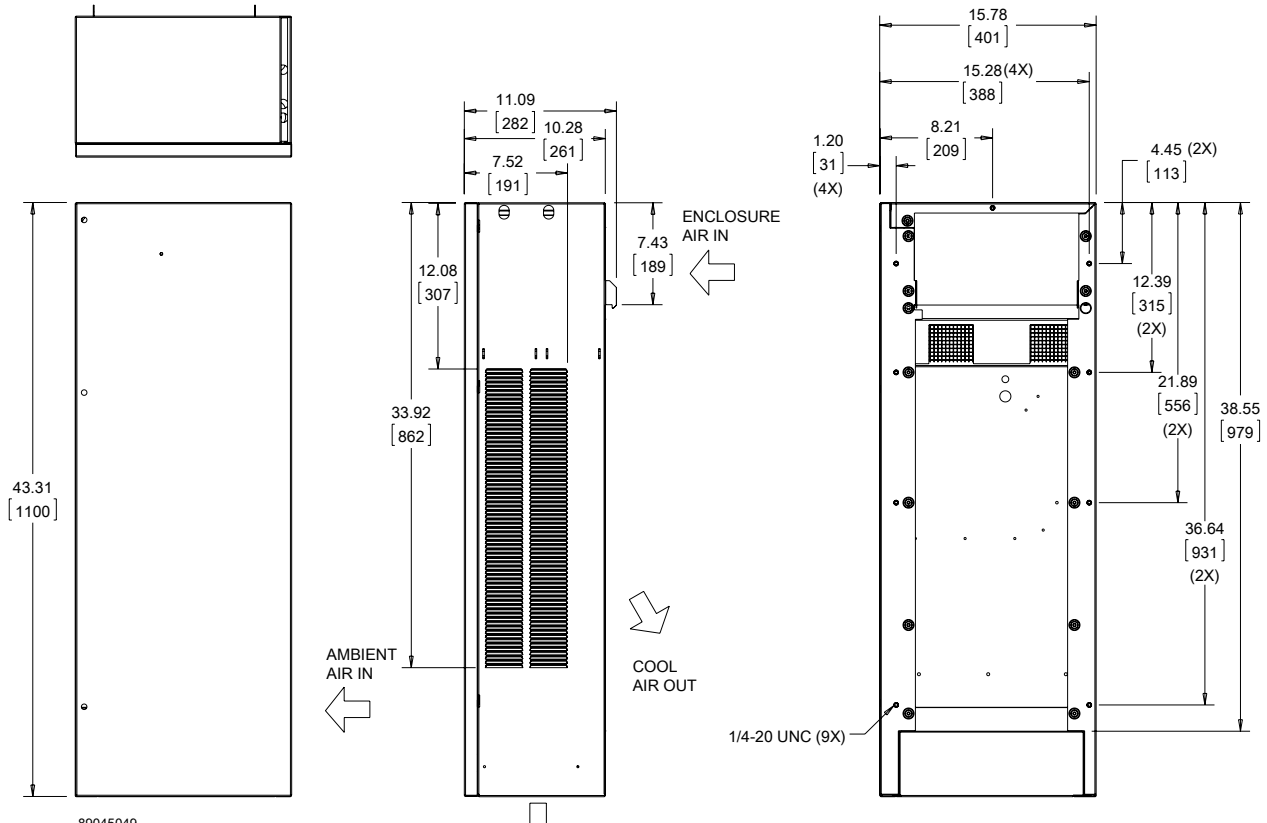
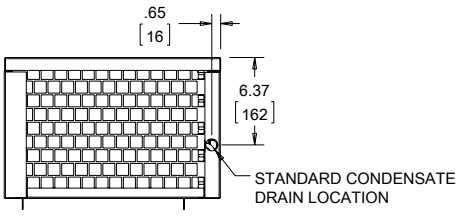
Performance Data **CR43 Models 6000/8000 BTU/Hr. (1758/2344 Watt)**

CATALOG NUMBER						
Indoor Model	CR430616G002	CR430626G002	CR430646G004	CR430816G002	CR430826G002	CR430826G089
Indoor Level 2 Controller	CR430616G016	CR430626G018	CR430626G030	CR430816G021	CR430826G026	—
Outdoor Type 3R	CR430616G013	CR430626G014	—	CR430816G038	CR430826G007	—
Outdoor/SST/Corrosion Type 3R	CR430616G004	—	—	CR430816G010	CR430826G037	—
Outdoor/SST/Level 2 Type 3R	—	CR430626G020	—	CR430816G023	CR430826G024	—
Indoor/Outdoor/SST/Corrosion Type 4X	CR430616G031	CR430626G034	CR430626G074	CR430816G036	CR430826G038	CR430846G401
COOLING PERFORMANCE						
Nominal:						
BTU/Hr.	**5500/6000**	**5500/6000**	**5500/6000**	**7100/8000**	**7100/8000**	**7100/8000**
Watts	1611/1758	**1611/1758**	**1611/1758**	**2080/2344**	**2080/2344**	**2080/2344**
Refrigerant	R-134A	R-134A	R-134A	R-134A	R-134A	R-134A
Refrigerant Charge (ounces/grams)	19/538	19/538	19/538	19/538	19/538	19/538
Operating Temperature Range:						
Maximum (°F/°C)	131/55	131/55	131/55	131/55	131/55	131/55
Minimum (°F/°C) (Low Ambient Pkg.)	-40/-40	-40/-40	-40/-40	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:						
Internal loop 50 Hz (CFM / m^3/hr.)	320/543	226/384	226/384	320/543	226/384	226/384
External loop 50 Hz (CFM / m^3/hr.)	480/815	470/798	470/798	480/815	470/798	470/798
Internal loop 60 Hz (CFM / m^3/hr.)	368/625	255/433	255/433	368/625	255/433	255/433
External loop 60 Hz (CFM / m^3/hr.)	544/924	540/917	540/917	544/924	540/917	540/917
ELECTRICAL DATA						
Rated Voltage	**115**	**230**	**460V 1PH**	**115**	**230**	**460V 1PH**
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	1460	1403/1518	1564/1656	1460	1403/1518	1564/1656
Max. Nominal Current (A at 50/60 Hz)	12.7	6.1/6.6	3.4/3.6	12.7	6.1/6.6	3.4/3.6
Starting Current (A)	48.3	27	14	48.3	27	14
Agency Approvals	UL/cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC	UL/cUL Listed CE EAC Others available upon request		cUR Recognized CE EAC
Power Input Description	6-ft. cord with NEMA 5-20 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads	6-ft. cord with NEMA 5-20 plug	6-ft. cord with NEMA 6-15 plug	6-ft. cord with wire leads
ENCLOSURE PROTECTION						
UL Type	Type 12, 3R standard Type 4, 4X Stainless steel optional			Type 12, 3R standard 4, 4X Stainless steel optional		
CONTROLLER						
Description	Basic mechanical thermostat			Basic mechanical thermostat		
Thermostat Location	Enclosure side on all base models			Enclosure side on all base models		
Factory Thermostat Setting (°F/°C)	80/27			80/27		
SOUND LEVEL						
At 1.5 Meters	71 dB(A)			71 dB(A)		
UNIT CONSTRUCTION						
Material	Galvanized sheet metal standard Stainless steel optional			Galvanized sheet metal standard Stainless steel optional		
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard			RAL 7035 light-gray, semi-textured powder-coat paint standard		
UNIT DIMENSIONS						
Height (in./mm)	43.31/1100			43.31/1100		
Width (in./mm)	15.75/400			15.75/400		
Depth (in./mm)	10.25/260			10.25/260		
Weight (lb./kg)	125/57	125/57	155/70	125/57	125/57	155/70

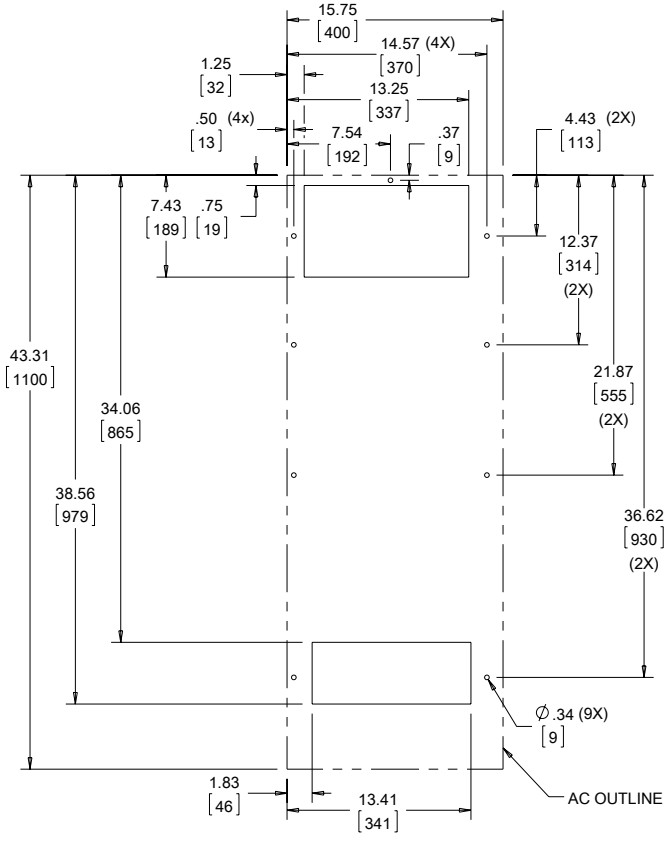


CR43 Models 6000/8000 BTU/Hr. (1758/2344 Watt)





NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]



Cutout Dimensions

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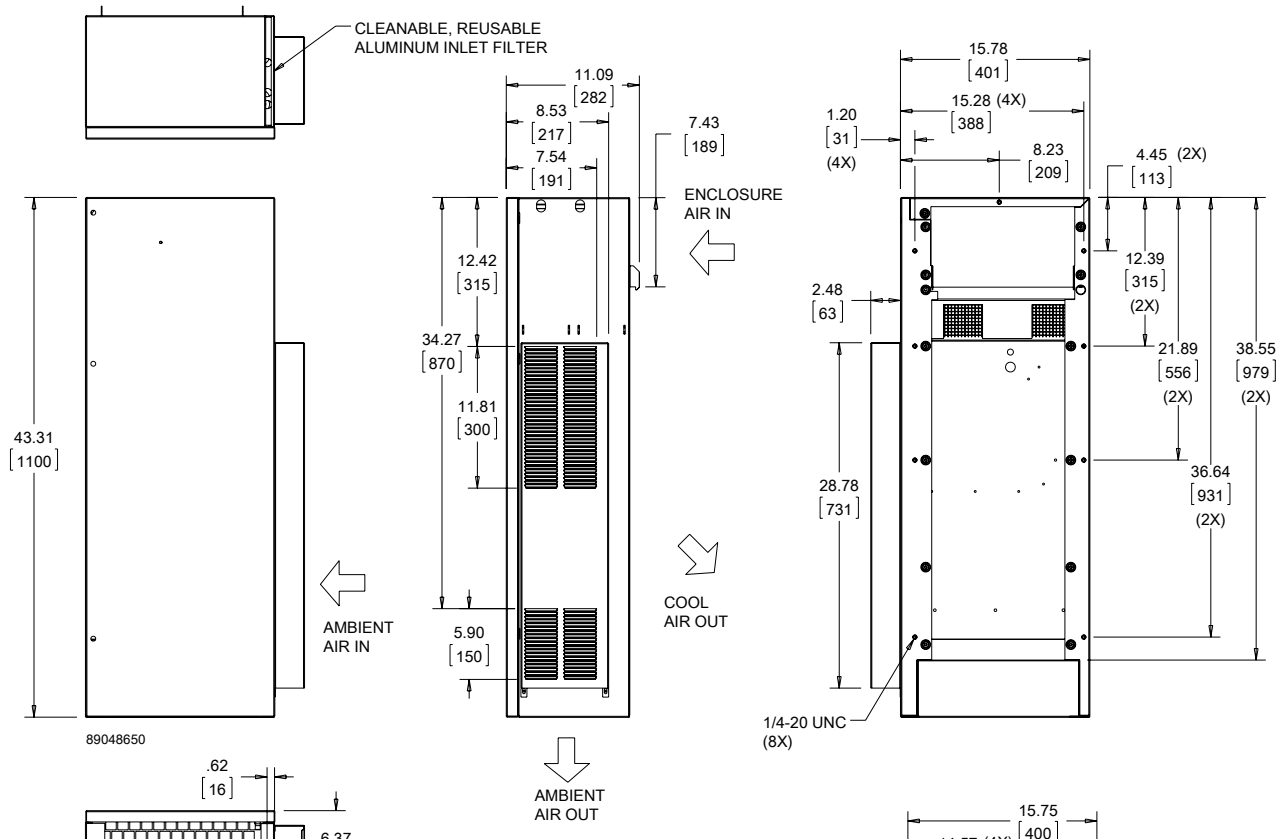
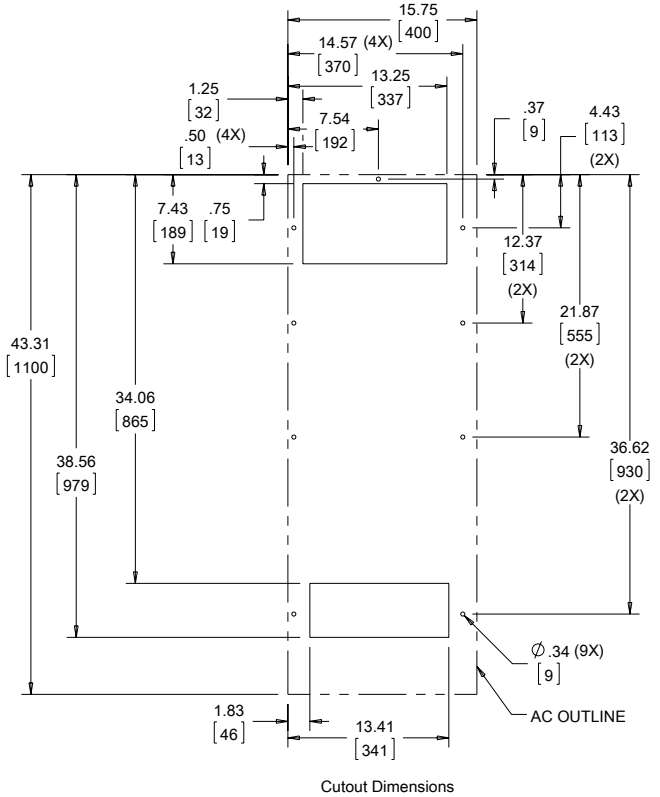
CR43 Models 6000/8000 BTU/Hr. (1758/2344 Watt) With Type 4X Hood



NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]



Cutout Dimensions

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WATER-COOLED INDOOR/OUTDOOR

CR43WC
8000 BTU/Hr.
2345 Watt

FEATURES

- Robust reciprocating compressor
- R134a earth-friendly refrigerant
- Models for 115 and 230 VAC power input
- UL Listed or Recognized to save customers time and money with agency approvals
- Operating temperature range from 50 F/10 C to 125 F/52 C
- Attractive industrial design with minimal use of visible fasteners
- Reliable mechanical thermostat located behind the front panel of the unit
- Low-carbon mild-steel sheet-metal cover for rugged factory and outdoor environments
- Easy-mount flanges for simple installation
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Heat is removed from the system by means of the water cooling the refrigerant; no external air movers or condenser coils to get clogged
- Maximum water usage of 2 GPM at 90 F water intake temperature
- Standard Indoor Air Conditioner models also include:
  - Electro-Mechanical Thermostat
  - Surge Suppressor

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint standard
- Stainless steel Type 304 or 316 finishes available on Type 4X models
- Other colors and textures available

OPTIONS

- Thermostat Malfunction Package
- Special Voltage Package
- Active Condensate Evaporator Package
- Harsh Environment Package*
- Stainless Steel Package*

* Consult the factory for availability and catalog number.

NOTES

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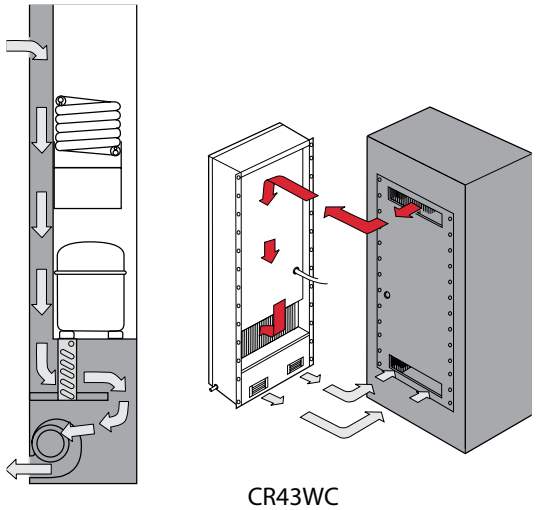
INDUSTRY STANDARDS

UL/cUL Listed; Type 4; 4X optional; File No. SA6453
UR/cUR Recognized

UR/cUR Recognized on select models, reference performance data tables.
CE
EAC

APPLICATION

- Industrial automation
- Package handling equipment
- Food and beverage
- Wastewater treatment
- Security and defense systems
- Pulp and paper
- And more

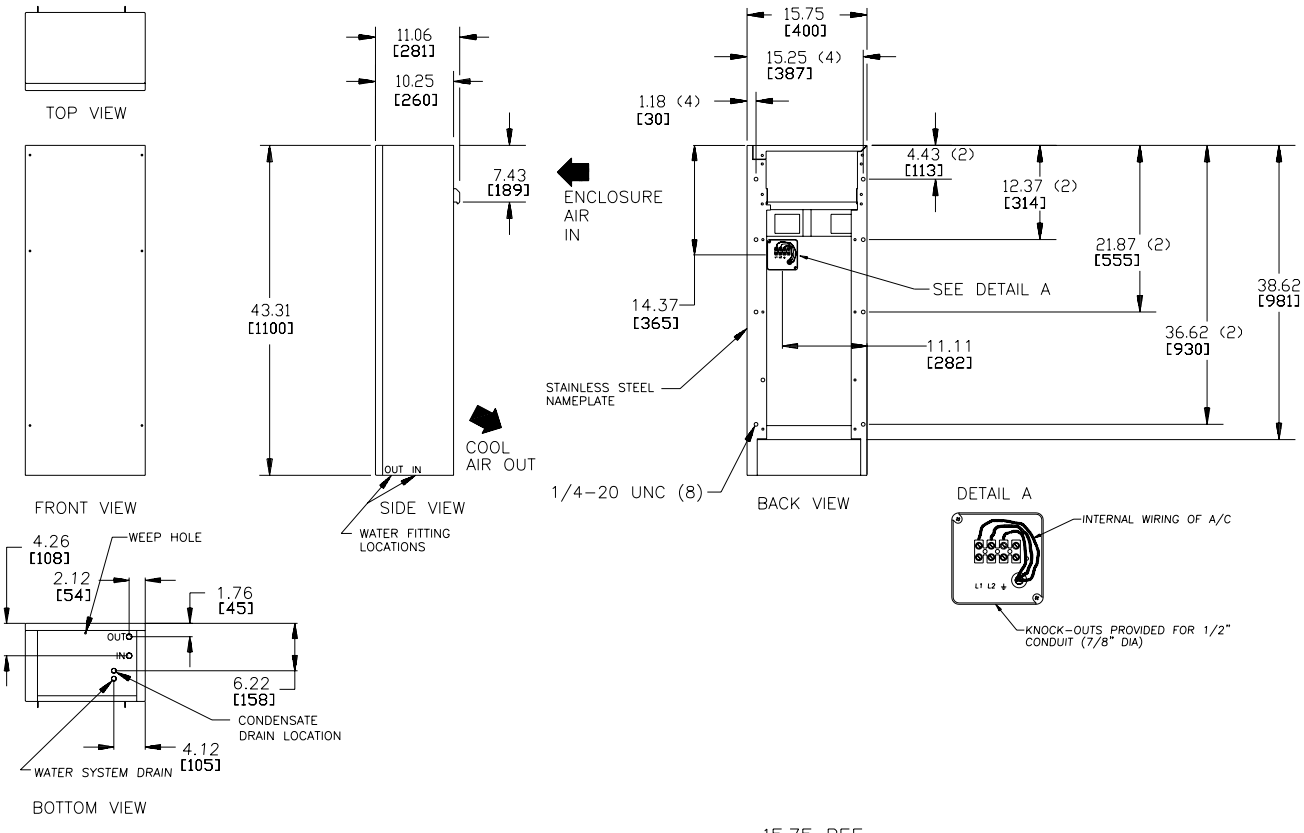


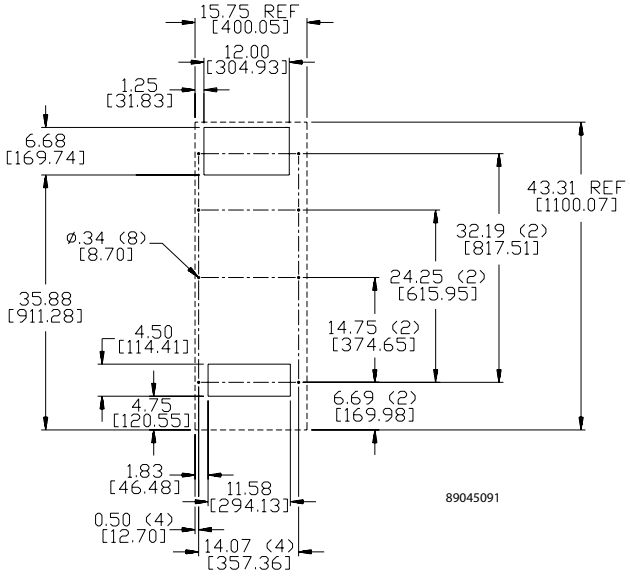
CR43WC

Performance Data **CR43WC Models 8000 BTU/Hr. (2345 Watt)**

CATALOG NUMBER		
Indoor/Outdoor Model	CR430816GW010	CR430826GW010
COOLING PERFORMANCE		
Nominal:		
BTU/Hr.	**8500**	**8500**
Watts	**2490**	**2490**
Refrigerant	R-134A	R-134A
Refrigerant Charge (ounces/grams)	12/341	12/341
Operating Temperature Range:		
Maximum (°F/°C)	131/55	131/55
Minimum (°F/°C)	50/10	50/10
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	135/229	100/170
External loop 50 Hz	Waterflow: 1.5 GPM @ 90F	Waterflow: 1.5 GPM @ 90F
Internal loop 60 Hz (CFM / m^3/hr.)	145/246	110/187
External loop 60 Hz	Waterflow: 1.5 GPM @ 90F	Waterflow: 1.5 GPM @ 90F
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50 / 60 Hz)	1518/1495	1518/1495
Max. Nominal Current (A at 50 / 60 Hz)	13.2/13	6.6/6.5
Starting Current (A)	48.3	27
Agency Approvals	UL/cUL Listed CE EAC	
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 4 standard Type 4X Stainless steel optional	
CONTROLLER		
Description	Basic mechanical thermostat	
Thermostat Location	Behind front cover	
Factory Thermostat Setting (°F/°C)	80/27	
SOUND LEVEL		
At 1.5 Meters	61 dB(A)	
UNIT CONSTRUCTION		
Material	Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	43.31/1100	
Width (in./mm)	15.75/400	
Depth (in./mm)	10.25/260.4	
Weight (lb./kg)	86/39	

CR43WC Models 8000 BTU/Hr. (2345 Watt)





Cutout Dimensions

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Notes

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CLIMAGUARD AIR-TO-AIR INDOOR

XR20
Models
4 W/°F (7 W/°C)

XR29-08
Models
8 W/°F (14 W/°C)

XR29-18
Models
18 W/°F (32 W/°C)

XR47-24
Models
24 W/°F (43 W/°C)

XR47-35
Models
35 W/°F (63 W/°C)

XR60-55
Models
55 W/°F (99 W/°C)

XR60-84
Models
84 W/°F (151 W/°C)

INDUSTRY STANDARDS

UL/cUL Listed; Type 12; File No. SA7402 UR/cUR Recognized

Type 12 on XR20 and XR29-08 models
Type 3R on XR29-18 and larger models when surface mounted vertically on an enclosure
CE
EAC

APPLICATION

- Industrial automation
- Package handling equipment
- Security and defense systems
- And more

FEATURES

- Unique counterflow aluminum core for high-efficiency and high-performance heat transfer, except for the XR20 and XR29-08 which use a modified heat pipe core
- Models for 115 and 230 VAC power input
- UL Listed or Recognized to save customers time and money with agency approvals
- Operating temperature range from -20 F/-29 C to 140 F/60 C
- Streamlined aesthetics with no visible mounting rails; Slim design allows for mounting to narrow or shallow enclosures
- Reliable top-quality bearing fans and impellers make these units run quietly and with increased reliability
- Low-carbon mild-steel sheet-metal cover for rugged factory environments
- Easy-mount flanges for simple installation
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Filterless design for low maintenance and easy cleaning
- Four fasteners allow simple removal of front cover for easy access

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint standard
- Stainless steel Type 304 or 316 finishes available
- Other colors and textures available

OPTIONS

- Special Voltage Package
- Outdoor Package*
- Stainless Steel Package*

* CLIMAGUARD may be more appropriate. Refer to CLIMAGUARD Air-to-Air Outdoor chapter. Consult the factory for availability and catalog number.

NOTES

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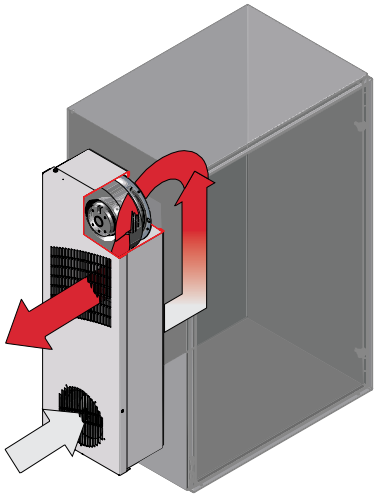
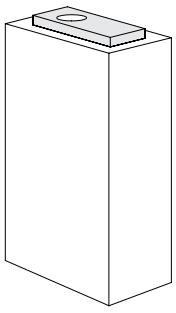


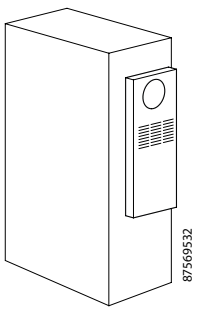
Performance Data **XR20 Models 4 W/°F (7 W/°C)**

CATALOG NUMBER	XR200416012	XR200426012
COOLING PERFORMANCE		
Nominal:		
W per °F	**4**	**4**
W per °C	**7**	**7**
Refrigerant	R-134A	R-134A
Refrigerant Charge (ounces/grams)	4/113	4/113
Operating Temperature Range:		
Maximum (°F/°C)	140/60	140/60
Minimum (°F/°C)	-20/-29	-20/-29
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	71/121	71/121
External loop 50 Hz (CFM / m^3/hr.)	75/127	75/127
Internal loop 60 Hz (CFM / m^3/hr.)	74/126	74/126
External loop 60 Hz (CFM / m^3/hr.)	78/132	78/132
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	69	69
Max. Nominal Current (A at 50/60 Hz)	0.6	0.3
Agency Approvals	UL/cUL Listed CE EAC	
Power Input Description	Terminal Block	Terminal Block
ENCLOSURE PROTECTION		
UL Type	Type 12 standard	
SOUND LEVEL		
At 1.5 Meters	56 dBA	
UNIT CONSTRUCTION		
Material	Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	20/508	20/508
Width (in./mm)	7.5/190.5	7.5/190.5
Depth (in./mm)	3/76.2	3/76.2
Weight (lb./kg)	12/5.4	12/5.4

Mounting Options

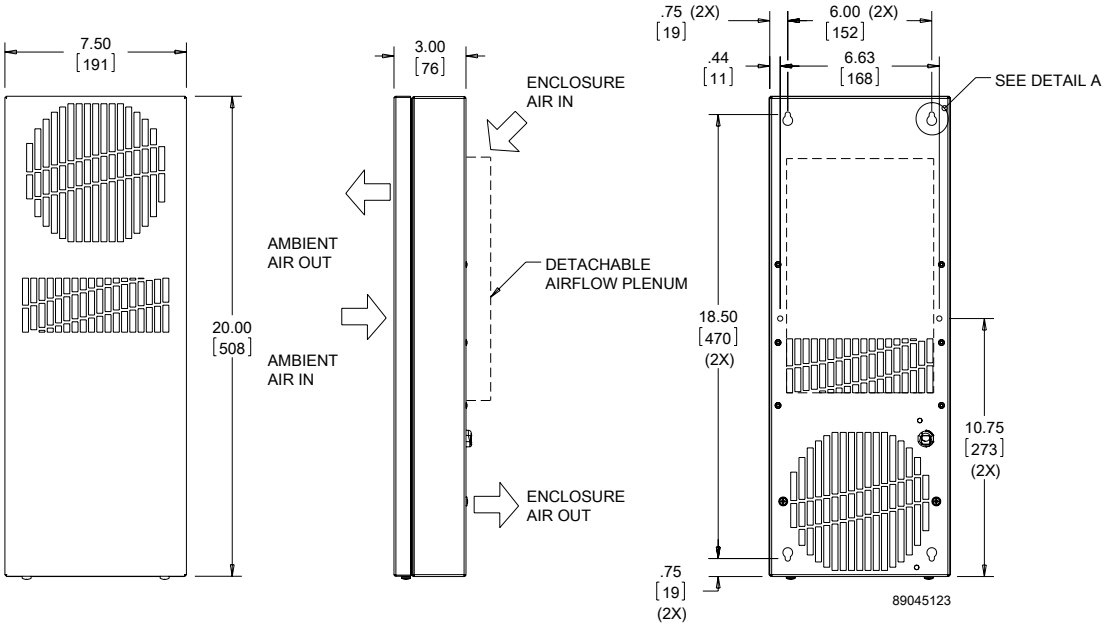


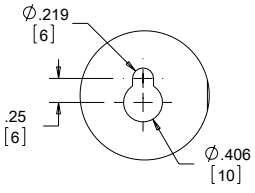
External
Top-Mount



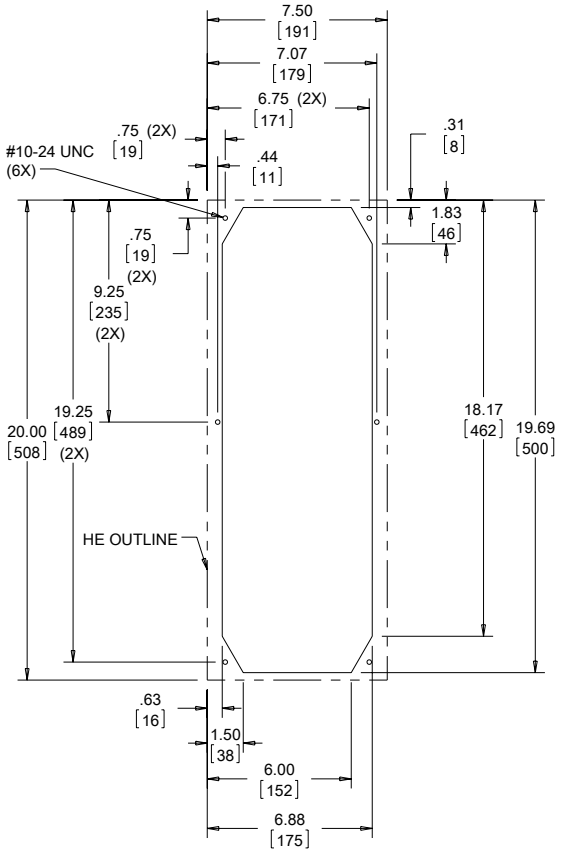
External
Vertical-Mount

XR20 Models 4 W/°F (7 W/°C)





DETAIL A
(4X)



Cutout Dimensions

NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in [mm]

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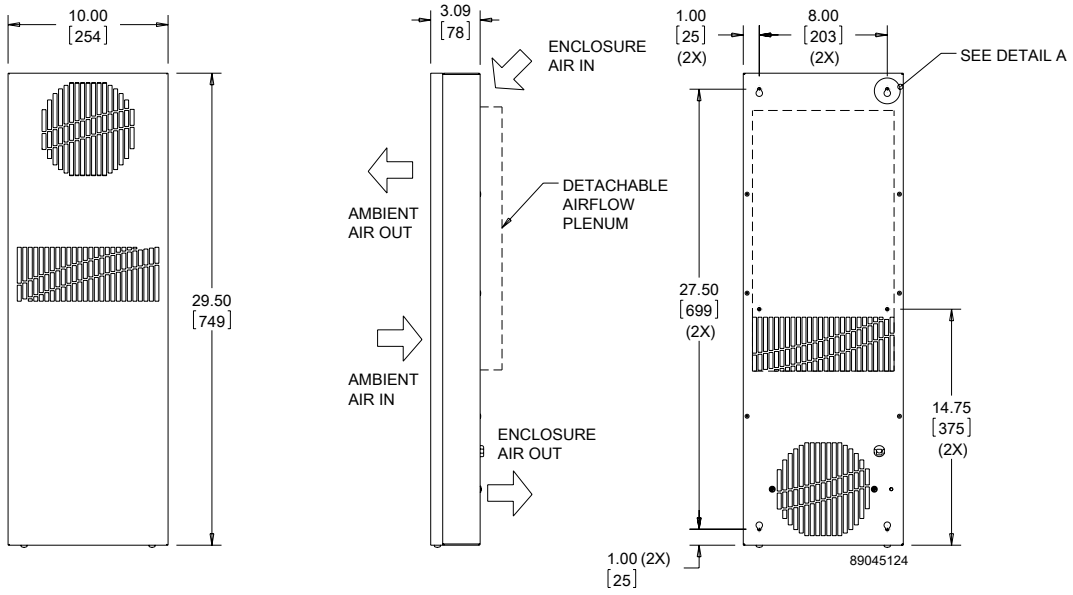
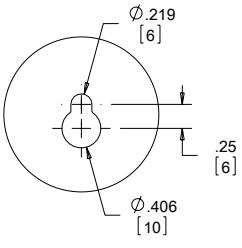
Performance Data **XR29 Models 8 W/°F (14 W/°C)**

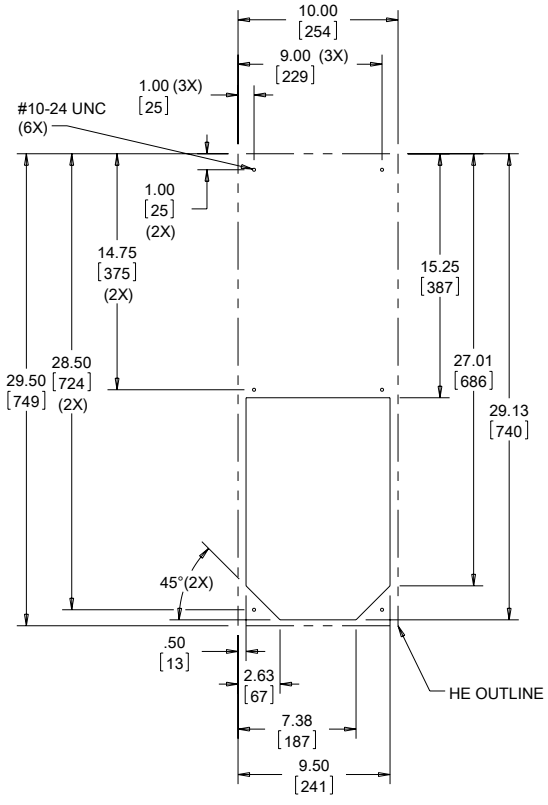
CATALOG NUMBER	XR290816012	XR290826012
COOLING PERFORMANCE		
Nominal:		
W per °F	**8**	**8**
W per °C	**14**	**14**
Refrigerant	R-134A	R-134A
Refrigerant Charge (ounces/grams)	5.5/156	5.5/156
Operating Temperature Range:		
Maximum (°F/°C)	140/60	140/60
Minimum (°F/°C)	-20/-29	-20/-29
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	71/121	71/121
External loop 50 Hz (CFM / m^3/hr.)	75/127	75/127
Internal loop 60 Hz (CFM / m^3/hr.)	74/126	74/126
External loop 60 Hz (CFM / m^3/hr.)	78/132	78/132
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	69	69
Max. Nominal Current (A at 50/60 Hz)	0.6	0.3
Agency Approvals	UL/cUL Listed CE EAC	
Power Input Description	Terminal Block	Terminal Block
ENCLOSURE PROTECTION		
UL Type	Type 12 standard	
SOUND LEVEL		
At 1.5 Meters	56 dBA	
UNIT CONSTRUCTION		
Material	Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	29.5/749.3	29.5/749.3
Width (in./mm)	10/254	10/254
Depth (in./mm)	3.09/78.5	3.09/78.5
Weight (lb./kg)	21/9.5	21/9.5

XR29 Models 8 W/°F (14 W/°C)





DETAIL A
(4X)



Cutout Dimensions

NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in [mm]

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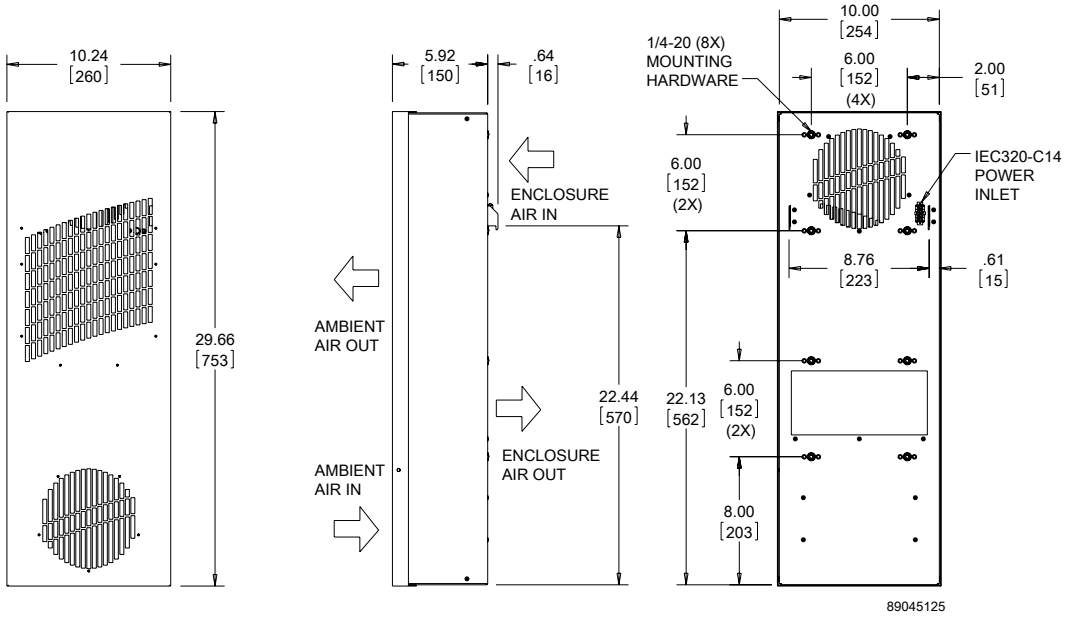
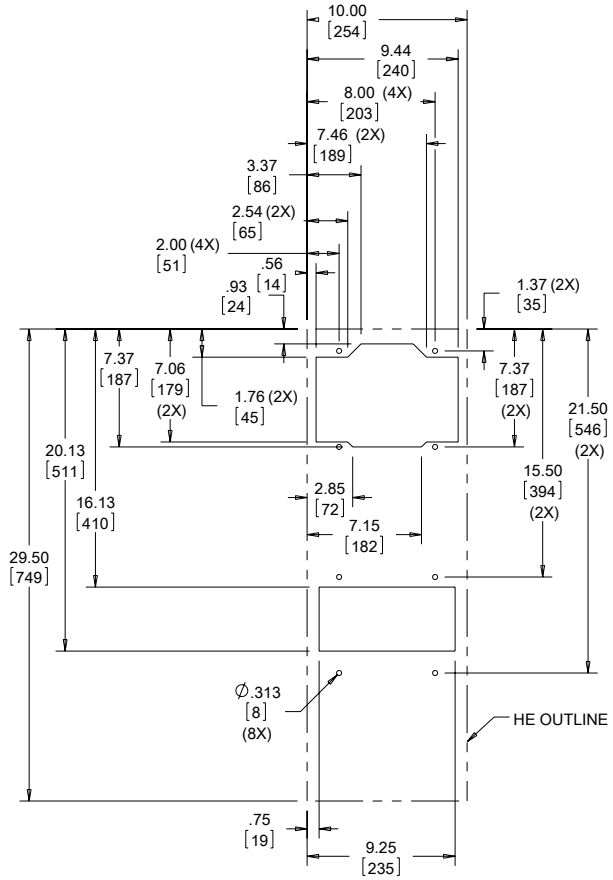
Performance Data **XR29 Models 18 W/°F (32 W/°C)**

CATALOG NUMBER	XR291816012	XR291826012
COOLING PERFORMANCE		
Nominal:		
W per °F	**18**	**18**
W per °C	**32**	**32**
Refrigerant	N/A	N/A
Refrigerant Charge (ounces/grams)	N/A	N/A
Operating Temperature Range:		
Maximum (°F/°C)	140/60	140/60
Minimum (°F/°C)	-20/-29	-20/-29
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	126/214	126/214
External loop 50 Hz (CFM / m^3/hr.)	120/204	120/204
Internal loop 60 Hz (CFM / m^3/hr.)	140/237	140/237
External loop 60 Hz (CFM / m^3/hr.)	133/226	133/226
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	207	207
Max. Nominal Current (A at 50/60 Hz)	1.8	0.9
Agency Approvals	UL/cUL Listed CE EAC	
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12 standard Type 3R, 4, 4X optional	
SOUND LEVEL		
At 1.5 Meters	64 dBA	
UNIT CONSTRUCTION		
Material	Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	29.66/753.3	29.66/753.3
Width (in./mm)	10.24/260.1	10.24/260.1
Depth (in./mm)	5.92/150.4	5.92/150.4
Weight (lb./kg)	32/15	32/15

XR29 Models 18 W/°F (32 W/°C)



NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in. [mm]



Cutout Dimensions

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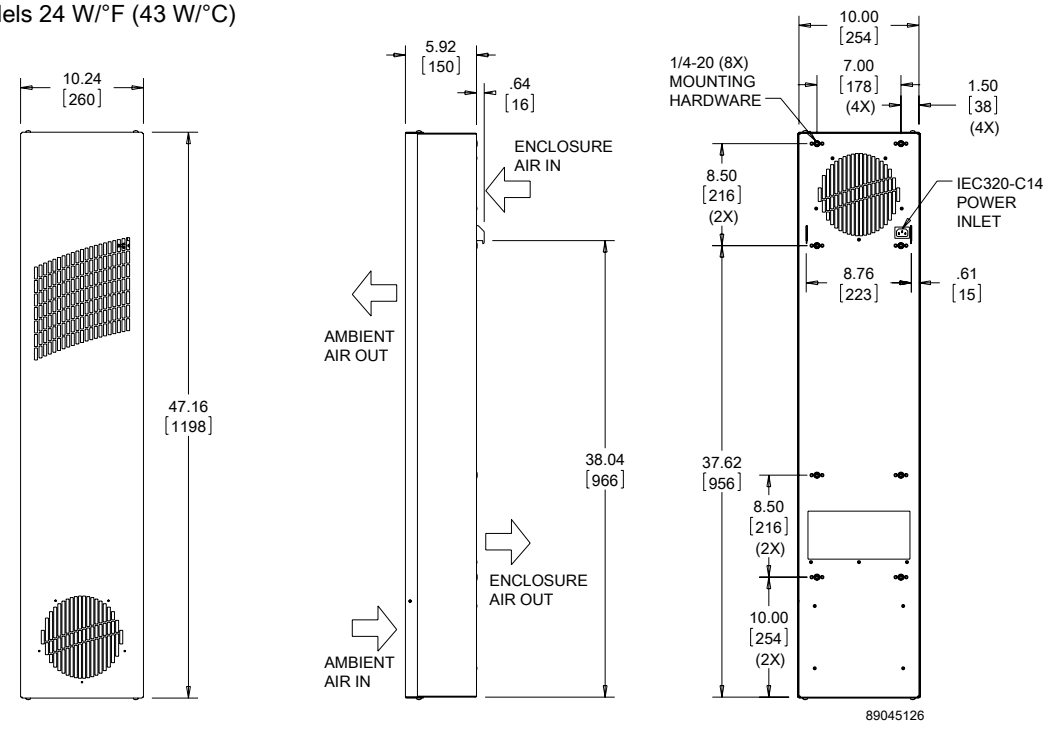
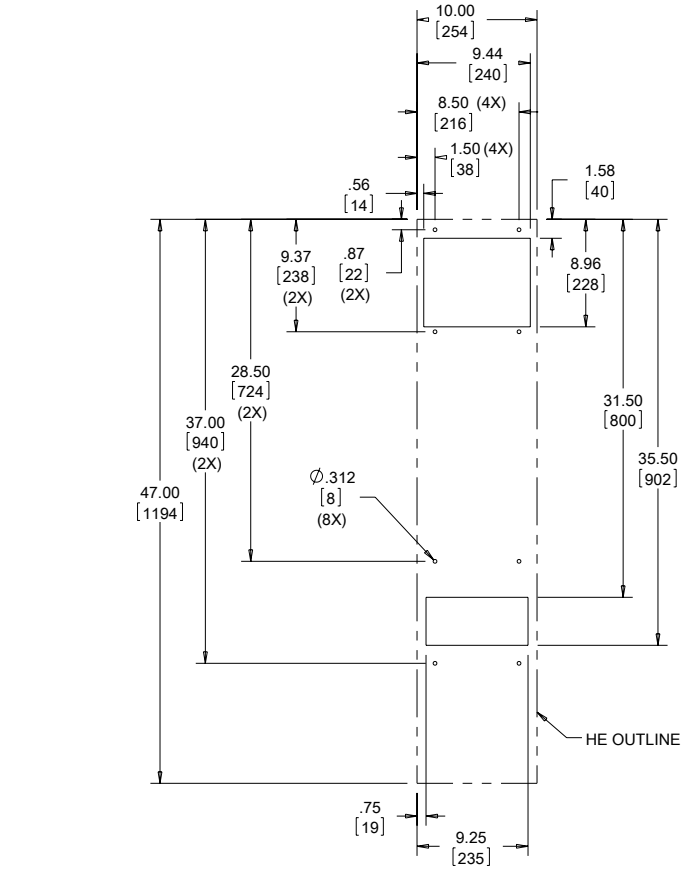
Performance Data **XR47 Models 24 W/°F (43 W/°C)**

CATALOG NUMBER	XR472416012	XR472426012
COOLING PERFORMANCE		
Nominal:		
W per °F	**24**	**24**
W per °C	**43**	**43**
Refrigerant	N/A	N/A
Refrigerant Charge (ounces/grams)	N/A	N/A
Operating Temperature Range:		
Maximum (°F/°C)	140/60	140/60
Minimum (°F/°C)	-20/-29	-20/-29
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	140/238	140/238
External loop 50 Hz (CFM / m^3/hr.)	118/200	118/200
Internal loop 60 Hz (CFM / m^3/hr.)	156/265	156/265
External loop 60 Hz (CFM / m^3/hr.)	131/222	131/222
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	207	207
Max. Nominal Current (A at 50/60 Hz)	1.8	0.9
Agency Approvals	UL/cUL Listed CE EAC	
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12 standard Type 3R, 4, 4X optional	
SOUND LEVEL		
At 1.5 Meters	68 dBA	
UNIT CONSTRUCTION		
Material	Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	47.16/1197.9	47.16/1197.9
Width (in./mm)	10.24/260.1	10.24/260.1
Depth (in./mm)	5.92/150.4	5.92/150.4
Weight (lb./kg)	51/23	51/23

XR47 Models 24 W/°F (43 W/°C)





Cutout Dimensions

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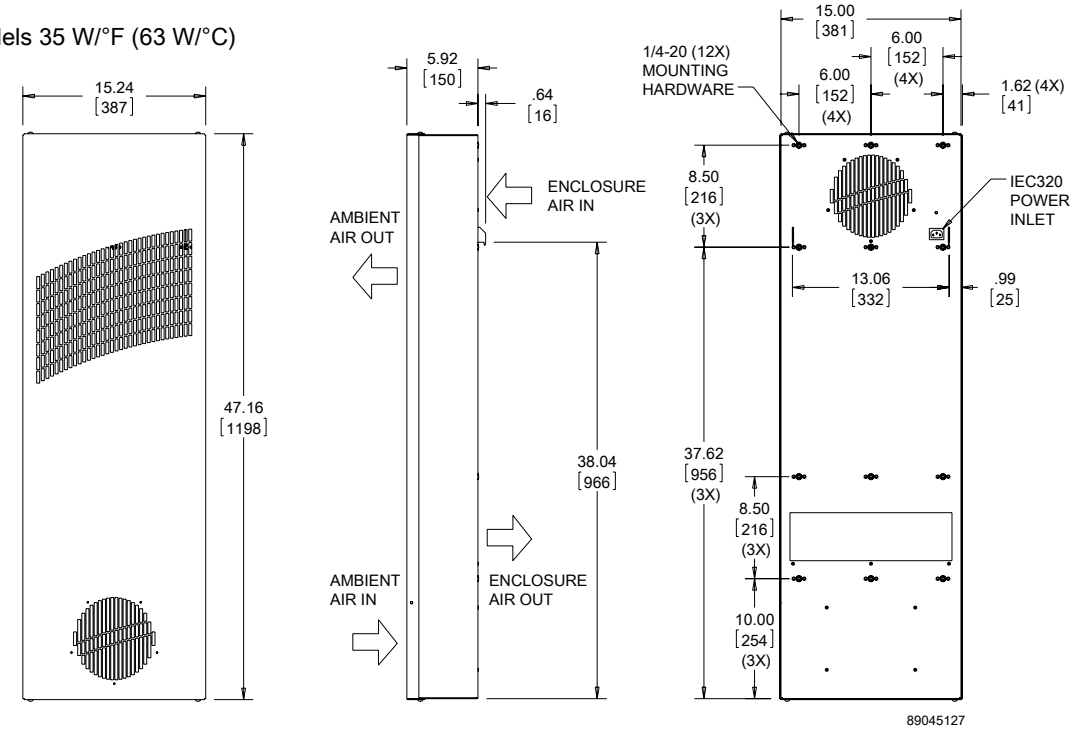
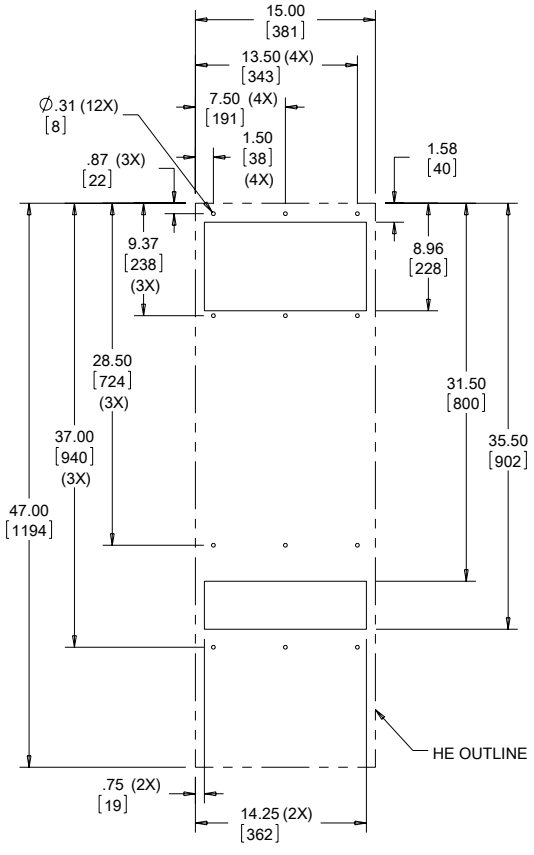
Performance Data **XR47 Models 35 W/°F (63 W/°C)**

CATALOG NUMBER	XR473516012	XR473526012
COOLING PERFORMANCE		
Nominal:		
W per °F	**35**	**35**
W per °C	**63**	**63**
Refrigerant	N/A	N/A
Refrigerant Charge (ounces/grams)	N/A	N/A
Operating Temperature Range:		
Maximum (°F/°C)	140/60	140/60
Minimum (°F/°C)	-20/-29	-20/-29
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	120/204	120/204
External loop 50 Hz (CFM / m^3/hr.)	131/222	131/222
Internal loop 60 Hz (CFM / m^3/hr.)	133/226	133/226
External loop 60 Hz (CFM / m^3/hr.)	146/248	146/248
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	207	207
Max. Nominal Current (A at 50/60 Hz)	1.8	0.9
Agency Approvals	UL/cUL Listed CE EAC	
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12 standard Type 3R, 4, 4X optional	
SOUND LEVEL		
At 1.5 Meters	68 dBA	
UNIT CONSTRUCTION		
Material	Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	47.16/1197.8	47.16/1197.8
Width (in./mm)	15.24/387.1	15.24/387.1
Depth (in./mm)	5.92/150.4	5.92/150.4
Weight (lb./kg)	59/27	59/27

XR47 Models 35 W/°F (63 W/°C)



NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in [mm]
3. 2-METER LONG SERVICE CORD TERMINATED WITH APPROPRIATE PLUG:
   NEMA 5-15P FOR 115V UNITS
   NEMA 6-15P FOR 230V UNITS



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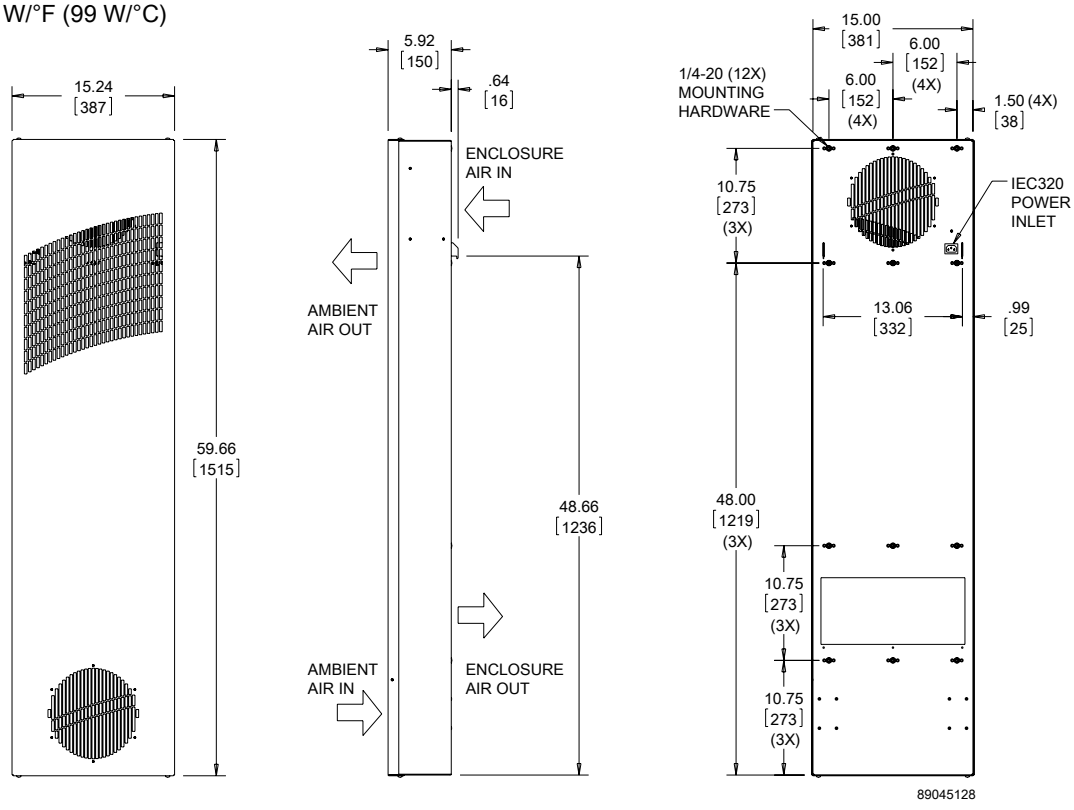
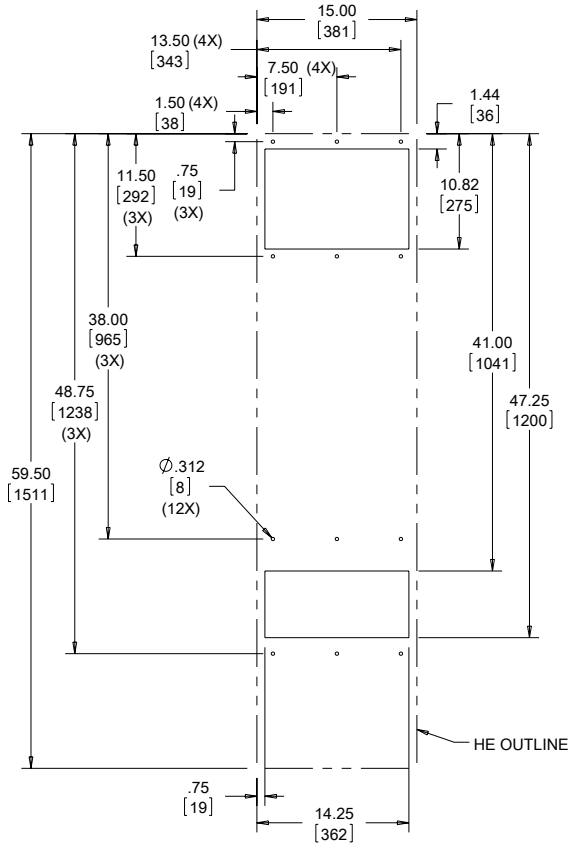
Performance Data **XR60 Models 55 W/°F (99 W/°C)**

CATALOG NUMBER	XR605516012	XR605526012
COOLING PERFORMANCE		
Nominal:		
W per °F	**55**	**55**
W per °C	**99**	**99**
Refrigerant	N/A	N/A
Refrigerant Charge (ounces/grams)	N/A	N/A
Operating Temperature Range:		
Maximum (°F/°C)	140/60	140/60
Minimum (°F/°C)	-20/-29	-20/-29
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	398/676	398/676
External loop 50 Hz (CFM / m^3/hr.)	429/729	429/729
Internal loop 60 Hz (CFM / m^3/hr.)	442/751	442/751
External loop 60 Hz (CFM / m^3/hr.)	477/810	477/810
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	759	759
Max. Nominal Current (A at 50/60 Hz)	6.6	3.3
Agency Approvals	UL/cUL Listed CE EAC	
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12 standard Type 3R, 4, 4X optional	
SOUND LEVEL		
At 1.5 Meters	73 dBA	
UNIT CONSTRUCTION		
Material	Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	59.66/1515.3	59.66/1515.3
Width (in./mm)	15.24/387.1	15.24/387.1
Depth (in./mm)	5.92/150.4	5.92/150.4
Weight (lb./kg)	86/39	86/39

XR60 Models 55 W/°F (99 W/°C)



NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in [mm]
3. 2-METER LONG SERVICE CORD SUPPLIED WITH APPROPRIATE PLUG:
   NEMA 5-15P FOR 115V UNITS
   NEMA 6-15P FOR 230V UNITS



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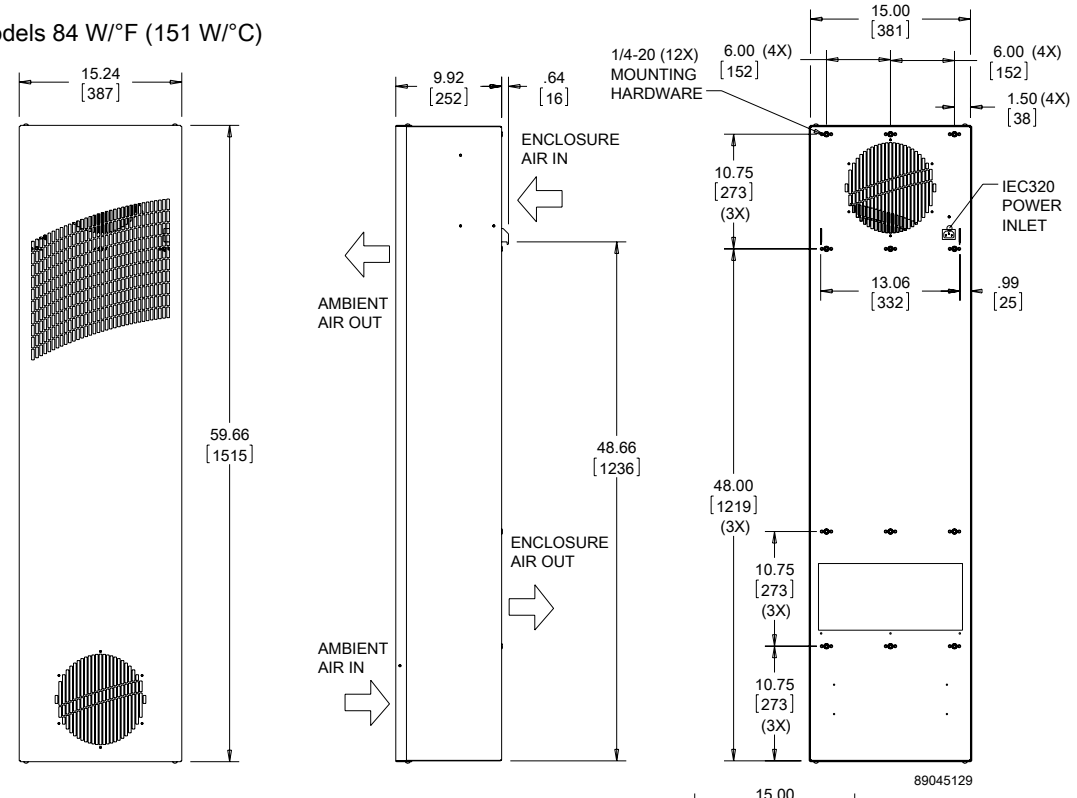
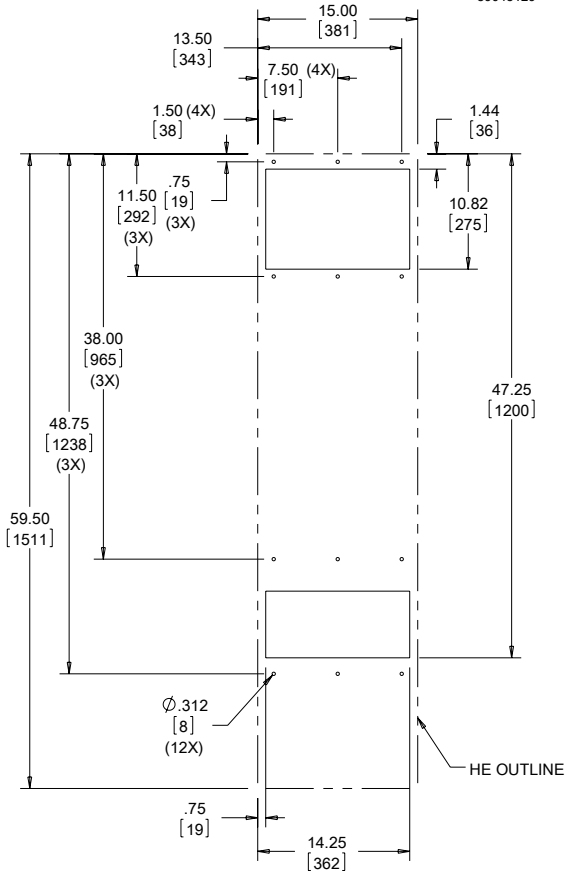
Performance Data **XR60 Models 84 W/°F (151 W/°C)**

CATALOG NUMBER	XR608416012	XR608426012
COOLING PERFORMANCE		
Nominal:		
W per °F	**84**	**84**
W per °C	**151**	**151**
Refrigerant	N/A	N/A
Refrigerant Charge (ounces/grams)	N/A	N/A
Operating Temperature Range:		
Maximum (°F/°C)	140/60	140/60
Minimum (°F/°C)	-20/-29	-20/-29
Airflow at 0 Static Pressure:		
Internal loop 50 Hz (CFM / m^3/hr.)	497/844	497/844
External loop 50 Hz (CFM / m^3/hr.)	434/737	434/737
Internal loop 60 Hz (CFM / m^3/hr.)	552/938	552/938
External loop 60 Hz (CFM / m^3/hr.)	482/819	482/819
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	759	759
Max. Nominal Current (A at 50/60 Hz)	6.6	3.3
Agency Approvals	UL/cUL Listed CE EAC	
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12 standard Type 3R, 4, 4X optional	
SOUND LEVEL		
At 1.5 Meters	73 dBA	
UNIT CONSTRUCTION		
Material	Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	59.66/1515.3	59.66/1515.3
Width (in./mm)	15.24/387.1	15.24/387.1
Depth (in./mm)	9.92/252	9.92/252
Weight (lb./kg)	106/48	106/48

XR60 Models 84 W/°F (151 W/°C)



NOTE:
1. MOUNTING GASKET SUPPLIED (NOT SHOWN)
2. UNITS: in [mm]
3. 2-METER LONG SERVICE CORD SUPPLIED
   WITH APPROPRIATE PLUG:
   NEMA 5-15P FOR 115V UNITS
   NEMA 6-15P FOR 230V UNITS



Cutout Dimensions

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Notes

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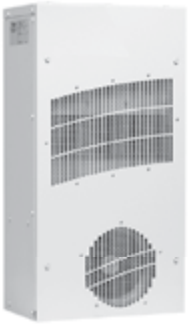
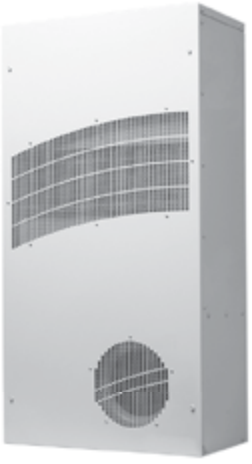
CLIMAGUARD AIR-TO-AIR OUTDOOR

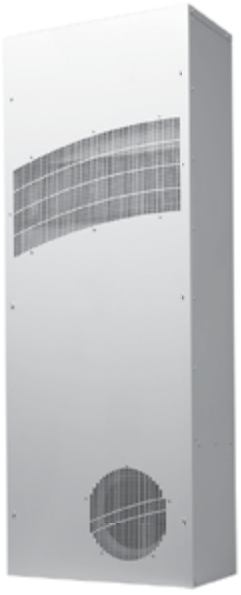


TX23
Models
14 W/°F (25 W/°C)

TX33
Models
28 W/°F (50 W/°C)



TX38
Models
56 W/°F (100 W/°C)



TX52
Models
83 W/°F (150 W/°C)

INDUSTRY STANDARDS

UL/cUL Listed; Type 12, 4; 4X optional; File No. SA7402 UR/cUR Recognized

UR/cUR Recognized on select models, reference performance data tables.
CE
EAC
Telcordia GR-487 capable

APPLICATION

- Telecom shelters
- Outdoor cabinets
- Equipment buildings
- Instrument enclosures
- And more

FEATURES

- Unique counterflow aluminum core for high efficiency and high performance heat transfer
- Models for 24 VDC, 48 VDC, 115 VAC and 230 VAC power supplies
- UL Listed or Recognized to save customers time and money with agency approvals
- Operating temperature range from -40 F/-40 C to 149 F/65 C
- Variable speed blowers standard on DC powered units for quiet running
- Surface or recessed mount capable
- Low-carbon mild-steel sheet-metal cover for rugged factory environments
- Easy-mount flanges for simple installation
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Filterless design for low maintenance and easy cleaning
- Engineered for temperature extremes, corrosive environments and wind driven rain

FINISH

- RAL 7035 light-gray, semi-textured powder-coat paint standard
- Stainless steel Type 304 or 316 finishes available on Type 4X models
- Other colors and textures available

OPTIONS

- Thermostat Package
- Special Voltage Package
- Outdoor Package
- Harsh Environment Package*
- Stainless Steel Package*
- Heater Package*

* Consult the factory for availability and catalog number.

NOTES

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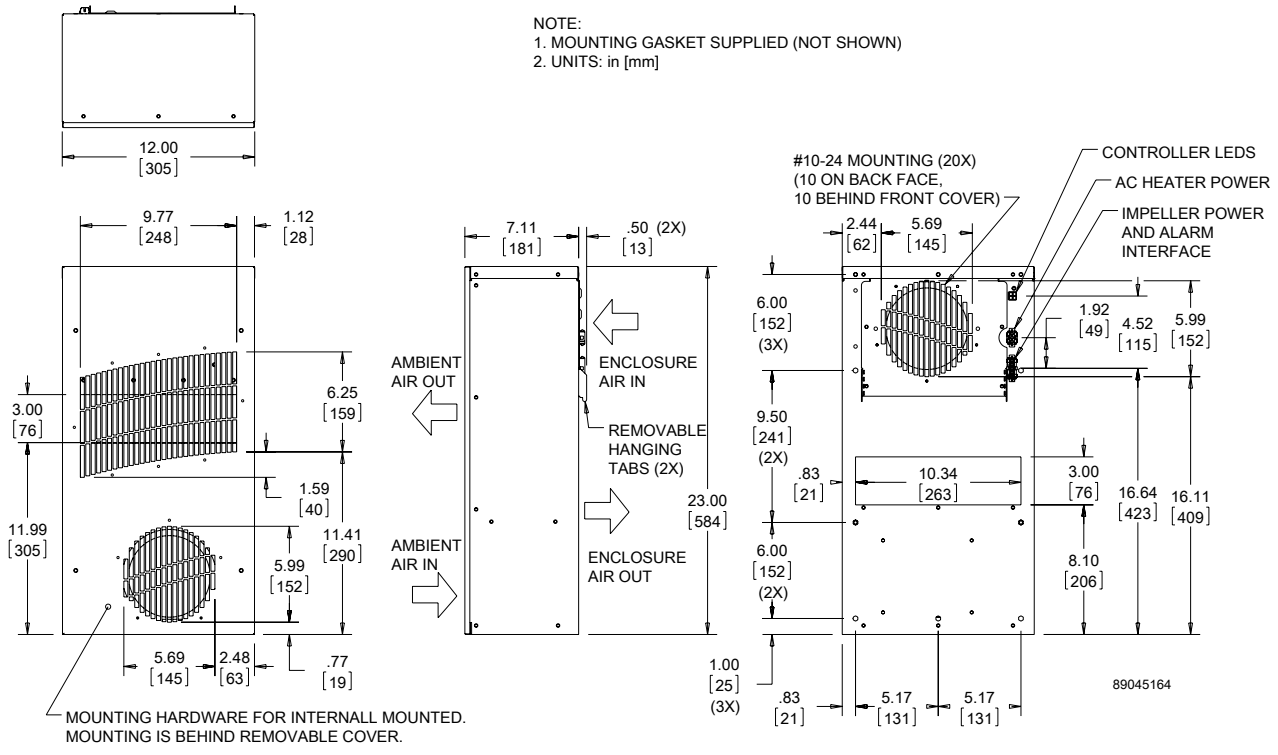
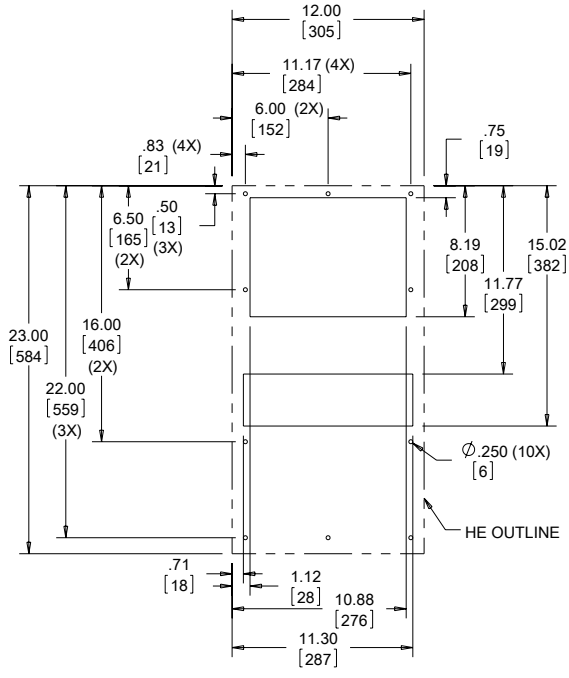
Performance Data **TX23 Models 14 W/°F (25 W/°C)**

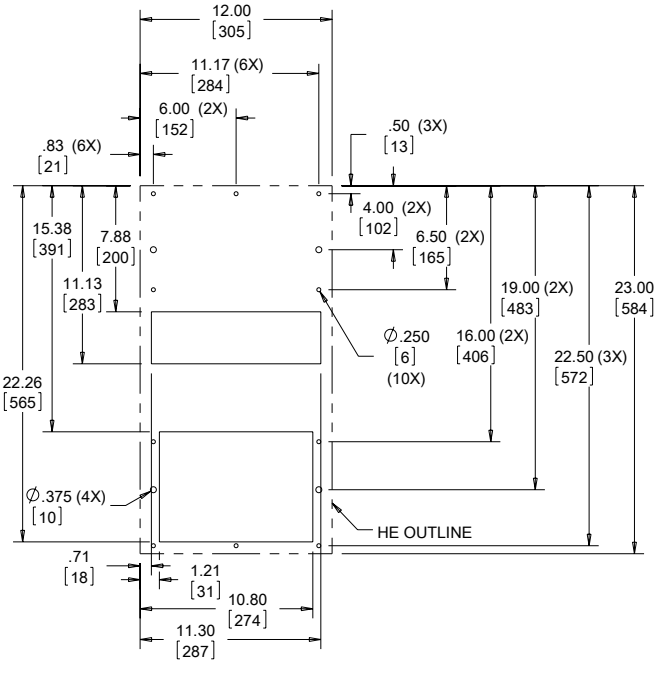
CATALOG NUMBER	TX231416100	TX231426100	TX231424100	TX231448100
COOLING PERFORMANCE				
Nominal:				
W per °F	**14**	**14**	**14**	**14**
W per °C	**25**	**25**	**25**	**25**
Refrigerant	N/A	N/A	N/A	N/A
Refrigerant Charge (ounces/grams)	N/A	N/A	N/A	N/A
Operating Temperature Range				
Maximum (°F/°C)	149/65	149/65	149/65	149/65
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:				
Internal loop 50 Hz (CFM / m^3/hr.)	69/117	69/117	N/A	N/A
External loop 50 Hz (CFM / m^3/hr.)	58/98	58/98	N/A	N/A
Internal loop 60 Hz (CFM / m^3/hr.)	84/142	84/142	175/268	175/268
External loop 60 Hz (CFM / m^3/hr.)	69/117	69/117	158/297	158/297
ELECTRICAL DATA				
Rated Voltage	**115 VAC**	**230 VAC**	**24 VDC**	**48 VDC**
Frequency (Hz)	50/60	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	69	23	82	87
Max. Nominal Current (A at 50/60 Hz)	0.6	0.1	3.4	1.8
Agency Approvals	UL/cUL Listed CE EAC		UL/cUL Listed CE EAC	
Power Input Description	6-ft. cord with NEMA 5-15 plug	6-ft. cord with NEMA 6-15 plug	Terminal block	Terminal block
ENCLOSURE PROTECTION				
UL Type	Type 12, 3R, 4 standard Type 4X optional		Type 12, 3R, 4 standard Type 4X optional	
SOUND LEVEL				
At 1.5 Meters	56 dBA		56 dBA	
UNIT CONSTRUCTION				
Material	Mild steel sheet metal standard Stainless steel optional		Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS				
Height (in./mm)	23/584.2	23/584.2	23/584.2	23/584.2
Width (in./mm)	12/304.8	12/304.8	12/304.8	12/304.8
Depth (in./mm)	7.1/180.3	7.1/180.3	7.1/180.3	7.1/180.3
Weight (lb./kg)	30/13.6	30/13.6	30/13.6	30/13.6

TX23 DC Models 14 W/°F (25°C)





CUTOUT DIMENSIONS
(EXTERNAL MOUNT)



CUTOUT DIMENSIONS
(INTERNAL MOUNT)

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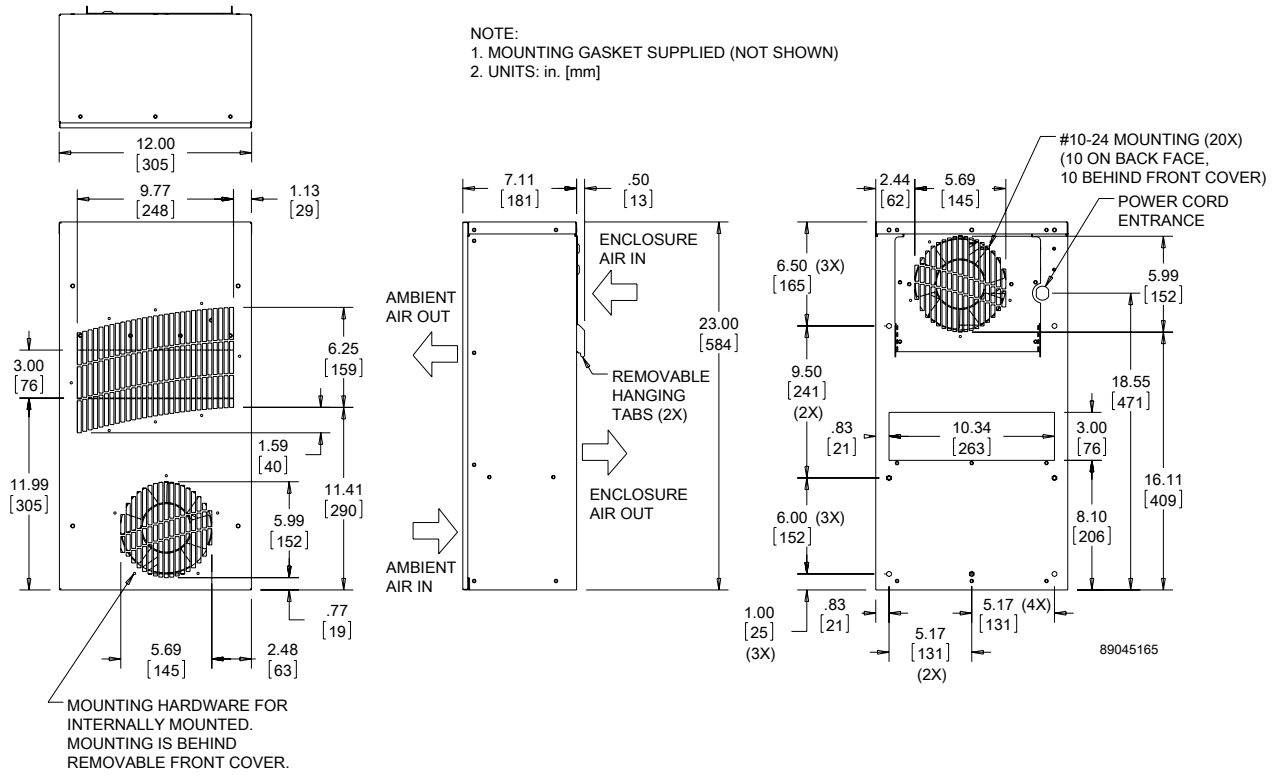
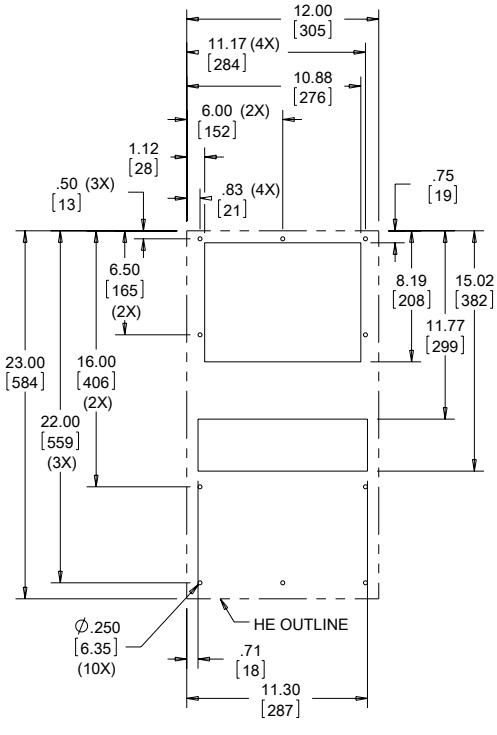
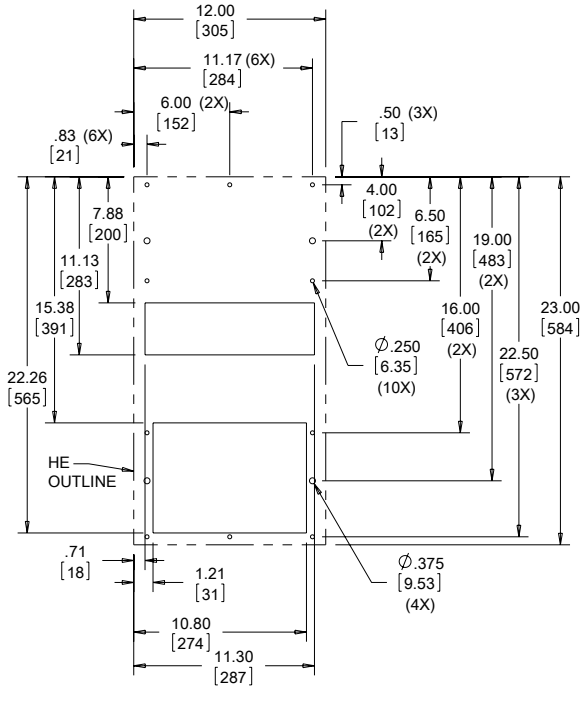
TX23 AC Models 14W/°F (25 W /°C)





CUTOUT DIMENSIONS (EXTERNAL MOUNT)



CUTOUT DIMENSIONS (INTERNAL MOUNT)

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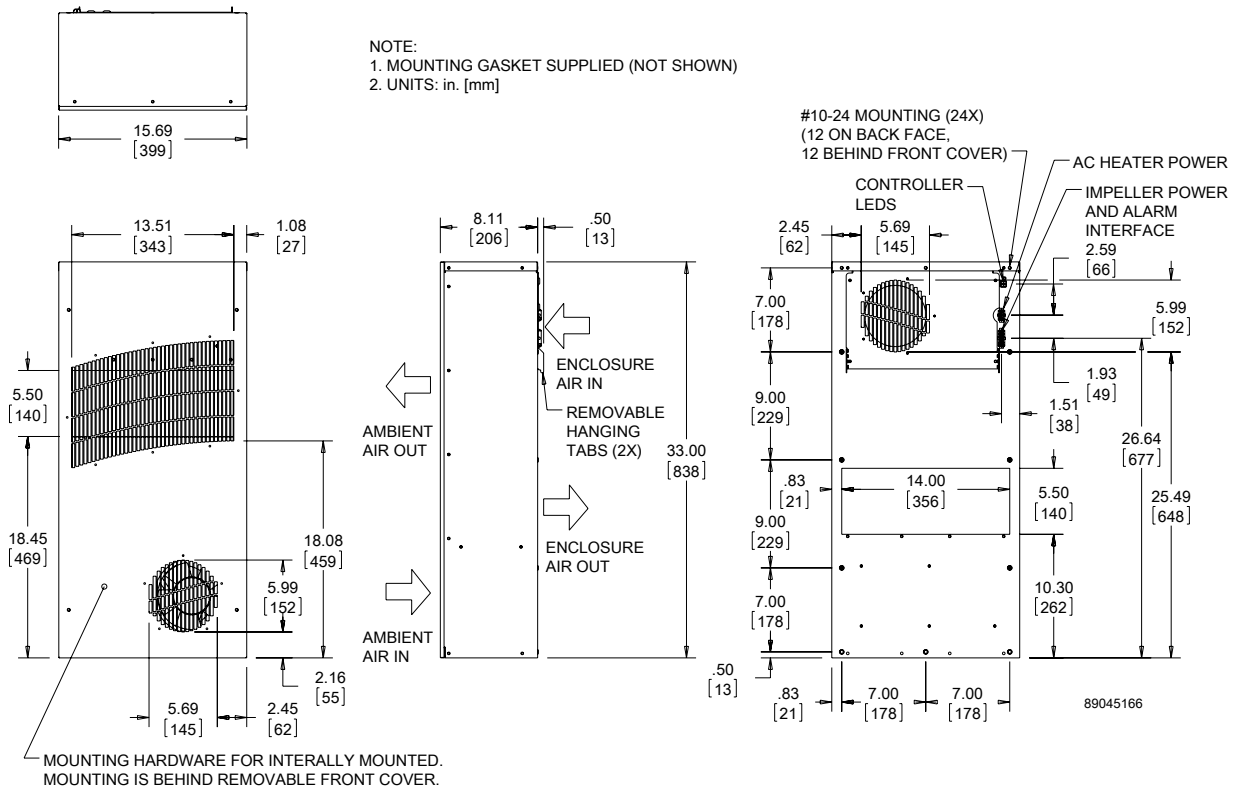
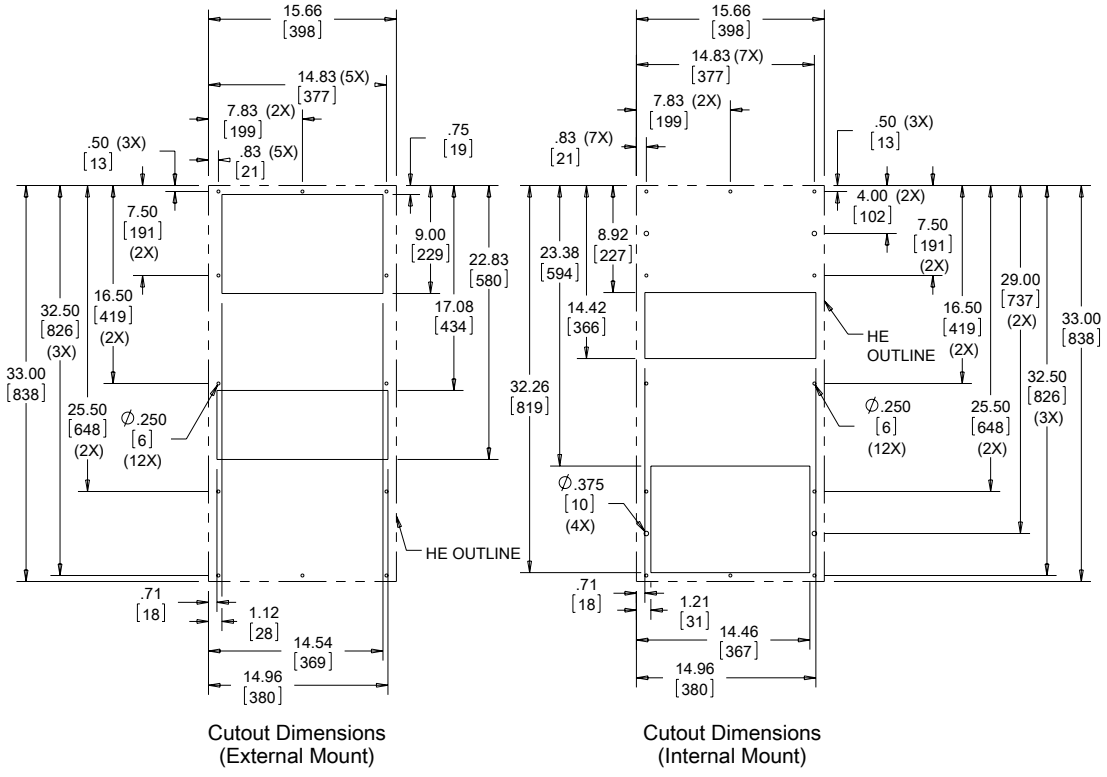
Performance Data **TX33 Models 28 W/°F (50 W/°C)**

CATALOG NUMBER	TX332816100	TX332826100	TX332824100	TX332848100
COOLING PERFORMANCE				
Nominal:				
W per °F	**28**	**28**	**28**	**28**
W per °C	**50**	**50**	**50**	**50**
Refrigerant	N/A	N/A	N/A	N/A
Refrigerant Charge (ounces/grams)	N/A	N/A	N/A	N/A
Operating Temperature Range:				
Maximum (°F/°C)	149/65	149/65	149/65	149/65
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:				
Internal loop 50 Hz (CFM / m^3/hr.)	212/360	212/360	N/A	N/A
External loop 50 Hz (CFM / m^3/hr.)	238/404	238/404	N/A	N/A
Internal loop 60 Hz (CFM / m^3/hr.)	228/387	228/387	228/387	228/387
External loop 60 Hz (CFM / m^3/hr.)	263/447	263/447	166/282	166/282
ELECTRICAL DATA				
Rated Voltage	**115 VAC**	**230 VAC**	**24 VDC**	**48 VDC**
Frequency (Hz)	50/60	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	161	92	82	87
Max. Nominal Current (A at 50/60 Hz)	1.4	0.4	3.4	1.8
Agency Approvals	UL/cUL Listed CE EAC		UL/cUL Listed CE EAC	
Power Input Description	Terminal block	Terminal block	Terminal block	Terminal block
ENCLOSURE PROTECTION				
UL Type	Type 12, 3R, 4 standard Type 4X optional		Type 12, 3R, 4 standard Type 4X optional	
SOUND LEVEL				
At 1.5 Meters	56 dBA		56 dBA	
UNIT CONSTRUCTION				
Material	Mild steel sheet metal standard Stainless steel optional		Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS				
Height (in./mm)	33/838.2	33/838.2	33/838.2	33/838.2
Width (in./mm)	15.7/398.8	15.7/398.8	15.7/398.8	15.7/398.8
Depth (in./mm)	8.1/205.7	8.1/205.7	8.1/205.7	8.1/205.7
Weight (lb./kg)	45/20.4	45/20.4	45/20.4	45/20.4

TX 33 DC Models 28 W/°F (50 W/°C)





Cutout Dimensions (External Mount)

Cutout Dimensions (Internal Mount)

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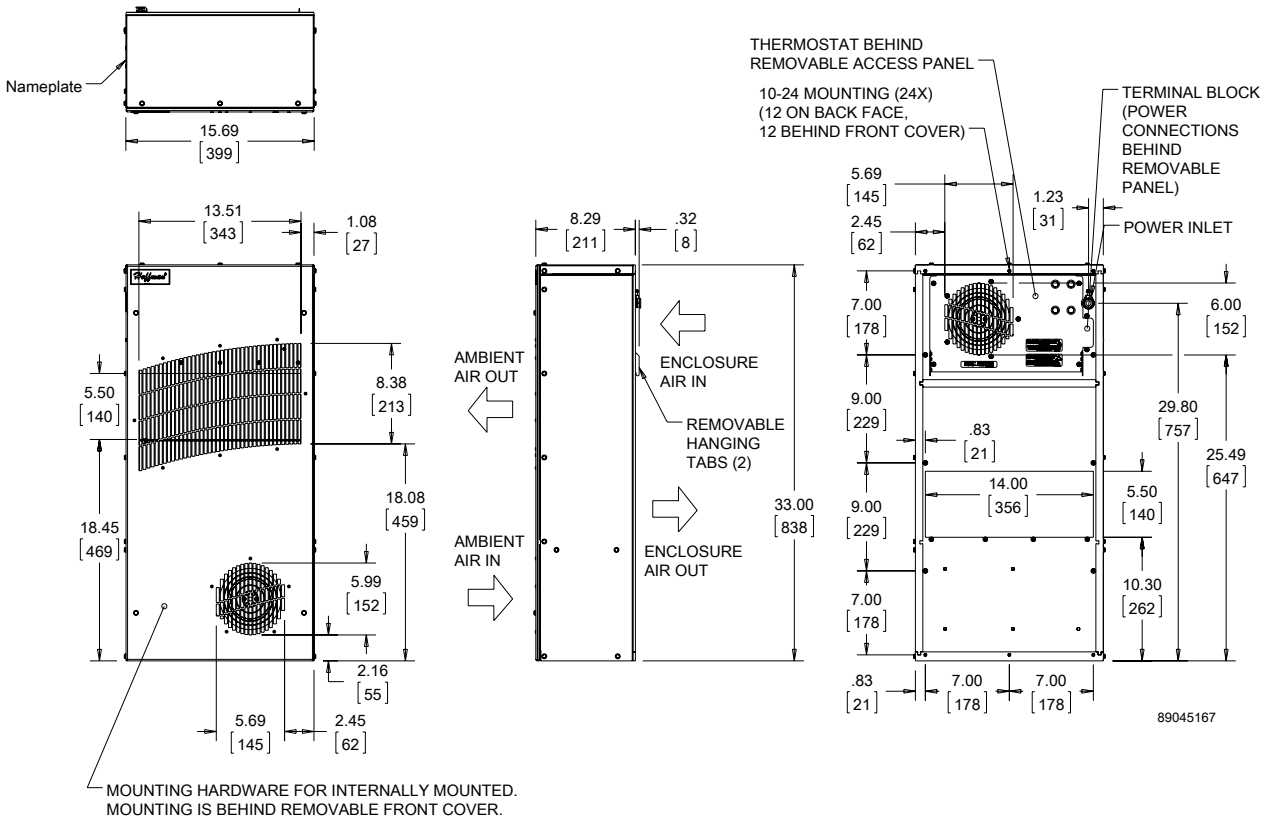
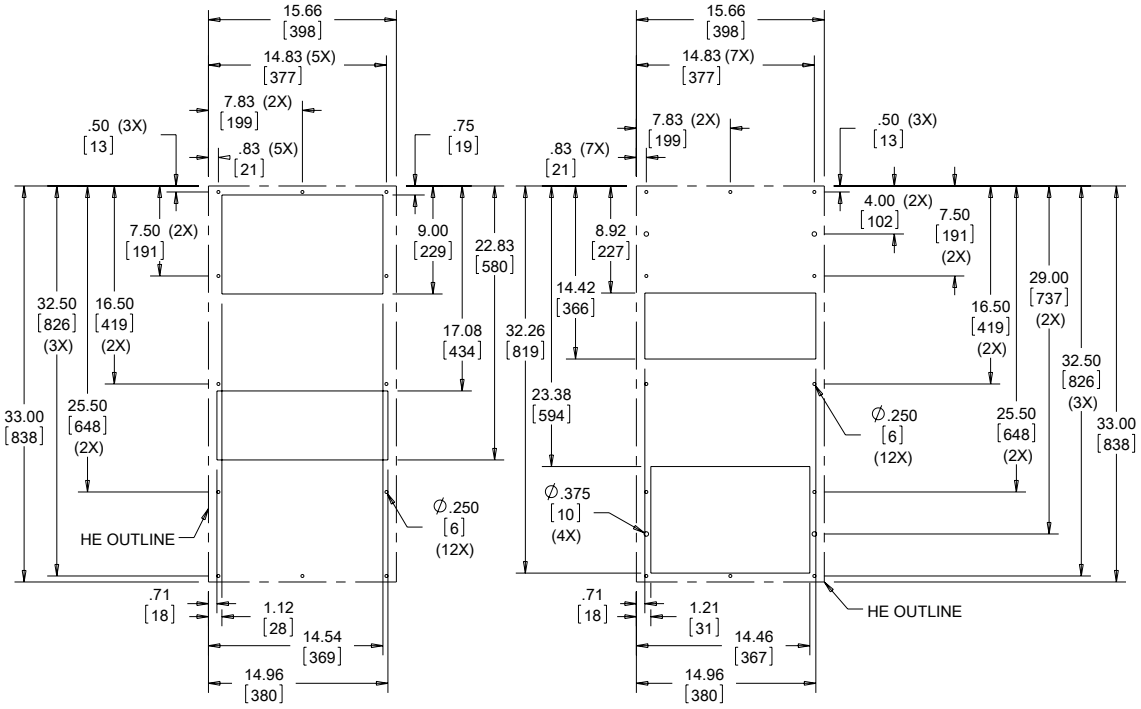
TX33 AC Models 28 W/°F (50 W/°C)





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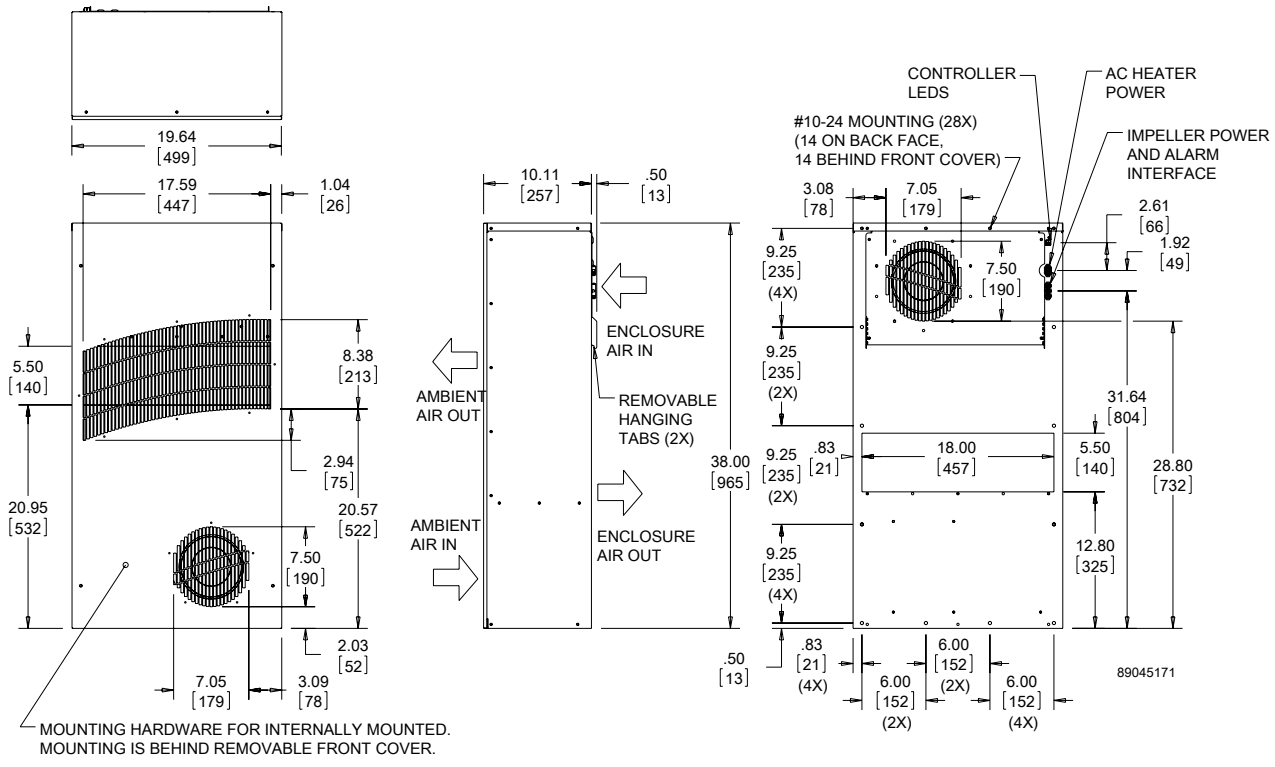
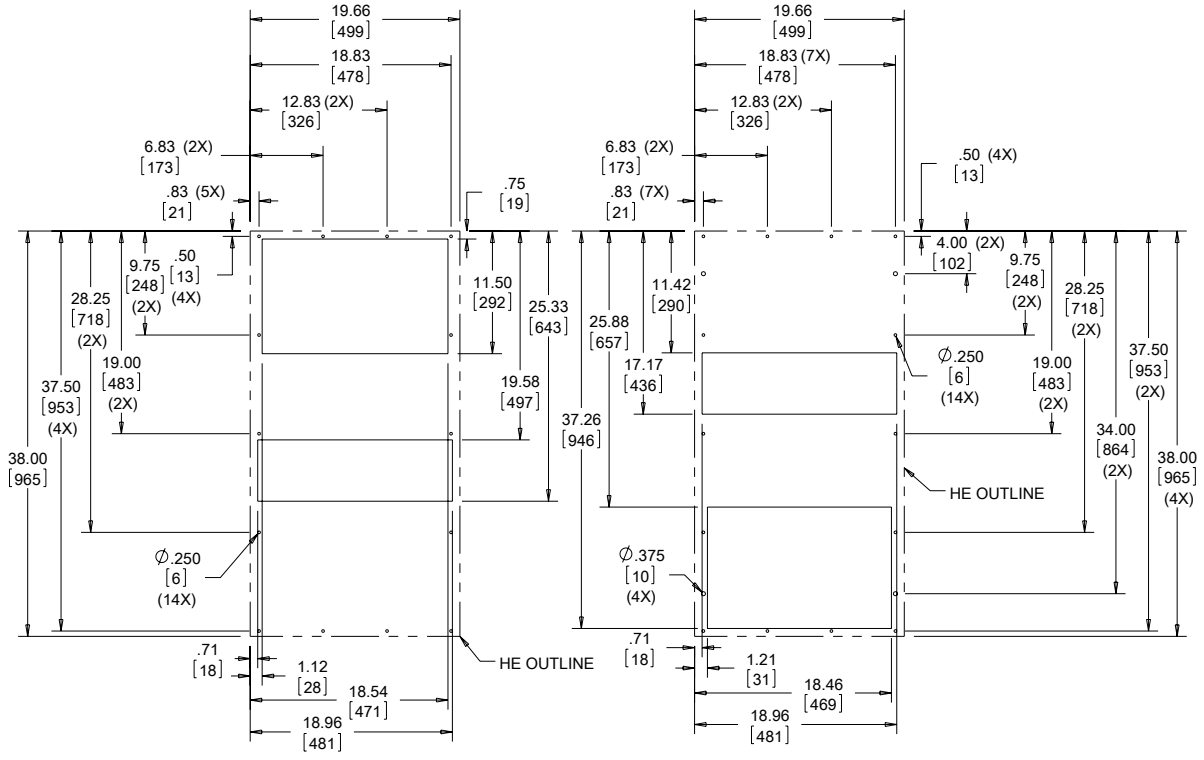
Performance Data **TX38 Models 56 W/°F (100 W/°C)**

CATALOG NUMBER	TX385616100	TX385626100	TX385624100	TX385648100
COOLING PERFORMANCE				
Nominal:				
W per °F	**56**	**56**	**56**	**56**
W per °C	**100**	**100**	**100**	**100**
Refrigerant	N/A	N/A	N/A	N/A
Refrigerant Charge (ounces/grams)	N/A	N/A	N/A	N/A
Operating Temperature Range:				
Maximum (°F/°C)	149/65	149/65	149/65	149/65
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:				
Internal loop 50 Hz (CFM / m^3/hr.)	425/722	425/722	N/A	N/A
External loop 50 Hz (CFM / m^3/hr.)	461/738	461/738	N/A	N/A
Internal loop 60 Hz (CFM / m^3/hr.)	477/810	477/810	368/625	368/625
External loop 60 Hz (CFM / m^3/hr.)	517/878	517/878	422/717	422/717
ELECTRICAL DATA				
Rated Voltage	**115 VAC**	**230 VAC**	**24 VDC**	**48 VDC**
Frequency (Hz)	50/60	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	368	276	207	279
Max. Nominal Current (A at 50/60 Hz)	2.3/3.2	0.7/1.2	8.6	5.8
Agency Approvals	UL/cUL Listed CE EAC		UL/cUL Listed CE EAC	
Power Input Description	Terminal block	Terminal block	Terminal block	Terminal block
ENCLOSURE PROTECTION				
UL Type	Type 12, 3R, 4 standard Type 4X optional		Type 12, 3R, 4 standard Type 4X optional	
SOUND LEVEL				
At 1.5 Meters	64 dBA		64 dBA	
UNIT CONSTRUCTION				
Material	Mild Mild steel sheet metal standard		Mild Mild steel sheet metal standard	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS				
Height (in./mm)	38/965.2	38/965.2	38/965.2	38/965.2
Width (in./mm)	19.7/500.4	19.7/500.4	19.7/500.4	19.7/500.4
Depth (in./mm)	10.1/256.5	10.1/256.5	10.1/256.5	10.1/256.5
Weight (lb./kg)	66/30	66/30	66/30	66/30

TX38 DC Models 56 W/°F (100 W/°C)





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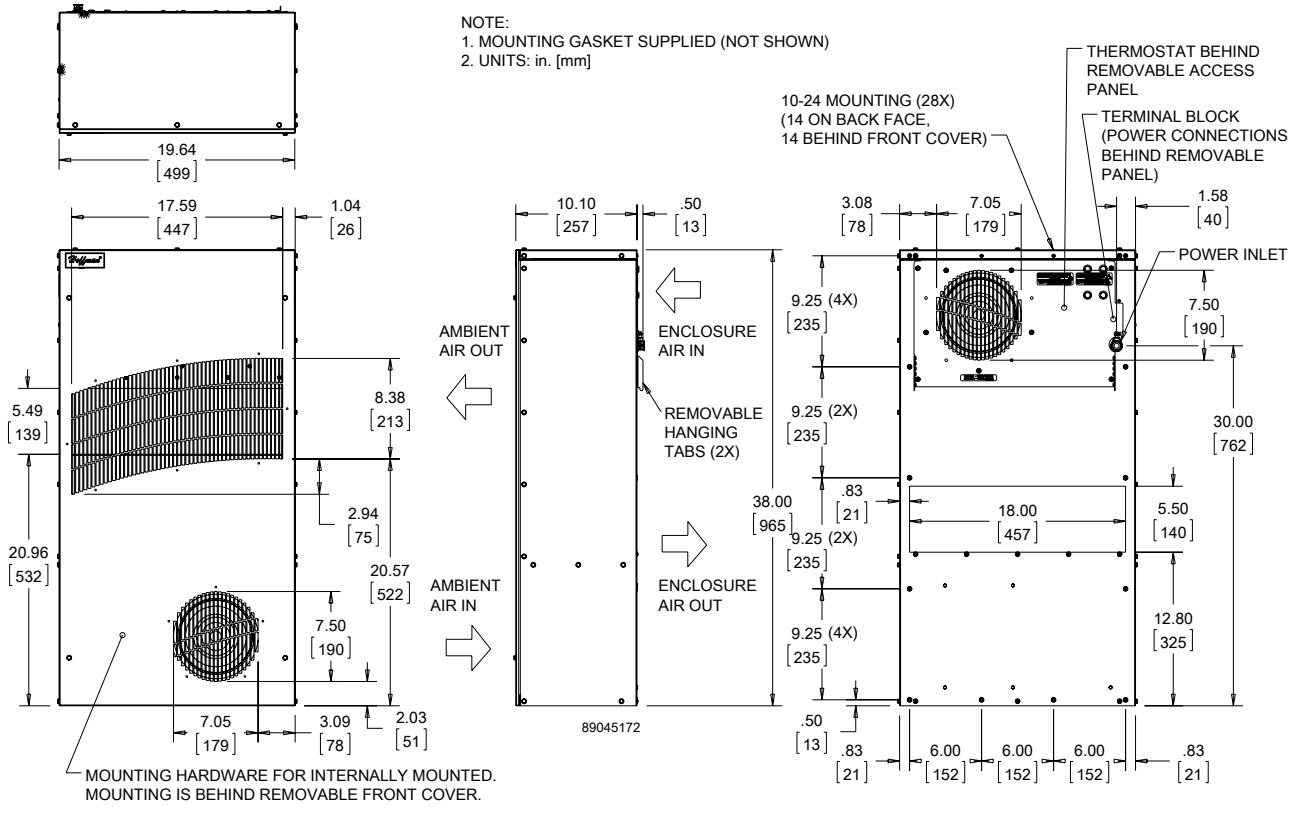
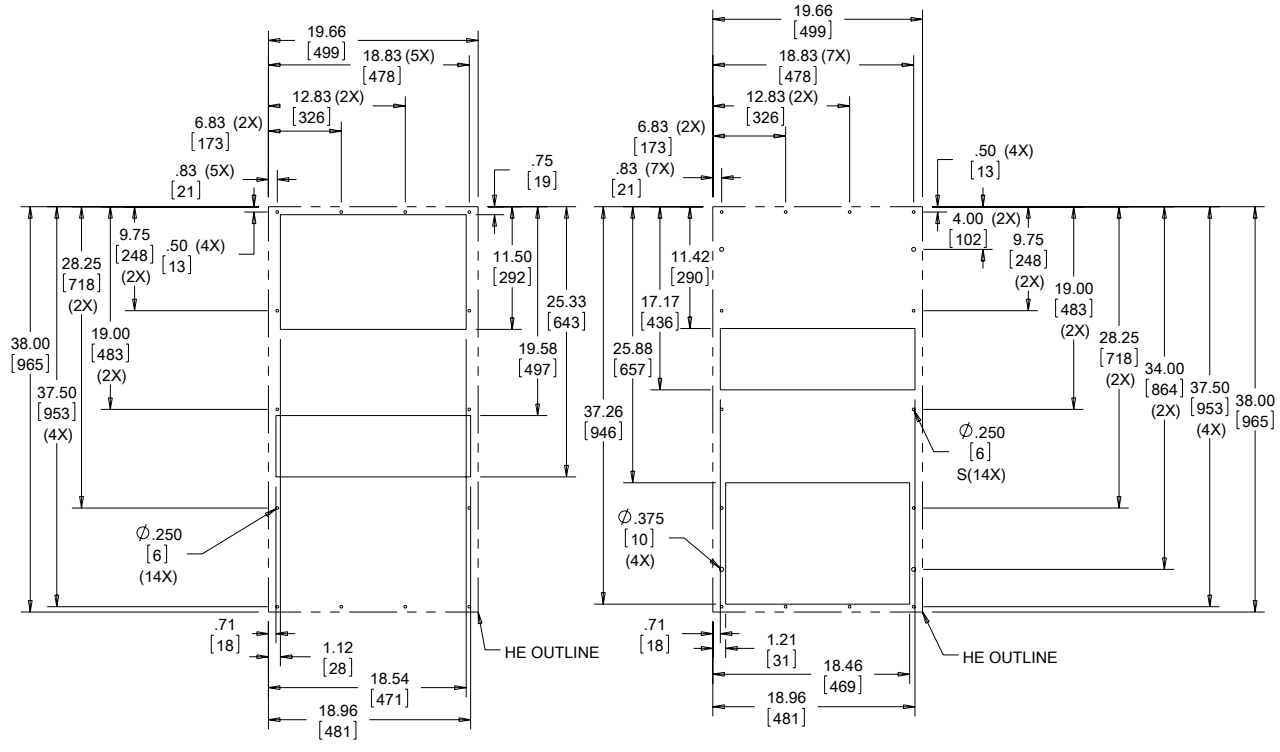
TX38 AC Models 56 W/°F (100 W/°C)





Cutout Dimensions (External Mount)

Cutout Dimensions (Internal Mount)

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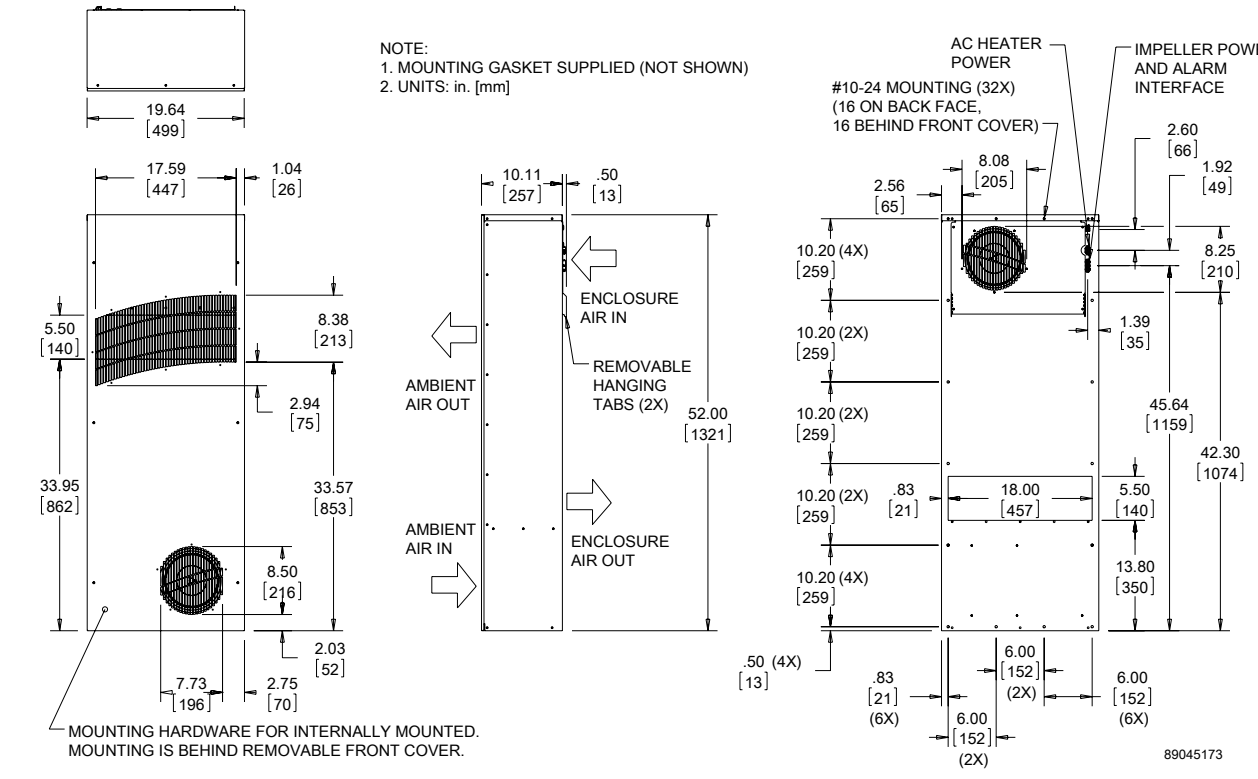
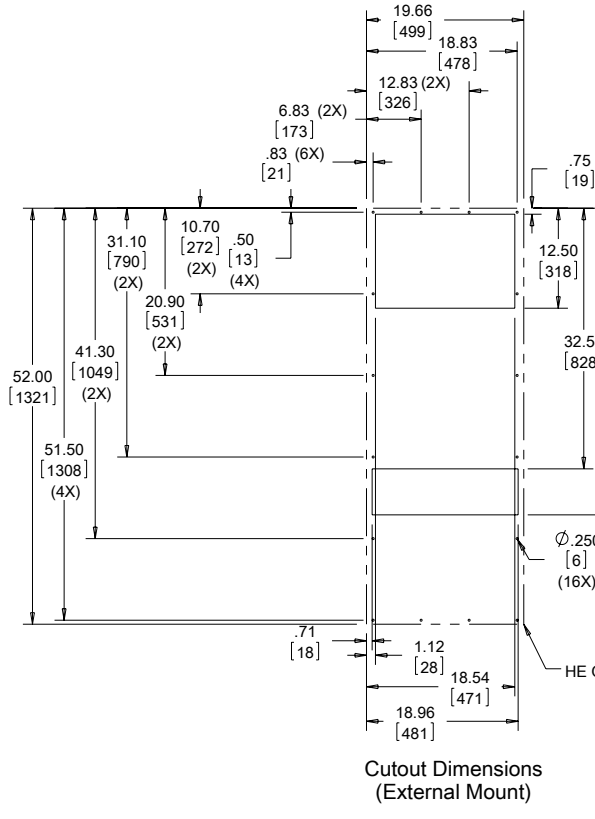
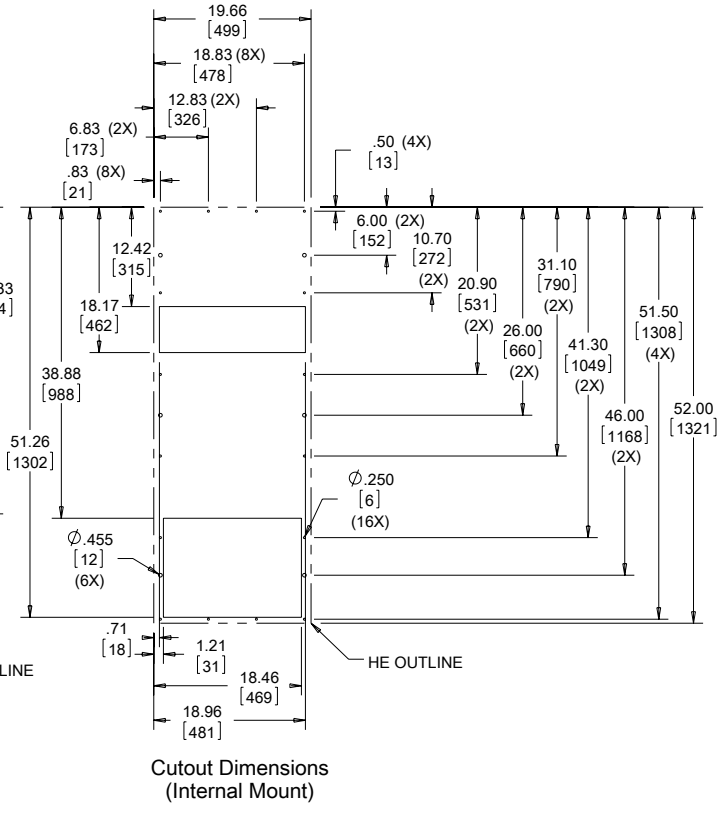
Performance Data **TX52 Models 83 W/°F (150 W/°C)**

CATALOG NUMBER	TX528316100	TX528326100	TX528324100	TX528348100
COOLING PERFORMANCE				
Nominal:				
W per °F	**83**	**83**	**83**	**83**
W per °C	**150**	**150**	**150**	**150**
Refrigerant	N/A	N/A	N/A	N/A
Refrigerant Charge (ounces/grams)	N/A	N/A	N/A	N/A
Operating Temperature Range:				
Maximum (°F/°C)	149/65	149/65	149/65	149/65
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40	-40/-40
Airflow at 0 Static Pressure:				
Internal loop 50 Hz (CFM / m^3/hr.)	495/841	495/841	N/A	N/A
External loop 50 Hz (CFM / m^3/hr.)	540/917	540/917	N/A	N/A
Internal loop 60 Hz (CFM / m^3/hr.)	533/905	533/905	466/792	466/792
External loop 60 Hz (CFM / m^3/hr.)	605/1028	605/1028	547/929	547/929
ELECTRICAL DATA				
Rated Voltage	**115 VAC**	**230 VAC**	**24 VDC**	**48 VDC**
Frequency (Hz)	50/60	50/60	50/60	50/60
Operating Range	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	782	771	507	375
Max. Nominal Current (A at 50/60 Hz)	4.3/6.7	2.2/3.4	21.1	7.8
Agency Approvals	UL/cUL Listed CE EAC		UL/cUL Listed CE EAC	
Power Input Description	Terminal block	Terminal block	Terminal block	Terminal block
ENCLOSURE PROTECTION				
UL Type	Type 12, 3R, 4 standard Type 4X optional		Type 12, 3R, 4 standard Type 4X optional	
SOUND LEVEL				
At 1.5 Meters	68 dBA		68 dBA	
UNIT CONSTRUCTION				
Material	Mild steel sheet metal standard Stainless steel optional		Mild steel sheet metal standard Stainless steel optional	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard		RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS				
Height (in./mm)	52/1320.8	52/1320.8	52/1320.8	52/1320.8
Width (in./mm)	19.7/500.4	19.7/500.4	19.7/500.4	19.7/500.4
Depth (in./mm)	10.1/256.5	10.1/256.5	10.1/256.5	10.1/256.5
Weight (lb./kg)	100/45.3	100/45.3	100/45.3	100/45.3

TX52 DC Models 83 W/°F (150 W/°C)







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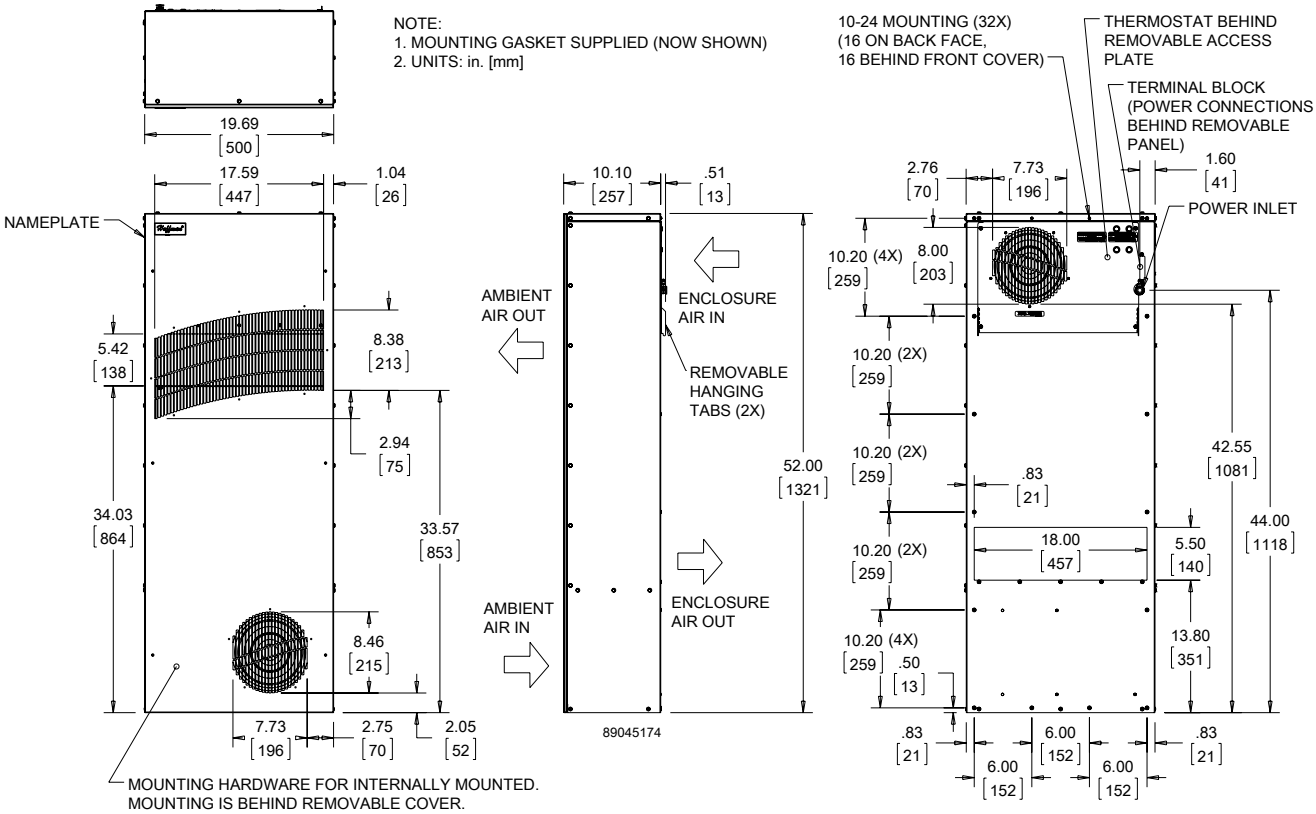
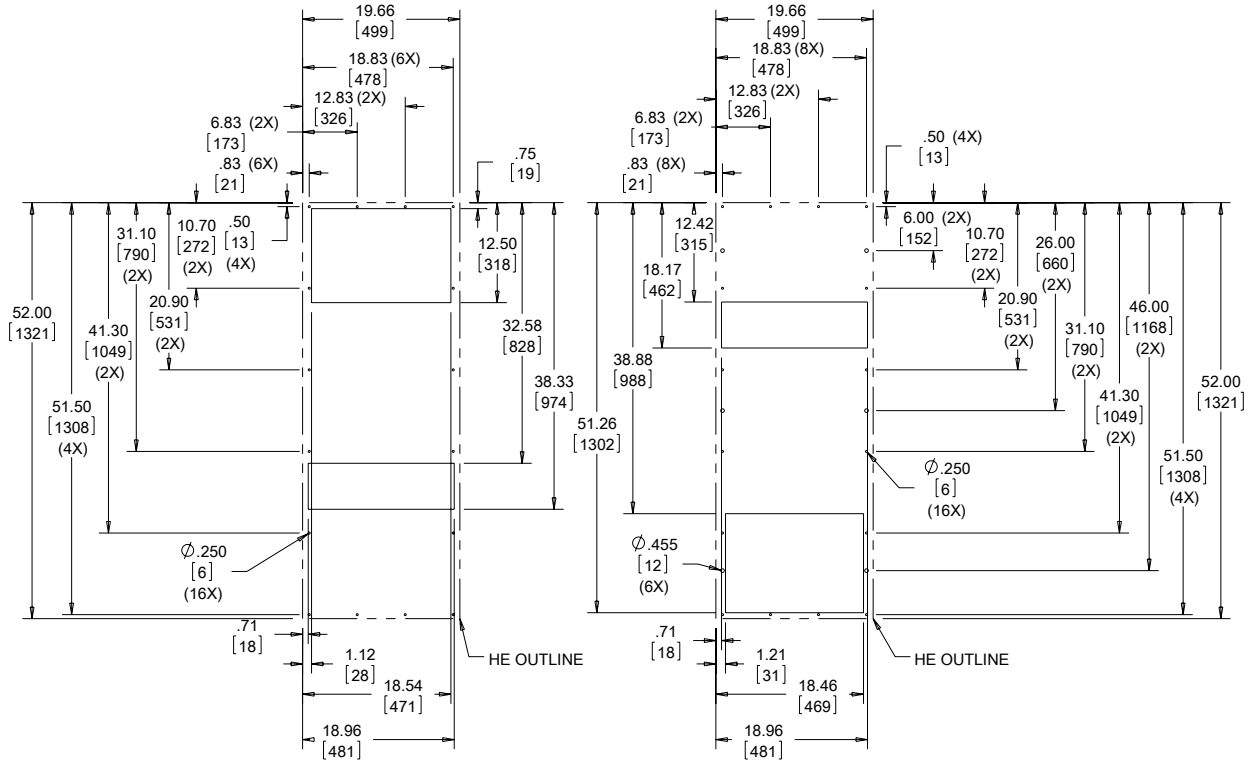
TX52 AC Models 83 W/°F (150 W/°C)





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Notes

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CLIMAGUARD AIR-TO-WATER INDOOR

WCHE01	WCHE04/WCHE06	WCHE14
2968 BTU/Hr.	7506/10577 BTU/Hr.	22861 BTU/Hr.
870 Watts	2200/3100 Watts	6700 Watts

INDUSTRY STANDARDS

UL/cUL Listed; Type 12; File No. SA33866

CE
EAC (230V models only)
IP55

APPLICATION

- Industrial process controls
- Industrial robotics controls
- Electronic cabinets in harsh environments
- Conveyor systems

FEATURES

- Capacities ranging from 870 watts to 6700 watts
- Filterless design
- NEMA power cord connection standard
- Copper pipe and aluminum fins heat exchanger core
- Air movers with thermal protection
- Regulating mechanical thermostat set at 35 C (95 F), differential of 4 C (7 F)
- Inside cabinet temperature from 10-50 C (50-122 F)
- Ambient operating temperature range from 10-70 C (50-158 F)
- Solenoid water valve
- UL Listed to save customers time and money with agency approvals
- Recovery of condensation system and condensation discharge pipe
- Requires an available cooled water source

FINISH

- Standard models constructed of rugged steel
- RAL 7035 light-gray, powder-coat polyester paint

NOTES

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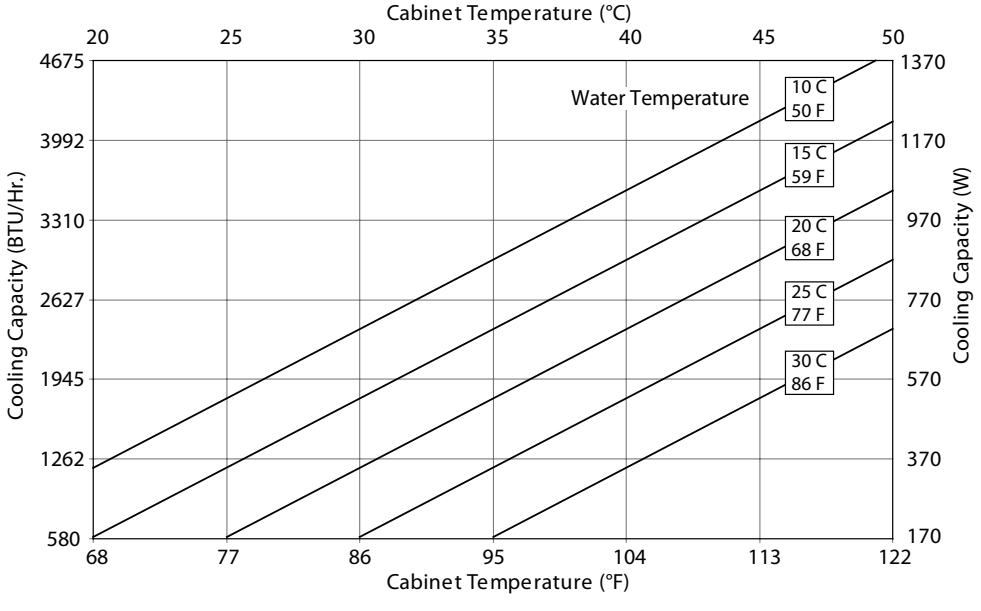
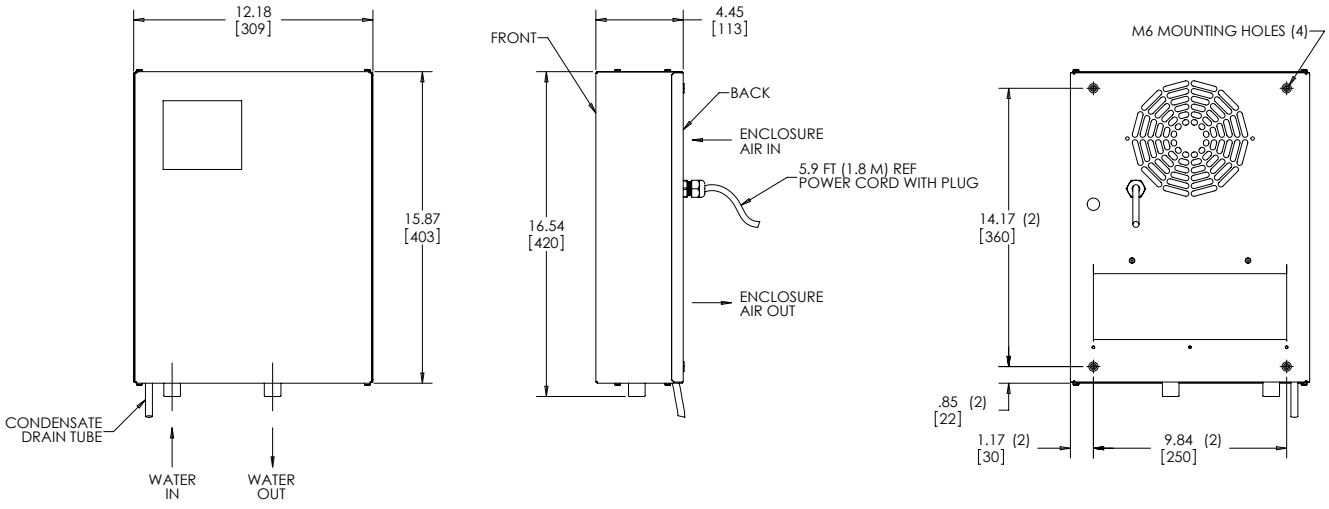
Performance Data **WCHE01 Models 870 Watt**

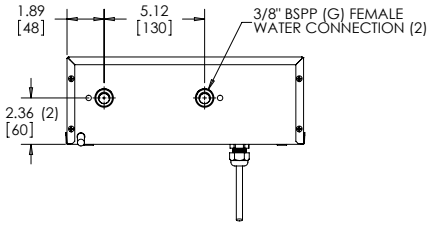
CATALOG NUMBER	WCHE01916002	WCHE01926002
COOLING PERFORMANCE		
Nominal:		
BTU/Hr. @ Δt 25 C	2968	2968
Watts @ Δt 25 C	870	870
Refrigerant	NA	NA
Refrigerant Charge (ounces/grams)	NA	NA
Inside Cabinet Temperature Range:		
Maximum (°F/°C)	122/50	122/50
Minimum (°F/°C)	50/10	50/10
Ambient Operating Temperature Range:		
Maximum (°F/°C)	158/70	158/70
Minimum (°F/°C)	50/10	50/10
Flow at 0 Static Pressure:		
Internal loop 50 Hz (Airflow: CFM / m^3/hr.)	194/330	194/330
External loop 50 Hz (Waterflow: GPM @ 95 F)	0.66	0.66
Internal loop 60 Hz (Airflow: CFM / m^3/hr.)	194/330	194/330
External loop 60 Hz (Waterflow: GPM @ 95 F)	0.66	0.66
ELECTRICAL DATA		
Rated Voltage	115	230
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	28	28
Max. Nominal Current (A at 50/60 Hz)	0.5	0.5
Starting Current (Amps)	0.7	0.7
Agency Approvals	UL/cUL Listed CE	UL/cUL Listed CE EAC
Power Input Description	Cord with NEMA 5-15 plug	Cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12/IP55	Type 12/IP55
CONTROLLER		
Description	Basic Mechanical Thermostat	
Thermostat Location	Behind front cover, near the fan	
Factory Thermostat Setting (°F/°C)	95/35	95/35
SOUND LEVEL		
At 1.0 Meters	58 dBA	58 dBA
UNIT CONSTRUCTION		
Material	Mild Steel Sheet Metal Standard	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	15.9/404	15.9/404
Width (in./mm)	12.12/308	12.12/308
Depth (in./mm)	4.49/114	4.49/114
Weight (lb./kg)	19.84/9	19.84/9

Performance Curves for WCHE01 Models 870 Watt

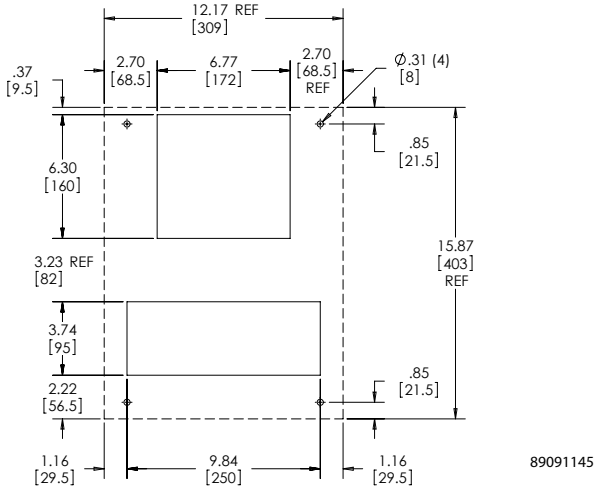


WCHE01 Models 870 Watt





NOTE: "G" to NPT adapting valves are included and shipped with the unit.



CUTOUT DIMENSIONS

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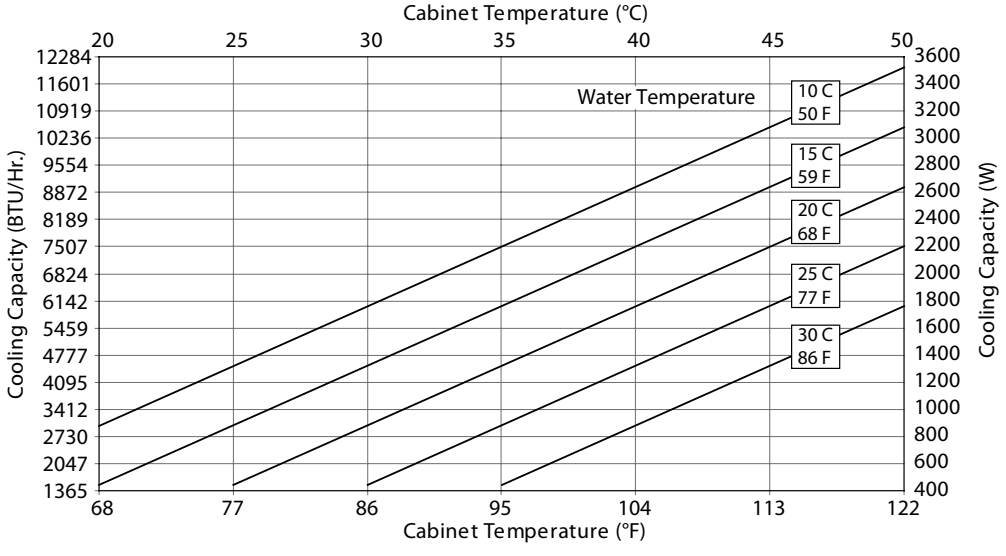
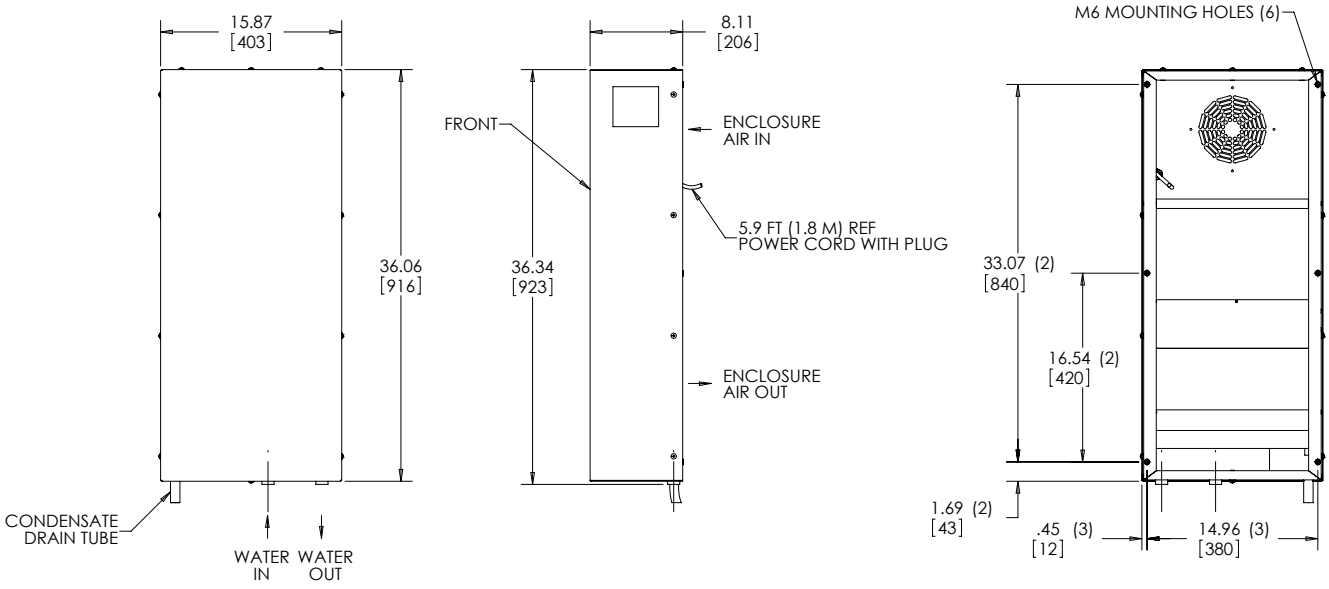
Performance Data **WCHE04 Models 2200 Watt**

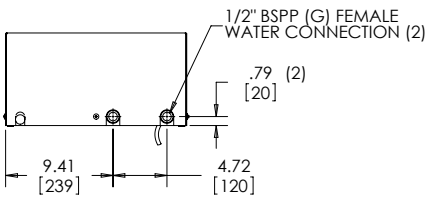
CATALOG NUMBER	WCHE04916002	WCHE04926002
COOLING PERFORMANCE		
Nominal:		
BTU/Hr. @ Δt 25 C	7506	7506
Watts @ Δt 25 C	2200	2200
Refrigerant	NA	NA
Refrigerant Charge (ounces/grams)	NA	NA
Inside Cabinet Temperature Range:		
Maximum (°F/°C)	122/50	122/50
Minimum (°F/°C)	50/10	50/10
Ambient Operating Temperature Range:		
Maximum (°F/°C)	158/70	158/70
Minimum (°F/°C)	50/10	50/10
Flow at 0 Static Pressure:		
Internal loop 50 Hz (Airflow: CFM / m^3/hr.)	339/575	339/575
External loop 50 Hz (Waterflow: GPM @ 95 F)	0.66	0.66
Internal loop 60 Hz (Airflow: CFM / m^3/hr.)	339/575	339/575
External loop 60 Hz (Waterflow: GPM @ 95 F)	0.66	0.66
ELECTRICAL DATA		
Rated Voltage	115	230
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	90	90
Max. Nominal Current (A at 50/60 Hz)	0.8	0.8
Starting Current (Amps)	1	1
Agency Approvals	UL/cUL Listed CE	UL/cUL Listed CE EAC
Power Input Description	Cord with NEMA 5-15 plug	Cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12/IP55	Type 12/IP55
CONTROLLER		
Description	Basic Mechanical Thermostat	
Thermostat Location	Behind front cover, near the fan	
Factory Thermostat Setting (°F/°C)	95/35	95/35
SOUND LEVEL		
At 1.0 Meters	58 dBA	58 dBA
UNIT CONSTRUCTION		
Material	Mild Steel Sheet Metal Standard	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	36.41/925	36.41/925
Width (in./mm)	15.75/400	15.75/400
Depth (in./mm)	8.07/205	8.07/205
Weight (lb./kg)	44.1/20	44.1/20

Performance Curves for WCHE04 Models 2200 Watt

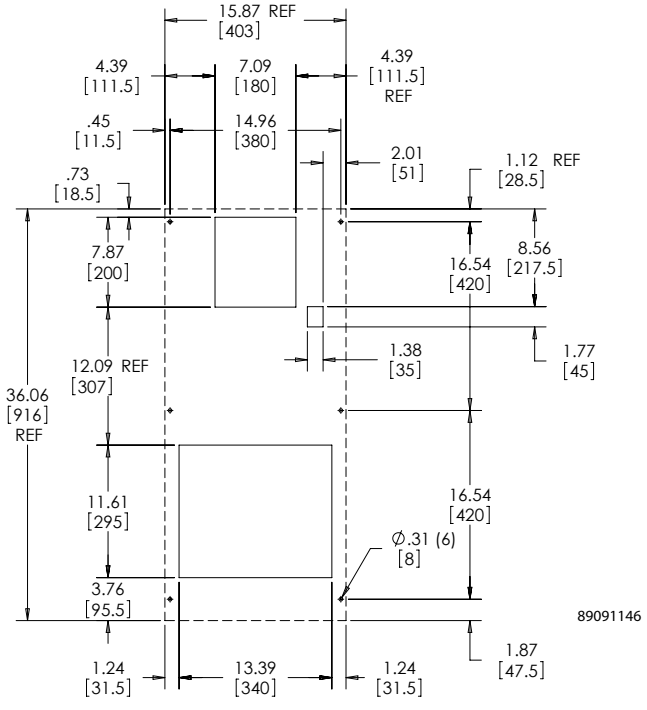


WCHE04 Models 2200 Watt





NOTE: "G" to NPT adapting valves are included and shipped with the unit.



CUTOUT DIMENSIONS

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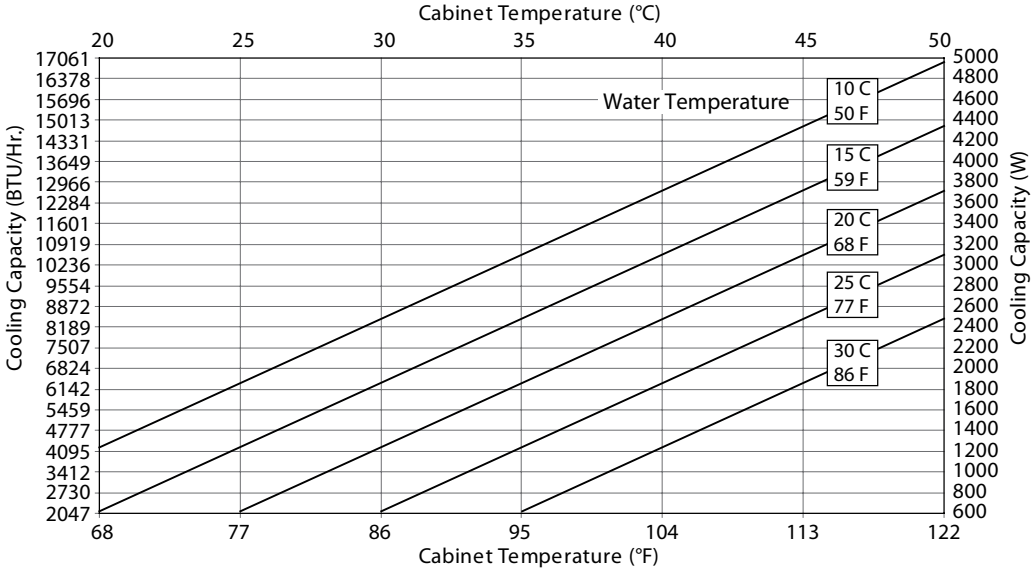
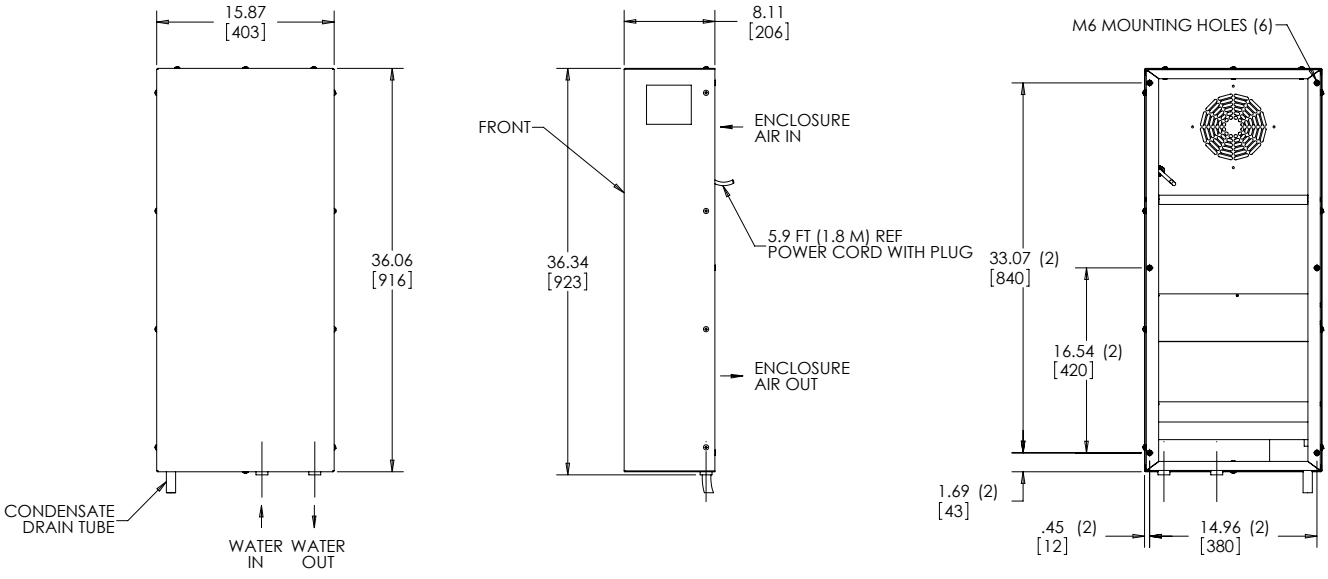
Performance Data **WCHE06 Models 3100 Watt**

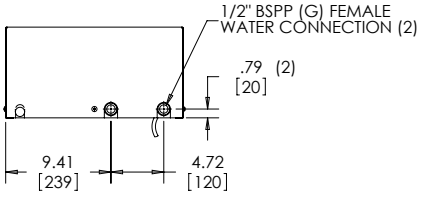
CATALOG NUMBER	WCHE06916002	WCHE06926002
COOLING PERFORMANCE		
Nominal:		
BTU/Hr. @ Δt 25 C	10577	10577
Watts @ Δt 25 C	3100	3100
Refrigerant	NA	NA
Refrigerant Charge (ounces/grams)	NA	NA
Inside Cabinet Temperature Range:		
Maximum (°F/°C)	122/50	122/50
Minimum (°F/°C)	50/10	50/10
Ambient Operating Temperature Range:		
Maximum (°F/°C)	158/70	158/70
Minimum (°F/°C)	50/10	50/10
Flow at 0 Static Pressure:		
Internal loop 50 Hz (Airflow: CFM / m^3/hr.)	507/860	507/860
External loop 50 Hz (Waterflow: GPM @ 95 F)	2.2	2.2
Internal loop 60 Hz (Airflow: CFM / m^3/hr.)	507/860	507/860
External loop 60 Hz (Waterflow: GPM @ 95 F)	2.2	2.2
ELECTRICAL DATA		
Rated Voltage	115	230
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	110	115
Max. Nominal Current (A at 50/60 Hz)	2	1
Starting Current (Amps)	2.4	1.2
Agency Approvals	UL/cUL Listed CE	UL/cUL Listed CE EAC
Power Input Description	Cord with NEMA 5-15 plug	Cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12/IP55	Type 12/IP55
CONTROLLER		
Description	Basic Mechanical Thermostat	
Thermostat Location	Behind front cover, near the fan	
Factory Thermostat Setting (°F/°C)	95/35	95/35
SOUND LEVEL		
At 1.0 Meters	58 dBA	58 dBA
UNIT CONSTRUCTION		
Material	Mild Steel Sheet Metal Standard	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	36.41/925	36.41/925
Width (in./mm)	15.75/400	15.75/400
Depth (in./mm)	8.07/205	8.07/205
Weight (lb./kg)	46.3/21	46.3/21

Performance Curves for WCHE06 Models 3100 Watt

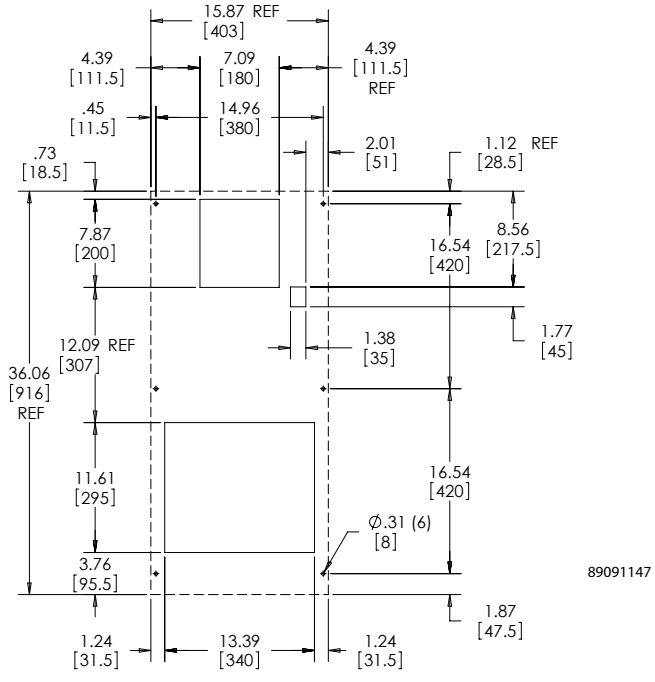


WCHE06 Models 3100 Watt





NOTE: "G" to NPT adapting valves are included and shipped with the unit.



CUTOUT DIMENSIONS

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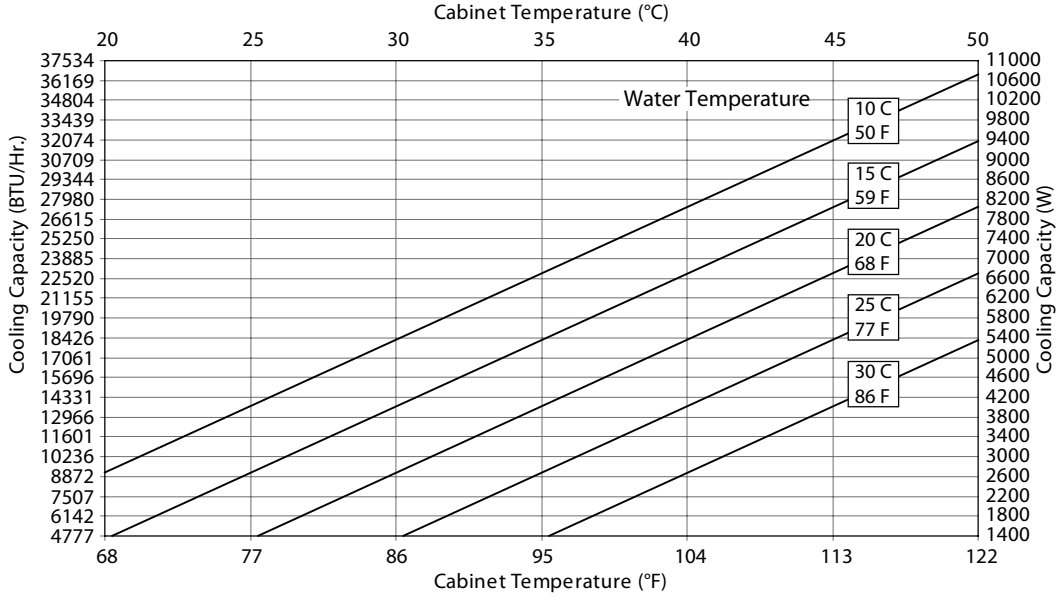
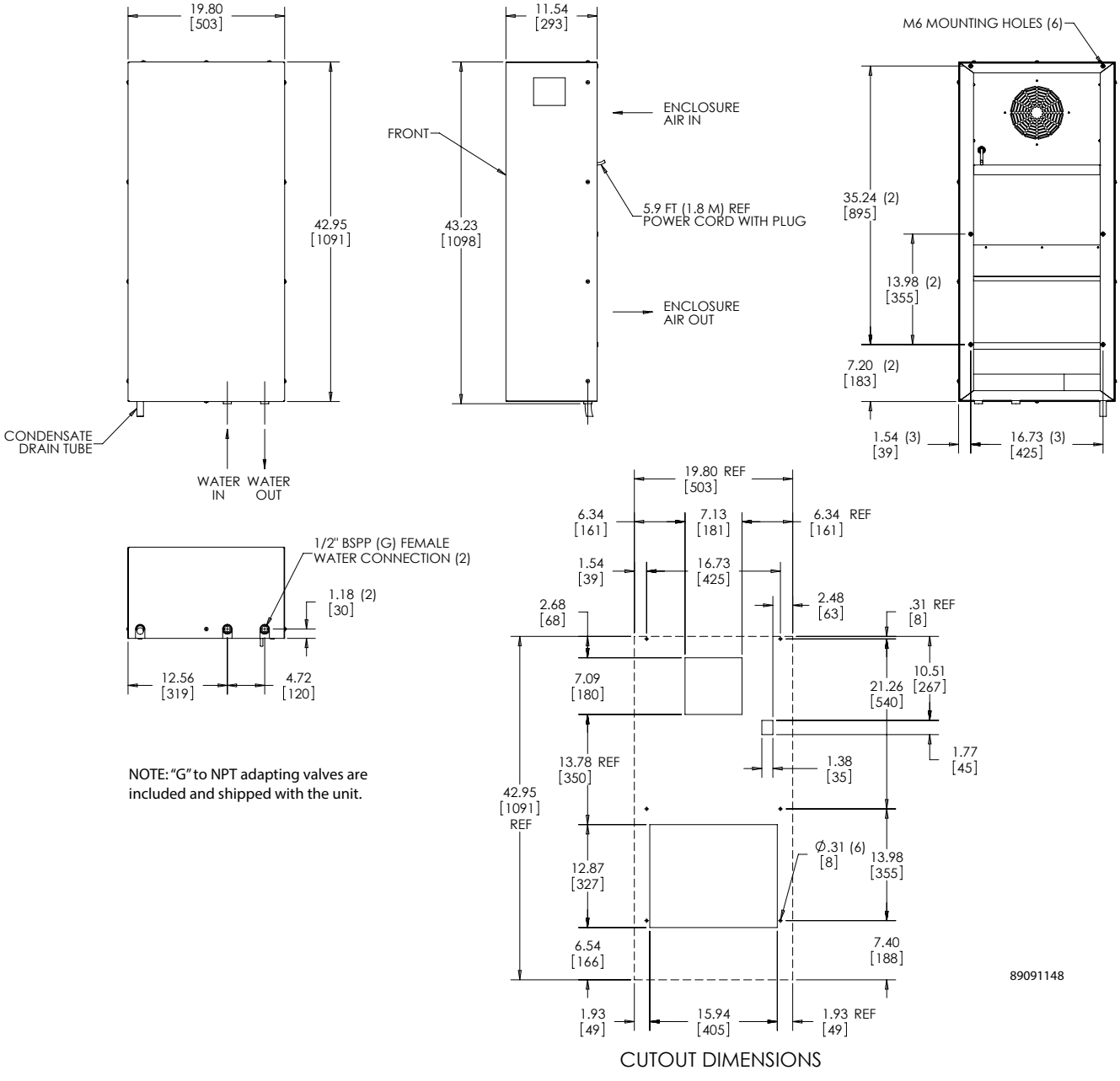
Performance Data **WCHE14 Models 6700 Watt**

CATALOG NUMBER	WCHE14916002	WCHE14926002
COOLING PERFORMANCE		
Nominal:		
BTU/Hr. @ Δt 25 C	22861	22861
Watts @ Δt 25 C	6700	6700
Refrigerant	NA	NA
Refrigerant Charge (ounces/grams)	NA	NA
Inside Cabinet Temperature Range:		
Maximum (°F/°C)	122/50	122/50
Minimum (°F/°C)	50/10	50/10
Ambient Operating Temperature Range:		
Maximum (°F/°C)	158/70	158/70
Minimum (°F/°C)	50/10	50/10
Flow at 0 Static Pressure:		
Internal loop 50 Hz (Airflow: CFM / m^3/hr.)	855/1450	855/1450
External loop 50 Hz (Waterflow: GPM @ 95 F)	3.78	3.78
Internal loop 60 Hz (Airflow: CFM / m^3/hr.)	855/1450	855/1450
External loop 60 Hz (Waterflow: GPM @ 95 F)	3.78	3.78
ELECTRICAL DATA		
Rated Voltage	115	230
Frequency (Hz)	50/60	50/60
Operating Range	+/- 10%	+/- 10%
Max. Power Consumption (W at 50/60 Hz)	200	245
Max. Nominal Current (A at 50/60 Hz)	2	1.3
Starting Current (Amps)	2.4	1.4
Agency Approvals	UL/cUL Listed CE	UL/cUL Listed CE EAC
Power Input Description	Cord with NEMA 5-15 plug	Cord with NEMA 6-15 plug
ENCLOSURE PROTECTION		
UL Type	Type 12/IP55	Type 12/IP55
CONTROLLER		
Description	Basic Mechanical Thermostat	
Thermostat Location	Behind front cover, near the fan	
Factory Thermostat Setting (°F/°C)	95/35	95/35
SOUND LEVEL		
At 1.0 Meters	58 dBA	58 dBA
UNIT CONSTRUCTION		
Material	Mild Steel Sheet Metal Standard	
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard	
UNIT DIMENSIONS		
Height (in./mm)	43.34/1101	43.34/1101
Width (in./mm)	19.72/501	19.72/501
Depth (in./mm)	11.81/300	11.81/300
Weight (lb./kg)	86/39	86/39

Performance Curves for WCHE14 Models 6700 Watt



WCHE14 Models 6700 Watt



NOTE: "G" to NPT adapting valves are included and shipped with the unit.

CUTOUT DIMENSIONS

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Notes

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THERMOELECTRIC COOLERS INDOOR/OUTDOOR

Unshrouded
60, 100 and 200 Watts

Shrouded
60, 100 and 200 Watts

INDUSTRY STANDARDS

UR, cUR Recognized; Type 12, 3R, 4, 4X; File No. SA6453

CE
IP 65

APPLICATION

Thermoelectric Coolers minimize downtime and component loss by removing heat around critical components within an enclosure. These compact, low-profile coolers using the Peltier effect allow for cooling of small indoor and outdoor enclosures. No condensers, compressors or filters are required making it a reliable solution for demanding low-maintenance environments.

FEATURES

- DC Powered operation for 24V and 48V applications
- Low profile design allows for mounting vertically and horizontally on any enclosure to avoid interference with internal components
- Filterless design reduces maintenance requirements
- Contains no refrigerant, making it earth friendly
- Prewired with simple terminal block for easy wiring connections
- Operates on the Peltier effect for cooling or heating
- Compressor-free air conditioning for demanding indoor and outdoor applications
- Shrouded and unshrouded models included in standard packages
- Operating temperature range -40 C (-40 F) to 55 C (131 F)
- Partial recess mount

SPECIFICATIONS

- Models
  60 Watt, 24 Volt
  100 Watt, 24/48 Volt
  200 Watt, 24/48 Volt

FINISH

- Shrouded finish includes both powder coat paint RAL 7035 light gray standard and stainless steel 304

ACCESSORIES

Thermoelectric Temperature Controller, page 388
Thermoelectric Condensate Manager, page 389

NOTES

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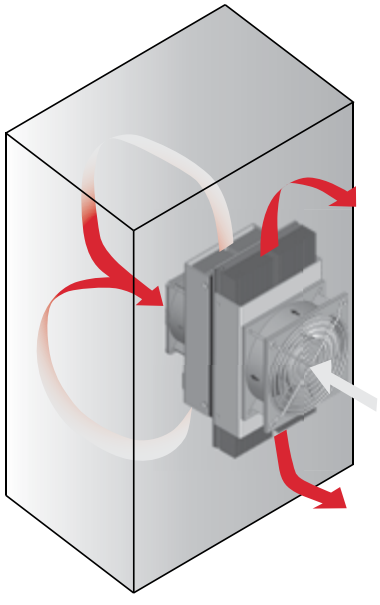
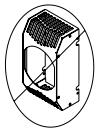
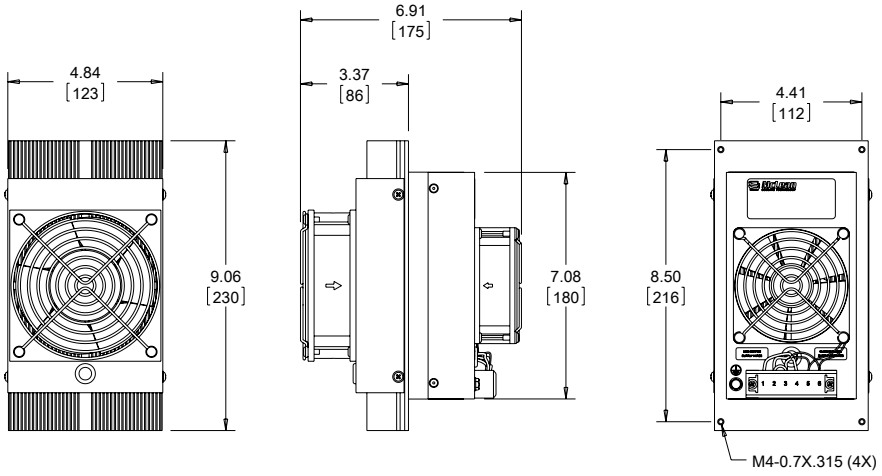


Performance Data **TE09 60W 204 BTU/Hr. (24 V)**

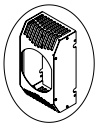
CATALOG NUMBERS			
Description	24V w/o shroud	24V w/ painted shroud	24V w/ SS shroud
Catalog Number	TE090624020	TE090624010	TE090624011
COOLING PERFORMANCE			
BTU/Hr.	**178**	**178**	**178**
Watts	**52**	**52**	**52**
Operating Temperature Range:			
Maximum (°C / °F)	55 / 131	55 / 131	55 / 131
Minimum (°C / °F)	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:			
Internal loop (CFM / M^3/Hr.)	24 / 41	24 / 41	24 / 41
External loop (CFM / M^3/Hr.)	80 / 136	80 / 136	80 / 136
Nominal Heating Watts	64	64	64
ELECTRICAL DATA			
Input DC Voltage			
Nominal (VDC)	**24**	**24**	**24**
Minimum (VDC)	18	18	18
Maximum (VDC)	27.6	27.6	27.6
Power Consumption 95 F / 95 F (35 C / 35 C) (W)	89	89	89
Rated Current (Amps) at 131 F/131 F (55 C/55 C)	4.4	4.4	4.4
Agency Approvals	UR, cUR Recognized CE	UR, cUR Recognized CE	UR, cUR Recognized CE
Power Input Description	Terminal Block	Terminal Block	Terminal Block
ENCLOSURE PROTECTION			
UL Type / IP Rating	Type 12,3R,4,4X / IP 65	Type 12,3R,4 / IP 65	Type 12,3R,4,4X / IP 65
SOUND LEVEL			
At 1.5 Meters	65 dBA	65 dBA	65 dBA
UNIT CONSTRUCTION			
Heat Sink Material	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum
Shroud Material	N/A	Galvanized Steel	Stainless Steel
Shroud Finish	N/A	RAL 7035 light-gray, semi-textured powder-coat paint standard	No. 4 Brushed Finish
UNIT DIMENSIONS			
Height (in. / mm)	9.06/230	9.29/236	9.29/236
Width (in. / mm)	4.84/123	5.02/128	5.02/128
Depth (in. / mm)	6.91/176	6.94/176	6.94/176
Weight (lb. / kg)	6.00/2.70	7.80/3.60	7.80/3.60

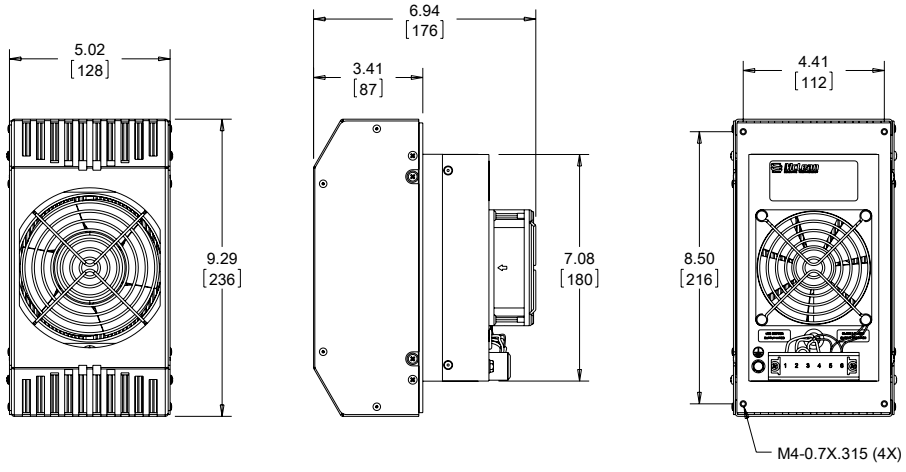
60 W 24 V

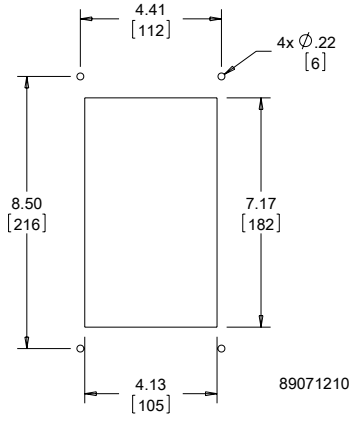




60 W 24 V







Cutout Dimensions

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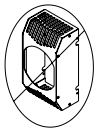
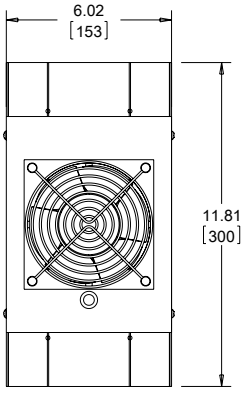
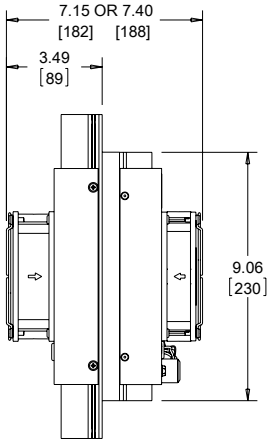
Performance Data **TE12 100W 341 BTU/Hr. (24/48 V)**

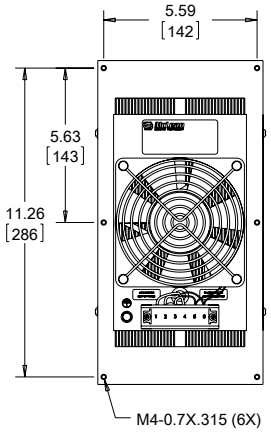
CATALOG NUMBERS					
Description	24V w/o shroud	24V w/ painted shroud	24V w/ SS shroud	48V w/o shroud	48V w/ painted shroud
Catalog Number	TE121024020	TE121024010	TE121024011	TE121048020	TE121048010
COOLING PERFORMANCE					
BTU/Hr.	**321**	**321**	**321**	**321**	**321**
Watts	**94**	**94**	**94**	**94**	**94**
Operating Temperature Range:					
Maximum (°C / °F)	55 / 131	55 / 131	55 / 131	55 / 131	55 / 131
Minimum (°C / °F)	-40 /-40	-40 /-40	-40 /-40	-40 /-40	-40 /-40
Air Flow at 0 Static Pressure:					
Internal loop (CFM / M^3/Hr.)	62 / 105	62 / 105	62 / 105	62 / 105	62 / 105
External loop (CFM / M^3/Hr.)	86 / 146	86 / 146	86 / 146	86 / 146	86 / 146
Nominal Heating Watts	94	94	94	94	94
ELECTRICAL DATA					
Input DC Voltage					
Nominal (VDC)	**24**	**24**	**24**	**48**	**48**
Minimum (VDC)	18	18	18	40	40
Maximum (VDC)	27.6	27.6	27.6	56.7	56.7
Power Consumption 95 F / 95 F (35 C / 35 C) (W)	162	162	162	162	162
Rated Current (Amps) at 131 F/131 F (55 C/55 C)	8.5	8.5	8.5	4.4	4.4
Agency Approvals	UR, cUR Recognized CE GOST	UR, cUR Recognized CE GOST	UR, cUR Recognized CE GOST	UR, cUR Recognized CE GOST	UR, cUR Recognized CE GOST
Power Input Description	Terminal Block	Terminal Block	Terminal Block	Terminal Block	Terminal Block
ENCLOSURE PROTECTION					
UL Type / IP Rating	Type 12,3R,4,4X / IP 65	Type 12,3R,4 / IP 65	Type 12,3R,4,4X / IP 65	Type 12,3R,4,4X / IP 65	Type 12,3R,4 / IP 65
SOUND LEVEL					
At 1.5 Meters	68 dBA	68 dBA	68 dBA	68 dBA	68 dBA
UNIT CONSTRUCTION					
Heat Sink Material	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum
Shroud Material	N/A	Galvanized Steel	Stainless Steel	N/A	Galvanized Steel
Shroud Finish	N/A	RAL 7035 light-gray, semi-textured powder-coat paint standard	No. 4 Brushed Finish	N/A	RAL 7035 light-gray, semi-textured powder-coat paint standard
UNIT DIMENSIONS					
Height (in. / mm)	11.81/300	12.00/305	12.00/305	11.81/300	12.00/305
Width (in. / mm)	6.02/153	6.18/157	6.18/157	6.02/153	6.18/157
Depth (in. / mm)	7.40/188	7.43/189	7.43/189	7.40/188	7.43/189
Weight (lb. / kg)	8.50/3.90	11.00/5.00	11.00/5.00	8.50/3.90	11.00/5.00

100 W 24/48 V

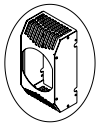


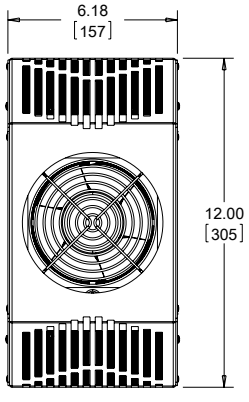


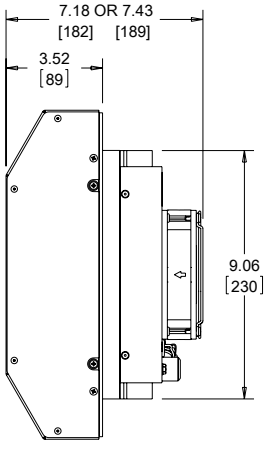


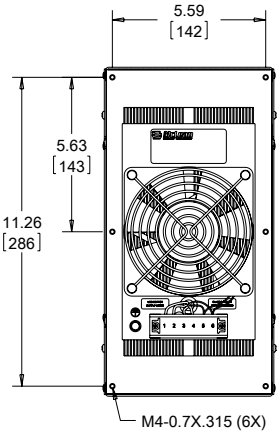


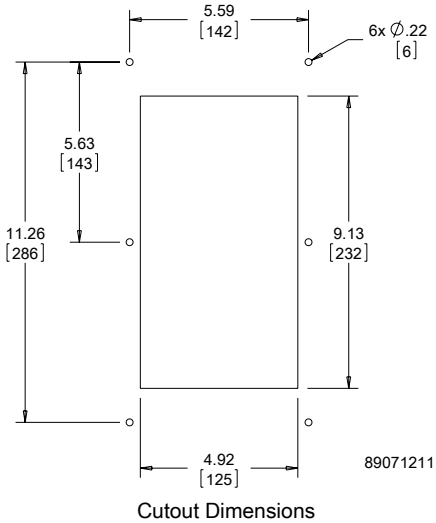
100 W 24/48 V











Cutout Dimensions

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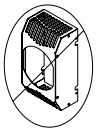
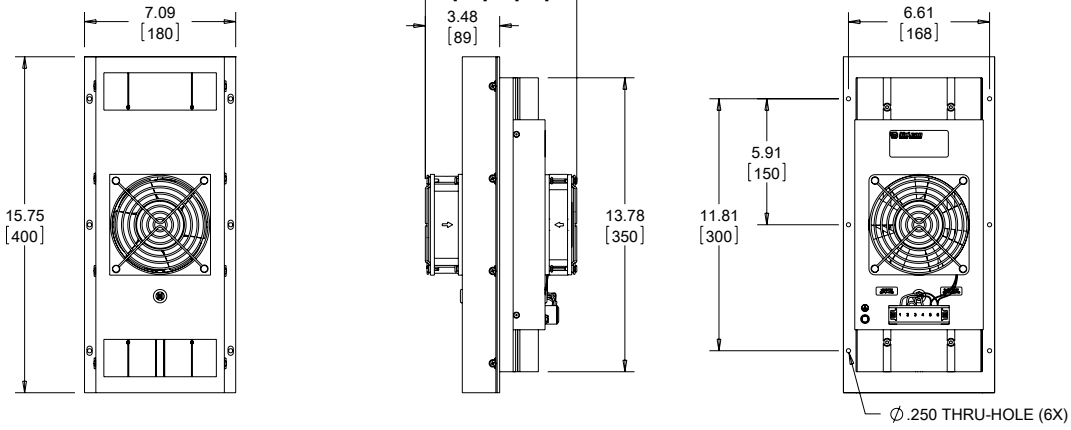
Performance Data **TE16 200W 682 BTU/Hr. (24/48 V)**

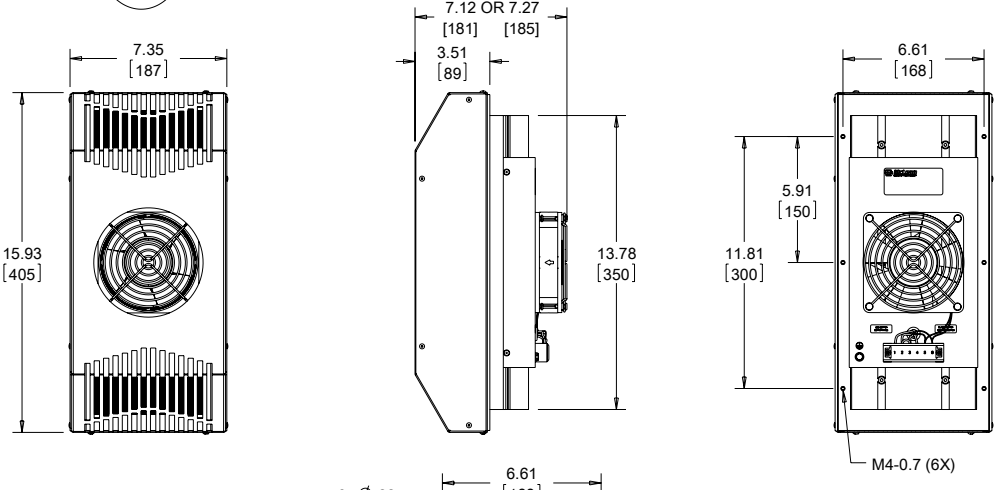
CATALOG NUMBERS					
Description	24V w/o shroud	24V w/ painted shroud	24V w/ SS shroud	48V w/o shroud	48V w/ painted shroud
Catalog Number	TE162024020	TE162024010	TE162024011	TE162048020	TE162048010
COOLING PERFORMANCE					
BTU/Hr.	**567**	**567**	**567**	**567**	**567**
Watts	**166**	**166**	**166**	**166**	**166**
Operating Temperature Range:					
Maximum (°C / °F)	55 / 131	55 / 131	55 / 131	55 / 131	55 / 131
Minimum (°C / °F)	-40 /-40	-40 /-40	-40 /-40	-40 /-40	-40 /-40
Air Flow at 0 Static Pressure:					
Internal loop (CFM / M^3/Hr.)	62 / 105	62 / 105	62 / 105	62 / 105	62 / 105
External loop (CFM / M^3/Hr.)	86 / 146	86 / 146	86 / 146	86 / 146	86 / 146
Nominal Heating Watts	146	146	146	146	146
ELECTRICAL DATA					
Input DC Voltage					
Nominal (VDC)	**24**	**24**	**24**	**48**	**48**
Minimum (VDC)	18	18	18	40	40
Maximum (VDC)	27.6	27.6	27.6	56.7	56.7
Power Consumption 95 F / 95 F (35 C / 35 C) (W)	295	295	295	295	295
Rated Current (Amps) at 131 F/131 F (55 C/55 C)	14.7	14.7	14.7	7.6	7.6
Agency Approvals	UR, cUR Recognized CE GOST	UR, cUR Recognized CE GOST	UR, cUR Recognized CE GOST	UR, cUR Recognized CE GOST	UR, cUR Recognized CE GOST
Power Input Description	Terminal Block	Terminal Block	Terminal Block	Terminal Block	Terminal Block
ENCLOSURE PROTECTION					
UL Type / IP Rating	Type 12,3R,4,4X / IP 65	Type 12,3R,4 / IP 65	Type 12,3R,4,4X / IP 65	Type 12,3R,4,4X / IP 65	Type 12,3R,4 / IP 65
SOUND LEVEL					
At 1.5 Meters	68 dBA	68 dBA	68 dBA	68 dBA	68 dBA
UNIT CONSTRUCTION					
Heat Sink Material	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum
Shroud Material	N/A	Galvanized Steel	Stainless Steel	N/A	Galvanized Steel
Shroud Finish	N/A	RAL 7035 light-gray, semi-textured powder-coat paint standard	No. 4 Brushed Finish	N/A	RAL 7035 light-gray, semi-textured powder-coat paint standard
UNIT DIMENSIONS					
Height (in. / mm)	15.75/400	15.93/405	15.93/405	15.75/400	15.93/405
Width (in. / mm)	7.09/180	7.35/187	7.35/187	7.09/180	7.35/187
Depth (in. / mm)	7.25/184	7.27/185	7.27/185	7.25/184	7.27/185
Weight (lb. / kg)	14.80/6.70	18.60/8.40	18.60/8.40	14.80/6.70	18.60/8.40

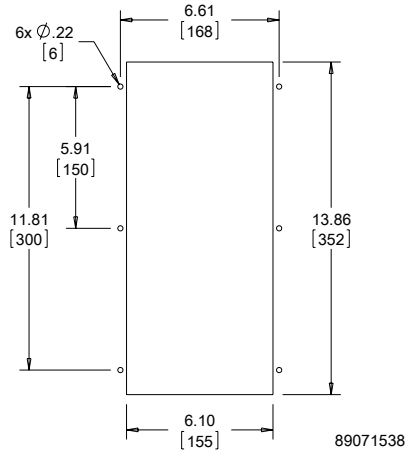
200 W 24/48 V





200 W 24/48 V

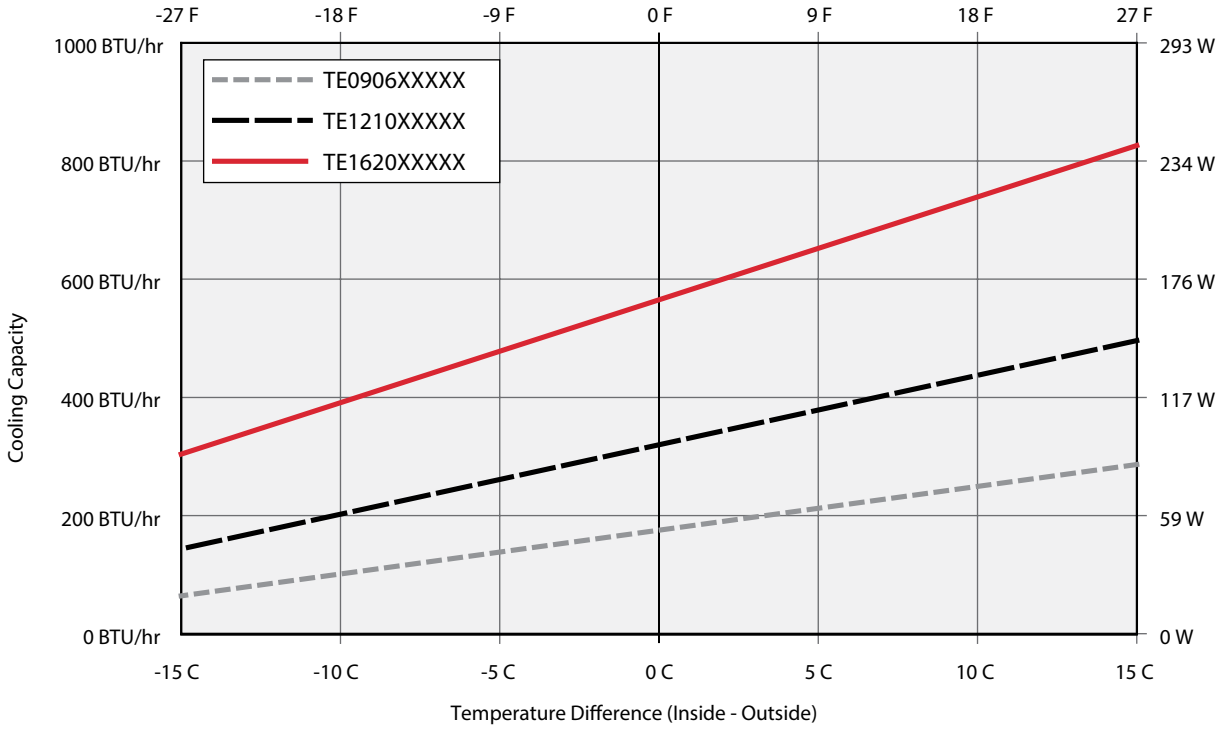




Cutout Dimensions

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

Cooling Capacity versus Temperature D at 35 C (95 F) Ambientifference



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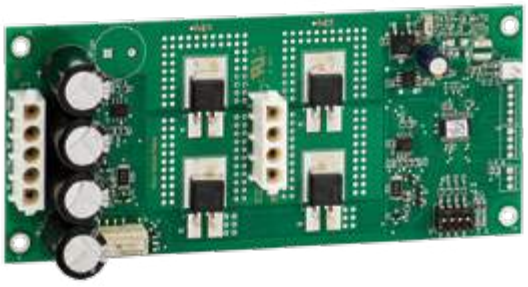
THERMOELECTRIC TEMPERATURE CONTROLLER



INDUSTRY STANDARDS

UL Recognized; File No. 60730

FEATURES

- Provides PWM regulation of cooling and heating output for TEC units
- Automatically switches between cooling and heating
- 4 cooling temperature set points range from 22.5 C to 35 C (35 C Factory Setting)
- 3 heating temperature set points range from -5 C to 15 C (15 C Factory Setting)
- Heating function can be easily disabled if desired
- On-board LEDS indicate low temp, high temp alarm, and overall system status
- Dry contact relay output provides for external alarm indication

Performance Data

CATALOG NUMBERS		
	TEC24VCNTLRN	TEC48VCNTLRN
ELECTRICAL DATA		
Rated Voltage (VDC)	24	48
Operating Range (VDC)	18 to 30	40 to 60
Current @ Rated Voltage (Amps)	17.2	8.6
Operating Temperature Range		
Maximum (°F/°C)	131 / 55	
Minimum (°F/°C)	-40 / -40	
Temperature Accuracy (°F/°C)	± 3.6 / 2.0	
Alarm Contact Rating	1) 0.5 A max @ 24 VDC - from same source of power as unit, SELV, non-power limited (greater than 15 W); OR 2) 0.5 A max @ 24 VAC - from, SELV, Class 2 safety isolating transformer.	1) 0.5 A max @ 48 VDC - from same source of power as unit, SELV, non-power limited (greater than 15 W); OR 2) 0.5 A max @ 24 VAC - from, SELV, Class 2 safety isolating transformer.
UNIT DIMENSIONS		
PCB Dimensions		
Height (in/mm)	1.20 / 30	
Width (in/mm)	2.88 / 73	
Length (in/mm)	6.50 / 165	
Weight (lb./kg)	0.21 / 0.10	
Mounting Bracket Dimensions		
Height (in/mm)	0.50 / 13	
Width (in/mm)	3.19 / 91	
Length (in/mm)	6.50 / 165	
Weight (lb./kg)	0.29 / 0.13	
Accessories		
Input Supply Harness	60-in. (1525mm) long Supply Harness Catalog Number TECSUPPLYHARNESS	
Board to TEC Harness	36-in. (915mm) long Control Harness Catalog Number TECCONTROLHARNESS	

THERMOELECTRIC CONDENSATE MANAGER

INDUSTRY STANDARDS

Maintains UL/cUL Type 3R, 12, 4 and 4X rating when properly installed

FEATURES

- Includes all required hardware and vent drain
- Maintains the integrity of Type 4 or Type 4X enclosure
- Drains condensation to bottom of enclosure via vent drain (vent drain included with package)
- Utilizes existing mounting holes and fasteners of thermoelectric cooler that requires no additional mounting

FINISH

- Pan Material Galvanized steel polyester powder coat paint with RAL 7035
- Vent drain material options include stainless steel or non-metallic

Performance Data

CATALOG NUMBERS						
	TEC60WCMSS4	TEC60WCMNM	TEC100WCMSS4	TEC100WCMNM	TEC200WCMSS4	TEC200WCMNM
Fits TEC Unit Model	All TE09	All TE09	All TE12	All TE12	All TE16	All TE16
UNIT CONSTRUCTION						
Pan Material	Galvanized Steel					
Pan Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard					
Vent Drain Material	Stainless Steel	Non-Metallic	Stainless Steel	Non-Metallic	Stainless Steel	Non-Metallic
UNIT DIMENSIONS						
Height (in./mm)	.75/19	.75/19	.75/19	.75/19	.75/19	.75/19
Width (in./mm)	5.50/140	5.50/140	6.25/159	6.25/159	7.44/189	7.44/189
Depth (in./mm)	2.50/64	2.50/64	2.50/64	2.50/64	2.50/64	2.50/64

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VORTEX COOLERS INDOOR/OUTDOOR

INDUSTRY STANDARDS

NEMA Type 4 Models:
Maintains UL/cUL Type 4 when properly installed on a UL/cUL Type 4 enclosure.

UL508 Listed; Type 4; File No. E187045

NEMA Type 4X Models:
Maintains UL/cUL Type 4X when properly installed on a UL/cUL Type 4X enclosure.

UL508 Listed; Type 4X; File No. E187045

NEMA Type 12 Models:
Maintains UL/cUL Type 12 when properly installed on a UL/cUL Type 12 enclosure.

UL508 Listed; Type 12; File No. E187045

APPLICATION

Powered by compressed air, Vortex Cooling Systems generate chilled air to cool small enclosures without refrigerants or moving parts. These systems are exceptionally reliable and low maintenance, even in the harshest and dirtiest environments.

FEATURES

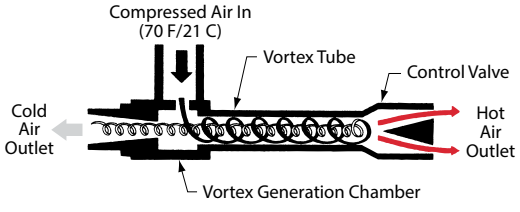
- Five-micron airline filter, 115 V solenoid
- Thermostat
- Ducting kit
- Cooling capacities to 2500 BTU/Hr. (733 W)

FINISH

Brushed satin aluminum or stainless steel

ACCESSORIES

Vortex Cooling Oil Filters, page 398



Vortex Tube Air Flow Schematic

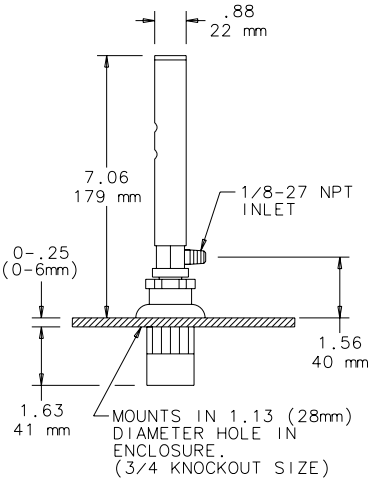
Performance Data **VC Series NEMA Type 12**

CATALOG NUMBERS				
Aluminum	VC0416012	VC0916012	VC1516012	VC2516012
COOLING PERFORMANCE				
Cooling Capacity (BTU/Hr.)	**400**	**900**	**1500**	**2500**
Cooling Capacity (Watts)	**117**	**264**	**440**	**733**
Compressed Air Consumption (SCFM)	8	15	25	35
Compressed Air Consumption (L^3/M)	227	425	708	991
SOUND LEVEL				
Noise Level (dB)	69	80	83	90
ENCLOSURE PROTECTION				
UL Type	Type 12			
ELECTRICAL DATA				
Rated Voltage	**115**	**115**	**115**	**115**
Frequency (Hz)	50/60	50/60	50/60	50/60
UNIT DIMENSIONS				
Weight (lb./kg)	5/2.27	6/2.72	6/2.72	6/2.72

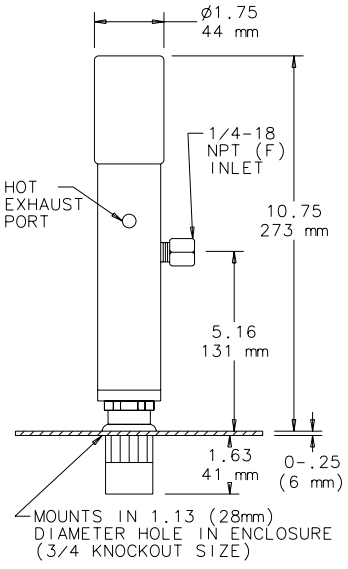
Performance Data **VC Series NEMA Type 4, 4X**

CATALOG NUMBERS			
Aluminum	VC0916004	VC1716004	VC2516004
Stainless Steel	VC091604X	VC171604X	VC251604X
COOLING PERFORMANCE			
Cooling Capacity (BTU/Hr.)	**900**	**1700**	**2500**
Cooling Capacity (Watts)	**264**	**498**	**733**
Compressed Air Consumption (SCFM)	15	25	35
Compressed Air Consumption (L^3/M)	425	708	991
SOUND LEVEL			
Noise Level (dB)	83	86	90
ENCLOSURE PROTECTION			
UL Type	Type 4, 4X		
ELECTRICAL DATA			
Rated Voltage	**115**	**115**	**115**
Frequency (Hz)	50/60	50/60	50/60
UNIT DIMENSIONS			
Weight (lb./kg)	6/2.72	6/2.72	6/2.72

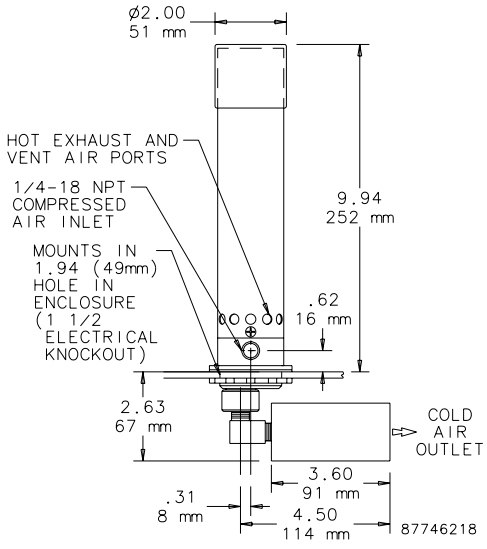
NEMA Type 12 - 400 BTU/Hr.



NEMA Type 12 -
900, 1500, 2500 BTU/Hr.

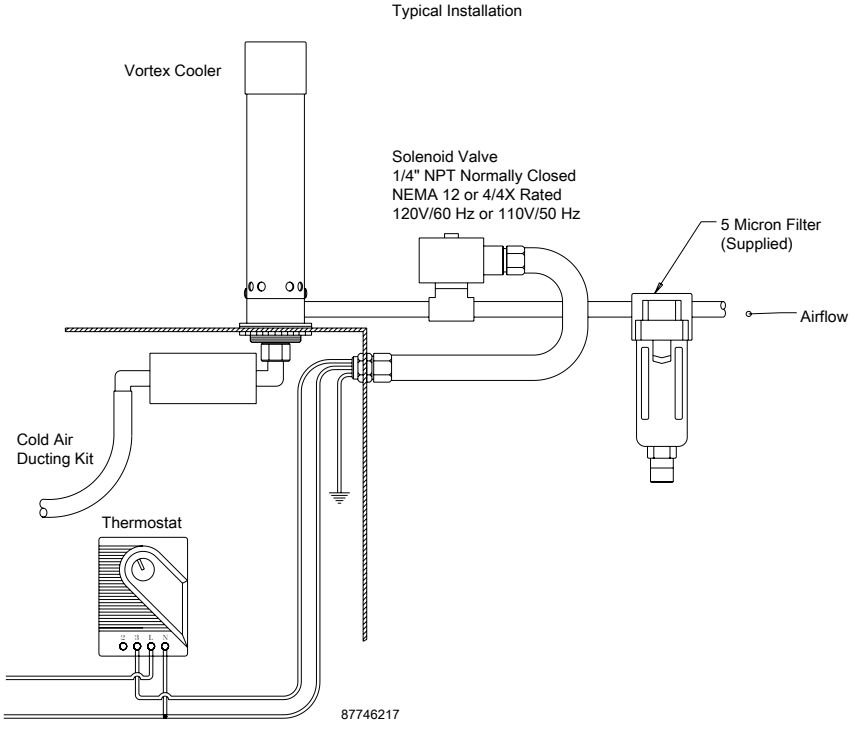


NEMA Type 4X
900, 1700, 2500 Btu/Hr.



ENCLOSURE COOLER MUST REMAIN IN A VERTICAL ORIENTATION TO MAINTAIN NEMA 4/4X RATINGS.

Typical Installation



QUIET VORTEX A/C ENCLOSURE COOLERS, TYPE 4/4X/12

VA09, VA15, VA25
NEMA Type 4/4X

VA09, VA15, VA25
NEMA Type 12

VA50
NEMA Type 4/4X

VA50
NEMA Type 12

INDUSTRY STANDARDS

NEMA Type 4,4X Models:

Maintains UL/cUL Type 4, 4X when properly installed on a UL/cUL Type 4, 4X enclosure.
UL508 Listed; Type 4, 4X; File No. E249700

IP66

NEMA Type 12 Models:

Maintains UL/cUL Type 12 when properly installed on a UL/cUL Type 12 enclosure.
UL508 Listed; Type 12; File No. E249700

IP54

APPLICATION

Vortex A/C Enclosure Coolers keep enclosures cool, clean and protect even in the harshest environments. Offering flexible installation, these enclosure coolers are ideal in space-restrictive areas where compressed air is readily available. With almost no moving parts, these enclosure coolers are highly reliable and virtually maintenance free.

FEATURES

- Mechanical thermostat reduces energy consumption
- Top, side, and front mount allows for versatile installation in confined areas
- Quieter operation with noise level of 60-75 dB
- Cooling capacities up to 5000 BTU/Hr. (1465 W)
- Supplied with five-micron, automatic drain compressed air filter, cold ducting kit, and cold air muffler
- Operates in environments up to 175 F (80 C)

FINISH

- NEMA Type 4,4X models: Polycarbonate and stainless steel exterior; aluminum and brass internal components
- NEMA Type 12 models: Polycarbonate and aluminum exterior; aluminum and brass internal components

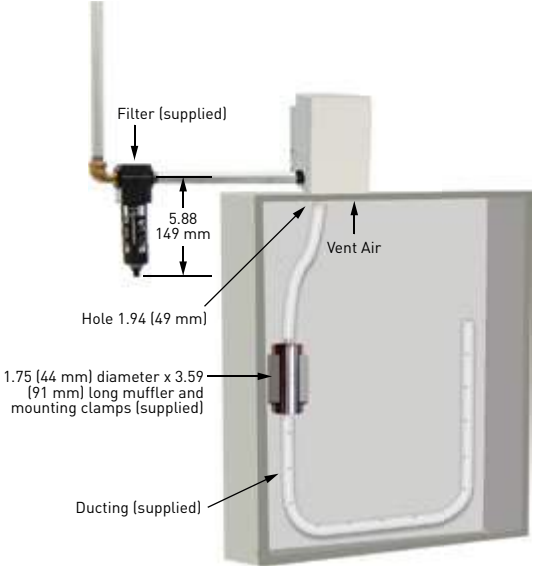
ACCESSORIES

Vortex Cooling Air Filters, page 398
Vortex Cooling Oil Filters, page 398
Vortex Cooling Generator Kits, page 398
Vortex Cooling VA Series Air Ducting, page 398

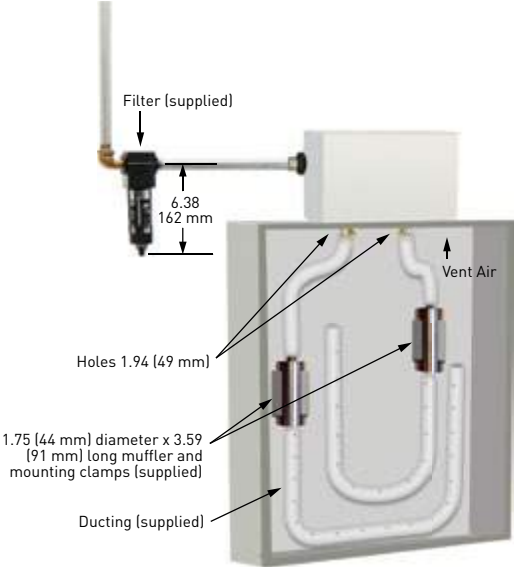
Performance Data **VA Series NEMA Type 4, 4X**

CATALOG NUMBERS	VA091604X	VA151604X	VA251604X	VA501604X
COOLING PERFORMANCE				
Cooling Capacity (BTU/Hr.)	**900**	**1500**	**2500**	**5000**
Cooling Capacity (Watts)	**264**	**440**	**733**	**1465**
Compressed Air Consumption (SCFM)	15	25	35	70
Compressed Air Consumption (SLPM)	425	708	991	1982
SOUND LEVEL				
Noise Level (dB)	60	66	72	75
ENCLOSURE PROTECTION				
UL Type	Type 4, 4X			
IP	IP66			
UNIT DIMENSIONS				
Height (in./mm)	8.00/203	8.00/203	8.00/203	6.44/164
Width (in./mm)	4.75/121	4.75/121	4.75/121	9.44/240
Depth (in./mm)	5.38/137	5.38/137	5.38/137	5.56/141
Weight (lb./kg)	6.3/2.86	6.3/2.86	6.4/2.90	11.0/4.99

VA09, VA15, VA25, Type 4/4X



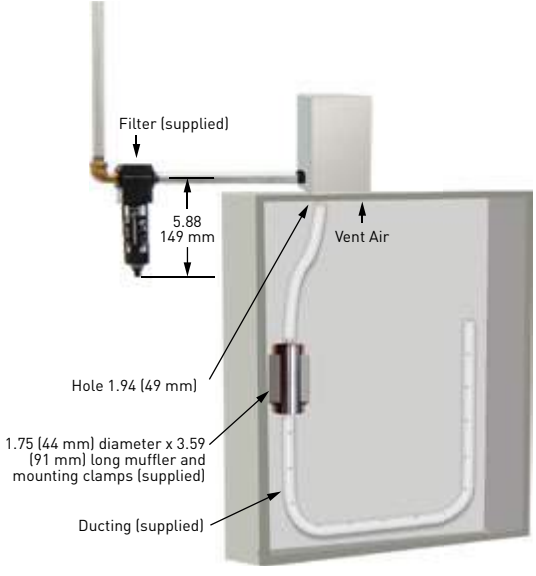
VA50, Type 4/4X



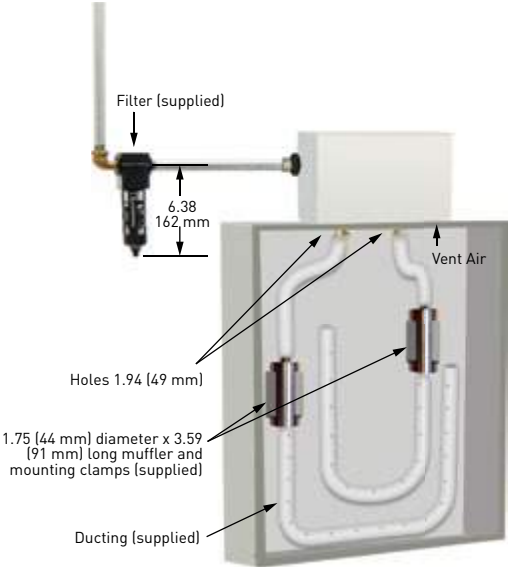
Performance Data **VA Series NEMA Type 12**

CATALOG NUMBERS	VA0916012	VA1516012	VA2516012	VA5016012
COOLING PERFORMANCE				
Cooling Capacity (BTU/Hr.)	**900**	**1500**	**2500**	**5000**
Cooling Capacity (Watts)	**264**	**440**	**733**	**1465**
Compressed Air Consumption (SCFM)	15	25	35	70
Compressed Air Consumption (SLPM)	425	708	991	1982
SOUND LEVEL				
Noise Level (dB)	60	66	72	75
ENCLOSURE PROTECTION				
UL Type		Type 12		
IP		IP54		
UNIT DIMENSIONS				
Height (in./mm)	8.00/203	8.00/203	8.00/203	6.44/164
Width (in./mm)	4.75/121	4.75/121	4.75/121	9.44/240
Depth (in./mm)	3.56/90	3.56/90	3.56/90	4.25/108
Weight (lb./kg)	4.9/2.22	4.9/2.22	5.0/2.27	7.7/3.50

VA09, VA15, VA25, Type 12



VA50, Type 12



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VORTEX A/C ENCLOSURE COOLERS, HAZARDOUS LOCATION

VHL09, VHL15, VHL25

VHL50

APPLICATION

Hazardous Location Vortex A/C Enclosure Coolers keep enclosures cool, clean and protect even in hazardous environments. These systems are ideal for applications where compressed air is available in hazardous locations. With almost no moving parts, these systems are highly reliable and virtually maintenance free.

FEATURES

- Approved for a 175 F (80 C) maximum ambient temperature in Class I, Div. 2; Class II, Div. 2; and Class III areas
- Mechanical thermostat reduces energy consumption
- Top, side, and front mount allows for versatile installation in confined areas
- Quieter operation with noise level of 60-75 dB
- Supplied with five-micron, automatic drain compressed air filter, cold ducting kit, cold air muffler, and check valve
- Cooling capacities up to 5000 BTU/Hr. (1465 W)

FINISH

- Polycarbonate and stainless steel exterior with aluminum and brass internal components

ACCESSORIES

Vortex Cooling Air Filters, page 398
Vortex Cooling Oil Filters, page 398
Vortex Cooling Generator Kits, page 398
Vortex Cooling VHL Series Air Ducting, page 398

INDUSTRY STANDARDS

Hazardous Location Models:

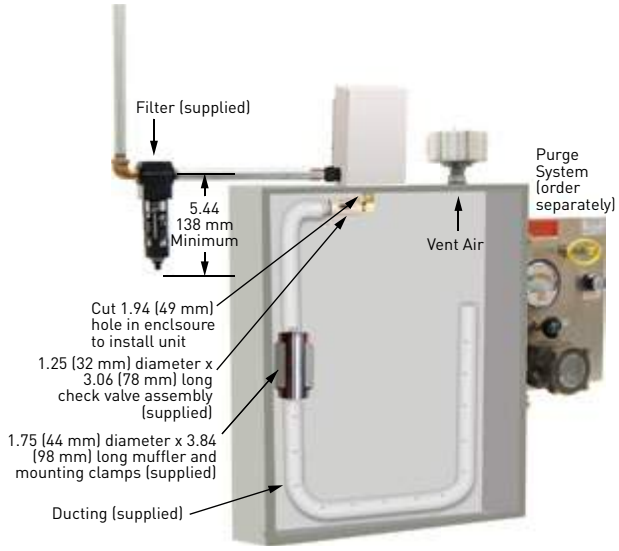
UL Classified for Class 1, Div. 2, Groups A through D; Class II, Div. 2, Groups F & G; and Class III locations (when used with an approved purge/pressurization system); File No. E364567. Maintains UL/cUL Type 4, 4X when properly installed on a UL/cUL Type 4, 4X enclosure.

10

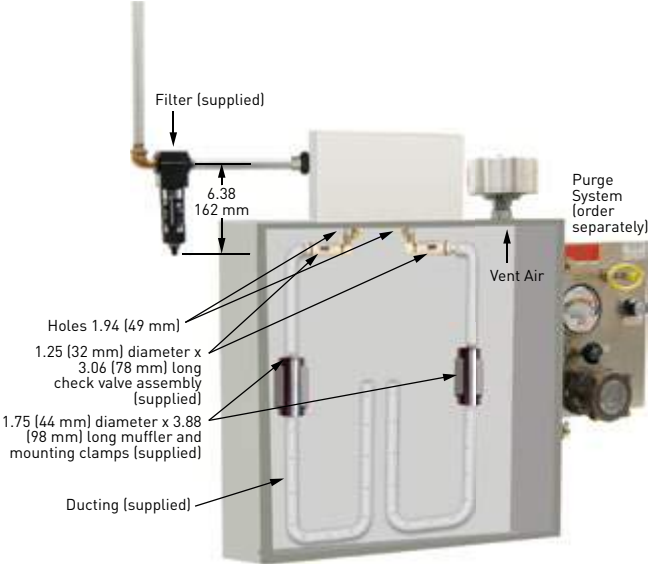
Performance Data **VHL Series for Hazardous Locations**

CATALOG NUMBERS	VHL09160	VHL15160	VHL25160	VHL50160
COOLING PERFORMANCE				
Cooling Capacity (BTU/Hr.)	900	1500	2500	5000
Cooling Capacity (Watts)	264	440	733	1465
Compressed Air Consumption (SCFM)	15	25	35	70
Compressed Air Consumption (SLPM)	425	708	991	1982
SOUND LEVEL				
Noise Level (dB)	60	66	72	75
ENCLOSURE PROTECTION				
UL Classified	Class 1, Div. 2, Groups A-D; Class II, Div. 2, Groups F & G, Class III			
UNIT DIMENSIONS				
Height (in./mm)	8.00/203	8.00/203	8.00/203	6.44/164
Width (in./mm)	4.75/121	4.75/121	4.75/121	9.44/240
Depth (in./mm)	5.38/137	5.38/137	5.38/137	5.56/141
Weight (lb./kg)	6.70/3.04	6.7/3.04	6.8/3.08	11.4/5.17

VHL09, VHL15, VHL25 HAZLOC



VHL50 HAZLOC



VORTEX COOLING AIR FILTERS

- 5-micron compressed air filter with automatic condensate drain
- Polycarbonate bowl with metal bowl guard
- 125 F (52 C) maximum temperature
- 150 psig maximum pressure

CATALOG NUMBER	Use with Model Capacity	SCFM	Ports
VAAF15	Up to 1500 BTU/Hr.	25	3/8 NPT
VAAF25	Up to 2500 BTU/Hr.	50	3/8 NPT
VAAF50	Up to 5000 BTU/Hr.	150	3/4 NPT

VORTEX COOLING OIL FILTERS

- .01 micron oil removal filter with automatic condensate drain
- Polycarbonate bowl with metal bowl guard
- 125 F (52 C) maximum temperature
- 150 psig maximum pressure

CATALOG NUMBER	Use with Model Capacity	SCFM	Ports
VCOF17	Up to 1500 BTU/Hr.	25	3/8 NPT
VCOF25	Up to 5000 BTU/Hr.	70	1/2 NPT

VORTEX COOLING GENERATOR KITS

- Vortex accessory generator kits
- Nylon generator and bushing

CATALOG NUMBER	Use with Model Capacity	SCFM	Quantity
VAGK09	900 BTU/Hr.	11	5
VAGK15	1500 BTU/Hr.	15	5
VAGK25	2500 and 5000 BTU/Hr.	25	5

VORTEX COOLING VA SERIES AIR DUCTING

Vortex VA series accessory cold air ducting kit evenly distributes compressed air.

CATALOG NUMBER	Use with Model Capacity
VADK124X	All NEMA 12, 4, 4X models

VORTEX COOLING VHL SERIES AIR DUCTING

Vortex VHL series accessory cold air ducting kit evenly distributes compressed air.

CATALOG NUMBER	Use with Model Capacity
VHLDK	All Hazardous Location models

Notes

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DACS OUTDOOR

INDUSTRY STANDARDS

UL Recognized

CE
Telcordia GR-487 capable

APPLICATION

- Outdoor telecommunications equipment
- Industrial automation
- Outdoor kiosk
- Outdoor displays
- OSP applications

FEATURES

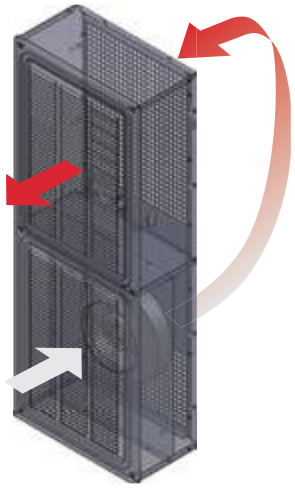
- Customizable solutions to meet any customer need
- Two models utilizing Hydrophobic GORE® filter
- Two models with MERV 12, pleated filter
- Standard power input: 48 VDC
- UL Listed to save time and money with agency approvals
- Power Cord included
- Easy to replace filters
- Broad operating temperature range -40 C to 55 C
- Every unit functionally tested before shipping
- Hydrophobic GORE® filter protects against salt and other corrosive agents
- Controller provides soft start and current limiting at start up
- Vibration resistant to withstand over-the-ground transportation of the telecom system
- Variable speed blowers standard on units for quiet running
- Controller provides fan speed control and temperature alarm

FINISH

- Standard Finish: Galvanized steel with RAL 7035 light-gray semi-textured powder coat paint

OPTIONS

- Custom Material: Aluminum, Stainless Steel, Mild Steel
- Custom Finish: Paint Color
- Custom Power Input: 24 VDC, 115 VAC
- Custom Sizes: Height 29 in. (737 mm) to 56 in. (1422 mm)



NOTES

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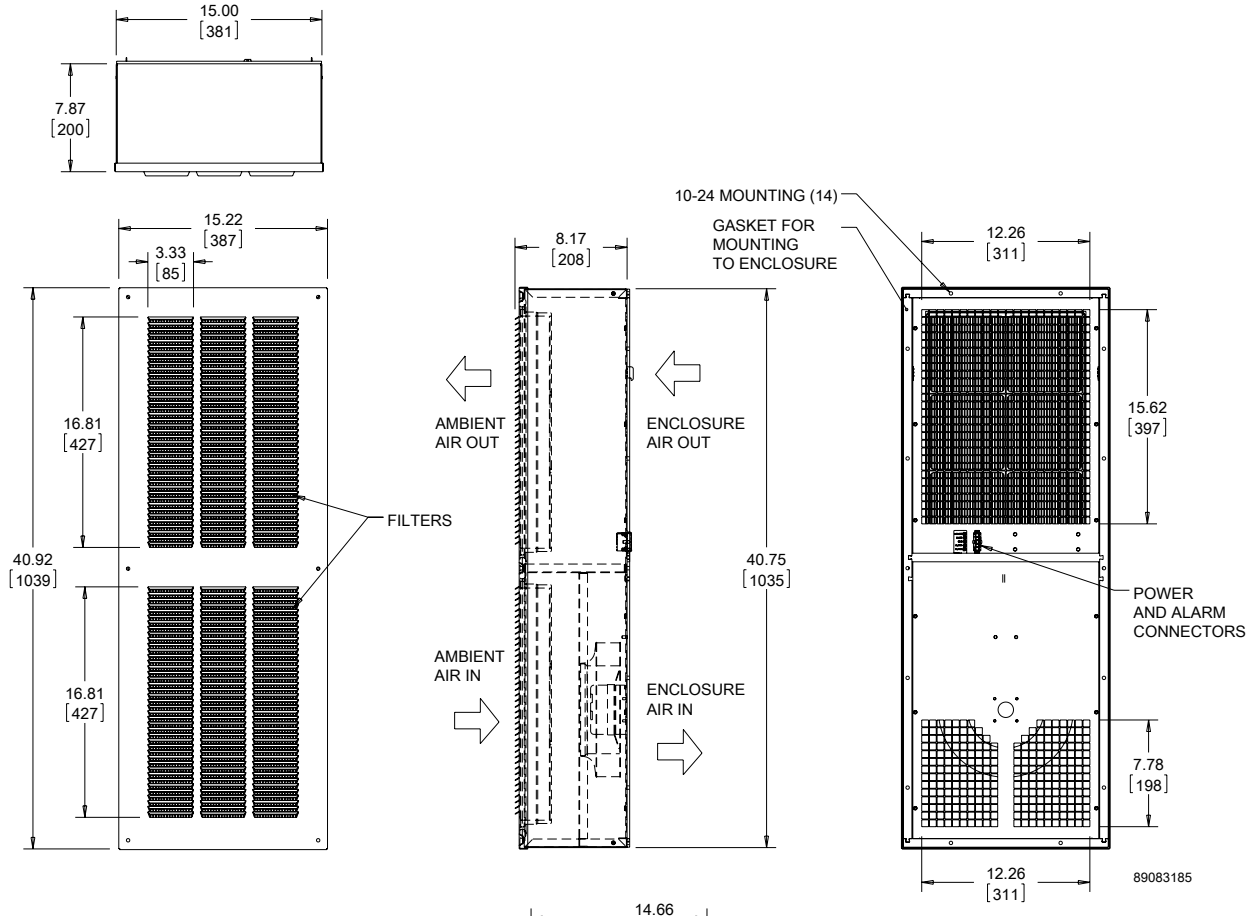
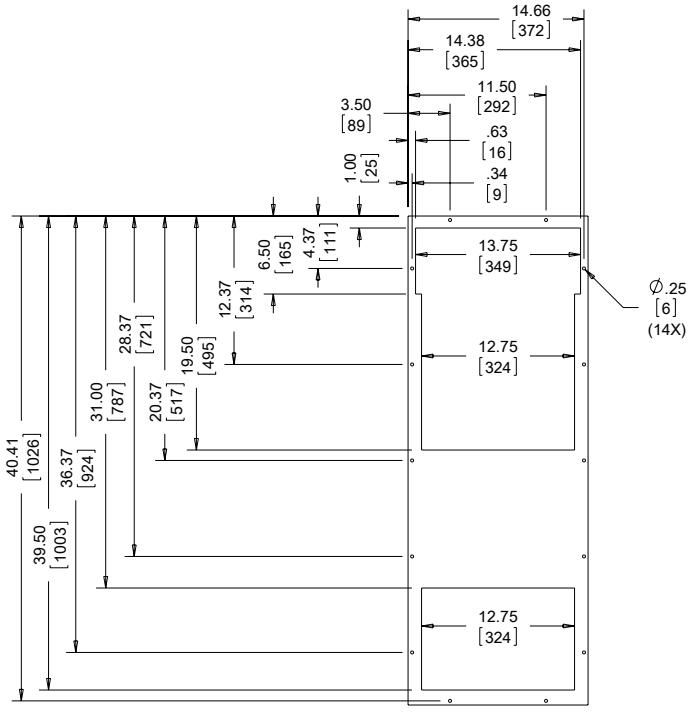
GORE® is a registered trademark of W.L. Gore & Associates, Inc.

Performance Data **DACS**

CATALOG NUMBERS	DCG4108548100	DCG2904248100	DCT5615048100	DCT3809448100
COOLING PERFORMANCE				
Nominal:				
Watts/°F	**85**	**42**	50	**94**
Watts/°C	**152**	**75**	**270**	**170**
Operating Temperature Range:				
Maximum (°F/°C)	131/55	131/55	131/55	131/55
Minimum (°F/°C)	-40/-40	-40/-40	-40/-40	-40/-40
Air Flow at 0 Static Pressure: (CFM/ m^3/hr.)	265/450	130/221	470/799	300/510
ELECTRICAL DATA				
Rated Voltage (VDC)		**48**		
Operating Range (VDC)		40-60		
Max. Power Consumption (Watts)	159	159	192	173
Max. Nominal Current (Amps)	3.3	3.3	4.0	3.6
Agency Approvals		UL Recognized, CE		
ENCLOSURE PROTECTION				
UL Type		Type 3R		
CONTROLLER				
Description		Fan speed control and temperature alarm		
Factory Thermostat Setting (°F/°C)		104/40		
SOUND LEVEL				
At 1.5 Meters - Full Speed (dBA)	67.1	68.1	65.0	63.4
UNIT CONSTRUCTION				
Material		Galvanized Steel		
Finish		RAL 7035 light-gray, semi-textured powder-coat paint standard		
Filter Type		**Hydrophobic GORE®**	**Pleated Filter Merv 12**	
UNIT DIMENSIONS				
Height (in./mm)	40.75/1035	28.75/730	56/1422	38/965
Width (in./mm)	15/381	12/305	20/508	16/406
Depth (in./mm)	7.88/200	7.12/181	7/178	6/152
Weight (lb./kg)	50/22.7	40/18.1	65/29.5	38/17.2

DCG4108548100





CUTOUT DIMENSIONS

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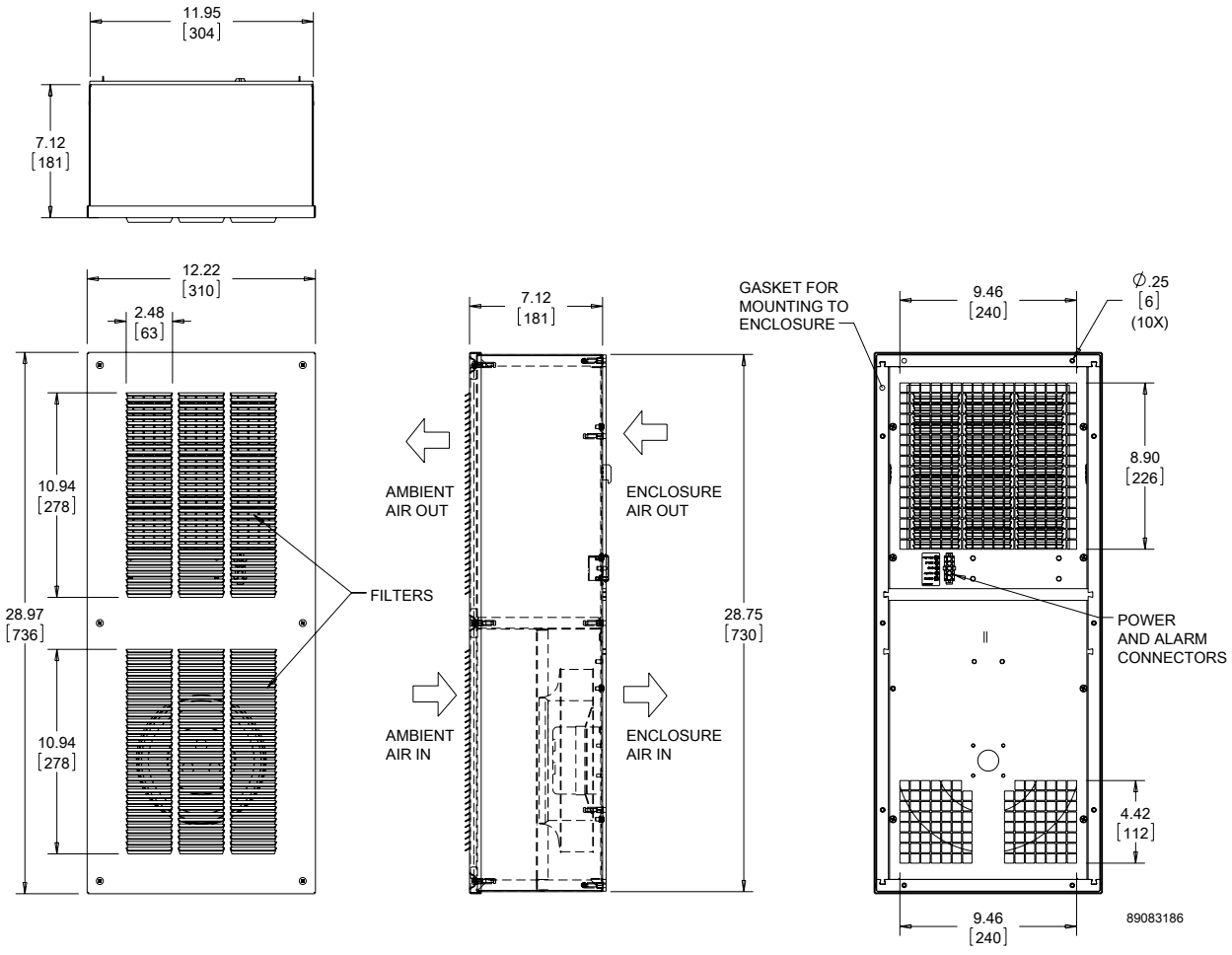
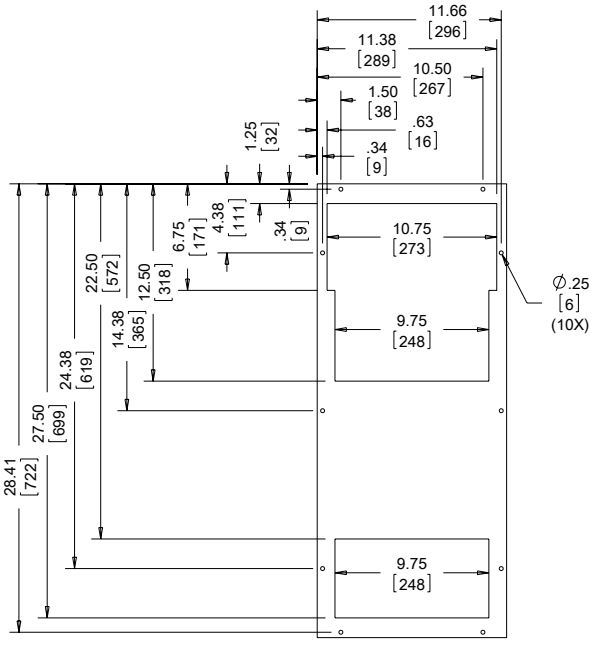
DCG2904248100





CUTOUT DIMENSIONS

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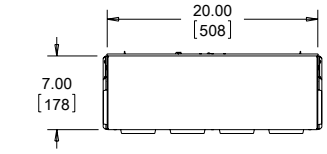

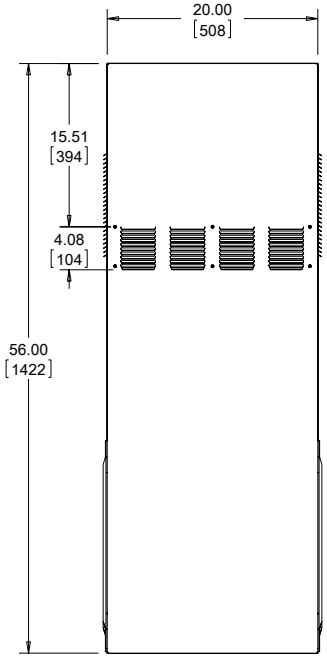

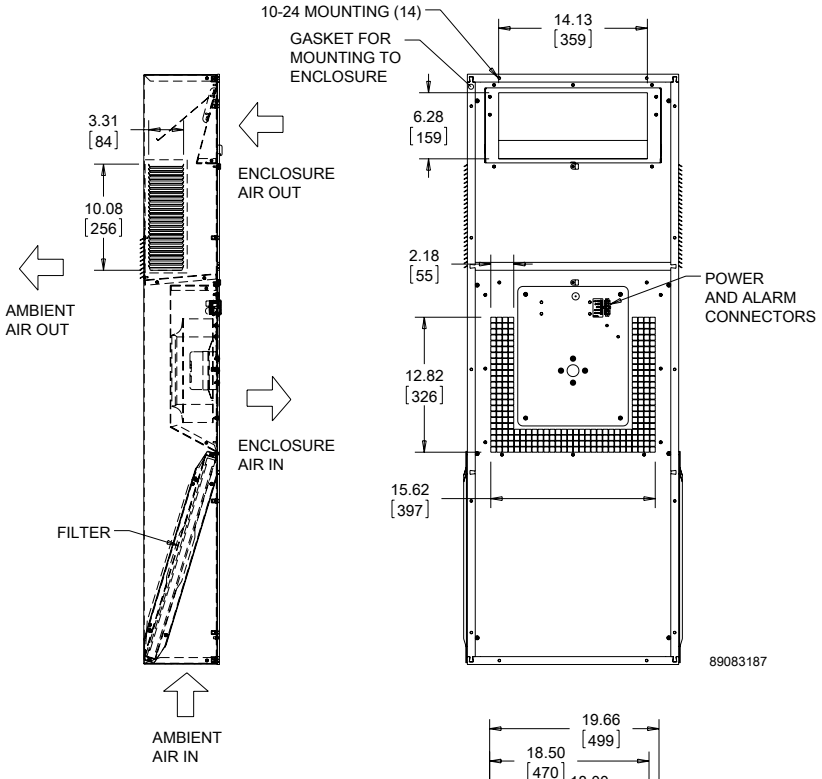

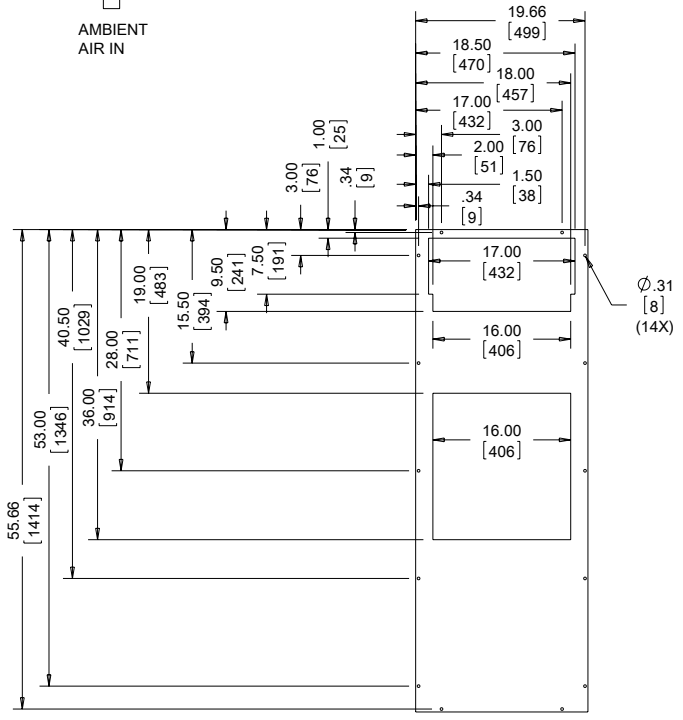

CUTOUT DIMENSIONS

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

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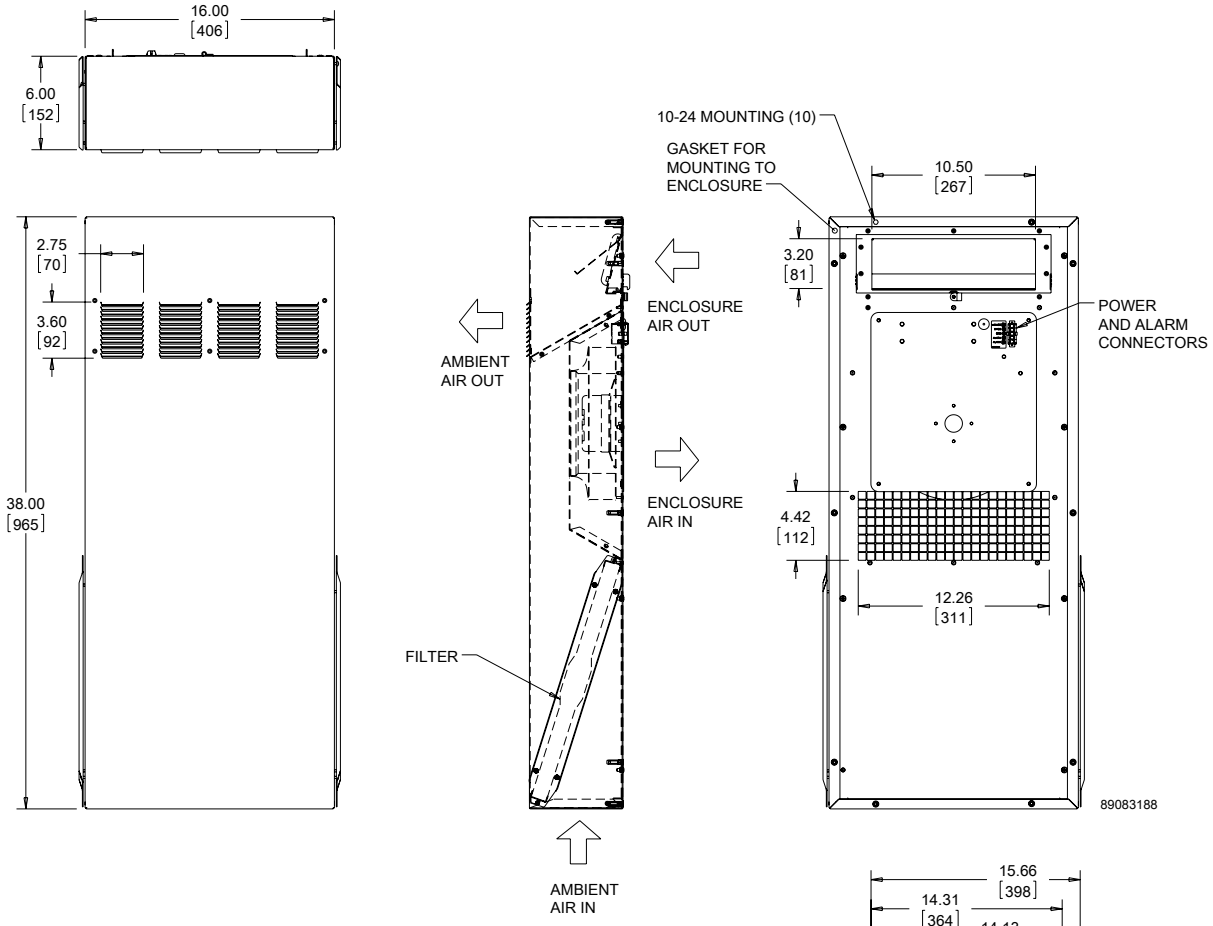

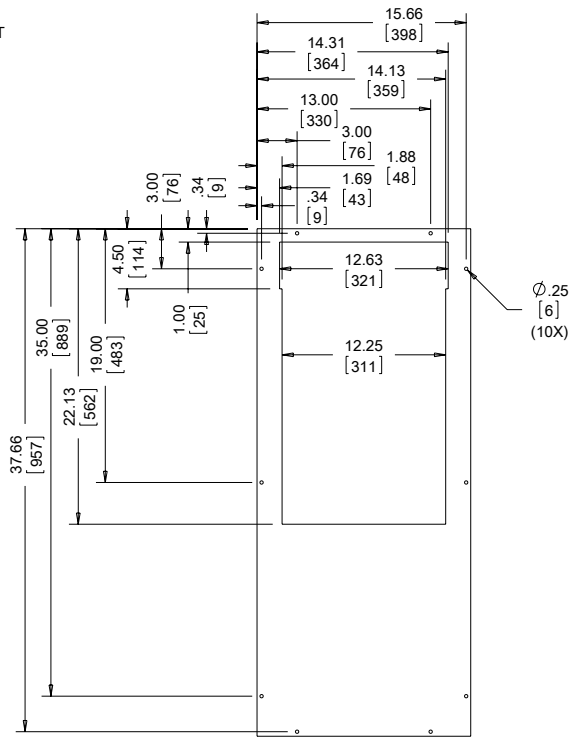

CUTOUT DIMENSIONS

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

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HF SIDE-MOUNT FILTER FANS

HF04
21 CFM (36 m^3/Hr.)

HF05
35 CFM (59 m^3/Hr.)

HF09
70 CFM (119 m^3/Hr.)

HF10
159 CFM (270 m^3/Hr.)

HF13
395 CFM (671 m^3/Hr.)
484 CFM (822 m^3/Hr.)

INDUSTRY STANDARDS

UL/cUL Listed; File No. E482010

CE
EAC
Type 12, IP54 standard (on all models except HF13)
Type 12, IP 55 optional (on all models except HF04)

APPLICATION

- Industrial automation
- Automotive assembly
- Package handling equipment
- Food and beverage process controls
- Wind energy systems

FEATURES

- Click-fit design quickly installs into enclosure wall; no tools or screws required
- Opens with the flick of a finger for easy filter replacement
- Enclosure side wall mounting
- Reverse airflow option on HF13 models available to push/pull air through higher static pressure
- Standard rope gasket provides proper seal to the enclosure
- Similar cut-out sizes as other filter fan manufacturers
- Terminal block connections
- Optional thermostat available to save energy and extend service life
- Hinged grille remains attached after opening

SPECIFICATIONS

- Size range from 4 in. (102 mm) to 13 in. (325 mm)
- Free air flow from 21 CFM (36 m^3/hr.) to 484 CFM (822 m^3/hr.)
- Service life hours from 40,000 to 100,000 hours
- Operating temperature range fo -4 F/-20 C to 149 F/65 C

FINISH

- RAL 7035 light-gray, UV-resistant plastic standard
- RAL 9011 black, UV-resistant plastic

NOTES

Visit **nVent.com/HOFFMAN** to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **HF04 21 CFM (36 m³/hr.) Side-Mount Filter Fans**

ELECTRICAL DATA				
Rated Voltage	**115**	**230**	**24***	**48***
Frequency (Hz)	50/60	50/60	—	—
Nominal Current Maximum (Amps)	.10	.07	.14	.06
Power Consumption Maximum (Watts)	8.5/7.0	9.5/8.0	3.4	2.9
Power Connection		Terminal Block		
TYPE 12 / IP54 FILTER FANS				
RAL 7035 Light Gray:				
Catalog Number	**HF0416414**	**HF0426414**	**HF0424414**	**HF0448414**
RAL 9011 Black:				
Catalog Number	**HF0416413**	**HF0426413**	**HF0424413**	**HF0448413**
Free Airflow (CFM / m³/hr.)	21/36	21/36	21/36	21/36
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	12/20	12/20	12/20	12/20
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	15/25	15/25	15/25	15/25
FILTER FAN UNIT CONSTRUCTION				
Fan RPM	3250	3250	2100	3300
Sound Pressure (dBA at 50/60 Hz)	34/36	34/36	34/36	34/36
Operating Temperature Range:				
Maximum (°F / °C)	131/55	131/55	149/65	149/65
Minimum (°F / °C)	14/-10	14/-10	-4/-20	-4/-20
Service Life (hours) at 40 C	61,000	61,000	51,000	70,000
Unit Dimensions - H x W x D (in. / mm)		4.42 x 4.44 x 3.65 / 112 x 113 x 93		
Cutout Dimensions - H x W (in. / mm)		3.62 x 3.62/92 x 92		
Weight (lb. / kg)		.91/.40		
TYPE 12 / IP54 EXHAUST GRILLES				
RAL 7035 Light Gray:				
Catalog Number	**HG0400404**	**HG0400404**	**HG0400404**	**HG0400404**
RAL 9011 Black:				
Catalog Number	**HG0400403**	**HG0400403**	**HG0400403**	**HG0400403**
ACCESSORIES				
Replacement Filters:				
Type 12 / IP54 Catalog Number	**89134423R**	**89134423R**	**89134423R**	**89134423R**
Thermostat Catalog Number (°F)	**THERM16F**	**THERM26F**	**—**	**—**
Thermostat Catalog Number (°C)	**THERM16C**	**THERM26C**	**—**	**—**

Above airflow rates at 60 Hz; see performance curves for airflow at 50 Hz and more details.

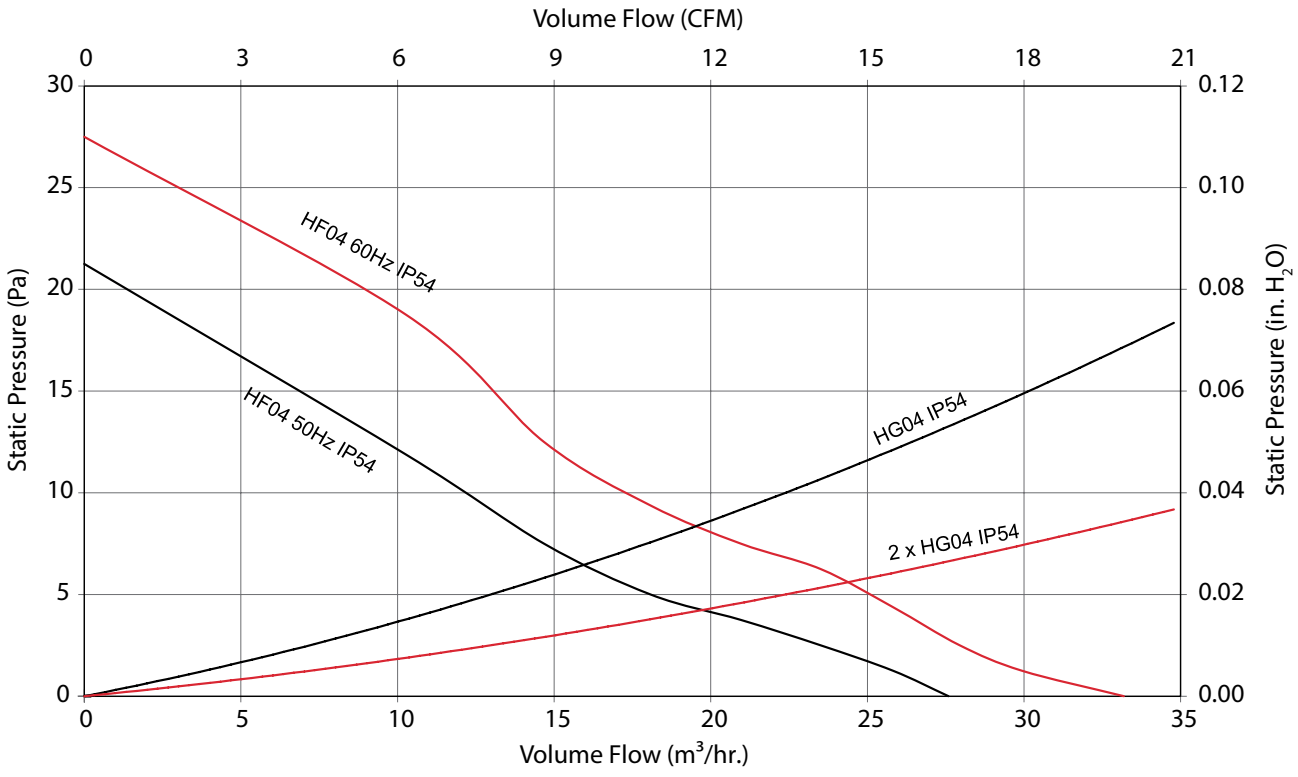
Unit depth is from the back edge of the grille to the back of the fan.

Exhaust Grilles sold separately.

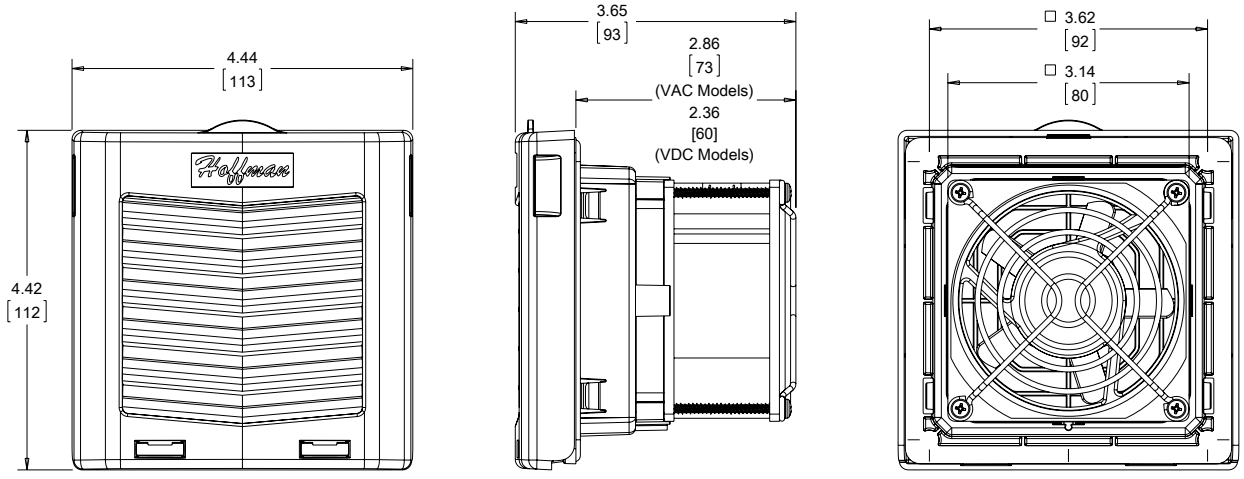
* This indicates a DC Voltage.

Performance Curves for HF04 Models 21 CFM (36 m^3/hr.) Side-Mount Filter Fans

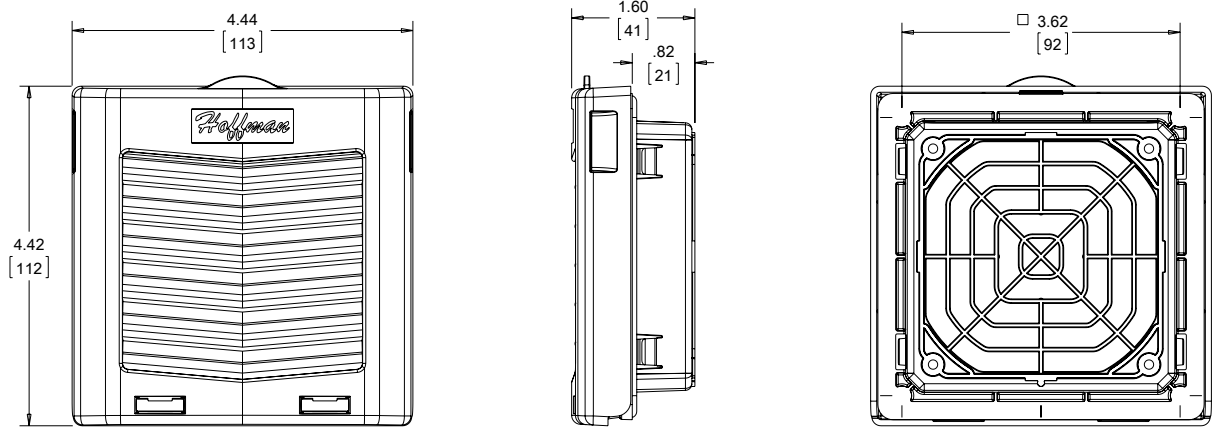
HF04 Capacity Curve, IP54



HF04 21 CFM (36 m³/hr.) Side-Mount Filter Fans

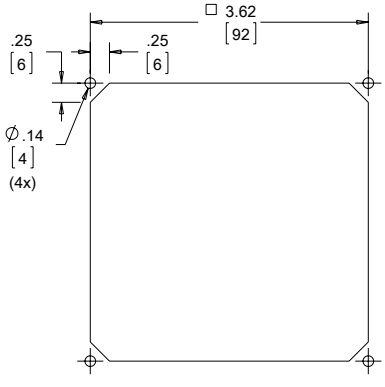


Exhaust Grille



Order exhaust grille kits separately.

89140582



Cutout Dimensions

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **HF05 35 CFM (59 m³/hr.) Side-Mount Filter Fans**

ELECTRICAL DATA				
Rated Voltage	**115**	**230**	**24***	**48***
Frequency (Hz)	50/60	50/60	—	—
Nominal Current Maximum (Amps)	.16/.14	.12/.10	.35	.17
Power Consumption Maximum (Watts)	11.0/10.0	15.0/14.0	8.4	8.2
Power Connection		Terminal Block		
TYPE 12 / IP54 FILTER FANS				
RAL 7035 Light Gray:				
Catalog Number	**HF0516414**	**HF0526414**	**HF0524414**	**HF0548414**
RAL 9011 Black:				
Catalog Number	**HF0516413**	**HF0526413**	**HF0524413**	**HF0548413**
Free Airflow (CFM / m³/hr.)	35/59	35/59	35/59	35/59
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	23/39	23/39	23/39	23/39
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	28/48	28/48	28/48	28/48
TYPE 12 / IP55 FILTER FANS				
RAL 7035 Light Gray:				
Catalog Number	**HF0516514**	**HF0526514**	**HF0524514**	**HF0548514**
RAL 9011 Black:				
Catalog Number	**HF0516513**	**HF0526513**	**HF0524513**	**HF0548513**
Free Airflow (CFM / m³/hr.)	12/20	12/20	12/20	12/20
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	8/14	8/14	8/14	8/14
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	9/15	9/15	9/15	9/15
FILTER FAN UNIT CONSTRUCTION				
Fan RPM	2600/2900	2600/2900	3200	3200
Sound Pressure (dBA at 50/60 Hz)	40/44	40/44	40/44	40/44
Operating Temperature Range:				
Maximum (°F / °C)	131/55	131/55	149/65	149/65
Minimum (°F / °C)	14/-10	14/-10	-4/-20	14/-10
Service Life (hours) at 40 C	40,000	40,000	100,000	100,000
Unit Dimensions - H x W x D (in. / mm)		6.15 x 6.16 x 3.98/156 x 157 x 101		
Cutout Dimensions - H x W (in. / mm)		4.92 x 4.92/125 x 125		
Weight (lb. / kg)		1.77/.80		
TYPE 12 / IP54 EXHAUST GRILLES				
RAL 7035 Light Gray:				
Catalog Number	**HG0500404**	**HG0500404**	**HG0500404**	**HG0500404**
RAL 9011 Black:				
Catalog Number	**HG0500403**	**HG0500403**	**HG0500403**	**HG0500403**
TYPE 12 / IP55 EXHAUST GRILLES				
RAL 7035 Light Gray:				
Catalog Number	**HG0500504**	**HG0500504**	**HG0500504**	**HG0500504**
RAL 9011 Black:				
Catalog Number	**HG0500503**	**HG0500503**	**HG0500503**	**HG0500503**
ACCESSORIES				
Replacement Filters:				
Type 12 / IP54 Catalog Number	**89134424R**	**89134424R**	**89134424R**	**89134424R**
Type 12 / IP55 Catalog Number	**89136408R**	**89136408R**	**89136408R**	**89136408R**
Thermostat Catalog Number (°F)	**THERM16F**	**THERM26F**	**—**	**—**
Thermostat Catalog Number (°C)	**THERM16C**	**THERM26C**	**—**	**—**
Shroud Catalog Number		**HH05GS35001, HH05GS61001, HH05SS04001**		

Above airflow rates at 60 Hz; see performance curves for airflow at 50 Hz and more details.

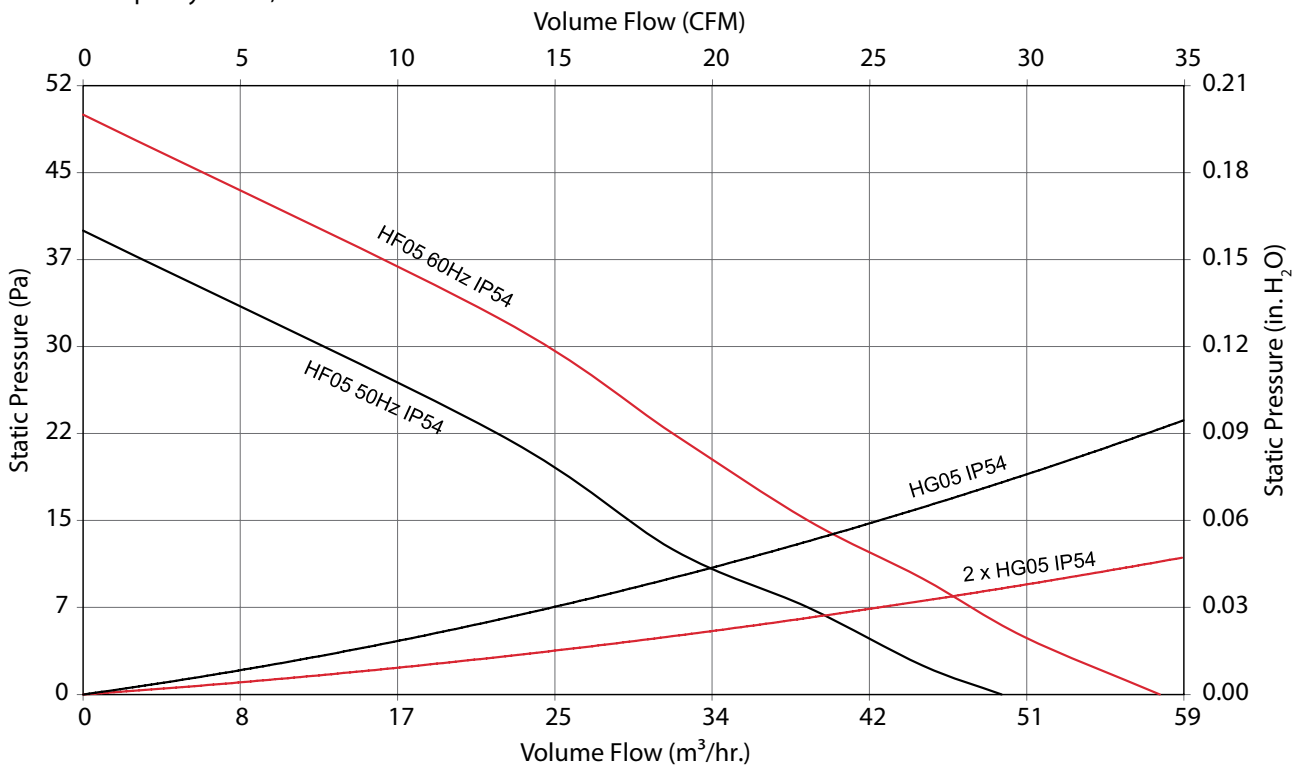
Unit depth is from the back edge of the grille to the back of the fan.

Exhaust Grilles sold separately.

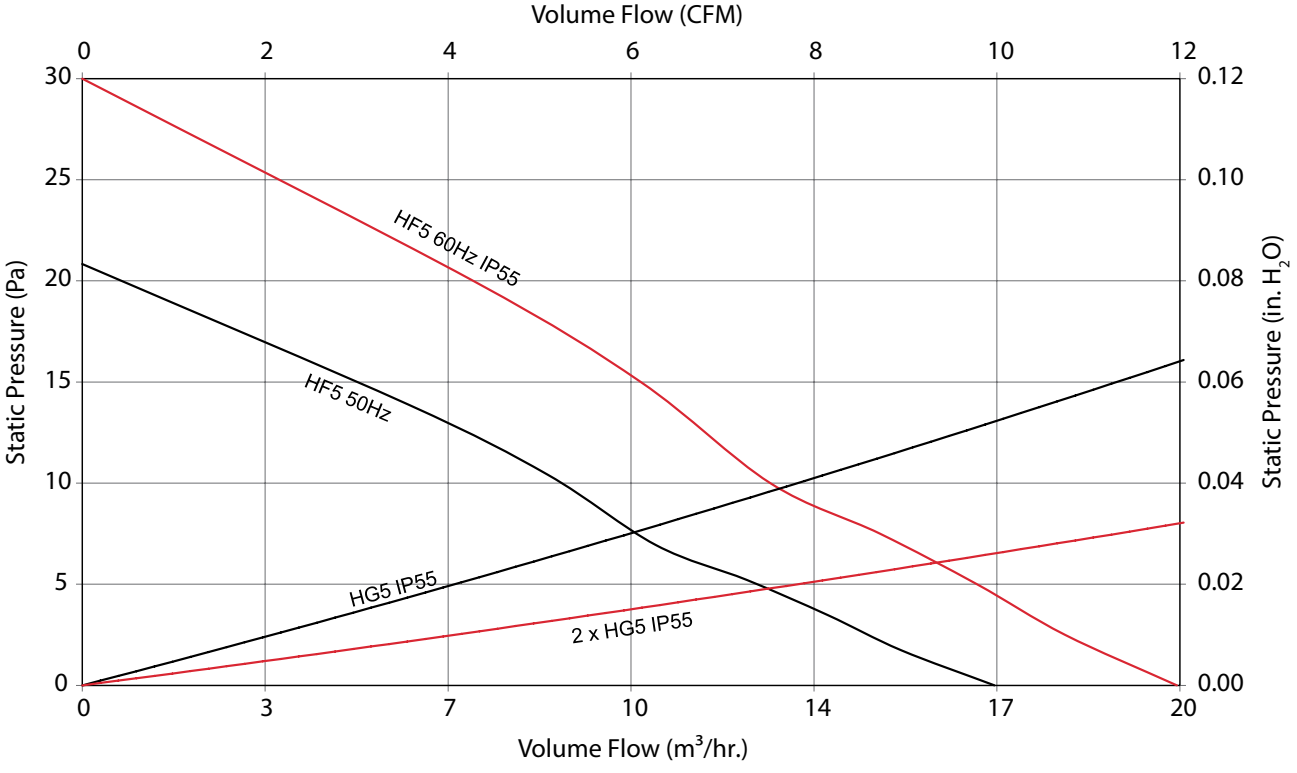
* This indicates a DC Voltage.

Performance Curves for HF05 Models 35 CFM (59 m³/hr.) Side-Mount Filter Fans

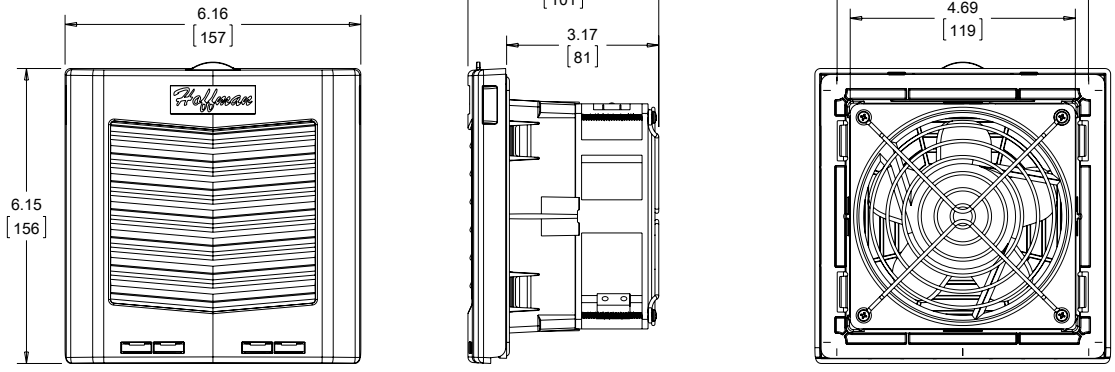
HF05 Capacity Curve, IP54



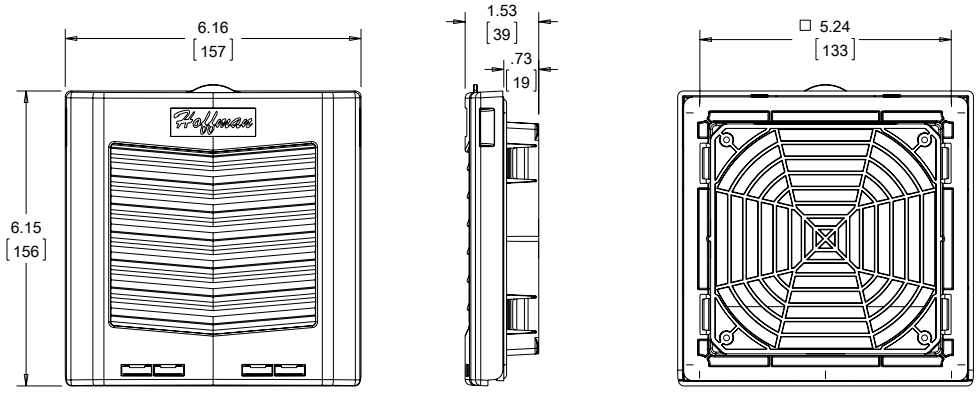
HF05 Capacity Curve, IP55



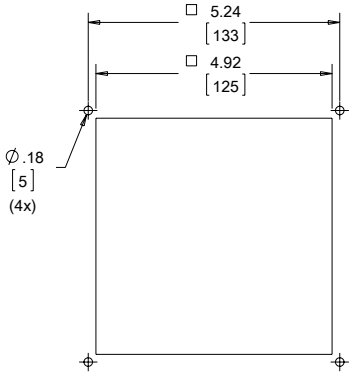
HF05 35 CFM (59 m³/hr.) Side-Mount Filter Fans



Exhaust Grille



Order exhaust grille kits separately.



Cutout Dimensions

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **HF09 70 CFM (119 m³/hr.) Side-Mount Filter Fans**

ELECTRICAL DATA				
Rated Voltage	**115**	**230**	**24***	**48***
Frequency (Hz)	50/60	50/60	—	—
Nominal Current Maximum (Amps)	.16/.14	.12/.10	.35	.17
Power Consumption Maximum (Watts)	11.0/10.0	15.0/14.0	8.4	8.2
Power Connection		Terminal Block		
TYPE 12 / IP54 FILTER FANS				
RAL 7035 Light Gray:				
Catalog Number	**HF0916414**	**HF0926414**	**HF0924414**	**HF0948414**
RAL 9011 Black:				
Catalog Number	**HF0916413**	**HF0926413**	**HF0924413**	**HF0948413**
Free Airflow (CFM / m³/hr.)	70/119	70/119	70/119	70/119
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	44/75	44/75	44/75	44/75
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	55/93	55/93	55/93	55/93
TYPE 12 / IP55 FILTER FANS				
RAL 7035 Light Gray:				
Catalog Number	**HF0916514**	**HF0926514**	**HF0924514**	**HF0948514**
RAL 9011 Black:				
Catalog Number	**HF0916513**	**HF0926513**	**HF0924513**	**HF0948513**
Free Airflow (CFM / m³/hr.)	33/56	33/56	33/56	33/56
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	23/39	23/39	23/39	23/39
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	26/44	26/44	26/44	26/44
FILTER FAN UNIT CONSTRUCTION				
Fan RPM	2600/2900	2600/2900	3200	3200
Sound Pressure (dBA at 50/60 Hz)	43/46	43/46	43/46	43/46
Operating Temperature Range:				
Maximum (°F / °C)	131/55	131/55	149/65	149/65
Minimum (°F / °C)	14/-10	14/-10	-4/-20	14/-10
Service Life (hours) at 40 C	40,000	40,000	100,000	100,000
Unit Dimensions - H x W x D (in. / mm)		8.19 x 8.21 x 4.15/208 x 209 x 105		
Cutout Dimensions - H x W (in. / mm)		6.97 x 6.97/177 x 177		
Weight (lb. / kg)		2.13/1.0		
TYPE 12 / IP54 EXHAUST GRILLES				
RAL 7035 Light Gray:				
Catalog Number	**HG0900404**	**HG0900404**	**HG0900404**	**HG0900404**
RAL 9011 Black:				
Catalog Number	**HG0900403**	**HG0900403**	**HG0900403**	**HG0900403**
TYPE 12 / IP55 EXHAUST GRILLES				
RAL 7035 Light Gray:				
Catalog Number	**HG0900504**	**HG0900504**	**HG0900504**	**HG0900504**
RAL 9011 Black:				
Catalog Number	**HG0900503**	**HG0900503**	**HG0900503**	**HG0900503**
ACCESSORIES				
Replacement Filters:				
Type 12 / IP54 Catalog Number	**89134425R**	**89134425R**	**89134425R**	**89134425R**
Type 12 / IP55 Catalog Number	**89136409R**	**89136409R**	**89136409R**	**89136409R**
Thermostat Catalog Number (°F)	**THERM16F**	**THERM26F**	**—**	**—**
Thermostat Catalog Number (°C)	**THERM16C**	**THERM26C**	**—**	**—**
Shroud Catalog Number		**HH10GS35001, HH10GS61001, HH10SS04001**		

Above airflow rates at 60 Hz; see performance curves for airflow at 50 Hz and more details.

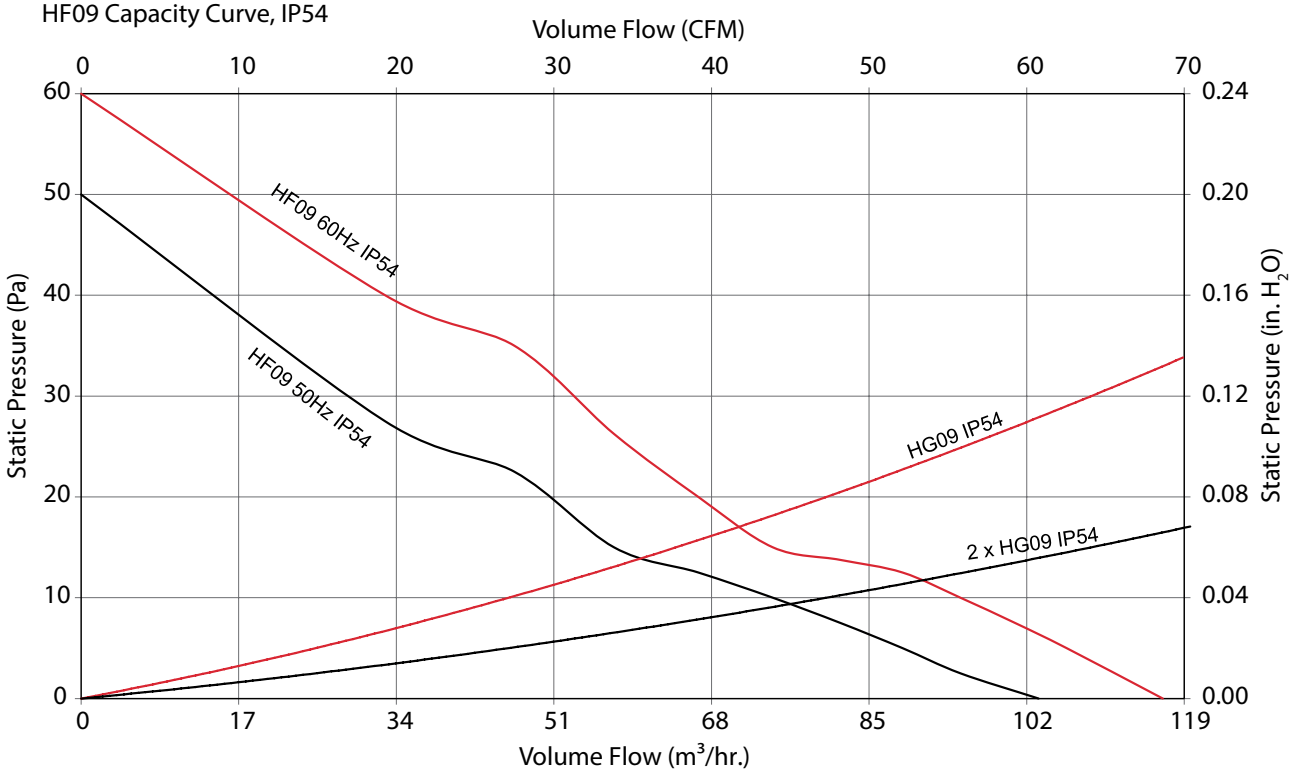
Unit depth is from the back edge of the grille to the back of the fan.

Exhaust Grilles sold separately.

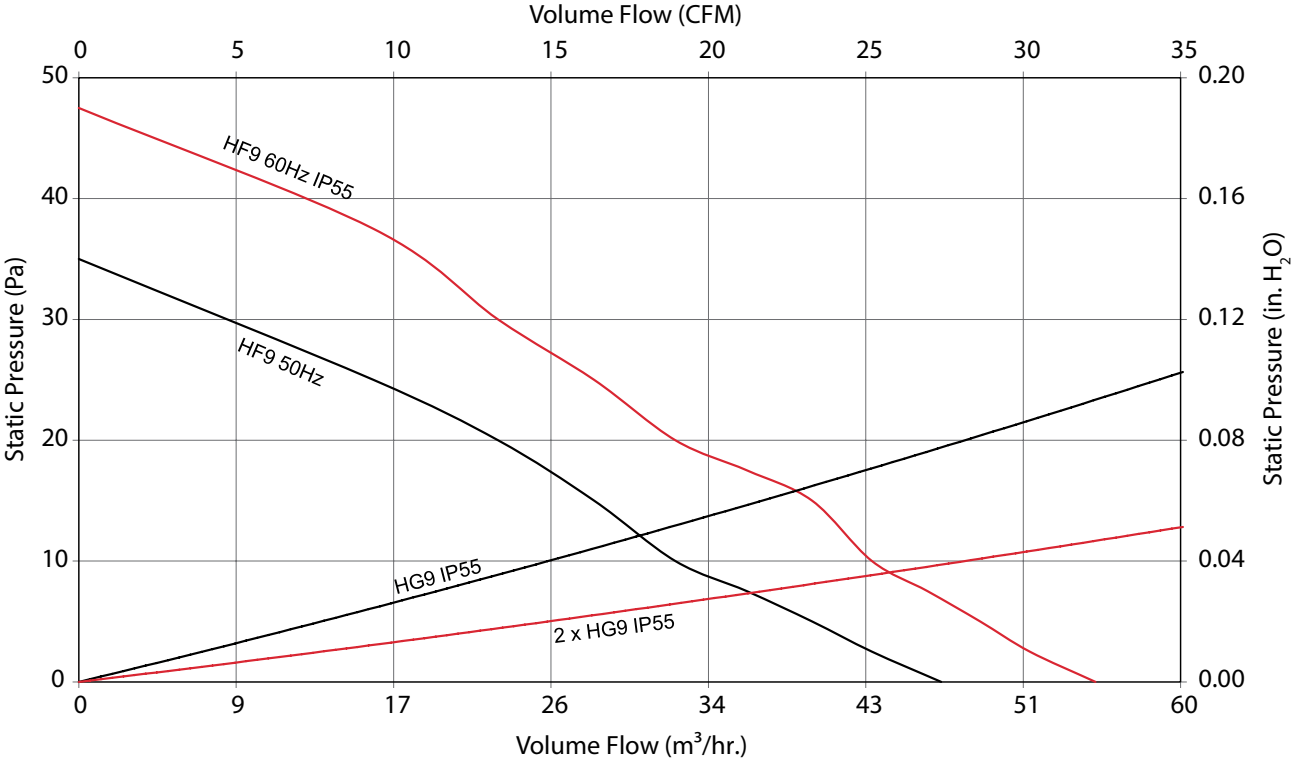
* This indicates a DC Voltage.

Performance Curves for HF09 Models 70 CFM (119 m³/hr.) Side-Mount Filter Fans

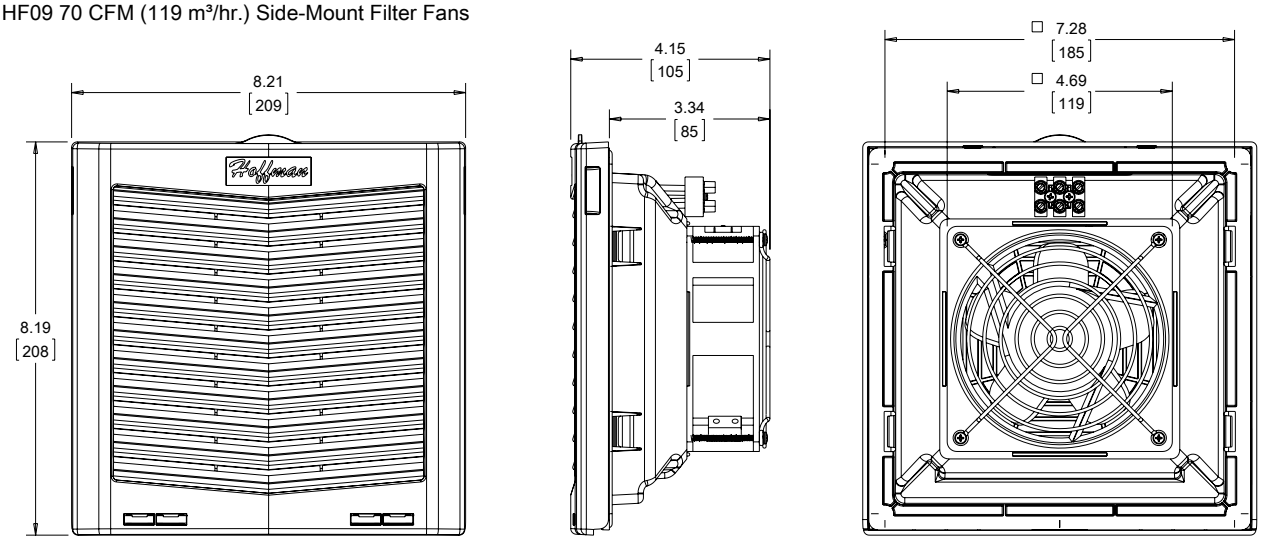
HF09 Capacity Curve, IP54



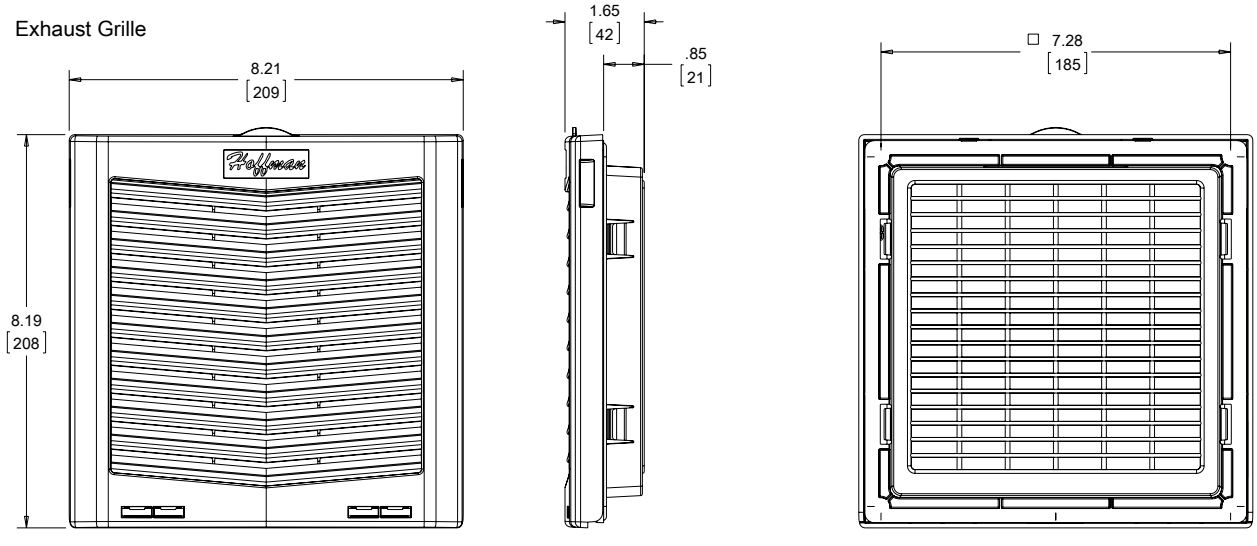
HF09 Capacity Curve, IP55



HF09 70 CFM (119 m³/hr.) Side-Mount Filter Fans



Exhaust Grille



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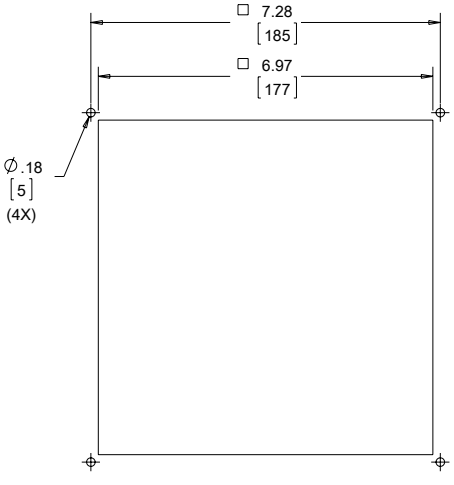

Cutout Dimensions

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Performance Data **HF10 159 CFM (270 m³/Hr.) Side-Mount Filter Fans**

ELECTRICAL DATA				
Rated Voltage	**115**	**230**	**24***	**48***
Frequency (Hz)	50/60	50/60	—	—
Nominal Current Maximum (Amps)	.38/.36	.18/.19	.88	.32
Power Consumption Maximum (Watts)	35/32	38/35	21.1	15.4
Power Connection	Terminal Block			
TYPE 12 / IP54 FILTER FANS				
RAL 7035 Light Gray:				
Catalog Number	**HF1016414**	**HF1026414**	**HF1024414**	**HF1048414**
RAL 9011 Black:				
Catalog Number	**HF1016413**	**HF1026413**	**HF1024413**	**HF1048413**
Free Airflow (CFM / m³/hr.)	159/270	159/270	159/270	159/270
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	128/217	128/217	128/217	128/217
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	151/257	151/257	151/257	151/257
TYPE 12 / IP55 FILTER FANS				
RAL 7035 Light Gray:				
Catalog Number	**HF1016514**	**HF1026514**	**HF1024514**	**HF1048514**
RAL 9011 Black:				
Catalog Number	**HF1016513**	**HF1026513**	**HF1024513**	**HF1048513**
Free Airflow (CFM / m³/hr.)	103/175	103/175	103/175	103/175
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	80/136	80/136	80/136	80/136
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	87/148	87/148	87/148	87/148
FILTER FAN UNIT CONSTRUCTION				
Fan RPM	2700/3200	2700/3200	3750	3500
Sound Pressure (dBA at 50/60 Hz)	53/56	53/56	53/56	53/56
Operating Temperature Range:				
Maximum (°F / °C)	131/55	131/55	131/55	131/55
Minimum (°F / °C)	14/-10	14/-10	14/-10	14/-10
Service Life (hours) at 40 C	97,000	97,000	76,000	76,000
Unit Dimensions - H x W x D (in. / mm)	10.13 x 10.14 x 4.68/257 x 258 x 119			
Cutout Dimensions - H x W (in. / mm)	8.78 x 8.78/223 x 223			
Weight (lb. / kg)	3.14/1.40			
TYPE 12 / IP54 EXHAUST GRILLES				
RAL 7035 Light Gray:				
Catalog Number	**HG1000404**	**HG1000404**	**HG1000404**	**HG1000404**
RAL 9011 Black:				
Catalog Number	**HG1000403**	**HG1000403**	**HG1000403**	**HG1000403**
TYPE 12 / IP55 EXHAUST GRILLES				
RAL 7035 Light Gray:				
Catalog Number	**HG1000504**	**HG1000504**	**HG1000504**	**HG1000504**
RAL 9011 Black:				
Catalog Number	**HG1000503**	**HG1000503**	**HG1000503**	**HG1000503**
ACCESSORIES				
Replacement Filters:				
Type 12 / IP54 Catalog Number	**89134426R**	**89134426R**	**89134426R**	**89134426R**
Type 12 / IP55 Catalog Number	**89136410R**	**89136410R**	**89136410R**	**89136410R**
Thermostat Catalog Number (°F)	**THERM16F**	**THERM26F**	**—**	**—**
Thermostat Catalog Number (°C)	**THERM16C**	**THERM26C**		
Shroud Catalog Number	**HH10GS35001, HH10GS61001, HH10SS04001**			

Above airflow rates at 60 Hz; see performance curves for airflow at 50 Hz and more details.

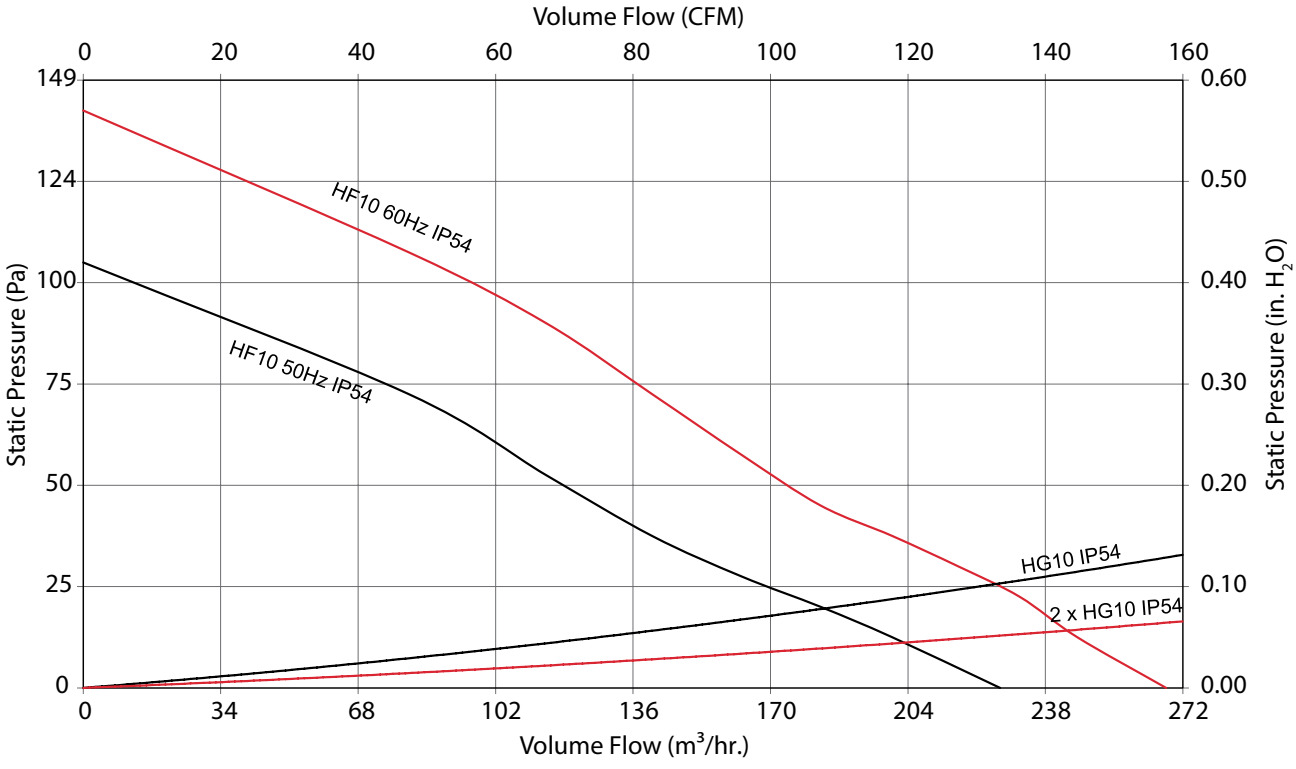
Unit depth is from the back edge of the grille to the back of the fan.

Exhaust Grilles sold separately.

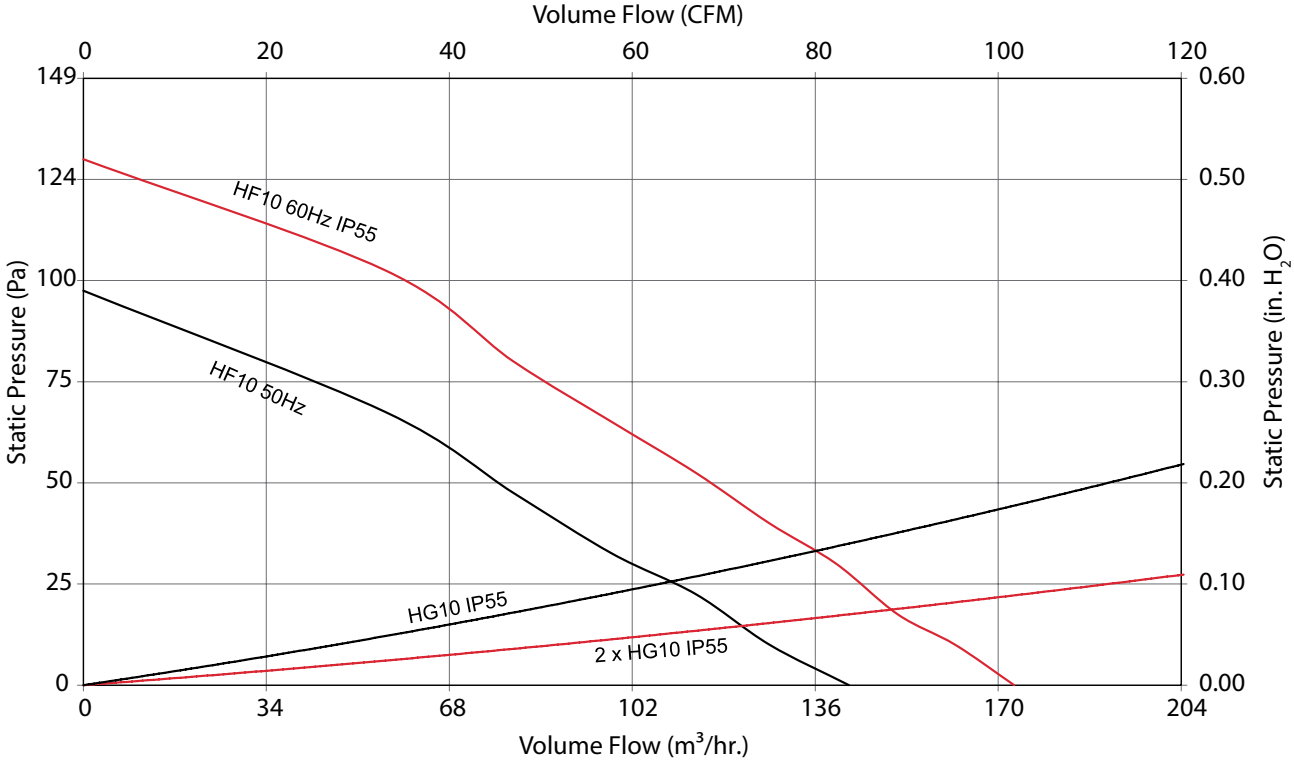
* This indicates a DC Voltage.

Performance Curves for HF10 Models 159 CFM (270 m^3/hr.) Side-Mount Filter Fans

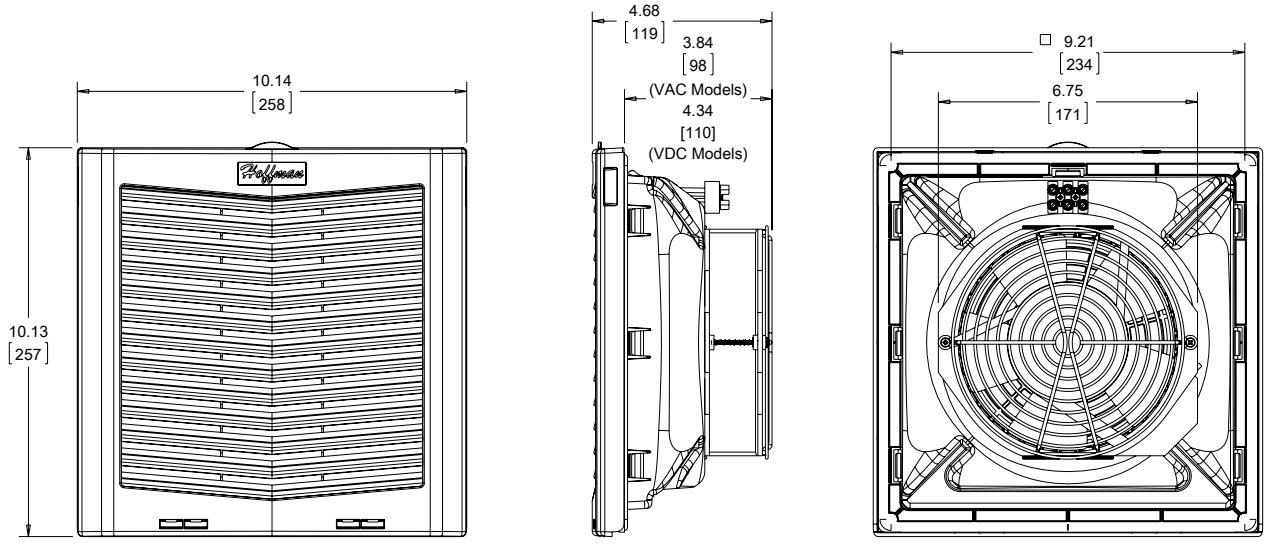
HF10 Capacity Curve, IP54



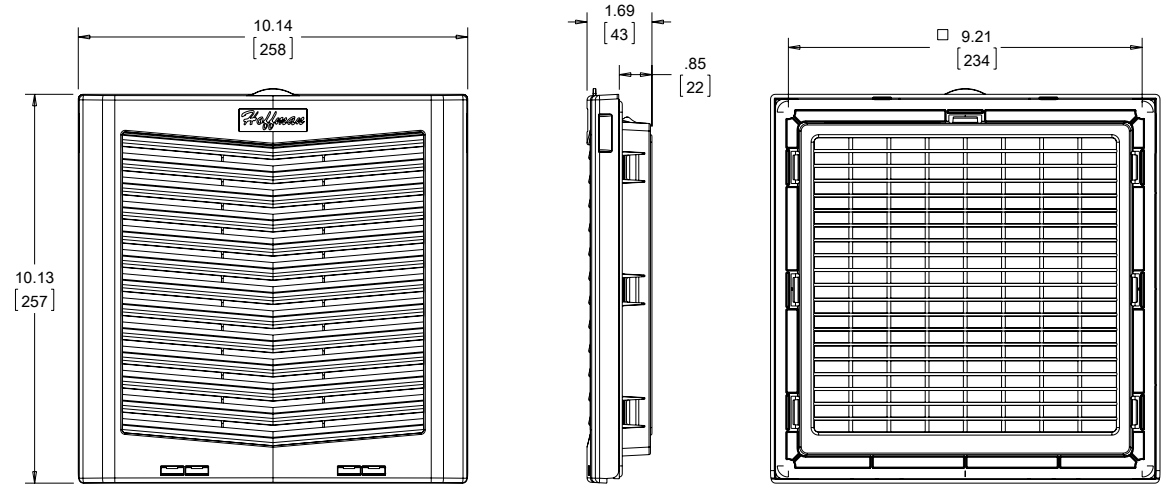
HF10 Capacity Curve, IP55



HF10 159 CFM (270 m³/Hr.) Side-Mount Filter Fans



Exhaust Grille



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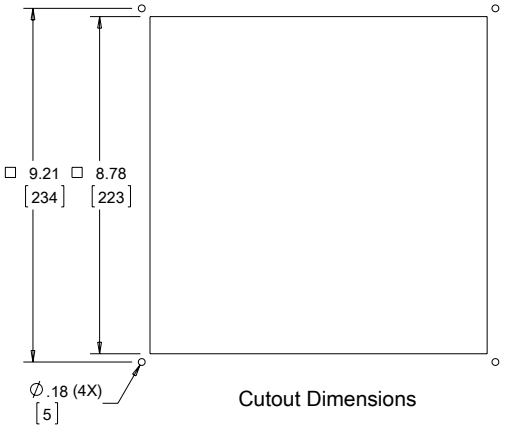


Cutout Dimensions

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **HF13 395 CFM (671 m³/hr.) Side-Mount Filter Fans - Standard and Reverse**

ELECTRICAL DATA						
Rated Voltage	**115**	**230**	**24***	**48***	**115 Rvrs**	**230 Rvrs**
Frequency (Hz)	50/60	50/60	—	—	50/60	50/60
Nominal Current Maximum (Amps)	.76/.88	.34/.37	2.6	1.12	.76/.88	.34/.37
Power Consumption Maximum (Watts)	65/72	74/80	55	54	65/72	74/80
Power Connection	Terminal Block					
TYPE 12 / IP54 FILTER FANS						
RAL 7035 Light Gray:						
Catalog Number	**HF1316414**	**HF1326414**	**HF1324414**	**HF1348414**	**HF1316414R**	**HF1326414R**
RAL 9011 Black:						
Catalog Number	**HF1316413**	**HF1326413**	**HF1324413**	**HF1348413**	**HF1316413R**	**HF1326413R**
Free Airflow (CFM / m³/hr.)	395/671	395/671	395/671	395/671	395/671	395/671
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	281/477	281/477	281/477	281/477	281/477	281/477
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	366/621	366/621	366/621	366/621	366/621	366/621
TYPE 12 / IP55 FILTER FANS						
RAL 7035 Light Gray:						
Catalog Number	**HF1316514**	**HF1326514**	**HF1324514**	**HF1348514**	**HF1316514R**	**HF1326514R**
RAL 9011 Black:						
Catalog Number	**HF1316513**	**HF1326513**	**HF1324513**	**HF1348513**	**HF1316513R**	**HF1326513R**
Free Airflow (CFM / m³/hr.)	149/253	149/253	149/253	149/253	149/253	149/253
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	100/170	100/170	100/170	100/170	100/170	100/170
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	113/192	113/192	113/192	113/192	113/192	113/192
FILTER FAN UNIT CONSTRUCTION						
Fan RPM	2600/3000	2600/3000	2950	2950	2600/3000	2600/3000
Sound Pressure (dBA at 50/60 Hz)	57/59	57/59	57/59	57/59	57/59	57/59
Operating Temperature Range:						
Maximum (°F / °C)	131/55	131/55	135/55	135/55	131/55	131/55
Minimum (°F / °C)	14/-10	14/-10	14/-10	14/-10	14/-10	14/-10
Service Life (hours) at 40 C	59,000	59,000	57,000	57,000	59,000	57,000
Unit Dimensions - H x W x D (in. / mm)	12.8 x 12.82 x 6.30/325 x 326 x 160					
Cutout Dimensions - H x W (in. / mm)	11.5 x 11.5/292 x 292					
Weight (lb. / kg)	4.25/1.90					
TYPE 12 / IP54 EXHAUST GRILLES						
RAL 7035 Light Gray:						
Catalog Number	**HG1300404**	**HG1300404**	**HG1300404**	**HG1300404**	**HG1300404**	**HG1300404**
RAL 9011 Black:						
Catalog Number	**HG1300403**	**HG1300403**	**HG1300403**	**HG1300403**	**HG1300403**	**HG1300403**
TYPE 12 / IP55 EXHAUST GRILLES						
RAL 7035 Light Gray:						
Catalog Number	**HG1300504**	**HG1300504**	**HG1300504**	**HG1300504**	**HG1300504**	**HG1300504**
RAL 9011 Black:						
Catalog Number	**HG1300503**	**HG1300503**	**HG1300503**	**HG1300503**	**HG1300503**	**HG1300503**
ACCESSORIES						
Replacement Filters:						
Type 12 / IP54 Catalog Number	**89134427R**	**89134427R**	**89134427R**	**89134427R**	**89134427R**	**89134427R**
Type 12 / IP55 Catalog Number	**89136411R**	**89136411R**	**89136411R**	**89136411R**	**89136411R**	**89136411R**
Thermostat Catalog Number (°F)	**THERM16F**	**THERM26F**	**—**	**—**	**THERM16F**	**THERM26F**
Thermostat Catalog Number (°C)	**THERM16C**	**THERM26C**	**—**	**—**	**THERM16C**	**THERM26C**
Shroud Catalog Number	**HH13GS35001, HH13GS61001, HH13SS04001**					

Above airflow rates at 60 Hz; see performance curves for airflow at 50 Hz and more details.

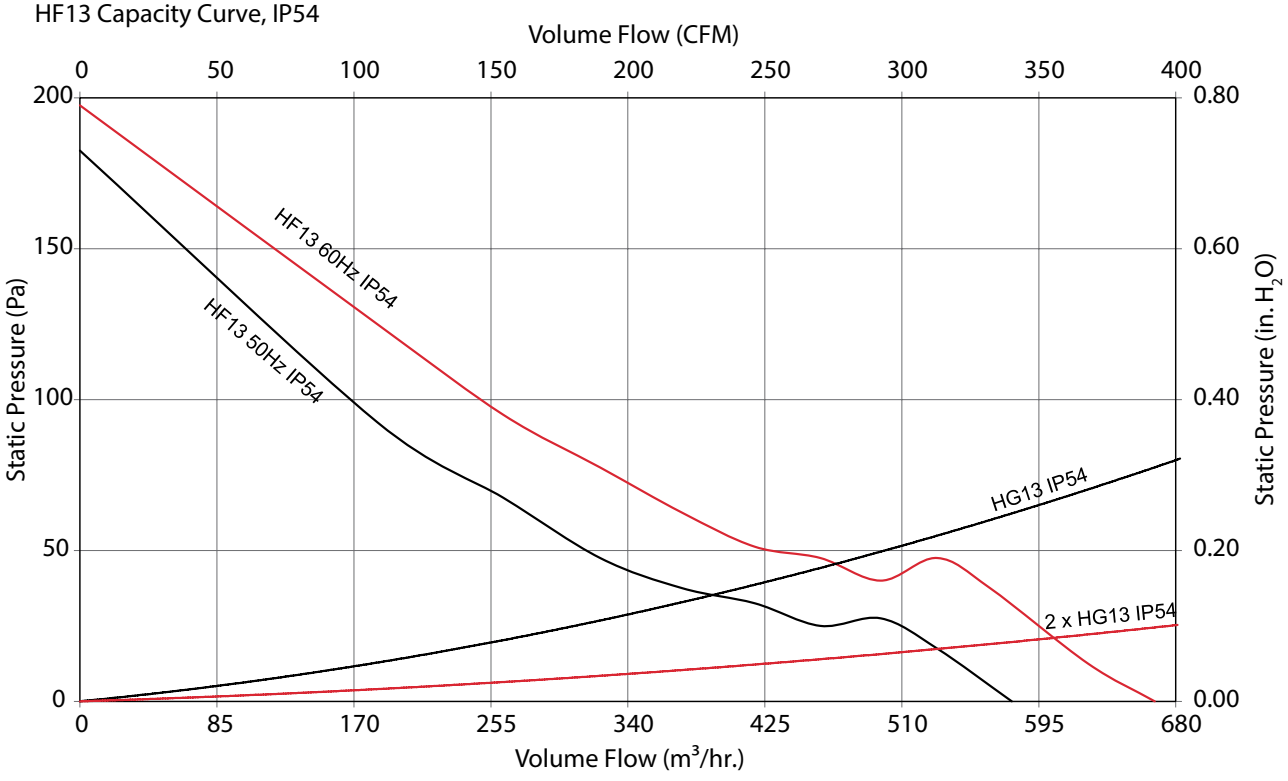
Unit depth is from the back edge of the grille to the back of the fan.

Exhaust Grilles sold separately.

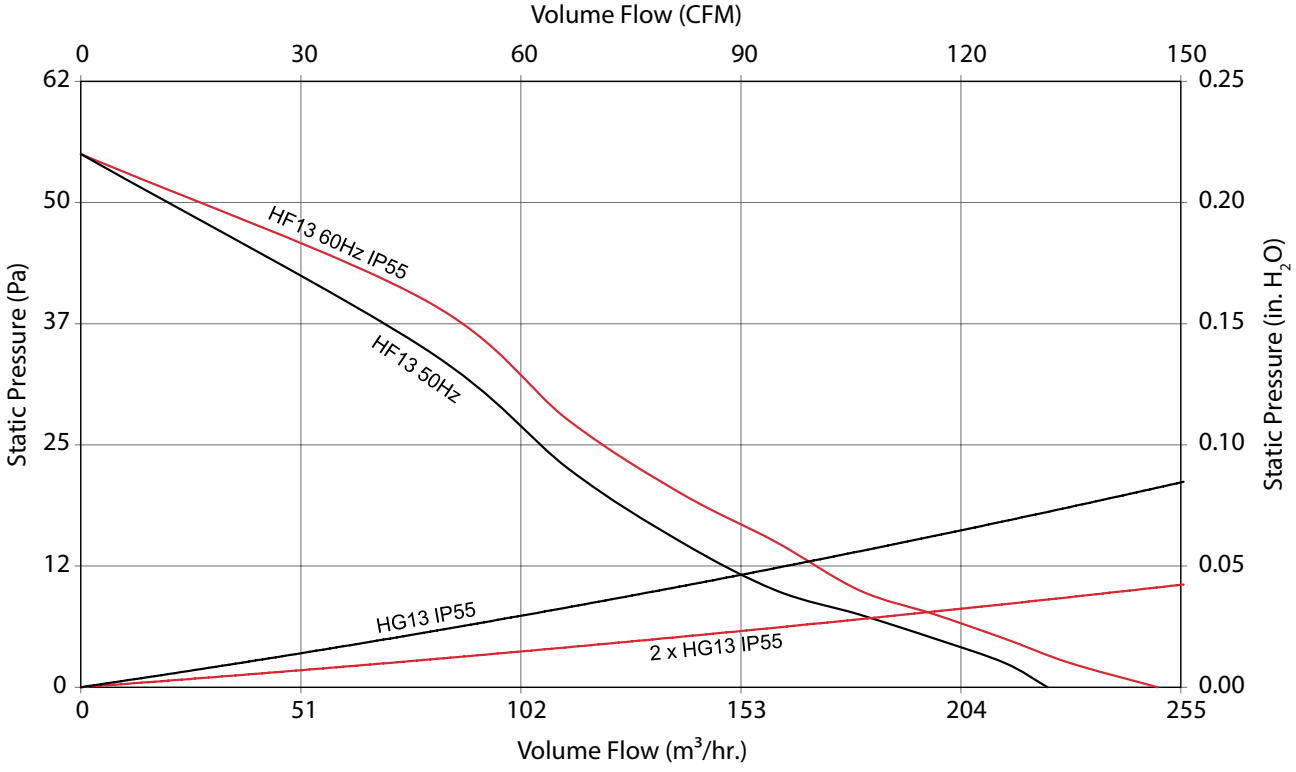
* This indicates a DC Voltage.

Performance Curves for HF13 Models 395 CFM (671 m³/hr.) Side-Mount Filter Fans

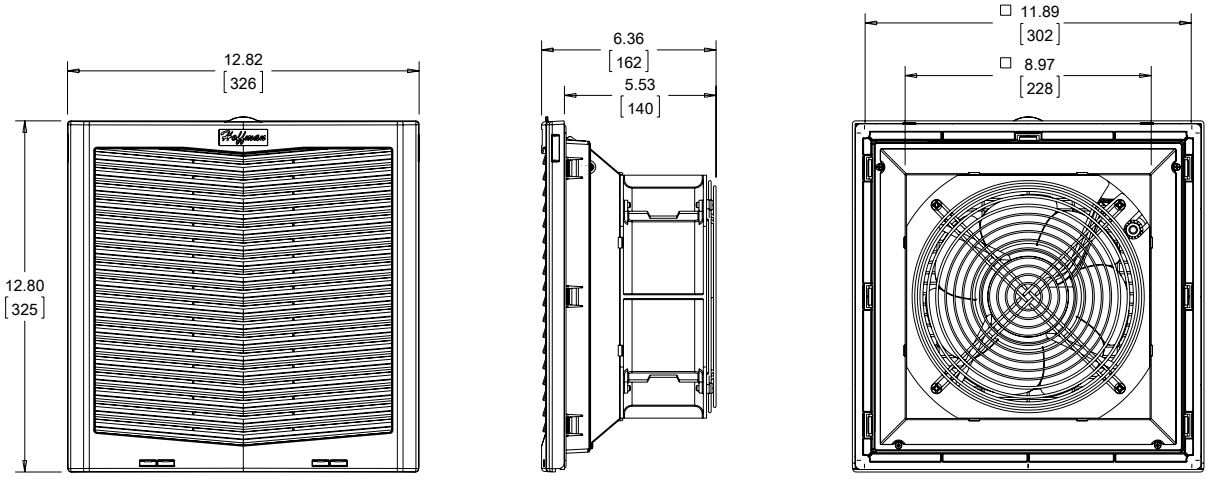
HF13 Capacity Curve, IP54



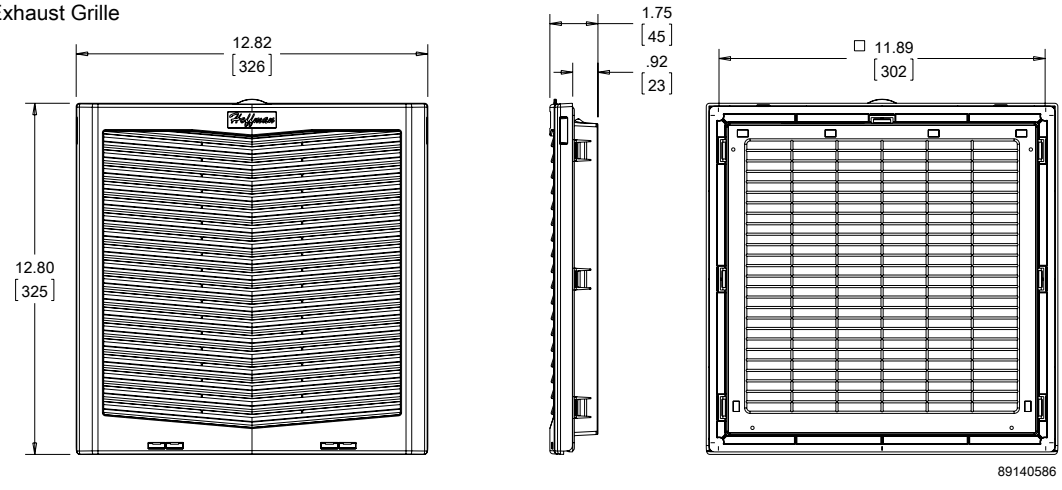
HF13 Capacity Curve, IP55

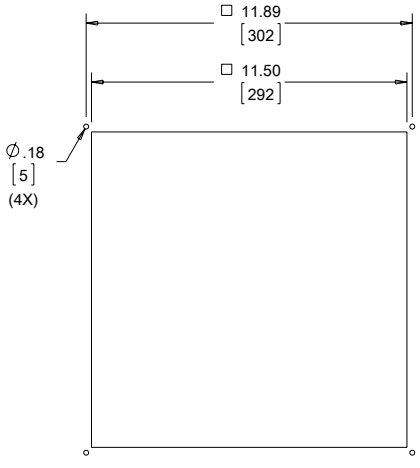


HF13 395 CFM (671 m³/hr.) Side-Mount Filter Fans - Standard and Reverse



Exhaust Grille





Cutout Dimensions

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **HF13 484 CFM (822 m³/hr.) Side-Mount Filter Fans - Standard**

ELECTRICAL DATA			
Rated Voltage	**115**	**230**	**24***
Frequency (Hz)	50/60	50/60	—
Nominal Current Maximum (Amps)	1.08/1.18	.50/.60	5.0
Power Consumption Maximum (Watts)	112/148	119/158	105
Power Connection		Terminal Block	
TYPE 12 / IP54 FILTER FANS			
RAL 7035 Light Gray:			
Catalog Number	**HF1316424**	**HF1326424**	**HF1324424**
RAL 9011 Black:			
Catalog Number	**HF1316423**	**HF1326423**	**HF1324423**
Free Airflow (CFM / m³/hr.)	484/822	484/822	484/822
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	417/708	417/708	417/708
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	442/751	442/751	442/751
TYPE 12 / IP55 FILTER FANS			
RAL 7035 Light Gray:			
Catalog Number	**HF1316524**	**HF1326524**	**HF1324524**
RAL 9011 Black:			
Catalog Number	**HF1316523**	**HF1326523**	**HF1324523**
Free Airflow (CFM / m³/hr.)	197/335	197/335	197/335
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	155/263	155/263	155/263
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	175/297	175/297	175/297
FILTER FAN UNIT CONSTRUCTION			
Fan RPM	2550/2850	2550/2850	2750
Sound Pressure (dBA at 50/60 Hz)	67/70	67/70	70
Operating Temperature Range:			
Maximum (°F / °C)	131 / 55	131 / 55	131 / 55
Minimum (°F / °C)	14 / -10	14 / -10	14 / -10
Service Life (hours)	59,000	59,000	57,000
Unit Dimensions - H x W x D (in. / mm)		12.8 x 12.82 x 6.30/325 x 326 x 160	
Cutout Dimensions - H x W (in. / mm)		11.50 x 11.50/292 x 292	
Weight (lb. / kg)		4.32/1.96	
TYPE 12 / IP54 EXHAUST GRILLES			
RAL 7035 Light Gray:			
Catalog Number	**HG1300404**	**HG1300404**	**HG1300404**
RAL 9011 Black:			
Catalog Number	**HG1300403**	**HG1300403**	**HG1300403**
TYPE 12 / IP55 EXHAUST GRILLES			
RAL 7035 Light Gray:			
Catalog Number	**HG1300504**	**HG1300504**	**HG1300504**
RAL 9011 Black:			
Catalog Number	**HG1300503**	**HG1300503**	**HG1300503**
ACCESSORIES			
Replacement Filters:			
Type 12 / IP54 Catalog Number	**89134427R**	**89134427R**	**89134427R**
Type 12 / IP55 Catalog Number	**89136411R**	**89136411R**	**89136411R**
Thermostat Catalog Number (°F)	**THERM16F**	**THERM26F**	**—**
Thermostat Catalog Number (°C)	**THERM16C**	**THERM26C**	**—**
Shroud Catalog Number		**HH13GS35001, HH13GS61001, HH13SS04001**	

Above airflow rates at 60 Hz; see performance curves for airflow at 50 Hz and more details.

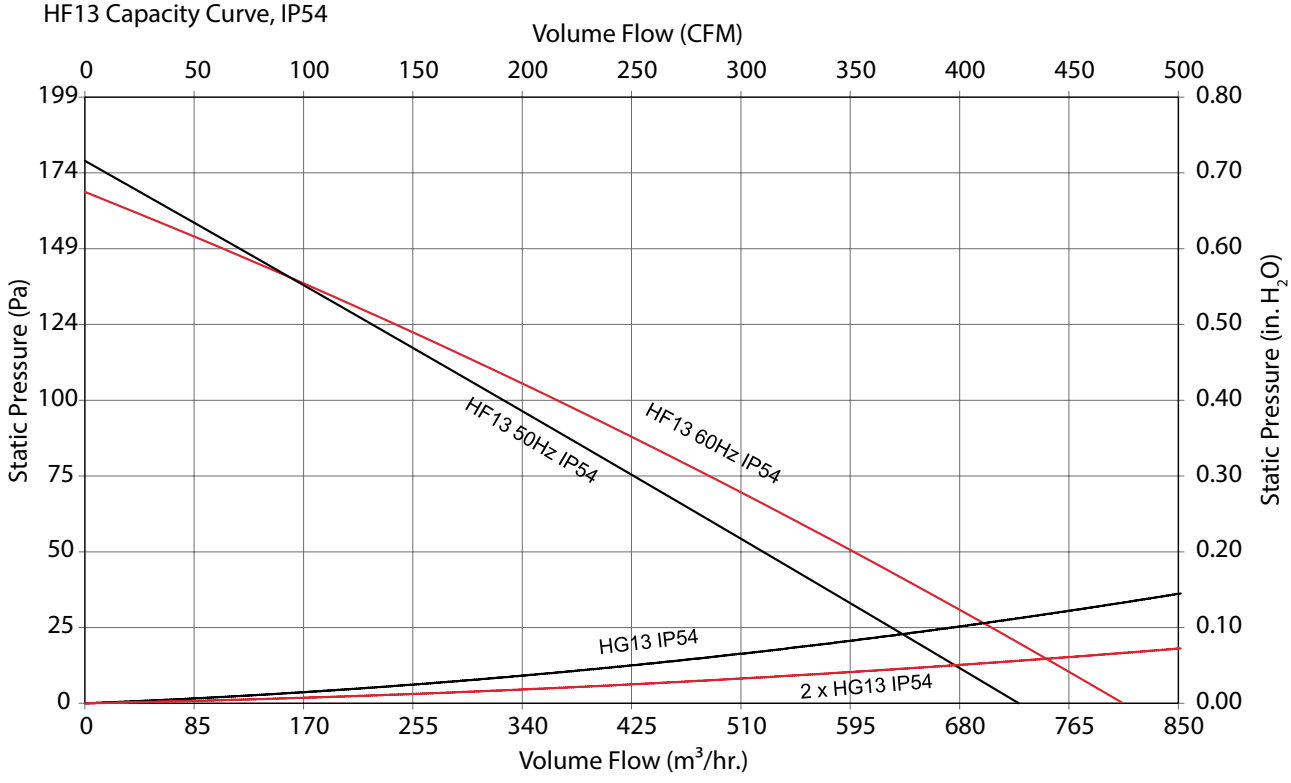
Unit depth is from the back edge of the grille to the back of the fan.

Exhaust Grilles sold separately.

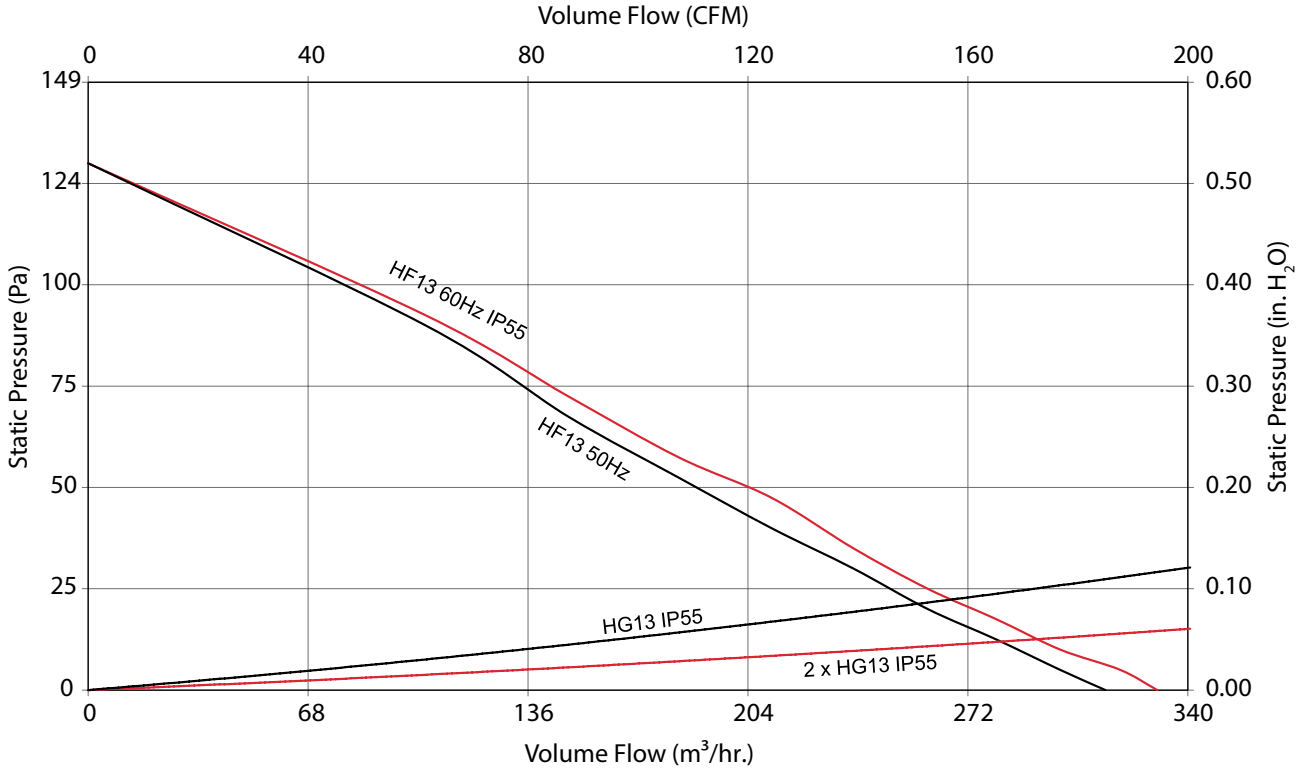
* This indicates a DC Voltage.

Performance Curves for HF13 Models 484 CFM (822 m^3/hr.) Side-Mount Filter Fans

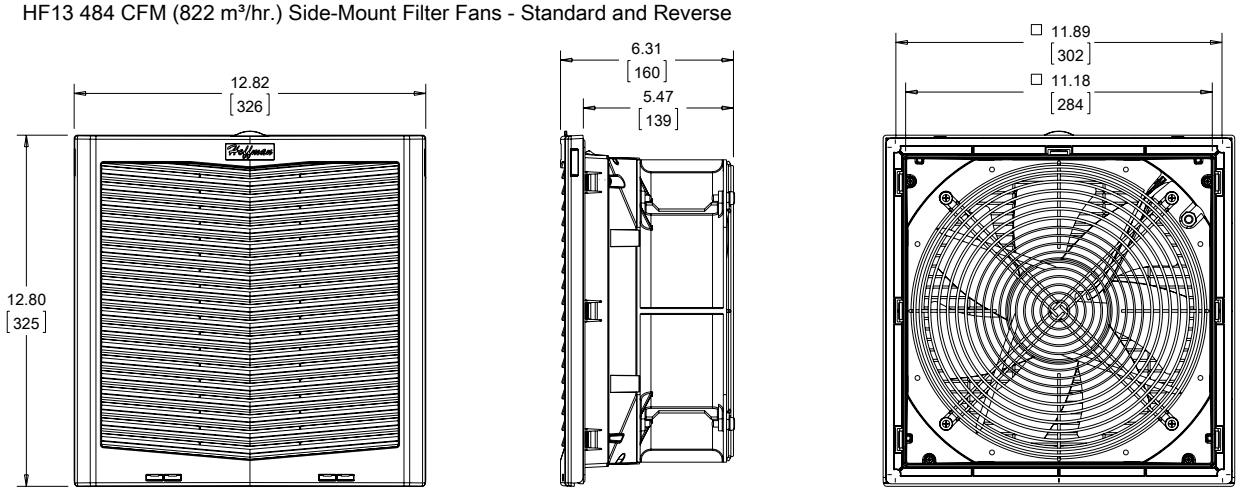
HF13 Capacity Curve, IP54



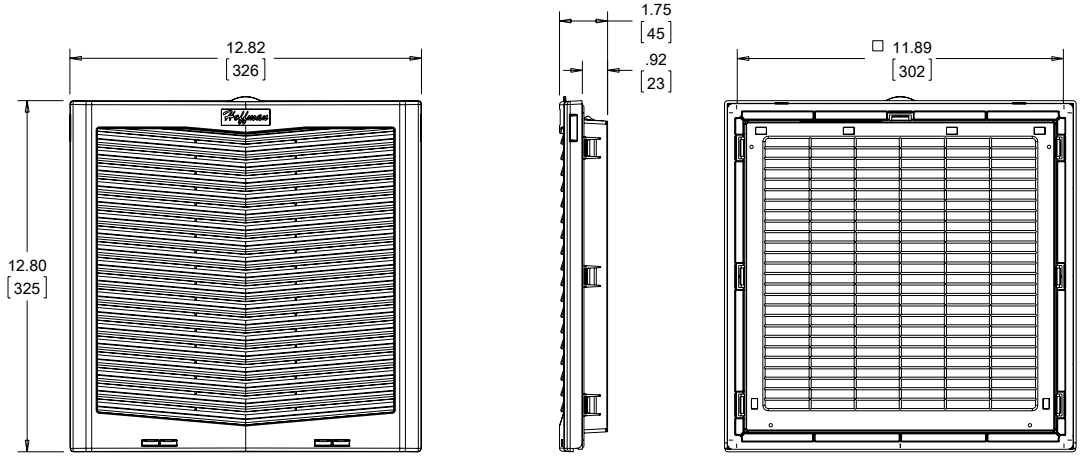
HF13 Capacity Curve, IP55

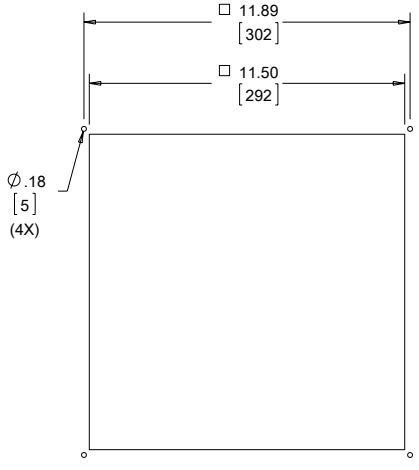


HF13 484 CFM (822 m³/hr.) Side-Mount Filter Fans - Standard and Reverse



Exhaust Grille





Cutout Dimensions

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **HF13 484 CFM (822 m³/hr.) Side-Mount Filter Fans - Reverse**

ELECTRICAL DATA		
Rated Voltage	**115 Rvrs**	**230 Rvrs**
Frequency (Hz)	50/60	50/60
Nominal Current Maximum (Amps)	1.05/1.5	.51/.70
Power Consumption Maximum (Watts)	112/148	119/158
Power Connection	Terminal Block	
TYPE 12 / IP54 FILTER FANS		
RAL 7035 Light Gray:		
Catalog Number	**HF1316424R**	**HF1326424R**
RAL 9011 Black:		
Catalog Number	**HF1316423R**	**HF1326423R**
Free Airflow (CFM / m^3/hr.)	484/822	484/822
Airflow with 1 Exhaust Grille (CFM / m^3/hr.)	417/708	417/708
Airflow with 2 Exhaust Grilles (CFM / m^3/hr.)	442/751	442/751
FILTER FAN UNIT CONSTRUCTION		
Fan RPM	2550/2850	2550/2850
Sound Pressure (dBA at 50/60 Hz)	67/70	67/70
Operating Temperature Range:		
Maximum (°F / °C)	131/55	131/55
Minimum (°F / °C)	14/-10	14/-10
Service Life (hours)	59,000	59,000
Unit Dimensions - H x W x D (in. / mm)	12.8 x 12.82 x 6.30/325 x 326 x 160	
Cutout Dimensions - H x W (in. / mm)	11.50 x 11.50/292 x 292)	
Weight (lb. / kg)	4.32/1.96	
TYPE 12 / IP54 EXHAUST GRILLES		
RAL 7035 Light Gray:		
Catalog Number	**HG1300404**	**HG1300404**
RAL 9011 Black:		
Catalog Number	**HG1300403**	**HG1300403**
TYPE 12 / IP55 EXHAUST GRILLES		
RAL 7035 Light Gray:		
Catalog Number	**HG1300504**	**HG1300504**
RAL 9011 Black:		
Catalog Number	**HG1300503**	**HG1300503**
ACCESSORIES		
Replacement Filters:		
Type 12/IP54 Catalog Number	**89134427R**	**89134427R**
Type 12 / IP55 Catalog Number	**89136411R**	**89136411R**
Thermostat Catalog Number (°F)	**THERM16F**	**THERM26F**
Thermostat Catalog Number (°C)	**THERM16C**	**THERM26C**
Shroud Catalog Number	**HH13GS35001, HH13GS61001, HH13SS04001**	

Above airflow rates at 60 Hz; see performance curves for airflow at 50 Hz and more details.

Unit depth is from the back edge of the grille to the back of the fan.

Exhaust Grilles sold separately.

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HR TOP-MOUNT FILTER FANS

INDUSTRY STANDARDS

UL/cUL Listed; File No. E482010

CE
EAC

APPLICATION

- Industrial automation
- Automotive assembly
- Package handling equipment
- Food and beverage process controls
- Wind energy systems

FEATURES

- Free airflow up to 266 CFM (452 m^3/hr.) or 348 CFM (591 m^3/hr.)
- Enclosure roof mounting
- Bolt in place to ensure a tight seal
- Terminal block connections

FINISH

- RAL 7035 light-gray UV-resistant mild steel standard
- RAL 9011 black UV-resistant mild steel optional

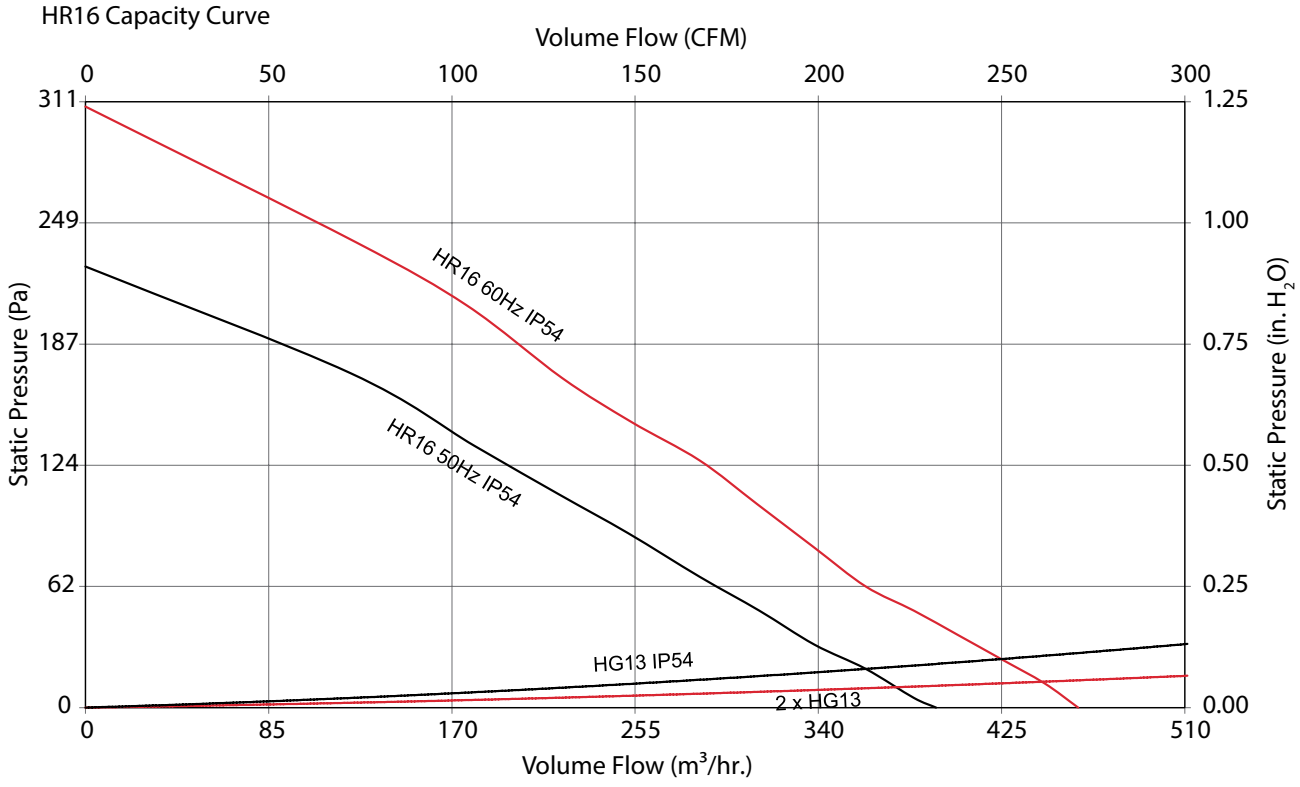
NOTES

Visit **nVent.com/HOFFMAN** to download 2D and 3D CAD drawings into the overall design of your electrical system.

Performance Data **HR16 266 CFM (452 m³/hr.) Top-Mount Filter Fans**

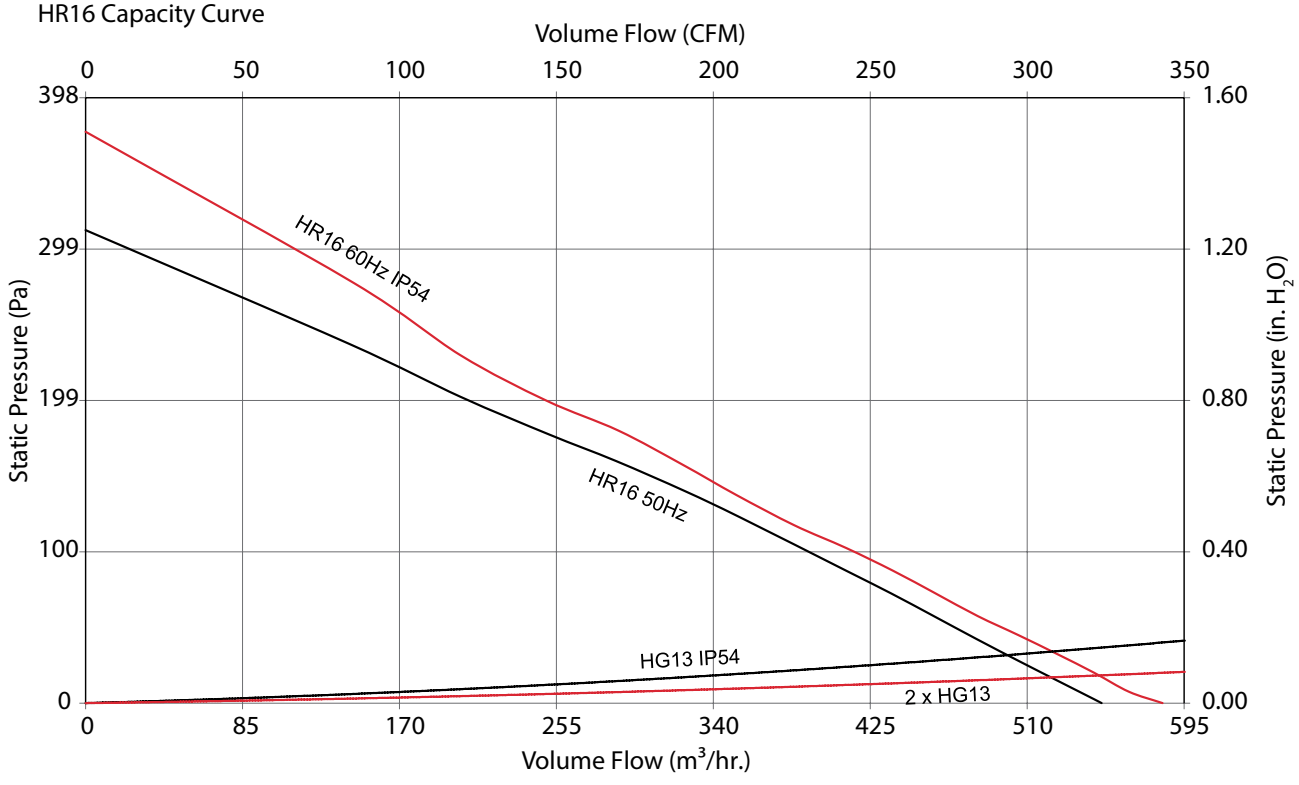
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Nominal Current Maximum (Amps)	.82	.48
Power Consumption Maximum (Watts)	80	108
Power Connection	Terminal Block	
FILTER FANS		
RAL 7035 Light Gray:		
Catalog Number	**HR1616414**	**HR1626414**
Free Airflow (CFM / m³/hr.)	266/452	266/452
Airflow with 1 Exhaust Grille (CFM / m³/hr.)	250/425	250/425
Airflow with 2 Exhaust Grilles (CFM / m³/hr.)	260/442	260/442
FILTER FAN UNIT CONSTRUCTION		
Fan RPM	2880	2980
Sound Pressure (dBA)	70	68
Operating Temperature Range:		
Maximum (°F / °C)	131/55	131/55
Minimum (°F / °C)	14/-10	14/-10
Service Life (hours)	50,000	50,000
Unit Dimensions - H x W x D (in. / mm)	13.52 x 16.27 x 4.19 / 343 x 413 x 107	
Cutout Dimensions - H x W (in. / mm)	10.43 x 13.58 / 265 x 345	
Weight (lb. / kg)	17.20 / 7.8	
EXHAUST GRILLES		
RAL 7035 Light Gray:		
Catalog Number	**HG1300404**	
ACCESSORIES		
Replacement Filters:		
Catalog Number	**89136409R**	**89136409R**
Thermostat Catalog Number (°F)	**THERM16F**	**THERM26F**
Thermostat Catalog Number (°C)	**THERM16C**	**THERM26C**

Performance Curves for HR16 Models 266 CFM (452 m³/hr.) Side-Mount Filter Fans

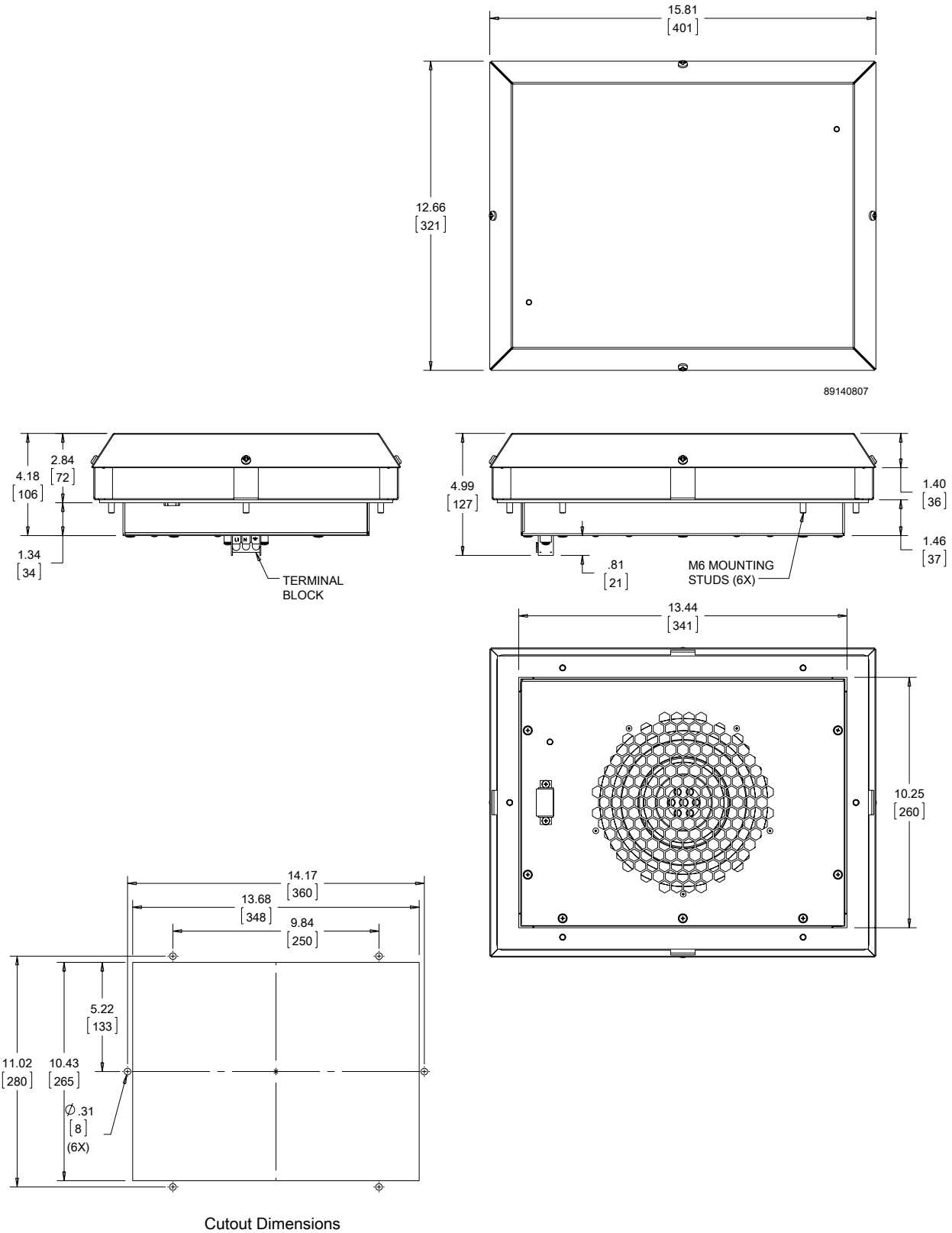


ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Nominal Current Maximum (Amps)	.93	.53
Power Consumption Maximum (Watts)	107	120
Power Connection	Terminal Block	
FILTER FANS		
RAL 7035 Light Gray:		
Catalog Number	**HR1616424**	**HR1626424**
Free Airflow (CFM / m^3/hr.)	348/591	348/591
Airflow with 1 Exhaust Grille (CFM / m^3/hr.)	311/528	311/528
Airflow with 2 Exhaust Grilles (CFM / m^3/hr.)	325/552	325/552
FILTER FAN UNIT CONSTRUCTION		
Fan RPM	2610	2650
Sound Pressure (dBA)	68	68
Operating Temperature Range:		
Maximum (°F / °C)	131/55	131/55
Minimum (°F / °C)	14/-10	14/-10
Service Life (hours)	50,000	50,000
Unit Dimensions - H x W x D (in. / mm)	13.52 x 16.27 x 4.19 / 343 x 413 x 107	
Cutout Dimensions - H x W (in. / mm)	10.43 x 13.58 / 265 x 345	
Weight (lb. / kg)	17.20 / 7.8	
EXHAUST GRILLES		
RAL 7035 Light Gray:		
Catalog Number	**HG1300404**	
ACCESSORIES		
Replacement Filters:		
Catalog Number	**89134427R**	**89136409R**
Thermostat Catalog Number (°F)	**THERM16F**	**THERM26F**
Thermostat Catalog Number (°C)	**THERM16C**	**THERM26C**

Performance Curves for HR16 Models 348 CFM (591 m^3/hr.) Side-Mount Filter Fans



HR16 266-348 CFM (452-591 m³/hr.) Top-Mount Filter Fans



Cutout Dimensions

Visit nVent.com/HOFFMAN to download 2D and 3D CAD drawings into the overall design of your electrical system.

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FILTER FAN SHROUDS

INDUSTRY STANDARDS

Maintains UL/cUL Listed Type 3R and Type 12 rating when properly installed on a Type 3R or Type 12 enclosure

UL 508A UL/cUL Listed; Type 3R; File No. E482010

FEATURES

- Protects filter fan and exhaust grill from wind-driven rain and high-pressure hose water
- Easy one person installation with simple back panel mounting
- Easily accessed filter simplifies replacement
- Low profile design
- Provides Type 3R protections and maintains a Type 12 rating when used with an equivalent rated filter kit

FINISH

- RAL 7035 light gray polyester powder coat paint on galvanized metal
- ANSI 61 gray polyester powder coat paint on galvanized metal
- Stainless Steel #304

HH05 Models			
Catalog Number	**HH05GS35001**	**HH05GS61001**	**HH05SS04001**
Provides protection for:			
Filter Fan Models	HF04 and HF05	HF04 and HF05	HF04 and HF05
Exhaust Grille Models	HG04 and HG05	HG04 and HG05	HG04 and HG05
Unit Construction			
Material	Galvanized	Galvanized	Stainless Steel #304
Finish	RAL 7035 polyester powder coat paint	ANSI 61 polyester powder coated paint	N/A
Unit Dimensions H x W x D (in./mm)	10.50 x 8.00 x 1.85/267 x 203 x 47	10.50 x 8.00 x 1.85/267 x 203 x 47	10.50 x 8.00 x 1.85/267 x 203 x 47
HH10 Models			
Catalog Number	**HH10GS35001**	**HH10GS61001**	**HH10SS04001**
Provides protection for:			
Filter Fan Models	HF09, HF10, TFP4 and TFP6	HF09, HF10, TFP4 and TFP6	HF09, HF10, TFP4 and TFP6
Exhaust Grille Models	HG09, HG10, TEP4 and TEP6	HG09, HG10, TEP4 and TEP6	HG09, HG10, TEP4 and TEP6
Unit Construction			
Material	Galvanized	Galvanized	Stainless Steel #304
Finish	RAL 7035 polyester powder coat paint	ANSI 61 polyester powder coated paint	N/A
Unit Dimensions H x W x D (in./mm)	15.00 x 12.00 x 3.81/381 x 305 x 97	15.00 x 12.00 x 3.81/381 x 305 x 97	15.00 x 12.00 x 3.81/381 x 305 x 97
HH13 Models			
Catalog Number	**HH13GS35001**	**HH13GS61001**	**HH13SS04001**
Provides protection for:			
Filter Fan Models	HF13 and TFP10	F13 and TFP10H	HF13 and TFP10
Exhaust Grille Models	HG13 and TEP10	HG13 and TEP10	HG13 and TEP10
Unit Construction			
Material	Galvanized	Galvanized	Stainless Steel #304
Finish	RAL 7035 polyester powder coat paint	ANSI 61 polyester powder coated paint	N/A
Unit Dimensions H x W x D (in./mm)	18.00 x 15.00 x 4.76/457 x 381 x 121	18.00 x 15.00 x 4.76/457 x 381 x 121	18.00 x 15.00 x 4.76/457 x 381 x 121

HF REPLACEMENT FILTERS

- Type 12 / IP54 filter option provides protection against dust infiltration (6 filters per package)
- IP55 filter adds additional protection against moisture
- See individual product pages for catalog and item numbers to order

CATALOG NUMBERS	FITS FAN PACKAGES
89134423R	All HF04 Models
89134424R	All HF05 IP54 Models
89136408R	All HF05 IP55 Models
89134425R	All HF09 IP54 Models
89136409R	All HF09 IP55 Models
89134426R	All HF10 IP54 Models
89136410R	All HF10 IP55 Models
89134427R	All HF13 IP54 Models
89136411R	All HF13 IP55 Models

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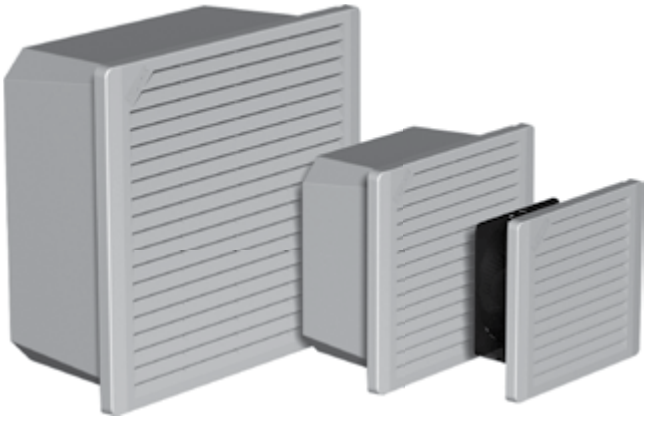
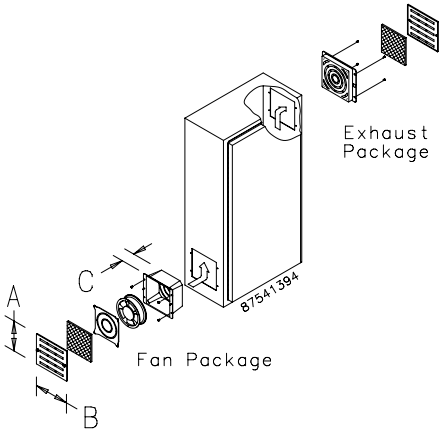
TFP SIDE-MOUNT FANS





TFP10
215 CFM
(365 m^3/hr.)

TFP6
140 CFM
(238 m^3/hr.)

TFP4
55 CFM
(93 m^3/hr.)

INDUSTRY STANDARDS

UL 508A Component Recognized; File No. E61997
TFP# Models: Type 1
TFP# UL 12 Models: Type 12

CSA certified (fan only)
CE

APPLICATION

- Industrial automation
- Automotive assembly
- Package handling equipment
- Food and beverage process controlls
- Wind energy systems

FEATURES

- Cooling Fan Package includes fan, air filter, composite air plenum, finger guard and grille
- Exhaust Package includes air filter, filter retainer with integral finger guard and grille
- EMC Upgrade Kit includes a grille standoff collar and a special EMC shielding grille
- Reliable cooling for enclosures with limited space requiring simple filtered airflow for basic cooling
- 24 VDC, 115 VAC and 230 VAC options available
- Washable foam (Type 1) or disposable (Type 12) filter in fan
- Dynamically-balanced fan impellers molded from polycarbonate material
- 4-in. fan is thermally protected and uses permanently-lubricated ball bearings
- 6- and 10-in. fans have ball bearing construction and split-capacitor motors that are thermally protected to avoid premature failure
- Fans have lead wires for power connection with ends stripped 1/2 in. (12 mm)
- All mounting hardware and installation instructions are furnished

SPECIFICATIONS

- Free airflow from 45 CFM (76 m^3/hr.) to 215 CFM (365 m^3/hr.)
- Maximum operating temperature 158 F / 70 C
- Engineered for 50,000 hours of continuous operation without lubrication or service (a monthly maintenance schedule is recommended to ensure optimal cooling performance)

FINISH

- Stainless steel grilles have brushed finish.
- ABS composite grille is black.

ACCESSORIES

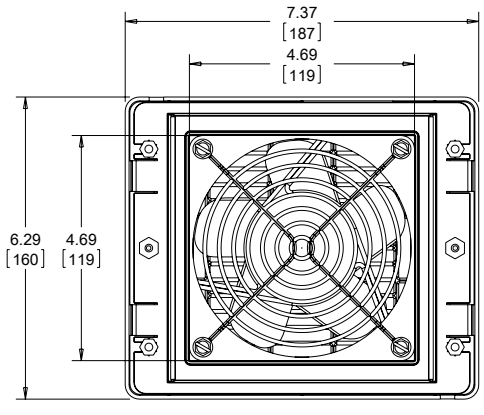
TFP Exhaust Grilles, page 436
TFP Optional Grilles and Replacement Filters, page 436
TFP EMC Upgrade Kit, page 437

Performance Data **TFP4 Models**

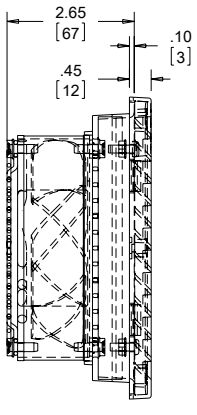
ELECTRICAL DATA			
Rated Voltage	**24 VDC**	**115 VAC**	**230 VAC**
Frequency (Hz)		50/60	
Nominal Current Maximum @ 50/60 Hz(Amps)	.35	.26/.21	.14/.11
Power Consumption Maximum @ 50/60 Hz (Watts)	8.4	17/15	16/14
Power Connection		Stripped Leadwires	
CATALOG NUMBERS			
Composite Type 1			
Catalog Number	**TFP424**	**TFP41**	**TFP42**
Stainless Steel Type 1			
Catalog Number	—	**TFP41SS**	**TFP42SS**
Composite Type 12			
Catalog Number	—	**TFP41UL12**	**TFP42UL12**
Free Airflow @ 50/60 Hz (CFM)*	55	45/55	45/55
Free Airflow @ 50/60 Hz (m^3/hr.)*	93	76/93	76/93
UNIT CONSTRUCTION			
Noise SIL @ 50/60 Hz (dBA)	65	37/41	37/41
Maximum Operating Temperature (°F/°C)		158/70	
Unit Dimensions - H x W x D (in./mm)		6.29 x 7.37 x 2.65/160 x 187 x 67	
Cutout Dimensions - H x W (in./mm)		5.66 x 5.66/144 x 144	
Weight (lb./kg)	4.2/1.90	4.2/1.90	4.3/1.95
EXHAUST GRILLE CATALOG NUMBERS			
Composite Type 1			
Catalog Number		**TEP4**	
Stainless Steel Type 1			
Catalog Number		**TEP4SS**	
Composite Type 12			
Catalog Number		**TEP4UL12**	

*CFM with single exhaust grille installed.

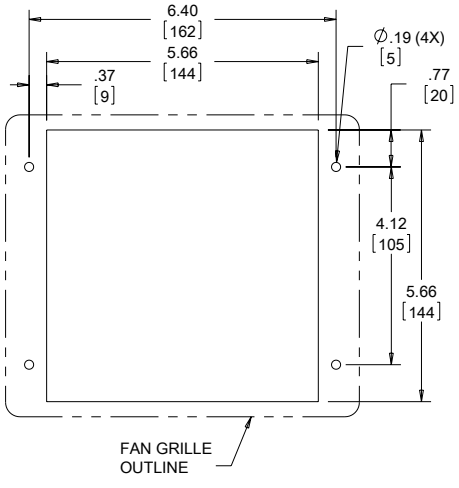
TFP4 Models



BACK VIEW

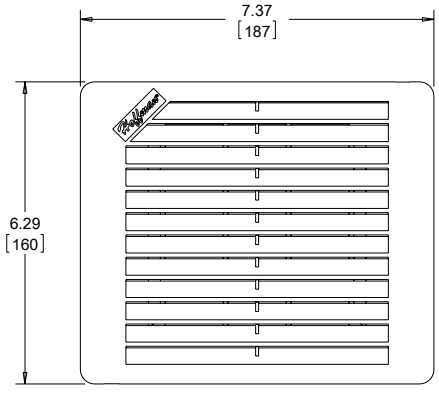


SIDE VIEW

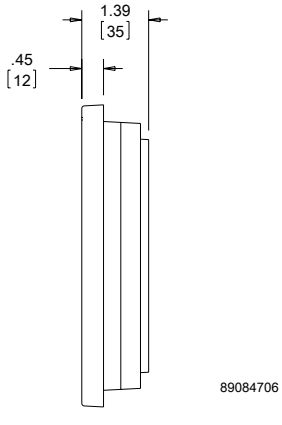


CUTOUT DIMENSIONS

TEP4 EXHAUST GRILLE



Exhaust grille included with fan package

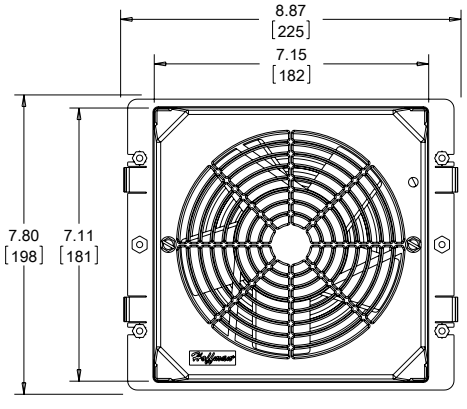


Performance Data **TFP6 Models**

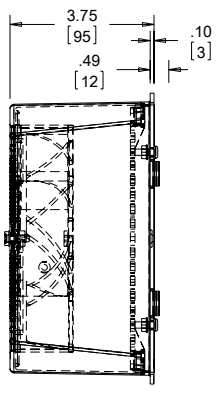
ELECTRICAL DATA			
Rated Voltage	**24 VDC**	**115 VAC**	**230 VAC**
Frequency (Hz)		50/60	
Nominal Current Maximum @ 50/60 Hz(Amps)	.88	.45/.36	.23/.18
Power Consumption Maximum @ 50/60 Hz (Watts)	21.1	36/32	39/35
Power Connection		Stripped Leadwires	
CATALOG NUMBERS			
Composite Type 1			
Catalog Number	**TFP624**	**TFP61**	**TFP62**
Stainless Steel Type 1			
Catalog Number	—	**TFP61SS**	**TFP62SS**
Composite Type 12			
Catalog Number	—	**TFP61UL12**	**TFP62UL12**
Free Airflow @ 50/60 Hz (CFM)*	140	117/140	117/140
Free Airflow @ 50/60 Hz (m^3/hr.)*	238	199/238	199/238
UNIT CONSTRUCTION			
Noise SIL @ 50/60 Hz (dBA)	62.5	50/56	50/56
Maximum Operating Temperature (°F/°C)		158/70	
Unit Dimensions - H x W x D (in./mm)		7.80 x 8.87 x 3.75/198 x 225 x 95	
Cutout Dimensions - H x W (in./mm)		7.16 x 7.16/182 x 182	
Weight (lb./kg)	5.3/2.40	5.3/2.40	5.4/2.45
EXHAUST GRILLE CATALOG NUMBERS			
Composite Type 1			
Catalog Number		**TEP6**	
Stainless Steel Type 1			
Catalog Number		**TEP6SS**	
Composite Type 12			
Catalog Number		**TEP6UL12**	

*CFM with single exhaust grille installed.

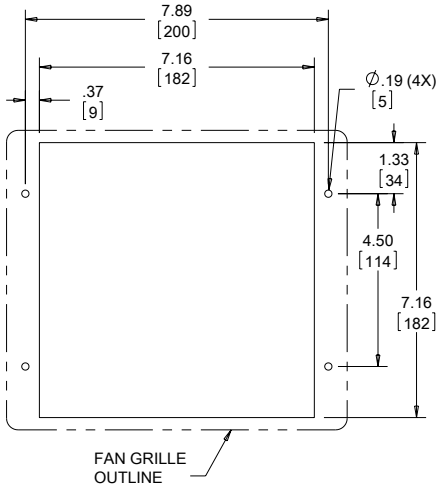
TFP6 Models



BACK VIEW

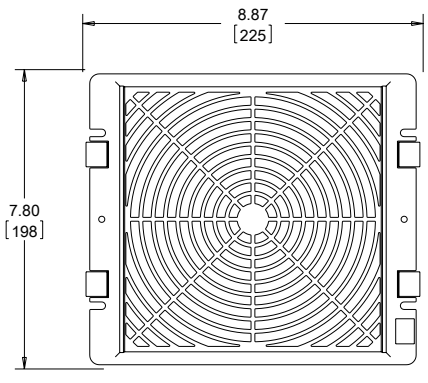


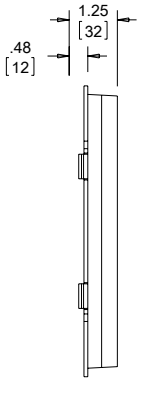
SIDE VIEW



CUTOUT DIMENSIONS

TEP6 EXHAUST GRILLE





Exhaust grille included with fan package

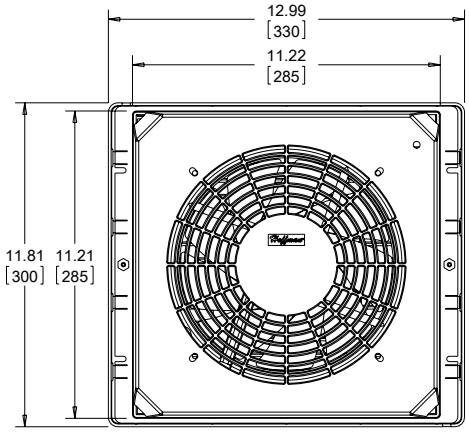
89084710

Performance Data **TFP10 Models**

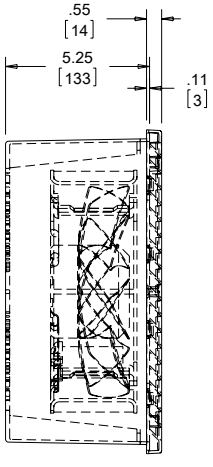
ELECTRICAL DATA		
Rated Voltage	**115 VAC**	**230 VAC**
Frequency (Hz)	50/60	
Nominal Current Maximum @ 50/60 Hz(Amps)	.58/.70	.29/.35
Power Consumption Maximum @ 50/60 Hz (Watts)	64/80	64/80
Power Connection	Stripped Leadwires	
CATALOG NUMBERS		
Composite Type 1		
Catalog Number	**TFP101**	**TFP102**
Stainless Steel Type 1		
Catalog Number	**TFP101SS**	**TFP102SS**
Composite Type 12		
Catalog Number	**TFP101UL12**	**TFP102UL12**
Free Airflow @ 50/60 Hz (CFM)*	180/215	180/215
Free Airflow @ 50/60 Hz (m^3/hr.)*	306/365	306/365
UNIT CONSTRUCTION		
Noise SIL @ 50/60 Hz (dBA)	54/61	54/61
Maximum Operating Temperature (°F/°C)	167/75	167/75
Unit Dimensions - H x W x D (in./mm)	11.81 x 12.99 x 5.25/300 x 330 x 133	
Cutout Dimensions - H x W (in./mm)	11.16 x 11.16/283 x 283	
Weight (lb./kg)	12.0/5.44	11.4/5.17
EXHAUST GRILLE CATALOG NUMBERS		
Composite Type 1		
Catalog Number	**TEP10**	
Stainless Steel Type 1		
Catalog Number	**TEP10SS**	
Composite Type 12		
Catalog Number	**TEP10UL12**	

*CFM with single exhaust grille installed.

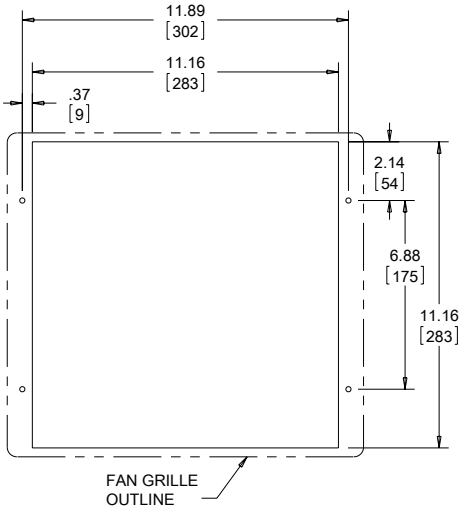
TFP10 Models



BACK VIEW

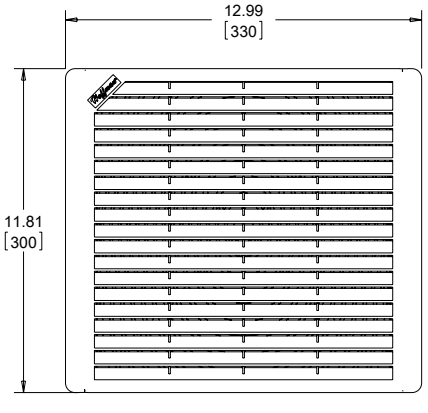


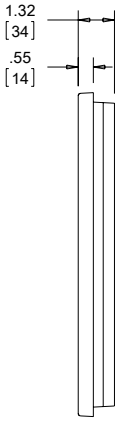
SIDE VIEW



CUTOUT DIMENSIONS

TEP10 EXHAUST GRILLE





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Exhaust grille included with fan package

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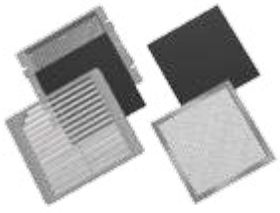
TFP EXHAUST GRILLES

CATALOG NUMBERS	Nominal Fan Size
TEP4 Models	
TEP4	4
TEP4SS	4
TEP4UL12	4
TEP6 Models	
TEP6	6
TEP6SS	6
TEP6UL12	6
TEP10 Models	
TEP10	10
TEP10SS	10
TEP10UL12	10

TFP OPTIONAL GRILLES AND REPLACEMENT FILTERS



Optional grilles offer the choice of stainless steel or black ABS plastic. These grilles replace the standard RAL 7035 gray composite or stainless steel grilles on both fan and exhaust packages. Standard replacement filters are washable foam (Type 1) or disposable (Type 12). To maintain UL Type 12 rating on the enclosure, UL Type 12 filters must be used on the fan package inlet. Washable aluminum filters are also available. Aluminum filters are compatible with Type 1 systems only.
Type 12 air filters are not washable.

CATALOG NUMBERS	Description	Fits Fan and Exhaust Nominal Size	Fits Fan and Exhaust Grill Size (in./mm)
4-inch Fan Models			
TG4SS	Brushed stainless steel grille	4	6.29 x 7.31 x .81 160 x 186 x 21
TG4B	Black ABS plastic grille	4	6.29 x 7.37 x .81 160 x 187 x 21
AFLTR4	Type 1 filter replacement (5/package)	4	—
AFLTR4AL	Aluminum filter replacement (5/package)	4	—
TFLT4UL12	Type 12 filter replacement (5/package)	4	—
6-inch Fan Models			
TG6SS	Brushed stainless steel grille	6	7.80 x 8.81 x .75 198 x 224 x 19
TG6B	Black ABS plastic grille	6	7.80 x 8.87 x .49 198 x 225 x 12
AFLTR6	Foam filter replacement (5/package)	6	—
AFLTR6AL	Aluminum filter replacement (5/package)	6	—
TFLT6UL12	UL 12 filter replacement (5/package)	6	—
10-inch Fan Models			
TG10SS	Brushed stainless steel grille	10	11.81 x 12.92 x .75 300 x 328 x 19
TG10B	Black ABS plastic grille	10	11.81 x 12.99 x .75 300 x 330 x 19
AFLTR10	Foam filter replacement (5/package)	10	—
AFLTR10AL	Aluminum filter replacement (5/package)	10	—
TFLT10UL12	UL 12 filter replacement (5/package)a	10	—

Replacement filter for Type 12 fan package only (models TFF__UL12). For Type 12 exhaust package use replacement filter AFLTRX.

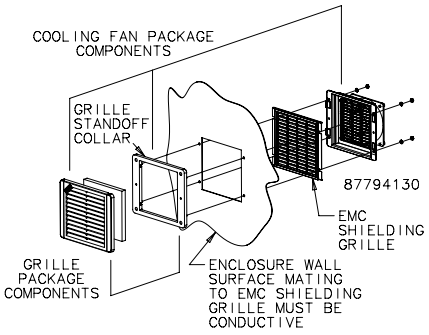
Filters fit all fan and exhaust packages according to their size.

TFP EMC UPGRADE KIT

With the addition of this kit, the cooling fan and exhaust packages are upgraded to provide EMC (electromagnetic compatibility) protection. Consult Hoffman for shielding effectiveness (dB attenuation vs. frequency).

Separate kits must be installed on both the inlet and outlet. Cooling fan and exhaust package must be ordered separately. EMC upgrade kit will not work with stainless steel grille option.

CATALOG NUMBERS	Fits Cooling Fan Package	Fits Exhaust Grille
4-inch Fan Models		
T4EMC	TFP42	TEP4
6-inch Fan Models		
T6EMC	TFP62	TEP6
10-inch Fan Models		
T10EMC	TFP102	TEP10



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OUTDOOR FILTER FAN AND EXHAUST PACKAGE

INDUSTRY STANDARDS

cURus Type 12; File No. E234324

NEMA Type 3R
IEC/EN60529, IP55
CE

FEATURES

- Ball bearing axial fan, service life minimum 50,000 hours at 77 F (25 C) and 65 percent RH
- Airflow 11.8 CFM (20 cubic meters/hour) free blowing
- High-impact plastic is highly weatherproof and resistant to UV light
- Removable F5 filter
- Lockable door in hood
- Two-sided tape provided
- Filter hood permanently fixed to enclosure from inside
- 2 lead wires, 3.94-in. (100-mm) long, with pressure clamps, 14 gauge max. (2.5 mm)
- Synthetic filter material, temperature resistant to 212 F (100 C), self-extinguishing class F1, moisture resistant to 100 percent RH
- Filter mat: Fine grade F5 to DIN EN779 filtering degree: 98 percent of particles larger than 10 µm (10 microns)

SPECIFICATIONS

- Aluminum fan body, plastic impeller

FINISH

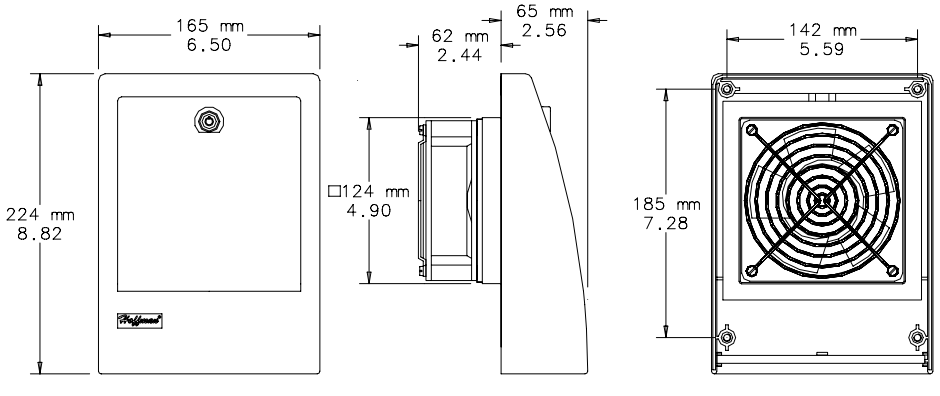
- Light gray plastic, UL94H-B

NOTES

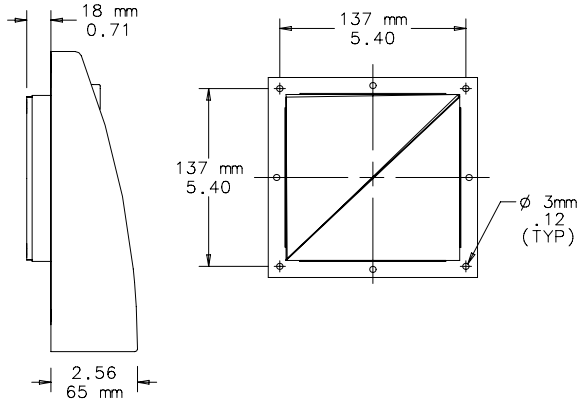
This fan package meets basic requirements for outdoor or indoor applications that require warm air dissipation.

ELECTRICAL DATA	
Rated Voltage	**120 VAC**
Frequency (Hz)	60
Full Load (Amps)	0.3
FILTER FAN	
Catalog Number	**AOFF118**
UNIT CONSTRUCTION	
External Mounting Depth (in./mm)	2.56/65
Internal Mounting Depth (in./mm)	2.44/62
Enclosure Cutout (in./mm)	4.92 x 4.92 / 125 x 125
EXHAUST GRILLE	
Catalog Number	**AOEFG118**
ACCESSORIES	
Replacement Filters:	
Catalog Number	**AOFILTER**
Description	Filter Mat, F5 (3 per package)
Filter Size (in./mm)	4.80 x 4.80 / 122 x 122

Outdoor Filter Fan and Exhaust Package



FILTER FAN



EXHAUST FILTER

MOUNTING FRAME

nVent | HOFFMAN

COMPACT AXIAL FANS

INDUSTRY STANDARDS

UL Component Recognized

APPLICATION

Compact Cooling Fans are ideal for applications where enclosure space is limited and quiet, reliable cooling is required. Engineered for 50,000 hours of continuous operation without lubrication or service.

Installation

Can be installed on any surface of an enclosure. With the addition of accessory fan brackets, Compact Cooling Fans can also be installed in any position inside the enclosure for spot cooling or air circulation.

FEATURES

- Maximum operating temperature is 158 F (70 C)
- 4-in. fan is thermally protected and uses permanently lubricated ball bearings
- 6- and 10-in. fans have ball-bearing construction and split-capacitor motors
- Split-capacitor motors are thermally protected to avoid premature failure
- Dynamically balanced impellers molded from polycarbonate material
- One finger guard is furnished (additional finger guards are available)
- All mounting hardware is provided
- 240 and 560 CFM fans have ball bearing construction and split capacitor motors
- Fans have leadwires with ends stripped 1/2-in. (12-mm) or 6-ft. (1.8-m) cord with polarized plug for power connections

Fan bracket and additional finger guards must be purchased separately

FINISH

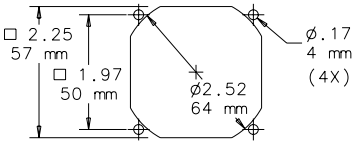
- Fan housing is black.

ACCESSORIES

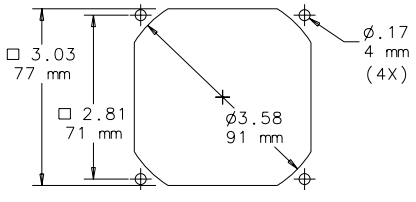
Fan Cords, page 442
Fan Cords With Inline Thermostat, page 442
Fan Filter and Finger Guard Kit, page 442
Fan Brackets, page 443
Finger Guards, page 443

Design Data **Compact Axial Fans**

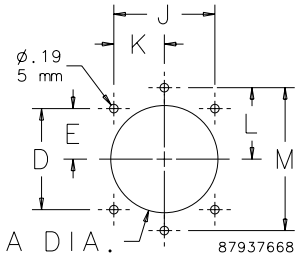
CATALOG NUMBERS	Nominal Size	Voltage	A in./mm	D in./mm	E in./mm	J in./mm	K in./mm	L in./mm	M in./mm
A2AXFN24	2	24 VDC	—	1.97/50	.98/25	1.97/50	.98/25	—	—
3-in. Fans									
A3AXFN	3	115 VAC	—	2.81/71	1.40/36	2.81/71	1.40/36	—	—
A3AXFN24	3	24 VDC	—	2.81/71	1.40/36	2.81/71	1.40/36	—	—
4-in. Fans									
A4AXFNGQ	4	115 VAC	4.62/117	4.12/105	2.06/52	4.12/105	2.06/52	—	—
A4AXFNPG	4	115 VAC	4.62/117	4.12/105	2.06/52	4.12/105	2.06/52	—	—
A4AXFN	4	115 VAC	4.62/117	4.12/105	2.06/52	4.12/105	2.06/52	—	—
A4AXFN2	4	230 VAC	4.62/117	4.12/105	2.06/52	4.12/105	2.06/52	—	—
A4AXFN24	4	24 VDC	4.62/117	4.12/105	2.06/52	4.12/105	2.06/52	—	—
6-in. Fans									
A6AXFNGQ	6	115 VAC	5.88/149	—	—	—	—	3.19/81	6.38/162
A6AXFNPG	6	115 VAC	5.88/149	—	—	—	—	3.19/81	6.38/162
A6AXFN	6	115 VAC	5.88/149	—	—	—	—	3.19/81	6.38/162
A6AXFN2	6	230 VAC	5.88/149	—	—	—	—	3.19/81	6.38/162
A6AXFN24	6	24 VDC	5.88/149	—	—	—	—	3.19/81	6.38/162
10-in. Fans									
A10AXFNPG	10	115 VAC	9.00/229	6.85/174	3.44/87	6.85/174	3.44/87	—	—
A10AXFN	10	115 VAC	9.00/229	6.85/174	3.44/87	6.85/174	3.44/87	—	—
A10AXFN2	10	230 VAC	9.00/229	6.85/174	3.44/87	6.85/174	3.44/87	—	—



MOUNTING CUTOUT
DIMENSIONS 2 INCH



MOUNTING CUTOUT
DIMENSIONS 3 INCH



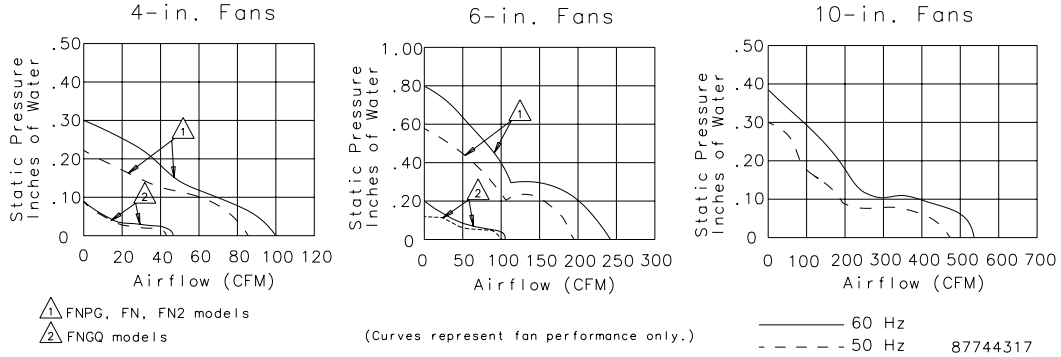
MOUNTING CUTOUT
DIMENSIONS 4,6,10 INCH

Performance Data **Compact Axial Fans**

ELECTRICAL DATA					
Rated Voltage	**24 VDC**	**115 VAC Lead Wires**	**115 VAC Power Cord Quiet Fan**	**115 VAC Power Cord**	**230 VAC Lead Wires**
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Power Connection	Lead Wires	Lead Wires	Power Cord	Power Cord	Lead Wires
2 inch Nominal-Size Fans					
Catalog Number	**A2AXFN24**	—	—	—	—
Nominal Current Maximum @50/60 Hz (Amps)	.09	—	—	—	—
Power Consumption Maximum @ 50/60 Hz (Watts)	2.16	—	—	—	—
Free Airflow @ 50/60 Hz (CFM)*	21.5	—	—	—	—
Free Airflow @ 50/60 Hz (m^3/hr.)*	36.5	—	—	—	—
Noise SIL @ 50/60 Hz (dBA)	65	—	—	—	—
Maximum RPM @50/60 Hz (RPM)	4550	—	—	—	—
Fan Size Diameter (in.)	2.36	—	—	—	—
Fan Depth (in.)	.98	—	—	—	—
3 inch Nominal-Size Fans					
Catalog Number	**A3AXFN24**	**A3AXFN**	—	—	—
Nominal Current Maximum @50/60 Hz (Amps)	.14	.09	—	—	—
Power Consumption Maximum @ 50/60 Hz (Watts)	3.36	7	—	—	—
Free Airflow @ 50/60 Hz (CFM)*	40	27	—	—	—
Free Airflow @ 50/60 Hz (m^3/hr.)*	68	46	—	—	—
Noise SIL @ 50/60 Hz (dBA)	35	40	—	—	—
Maximum RPM @50/60 Hz (RPM)	3400	2700	—	—	—
Fan Size Diameter (in.)	3.15	3.15	—	—	—
Fan Depth (in.)	.98	1.50	—	—	—
4 inch Nominal-Size Fans					
Catalog Number	**A4AXFN24**	**A4AXFN**	**A4AXFNGQ**	**A4AXFNPG**	**A4AXFN2**
Nominal Current Maximum @50/60 Hz (Amps)	.35	.26/.21	.09/.08	.26/.21	.14/.11
Power Consumption Maximum @ 50/60 Hz (Watts)	84	17/15	6/5	17/15	16/14
Free Airflow @ 50/60 Hz (CFM)*	118	85/100	46/49	85/100	85/100
Free Airflow @ 50/60 Hz (m^3/hr.)*	200	144/170	78/83	144/170	144/170
Noise SIL @ 50/60 Hz (dBA)	46.5	37/41	27/28	37/41	37/41
Maximum RPM @50/60 Hz (RPM)	3200	2415/2900	1350/1450	2415/2900	2415/2900
Fan Size Diameter (in.)	4.69	4.69	4.69	4.69	4.69
Fan Depth (in.)	1.52	1.52	1.52	1.52	1.52
6 inch Nominal-Size Fans					
Catalog Number	**A6AXFN24**	**A6AXFN**	**A6AXFNGQ**	**A6AXFNPG**	**A6AXFN2**
Nominal Current Maximum @50/60 Hz (Amps)	.88	.45/.36	.16/.19	.45/.36	.23/.18
Power Consumption Maximum @ 50/60 Hz (Watts)	21.1	36/32	16/18	36/32	39/35
Free Airflow @ 50/60 Hz (CFM)*	280	200/240	85/102	200/240	200/240
Free Airflow @ 50/60 Hz (m^3/hr.)*	476	340/408	144/173	340/408	340/408
Noise SIL @ 50/60 Hz (dBA)	62.5	50/56	35/38	50/56	50/56
Maximum RPM @50/60 Hz (RPM)	3750	2670/3200	1400/1650	2670/3200	2670/3200
Fan Size Diameter (in.)	6.77	6.77	6.77	6.77	6.77
Fan Depth (in.)	2.00	1.50	1.50	1.50	1.50
10 inch Nominal-Size Fans					
Catalog Number	—	**A10AXFN**	**—**	**A10AXFNPG**	**A10AXFN2**
Nominal Current Maximum @50/60 Hz (Amps)	—	1.0/.88	—	1.0/.88	.47/.43
Power Consumption Maximum @ 50/60 Hz (Watts)	—	36/36	—	36/36	36/36
Free Airflow @ 50/60 Hz (CFM)*	—	480/560	—	480/560	480/560
Free Airflow @ 50/60 Hz (m^3/hr.)*	—	816/951	—	816/951	816/951
Noise SIL @ 50/60 Hz (dBA)	—	46/49	—	46/49	46/49
Maximum RPM @50/60 Hz (RPM)	—	1350/1650	—	1350/1650	1350/1650
Fan Size Diameter (in.)	—	10.00	—	10.00	10.00
Fan Depth (in.)	—	3.50	—	3.50	3.50

* CFM without exhaust grille

Performance Curves for Compact Axial Fans



FAN CORDS

Used to power Compact Cooling Fans when positive ground of the cabinet case is required. Available with connectors for one or two fans. Five-foot (1.52-meter) cord with grounded three-prong plug. Fits A4AXFNPG, A6AXFNPG, A10AXFNPG, A4AXFNGQ and A10AXFNGQ.

CATALOG NUMBERS		
	ACORD1	ACORD2
DESIGN DATA		
Description	One connector	Two connectors

FAN CORDS WITH INLINE THERMOSTAT

Use to power 120 VAC Compact Cooling Fans; replaces existing supplied power cord. Fan cord includes inline thermostat. The cord automatically activates up to two fans. Fan(s) will turn on when the inline thermostat reaches 86F (30C). Fan(s) will run only when temperature is above 86F (30C). Use with 110-120 VAC fans with power cords only. One or two fans can be used with power cord.

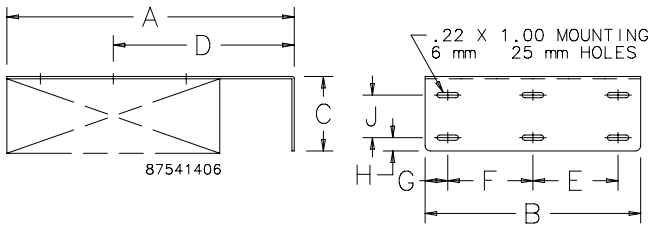
ELECTRICAL DATA	
Rated Voltage	**110-120 VAC**
Maximum Current (Amps)	10
Fan Activation Temperature (°F/°C)	86/30
CATALOG NUMBERS	
	ACORD2T

FAN FILTER AND FINGER GUARD KIT

CATALOG NUMBERS		
	AFLTR4LD	AFLTR6LD
DESIGN DATA		
Description	Fan Filter and Finger Guard Kit	
Fits	4-in. fans	6-in. fans

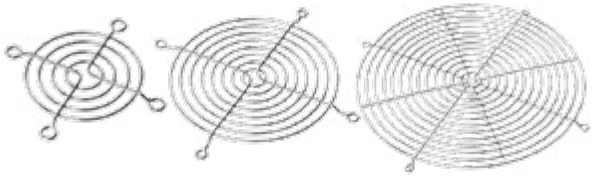
FAN BRACKETS

Designed to provide easy mounting of compact axial fans on enclosure panels. Brackets can be used for general air circulation or to direct air at problem areas. All sizes are .100-in. aluminum. Package quantity of 1 bracket. Fans must be ordered separately.



CATALOG NUMBERS	AxBxC in./mm	Used with Fan Catalog Number	D in./mm	E in./mm	F in./mm	G in./mm	H in./mm	J in./mm
ABRKT2	3.75x2.75x1.50 95x70x38	A2AXFN24	2.38/60	—	1.75/44	.50/13	.37/9	.62/16
ABRKT3	4.50x3.50x1.50 114x89x38	A3AXFN, A3AXFN24	2.75/70	—	2.50/64	.50/13	.37/9	.62/16
ABRKT4	6.00x5.00x1.50 152x127x38	A4AXFNPG, A4AXFNGQ, A4AXFN or A4AXFN2	3.50/89	—	3.00/76	1.00/25	.38/10	.62/16
ABRKT6	10.00x6.88x2.00 254x175x51	A6AXFNPG, A6AXFNGQ, A6AXFN or A6AXFN2	6.50/51	—	5.00/127	.94/24	.38/10	1.00/25
ABRKT10	13.50x10.12x3.50 343x257x89	A10AXFNPG, A10AXFNGQ, A10AXFN or A10AXFN2	8.50/216	4.00/102	4.00/102	1.06/27	.62/16	2.00/51

FINGER GUARDS



One finger guard is included with each Compact Axial Fan and Cooling Fan Package. Additional Finger Guards can be mounted on either side of the fan for maximum safety. All guards are chrome-plated and meet UL 507 .25-in. plug gauge test.

CATALOG NUMBERS	Use on Compact Axial Fan Catalog Numbers
AGARD2	A2AXFN24
AGARD3	A3AXFN, A3AXFN24
AGARD4	A4AXFNPG, A4XFNGQ, A4AXFN, A4AXFN2
AGARD6	A6AXFNPG, A6AXFNGQ, A6AXFN, A6AXFN2
AGARD10	A10AXFNPG, A10AXFNQR , A10AXFN, A10AXFN2

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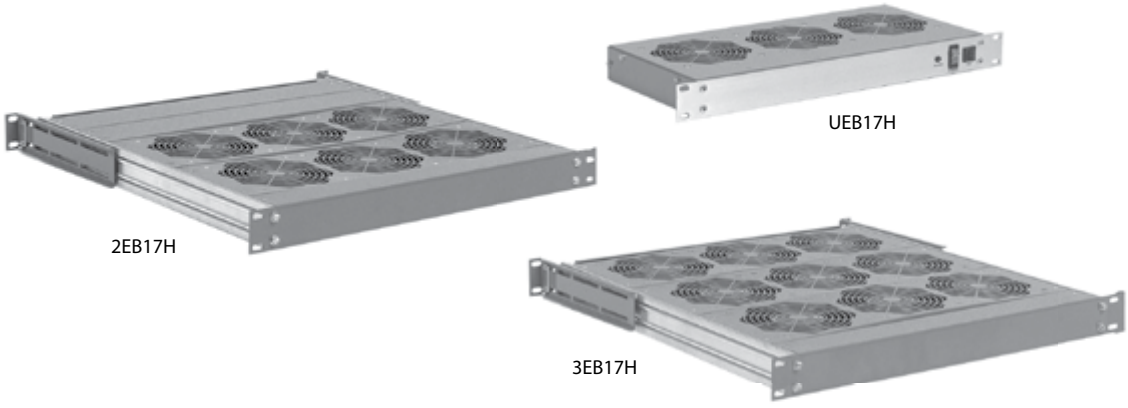
RACK-MOUNTABLE ASSEMBLIES



INDUSTRY STANDARDS

UL recognized

- CSA Certified Motors
- CE

APPLICATION

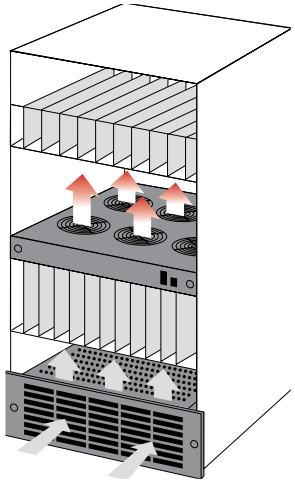
Fan trays are a versatile solution to cooling card cages and racks. Redundant cooling with optional failure detection makes this air mover the obvious choice for sensitive equipment. Minimal rack space and repositionable fans are suited to today's smaller enclosures.

FEATURES

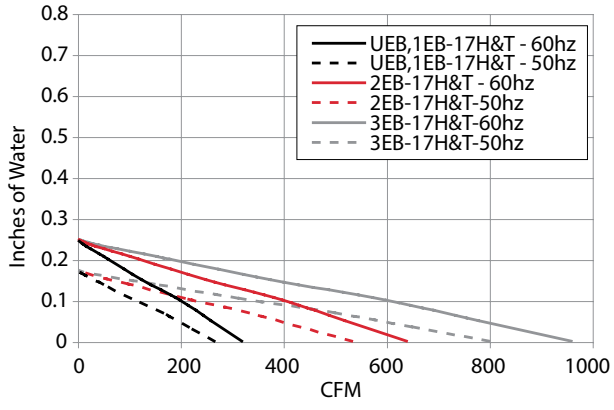
- Slim 1.75 in. (44 mm) Panel Height
- 19-in. rack mountable
- Field adjustable fan strips to optimize air flow
- Easy access to fan tray from front and back
- Simplified installation without the need for side access
- Support bracket
- Exhaust Guard
- 6-inch Power Cord AC trays, Terminal block on DC trays
- Permanently lubricated ball bearing motors
- 100% functionally tested

SPECIFICATIONS

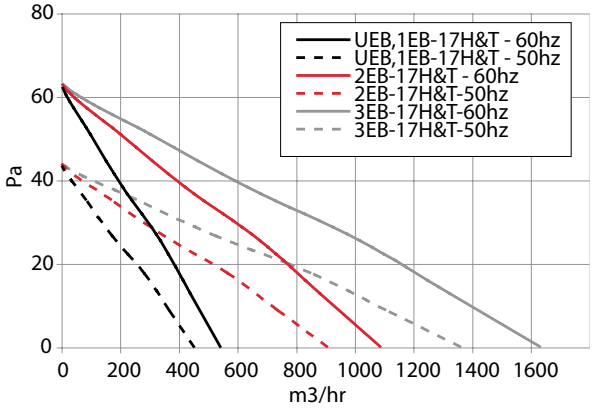
- 115/230 VAC
- 24 VDC
- 50/60 Hz

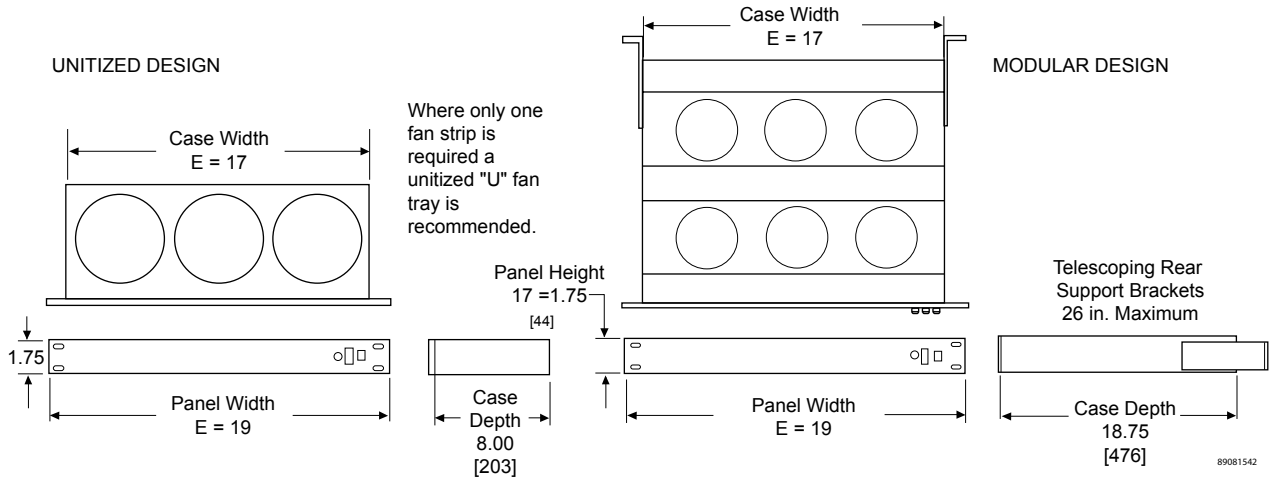


Performance Curves (Inches of Water to CFM)



Performance Curves (Pa to m3/hr)





Performance Data **Rack-Mountable Assemblies**

ELECTRICAL DATA			
Rated Voltage	**115 VAC**	**230 VAC**	**24 VDC**
Frequency (Hz)	50/60	50/60	DC
RPM	3100	3100	3000
Nominal Current Maximum (Amps)	0.4	0.2	0.8
Power Consumption Maximum (Watts)	42	42	21
Maximum Operating Temperature (°F/°C)		158/70	
UEB17H			
Catalog Numbers	**UEB17H115**	**UEB17H230**	**UEB17H24**
Nominal Current Maximum @50/60 Hz (Amps)	.4	.2	.8
Power Consumption Maximum @ 50/60 Hz (Watts)	42	42	21
Free Airflow @ 50/60 Hz (CFM)*	315	315	330
Free Airflow @ 50/60 Hz (m^3/hr.)*	536	536	561
Number of Fans		3	
Unit Dimensions H x W x D (In./mm)		1.75 x 19.00 x 8.00/44 x 482 x 203	
Weight (lb./kg)	7.8/3.4	7.8/3.4	7.6/3.3
2EB17H			
Catalog Numbers	**2EB17H115**	**2EB17H230**	—
Nominal Current Maximum @50/60 Hz (Amps)	.9	.5	—
Power Consumption Maximum @ 50/60 Hz (Watts)	84	84	—
Free Airflow @ 50/60 Hz (CFM)*	630	630	—
Free Airflow @ 50/60 Hz (m^3/hr.)*	1071	1071	—
Number of Fans		6	—
Unit Dimensions H x W x D (In./mm)		1.75 x 19.00 x 18.75/44 x 482 x 476	—
Weight (lb./kg)	10.2/4.5	10.2/4.5	—
3EB17H			
Catalog Numbers	**3EB17H115**	**3EB17H230**	—
Nominal Current Maximum @50/60 Hz (Amps)	1.4	.8	—
Power Consumption Maximum @ 50/60 Hz (Watts)	126	126	—
Free Airflow @ 50/60 Hz (CFM)*	945	945	—
Free Airflow @ 50/60 Hz (m^3/hr.)*	1607	1607	—
Number of Fans		9	—
Unit Dimensions H x W x D (In./mm)		1.75 x 19.00 x 18.75/44 x 482 x 476	—
Weight (lb./kg)	12.5/5.5	12.5/5.5	—

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19-IN. RACK-MOUNTABLE TRAY

APPLICATION

Fan trays enhance the natural convection airflow within a cabinet when installed with other 19-in. rack-mount equipment.

FEATURES

- Fan trays available with either three or six 4-in. fans
- Includes 72-in. (1829-mm) power cord with IEC 320 standard power socket
- Power cord plugs into standard 115 VAC outlet
- Lighted rocker switch provides on-off control and indicates when fans are on

FINISH

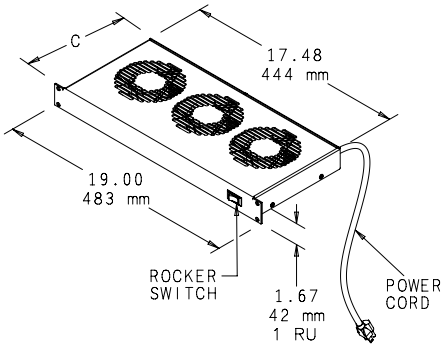
- RAL 9005 black, lightly textured polyester powder paint

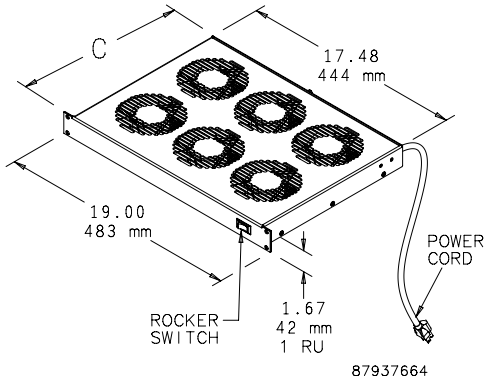
ACCESSORIES

Rack-Mount Fan Speed Control, page 447

Performance Data **19-in. Rack-Mountable Tray**

ELECTRICAL DATA		
Rated Voltage	**115**	**115**
Frequency (Hz)	60	60
Power Consumption (Watts)	45	90
CATALOG NUMBERS		
	A19FT3B	**A19FT6B**
Maximum Airflow (CFM)	253	506
Maximum Airflow (m^3/hr.)	430	860
Nominal Airflow Capacity (CFM)	102	102
Nominal Airflow Capacity (m^3/hr.)	173	173
UNIT CONSTRUCTION		
Sound Pressure (dBA)	41	41
Maximum Operating Temperature Range (°F/°C)	158/70	158/70
Maximum Static Pressure (in. WC)	0.27	0.27
Number of Fans	3	6
C (in./mm)	8.10/206	12.96/329





RACK-MOUNT FAN SPEED CONTROL

APPLICATION

Perfect for offices, classrooms and other noise-sensitive areas. Fan Speed Control optimizes airflow in a cabinet or rack, balancing air volume requirements with noise level and power use.

FEATURES

- Continuously variable fan speed control knob with minimum speed adjustment
- Uses 1 RU rack space
- Steel construction
- Two NEMA 5-15R outlets provide power to fan
- Six-foot (1.83-m) power cord plugs into standard 120 V 60 Hz outlet

INDUSTRY STANDARDS

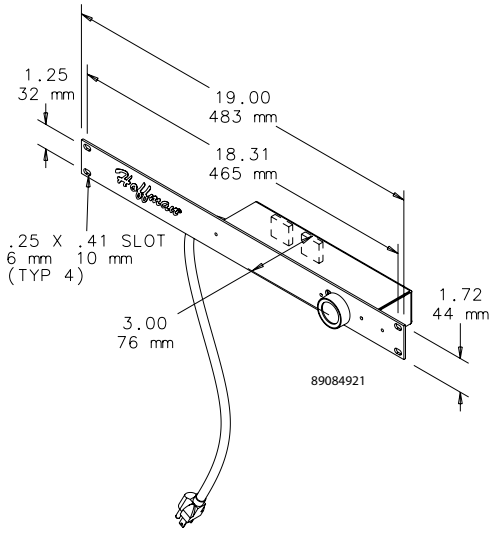
UL 508 Listed; File No. E249700
cUL Listed per CSA C22.2 No. 14; File No. E249700

FINISH

- A19FANSC: RAL 9005 black polyester powder paint

Performance Data **Rack-Mount Fan Speed Controls**

CATALOG NUMBERS	A19FANSC
ELECTRICAL DATA	
Rated Voltage	**120 VAC**
Maximum Nominal Current (Amps)	4
Temperature Settings (°F)	86, 95, 104, 113
Temperature Settings (°C)	30, 35, 40, 45
DESIGN DATA	
Description	19-in. Rack-Mount Fan Speed Control
Application	Fan speed adjusted manually



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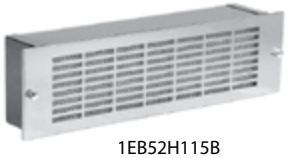
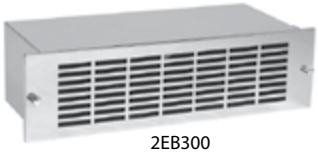
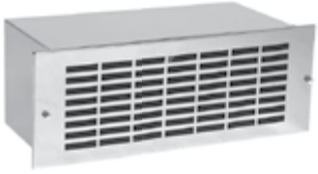
RACK-MOUNTABLE BLOWERS

1EB52H115A


1EB52H115B


2EB300

2EB3500


2EB412

2EB512

2EB612

4EB300

INDUSTRY STANDARDS

UL recognized

CSA Certified Motors
CE

APPLICATION

Fanpack packaged blowers are filtered inlet redundant fan packages. The compact size of the "B" models result in minimal intrusion into the enclosure.

Standard packaged blowers offer reliable rack cooling in a variety of case styles. Two exhaust styles are available with air flowing out the rear or out the top. Specify exhaust style (R or T) when ordering.

Multi-exhaust packaged blowers feature top and rear exhausts, for a wide, deep airflow pattern. Designed with two separate blowers inside, multi-exhaust blowers also offer redundancy and increased airflow.

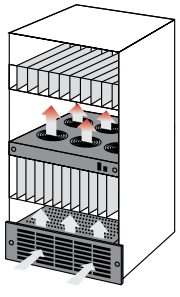
FEATURES

- Permanent, Washable Aluminum Filter
- 19-in. Rack Mountable
- Brushed Aluminum Grille
- Exhaust Guard
- Power Cord
- Permanently lubricated ball bearing motors
- 100% functionally tested

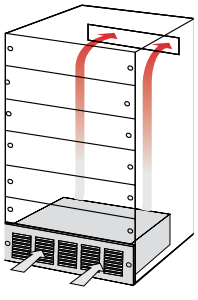
SPECIFICATIONS

- 115/230 VAC
- 50/60 Hz

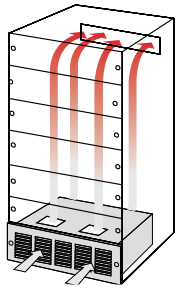
1EB Models



2EB Models



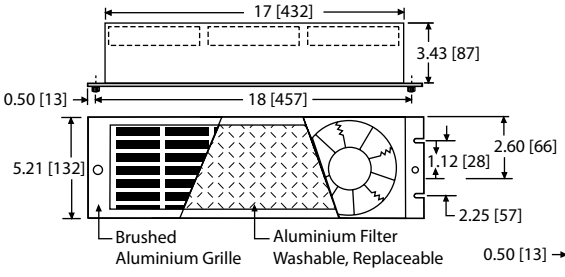
4EB Models



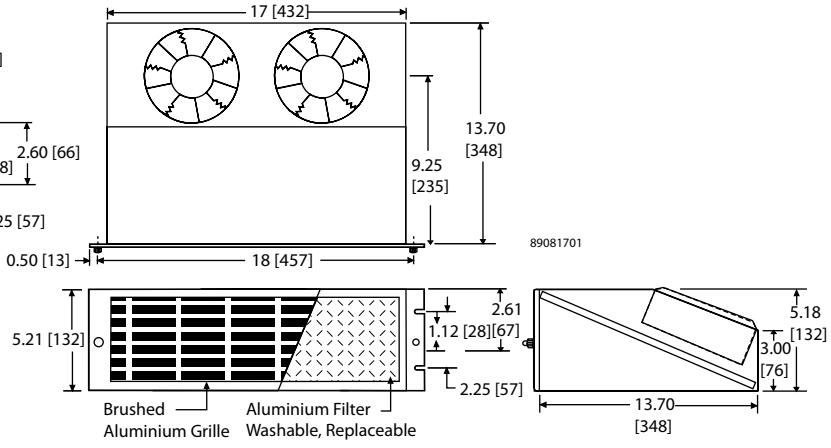
Performance Data **1EB Models**

ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Maximum Operating Temperatur (°F/°C)	140/60	140/60
"A" Models		
Catalog Numbers	**1EB52H115A**	**1EB52H230A**
Free Airflow (CFM/M^3/hr.)	320/544	320/544
RPM	3300	3300
Nominal Run Current Maximum (Amps)	.52	.26
Nominal Start Current Maximum (Amps)	1.00	.50
Power Consumption (Watts)	62	62
Weight (lb./kg)	14/6.3	14/6.3
"B" Models		
Catalog Numbers	1EB52H115B	1EB52H230B
Free Airflow (CFM/M^3/hr.)	235/400	235/400
RPM	3100	3100
Nominal Run Current Maximum (Amps)	.55	.31
Nominal Start Current Maximum (Amps)	.80	.40
Power Consumption (Watts)	44	44
Weight (lb./kg)	8/3.6	8/3.6

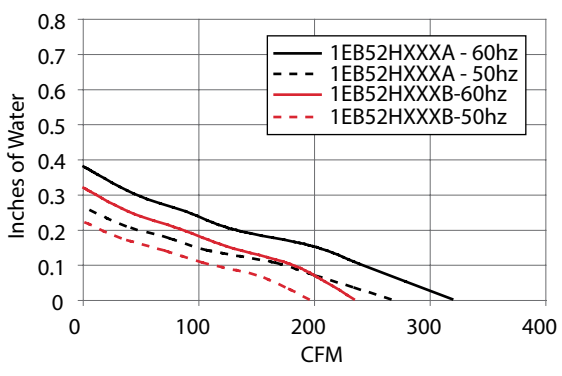
1EB52HxxxB Models

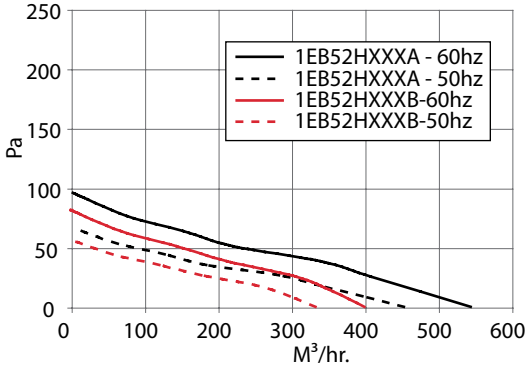


1EB52HxxxA Models



1EB Models





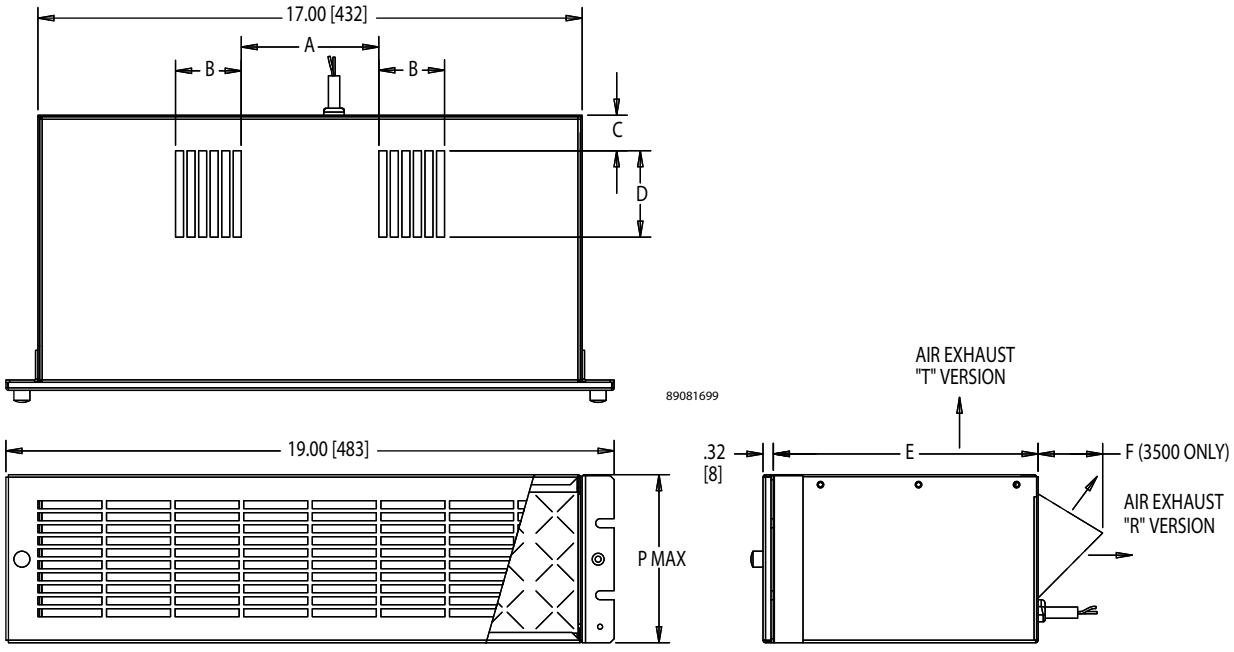
Performance Data **2EB Models**

ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Maximum Operating Temperatur (°F/°C)	104/40	104/40
2EB300R Models		
Catalog Numbers	**2EB300R115**	**2EB300R230**
Free Airflow (CFM/M^3/hr.)	125/212	125/212
RPM	3000	3000
Nominal Run Current Maximum (Amps)	.9	.5
Power Consumption (Watts)	70	70
Weight (lb./kg)	16/17.3	16/17.3
2EB3500R Models		
Catalog Numbers	**2EB3500R115**	**2EB3500R230**
Free Airflow (CFM/M^3/hr.)	290/493	290/493
RPM	3050	3050
Nominal Run Current Maximum (Amps)	1.8	.9
Power Consumption (Watts)	125	125
Weight (lb./kg)	17/7.7	17/7.7
2EB412R Models		
Catalog Numbers	**2EB412R115**	**2EB412R230**
Free Airflow (CFM/M^3/hr.)	375/637	375/637
RPM	3100	3100
Nominal Run Current Maximum (Amps)	1.8	.8
Power Consumption (Watts)	200	200
Weight (lb./kg)	22/10	22/10
2EB512R Models		
Catalog Numbers	**2EB512R115**	
Free Airflow (CFM/M^3/hr.)	425/722	
RPM	1700	
Nominal Run Current Maximum (Amps)	1.3	
Power Consumption (Watts)	140	
Weight (lb./kg)	25/11.3	
2EB512T Models		
Catalog Numbers	**2EB512T115**	
Free Airflow (CFM/M^3/hr.)	425/722	
RPM	1700	
Nominal Run Current Maximum (Amps)	1.3	
Power Consumption (Watts)	140	
Weight (lb./kg)	25/11.3	
2EB612R Models		
Catalog Numbers	**2EB612R115**	**2EB612R230**
Free Airflow (CFM/M^3/hr.)	800/1359	800/1359
RPM	1650	1650
Nominal Run Current Maximum (Amps)	2.2	1.0
Power Consumption (Watts)	220	220
Weight (lb./kg)	41/18.6	41/18.6

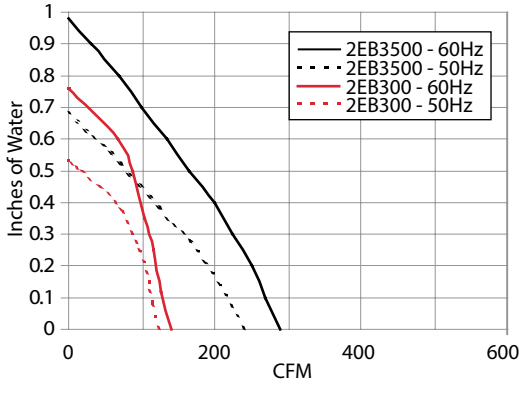
Design Data **2EB Models**

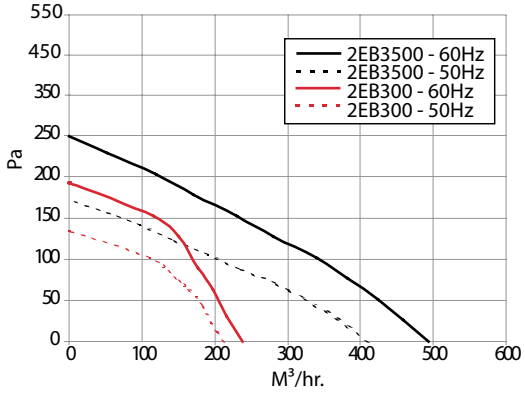
CATALOG NUMBERS	PMax in./mm	A in./mm	B in./mm	C in./mm	D in./mm	E in./mm	F in./mm
2EB300R115	5.25/133	4.30/109	2.05/52	—	—	8.22/209	—
2EB3500R115	5.25/133	4.38/111	4.56/116	—	—	7.17/182	1.75/44
2EB412R115	7.00/178	4.23/107	3.15/80	—	—	8.22/209	—
2EB512R115	8.75/222	4.13/105	3.63/92	—	—	8.22/209	—
2EB512T115	8.75/222	4.13/105	3.63/92	.80/20	3.40/86	9.61/244	—
2EB612R115	10.50/267	4.38/111	3.99/101	—	—	10.22/620	—

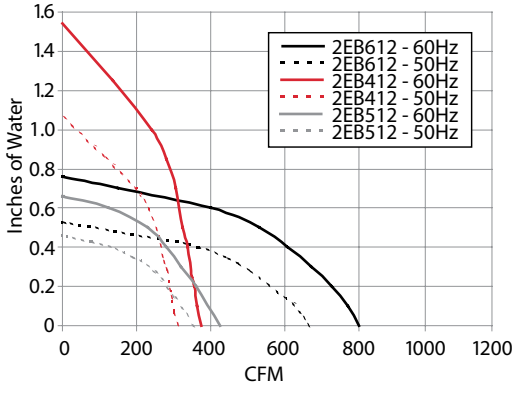
2EB Models

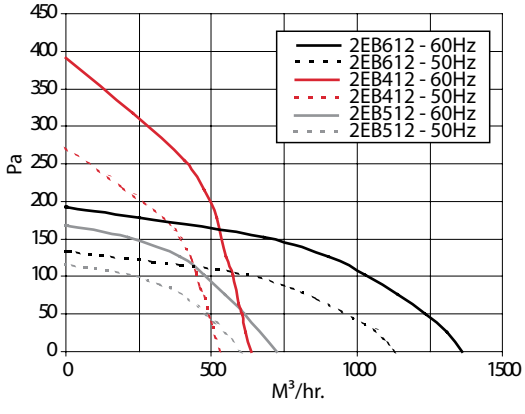


2EB Models









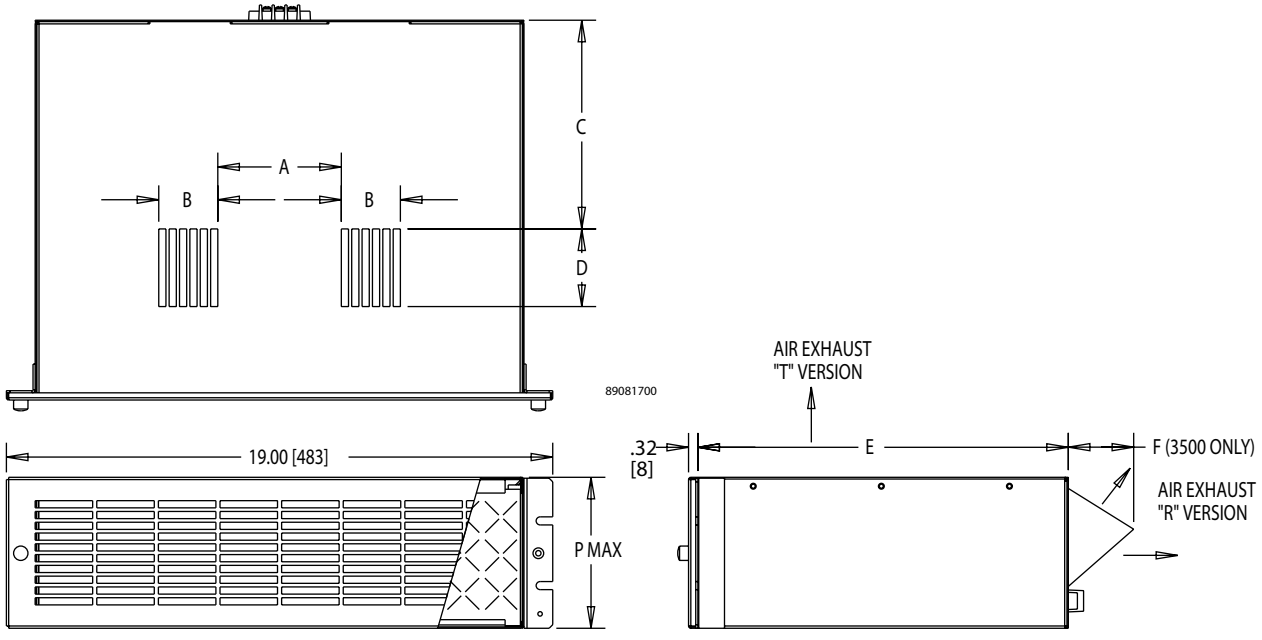
Performance Data **4EB Models**

ELECTRICAL DATA	
Rated Voltage	**115**
Frequency (Hz)	50/60
Maximum Operating Temperatur (°F/°C)	104/40
4EB300RT Models	
Catalog Number	**4EB300RT115**
Free Airflow (CFM/M^3/hr.)	180/306
RPM	2900
Nominal Run Current Maximum (Amps)	2.0
Power Consumption (Watts)	130
Weight (lb./kg)	21/9.5

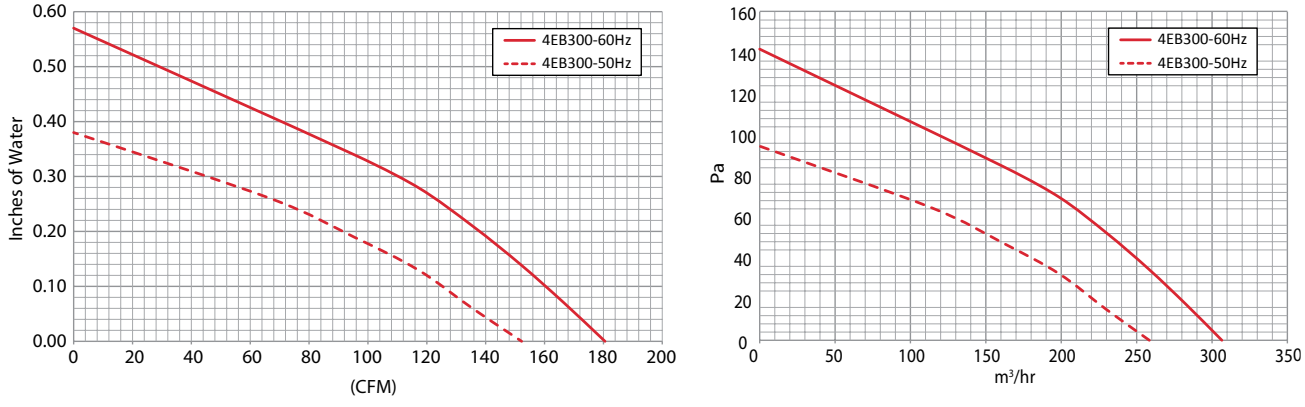
Design Data **4EB Models**

CATALOG NUMBERS	PMax in./mm	A in./mm	B in./mm	C in./mm	D in./mm	E in./mm	F in./mm
4EB300RT115	5.25/133	4.30/109	2.05/52	7.25/184	2.70/69	12.88/327	—

4EB Models



4EB Models



Notes

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RACK-MOUNTABLE FAN PACKAGE

INDUSTRY STANDARDS

UL Component Recognized; File No. E61997

EIA RS-310-D
CSA certified
(blower motor only)

APPLICATION

For enclosure or 19-in. rack applications, the Blower Fan Package provides the maximum amount of cooling air in the least amount of space by utilizing 115 volt AC, 60/50 hertz, single-phase input power.
Engineered for 20,000 hours of continuous operation when properly powered.

FEATURES

- Intake grille is easily removed with two captive thumbnuts
- Washable aluminum filter
- Single phase motor powers the statically balanced blower
- Motor is thermally protected and cooled by incoming forced air
- Direct drive induction motor contains permanently lubricated ball bearings
- Lubricant protects from -20 F to 298 F (-29 C to 148 C)
- Rotating components are suspended on neoprene shock-mounts
- Three-conductor power cord (five feet long)
- The unit is self-supporting with 16 gauge steel flanges notched per EIA RS-310-D.
- An exhaust grille and filter package (catalog number AEXGR275) is required and must be ordered separately

SPECIFICATIONS

- 16 gauge steel housing

FINISH

- Blower housing is black enamel.
- Grille is brushed stainless steel.

ACCESSORIES

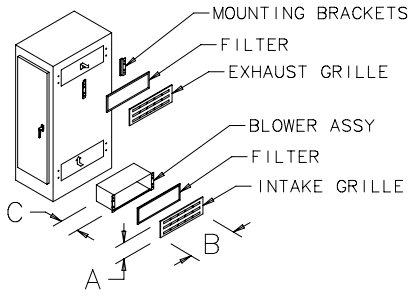
Exhaust Grilles and Replacement Filters, page 455
Rack-Mount Fan Speed Control, page 447
Filter Adhesive, page 465

Performance Data **Rack-Mountable Fan Package**

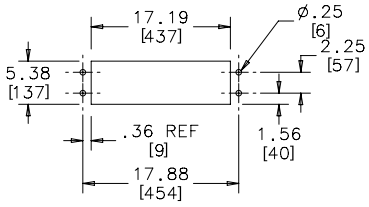
CATALOG NUMBERS	
	ADB275
ELECTRICAL DATA	
Rated Voltage	**115**
Frequency	50/60
Free Airflow (CFM)	230/275
RPM	2580/3100
Nominal Current Maximum (Amps)	1.2
Power Consumption (Watts)	84
SOUND LEVEL	
Sound Pressure (dBA)	56
UNIT CONSTRUCTION	
Weight (lb./kg)	15/7
EXHAUST GRILLE CATALOG NUMBERS	
Catalog Number	AEXGR275

Rack-Mountable Fan Package

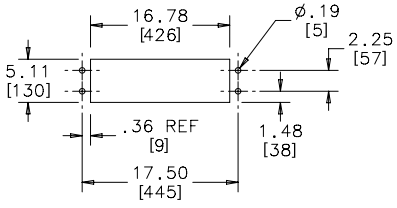
Mounting Cutout Dimensions



Blower Cutout



Exhaust Grille Cutout



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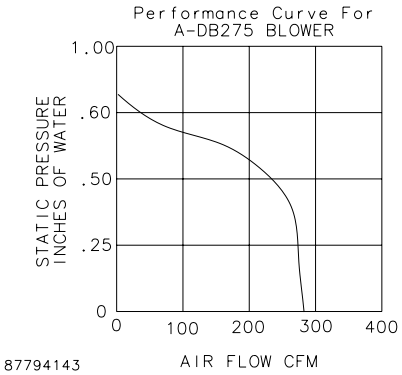

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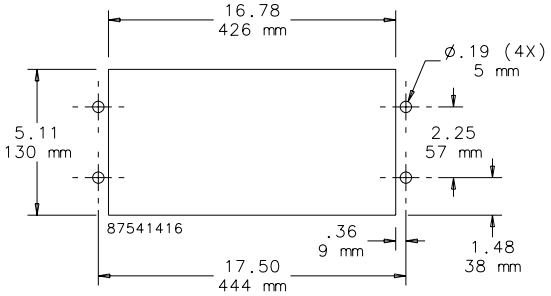
EXHAUST GRILLES AND REPLACEMENT FILTERS



CUTOUT DIMENSIONS

CATALOG NUMBERS	
	AEXGR275
UNIT CONSTRUCTION	
Dimensions H x W (in./mm)	5.75/146 x 19.00/483
Filter Size (in./mm)	4.98/126 x 16.56/421
ACCESSORIES	
Replacement Filters:	
Catalog Number	**AFLTR275AL**
Description	Aluminum Filter Replacement (5 per package)

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FILTER BOX FANS

INDUSTRY STANDARDS

UL Recognized Motor

CSA Certified Motor

APPLICATION

Thermal filter boxes are high volume air movers that require minimal enclosure space. Repositionable mounting ears allow the fans to be mounted internally or externally, and used for either intake or exhaust.

FEATURES

- Inlet Guard
- Outlet Guard
- Power Cord
- 5-15 plug available on catalog numbers ending with "M" only
- Permanently lubricated ball bearing motors
- 100% functionally tested

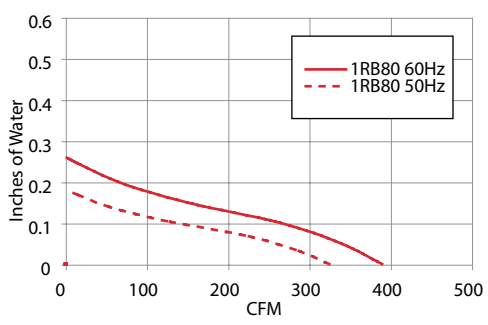
SPECIFICATIONS

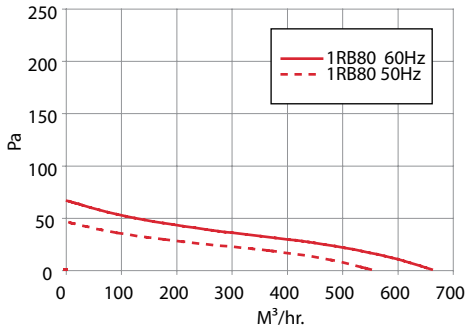
- 115 VAC
- 50/60Hz

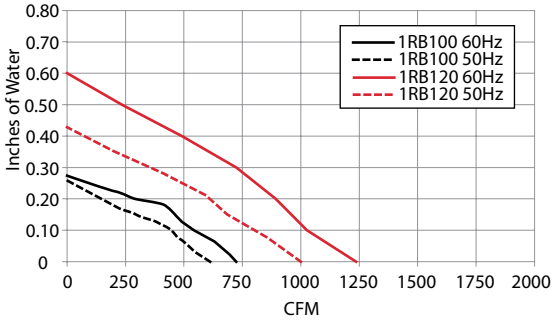
Performance Data **Filter Box Fans**

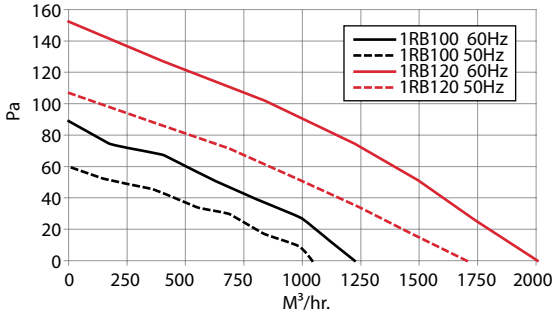
ELECTRICAL DATA		
Rated Voltage	**115**	**115**
Frequency (Hz)	50/60	50/60
Maximum Operating Temperature (°F/°C)	104/40	104/40
1RB80 Models		
Catalog Numbers	**1RB80**	**1RB80M**
Free Airflow (CFM/M^3/hr.)	390/699	390/699
RPM	1600	1600
Nominal Run Current Maximum (Amps)	1.1	1.1
Nominal Start Current Maximum (Amps)	1.5	1.5
Power Consumption (Watts)	80	80
Filter	N/A	Aluminum
Weight (lb./kg)	10/4.5	10/4.5
1RB100 Models		
Catalog Numbers	**1RB100**	**1RB100M**
Free Airflow (CFM/M^3/hr.)	675/1147	675/1147
RPM	1600	1600
Nominal Run Current Maximum (Amps)	1.2	1.2
Nominal Start Current Maximum (Amps)	1.5	1.5
Power Consumption (Watts)	90	90
Filter	N/A	Aluminum
Weight (lb./kg)	12/5.4	12/5.4
1RB120 Models		
Catalog Numbers	**1RB120**	**1RB120M**
Free Airflow (CFM/M^3/hr.)	1200/2151	1200/2151
RPM	1500	1500
Nominal Run Current Maximum (Amps)	1.5	1.5
Nominal Start Current Maximum (Amps)	2.5	2.5
Power Consumption (Watts)	160	160
Filter	N/A	Aluminum
Weight (lb./kg)	24/10.8	24/10.8

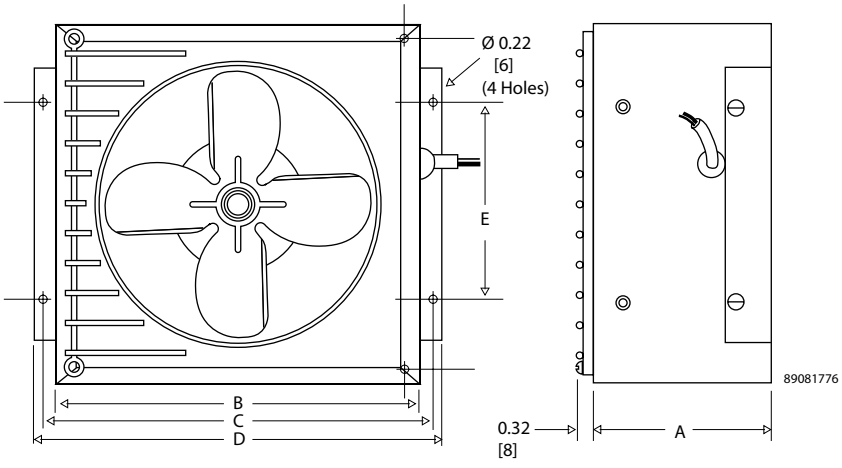
Performance Curves Filter Box











Design Data **Filter Box**

CATALOG NUMBERS	A in./mm	B in./mm	C in./mm	D in./mm	E in./mm
1RB80	4.50/114	8.88/226	9.56/243	10.13/257	4.88/124
1RB80M	4.50/114	8.88/226	9.56/243	10.13/257	4.88/124
1RB100	4.50/114	12.13/308	12.81/325	13.38/340	6.13/156
1RB100M	4.50/114	12.13/308	12.81/325	13.38/340	6.13/156
1RB120	7.38/187	15.13/384	15.81/402	16.38/416	9.00/229
1RB120M	7.38/187	15.13/384	15.81/402	16.38/416	9.00/229

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CENTRIFUGAL BLOWERS

INDUSTRY STANDARDS

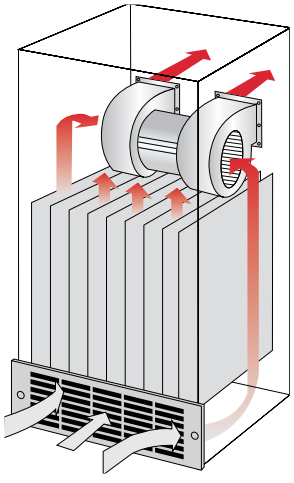
UL Recognized

CSA Certified Motors

APPLICATION

Single Centrifugal Blowers are compact for the maximum in spot cooling applications. Single centrifugal blowers can be mounted in any position for effective air movement.

Dual Centrifugal Blowers are designed for applications where space limitations are a problem. Mountable in any position, these blowers provide dual blasts from separate housings mounted on a reliable motor.



FEATURES

- 100% Functionally Tested

SPECIFICATIONS

- 115/230 VAC
- 50/60 Hz

10

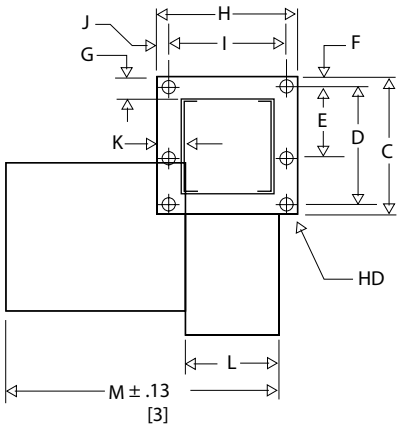
Performance Data **1NB Models**

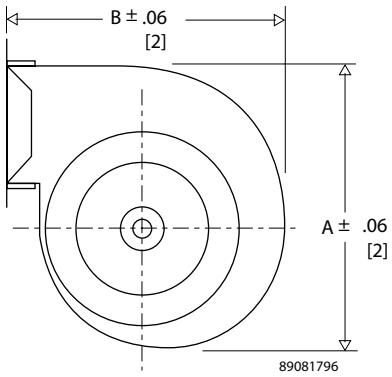
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Maximum Operating Temperature (°F/°C)	104/40	104/40
1NB412 Models		
Catalog Numbers	**1NB412115**	**1NB412230**
Free Airflow (CFM/M^3/hr.)	200/340	200/340
RPM	3100	3100
Nominal Run Current Maximum (Amps)	1.2	0.6
Nominal Start Current Maximum (Amps)	2.1	1.5
Power Consumption (Watts)	120	120
Weight (lb./kg)	6/2.7	6/2.7

Design Data **1NB Models**

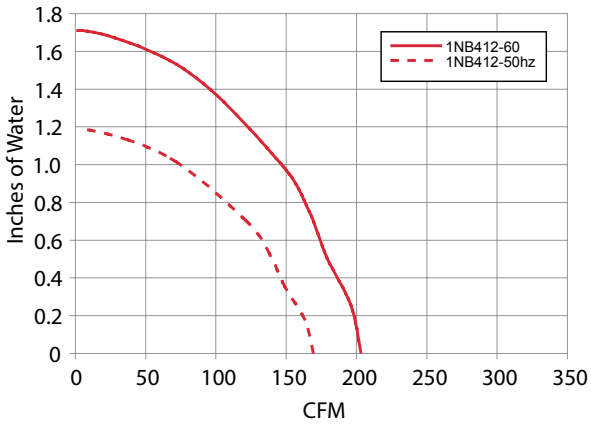
CATALOG NUMBERS	A in./mm	B in./mm	C in./mm	D in./mm	F in./mm	G in./mm	H in./mm	I in./mm	J in./mm	K in./mm	L in./mm	M in./mm	HD in./mm
1NB412115	6.81/173	6.14/156	3.84/96	3.29/84	0.31/8	0.62/16	4.66/118	4.03/102	0.31/8	0.72/18	3.22/82	7.47/190	0.28/7
1NB412230	6.81/173	6.14/156	3.84/96	3.29/84	0.31/8	0.62/16	4.66/118	4.03/102	0.31/8	0.72/18	3.22/82	7.47/190	0.28/7

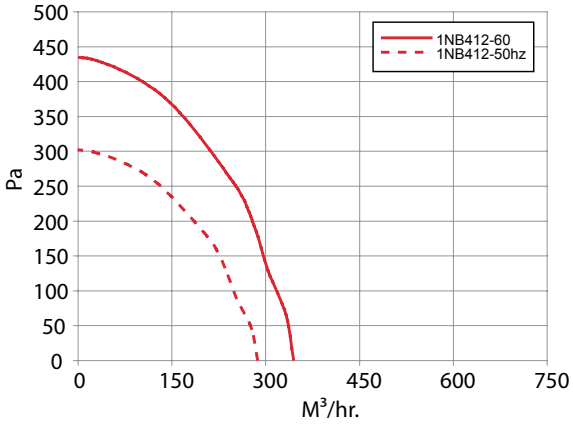
1NB Models





Performance Curves 1NB Models





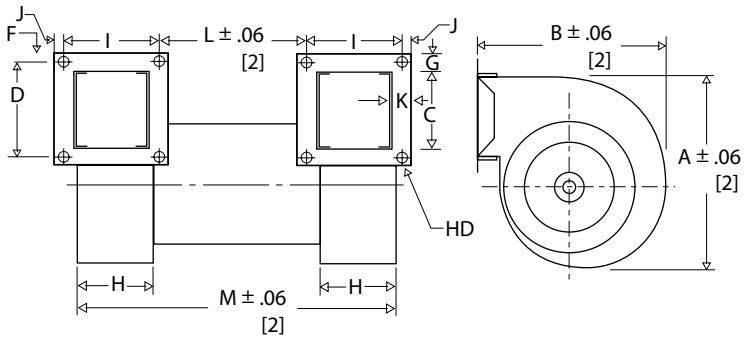
Performance Data **2NB Models**

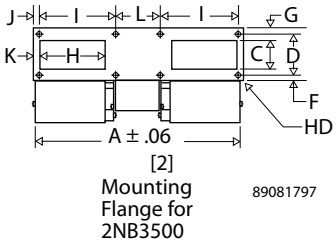
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Maximum Operating Temperature (°F/°C)	104/40	104/40
2NB300 Models		
Catalog Numbers	**2NB300115**	**2NB300230**
Free Airflow (CFM/M^3/hr.)	130/221	130/221
RPM	2900	2900
Nominal Run Current Maximum (Amps)	0.9	0.5
Nominal Start Current Maximum (Amps)	1.2	0.6
Power Consumption (Watts)	70	70
Weight (lb./kg)	6/2.7	6/2.7
2NB3500 Models		
Catalog Numbers	**2NB3500115**	**2NB3500230**
Free Airflow (CFM/M^3/hr.)	300/510	300/510
RPM	3050	3050
Nominal Run Current Maximum (Amps)	1.8	0.9
Nominal Start Current Maximum (Amps)	2.5	1.3
Power Consumption (Watts)	125	125
Weight (lb./kg)	8/3.6	8/3.6
2NB412 Models		
Catalog Numbers	**2NB412115**	**2NB412230**
Free Airflow (CFM/M^3/hr.)	360/612	360/612
RPM	3000	3000
Nominal Run Current Maximum (Amps)	1.6	0.8
Nominal Start Current Maximum (Amps)	4	2
Power Consumption (Watts)	225	225
Weight (lb./kg)	9/4.1	9/4.1
2NB424 Models		
Catalog Numbers	**2NB424115**	**2NB424230**
Free Airflow (CFM/M^3/hr.)	595/1011	595/1011
RPM	3100	3100
Nominal Run Current Maximum (Amps)	4	2
Nominal Start Current Maximum (Amps)	6.8	3.5
Power Consumption (Watts)	400	400
Weight (lb./kg)	12/5.4	12/5.4
2NB512 Models		
Catalog Numbers	**2NB512115**	**2NB512230**
Free Airflow (CFM/M^3/hr.)	500/850	500/850
RPM	1700	1700
Nominal Run Current Maximum (Amps)	1.5	0.8
Nominal Start Current Maximum (Amps)	3.5	1.7
Power Consumption (Watts)	130	130
Weight (lb./kg)	14/6.3	14/6.3

Design Data **2NB Models**

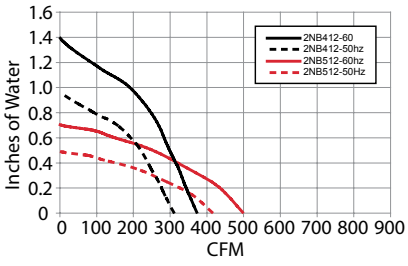
CATALOG NUMBERS	A in/mm	B in/mm	C in/mm	D in/mm	F in/mm	G in/mm	H in/mm	I in/mm	J in/mm	K in/mm	L in/mm	M in/mm	HD in/mm
2NB300XXX	5.19/132	5.25/133	2.19/56	2.50/64	.28/7	.43/11	2.13/54	2.63/67	.22/6	.42/11	3.87/98	8.69/221	.25/6
2NB3500XXX	5.57/141	5.07/129	2.00/51	2.75/70	.38/10	.78/20	4.37/111	5.25/133	.38/10	.50/13	3.00/76	13.80/350	.22/6
2NB412XXX	6.73/171	6.37/162	2.59/66	2.53/64	.38/10	- / -	3.22/82	4.03/102	.27/7	.68/17	3.31/84	10.62/270	.28/7
2NB424XXX	8.06/205	7.00/178	3.13/80	3.25/83	.63/16	.13/3	3.50/89	4.13/105	.69/18	1.12/28	3.63/92	11.25/286	.25/6
2NB512XXX	8.06/205	7.75/197	3.44/87	4.06/103	.31/8	.63/16	3.66/93	4.25/108	.31/8	.63/16	3.63/92	11.56/294	.28/7

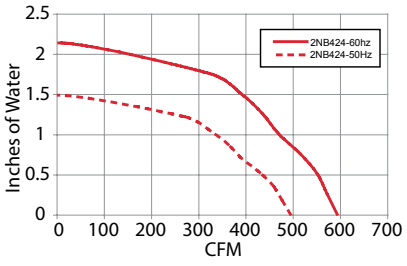
2NB Models

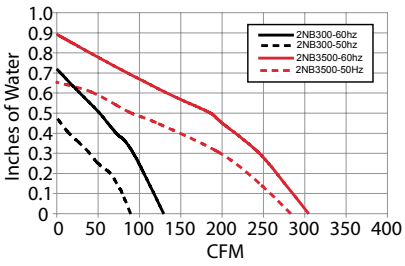


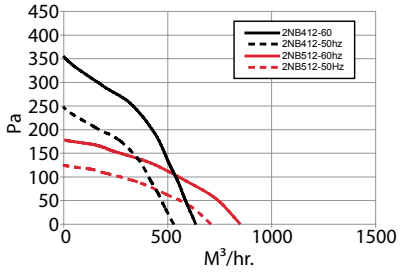


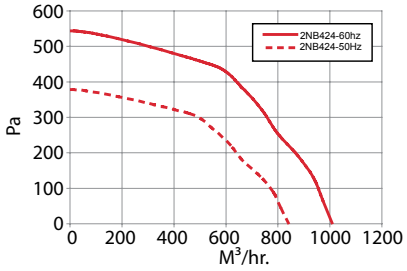
Performance Curves 2NB Models

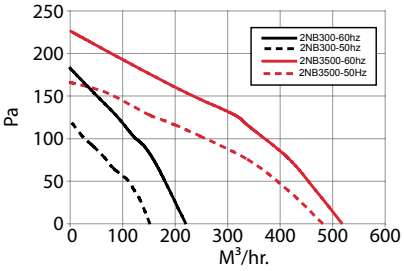












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FILTER GRILLE PANEL

APPLICATION

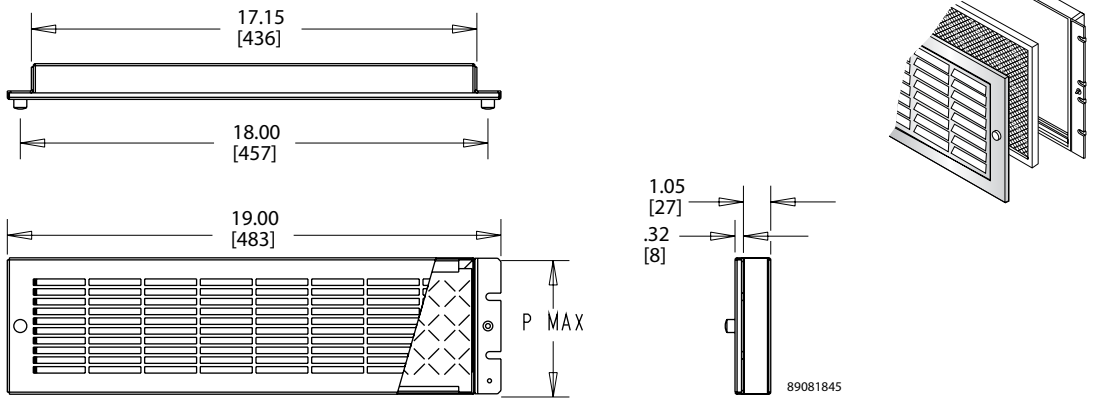
Filter Grille Panels add valuable ventilation to a rack for either inlet or exhaust air. Used alone, filter grille panels allow adequate air flow on natural convection applications or in conjunction with an air moving device to provide filtered air intake.

FEATURES

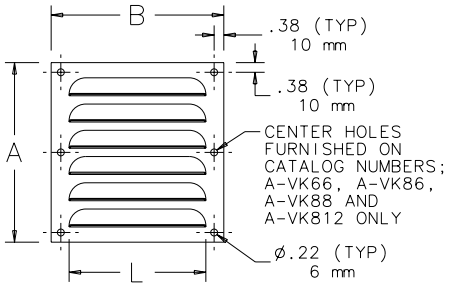
- Permanent, Washable Aluminum Filter
- 19-inch Rack Mountable
- Brushed Aluminum or Stainless Steel Grilles

Performance Data **Filter Grille Panel**

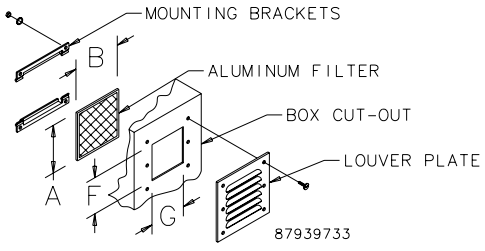
CATALOG NUMBERS					
Stainless Steel	35G19	—	7G19	875G19	105G19
Aluminum	35H19	525H19	7H19	875H19	105H19
UNIT CONSTRUCTION					
Height PMax (in./mm)	3.5/89	5.25/133	7.00/178	8.75/222	10.50/267
Width (in./mm)	19/483	19/483	19/483	19/483	19/483
Weight (lb./kg)	2/1.0	3/1.4	5/2.2	5/2.2	5/2.2



LOUVER PLATE KITS



Designed to provide ventilation in enclosures where excessive internal heat or excessive moisture is a problem. Although louvers cannot keep all moisture out of an enclosure, gasketing or sealing the perimeter of the louver plate reduces problems associated with moisture intrusion. These kits may be easily installed in the field by making a cutout of the proper size and attaching the louver plate in place. Louver plates are made from 14 gauge steel with an ANSI 61 gray polyester powder finish over pretreated surfaces or 316 stainless steel. Hardware is furnished for mounting. Custom sizes, materials, finishes, etc., can be provided on special order.



Design Data **Louver Plate Kits**

CATALOG NUMBERS	Dimensions A x B in./mm	Number of Louvers	Thickness in./mm	Length L in./mm	Opening Area $in.^2/cm^2$	Cutout Size, F in./mm	Cutout Size, G in./mm
AVK23	3.25 x 3.25/83 x 83	3	0.19/5	2.00/51	.86/5.54	2.00/51	1.75/44
AVK23SS6	3.25 x 3.25/83 x 83	3	0.19/5	2.00/51	.86/5.54	2.00/51	1.75/44
AVK33	3.88 x 4.50/98 x 114	3	0.25/6	3.00/76	1.32/8.52	2.62/67	3.00/76
AVK33SS6	3.88 x 4.50/98 x 114	3	0.25/6	3.00/76	1.32/8.52	2.62/67	3.00/76
AVK34	4.75 x 4.50/121 x 114	4	0.25/6	3.00/76	1.76/11.35	3.50/89	3.00/76
AVK34SS6	4.75 x 4.50/121 x 114	4	0.25/6	3.00/76	1.76/11.35	3.50/89	3.00/76
AVK43	4.50 x 5.50/114 x 140	3	0.25/6	4.00/102	1.88/12.10	3.25/83	4.00/102
AVK43SS6	4.50 x 5.50/114 x 140	3	0.25/6	4.00/102	1.88/12.10	3.25/83	4.00/102
AVK44	5.62 x 5.50/143 x 140	4	0.25/6	4.00/102	2.50/16.13	4.38/111	4.00/102
AVK44SS6	5.62 x 5.50/143 x 140	4	0.25/6	4.00/102	2.50/16.13	4.38/111	4.00/102
AVK64	5.62 x 7.50/143 x 191	4	0.31/8	6.00/152	5.21/33.61	4.38/111	6.00/152
AVK64SS6	5.62 x 7.50/143 x 191	4	0.31/8	6.00/152	5.21/33.61	4.38/111	6.00/152
AVK66	7.88 x 7.50/200 x 191	6	0.31/8	6.00/152	7.82/50.45	6.62/168	6.00/152
AVK66SS6	7.88 x 7.50/200 x 191	6	0.31/8	6.00/152	7.82/50.45	6.62/168	6.00/152
AVK84	5.81 x 9.50/148 x 241	4	0.31/8	8.00/203	8.08/52.12	4.56/116	8.00/203
AVK84SS6	5.81 x 9.50/148 x 241	4	0.31/8	8.00/203	8.08/52.12	4.56/116	8.00/203
AVK86	8.19 x 9.50/208 x 241	6	0.31/8	8.00/203	12.11/78.13	6.94/176	8.00/203
AVK86SS6	8.19 x 9.50/208 x 241	6	0.31/8	8.00/203	12.11/78.13	6.94/176	8.00/203
AVK88	10.56 x 9.50/268 x 241	8	0.31/8	8.00/203	16.15/104.19	9.31/236	8.00/203
AVK88SS6	10.56 x 9.50/268 x 241	8	0.31/8	8.00/203	16.15/104.19	9.31/236	8.00/203
AVK812	15.31 x 9.50/389 x 241	12	0.31/8	8.00/203	24.22/156.26	14.06/357	8.00/203
AVK812SS6	15.31 x 9.50/389 x 241	12	0.31/8	8.00/203	24.22/156.26	14.06/357	8.00/203

Catalog numbers ending in SS6 indicates 316L stainless steel

LOUVER PLATE KIT FILTERS

Design
Designed for use with Louver Plate Kit. Mounting holes on filter bracket align with louver mounting holes. Hardware supplied with louvers also secures filter brackets in place. Aluminum air filters provide good arrestment of airborne dust and dirt.

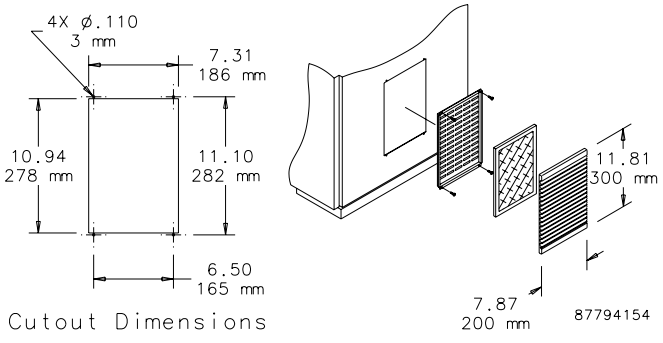
Filter Media
Filter media is composed of layers of slit and expanded aluminum providing hundreds of adhesive coated baffle surfaces for trapping impurities. Impurities are held throughout the depth of the filter. Washing with warm water will keep the filter clean. To achieve best results, Filter Adhesive is recommended.

CATALOG NUMBERS	Dimensions H x W (in./mm)	Use with Steel Louver	Use with Stainless Steel Louver
AFLT33	3.22x 3.25/82 x 83	AVK33	AVK33SS6
AFLT34	4.09 x 3.25/104 x 83	AVK34	AVK34SS6
AFLT43	3.84 x 4.25/98 x 108	AVK43	AVK43SS6
AFLT44	4.97 x 4.25/126 x 108	AVK44	AVK44SS6
AFLT64	4.45 x 6.25/113 x 159	AVK64	AVK64SS6
AFLT66	6.72 x 6.25/171 x 159	AVK66	AVK66SS6
AFLT84	4.64 x 8.25/118 x 210	AVK84	AVK84SS6
AFLT86	7.02 x 8.25/178 x 210	AVK86	AVK86SS6
AFLT88	9.39 x 8.25/239 x 210	AVK88	AVK88SS6
AFLT812	14.14 x 8.25/359 x 210	AVK812	AVK812SS6

VENT KIT

Includes a stylized louvered cover and filter package. Use as an air inlet when a cooling fan is mounted in an enclosure or use two vent kits to allow passive airflow. Mounting hardware included. Vent Kit requires cutout shown in diagram. Available in gray (RAL 7042) or black.

CATALOG NUMBERS	XPV32	PPV32B
UNIT CONSTRUCTON		
Dimension H x W x D (in./mm)	11.81 x 7.88 x 1.03 300 x 200 x 26	11.81 x 7.88 x 1.03 300 x 200 x 26
Color	Gray	Black

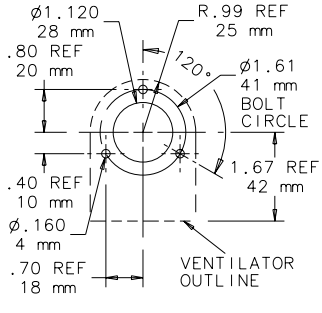


Cutout Dimensions

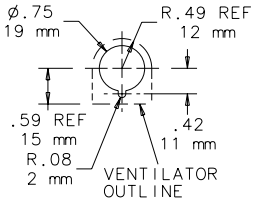
VENTILATOR

Designed to fit most metallic and non-metallic enclosures. Proper installation will provide rainproof ventilation but will not meet Type 4 or 12 requirements. Kit includes mounting hardware, and instructions.
Supplied screws are 13-mm (.515-inch) long. Some applications may require longer screws.

CATALOG NUMBERS	ANMV6	ANMV3
DESIGN DATA		
Description	Large nonmetallic vent	Small nonmetallic vent



Large Ventilator



Small Ventilator

87541390

FILTER ADHESIVE

Designed to maximize the efficiency of all expanded aluminum air filters. Use of Filter Adhesive doubles the dust-retention capacity of the filter. Adhesive contains a low-viscosity water-soluble oil which absorbs dirt particles trapped on the surface of the filter. Through the circulation of the oil, a renewed impurity-absorbing surface is constantly established. Washing with water will remove dust, dirt and other impurities. Once the filter is dry, recoat with adhesive.

CATALOG NUMBERS	
	AFLTAD
DESIGN DATA	
Description	Spray Adhesive

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H2OMIT VENT DRAINS

INDUSTRY STANDARDS

Maintains UL/cUL Type 4, 4X rating when properly installed on a UL/cUL Type 4 or 4X enclosure.

UL 508A Listed; Type 4, 4X; File No. E61997
cUL Listed per CSA C22.2 No 94; Type 4, 4X; File No. E61997

NEMA/EEMAC Type 4, 4X
IEC 60529, IP66

APPLICATION

H2OMIT Vent Drains allow accumulated water to drain out the bottom of an enclosure. The UL-approved vent drains also function as an air pressure equalizer, reducing the harmful effects of temperature-induced vacuums that could pull water and moisture into the enclosure.

FEATURES

- Uses gravity to remove collected liquids
- One-way mechanical shut-off when pressure is equalized prevents water and contaminants from entering the enclosure
- Helps reduce corrosion that can limit the life of internal electrical and electronic components
- Installs in a 7/8-in. hole in the bottom of enclosure with provided nut or in a 1/2-in. NPT/NPS threaded conduit hub
- Installs in the bottom of mild steel, aluminum, stainless steel or non-metallic enclosures
- Maintains enclosure's UL Type rating when properly installed

SPECIFICATIONS

Stainless Steel Vent Drain

- Corrosion-resistant polyester material with a Type 304 stainless steel sleeve
- 2.00-in. long x 1.38-in outside diameter

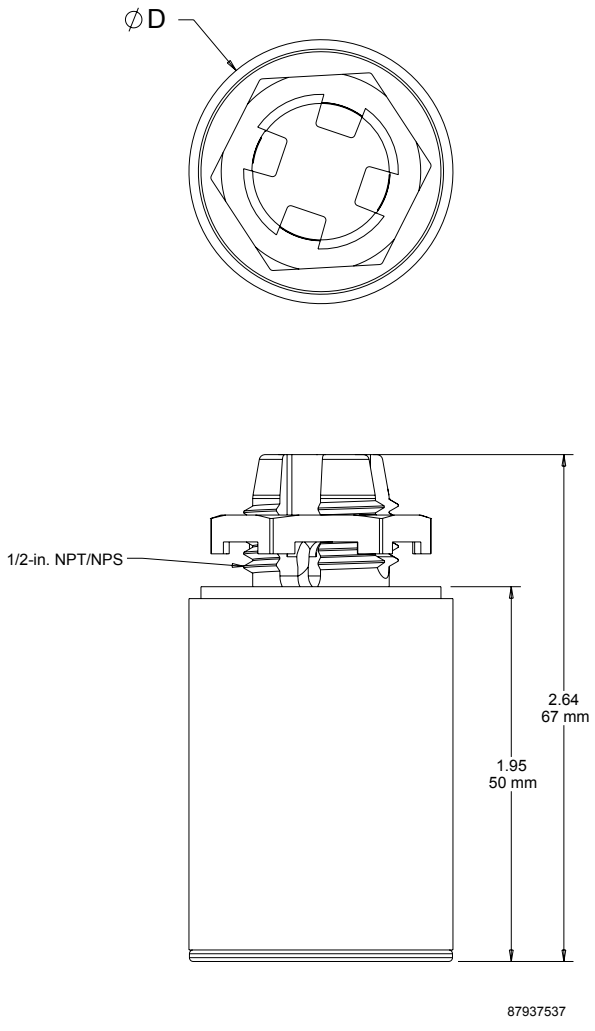
Non-Metallic Drain Vent

- Corrosion-resistant polyester material
- 2.00-in. long x 1.25-in. outside diameter

Performance Data **H2OMIT Vent Drains**

CATALOG NUMBERS	AVDR4NM	AVDR4SS4
UNIT CONSTRUCTION		
Description	Non-metallic Vent Drain	Stainless Steel Vent Drain
D (in./mm)	1.25/32	1.38/35
Quantity	1	1

H2OMIT Vent Drains



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H2OMIT THERMOELECTRIC DEHUMIDIFIER

INDUSTRY STANDARDS

UL 508A Listed; File No. E61997
cUL Listed per C22.2 No. 14; File No. E61997

CE

APPLICATION

The H2OMIT Thermoelectric Dehumidifier removes moisture from the air within an enclosure, providing an inexpensive yet highly effective way to protect electronic and electrical components from condensation.

FEATURES

- Reduces corrosion that can limit the life of internal electrical and electronic components
- Condenses moisture from internal enclosure air and standing liquids
- Built-in drain provision with plastic hose directs collected moisture to the Vent Drain (sold separately)
- Rotating side air vents direct recirculating air away from critical controls
- Mounts via DIN rail on internal panel or mounts directly onto the inside bottom of enclosure above the Vent Drain (sold separately)
- Can be used in mild steel, aluminum, stainless steel and non-metallic enclosures

SPECIFICATIONS

- High-impact ABS shell
- Operates on 24-Volt DC power
- 4.5 A max. (84 W)
- Runs continuously above 32 F[a] (power supply not included)
- Removes 8 oz. of moisture in 24 hours
- Compact 6.00-in. x 5.50-in. x 5.75-in. design
- One Thermoelectric Dehumidifier includes:
  - Four feet of plastic hose
  - Two hose retainers
  - One double-ended hose retainer
  - Six inches of Velcro®
  - Seven-inch strip of DIN rail
  - Two mounting screws

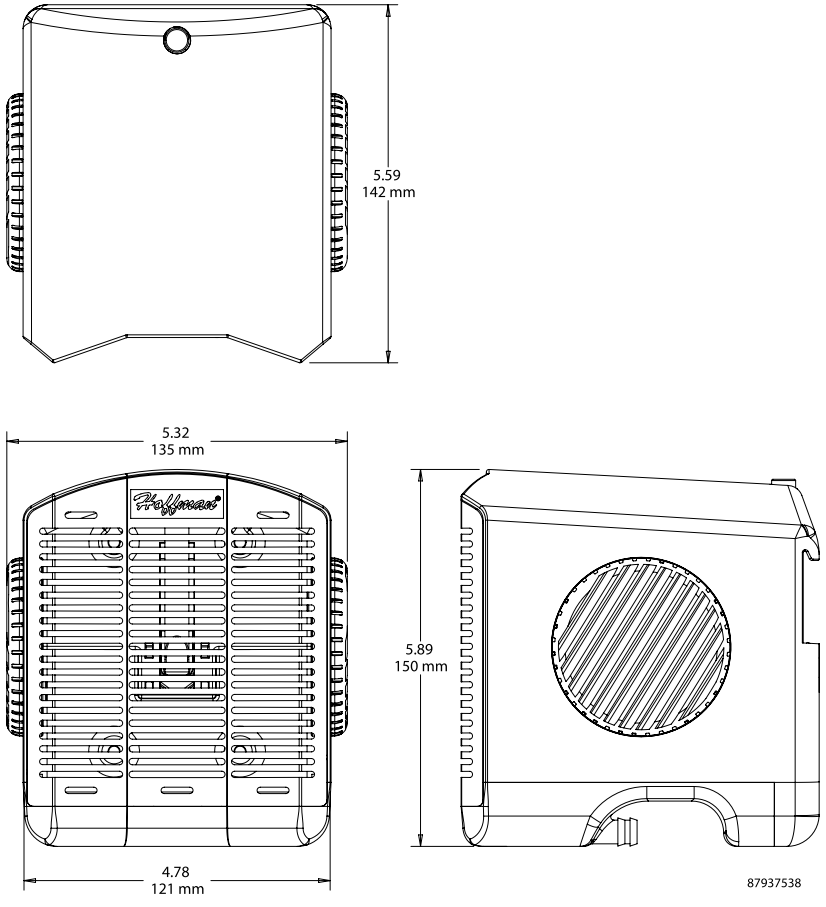
Must be used with UL-certified drain to remove pooled liquid from enclosure.
[a]If continual operation is not desired, a Mechanical Hygrostat (AMHUM) can be wired to the thermoelectric dehumidifier and then set to turn the dehumidifier on at the desired relative humidity.

VELCRO is a trademark of Velcro Industries B.V.

Performance Data **H2OMIT Thermoelectric Dehumidifier**

CATALOG NUMBERS																			
H2OMITTER																			
Dew Point Temperature : Percent Relative Humidity																			
Temp. (° F)	**100%**	**95%**	**90%**	**85%**	**80%**	**75%**	**70%**	**65%**	**60%**	**55%**	**50%**	**45%**	**40%**	**35%**	**30%**	**25%**	**20%**	**15%**	**10%**
110	110	108	106	104	**102**	100	98	95	93	90	87	84	80	76	72	65	60	51	41
105	105	103	101	99	**97**	95	93	91	88	85	83	80	76	72	67	62	55	47	37
100	100	99	97	95	**93**	91	89	86	84	81	78	75	71	67	63	58	52	44	32
95	95	96	92	90	**88**	86	87	81	79	76	73	70	67	63	59	54	48	40	32
90	90	88	87	85	**83**	81	79	79	74	71	68	65	62	59	54	49	43	36	32
85	**85**	**83**	**81**	**80**	**78**	76	74	71	69	67	64	61	58	54	50	45	38	32	—
80	80	78	77	75	73	71	69	67	65	62	59	56	53	50	45	40	35	32	—
75	75	73	72	70	68	66	64	62	60	58	55	52	49	45	41	36	32	—	—
70	70	68	67	65	63	61	59	58	55	53	50	47	44	40	37	32	—	—	
65	65	63	62	60	59	57	55	53	50	48	45	42	40	36	62	—	—	—	—
60	60	58	57	55	53	52	50	48	45	43	41	38	35	32	—	—	—	—	—
55	55	53	52	50	49	47	45	43	40	38	36	33	32	—	—	—	—	—	—
50	50	48	46	45	44	42	40	38	36	34	32	—	—	—	—	—	—	—	—
45	45	43	42	40	39	37	35	34	32	—	—	—	—	—	—	—	—	—	—
40	40	39	37	35	34	32	—	—	—	—	—	—	—	—	—	—	—	—	—
35	35	34	32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32	32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Definition: Dew Point is the temperature at which condensation forms. If the temperature of the enclosure is 85 F and the relative humidity is 80 percent, Dew Point is reached at a temperature of 78 F or below.
This means that moisture vapor will condense on any surface that is below the Dew Point temperature of 78 F.



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STAINLESS STEEL PRESSURE COMPENSATION

INDUSTRY STANDARDS

CE
NEMA Type 4X
IEC/EN 60529, IP66

APPLICATION

Pressure differentials in a tightly sealed enclosure result from heat generated by electrical and electronic equipment within the enclosure and fluctuations of outside ambient temperature. Stainless steel pressure compensation devices provide IP66 protection in corrosive applications requiring slow pressure equalization. For optimal performance, install two plugs diagonally to each other.

FEATURES

- Air permeability = 42 cubic feet/hour (1,200 liters/hour) at a pressure difference of min. 70 mbar
- Easy installation: drill one 1.60-in. (41-mm) diameter hole
- Sealing gasket (Nitrile Buna-N Rubber)

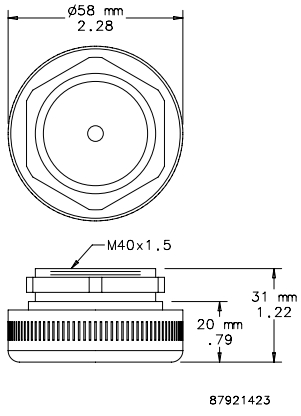
SPECIFICATIONS

- Type 316L stainless steel
- Semipermeable membrane inside the plug filters moisture and dust
- Mounting thread M40 with union nut

FINISH

- Machined Type 316L stainless steel

CATALOG NUMBERS	APCDSS6
UNIT CONSTRUCTION	
Operating/Storage Temperature (°F/°C)	-40/-40 to 176/80
Unit Dimenstions (in./mm)	2.28/58Ø x 1.22/31
Depth into Enclosure (in./mm)	.35/9



PRESSURE COMPENSATION

INDUSTRY STANDARDS

UL Type 1, 4, 4X; File No. E234324

CE
IEC/EN 60529, IP66

APPLICATION

Pressure differentials in a tightly sealed enclosure result from heat generated by electrical and electronic equipment within the enclosure and fluctuations of outside ambient temperature. Pressure compensation devices provide IP66 protection in applications requiring slow pressure equalization. For optimal performance, install two plugs diagonally to each other.

FEATURES

- Air permeability = 42 cubic feet/hour (1,200 liters/hour) at a pressure difference of min. 70 mbar
- Easy installation: drill one 1.60-in. (41-mm) diameter hole
- Sealing gasket (Nitrile Buna-N Rubber)

SPECIFICATIONS

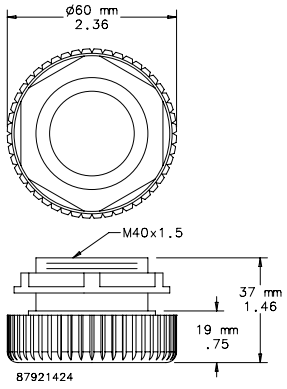
- Semipermeable membrane inside the plug to filter moisture and dust
- Mounting thread M40 with union nut
- Plastic PA66

FINISH

- Light-gray plastic. Polymeric material manufactured by DuPont.

DuPont is the trademark of E. I. duPont de Nemours and Company.

CATALOG NUMBERS	APCDABS
UNIT CONSTRUCTION	
Operating/Storage Temperature (°F/°C)	-49/-45 to 158/70
Unit Dimensions (in./mm)	2.36/60Ø x 146/37
Depth into Enclosure (in./mm)	.6/15



INDUSTRIAL CORROSION INHIBITORS

Hoffman corrosion inhibitors protect

- Interior components of electrical enclosures, boxes, consoles and wireways
- Interior components of electronic enclosures
- Electrical and electronic equipment and controls
- Parts and components that are packaged in crates during shipping and storage
- Switch gear and relay cabinets
- Interiors of pipes, conduits and fuse boxes
- Process control computers, instruments and recording devices
- Tool chest interiors and contents
- Equipment stored at construction sites

Chief Advantages

- Protects against salt and high humidity
- Eliminates the need of oiling, plating or dipping metal
- Puts protected equipment to use immediately without degreasing or coating removal

How They Work

Each inhibitor contains a special chemical combination that vaporizes and condenses on all surfaces in an enclosed area. Vapors will redeposit as needed in the event of condensation of moisture on surfaces. These vapors reach every part of an enclosure, protecting all interior components. Spraying, wiping or greasing are not required. This eliminates precoating, special wraps and drying agents. Protection is effective even in salt-water atmospheres. The AHCI5E and AHCI10E emitters have additional red-metal inhibitors for further protection. Enclosures containing corrosion inhibitors must be reasonably sealed.

Life Expectancy and Usage

The normal useful life-span of Hoffman corrosion inhibitors is in excess of one year. However, inhibitor life expectancy is shortened by approximately 25 percent when exposed to temperatures above 104 F (40 C). This product is not recommended for use where temperature exceeds 199 F. Since Hoffman corrosion inhibitors are vapor-phase protective, all surfaces to be protected should be accessible to the vapors. The maximum distance the vapors can travel is approximately 1.50 ft. (.46 m). Protection of long, narrow enclosures can be achieved with tape or multiple inhibitors.

Storage and Handling

Each Hoffman corrosion inhibitor is individually packaged in a resealable bag for maximum effectiveness at the time of usage. Corrosion inhibitors should be stored at temperatures not exceeding 120 F (45 C). Hoffman corrosion inhibitors are not returnable.

When determining the proper corrosion inhibitor for your application, assume the enclosure volume to be protected is greater than calculated if (1) cabinet doors are opened frequently, (2) cabinet is located in an extremely corrosive area and/or (3) cabinet length divided by depth is greater than four.

AHCI1DV

Foam device protects one cubic foot (28 liters) of enclosure volume for approximately one year.
Size: .25 x 1.25 x 3.00 in. (6 x 32 x 76 mm)

AHCI5E

Emitter protects 5 ft.^{3} (142 liters) of enclosure volume for approximately two years from the date of manufacture. Emitters contain additional red metal (non-ferrous) inhibitors.
Size: 2.31 in. (diameter) x 0.81 in. (high) (59 mm x 21 mm)

AHCI10E

Emitter protects 10 ft.^{3} (283 liters) of enclosure volume for approximately two years from the date of manufacture. Emitters contain additional red metal (non-ferrous) inhibitors.
Size: 2.31 in. (diameter) x 1.38 in. (high) (59 mm x 35 mm)

AHCI60R

Tape protects 60 ft.^{3} of enclosure volume per roll. Use approximately 2.50 in. (63 mm) of tape per cubic foot (28 liters) of enclosure volume to be protected. Each roll of tape is packaged individually in a resealable bag.
Size: .25 in. x .75 in. x 12.00 ft. (6 mm x 19 mm x 3.6 m)

AHCI240R

Tape protects 240 ft.^{3} of enclosure volume per roll. Use approximately 1.00 in. (25 mm) of tape per cubic foot (28 liters) of enclosure volume to be protected. Each roll of tape is packaged individually in a resealable bag.
Size: .25 in. x 2.00 in. x 20.00 ft. (6 mm x 51 mm x 6.1 m)

AHCI238S

Spray is a non-conductive, nonflammable, vapor-phase film and is non-toxic. It has essentially neutral pH value. Application provides instant protection against corrosion. Spray is water soluble and can be easily flushed away with water if desired. This product should be kept from freezing and has a shelf life of 2+ years in normal warehouse conditions.

Standard Product

CATALOG NUMBER	Enclosure Volume Protected (ft.^{3})	Enclosure Volume Protected (liters)	Package Qty.
AHCI1DV	1	28.32	50
AHCI5E	5	141.60	25
AHCI10E	10	283.20	12
AHCI60R	60 per roll	1699 per roll	3
AHCI240R	240 per roll	6797 per roll	1
AHCI238S	Corrosion Inhibitor Spray	Corrosion Inhibitor Spray	6

Metal Protection Chart

Metal	Protected by Chemical	Unprotected by Chemical
Aluminum	Marked reduction of surface attack; no pitting	Severe surface attack; tarnish; pitting
Brass[a]	Decreased tarnish; very minor surface attack	Surface discoloration; pitting
Steel, Iron	No change	Severe corrosion
Copper[a]	Slight staining	Heavy corrosive attack
Zinc Plate	Slight discoloration	Severe corrosion
Tin Plate	Slight discoloration	Moderate corrosive attack

[a] AHCI5E and AHCI10E emitters are recommended for these materials

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TOUCH-SAFE HEATERS

INDUSTRY STANDARDS

cURus Component Recognized; File No. E150057

IP 20
CE

APPLICATION

Protect electrical, mechanical equipment from low temperatures, condensation, and corrosion with this heater, which will maintain stable enclosure temperatures by using natural convection resulting in current circulation of warm air.

SPECIFICATIONS

- Heating element PTC resistor - temperature limiting
- Double Insulated Protection
- Mounting clip for 35mm DIN rail, EN 60 715
- Vertical mount

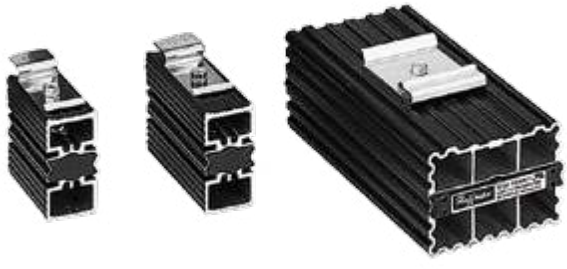
FINISH

- UL 94 V-0 Black Plastic Housing

Performance Data

CATALOG NUMBERS	DAH101TS	DAH201TS	DAH501TS
Electrical Data			
Rated Voltage (AC/DC)	**110/120**	**110/120**	**110/120**
Power Consumption (Watts)	10	20	50
Start Nominal Current (Amps)	2.5	4.5	8
Unit Construction			
H x W x D (in./mm)	3.9 X 1.5 X 3.0/98 x 38 x 75	3.9 X 1.5 X 3.0/98 x 38 x 75	4.3 X 2.4 X 3.5/110 x 60 x 90
Weight (oz)	5.0	6.1	10.4

SEMICONDUCTOR HEATERS



INDUSTRY STANDARDS

cURus Component Recognized; File No. E150057

IEC IP54
CE

APPLICATION

Protect electrical, pneumatic, hydraulic and mechanical equipment from low temperatures, condensation and corrosion with this heater, which maintains a stable enclosure temperature.

SPECIFICATIONS

- PTC (Positive Temperature Coefficient) heating element
- Mounting clip for 35-mm DIN rails EN 50022

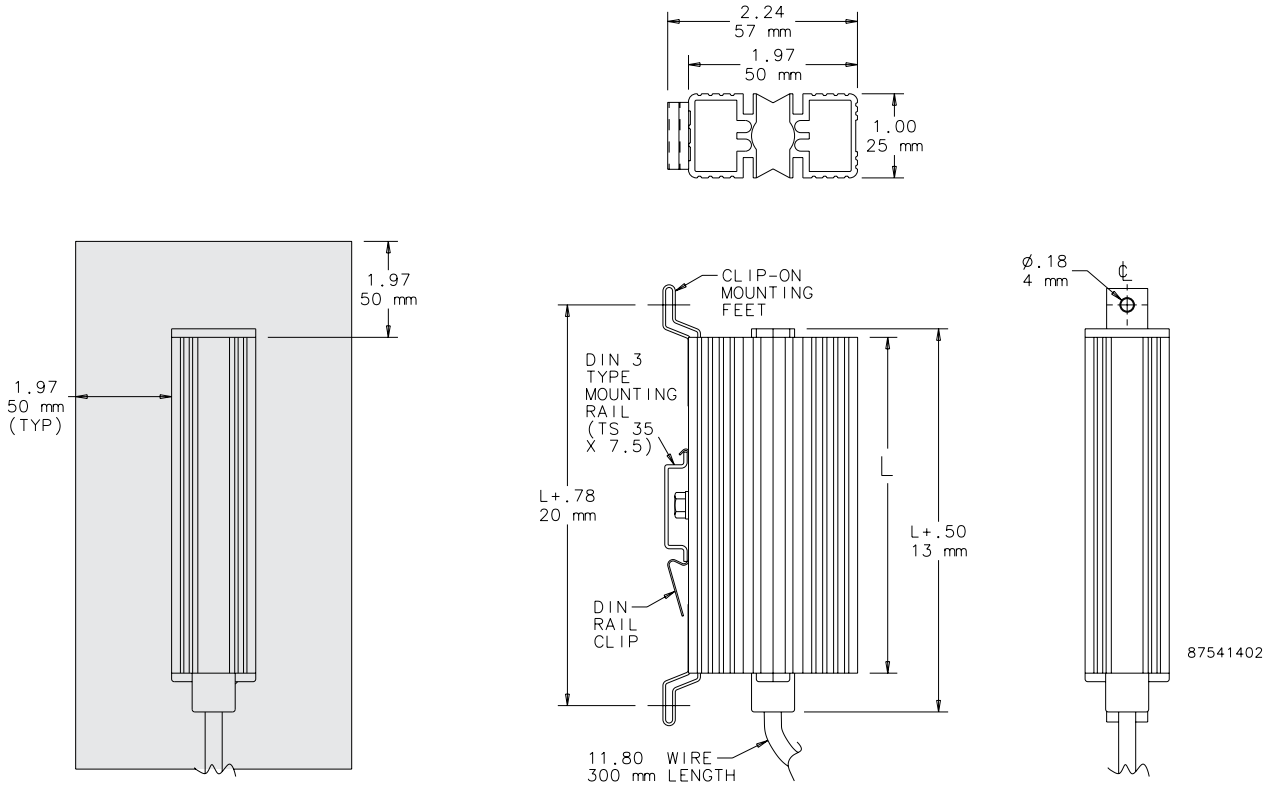
FINISH

- Black anodized, extruded aluminum.

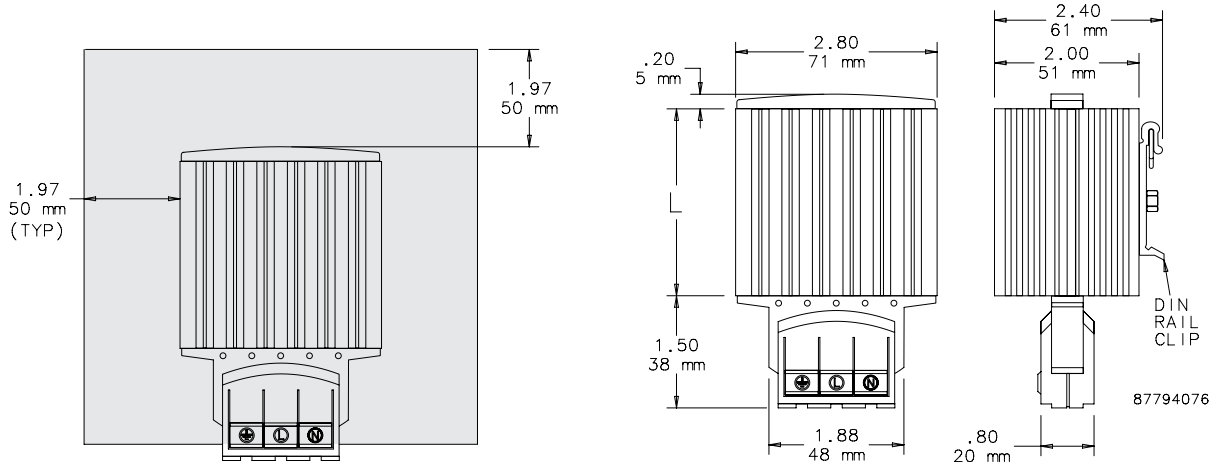
Performance Data **Semiconductor Heater**

CATALOG NUMBERS	DAH101	DAH301	DAH601
ELECTRICAL DATA			
Rated Voltage	**AC/DC 110/120**	**AC/DC 110/120**	**AC/DC 110/250**
Power Consumption (Watts)	10	30	60
Start Nominal Current (Amps)	0.8	1.2	2.5
HEATING PERFORMANCE			
Watts	**10**	**30**	**60**
UNIT CONSTRUCTION			
L (in./mm)	1.97/50	3.93/100	5.5/140
Weight (lb./kg)	0.45/0.20	0.66/0.30	1.10/0.50

Clearance Range for DAH101 and DAH301



Clearance Range for DAH601



nVent | HOFFMAN

ELECTRIC HEATERS

115/230 Volt
100/200 Watt

115/230 Volt
400/800 Watt

115/230 Volt
1300 Watt

INDUSTRY STANDARDS

UL 508A Component Recognized; File No. E61997

CSA Certified, CSA File No. LR42186
CE

APPLICATION

Protect mechanical, electrical and electronic equipment from low temperatures, condensation and corrosion with this thermostatically controlled, fan-driven heater that maintains a stable enclosure temperature.
Fan draws cool air from the bottom of the enclosure and passes this air across the thermostat and heating element before being released into enclosure cavity. Heated air is discharged through the top of the heater unit.

SPECIFICATIONS

- Aluminum housing
- Thermostat range adjustable from 0 F to 100 F (-18 C to 38 C)
- Four 10-32 x self-tapping screws are included with each heater
- Ball bearing fan
- Terminal strip with clamp connector that accepts both solid and stranded wire

FINISH

- Brushed aluminum

⚠ CAUTION

These electric heaters are not designed for use in dusty, dirty, corrosive, or hazardous locations. Portions of the heater can get hot. Adequate protection must be taken to protect people from potential burns, and to protect other components from this heat. nVent recommends this heater only be installed in a totally-enclosed metal enclosure.

DO NOT INSTALL HEATERS ON WOOD PANELS.
Heat sensitive components should not be placed near the heater discharge area since this air can be quite warm. The clearance range defines the space that must be kept free of these components for proper and safe operation of the heater.

Performance Data **100 and 200 Watt Heaters**

CATALOG NUMBERS	DAH1001A	DAH1002A	DAH2001A	DAH2002A
ELECTRICAL DATA				
Rated Voltage	**115**	**230**	**115**	**230**
Frequency (Hz)	50/60	50/60	50/60	50/60
Power Consumption (Watts)	100	100	200	200
Nominal Current (Amps)	0.98	0.49	1.89	0.95
HEATING PERFORMANCE				
Watts	**100**	**100**	**200**	**200**
UNIT CONSTRUCTION				
Weight (lb./kg)	1.6/0.73	1.6/0.73	1.6/0.73	1.6/0.73
X (in./mm)	4.00/102	4.00/102	6.00/152	6.00/152

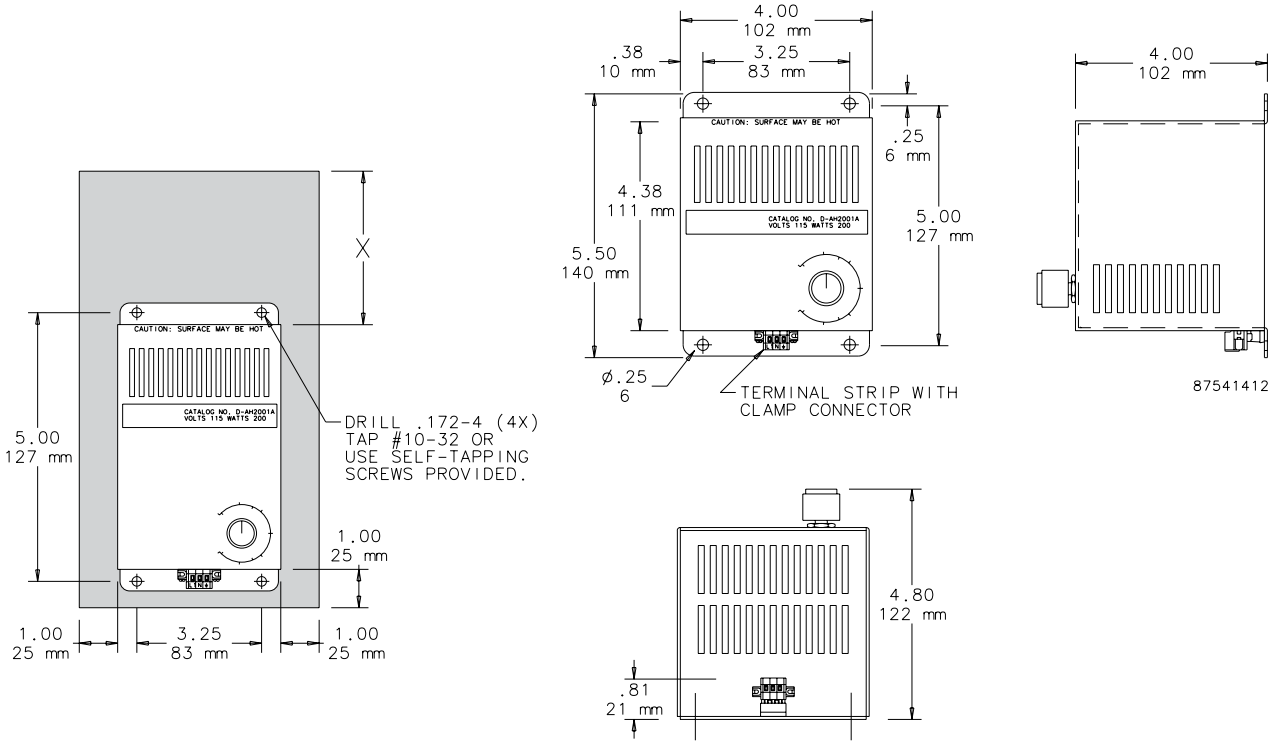
Performance Data **400 and 800 Watt Heaters**

CATALOG NUMBERS	DAH4001B	DAH4002B	DAH8001B	DAH8002B
ELECTRICAL DATA				
Rated Voltage	**115**	**230**	**115**	**230**
Frequency (Hz)	50/60	50/60	50/60	50/60
Power Consumption (Watts)	400	400	800	800
Nominal Current (Amps)	3.72	1.86	7.37	3.69
HEATING PERFORMANCE				
Watts	**400**	**400**	**800**	**800**
UNIT CONSTRUCTION				
Weight (lb./kg)	2.2/1.00	2.2/1.00	2.2/1.00	2.2/1.00
X (in./mm)	6.00/152	6.00/152	8.00/203	8.00/203

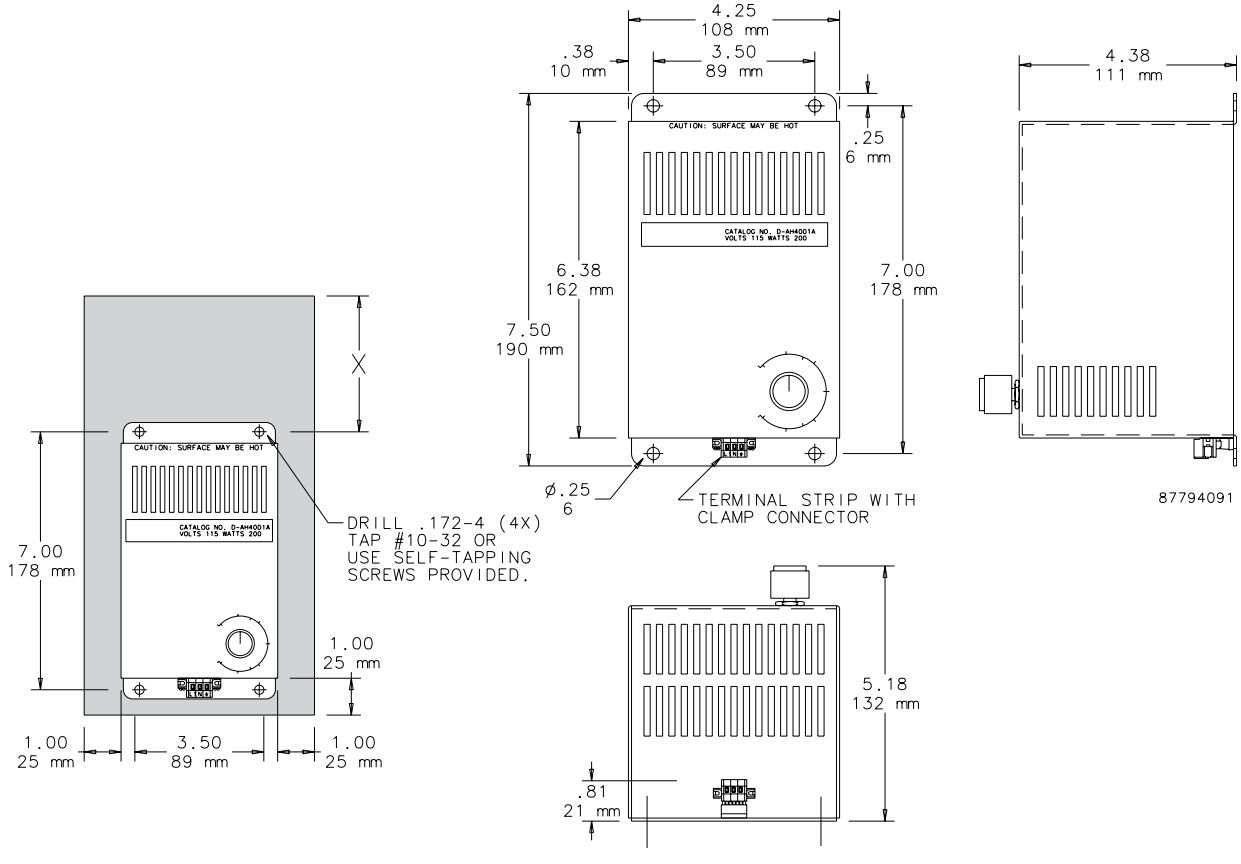
Performance Data **1300 Watt Heaters**

CATALOG NUMBERS	DAH13001C	DAH13002C
ELECTRICAL DATA		
Rated Voltage	**115**	**230**
Frequency (Hz)	50/60	50/60
Power Consumption (Watts)	1300	1300
Nominal Current (Amps)	11.5	5.7
HEATING PERFORMANCE		
Watts	**1300**	**1300**
UNIT CONSTRUCTION		
Weight (lb./kg)	3.4/1.54	3.4/1.54
X (in./mm)	8.00/203	8.00/203

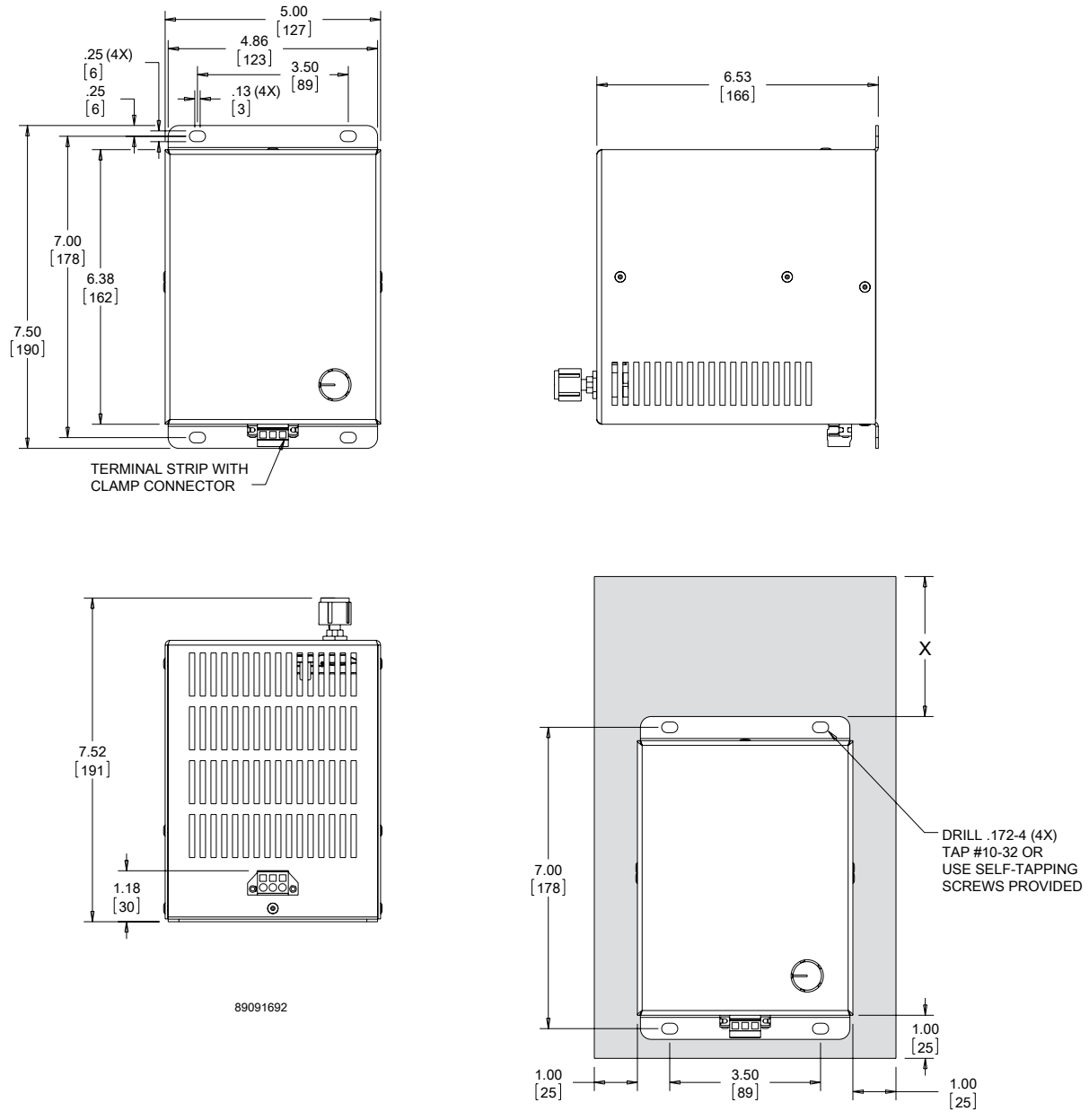
Dimensions and Clearance Range Drawing for DAH1001A, -2A and DAH2001A, -2A



Dimensions and Clearance Range Drawing for DAH4001B, -2B and DAH8001B, -2B



Dimensions and Clearance Range Drawing for DAH13001C and DAH13002C



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HAZARDOUS LOCATION HEATER, ATEX

INDUSTRY STANDARDS

CE
Conformity Certificate LCIE (Laboratoire Central des Industries Electriques) LCIE 01 ATEX 6073
EEx d IIC T4/II 2 GD, IP6x T135°C
IEC 60529, IP65/I (grounded)

APPLICATION

Designed for use in hazardous locations where electrical components require protection from condensation and corrosion, sudden temperature drops and low temperatures.

FEATURES

- Maintenance-free
- High-performance heating cartridge (element)
- Large convection surface
- Extruded aluminum heat sink
- DIN clip for mounting
- Connection cable: Si HF-JZ 3 x AWG 18 x 3.3 ft. (0.75 mm² x 1 m)
- Operating voltage 110-120 VAC

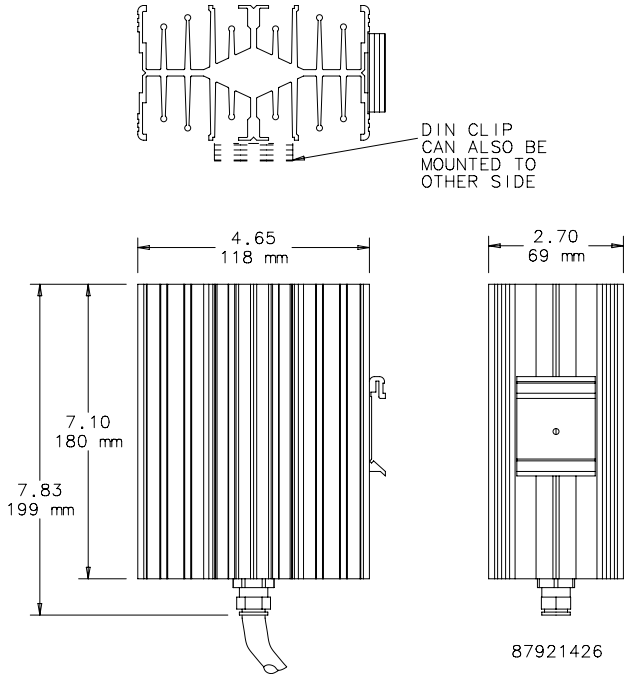
FINISH

- Black anodized

Performance Data **Hazardous Location Heater**

CATALOG NUMBERS	HLHEAT100
DESIGN DATA	
Heating Power (Watts)	100
Surface Temperature T4 (°F/°C) *	275/135
UNIT CONSTRUCTION	
Unit Dimensions - H x W x D (in. / mm)	7.10/180 x 4.65/118 x 2.70/69

* Surface temperature when mounted vertically.



HAZARDOUS LOCATION HEATERS AND THERMOSTATS

INDUSTRY STANDARDS

CE
cCSAus
See additional certifications in product tables.

APPLICATION

Designed for use in hazardous locations where electrical components require protection from cold freezing temperatures, condensation and corrosion.

SPECIFICATIONS

- 50W, 80W, 200W, 300W, 400W and 600W models available
- Provides freeze protection down to -76 F / -60 C
- Conductive and Convection heating types available
- 50W and 80W models can be mounted directly to manifolds, measuring or analyzing instruments, control valves, and similar equipment
- 200W, 300W, 400W, 600W models are finned heaters that heat the area by transferring the heat from the heater to surrounding air, creating a convection current.
- Two thermostat options available with a 50 F / 10 C or 68 F / 20 C set point

FINISH

- Black Anodized Aluminum

Performance Data **50W and 80W Hazardous Location Heaters**

CATALOG NUMBERS		
	DAHHL501AC	DAHHL801AC
HEATING PERFORMANCE		
Watts	50	80
Heating Type	Conductive	Conductive
Power Regulation	Self Limiting	Self Limiting
HAZARDOUS LOCATION CERTIFICATIONS		
Agency Approvals	ATEX, IECEx, CE, cCSAus	ATEX, IECEx, CE, cCSAus
ATEX / IECEx Certification	PTB 02 ATEX 1116 X IECEx PTB 07.0055X II 2 G Ex db IIC T4 II 2 D Ex tb IIIC T135°C	PTB 02 ATEX 1116 X IECEx PTB 07.0055X II 2 G Ex db IIC T3 II 2 D Ex tb IIIC T200°C
NEC cCSAus Certification	CSA 1655545 (LR43674) Class I Zone 1 and 2 Group IIC Class I Div 1 Groups A,B,C,D T4 Class II Div 1 Groups E,F,G	CSA 1655545 (LR43674) Class I Zone 1 and 2 Group IIC Class I Div 1 Groups A,B,C,D T3 Class II Div 1 Groups E,F,G
ELECTRICAL DATA		
Rated Voltage (VAC or VDC)	110 - 265	110 - 265
Operating Range		
Maximum (F/C)	302/150	302/150
Minimum (F/C)	-76/-60	-76/-60
UNIT CONSTRUCTION		
Material	Black, anodized, seawater-proof aluminium	
ACCESSORIES		
Thermostat*	**HLTSTAT10C, HLTSTAT20C**	
UNIT DIMENSIONS		
Height (in./mm)	3.5/90	3.5/90
Width (in./mm)	1.6/40	1.6/40
Depth (in./mm)	1.2/30	1.2/30
Weight (lb./kg)	1.1/.50	1.1/.50

* Thermostats sold separately as an accessory.

Performance Data **200W, 300W, 400W, 600W Hazardous Location Heaters**

CATALOG NUMBERS	DAHHL200AC	DAHHL300AC	DAHHL4001A	DAHHL4002A	DAHHL6001A	DAHHL6002A
HEATING PERFORMANCE						
Watts	200	300	400	400	600	600
Heating Type	Convection	Convection	Convection	Convection	Convection	Convection
Power Regulation	Self Limiting	Self Limiting	Constant Power	Constant Power	Constant Power	Constant Power
HAZARDOUS LOCATION CERTIFICATIONS						
Agency Approvals	ATEX, IECEx, CE, cCSAus		ATEX, IECEx, CE, cCSAus		ATEX, IECEx, CE, cCSAus	
ATEX / IECEx Certification	PTB 02 ATEX 1116X IECEx PTB 07.0055 X II 2 G Ex db IIC T3 II 2 D Ex tb IIIC T200°C		PTB 02 ATEX 1041X IECEx PTB 07.0052 X II 2 G Ex db IIC T3 II 2 D Ex tb IIIC T200°C		PTB 02 ATEX 1041X IECEx PTB 07.0052 X II 2 G Ex db IIC T3 II 2 D Ex tb IIIC T200°C	
NEC cCSAus Certification	CSA 1655545 (LR43674) Class I Zone 1 and 2 Group IIC Class I Div 1 Groups A,B,C,D T3 Class II Div 1 Groups E,F,G		CSA 1655545 (LR43674) Class I Zone 1 and 2 Group IIC Class I Div 1 Groups A,B,C,D T3 Class II Div 1 Groups E,F,G		CSA 1655545 (LR43674) Class I Zone 1 and 2 Group IIC Class I Div 1 Groups A,B,C,D T3 Class II Div 1 Groups E,F,G	
ELECTRICAL DATA						
Rated Voltage (VAC or VDC)	110 - 265	110 - 265	108 - 132	207 -253	108 - 132	207 -253
Operating Range						
Maximum (F/C)	302/150	302/150	302/150	302/150	302/150	302/150
Minimum (F/C)	-76/-60	-76/-60	-76/-60	-76/-60	-76/-60	-76/-60
UNIT CONSTRUCTION						
Material	Black, anodized, seawater-proof aluminium					
ACCESSORIES						
Thermostat*	HLTSTAT10C, HLTSTAT20C					
UNIT DIMENSIONS						
Height (in./mm)	8.9/225	12.8/325	8.9/225	8.9/225	12.8/325	12.8/325
Width (in./mm)	9.0/229	9.0/229	9.0/229	9.0/229	9.0/229	9.0/229
Depth (in./mm)	2.4/60	2.4/60	2.4/60	2.4/60	2.4/60	2.4/60
Weight (lb./kg)	8.7/3.95	12.5/5.65	8.7/3.95	8.7/3.95	12.5/5.65	12.5/5.65

* A thermostat is required for 400W and 600W models. It is sold separately as an accessory.

Performance Data **Hazardous Location Thermostats**

CATALOG NUMBERS	HLTSTAT10C	HLTSTAT20C
HAZARDOUS LOCATION CERTIFICATIONS		
Agency Approvals	ATEX, IECEx, CE, cCSAus	ATEX, IECEx, CE, cCSAus
ATEX / IECEx Certification	PTB 03 ATEX 1136 X IECEx PTB 07.0054 II 2 G Ex db IIC T6 II 2 D Ex tb IIIC T80°C	PTB 03 ATEX 1136 X IECEx PTB 07.0054 II 2 G Ex db IIC T6 II 2 D Ex tb IIIC T80°C
NEC cCSAus Certification	CSA 1655545 (LR43674) Class I Zone 1 and 2 Group IIC Class I Div 1 Groups A,B,C,D T6 Class II Div 1 Groups E,F,G	CSA 1655545 (LR43674) Class I Zone 1 and 2 Group IIC Class I Div 1 Groups A,B,C,D T6 Class II Div 1 Groups E,F,G
ELECTRICAL DATA		
Rated Voltage (VAC or VDC)	0-275	0-275
Max. Rated Current (Amps)	10	10
Operating Range		
Maximum (F/C)	302/150	302/150
Minimum (F/C)	-76/-60	-76/-60
Thermostats Nominal Setpoints		
Switch-on Temperature (°F/°C)	50 F/10 C	68 F/20 C
Switch-off Temperature (°F/°C)	64 F/18 C	82 F/28 C
UNIT CONSTRUCTION		
Material	Black, anodized, seawater-proof aluminium	
UNIT DIMENSIONS		
Height (in./mm)	1.10/28	1.10/28
Width (in./mm)	.90/24	.90/24
Depth (in./mm)	4.30/108	4.30/108
Weight (lb./kg)	.50/.20	.50/.20

THERMOSTAT CONTROLLER

FEATURES

- Mechanical thermostat for controlling filter fans and heaters
- Registers surrounding air and can switch inductive and resistive loads via snap-action contact
- Clips for vertically mounting on 35 mm DIN rail (EN 60715)
- An integrated resistor (RF) can be connected to improve the switch temperature difference

FINISH

- RAL7035 light gray
- Plastic housing UL94V-0

NOTES

- The contact system of the regulator is subjected to environmental influences and contact restistance may change which can lead to a voltage drop and/or self-heating of contacts
- If the Normally Closed contact is used, the switch temperature difference could be reduced by connecting terminal "N" (RF heating resistor). It causes thermal feedback which is subject to surrounding conditions and thus has to be determined for each individual application.
- Voltage only needs to be specified if the optional use of the RF resistor is desired

INDUSTRY STANDARDS

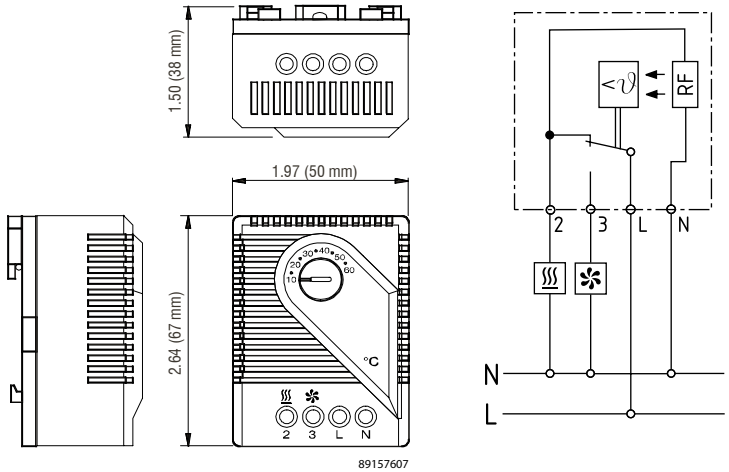
cURus; File No. E164102

CE

Performance Data **Thermostat Controller**

CATALOG NUMBERS	THERM16F	THERM26F	THERM16C	THERM26C
DESIGN DATA				
Control Range	40 to 140 F		5 to 60 C	
Switching Differences:				
Bimetal controllers	Approximately 9 F (5K), tolerance -5.4/+3.6 F (-3/+2K)			
Contact	Snap contact as break contact-NC Make contact-NO			
Switching Capacity:				
Minimum switching capacity	10 mA			
Maximum switching capacity, NC	10 A resistive / 4 A inductive @ AC 115V 10 A resistive / 4 A inductive @ AC 250V DC 30 W			
Maximum switching capacity, NO	5 A resistive / 2 A inductive @ AC 115V 5 A resistive / 2 A inductive @ AC 250V DC 30 W			
Supply Voltage	**115V**	**230V**	**115V**	**230V**
Protection	IP20			
Sensor	Bimetal			
Power Connection	4-pole terminal, clamping torqe 0.5 Nm maximum: solid/stranded wire, 14 AWG maximum (2.5 mm)*			
Ambient Temperature (°F / °C)	-4 to 176 F		-20 to 80 C	
Storage Temperature (°F / °C)	-49 to 149 F		-45 to 65 C	
UNIT CONSTRUCTION				
Temperature Display	Fahrenheit		Celsius	
Unit Dimensions - H x W x D (in./mm)	2.64 x 1.97 x 1.50/67 x 50 x 38			
Weight (oz/g)	2.00/60			

*When connecting with stranded wires, wire end ferrules must be used



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DUAL THERMOSTAT

INDUSTRY STANDARDS

cURus; File No. E164102

CSA File No. 215952
CE

APPLICATION

Two thermostats in one, the Dual Thermostat independently controls equipment heating and cooling systems.

FEATURES

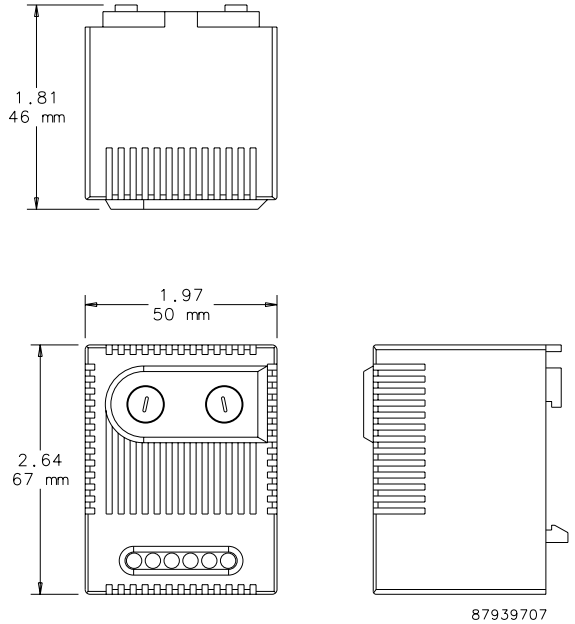
- Two thermostats; one normally closed (NC), red, and one normally open (NO), blue, in one casing
- Wide adjustable temperature range (32 -140 F)
- Thermostatic bimetallic sensor element
- Connection: 4-pole terminal for AWG 14 max (2.5 mm^2)
- Mounting clip for 35-mm DIN rail

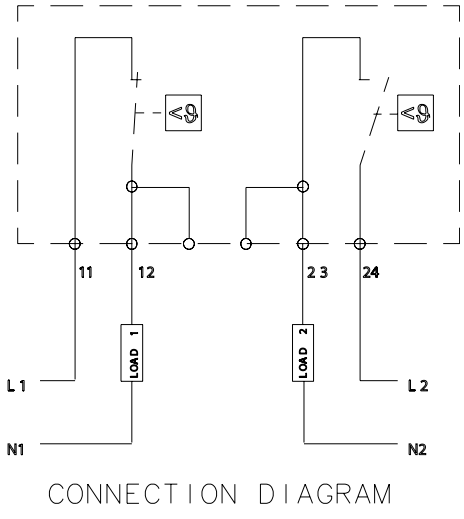
FINISH

- Light-gray plastic, UL94V-0

Performance Data **Dual Thermostat**

CATALOG NUMBERS	ADLTEMP
ELECTRICAL DATA	
Switching Capacity (Normally Closed)	10 A resistive/2 A inductive @250 VAC, DC 30 W
Switching Capacity - Normally Open	5 A resistive/2 A inductive @250 VAC, DC 30 W
Setting Range - Normally Closed (°F/C°)	32/0 to 140/60
Setting Range - Normally Open (°F/C°)	32/0 to 140/60
UNIT CONSTRUCTION	
Unit Dimensions - H x W x D (in./mm)	2.64 x 1.97 x 1.81/67 x 50 x 46





CONNECTION DIAGRAM

ELECTRONIC HYGROTHERM

APPLICATION

The Electronic Hygrotherm senses ambient temperature and relative air humidity and adjusts a connected device to maintain temperature and humidity set points.

FEATURES

- Temperature (32-140 F) and humidity (50%-90% RH) adjustment
- High switching capacity
- Optical function displays (LED) in each control
- Mounting clip for 35-mm DIN rail
- Change-over contact (relay)
- Connection: 5-pole terminal for AWG 14 max (2.5-mm square). Clamping torque .5 Nm (4.4 in-lbs) maximum.
- Plastic housing UL94V-0
- Vertical mounting
- Operating voltage is AC 100-240 V with maximum switching capacity of 10 A resistive / 1.6 A inductive at AC 240 V

FINISH

- Light-gray plastic UL94V-0

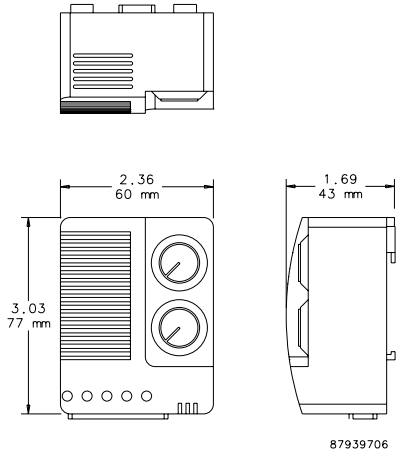
INDUSTRY STANDARDS

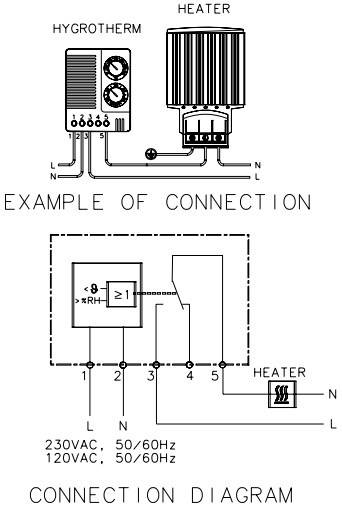
cURus; File No. E164102

CE

Performance Data **Electronic Hygrotherm**

CATALOG NUMBERS	
	ATEMHUM
ELECTRICAL DATA	
Hysteresis	~ 3.6 F (2K) ± 1.8 F (1K) tolerance
Humidity Set Point (adjustable)	50-90% RH
Temperature Set Point (adjustable) (°F/°C)	32/0 to 140/60
Operating Temperature Range (°F/°C)	-40 to 140/-40 to 60
Storage Temperature (°F/°C)	-40 to 140/-40 to 60
CONTACTS	
3 and 5	
Close at...	humidity rise or temperature drop
Open at...	humidity drop or temperature rise
Use for...	heaters, dehumidifiers, low-temp alarms
4 and 5	
Close at...	humidity drop or temperature rise
Open at...	humidity rise or temperature drop
Use for...	cooling, humidifiers, high-temp alarms
UNIT CONSTRUCTION	
Unit Dimensions - H x W x D (in./mm)	3.03 x 2.36 x 1.69/77 x 60 x 43





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MECHANICAL HYGROSTAT

INDUSTRY STANDARDS

cURus; File No. E164102

CE

APPLICATION

The Mechanical Hygrostat controls relative air humidity inside an enclosure to prevent condensation and corrosion that can damage components. It can also be connected to an enclosure heater, cooling fans, warning lights or other devices.
The critical relative humidity (RH) level for most components is 65 percent. Above 65 percent RH, condensation can form and cause electrical equipment to malfunction.

FEATURES

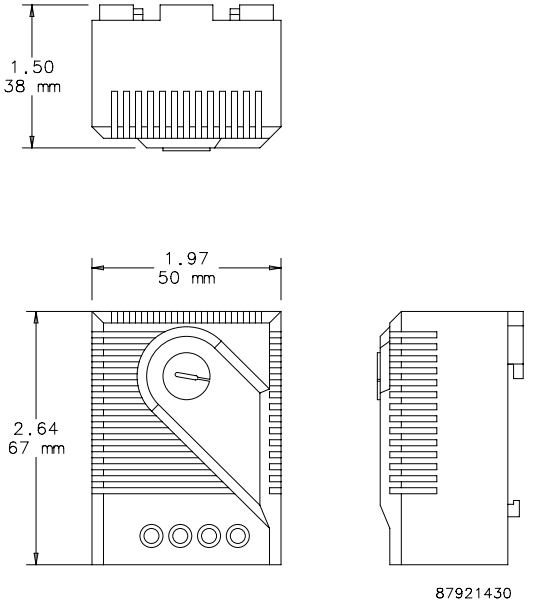
- Adjustable relative humidity range
- High switching capacity
- Long service life (>100,000 cycles)
- Maximum permissible air velocity of 50 ft./sec. (15 m/s)
- Maximum switching voltage = 250 VAC
  250 V should be switched only in a non-condensing environment
- Change-over contact
- Mounting clip for 35-mm DIN rail
- Connection: 3-pole terminal for AWG 14 max. (2.5-mm squared)
- Contact resistance less than 10 mΩ

FINISH

- Light-gray plastic, UL94V-0

Performance Data **Mechanical Hygrostat**

CATALOG NUMBERS	AMHUM
ELECTRICAL DATA	
Switching Capacity (Minimum)	100mA @ AC/DC 20 V
Switching Capacity (Maximum)	5A @ AC 250 V (resistive load) 0.2A @ AC 250 V (inductive load at cos O = 0.8) DC 20W
Operating Temperature Adjustable) (°F/°C)	32/0 to 140/60
Storage Temperature (°F/°C)	-40/-40 to 140/60
UNIT CONSTRUCTION	
Unit Dimensions - H x W x D (in./mm)	2.64 x 1.97 x 1.50/67 x 50 x 38
Weight (oz/g)	2.00/60



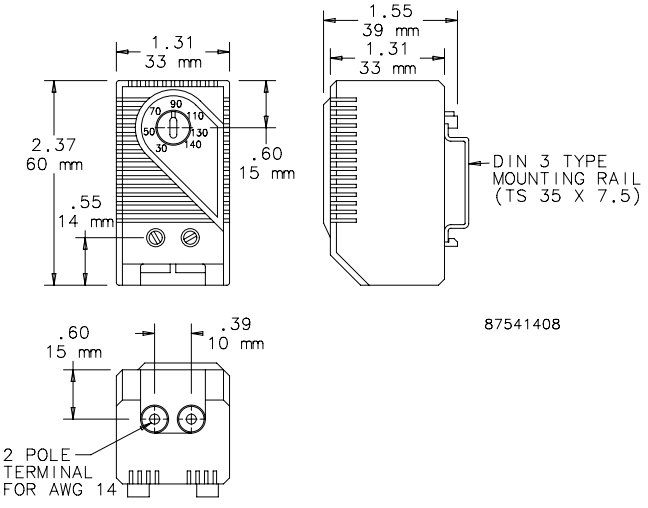
TEMPERATURE CONTROL SWITCH

FEATURES

- Additional label for conversion to Celsius scale and blank label to cover set point range label when adjustment after initial setting is not desired are included
- Bimetal temperature sensor
- Plastic housing
- Connections consist of tubular screw terminals for AWG 14 (.04 sq. in.)
- Provision for both panel mounting and DIN rail mounting

FINISH

- Molded plastic housing is black



INDUSTRY STANDARDS

cURus; File No. E164102
UL94-V0

Protection rating IEC IP30
CSA Certified, File Number 215952
CE

APPLICATION

These easy-to-install thermostats regulate and monitor air temperature in enclosures that contain heat-emitting equipment. Thermostats prolong heater and fan life expectancy by controlling operation time and increase electrical component working efficiency by exposing them to fewer environmental contaminants.

Performance Data **Temperature Control Switch**

CATALOG NUMBERS	ATEMNC	ATEMNO
ELECTRICAL DATA		
Maximum Load (Switching Capacity)		
120 VAC	15 A resistive / 2 A inductive @ 120 VAC	
250 VAC	10 A resistive / 2 A inductive @ 250 VAC	
DC	DC 30 W	
Minimum load	20 mA (all voltages)	
Contact Type	NC (normally closed), quick acting	NO (normally open), quick acting
Control Application	Heater	Fan
UNIT CONSTRUCTION		
Unit Dimensions - H x W x D (in./mm)	2.37 x 1.31 x 1.55/60 x 33 x 39	

nVent | HOFFMAN

PANEL-MOUNT FAN SPEED CONTROLS

APPLICATION

Perfect for offices, classrooms and other noise-sensitive areas. Fan Speed Control optimizes airflow in a cabinet or rack, balancing air volume requirements with noise level and power use.

FEATURES

- Automatically adjusts fan speed depending on remote temperature sensor input
- Temperature set point is field adjustable; preset at 35 C (95 F)
- Idle speed and temperature slope are field-adjustable
- Push-to-reset thermal circuit breaker inside control housing
- Compact polycarbonate control housing can be mounted in any position
- NEMA 5-15R outlet provides power to fan
- Six-foot (1.83-m) power cord plugs into standard 120 V, 50 or 60 Hz outlet
- Remote temperature sensor with 10-ft. (3.05-m) lead mounts in airflow
- Mounting brackets included

FINISH

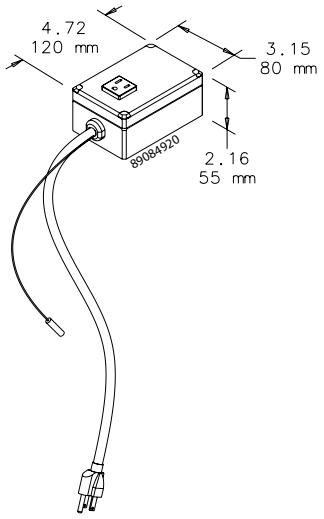
- AFANTSC: Light-gray polycarbonate control housing

INDUSTRY STANDARDS

UL 508 Listed; File No. E249700
cUL Listed per CSA C22.2 No. 14; File No. E249700

Performance Data **Panel-Mount Fan Speed Controls**

CATALOG NUMBERS	AFANTSC
ELECTRICAL DATA	
Rated Voltage	**120 VAC**
Maximum Nominal Current (Amps)	2
Temperature Settings (°F)	86, 95, 104, 113
Temperature Settings (°C)	30, 35, 40, 45
DESIGN DATA	
Description	Panel-Mount Fan Speed Control
Application	Fan speed controlled automatically with remote temperature sensor



HAZARDOUS LOCATION THERMOSTAT

APPLICATION

Compact mechanical thermostat for temperature control of heaters or low-temperature alarms in enclosures that are used in explosion-hazardous areas.

FEATURES

- Compact design
- Set temperature
- High switching capacity
- Small hysteresis (switching difference)
- Long service life (greater than 100,000 cycles)
- Can usually be connected directly and switched without the need for additional relays
- Thermostatic bimetallic sensor element
- One-pole contact opens with rising temperature
- Mounting bracket and DIN clip for mounting
- Connection cable: Si HF - JZ 3 x AWG 18 x 3.3 ft. (0.75 mm² x 1 m)

FINISH

- Black anodized aluminum

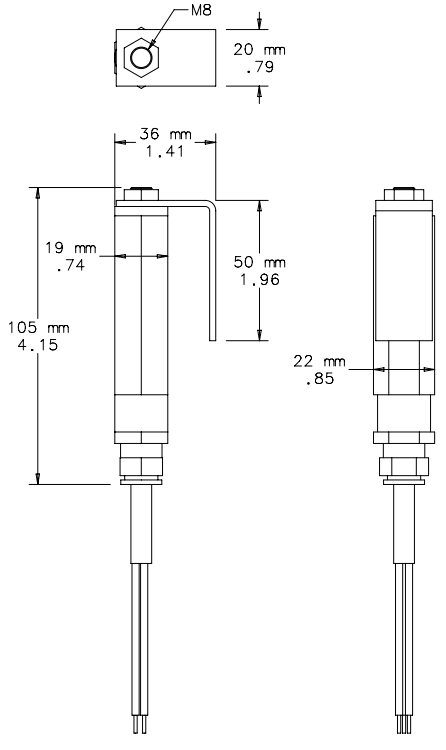
INDUSTRY STANDARDS

CE
Conformity Certificate LCIE (Laboratoire Central des Industries Electriques) LCIE 01 ATEX 6074

EEx d IIC T6/II 2 GD, IP6x T85 °C
IEC 60529, IP65/1 (grounded)

Performance Data **Hazardous Location Thermostat**

CATALOG NUMBERS	HLTHERMNC
DESIGN DATA	
Maximum Operating Voltage (AC)	250 V
Maximum Operating Voltage (DC)	100 V
Switching Capacity @ 250 VAC	4A resistive; 1A ind. (cos f = 0.6)
Switch Off (Open) Temperature (°F)	77 +/- 6
Switch Off (Open) Temperature (°C)	25 +/- 3K
Switch On (Closed) Temperature below Switch Off Temperature (°F)	7.2 +/- 2
Switch On (Closed) Temperature below Switch Off Temperature (°C)	4 +/- 1K



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CHAPTER 12
ACCESSORIES

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WINDOW KITS

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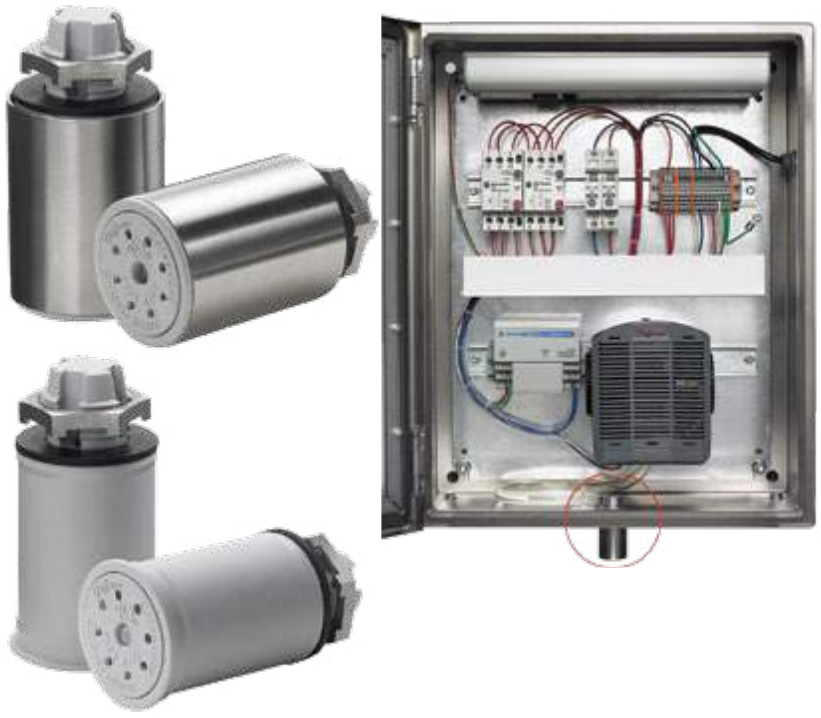
H2OMIT VENT DRAINS, TYPE 4X



INDUSTRY STANDARDS

Maintains UL/cUL Type 4, 4X rating when properly installed on a UL/cUL Type 4 or 4X enclosure.

UL 508A Listed; Type 4, 4X; File No. E61997
cUL Listed per CSA C22.2 No 94; Type 4, 4X; File No. E61997

NEMA/EEMAC Type 4, 4X
IEC 60529, IP66

APPLICATION

H2OMIT Vent Drains allow accumulated water to drain out the bottom of an enclosure. The UL-approved vent drains also function as an air pressure equalizer, reducing the harmful effects of temperature-induced vacuums that could pull water and moisture into the enclosure.

FEATURES

- Uses gravity to remove collected liquids
- One-way mechanical shut-off when pressure is equalized prevents water and contaminants from entering the enclosure
- Helps reduce corrosion that can limit the life of internal electrical and electronic components
- Installs in a 7/8-in. hole in the bottom of enclosure with provided nut or in a 1/2-in. NPT/NPS threaded conduit hub
- Installs in the bottom of mild steel, aluminum, stainless steel or non-metallic enclosures
- Maintains enclosure's UL Type rating when properly installed

SPECIFICATIONS

Stainless Steel Vent Drain

- Corrosion-resistant polyester material with a Type 304 stainless steel sleeve
- 2.00-in. long x 1.38-in outside diameter

Non-Metallic Drain Vent

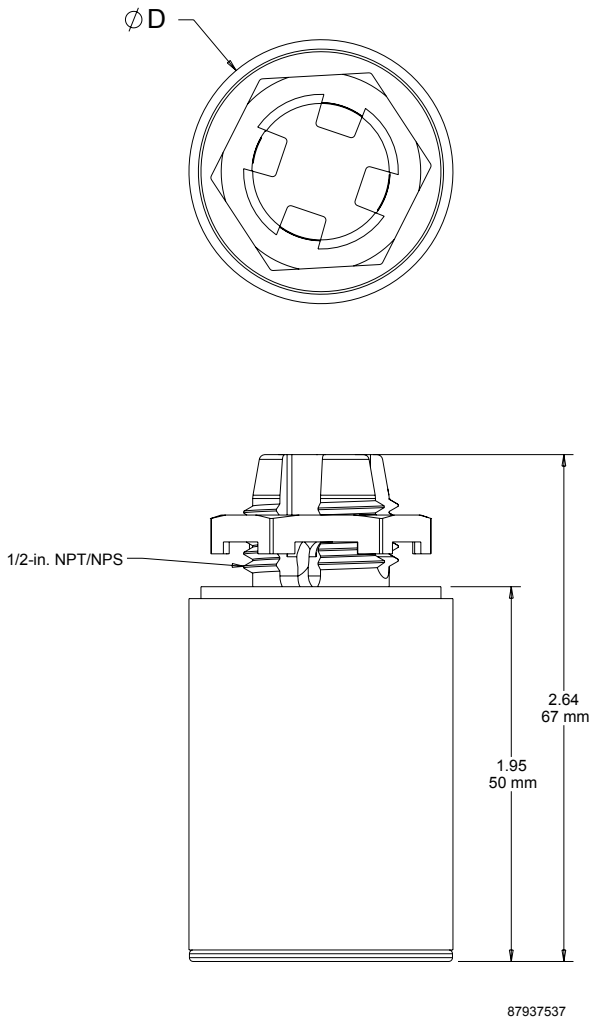
- Corrosion-resistant polyester material
- 2.00-in. long x 1.25-in. outside diameter

BULLETIN: H20

Standard Product

Catalog Number	Description	D (in.)	D (mm)	Quantity
AVDR4NM	Non-metallic Vent Drain	1.25	32	1
AVDR4SS4	Stainless Steel Vent Drain	1.38	35	1

H2OMIT Vent Drains



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H2OMIT THERMOELECTRIC DEHUMIDIFIER

INDUSTRY STANDARDS

UL 508A Listed; File No. E61997
cUL Listed per C22.2 No. 14; File No. E61997

CE

APPLICATION

The H2OMIT Thermoelectric Dehumidifier removes moisture from the air within an enclosure, providing an inexpensive yet highly effective way to protect electronic and electrical components from condensation.

FEATURES

- Reduces corrosion that can limit the life of internal electrical and electronic components
- Condenses moisture from internal enclosure air and standing liquids
- Built-in drain provision with plastic hose directs collected moisture to the Vent Drain (sold separately)
- Rotating side air vents direct recirculating air away from critical controls
- Mounts via DIN rail on internal panel or mounts directly onto the inside bottom of enclosure above the Vent Drain (sold separately)
- Can be used in mild steel, aluminum, stainless steel and non-metallic enclosures

SPECIFICATIONS

- High-impact ABS shell
- Operates on 24-Volt DC power
- 4.5 A max. (84 W)
- Runs continuously above 32 F[a] (power supply not included)
- Removes 8 oz. of moisture in 24 hours
- Compact 6.00-in. x 5.50-in. x 5.75-in. design
- One Thermoelectric Dehumidifier includes:
  - Four feet of plastic hose
  - Two hose retainers
  - One double-ended hose retainer
  - Six inches of Velcro®
  - Seven-inch strip of DIN rail
  - Two mounting screws

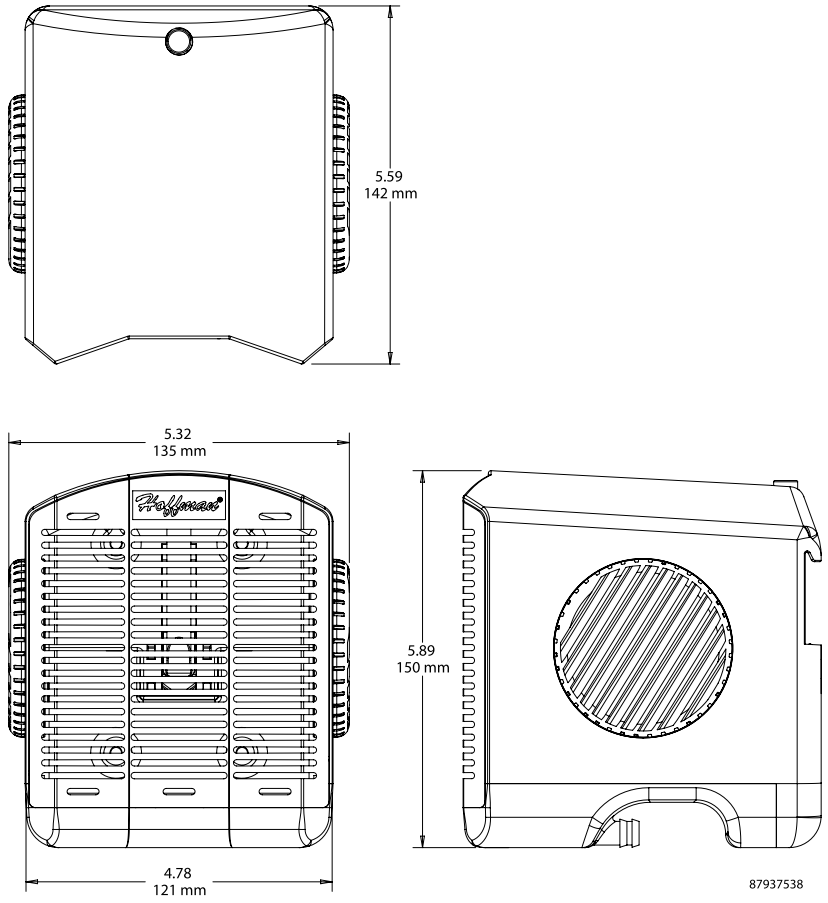
Must be used with UL-certified drain to remove pooled liquid from enclosure.
[a]If continual operation is not desired, a Mechanical Hygrostat (AMHUM) can be wired to the thermoelectric dehumidifier and then set to turn the dehumidifier on at the desired relative humidity.

VELCRO is a trademark of Velcro Industries B.V.

BULLETIN: H20

Standard Product

Catalog Number	Description
H2OMITTER	Thermoelectric Dehumidifier



Dew Point Temperature **Percent Relative Humidity**

Temp. (° F)	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%
110	110	108	106	104	**102**	100	98	95	93	90	87	84	80	76	72	65	60	51	41
105	105	103	101	99	**97**	95	93	91	88	85	83	80	76	72	67	62	55	47	37
100	100	99	97	95	**93**	91	89	86	84	81	78	75	71	67	63	58	52	44	32
95	95	96	92	90	**88**	86	87	81	79	76	73	70	67	63	59	54	48	40	32
90	90	88	87	85	**83**	81	79	76	74	71	68	65	62	59	54	49	43	36	32
85	**85**	**83**	**81**	**80**	**78**	76	74	71	69	67	64	61	58	54	50	45	38	32	—
80	80	78	77	75	73	71	69	67	65	62	59	56	53	50	45	40	35	32	—
75	75	73	72	70	68	66	64	62	60	58	55	52	49	45	41	36	32	—	—
70	70	68	67	65	63	61	59	58	55	53	50	47	44	40	37	32	—	—	—
65	65	63	62	60	59	57	55	53	50	48	45	42	40	36	62	—	—	—	—
60	60	58	57	55	53	52	50	48	45	43	41	38	35	32	—	—	—	—	—
55	55	53	52	50	49	47	45	43	40	38	36	33	32	—	—	—	—	—	—
50	50	48	46	45	44	42	40	38	36	34	32	—	—	—	—	—	—	—	—
45	45	43	42	40	39	37	35	34	32	—	—	—	—	—	—	—	—	—	—
40	40	39	37	35	34	32	—	—	—	—	—	—	—	—	—	—	—	—	—
35	35	34	32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32	32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Definition: Dew Point is the temperature at which condensation forms. If the temperature of the enclosure is 85 F and the relative humidity is 80 percent, Dew Point is reached at a temperature of 78 F or below.
This means that moisture vapor will condense on any surface that is below the Dew Point temperature of 78 F.

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STAINLESS STEEL PRESSURE COMPENSATION

INDUSTRY STANDARDS

CE
NEMA Type 4X
IEC/EN 60529, IP66

APPLICATION

Pressure differentials in a tightly sealed enclosure result from heat generated by electrical and electronic equipment within the enclosure and fluctuations of outside ambient temperature. Stainless steel pressure compensation devices provide IP66 protection in corrosive applications requiring slow pressure equalization. For optimal performance, install two plugs diagonally to each other.

FEATURES

- Air permeability = 42 cubic feet/hour (1,200 liters/hour) at a pressure difference of min. 70 mbar
- Easy installation: drill one 1.60-in. (41-mm) diameter hole
- Sealing gasket (Nitrile Buna-N Rubber)

SPECIFICATIONS

- Type 316L stainless steel
- Semipermeable membrane inside the plug filters moisture and dust
- Mounting thread M40 with union nut

FINISH

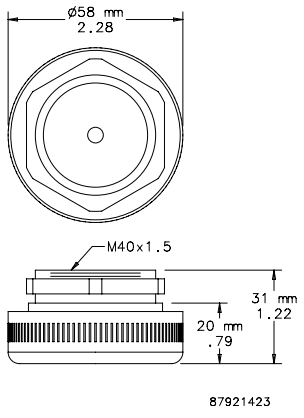
Machined Type 316L stainless steel

BULLETIN: D85

Standard Product

Catalog Number	AxB in./mm	Depth in Enclosure in./mm	Operating/Storage Temperature °F	Operating/Storage Temperature °C
APCDSS6	2.28 x 1.22 58 x 31	0.35 9	-40 to 176	-40 to 80

A dimension = diameter



PRESSURE COMPENSATION DEVICE

INDUSTRY STANDARDS

UL Type 1, 4, 4X; File No. E234324

CE
IEC/EN 60529, IP66

APPLICATION

Pressure differentials in a tightly sealed enclosure result from heat generated by electrical and electronic equipment within the enclosure and fluctuations of outside ambient temperature. Pressure compensation devices provide IP66 protection in applications requiring slow pressure equalization. For optimal performance, install two plugs diagonally to each other.

FEATURES

- Air permeability = 42 cubic feet/hour (1,200 liters/hour) at a pressure difference of min. 70 mbar
- Easy installation: drill one 1.60-in. (41-mm) diameter hole
- Sealing gasket (Nitrile Buna-N Rubber)

SPECIFICATIONS

- Semipermeable membrane inside the plug to filter moisture and dust
- Mounting thread M40 with union nut
- Plastic PA66

FINISH

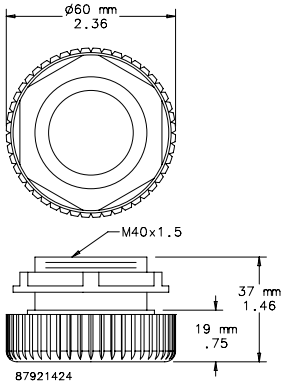
Light-gray plastic. Polymeric material manufactured by DuPont™.
DuPont is the trademark of E. I. duPont de Nemours and Company.

BULLETIN: D85

Standard Product

Catalog Number	Depth in Enclosure in./mm	Operating/Storage Temperature °F	Operating/Storage Temperature °C
APCDABS	0.6 15	-49 to 158	-45 to 70

A dimension = diameter



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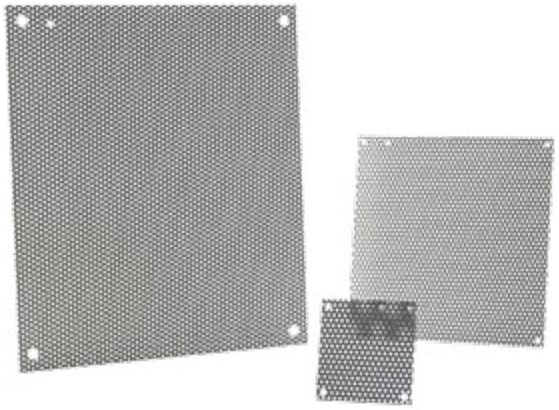
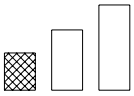
PERFORATED PANELS

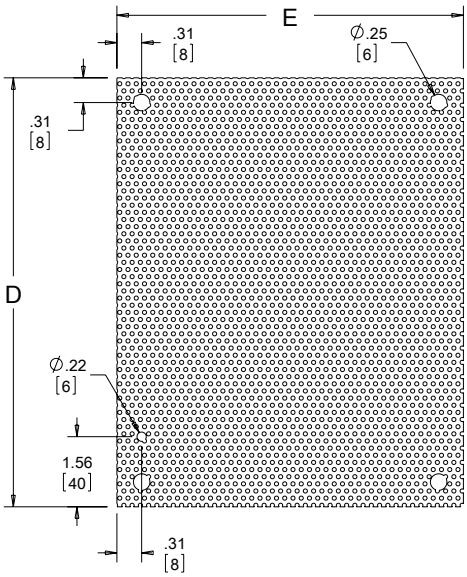


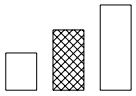
Perforated panels are 16 gauge steel and accept self-tapping screws and eliminate the need to measure, mark and drill when mounting components. Use for mounting lightweight control components.

BULLETIN: PNLP

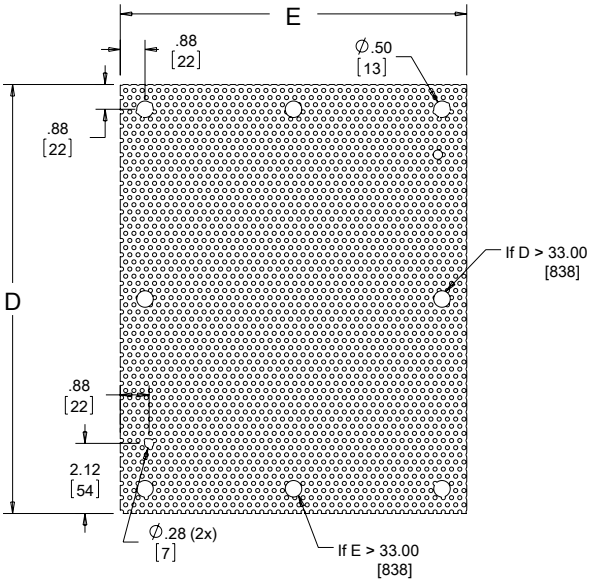
Catalog Number	Use in	Panel Size D x E (in.)	Panel Size D x E (mm)
A6N6PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	4.25 x 4.25	108 x 108
A8N6PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	6.25 x 4.25	159 x 108
A8N8PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	6.25 x 6.25	159 x 159
A10N8PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	8.25 x 6.25	210 x 159
A10N10PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	8.25 x 8.25	210 x 210
A12N10PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	10.25 x 8.25	260 x 210
A12N12PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	10.25 x 10.25	260 x 260
A14N12PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	12.25 x 10.25	311 x 260
A16N12PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	14.25 x 10.25	362 x 260
A20N12PP	Small Type 1 Panel Enclosures and Small Type 3R Boxes	18.25 x 10.25	464 x 260
A16N12MPP	Medium Type 1 Panel Enclosures	13.00 x 10.50	330 x 267
A16N16MPP	Medium Type 1 Panel Enclosures	13.00 x 14.50	330 x 368
A16N20MPP	Medium Type 1 Panel Enclosures	13.00 x 18.50	330 x 470
A18N18MPP	Medium Type 1 Panel Enclosures	15.00 x 16.50	381 x 419
A20N12MPP	Medium Type 1 Panel Enclosures	17.00 x 10.50	432 x 267
A20N16MPP	Medium Type 1 Panel Enclosures	17.00 x 14.50	432 x 368
A20N20MPP	Medium Type 1 Panel Enclosures	17.00 x 18.50	432 x 470
A24N16MPP	Medium Type 1 Panel Enclosures	21.00 x 14.50	533 x 368
A24N20MPP	Medium Type 1 Panel Enclosures	21.00 x 18.50	533 x 470
A24N24MPP	Medium Type 1 Panel Enclosures	21.00 x 22.50	533 x 572
A30N20MPP	Medium Type 1 Panel Enclosures	26.00 x 18.50	660 x 470
A30N24MPP	Medium Type 1 Panel Enclosures	26.00 x 22.50	660 x 572
A30N30MPP	Medium Type 1 Panel Enclosures	26.00 x 28.50	660 x 724
A36N24MPP	Medium Type 1 Panel Enclosures	32.00 x 22.50	813 x 572
A36N30MPP	Medium Type 1 Panel Enclosures	32.00 x 26.50	813 x 724
A16P12PP	Medium Type 3R Hinged-Cover Panel Enclosures	13.00 x 9.00	330 x 229
A16P16PP	Medium Type 3R Hinged-Cover Panel Enclosures	13.00 x 13.00	330 x 330
A20P16PP	Medium Type 3R Hinged-Cover Panel Enclosures	17.00 x 13.00	432 x 330
A18P18PP	Medium Type 3R Hinged-Cover Panel Enclosures	15.00 x 15.00	381 x 381
A20P20PP	Medium Type 3R Hinged-Cover Panel Enclosures	17.00 x 17.00	432 x 732
A24P20PP	Medium Type 3R Hinged-Cover Panel Enclosures	21.00 x 17.00	533 x 432
A24P24PP	Medium Type 3R Hinged-Cover Panel Enclosures	21.00 x 21.00	533 x 533
A30P24PP	Medium Type 3R Hinged-Cover Panel Enclosures	27.00 x 21.00	686 x 533
A36P24PP	Medium Type 3R Hinged-Cover Panel Enclosures	33.00 x 21.00	838 x 533
A30P30PP	Medium Type 3R Hinged-Cover Panel Enclosures	27.00 x 27.00	686 x 686
A36P30PP	Medium Type 3R Hinged-Cover Panel Enclosures	33.00 x 27.00	838 x 686
A36P36PP	Medium Type 3R Hinged-Cover Panel Enclosures	33.00 x 33.00	838 x 838

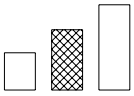




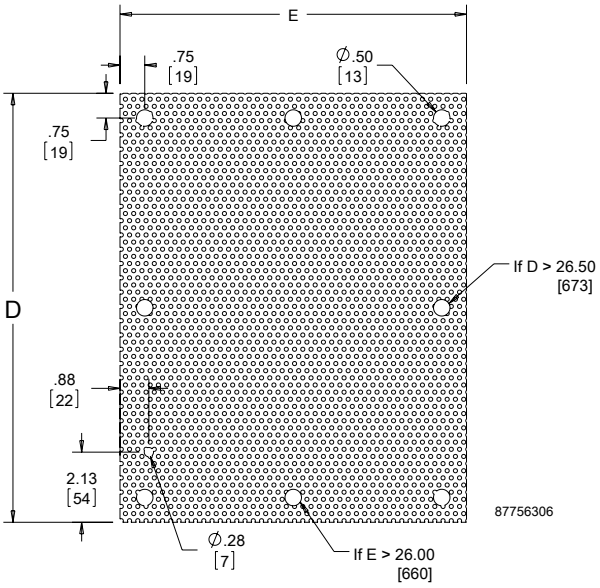


Type 3R





Type 1



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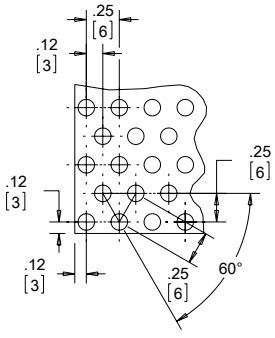
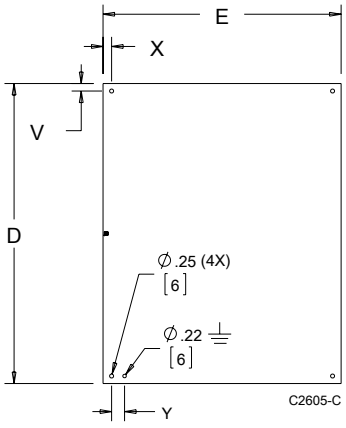


PANELS FOR JUNCTION BOXES

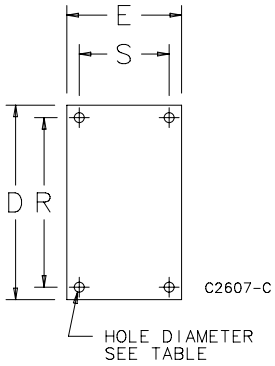
BULLETIN: PNLJ, PNLWM



Steel panels are 14 gauge, finished with white polyester powder paint or with a conductive, corrosion-resistant coating. Stainless steel panels are 14 gauge Type 304 and have a commercial #3 finish which is protected on one side with a plastic film. Aluminum panels are 5052-H32 aluminum alloy 0.080-in. (2-mm) thick and protected on one side with a plastic film. Panel mounting hardware is furnished with all enclosures which accept these panels.

Catalog Number	Material	Panel Size D x E (in.)	Panel Size D x E (mm)	V (in.)	V (mm)	X (in.)	X (mm)	Y (in.)	Y (mm)
A4P4G	Conductive	2.88 x 2.88	73 x 73	.31	8	.31	8	1.25	32
A6P4	Painted steel	4.88 x 2.88	124 x 73	.31	8	.31	8	1.25	32
A6P4G	Conductive steel	4.88 x 2.88	124 x 73	.31	8	.31	8	1.25	32
A6P4SS	Stainless Steel	4.88 x 2.88	124 x 73	.31	8	.31	8	1.25	32
A6P4AL	Aluminum	4.88 x 2.88	124 x 73	.31	8	.31	8	1.25	32
A6P6	Painted steel	4.88 x 4.88	124 x 124	.31	8	.31	8	1.25	32
A6P6G	Conductive steel	4.88 x 4.88	124 x 124	.31	8	.31	8	1.25	32
A6P6SS	Stainless Steel	4.88 x 4.88	124 x 124	.31	8	.31	8	1.25	32
A6P6AL	Aluminum	4.88 x 4.88	124 x 124	.31	8	.31	8	1.25	32
A7P7G	Conductive	5.88 x 5.88	149 x 149	.31	8	.31	8	1.25	32
A8P6	Painted steel	6.75 x 4.88	171 x 124	.25	6	.31	8	1.25	32
A8P6G	Conductive steel	6.75 x 4.88	171 x 124	.25	6	.31	8	1.25	32
A8P6SS	Stainless Steel	6.75 x 4.88	171 x 124	.25	6	.31	8	1.25	32
A8P6AL	Aluminum	6.75 x 4.88	171 x 124	.25	6	.31	8	1.25	32
A8P8	Painted steel	6.75 x 6.88	171 x 175	.25	6	.31	8	1.25	32
A8P8G	Conductive Steel	6.75 x 6.88	171 x 175	.25	6	.31	8	1.25	32
A8P8AL	Aluminum	6.75 x 6.88	171 x 175	.25	6	.31	8	1.25	32
A9P6G	Conductive	7.38 x 4.63	187 x 118	.31	8	.31	8	1.25	32
A10P8	Painted steel	8.75 x 6.88	222 x 175	.25	6	.31	8	1.25	32
A10P8G	Conductive steel	8.75 x 6.88	222 x 175	.25	6	.31	8	1.25	32
A10P8SS	Stainless Steel	8.75 x 6.88	222 x 175	.25	6	.31	8	1.25	32
A10P8AL	Aluminum	8.75 x 6.88	222 x 175	.25	6	.31	8	1.25	32
A10P10	Painted steel	8.75 x 8.88	222 x 226	.25	6	.31	8	1.25	32
A10P10G	Conductive steel	8.75 x 8.88	222 x 226	.25	6	.31	8	1.25	32
A10P10AL	Aluminum	8.75 x 8.88	222 x 226	.25	6	.31	8	1.25	32
A12P6	Painted steel	10.75 x 4.88	273 x 124	.25	6	.31	8	1.25	32
A12P6G	Conductive steel	10.75 x 4.88	273 x 124	.25	6	.31	8	1.25	32
A12P10	Painted steel	10.75 x 8.88	273 x 226	.25	6	.31	8	1.25	32
A12P10G	Conductive steel	10.75 x 8.88	273 x 226	.25	6	.31	8	1.25	32
A12P10SS	Stainless Steel	10.75 x 8.88	273 x 226	.25	6	.31	8	1.25	32
A12P10AL	Aluminum	10.75 x 8.88	273 x 226	.25	6	.31	8	1.25	32
A12P12	Painted steel	10.75 x 10.88	273 x 276	.25	6	.31	8	1.25	32
A12P12G	Conductive steel	10.75 x 10.88	273 x 276	.25	6	.31	8	1.25	32
A12P12SS	Stainless Steel	10.75 x 10.88	273 x 276	.25	6	.31	8	1.25	32
A14P8	Painted steel	12.75 x 6.88	324 x 175	.25	6	.31	8	1.25	32
A14P8G	Conductive steel	12.75 x 6.88	324 x 175	.25	6	.31	8	1.25	32
A14P12	Painted steel	12.75 x 10.88	324 x 276	.25	6	.31	8	1.25	32
A14P12G	Conductive steel	12.75 x 10.88	324 x 276	.25	6	.31	8	1.25	32
A14P12SS	Stainless Steel	12.75 x 10.88	324 x 276	.25	6	.31	8	1.25	32
A14P12AL	Aluminum	12.75 x 10.88	324 x 276	.25	6	.31	8	1.25	32
A16P10	Painted steel	14.75 x 8.88	375 x 226	.25	6	.31	8	1.25	32
A16P10G	Conductive steel	14.75 x 8.88	375 x 226	.25	6	.31	8	1.25	32
A16P14	Painted steel	14.75 x 12.88	375 x 327	.25	6	.31	8	1.25	32
A16P14G	Conductive steel	14.75 x 12.88	375 x 327	.25	6	.31	8	1.25	32
A16P14SS	Stainless Steel	14.75 x 12.88	375 x 327	.25	6	.31	8	1.25	32
A16P14AL	Aluminum	14.75 x 12.88	375 x 327	.25	6	.31	8	1.25	32
A18P16	Painted steel	16.75 x 14.88	425 x 378	.25	6	.31	8	1.25	32
A18P16G	Conductive steel	16.75 x 14.88	425 x 378	.25	6	.31	8	1.25	32
A18P16SS	Stainless Steel	16.75 x 14.88	425 x 378	.25	6	.31	8	1.25	32
A18P16AL	Aluminum	16.75 x 14.88	425 x 378	.25	6	.31	8	1.25	32
A20P16J	Painted	18.75 x 14.88	476 x 378	.47	12	.54	14	.81	21
A20P16JAL	Aluminum	18.75 x 14.88	476 x 378	.47	12	.54	14	.81	21

COMPOSITE PANELS FOR JUNCTION BOXES AND UL/NEMA WALL-MOUNT ENCLOSURES



Manufactured from light-brown, reinforced phenolic laminate sheet stock. This material has exceptional strength and chemical resistance, which makes it ideally suited for the most corrosive environments. Composite panels are intended for use in corrosion-resistant enclosures. Panel sizes are available for junction boxes and UL/NEMA size enclosures. Composite panels may be drilled and tapped but work equally as well with self-threading or thread-cutting screws. Refer to the table for recommended mounting specifications.

BULLETIN: PNLC

Standard Product

Catalog Number	Panel Size D x E in./mm	R in./mm	S in./mm	Hole Dia. in./mm	Panel Thickness in./mm
A6P4C	4.88 x 2.88 124 x 73	4.25 108	2.25 57	0.25 6	0.12 3
A6P6C	4.88 x 4.88 124 x 124	4.25 108	4.25 108	0.25 6	0.12 3
A8P6C	6.75 x 4.88 171 x 124	6.25 159	4.25 108	0.25 6	0.12 3
A10P8C	8.75 x 6.88 222 x 175	8.25 210	6.25 159	0.25 6	0.12 3
A12P10C	10.75 x 8.88 273 x 226	10.25 260	8.25 210	0.25 6	0.19 5
A14P12C	12.75 x 10.88 324 x 276	12.25 311	10.25 260	0.25 6	0.19 5
A16P14C	14.75 x 12.88 375 x 327	14.25 362	12.25 311	0.25 6	0.19 5
A18P16C	16.75 x 14.88 425 x 379	16.25 413	14.25 362	0.25 6	0.19 5
A20P16C	17.00 x 13.00 432 x 330	15.25 387	11.25 286	0.50 13	0.19 5
A20P20C	17.00 x 17.00 432 x 432	15.25 387	15.25 387	0.50 13	0.19 5
A24P20C	21.00 x 17.00 533 x 432	19.25 489	15.25 387	0.50 13	0.19 5
A24P24C	21.00 x 21.00 533 x 533	19.25 489	19.25 489	0.50 13	0.19 5
A30P24C	27.00 x 21.00 686 x 533	25.25 641	19.25 489	0.50 13	0.19 5

Composite Panel Mounting Recommendations

Screw Type	Screw Size	Hole Size in./mm	Max. Insertion Torque (lb.) in 0.12 in. Material	Max. Insertion Torque (lb.) in 0.19 in. Material	Max. Load (lb. per screw) in 0.12 in. Material	Max. Load (lb. per screw) in 0.19 in. Material
Machine (tapped hole)	8-32	.136 3	15	25	40	45
Machine (tapped hole)	10-32	.161 4	15	25	35	40
Machine (tapped hole)	1/4-20	.204 5	20	25	30	35
Thread Cutting Type T	8-32	.144 4	15	25	40	45
Thread Cutting Type T	10-32	.166 4	15	25	35	40
Thread Cutting Type T	1/4-20	.288 7	20	25	30	35
Sheet Metal A-B	8-32	.147 4	Not recommended	10	40	45
Sheet Metal A-B	10-32	.166 4	Not recommended	10	35	40
Sheet Metal A-B	1/4-20	.221 6	Not recommended	15	30	35

JUNCTION BOX AND WALL-MOUNT ENCLOSURE SWING-OUT PANEL KIT

Kits allow mounting standard Hoffman junction box and NEMA style panels (purchase separately) near the front of the enclosure for easy access to or reading of gauges, switches, pilot lights and other components. Kits consist of heavy-gauge brackets and hinges which are easily installed by drilling small holes in the sides of the enclosure and bolting the brackets in place. External screws are stainless steel; internal components are plated steel. All mounting hardware and instructions are provided. Sealing washers ensure the enclosure will meet original JIC or NEMA standards after installation.
Swing-Out Panel Kits do not fit single-door disconnect enclosures.

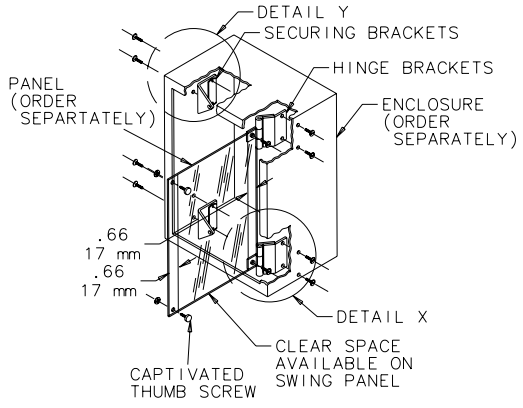
BULLETIN: A80

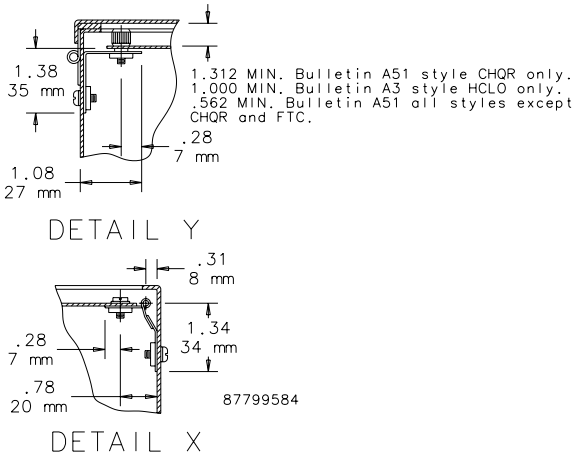
Catalog Number	Description	Maximum Load (lb.)	Maximum Load (kg)	Use In
AJCDFK	Junction Box Kit	25	11.3	- Junction boxes where A x B is 8.00 x 6.00 in. (203 x 152 mm) or larger - HCLO Type 3R enclosures where A x B is 16.00 x 12.00 in. (406 x 305 mm) or smaller
ANADFK	Wall-Mount Enclosure Kit	100	45.4	- One-door Type 4, 4X, 12 and 13 enclosures where A x B is 12.00 x 12.00 in. (305 x 305 mm) or larger - HCLO Type 3R enclosures where A x B is 16.00 x 16.00 in. (406 x 406 mm) or larger - HCR Type 3R enclosures where A x B is 16.00 x 12.00 (406 x 305 mm) or larger - Type 1 enclosures where A x B is 42.00 x 30.00 in. (1067 x 762 mm) or larger

Both kits maintain UL Type 4 and Type 4X rating when properly installed in a Hoffman enclosure.

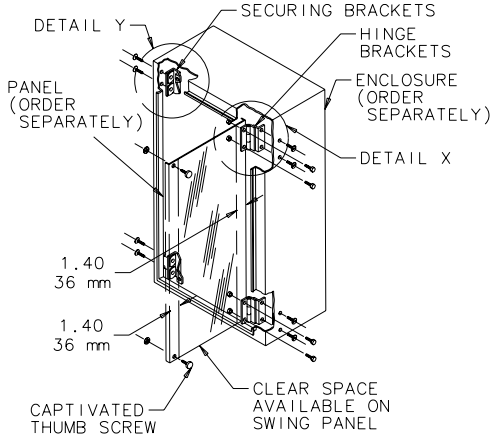
Maximum load includes the weight of the panel plus the weight of the components, with the weight of the components spread evenly over the panel.

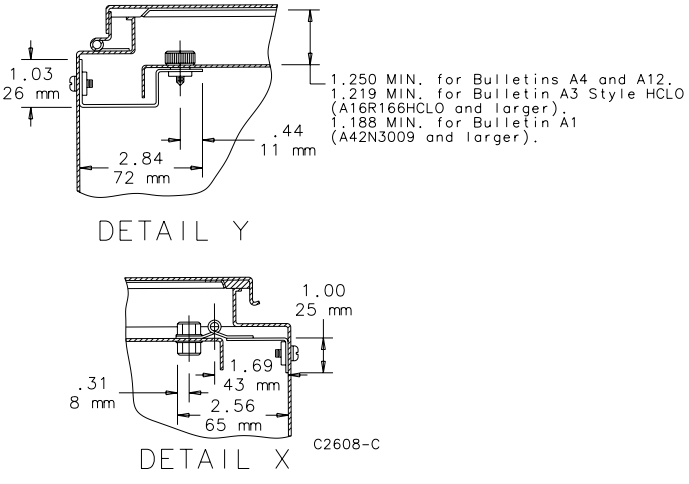
Junction Box Swing-Out Panel Kit



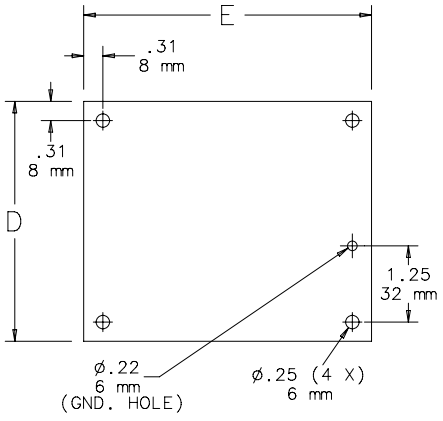


Wall-Mount Enclosure Swing-Out Panel Kit





PANELS FOR TYPE 1 ENCLOSURES AND SMALL TYPE 3R ENCLOSURES



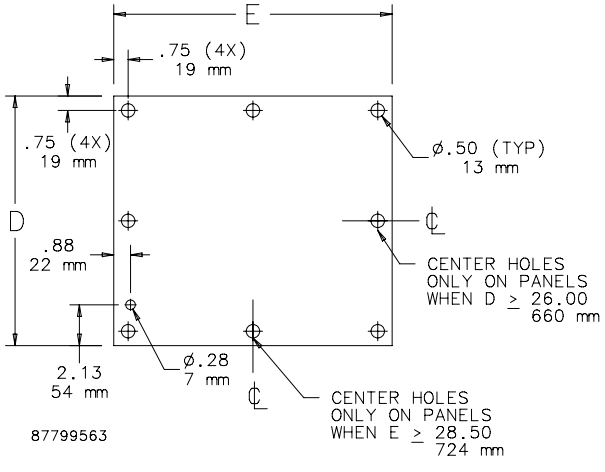
C2646-C

Steel panels are 14 gauge, finished with white polyester powder paint. Panel mounting hardware is furnished with enclosure.

BULLETIN: PNLT1

Catalog Number	Panel Size D x E (in.)	Panel Size D x E (mm)
A6N4P	4.25 x 2.25	108 x 57
A6N6P	4.25 x 4.25	108 x 108
A8N6P	6.25 x 4.25	159 x 108
A8N8P	6.25 x 6.25	159 x 159
A10N8P	8.25 x 6.25	210 x 159
A10N10P	8.25 x 8.25	210 x 210
A12N10P	10.25 x 8.25	260 x 210
A12N12P	10.25 x 10.25	260 x 260
A14N12P	12.25 x 10.25	311 x 260
A16N12P	14.25 x 10.25	362 x 260
A20N12P	18.25 x 10.25	464 x 260

PANELS FOR MEDIUM TYPE 1 ENCLOSURES



87799563

Steel panels are 14 or 12 gauge with a white polyester powder paint finish. Panel mounting hardware is furnished with enclosure.

BULLETIN: PNLT1

Catalog Number	Panel Thickness (ga.)	Panel Size D x E (in.)	Panel Size D x E (mm)
A16N12MP	14	13.00 x 10.50	330 x 267
A20N12MP	14	17.00 x 10.50	432 x 267
A16N16MP	14	13.00 x 14.50	330 x 368
A20N16MP	14	17.00 x 14.50	432 x 368
A24N16MP	14	21.00 x 14.50	533 x 368
A18N18MP	14	15.00 x 16.50	381 x 419
A16N20MP	14	13.00 x 18.50	330 x 470
A20N20MP	14	17.00 x 18.50	432 x 470
A24N20MP	14	21.00 x 18.50	533 x 470
A30N20MP	14	26.00 x 18.50	660 x 470
A24N24MP	12	21.00 x 22.50	533 x 571
A30N24MP	12	26.00 x 22.50	660 x 571
A36N24MP	12	32.00 x 22.50	813 x 571
A30N30MP	12	26.00 x 28.50	660 x 724
A36N30MP	12	32.00 x 28.50	813 x 724

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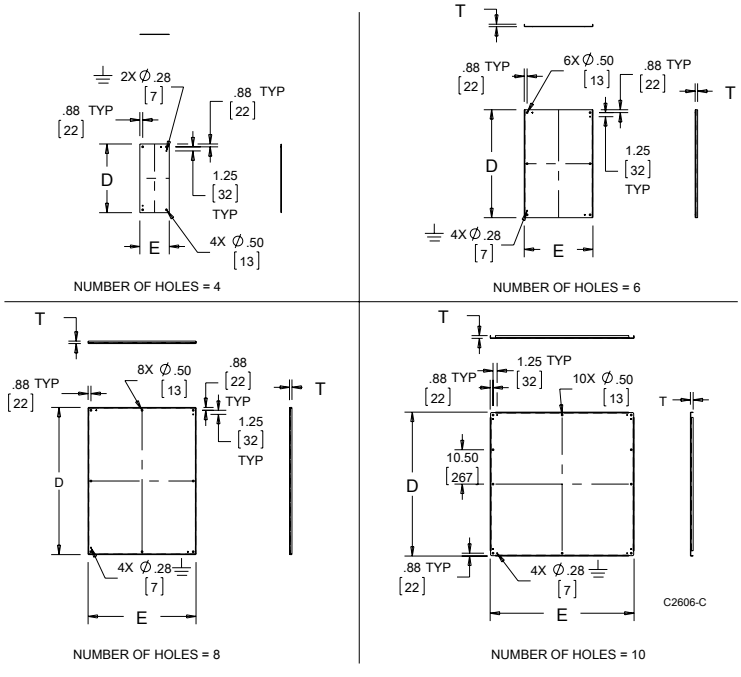
PANELS FOR TYPE 3R, 4, 4X, 12 AND 13 ENCLOSURES

Steel panels are 11 or 12 gauge, finished with white polyester powder paint or a conductive, corrosion-resistant coating. Larger panels have flanges on two or four sides. Some larger steel panels are 11 gauge and include extra holes for panel lifting. Aluminum panels are 5052-H32 aluminum alloy. Larger panels have flanges on four sides. Aluminum panels are protected on one side with a plastic film. Stainless steel panels are Type 316 stainless steel. Panel mounting hardware is furnished with all enclosures which accept these panels.

BULLETIN: PNLFS, PNLJ, PNLWM

Catalog Number	Material	Panel Size D x E (in.)	Panel Size D x E (mm)	Panel Gauge or Thickness	Edge Flanges	T (in.)	T (mm)	Number of Holes
A12P24	Painted steel	9.00 x 21.00	229 x 533	12 ga.	0	—	—	4
A12P24G	Conductive steel	9.00 x 21.00	229 x 533	12 ga.	0	—	—	4
A16P12	Painted steel	13.00 x 9.00	330 x 229	12 ga.	0	—	—	4
A16P12G	Conductive steel	13.00 x 9.00	330 x 229	12 ga.	0	—	—	4
A16P12SS6	Stainless Steel	13.00 x 9.00	330 x 229	12 ga.	0	—	—	4
A16P12AL	Aluminum	13.00 x 9.00	330 x 229	0.10 in./3 mm	0	—	—	4
A16P16	Painted steel	13.00 x 13.00	330 x 330	12 ga.	0	—	—	4
A16P16G	Conductive steel	13.00 x 13.00	330 x 330	12 ga.	0	—	—	4
A16P16SS6	Stainless Steel	13.00 x 13.00	330 x 330	12 ga.	0	—	—	4
A16P16AL	Aluminum	13.00 x 13.00	330 x 330	0.10 in./3 mm	0	—	—	4
A18P18	Painted steel	15.00 x 15.00	381 x 381	12 ga.	0	—	—	4
A18P18G	Conductive steel	15.00 x 15.00	381 x 381	12 ga.	0	—	—	4
A20P12	Painted steel	17.00 x 9.00	432 x 229	12 ga.	0	—	—	4
A20P12G	Conductive steel	17.00 x 9.00	432 x 229	12 ga.	0	—	—	4
A20P16	Painted steel	17.00 x 13.00	432 x 330	12 ga.	0	—	—	4
A20P16G	Conductive steel	17.00 x 13.00	432 x 330	12 ga.	0	—	—	4
A20P16SS6	Stainless Steel	17.00 x 13.00	432 x 330	12 ga.	0	—	—	4
A20P16AL	Aluminum	17.00 x 13.00	432 x 330	0.10 in./3 mm	0	—	—	4
A20P20	Painted steel	17.00 x 17.00	432 x 432	12 ga.	0	—	—	4
A20P20G	Conductive steel	17.00 x 17.00	432 x 432	12 ga.	0	—	—	4
A20P20SS6	Stainless steel	17.00 x 17.00	432 x 432	12 ga.	0	—	—	4
A20P20AL	Aluminum	17.00 x 17.00	432 x 432	0.10 in./3 mm	0	—	—	4
A24P16	Painted steel	21.00 x 13.00	533 x 330	12 ga.	0	—	—	4
A24P16G	Conductive steel	21.00 x 13.00	533 x 330	12 ga.	0	—	—	4
A24P16SS6	Stainless Steel	21.00 x 13.00	533 x 330	12 ga.	0	—	—	4
A24P20	Painted steel	21.00 x 17.00	533 x 432	12 ga.	2	0.75	19	4
A24P20G	Conductive steel	21.00 x 17.00	533 x 432	12 ga.	2	0.75	19	4
A24P20SS6	Stainless Steel	21.00 x 17.00	533 x 432	12 ga.	2	0.75	19	4
A24P20AL	Aluminum	21.00 x 17.00	533 x 432	0.10 in./3 mm	4	0.75	19	4
A24P24	Painted steel	21.00 x 21.00	533 x 533	12 ga.	2	0.75	19	4
A24P24G	Conductive steel	21.00 x 21.00	533 x 533	12 ga.	2	0.75	19	4
A24P24SS6	Stainless Steel	21.00 x 21.00	533 x 533	12 ga.	2	0.75	19	4
A24P24AL	Aluminum	21.00 x 21.00	533 x 533	0.10 in./3 mm	2	0.75	19	4
A30P16	Painted steel	27.00 x 13.00	686 x 330	12 ga.	2	0.75	19	4
A30P16G	Conductive steel	33.00 x 27.00	838 x 686	12 ga.	2	0.75	19	4
A30P20	Painted steel	27.00 x 17.00	686 x 432	12 ga.	2	0.75	19	4
A30P20G	Conductive steel	27.00 x 17.00	686 x 432	12 ga.	2	0.75	19	4
A30P20SS6	Stainless Steel	27.00 x 17.00	686 x 432	12 ga.	2	0.75	19	4
A30P24	Painted steel	27.00 x 21.00	686 x 533	12 ga.	2	0.75	19	4
A30P24G	Conductive steel	27.00 x 21.00	686 x 533	12 ga.	2	0.75	19	4
A30P24SS6	Stainless Steel	27.00 x 21.00	686 x 533	12 ga.	2	0.75	19	4
A30P24AL	Aluminum	27.00 x 21.00	686 x 533	0.10 in./3 mm	2	0.75	19	4
A30P30	Painted steel	27.00 x 27.00	686 x 686	12 ga.	4	0.75	19	4
A30P30G	Conductive steel	27.00 x 27.00	686 x 686	12 ga.	4	0.75	19	4
A30P30SS6	Stainless Steel	27.00 x 27.00	686 x 686	12 ga.	4	0.75	19	4
A36P16	Painted steel	33.00 X 13.00	838 X 330	12 ga.	2	0.75	19	4
A36P16G	Conductive steel	33.00 x 13.00	838 x 330	12 ga.	2	0.75	19	4
A36P24	Painted steel	33.00 x 21.00	838 x 533	12 ga.	2	0.75	19	6
A36P24G	Conductive steel	33.00 x 21.00	838 x 533	12 ga.	2	0.75	19	6
A36P24SS6	Stainless Steel	33.00 x 21.00	838 x 533	12 ga.	2	0.75	19	6
A36P24AL	Aluminum	33.00 x 21.00	838 x 533	0.10 in./3 mm	2	0.75	19	6
A36P30	Painted steel	33.00 x 27.00	838 x 686	12 ga.	4	0.75	19	6
A36P30G	Conductive steel	33.00 x 27.00	838 x 686	12 ga.	4	0.75	19	6
A36P30SS6	Stainless Steel	33.00 x 27.00	838 x 686	12 ga.	4	0.75	19	6
A36P30AL	Aluminum	33.00 x 27.00	838 x 686	0.10 in./3 mm	4	0.75	19	6
A36P36	Painted steel	33.00 x 33.00	838 x 838	12 ga.	4	0.75	19	8
A36P36G	Conductive steel	33.00 x 33.00	838 x 838	12 ga.	4	0.75	19	8
A36P36SS6	Stainless Steel	33.00 x 33.00	838 x 838	12 ga.	4	0.75	19	8
A40P24	Painted steel	37.00 x 21.00	940 x 533	12 ga.	4	0.75	19	6

Catalog Number	Material	Panel Size D x E (in.)	Panel Size D x E (mm)	Panel Gauge or Thickness	Edge Flanges	T (in.)	T (mm)	Number of Holes
A40P24G	Conductive steel	37.00 x 21.00	940 x 533	12 ga.	4	0.75	19	6
A40P30	Painted steel	37.00 x 29.00	940 x 737	12 ga.	4	0.75	19	4
A40P30G	Conductive steel	37.00 x 29.00	940 x 737	12 ga.	4	0.75	19	4
A42P24	Painted steel	39.00 x 21.00	991 x 533	12 ga.	2	0.75	19	6
A42P24G	Conductive steel	39.00 x 21.00	991 x 533	12 ga.	2	0.75	19	6
A42P30	Painted steel	39.00 x 27.00	991 x 686	12 ga.	4	0.75	19	6
A42P30G	Conductive steel	39.00 x 27.00	991 x 686	12 ga.	4	0.75	19	6
A42P30SS6	Stainless Steel	39.00 x 27.00	991 x 686	12 ga.	4	0.75	19	6
A42P36	Painted steel	39.00 x 33.00	991 x 838	12 ga.	4	0.75	19	8
A42P36G	Conductive steel	39.00 x 33.00	991 x 838	12 ga.	4	0.75	19	8
A42P36SS6	Stainless Steel	39.00 x 33.00	991 x 838	12 ga.	4	0.75	19	8
A42P42	Painted steel	39.00 x 39.00	991 x 991	12 ga.	4	0.75	19	8
A42P42G	Conductive steel	39.00 x 39.00	991 x 991	12 ga.	4	0.75	19	8
A48P24	Painted steel	45.00 x 21.00	1143 x 533	12 ga.	2	0.75	19	6
A48P24G	Conductive steel	45.00 x 21.00	1143 x 533	12 ga.	2	0.75	19	6
A48P30	Painted steel	45.00 x 27.00	1143 x 686	12 ga.	4	0.75	19	6
A48P30G	Conductive steel	45.00 x 27.00	1143 x 686	12 ga.	4	0.75	19	6
A48P36	Painted steel	45.00 x 33.00	1143 x 838	12 ga.	4	0.75	19	8
A48P36G	Conductive steel	45.00 x 33.00	1143 x 838	12 ga.	4	0.75	19	8
A48P36SS6	Stainless Steel	45.00 x 33.00	1143 x 838	12 ga.	4	0.75	19	8
A48P36AL	Aluminum	45.00 x 33.00	1143 x 838	0.10 in./3 mm	4	0.75	19	8
A48P42	Painted steel	45.00 x 39.00	1143 x 991	12 ga.	4	0.75	19	8
A48P42G	Conductive steel	45.00 x 39.00	1143 x 991	12 ga.	4	0.75	19	8
A48P48	Painted steel	44.00 x 44.00	1118 x 1118	11 ga.	4	0.84	21	10
A48P48G	Conductive steel	44.00 x 44.00	1118 x 1118	11 ga.	4	0.84	21	10
A54P42	Painted steel	50.00 x 38.00	1270 x 965	11 ga.	4	0.84	21	10
A54P42G	Conductive steel	50.00 x 38.00	1270 x 965	11 ga.	4	0.84	21	10
A60P24	Painted steel	57.00 x 21.00	1448 x 533	12 ga.	4	0.75	19	6
A60P24G	Conductive steel	57.00 x 21.00	1448 x 533	12 ga.	4	0.75	19	6
A60P30	Painted steel	57.00 x 27.00	1448 x 686	12 ga.	4	0.75	19	6
A60P30G	Conductive steel	57.00 x 27.00	1448 x 686	12 ga.	4	0.75	19	6
A60P36	Painted steel	57.00 x 33.00	1448 x 838	12 ga.	4	0.75	19	8
A60P36G	Conductive steel	57.00 x 33.00	1448 x 838	12 ga.	4	0.75	19	8
A60P36SS6	Stainless Steel	57.00 x 33.00	1448 x 838	12 ga.	4	0.75	19	8
A60P36AL	Aluminum	57.00 x 33.00	1448 x 838	0.10 in./3 mm	4	0.75	19	8
A60BFP42	Painted steel	56.00 x 38.00	1422 x 965	11 ga.	4	0.84	21	10
A60BFP42G	Conductive steel	56.00 x 38.00	1422 x 965	11 ga.	4	0.84	21	10
A60P48	Painted steel	56.00 x 44.00	1422 x 1118	11 ga.	4	0.84	21	10
A60P48G	Conductive steel	56.00 x 44.00	1422 x 1118	11 ga.	4	0.84	21	10
A60P60	Painted steel	56.00 x 56.00	1422 x 1422	11 ga.	4	0.84	21	10
A60P60G	Conductive steel	56.00 x 56.00	1422 x 1422	11 ga.	4	0.84	21	10
A72P36	Painted steel	69.00 x 33.00	1753 x 838	12 ga.	4	0.75	19	8
A72P36G	Conductive steel	69.00 x 33.00	1753 x 838	12 ga.	4	0.75	19	8
A72P60	Painted steel	68.00 x 56.00	1727 x 1422	11 ga.	4	0.84	21	10
A72P60G	Conductive steel	68.00 x 56.00	1727 x 1422	11 ga.	4	0.84	21	10
A72P72	Painted steel	68.00 x 68.00	1727 x 1727	11 ga.	4	0.84	21	10
A72P72G	Conductive steel	68.00 x 68.00	1727 x 1727	11 ga.	4	0.84	21	10



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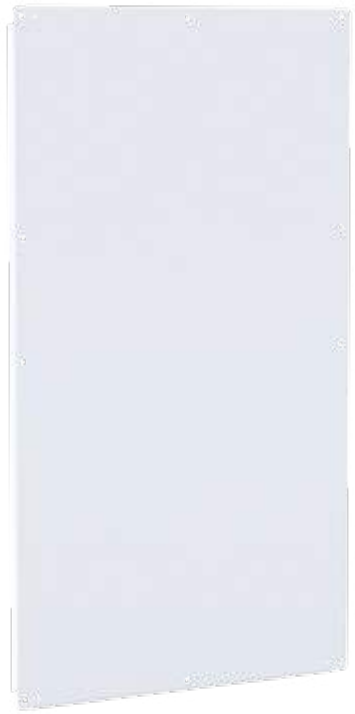
PANELS FOR FREE-STAND, MULTI-DOOR ENCLOSURES (BULLETINS A27, A28, A28S4 AND A34)



Extra panels for large enclosures (Bulletins A27, A28, A28S4 and A34) can be ordered for panel assembly prior to receiving the enclosures (enclosures include panels). Panels are 11 gauge steel with .80-in. (20-mm) flanges on four sides. Finish is white polyester powder paint or a conductive, corrosion-resistant coating. Two extra holes are provided for lifting and installing panels. Mounting hardware included with enclosure.

BULLETIN: PNLFS

Catalog Number	Finish	Panel Size D x E (in.)	Panel Size D x E (mm)	Number of Holes	Fits Enclosure Height
A72PM28	Painted steel	60.00 x 21.75	1524 x 552	8	72 in.
A72PM28G	Conductive	60.00 x 21.75	1524 x 552	8	72 in.
A72PM34	Painted steel	60.00 x 27.75	1524 x 705	8	72 in.
A72PM34G	Conductive	60.00 x 27.75	1524 x 705	8	72 in.
A72PM40	Painted steel	60.00 x 33.75	1524 x 857	8	72 in.
A72PM40G	Conductive	60.00 x 33.75	1829 x 857	8	72 in.
A72PM54	Painted steel	60.00 x 48.00	1524 x 1219	10	72 in.
A72PM54G	Conductive	60.00 x 48.00	1524 x 1219	10	72 in.
A72PM66	Painted steel	60.00 x 60.00	1524 x 1524	10	72 in.
A72PM66G	Conductive	60.00 x 60.00	1524 x 1524	10	72 in.
A72PM78	Painted steel	60.00 x 72.00	1524 x 1829	12	72 in.
A72PM78G	Conductive	60.00 x 72.00	1524 x 1829	12	72 in.
A84PM40	Painted steel	72.00 x 33.75	1829 x 857	8	84 in.
A84PM40G	Conductive	72.00 x 33.75	1829 x 857	8	84 in.
A84PM78	Painted steel	72.00 x 72.00	1829 x 1829	12	84 in.
A84PM78G	Conductive	72.00 x 72.00	1829 x 1829	12	84 in.
A86PM37	Painted steel	78.00 x 34.00	1981 x 864	8	86 in.
A86PM37G	Conductive	78.00 x 34.00	1981 x 864	8	86 in.
A86PM75	Painted steel	78.00 x 70.00	1981 x 1778	12	86 in.
A86PM75G	Conductive	78.00 x 70.00	1981 x 1778	12	86 in.
A90PM40	Painted steel	78.00 x 33.75	1981 x 857	8	90 in.
A90PM40G	Conductive	78.00 x 33.75	1981 x 857	8	90 in.
A90PM78	Painted steel	78.00 x 72.00	1981 x 1829	12	90 in.
A90PM78G	Conductive	78.00 x 72.00	1981 x 1829	12	90 in.

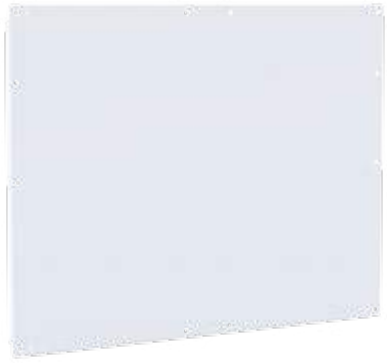
PANELS FOR FREE-STAND, TYPE 1 ONE-DOOR ENCLOSURES

Panels for free-stand, Type 1 one-door standard and disconnect enclosures are 12 gauge steel. Panels have either polyester powder paint finish or a conductive, corrosion-resistant coating.

BULLETIN: A38P

Catalog Number	Finish	Panel Size D x E (in.)	Panel Size D x E (mm)
A37P21N	Painted steel	37.16 x 21.50	944 x 546
A37P21NG	Conductive	37.16 x 21.50	944 x 546
A49P21N	Painted steel	49.16 x 21.50	1249 x 546
A49P21NG	Conductive	49.16 x 21.50	1249 x 546
A61P21N	Painted steel	61.16 x 21.50	1553 x 546
A73P21N	Painted steel	73.16 x 21.50	1858 x 546
A73P21NG	Conductive	73.16 x 21.50	1858 x 546
A49P32N	Painted steel	49.16 x 32.00	1249 x 813
A49P32NG	Conductive	49.16 x 32.00	1249 x 813
A61P32N	Painted steel	61.16 x 32.00	1553 x 813
A61P32NG	Conductive	61.16 x 32.00	1553 x 813
A73P32N	Painted steel	73.16 x 32.00	1858 x 813
A73P32NG	Conductive	73.16 x 32.00	1858 x 813

PANELS FOR FREE-STAND, TYPE 1 TWO-DOOR ENCLOSURES



Panels for free-stand, Type 1 two-door standard and disconnect enclosures are 12 gauge steel. Panels have either polyester powder paint finish or a conductive, corrosion-resistant coating.

BULLETIN: A38P

Catalog Number	Finish	Panel Size D x E (in.)	Panel Size D x E (mm)
A37P48N	Painted steel	37.16 x 48.00	944 x 1219
A37P48NG	Conductive	37.16 x 48.00	944 x 1219
A49P48N	Painted steel	49.16 x 48.00	1249 x 1219
A49P48NG	Conductive	49.16 x 48.00	1249 x 1219
A49P68N	Painted steel	49.16 x 68.00	1249 x 1727
A49P68NG	Conductive	49.16 x 68.00	1249 x 1727
A61P68N	Painted steel	61.16 x 68.00	1553 x 1727
A61P68NG	Conductive	61.16 x 68.00	1553 x 1727
A73P68N	Painted steel	73.16 x 68.00	1858 x 1727
A73P68NG	Conductive	73.16 x 68.00	1858 x 1727

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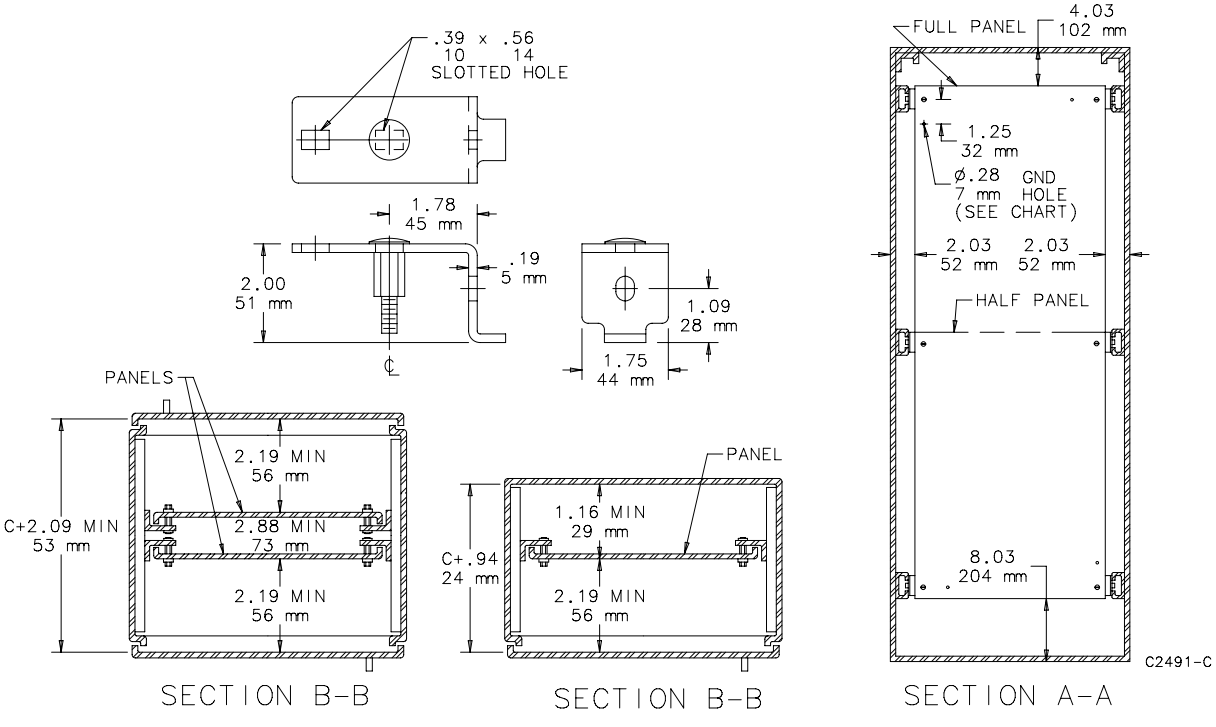
PANELS FOR FREE-STAND SINGLE- AND DUAL-ACCESS ONE-DOOR ENCLOSURES

Panels for one-door, single-access and one-door, dual-access Free-Stand Type 12 Enclosures, Free-Stand Type 4 Enclosures and One-Door Type 4X Free-Stand Fiberglass Enclosures. Panels are 12 gauge steel and can be positioned anywhere along horizontal mounting channels (see dimension drawing Sections B-B for limitations). Half-length panels can be located in the upper or lower portion of the enclosure. Panels are finished with white polyester powder paint or a conductive, corrosion-resistant coating and furnished with plated mounting hardware.

BULLETIN: PNL30

Catalog Number	Description	Finish	Panel Size (in.)	Panel Size (mm)	Fits Enclosure A x B (in.)	Fits Enclosure A x B (mm)
A60P24F1	Full Panel	Painted steel	48.00 x 20.00	1218 x 508	60.00 x 24.00	1524 x 610
A60P24F1G	Full Panel	Conductive	48.00 x 20.00	1218 x 508	60.00 x 24.00	1524 x 610
A60P24F2	Half Panel	Painted steel	24.88 x 20.00	632 x 508	60.00 x 24.00	1524 x 610
A60P24F2G	Half Panel	Conductive	24.88 x 20.00	632 x 508	60.00 x 24.00	1524 x 610
A72P24F1	Full Panel	Painted steel	60.00 x 20.00	1524 x 508	72.00 x 24.00	1829 x 610
A72P24F1G	Full Panel	Conductive	60.00 x 20.00	1524 x 508	72.00 x 24.00	1829 x 610
A72P24F2	Half Panel	Painted steel	30.88 x 20.00	784 x 508	72.00 x 24.00	1829 x 610
A72P24F2G	Half Panel	Conductive	30.88 x 20.00	784 x 508	72.00 x 24.00	1829 x 610
A90P24F1	Full Panel	Painted steel	78.00 x 20.00	1981 x 508	90.00 x 24.00	2286 x 610
A90P24F1G	Full Panel	Conductive	78.00 x 20.00	1981 x 508	90.00 x 24.00	2286 x 610
A90P24F2	Half Panel	Painted steel	39.88 x 20.00	1013 x 508	90.00 x 24.00	2286 x 610
A90P24F2G	Half Panel	Conductive	39.88 x 20.00	1013 x 508	90.00 x 24.00	2286 x 610
A72P30F1	Full Panel	Painted steel	60.00 x 26.00	1524 x 660	72.00 x 30.00	1829 x 762
A72P30F1G	Full Panel	Conductive	60.00 x 26.00	1524 x 660	72.00 x 30.00	1829 x 762
A72P30F2	Half Panel	Painted steel	30.88 x 26.00	784 x 660	72.00 x 30.00	1829 x 762
A72P30F2G	Half Panel	Conductive	30.88 x 26.00	784 x 660	72.00 x 30.00	1829 x 762
A60P36F1	Full Panel	Painted steel	48.00 x 32.00	1219 x 813	60.00 x 36.00	1524 x 914
A60P36F1G	Full Panel	Conductive	48.00 x 32.00	1219 x 813	60.00 x 36.00	1524 x 914
A60P36F2	Half Panel	Painted steel	24.88 x 32.00	632 x 813	60.00 x 36.00	1524 x 914
A60P36F2G	Half Panel	Conductive	24.88 x 32.00	632 x 813	60.00 x 36.00	1524 x 914
A72P36F1	Full Panel	Painted steel	60.00 x 32.00	1524 x 813	72.00 x 36.00	1829 x 914
A72P36F1G	Full Panel	Conductive	60.00 x 32.00	1524 x 813	72.00 x 36.00	1829 x 914
A72P36F2	Half Panel	Painted steel	30.88 x 32.00	784 x 813	72.00 x 36.00	1829 x 914
A72P36F2G	Half Panel	Conductive	30.88 x 32.00	784 x 813	72.00 x 36.00	1829 x 914
A90P36F1	Full Panel	Painted steel	78.00 x 32.00	1981 x 813	90.00 x 36.00	2286 x 914
A90P36F1G	Full Panel	Conductive	78.00 x 32.00	1981 x 813	90.00 x 36.00	2286 x 914
A90P36F2	Half Panel	Painted steel	39.88 x 32.00	1013 x 813	90.00 x 36.00	2286 x 914
A90P36F2G	Half Panel	Conductive	39.88 x 32.00	1013 x 813	90.00 x 36.00	2286 x 914

Use combinations of panels for 3-5 door A 28 enclosures.



PANELS FOR FREE-STAND SINGLE- AND DUAL-ACCESS TWO-DOOR ENCLOSURES

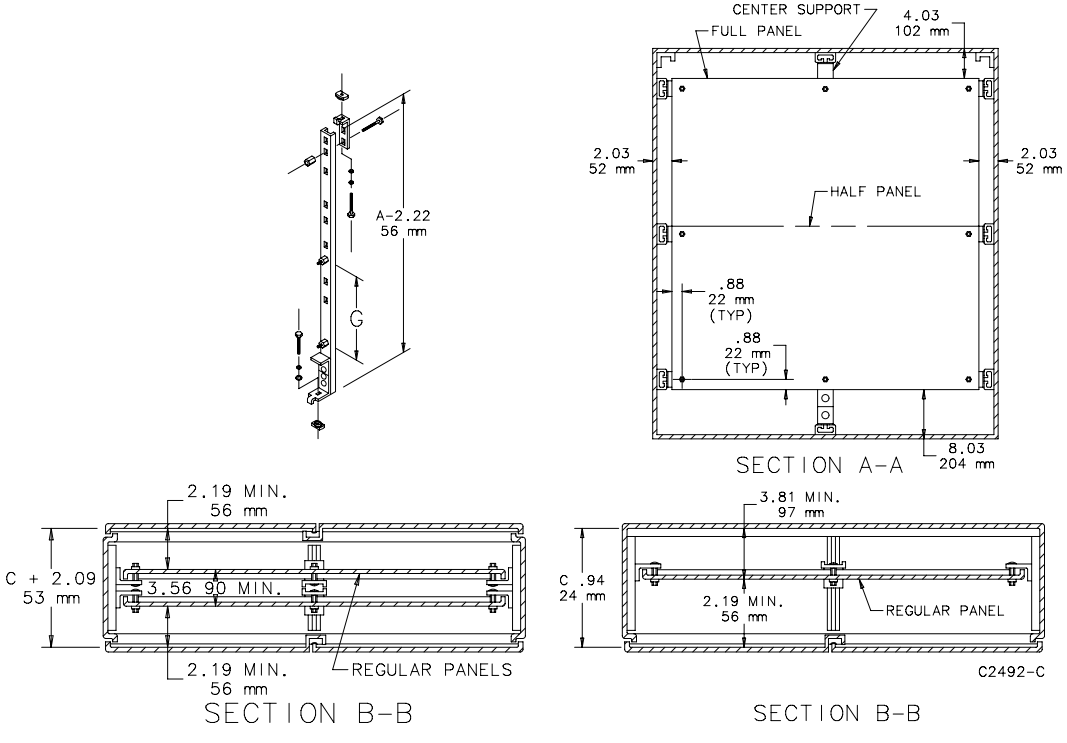
BULLETIN: PNL30

Panels for two-door single access and two-door dual access Free-Stand Type 4, 4X and 12 Enclosures with mounting channel are 11 gauge steel and can be positioned anywhere along horizontal mounting channels (see Sections B-B for limitations). Half-length panels can be located in the upper or lower portion of the enclosure. Some assembly is required.

Panels are finished with white polyester powder paint or a conductive, corrosion-resistant coating and furnished with plated mounting hardware.

Center support is furnished with each full panel or half panel for two-door enclosures. The center support attaches to the top and bottom mounting channels and can be positioned from front to back in the enclosure. The center support can be used with heavy duty panel supports to support panels of various heights.

Catalog Number	Description	Finish	Fits Enclosure A x B (in.)	Fits Enclosure A x B (mm)	Panel Size (in.)	Panel Size (mm)	G (in.)	G (mm)
A60P48F1	Full Panel	Painted Steel	60.00 x 48.00	1524 x 1219	48.00 x 44.00	1219 x 1118	23.12	587
A60P48F1G	Full Panel	Conductive	60.00 x 48.00	1524 x 1219	48.00 x 44.00	1219 x 1118	23.12	587
A72P48F1	Full Panel	Painted Steel	72.00 x 48.00	1829 x 1219	60.00 x 44.00	1524 x 1118	29.12	740
A72P48F1G	Full Panel	Conductive	72.00 x 48.00	1829 x 1219	60.00 x 44.00	1524 x 1118	29.12	740
A72P48F2	Half Panel	Painted Steel	72.00 x 48.00	1829 x 1219	30.88 x 44.00	784 x 1118	29.12	740
A72P48F2G	Half Panel	Conductive	72.00 x 48.00	1829 x 1219	30.88 x 44.00	784 x 1118	29.12	740
A90P48F1	Full Panel	Painted Steel	90.00 x 48.00	2286 x 1219	78.00 x 44.00	1981 x 1118	38.12	968
A90P48F1G	Full Panel	Conductive	90.00 x 48.00	2286 x 1219	78.00 x 44.00	1981 x 1118	38.12	968
A90P48F2	Half Panel	Painted Steel	90.00 x 48.00	2286 x 1219	39.88 x 44.00	1013 x 1118	38.12	968
A90P48F2G	Half Panel	Conductive	90.00 x 48.00	2286 x 1219	39.88 x 44.00	1013 x 1118	38.12	968
A72P60F1	Full Panel	Painted Steel	72.00 x 60.00	1829 x 1524	60.00 x 56.00	1524 x 1422	29.12	740
A72P60F1G	Full Panel	Conductive	72.00 x 60.00	1829 x 1524	60.00 x 56.00	1524 x 1422	29.12	740
A72P60F2	Half Panel	Painted Steel	72.00 x 60.00	1829 x 1524	30.88 x 56.00	784 x 1422	29.12	740
A72P60F2G	Half Panel	Conductive	72.00 x 60.00	1829 x 1524	30.88 x 56.00	784 x 1422	29.12	740
A72P72F1	Full Panel	Painted Steel	72.00 x 72.00	1829 x 1829	60.00 x 68.00	1524 x 1727	29.12	740
A72P72F1G	Full Panel	Conductive	72.00 x 72.00	1829 x 1829	60.00 x 68.00	1524 x 1727	29.12	740
A72P72F2	Half Panel	Painted Steel	72.00 x 72.00	1829 x 1829	30.88 x 68.00	784 x 1727	29.12	740
A72P72F2G	Half Panel	Conductive	72.00 x 72.00	1829 x 1829	30.88 x 68.00	784 x 1727	29.12	740
A90P72F1	Full Panel	Painted Steel	90.00 x 72.00	2286 x 1829	78.00 x 68.00	1981 x 1727	38.12	968
A90P72F1G	Full Panel	Conductive	90.00 x 72.00	2286 x 1829	78.00 x 68.00	1981 x 1727	38.12	968
A90P72F2	Half Panel	Painted Steel	90.00 x 72.00	2286 x 1829	39.88 x 68.00	1013 x 1727	38.12	968
A90P72F2G	Half Panel	Conductive	90.00 x 72.00	2286 x 1829	39.88 x 68.00	1013 x 1727	38.12	968



SIDE-MOUNTED PANELS

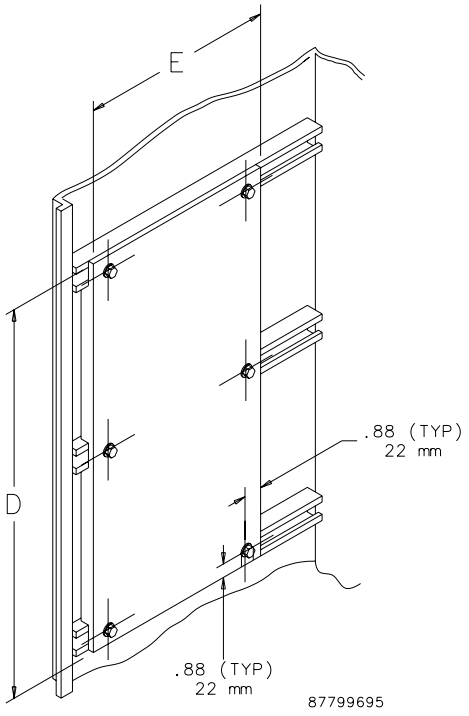
Panels provide extra mounting space on the sides of enclosures. 12 gauge steel side-mounting panels are painted white. Conductive panels are steel with a conductive, corrosion-resistant coating. Panels attach securely to mounting channels. Plated steel mounting hardware is furnished.

BULLETIN: PNL30

Catalog Number	Description	Panel Size D x E in./mm	Fits Enclosure A in./mm
A60SMP14	Painted steel	48.00 x 14.00 1219 x 356	60.00 1524
A60SMP14G	Conductive	48.00 x 14.00 1219 x 356	60.00 1524
A72SMP14	Painted steel	60.00 x 14.00 1524 x 356	72.00 1829
A72SMP14G	Conductive	60.00 x 14.00 1524 x 356	72.00 1829
A72SMP20	Painted steel	60.00 x 20.00 1524 x 508	72.00 1829
A72SMP20G	Conductive	60.00 x 20.00 1524 x 508	72.00 1829
A90SMP14	Painted steel	78.00 x 14.00 1981 x 356	90.00 2286
A90SMP14G	Conductive	78.00 x 14.00 1981 x 356	90.00 2286
A90SMP20	Painted steel	78.00 x 20.00 1981 x 508	90.00 2286
A90SMP20G	Conductive	78.00 x 20.00 1981 x 508	90.00 2286

A90SMP14 and A90SMP14G will not fit 18.06-in.deep two-door enclosures (FSD style) if regular panel is also installed.

A90SMP20 and A90SMP20G will not fit 20.12-in. deep enclosures. Will not fit 24.12-in. deep two-door enclosures (FSD style) if regular panel is also installed.

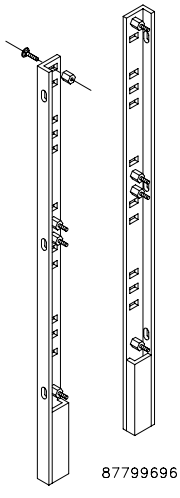


HEAVY DUTY PANEL SUPPORTS

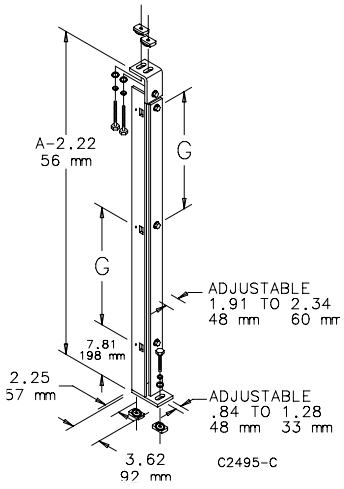
Heavy Duty Panel Supports, sold in pairs, are used in place of the panel supports furnished with panels when heavy equipment will be installed on the panels. They extend to the bottom of the enclosure. Adjustable mounting studs allow mounting of different height panels or a combination of panels. Use mounting hardware furnished with panels.

BULLETIN: A80

Catalog Number	Fits Enclosure A in./mm	Support Length in./mm
A60FSHDPS	60.00 1524	57.25 1454
A72FSHDPS	72.00 1829	69.25 1759
A90FSHDPS	90.00 2286	87.25 2216



CENTER PANEL SUPPORTS



Center panel supports are used with Free-Stand Type 12 (Bulletin A30) two-door enclosures. They permit the installation of panels, swing-out panels and rack-mounting angles sized for one-door enclosures. The Center Panel Support can be positioned from front to back of the enclosure.

BULLETIN: A80

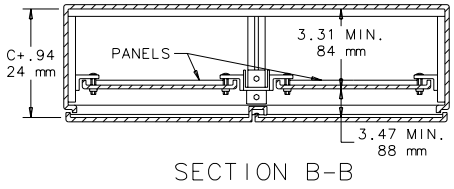
Standard Product **Panel Supports**

Catalog Number	Fits Enclosure A (in.)	Fits Enclosure A (mm)	G (in.)	G (mm)
A60FSCPS	60.00	1524	23.12	587
A72FSCPS	72.00	1829	29.12	740
A90FSCPS	90.00	2286	38.12	968

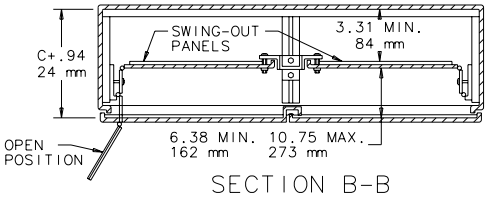
Accessory Width with Center Panel Supports

Two Door Enclosure Width (in.)	Two Door Enclosure Width (mm)	Accessory Width (in.)	Accessory Width (mm)
48.00	1219	24.00	610
60.00	1524	30.00	762
72.00	1829	36.00	914

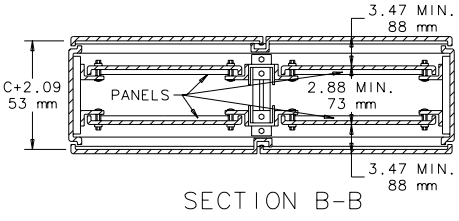
Center Panel Supports Enclosure Section Views



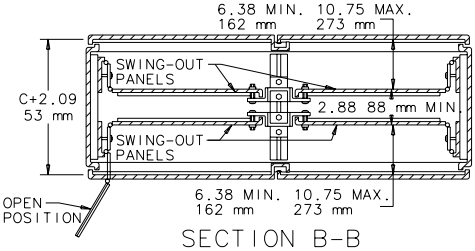
Showing two panels (for one-door enclosures)and center panel support mounted in two-door enclosure.



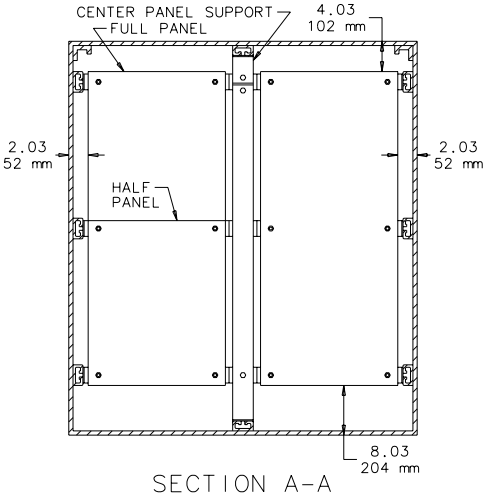
Showing four swing-out panels and center panel support mounted in two-door enclosure.



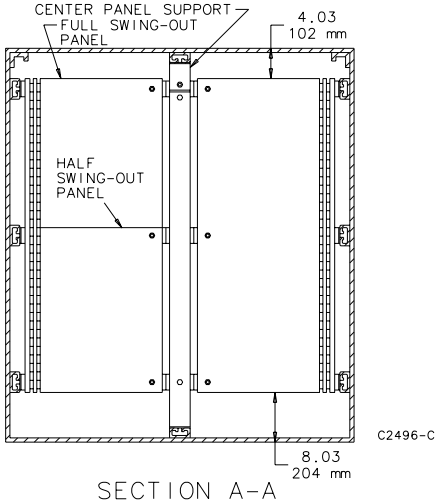
Showing four panels (for one-door enclosures) and two center panel supports mounted in two-door access enclosure.



Showing four swing-out panels and two center panel supports mounted in two-door dual access enclosure.



Panels shown are for one-door free-stand enclosures. Half panel fits in top or bottom half of enclosure.



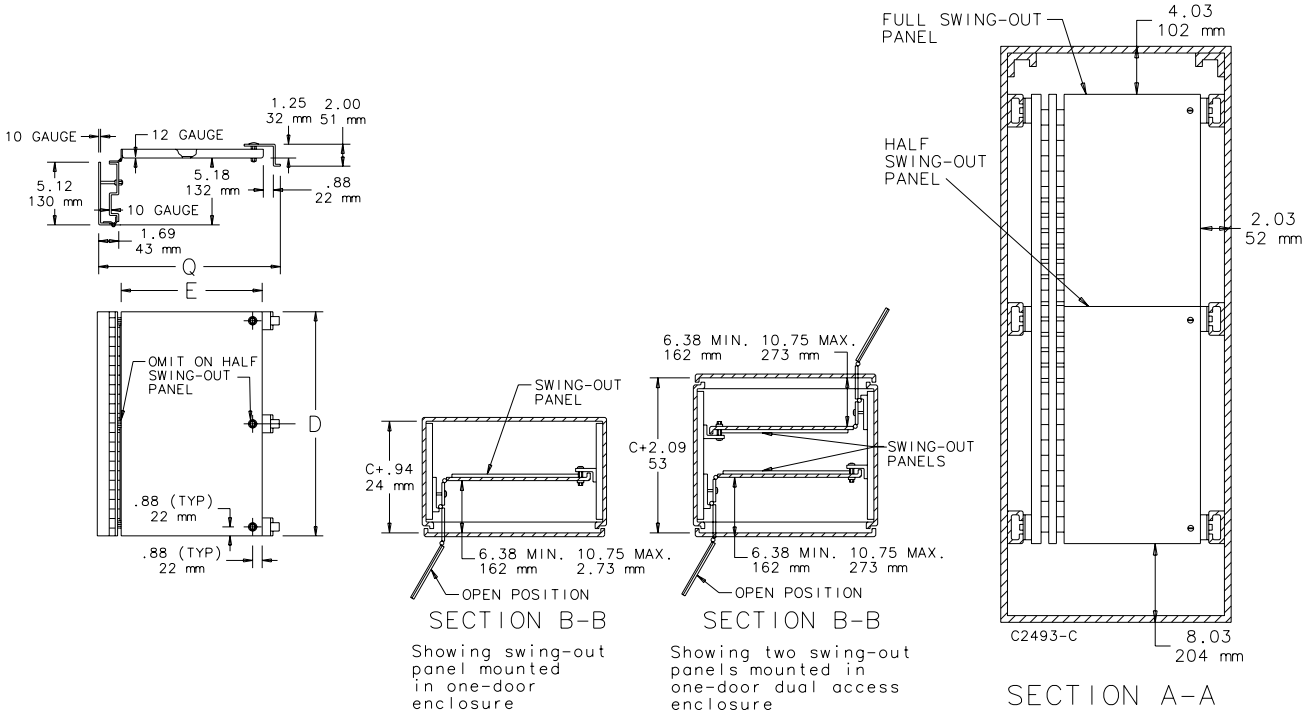
Showing swing-out panels installed in one-door enclosure.

SWING-OUT PANELS FOR FREE-STAND TYPE 4, 4X AND 12 ENCLOSURES WITH MOUNTING CHANNEL

Panels for Free-Stand Type 12 Enclosures, Free-Stand Type 4 Enclosures and One-Door Type 4X Free-Stand Fiberglass Enclosures. Full-length and half-length swing-out panels are available. Half-length panels can be located in the upper or lower portion of the enclosures. Swing-out panels have a 10 gauge steel support frame and two heavy-gauge continuous hinges which permit the panel to swing completely out of the enclosure if it is located within approximately 10.75 in. (273 mm) of the door. These panels are 12 gauge steel and can be mounted on either side of the enclosure. Panels are finished with white polyester powder paint and furnished with plated mounting hardware.

BULLETIN: PNL30

Catalog Number	Description	Panel Size D x E (in.)	Panel Size D x E (mm)	Fits Enclosure A x B (in.)	Fits Enclosure A x B (mm)	Q (in.)	Q (mm)
A72SP24F3	Full Panel	60.00 x 18.81	1524 x 478	72.00 x 24.00	1829 x 610	21.84	555
A72SP24F4	Half Panel	30.88 x 18.81	784 x 478	72.00 x 24.00	1829 x 610	21.84	555
A72SP30F3	Full Panel	60.00 x 24.81	1524 x 630	72.00 x 30.00	1829 x 762	27.84	707
A72SP30F4	Half Panel	30.88 x 24.81	784 x 630	72.00 x 30.00	1829 x 762	27.84	707
A72SP36F3	Full Panel	60.00 x 30.81	1524 x 783	72.00 x 36.00	1829 x 914	33.84	860
A72SP36F4	Half Panel	30.88 x 30.81	784 x 783	72.00 x 36.00	1829 x 914	33.84	860
A90SP36F3	Full Panel	78.00 x 30.81	1981 x 783	90.00 x 36.00	2286 x 914	33.84	860
A90SP36F4	Half Panel	39.88 x 30.81	1013 x 783	90.00 x 36.00	2286 x 914	33.84	860

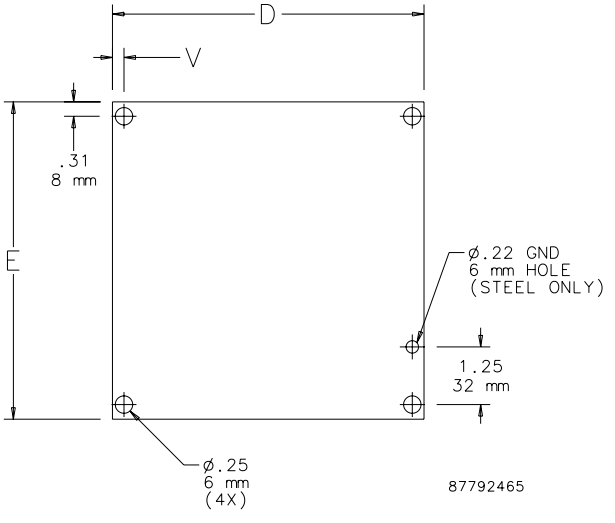


PANELS FOR WIFI CABINETS AND SMALL WALL-MOUNT ENCLOSURES

Panels are available in both steel and wood. Steel panels are 14 gauge steel with a white polyester powder paint finish. Wood panels are 3/4-in. plywood and are unfinished. Wood panels are supplied with Fiberglass Hinged-Cover and POLYPRO Type 4X WiFi Cabinets.

BULLETIN: DWS12, PNLJ, PNLWM

Catalog Number	Material	Panel Size D x E (in.)	Panel Size D x E (mm)	V (in.)	V (mm)
A6P6	Steel	4.88 x 4.88	124 x 124	0.31	8
A6P6WD	Wood	4.88 x 4.88	124 x 124	0.31	8
A16P14	Steel	14.75 x 12.88	375 x 327	0.25	6
A16P14WD	Wood	14.75 x 12.88	375 x 327	0.25	6
A18P16	Steel	16.75 x 14.88	425 x 378	0.25	6
A18P16WD	Wood	16.75 x 14.88	425 x 378	0.25	6

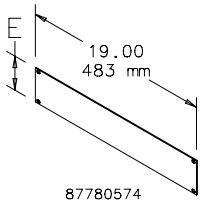


RACK PANEL FOR 19-IN. RACKS

Used to cover unused rack space in cabinets or open frame racks for a finished appearance. Can also be used for surface mounting small devices. Panels are flat with mounting slots spaced at 19-in. EIA standard spacing. Made of 12 gauge steel with RAL 9005 black polyester powder paint finish. Mounting hardware sold separately.

BULLETIN: DOFRY

Catalog Number	Rack Units	E (in.)	E (mm)
P19RPP1UB	1	1.75	44
P19RPP2UB	2	3.50	89
P19RPP3UB	3	5.25	133
P19RPP4UB	4	7.00	178
P19RPP5UB	5	8.75	222
P19RPP6UB	6	10.50	267



TOOL-LESS (SNAP-IN) BLANKING PANELS FOR 19-IN. RACKS

These Tool-less 19-in. Blanking Panels provide easy tool-less installation and ensure proper airflow to equipment. Made of UL approved thermal plastic material with a low-gloss textured black finish. May be used with tapped or square EIA universal spaced rack mounting angles.

BULLETIN: DACCY

Catalog Number	Description	Rack Units	Fits	Pkg. Qty.
D19BPT1RU	Blanking Panel, 19 in.	1	19 in., universal rack spacing, tapped or square holes	10
D19BPT2RU	Blanking Panel, 19 in.	2	19 in., universal rack spacing, tapped or square holes	10

RACK PANELS

Rack Panels are available in aluminum and painted steel. Aluminum Rack Panels are .125-in.-thick 5052-H32 alloy. Steel Rack Panels are 12 gauge steel and finished in RAL 7035 textured light-gray polyester powder paint. All panels are flat with oblong holes positioned at EIA standard spacing. Mounting hardware is sold separately.

BULLETIN: P20

Catalog Number	Material	Rack Angle Size	Rack Units
P19RP1UA	Aluminum	19 in.	1
P19RP1UP	Steel	19 in.	1
P19RP2UA	Aluminum	19 in.	2
P19RP2UP	Steel	19 in.	2
P19RP3UA	Aluminum	19 in.	3
P19RP3UP	Steel	19 in.	3
P19RP4UA	Aluminum	19 in.	4
P19RP4UP	Steel	19 in.	4
P19RP5UA	Aluminum	19 in.	5
P19RP5UP	Steel	19 in.	5
P19RP6UP	Steel	19 in.	6
P19RP6UA	Aluminum	19 in.	6
P19RP7UA	Aluminum	19 in.	7
P19RP7UP	Steel	19 in.	7
P19RP8UA	Aluminum	19 in.	8
P19RP8UP	Steel	19 in.	8
P19RP9UA	Aluminum	19 in.	9
P19RP9UP	Steel	19 in.	9
P19RP10UA	Aluminum	19 in.	10
P19RP10UP	Steel	19 in.	10
P19RP11UA	Aluminum	19 in.	11
P19RP11UP	Steel	19 in.	11
P19RP12UA	Aluminum	19 in.	12
P19RP12UP	Steel	19 in.	12
P19RP16UA	Aluminum	19 in.	16
P19RP16UP	Steel	19 in.	16

PANEL LIFTING HOOKS

Used to lift a large interior panel to position it in an enclosure lying on its back and to transport a panel from one location to another. Comfortable hand grip. Plated finish.

BULLETIN: A80

Catalog Number	Description
APLH	Two lifting hooks with handles

PANEL SUPPORT KIT

Provide additional support for panels on which heavy components are mounted. Each panel support fits over a collar stud and is then adjusted so the weight of the panel is partially supported by the bottom of the enclosure. Locknuts prevent accidental change in adjustment. A polyethylene-covered base on each panel support distributes the panel weight and prevents damage to the interior finish. Constructed of heavy-gauge steel. White finish.

BULLETIN: A80

Catalog Number	Description
APS3	Two panel supports for 1-door or 2-door enclosures where distance from bottom of panel to bottom of enclosure is less than 2.25 inches (57mm).
APS9	Two panel supports for free-standing or multi-door enclosures where distance from bottom of panel to bottom of enclosure is between 2.88 inches (73mm) and 8.50 inches (216mm).

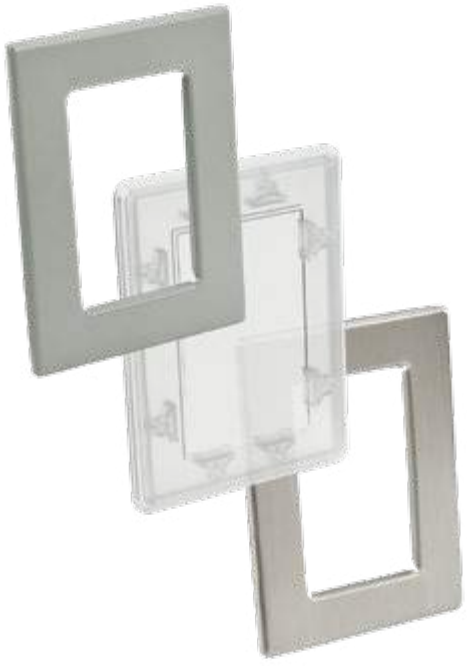
THREADED PANEL EXTENDERS

Threaded Panel Extenders are made of plated steel and designed to raise the panel mounting surface. Extenders attach to threaded internal pads. Male and female thread size is 10-32. Each kit contains 4 extenders.

BULLETIN: A80

Catalog Number	Length (in.)	Length (mm)
APE050	0.50	13
APE100	1.00	25

STEEL, STAINLESS STEEL AND NON-METALLIC WINDOW KITS



Steel Window Kits have a heavy gauge cold rolled steel formed frame (cleaned and treated for paint endurance and adhesion), painted ANSI 61 gray. The window is a clear acrylic .25-in. (16mm) scratch-resistant material. They are ideal for indoor and outdoor Type 3R, 4 and 12 applications.

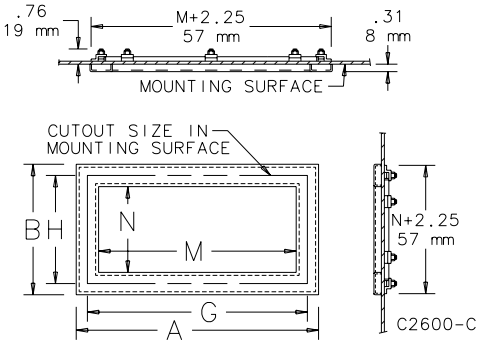
Stainless Steel Window kits have a formed heavy gauge Type 304 stainless steel frame with a brushed finish. The clear window is made of .25-in. (16mm) impact-resistant polycarbonate material. They are ideal for indoor and outdoor Type 3R, 4X and 12 applications.

Non-Metallic Window kits are made of a single piece special polycarbonate blend, Makrolon, that has enhanced impact, UV, water exposure, absorption, and saturation resistance. They are ideal for indoor and outdoor Type 3R, 4, 4X and 12 applications. They are also ideal for non-metallic enclosures where exterior metallic materials are not allowed and can accommodate up to .25-in. enclosure material thickness.

All Window kits are easy to install and require a simple rectangular enclosure cutout. All required hardware is furnished, along with assembly and cut- out instructions. The gasket material on all windows is resistant to oils, cutting fluids and many other liquids. Window kits of the same size use the same interchangeable cutout.

Custom sizes for Steel and Stainless Steel Window Kits are available along with different finishes and gasket materials. Consult Hoffman for details.

BULLETIN: A80SW, A80W



INDUSTRY STANDARDS

UL 508A Component Recognized; Type 4, 4X (stainless steel and non-metallic versions only), 3R, 12; File No. E61997.
UL 746C Component Recognized (non-metallic version only).

CSA Type 4, 4X (stainless steel and non-metallic versions only), 3R, 12; File No. 42186
NEMA/EEMAC 4, 4X (stainless steel and non-metallic versions only), 3R, 12
IEC 60529, IP66

Catalog Number	AxB in.	AxB mm	Material	Window Size M x N (in.)	Window Size M x N (mm)	Required Cutout Size G x H (in.)	Required Cutout Size G x H (mm)
APWK53NF	7.50 x 5.50	191 x 140	Steel	5.00 x 3.00	127 x 76	6.69 x 4.69	170 x 119
APWK53NFSS	7.50 x 5.50	191 x 140	Stainless Steel	5.00 x 3.00	127 x 76	6.69 x 4.69	170 x 119
APWK53NFNM	7.62 x 5.62	194 x 143	Polycarbonate	5.00 x 3.00	127 x 76	6.78 x 4.78	172 x 121
APWK711NFSS	9.50 x 13.50	241 x 343	Stainless Steel	11.00 x 7.00	279 x 178	8.69 x 12.69	221 x 322
APWK95NF	11.50 x 8.00	292 x 203	Steel	9.00 x 5.50	229 x 140	10.69 x 7.19	272 x 183
APWK95NFSS	11.50 x 8.00	292 x 203	Stainless Steel	9.00 x 5.50	229 x 140	10.69 x 7.19	272 x 183
APWK95NFNM	11.62 x 8.12	295 x 203	Polycarbonate	9.00 x 5.50	229 x 140	10.78 x 7.28	274 x 185
APWK116NFNM	13.62 x 8.62	346 x 219	Polycarbonate	11.00 x 6.00	279 x 152	12.78 x 7.78	325 x 198
APWK133NF	15.50 x 5.50	394 x 140	Steel	13.00 x 3.00	330 x 76	14.69 x 4.69	373 x 119
APWK138NF	15.50 x 10.50	394 x 267	Steel	13.00 x 8.00	330 x 203	14.69 x 9.69	373 x 246
APWK138NFSS	15.50 x 10.50	394 x 267	Stainless Steel	13.00 x 8.00	330 x 203	14.69 x 9.69	373 x 246
APWK138NFNM	15.62 x 10.62	397 x 270	Polycarbonate	13.00 x 8.00	330 x 203	14.69 x 9.69	375 x 248
APWK715NFSS	17.50 x 9.50	445 x 241	Stainless Steel	15.00 x 7.00	381 x 178	8.69 x 16.69	221 x 424
APWK175NF	19.50 x 8.00	495 x 203	Steel	17.00 x 5.50	432 x 140	18.69 x 7.19	475 x 183
APWK1711NF	19.50 x 13.50	495 x 343	Steel	17.00 x 11.00	432 x 279	18.69 x 12.69	475 x 322
APWK1711NFSS	19.50 x 13.50	495 x 343	Stainless Steel	17.00 x 11.00	432 x 279	18.69 x 12.69	475 x 322
APWK720NFSS	22.50 x 9.50	572 x 241	Stainless Steel	20.00 x 7.00	508 x 178	8.69 x 21.69	221 x 551
APWK2315NF	25.50 x 17.50	648 x 445	Steel	23.00 x 15.00	584 x 381	24.69 x 16.69	627 x 424
APWK2315NFSS	25.50 x 17.50	648 x 445	Stainless Steel	23.00 x 15.00	584 x 381	24.69 x 16.69	627 x 424
APWK724NFSS	26.50 x 9.50	673 x 241	Stainless Steel	24.00 x 7.00	610 x 178	8.69 x 25.69	221 x 653
APWK729NFSS	31.50 x 9.50	800 x 241	Stainless Steel	29.00 x 7.00	737 x 178	8.69 x 30.69	221 x 780
APWK2919NF	31.50 x 21.50	800 x 546	Steel	29.00 x 19.00	737 x 483	30.69 x 20.69	780 x 525
APWK2919NFSS	31.50 x 21.50	800 x 546	Stainless Steel	29.00 x 19.00	737 x 483	30.69 x 20.69	780 x 525
APWK3523NF	37.50 x 25.50	953 x 648	Steel	35.00 x 23.00	889 x 584	36.69 x 24.69	932 x 627

When determining if a window kit will fit in a door or cover, be sure to allow for gaskets, data pockets, door handles, latch rods and other parts attached to the door or cover.

FRAMELESS WINDOW KIT

Designed for use on many Type 12 and 13 enclosures. These kits are for indoor use in a temperature range of 55 F to 125 F (13 C to 52 C). For more severe conditions use Steel or Stainless Steel Window Kits. The window is scratch-resistant .12-in. (3-mm) polycarbonate. Special high-strength, double-sided tape is supplied as well as screw fasteners. Windows can be cut to smaller sizes. Allow .50-in. (13-mm) overlap on each side of window for tape.

BULLETIN: A80W

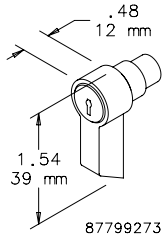
Catalog Number	Window Size in./mm	Maximum Cutout Size in./mm
APWKE52	5.50 x 3.00 140 x 76	4.50 x 2.00 114 x 51
APWKE96	9.62 x 7.19 244 x 183	8.62 x 6.19 219 x 157
APWKE133	13.88 x 3.88 353 x 99	12.88 x 2.88 327 x 73

WING KNOBS FOR CONCEPT WINDOW KITS

Knobs are optional latching for hinged windows and hinged bezels. Knobs are black and available in locking and nonlocking versions. Keylocking knob maintains Type 12 rating only.

BULLETIN: C2

Catalog Number	Description
CWKL	Wing Knob, locking
CWKN	Wing Knob, non-locking



CONCEPT FIXED AND HINGED WINDOW KITS

INDUSTRY STANDARDS

Fixed Window Kits

UL 508A, 508, File Number E61997: Type 4 and Type 12

NEMA Type 4 and 12
CSA File Number LR42186: Type 4 and Type 12
IEC 60529, IP66

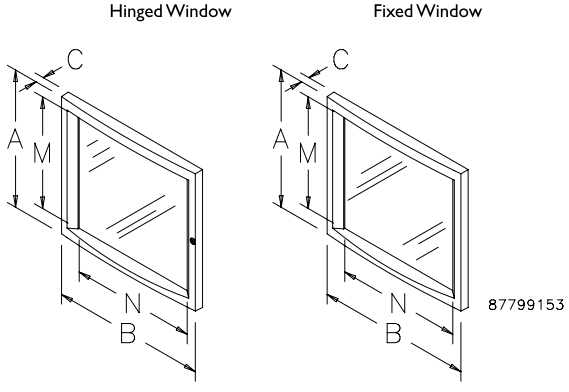
Hinged Window Kits

UL 508A, 508, File Number E61997: Type 12

NEMA Type 12
CSA File Number LR42186: Type 12
IEC 60529, IP66

APPLICATION

Aesthetic die-cast aluminum frame has .188-in. (5-mm) thick, clear polycarbonate window. Preassembled kit is secured to front opening of enclosure by four mounting screws. Furnished window frame caps conceal mounting screws. Hinged window kit is hinged on left side and has a single-point slotted latch (optional locking or non-locking wing knob latch is also available). Textured finish, ANSI 61 gray or RAL 7035 light gray.



BULLETIN: C2

Catalog Number	AxBxC in.	AxBxC mm	Finish	Description	Window Size M x N (mm)	Window Size M x N (in.)
CWF3136	12.20 x 14.17 x 1.26	310 x 360 x 32	ANSI 61	Fixed window kit	253 x 276	9.96 x 10.86
CWF3136LG	12.20 x 14.17 x 1.26	310 x 360 x 32	RAL 7035	Fixed window kit	253 x 276	9.96 x 10.86
CWH3136	12.20 x 14.17 x 1.34	310 x 360 x 34	ANSI 61	Hinged window kit	253 x 276	9.96 x 10.86
CWH3136LG	12.20 x 14.17 x 1.34	310 x 360 x 34	RAL 7035	Hinged window kit	253 x 276	9.96 x 10.86
CWF4045	15.75 x 17.72 x 1.30	400 x 450 x 33	ANSI 61	Fixed window kit	343 x 366	13.50 x 14.40
CWF4045LG	15.75 x 17.72 x 1.30	400 x 450 x 33	RAL 7035	Fixed window kit	343 x 366	13.50 x 14.40
CWH4045	15.75 x 17.72 x 1.38	400 x 450 x 35	ANSI 61	Hinged window kit	343 x 366	13.50 x 14.40
CWH4045LG	15.75 x 17.72 x 1.38	400 x 450 x 35	RAL 7035	Hinged window kit	343 x 366	13.50 x 14.40
CWF5557	21.65 x 22.44 x 1.42	550 x 570 x 36	ANSI 61	Fixed window kit	493 x 486	19.40 x 19.13
CWF5557LG	21.65 x 22.44 x 1.42	550 x 570 x 36	RAL 7035	Fixed window kit	493 x 486	19.40 x 19.13
CWH5557	21.65 x 22.44 x 1.50	550 x 570 x 38	ANSI 61	Hinged window kit	493 x 486	19.40 x 19.13

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CONCEPT DEEP HINGED WINDOW KIT

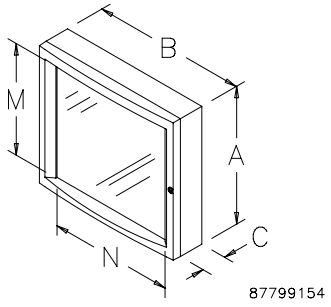
INDUSTRY STANDARDS

UL 508A, 508, File Number E61997: Type 12

NEMA Type 12
CSA File Number LR42186: Type 12
IEC 60529, IP66

APPLICATION

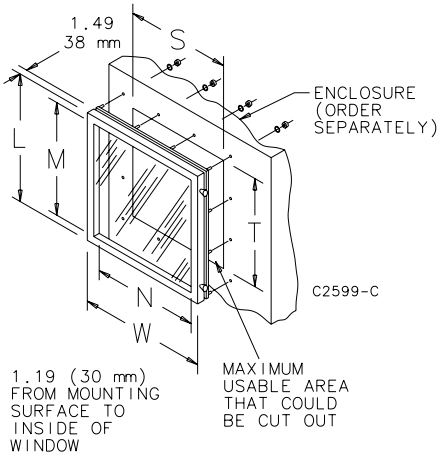
Kit is hinged on left side and has a single-point slotted latch (optional locking or non-locking wing knob latch is also available). Aesthetic die-cast aluminum frame has .188-in. (5-mm) thick, clear polycarbonate window. Two-inch space between enclosure front opening and window surface accommodates switches, lights, meters and other components. This kit can be used as an accessory window kit on larger standard Hoffman enclosure doors. Textured finish, ANSI 61 gray or RAL 7035 light gray.



BULLETIN: C2

Catalog Number	AxBxC in.	AxBxC mm	Finish	Window Size M x N (mm)	Window Size M x N (in.)
CWHD3136	12.20 x 14.17 x 3.31	310 x 360 x 84	ANSI 61	253 x 276	9.96 x 10.86
CWHD3136LG	12.20 x 14.17 x 3.31	310 x 360 x 84	RAL 7035	253 x 276	9.96 x 10.86
CWHD4045	15.75 x 17.72 x 3.39	400 x 450 x 86	ANSI 61	343 x 366	13.50 x 14.40
CWHD4045LG	15.75 x 17.72 x 3.39	400 x 450 x 86	RAL 7035	343 x 366	13.50 x 14.40
CWHD5557	21.65 x 22.44 x 3.50	550 x 570 x 89	ANSI 61	493 x 486	19.40 x 19.13

TYPE 12 HINGED WINDOW KIT



INDUSTRY STANDARDS

UL 508A Component Recognized; Type 12; File No. E61997

CSA Type 12; File No. 42186
NEMA/EEMAC Type 12
IEC 60529, IP55

For use as a viewing window where access to components mounted behind the window is required. Window is .25-in. (6-mm) clear acrylic. Easily mounted by drilling the appropriate mounting holes. All mounting hardware is provided. Continuous gaskets on all openings maintain UL Type 12 integrity. Finish is ANSI 61 gray polyester powder paint.

BULLETIN: A80W

Catalog Number	Window Size M x N in./mm	Overall L x W in./mm	S in./mm	T in./mm
APWK1212H	10.28 x 10.28 261 x 261	12.00 x 12.00 305 x 305	10.44 265	10.44 265
APWK1612H	14.28 x 10.28 363 x 261	16.00 x 12.00 406 x 305	10.44 265	14.44 367
APWK2016H	18.28 x 14.28 464 x 363	20.00 x 16.00 508 x 406	14.44 367	18.44 468
APWK2020H	18.28 x 18.28 464 x 464	20.00 x 20.00 508 x 508	18.44 468	18.44 468
APWK2420H	22.28 x 18.28 566 x 464	24.00 x 20.00 610 x 508	18.44 468	22.44 570
APWK3024H	28.28 x 22.28 718 x 566	30.00 x 24.00 762 x 610	22.44 570	28.44 722

TYPE 4 AND 4X DEEP-HINGED WINDOW KITS

INDUSTRY STANDARDS

Stainless Steel

UL 508A Listed; Type 3R, 4, 4X, 12; File No. E61997
cUL Listed per CSA C22.2, No. 94; Type 3R, 4, 4X, 12; File No. E61997

NEMA/EEMAC Type 3R, 4, 4X, 12
IEC 60529, IP66

Mild Steel

UL 508A Listed; Type 4, 12; File No. E61997
cUL Listed per CSA C22.2 No. 94; Type 4, 12; File No. E61997

NEMA/EEMAC Type 4, 12
IEC 60529, IP66

APPLICATION

Deep-hinged window kits provide protection, visibility and easy access to equipment and components installed behind the viewing area. Window kits are conveniently sized to allow direct mounting in the usable door area of Hoffman NEMA and CONCEPT wall-mount enclosures, as well as any Hoffman enclosure with a suitably sized mounting surface. Deep-hinged window kits provide protection, visibility and easy access to equipment and components installed behind the viewing area. These kits have an aesthetic appearance, quarter-turn latching for easy access, .25-in. (6-mm) thick, clear polycarbonate material for viewing, 2.5-in. (64-mm) depth to allow for deep controls and a built-in gasket compression stop to facilitate flush mounting. Each kit comes with a mounting template and hardware to allow for easy installation and can be mounted either left or right hinged.

SPECIFICATIONS

- Manufactured from Type 316L stainless steel or painted mild steel
- Quarter-turn latches for quick access
- 0.25-in. (6-mm) thick, clear polycarbonate windows for easy viewing
- 2.5-in. (64-mm) deep to allow for deep controls
- Built-in gasket compression stop on back of window kit facilitates flush mounting
- Designed for either left or right hinging
- Includes mounting template and mounting hardware
- Easy-to-remove clip-style hinge pin

FINISH

- Stainless steel: Enclosures are unpainted; door and body have a smooth #4 brushed finish
- Mild steel: ANSI 61 gray polyester powder paint inside and out

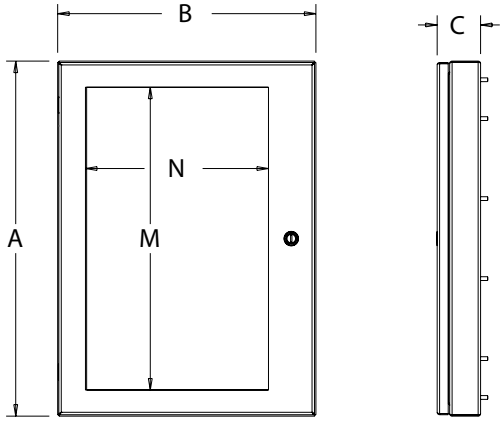
OPTIONS

Optional Handles
CWHNL - Non-locking
CWHK - Keylocking
CWHPTO - Padlocking

BULLETIN: A80SW, A80W

Standard Product

Catalog Number	AxBxC in./mm	Material	Window Size M x N in./mm	No. of Latches
AWDH1418N4	12.19 x 14.56 x 2.73 310 x 370 x 69	Steel	8.68 x 9.83 220 x 250	1
AWDH1418N4SS	12.19 x 14.56 x 2.73 310 x 370 x 69	316L Stainless steel	8.68 x 9.83 220 x 250	1
AWDH1612N4	14.19 x 8.14 x 2.73 360 x 207 x 69	Steel	10.68 x 3.41 271 x 87	1
AWDH1612N4SS	14.19 x 8.14 x 2.73 360 x 207 x 69	316L Stainless steel	10.68 x 3.41 271 x 87	1
AWDH2016N4	18.19 x 12.14 x 2.73 462 x 308 x 69	Steel	14.68 x 7.41 373 x 188	1
AWDH2016N4SS	18.19 x 12.14 x 2.73 462 x 308 x 69	316L Stainless steel	14.68 x 7.41 373 x 188	1
AWDH2416N4	22.19 x 12.14 x 2.73 564 x 308 x 69	Steel	18.68 x 7.41 474 x 188	2
AWDH2416N4SS	22.19 x 12.14 x 2.73 564 x 308 x 69	316L Stainless steel	18.68 x 7.41 474 x 188	2
AWDH2420N4	22.19 x 16.14 x 2.73 564 x 410 x 69	Steel	18.68 x 11.41 474 x 290	2
AWDH2420N4SS	22.19 x 16.14 x 2.73 564 x 410 x 69	316L Stainless steel	18.68 x 11.41 474 x 290	2
AWDH2430N4	22.19 x 26.14 x 2.73 564 x 664 x 69	Steel	18.68 x 20.22 474 x 514	2
AWDH2430N4SS	22.19 x 26.14 x 2.73 564 x 664 x 69	316L Stainless steel	18.68 x 20.22 474 x 514	2
AWDH3024N4	28.19 x 20.14 x 2.73 716 x 512 x 69	Steel	24.68 x 14.22 627 x 361	2
AWDH3024N4SS	28.19 x 20.14 x 2.73 716 x 512 x 69	316L Stainless steel	24.68 x 14.22 627 x 361	2
AWDH3624N4	34.19 x 20.14 x 2.73 868 x 512 x 69	Steel	30.68 x 14.22 779 x 361	2
AWDH3624N4SS	34.19 x 20.14 x 2.73 868 x 512 x 69	316L Stainless steel	30.68 x 14.22 779 x 361	2



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IR WINDOWS

APPLICATION

IR Windows provide a safe, efficient, and accurate way to perform electrical inspections or predictive maintenance without removing the panels or disturbing the electrical equipment.

Installing the IR Windows can help protect employees from potential arc flash hazards and comply with NFPA70E safety guidelines. The special design and feature enable quicker inspections which save money and time. Made with durable broadband crystal optic and aluminum housing materials, IR Windows can be mounted to any enclosure.

Equipped with HYDROGARD lens moisture protection, IR Windows can be installed both indoors and outdoors. IR Windows work with any thermal imager, expanding the application to many industries. Each kit comes with a self-adhesive drilling template, hardware, and step-by-step instructions for easy installation or can be pre-installed into Hoffman enclosures.

SPECIFICATIONS

- Spring-loaded cover opens and retains position. Clear cover design allows for visual inspection when closed
- Arc flash tested against a 50kA short circuit for 1 second at 11kV
- Quarter-turn locking system for quick access
- Built-in silicone gaskets for protection against water and dust ingress
- Gasket maximum temperature: 250 C/482 F; Body maximum temperature: 659 C/1218 F; Optic maximum temperature: 1400 C/2552 F.

BULLETIN: A80RW

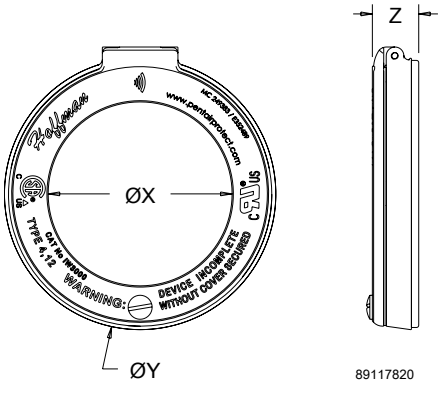
INDUSTRY STANDARDS

UL 50 Component Recognized; Type 4, 12. File No.: E362489
UL 50V Component Recognized. File No.: E362489

cCSAus Certified; Type 3, 4, 12. File No.: 249383
NEMA/EEMAC Type 3, 4, 12
IEC60529, IP65

Standard Product

Catalog Number	X in./mm	Y in./mm	Z in./mm	Description	Crystal Thickness in./mm	Viewing Area	Free diameter space required for mounting in./mm
IW3000	2.9	4.2	0.8	3-in. (75 mm) IR Window	.08	6.49 sq. in. (4186 sq. mm)	4.50
	73	107	19		2		115
IW4000	3.7	5.0	0.8	4-in. (100 mm) IR Window	.16	10.53 sq. in (6794 sq. mm)	5.50
	92	127	21		4		140



DOOR STOP KIT

Designed for use on most standard Hoffman Type 4 and 12 enclosures to secure the door in the open position. Enclosures must have a "B" dimension of 16.00 in. (406 mm) or more and a door which opens horizontally. Door Stop Kit can be mounted at the top or bottom of the door opening after drilling two small holes in the body of the enclosure and two small holes in the door. The angle of the door is easily adjusted by means of a wingnut, and the stop arm slides neatly out of the way when the door is closed. All parts are plated. Maintains UL/CSA Type 4 and Type 12 if properly installed in a Hoffman enclosure. Door Stop Kit is not intended for use on CONCEPT window door enclosures, or enclosures configured with a swing-out panel or swing-out rack frame.

BULLETIN: A80

Catalog Number	Description
ADSTOPK	Door Stop Kit

TYPE 316 STAINLESS STEEL DOOR STOP KIT

APPLICATION

Type 316 stainless steel door stop kit is available for use in applications that require the kind of corrosion protection that only Type 316 stainless steel can provide. Typical applications include water treatment, pulp, paper, petroleum, chemical, food and pharmaceutical processing, and packaging. Kit includes all mounting hardware. Secures doors in the open position. Can be mounted at either top or bottom of door. Can be installed on either left- or right-hinged doors. Maintains an enclosure's Type 4X rating. Easy to install. Mounting hardware is Type 316 stainless steel. This door stop kit can be mounted in large and wall-mount enclosures.

FEATURES

- Can be mounted at either top or bottom of door
- Can be installed on either left- or right-hinged doors
- Maintains an enclosure's Type 4X rating
- Easy to install

SPECIFICATIONS

- Kit, including mounting hardware, constructed of Type 316 stainless steel

BULLETIN: A4SY

Catalog Number	Description
ADSTOPKSS6	Type 316 stainless steel door stop kit

LARGE ENCLOSURE DOOR STOP KIT

Designed for use with most standard, large mild and stainless steel enclosures to secure the door in the 90 degree open position. Door Stop Kit can be mounted at the top or bottom of the door opening after drilling two small holes in the door and enclosure. All parts are plated. Maintains UL/CSA Type 4 and Type 12 if properly installed in a Hoffman enclosure.

BULLETIN: A80

Catalog Number	Description
ALGDSTOP2	Large Enclosure Door Stop Kit

GASKET KITS

APPLICATION

Gasket kits are ideal to replace damaged or worn foam-in-place or strip enclosure gaskets. Available in either EPDM and silicone material, these gasket kits allows replacement of current gasket as well as provides a solution to upgrade enclosure gasket for harsh applications. Kits offered with different sized gaskets is suitable to be used on either wall mount or large enclosures.

FEATURES

- Positioned inside enclosure door, providing a sealing barrier between the enclosure housing and door
- EPDM gasket kits are ideal to replace damaged or worn enclosure gasket
- Silicon gasket provides a secure sealing to protect against water and dust ingress in extreme temperatures
- Silicone gaskets are ideal to replace current silicone gasket and can be used to upgrade current gasket for harsh applications
- Strip gasket is field-installable with included sealant and instructions

INDUSTRY STANDARDS

UL 508A Component Recognized; Type 4, 4x, 12; File No. E61997
cUL Component Recognized per CSA C22.2 No 94; File No. E61997

Suitable for field installation for door, cover and gland plate sealing on Hoffman enclosure models rated Types 4, 4X and 12.

SPECIFICATIONS

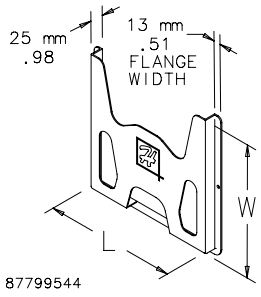
- EPDM Gaskets available in .28 in. (6 mm) thick by .63 in. (16 mm) wide for wall-mount enclosures
- EPDM Gaskets available in .38 in. (10 mm) thick by 1 in. (25 mm) wide for large enclosures
- Silicone gaskets available in .25 in. (6 mm) thick by .50 in. (13 mm) wide for wall-mount enclosures
- Silicone gaskets available in .38 in. (10 mm) thick by 1 in. (25 mm) wide for large enclosures
- Each kit includes a 20-ft. roll of strip gasket

BULLETIN: A80

Standard Product

Catalog Number	Description	Material	Thickness in./mm	Width in./mm
GSKTKITE025	Gasket Kit EPDM .28 x .63	EPDM	.28 7	.63 16
GSKTKITE375	Gasket Kit EPDM .38 x 1.00	EPDM	.38 10	1.00 25
GSKTKITS025	Gasket Kit Silicone .25 x .50	Silicone	.25 6	.50 13
GSKTKITS375	Gasket Kit Silicone .38 x 1.00	Silicone	.38 10	1.00 25

THERMOPLASTIC DATA POCKET

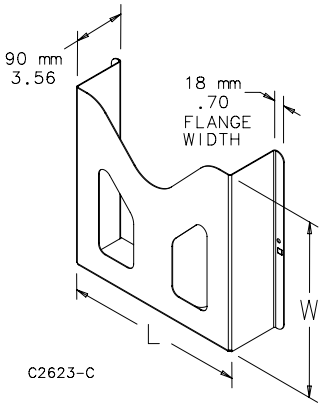


Provides a convenient place to store wiring diagrams, operation manuals and other documentation inside the enclosure. Adhesive-backed pockets mount inside the solid enclosure cover. Mounting hardware included. Thermoplastic pockets are dark gray and have cut-away areas for easy inspection of contents.

BULLETIN: A80DP

Catalog Number	Description	Size L x W in./mm
ADP1	Small pocket	6.00 x 6.00 152 x 152
ADP2	Large pocket	12.00 x 12.00 305 x 305

METAL DATA POCKET



Three-inch (76-mm) deep Metal Data Pocket provides a convenient place to store wiring diagrams, operation manuals and other documentation inside the enclosure. Large enough to store 3-ring binders. Mounting hardware is included. Painted white and has cut-away areas for easy inspection of contents.

BULLETIN: A80DP

Catalog Number	Fits A x B in./mm	Size L x W in./mm
ADP3	greater than or equal to 30.00 x 24.00 greater than or equal to 762 x 610	12.00 x 12.00 305 x 305

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EXTERNAL DATA POCKETS, TYPE 4/4X/12

Mild steel coated with polyester powder paint

Type 304 stainless steel

INDUSTRY STANDARDS

Mild Steel Models:

UL 508A Listed; Type 4, 12; File No. E61997
cUL Listed per C22.2 No. 94; Type 4, 12; File No. E61997

NEMA/EEMAC Type 4, 12
IEC 60529, IP66

Stainless Steel Models:

UL 508A Listed; Type 4, 4X, 12; File No. E61997
cUL Listed per C22.2 No. 94; Type 4, 4X, 12; File No. E61997

NEMA/EEMAC Type 4, 4X, 12
IEC 60529, IP66

APPLICATION

Mounted on the exterior of an enclosure, Data Pockets allow access to system documentation without having to open the enclosure door.

FEATURES

- Available in mild steel or stainless steel to match the enclosure finish
- Foam-in-place gasket to protect documentation from harsh environments
- Hinged front for easy access to contents
- Three sizes accommodate a wide variety of documents
- Sloped top sheds liquids and prevents accumulation of extraneous material
- Optional wing knob and keylock inserts available for additional security

SPECIFICATIONS

- 16 gauge steel or 16 gauge Type 304 stainless steel
- Front of pocket hinges away from frame

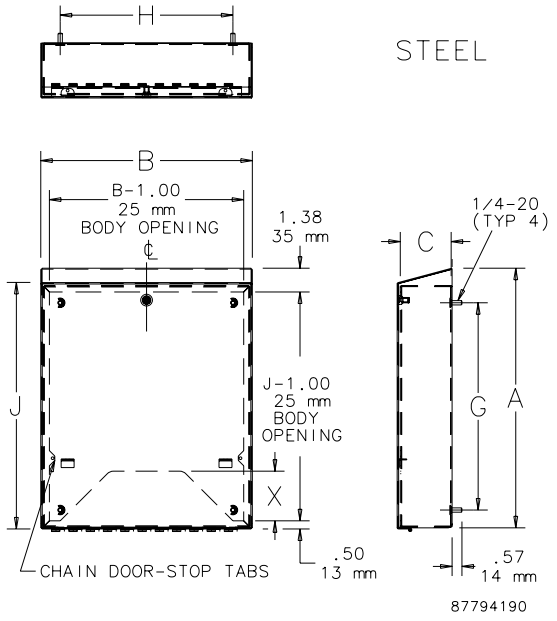
FINISH

Mild steel models are either ANSI 61 medium-gray or RAL 7035 light-gray polyester powder finish inside and out. Stainless steel models have brushed finish.

BULLETIN: A80DP

Standard Product

Catalog Number	AxBxC in.	AxBxC mm	Finish	G (in.)	G (mm)	H (in.)	H (mm)	J (in.)	J (mm)
ADPX4A	14.00 x 12.00 x 3.00	356 x 305 x 76	ANSI 61 paint	12.00	305	10.00	254	14.25	362
ADPX4ALG	14.00 x 12.00 x 3.00	356 x 305 x 76	RAL 7035 paint	12.00	305	10.00	254	14.25	362
ADPX4ASS	14.00 x 12.00 x 3.00	356 x 305 x 76	Brushed stainless steel	12.00	305	10.00	254	14.25	362
ADPX4B	6.00 x 6.00 x 3.00	152 x 152 x 76	ANSI 61 paint	4.00	102	4.00	102	6.25	159
ADPX4BLG	6.00 x 6.00 x 3.00	152 x 152 x 76	RAL 7035 paint	4.00	102	4.00	102	6.25	159
ADPX4BSS	6.00 x 6.00 x 3.00	152 x 152 x 76	Brushed stainless steel	4.00	102	4.00	102	6.25	159
ADPX4C	12.00 x 18.00 x 3.25	305 x 457 x 83	ANSI 61 paint	10.00	254	16.00	406	12.25	311
ADPX4CLG	12.00 x 18.00 x 3.25	305 x 457 x 83	RAL 7035 paint	10.00	254	16.00	406	12.25	311
ADPX4CSS	12.00 x 18.00 x 3.25	305 x 457 x 83	Brushed stainless steel	10.00	254	16.00	406	12.25	311


H
STEEL
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B-1.00
25 mm
BODY OPENING
1.38
35 mm
1/4-20
(TYP 4)
C
J
J-1.00
25 mm
BODY
OPENING
G
A
X
CHAIN DOOR-STOP TABS
.50
13 mm
.57
14 mm
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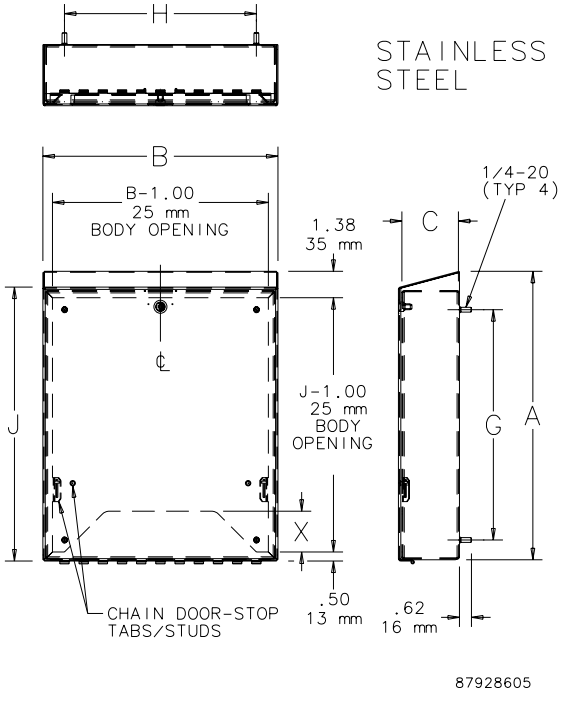
H
STAINLESS
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B
B-1.00
25 mm
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35 mm
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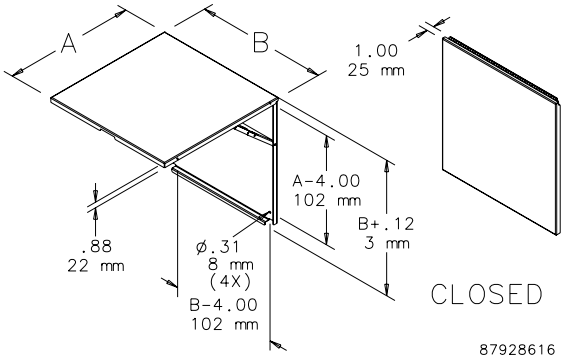
J-1.00
25 mm
BODY
OPENING
G
A
X
CHAIN DOOR-STOP
TABS/STUDS
.50
13 mm
.62
16 mm
87928605

STAINLESS STEEL FOLDING SHELF

Supports instruments and test equipment used to install and maintain electrical components in an enclosure. Also ideally suited for supporting laptop computers, monitoring units and other equipment used with programmable controllers. The shelf can be installed on the inside or outside surface of larger Hoffman industrial enclosures (except PROLINE). Automatically locks in the horizontal position when raised. When not in use, the shelf folds down and projects only 1 in. (25 mm) from the mounting surface. Constructed of 304 stainless steel with a brushed finish. Maintains UL/CSA Type 4, 4X and 12 rating when properly installed on a Hoffman enclosure.

BULLETIN: A80

Catalog Number	Size AxB in./mm	Maximum Distributed Load Rating (lb.)	Maximum Distributed Load Rating (kg)
ACSHELF1212SS	12.00 x 12.00 305 x 305	150	68
ACSHELF1818SS	18.00 x 18.00 457 x 457	150	68
ACSHELF2424SS	24.00 x 24.00 610 x 610	150	68

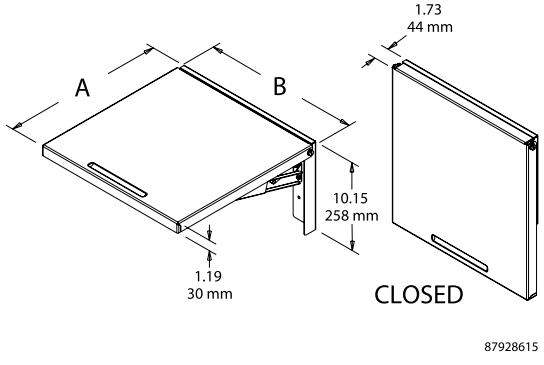


LARGE FOLDING SHELF

Supports instruments and test equipment used to install and maintain electrical components in an enclosure. Also ideally suited for supporting laptop computers, monitoring units and other equipment used with programmable controllers. The shelf can be installed on the inside or outside surface of larger Hoffman industrial enclosures (except PROLINE). Automatically locks in the horizontal position when raised. When not in use, the shelf folds to 1.73 in. (44 mm) from the mounting surface. All parts are heavy gauge steel. Maintains UL/CSA Type 4 and 12 when properly intalled on a Hoffman enclosure.

BULLETIN: ASHLF

Catalog Number	Size AxB in./mm	Maximum Distributed Load Rating (lb.)	Maximum Distributed Load Rating (kg)	Finish
AASHLF1218	18.00 x 12.00 457 x 305	150	68	White
AA61SHLF1218	18.00 x 12.00 457 x 305	150	68	Gray
AA35SHLF1218	18.00 x 12.00 457 x 305	150	68	Light gray
AASHLF1818	18.00 x 18.00 457 x 457	150	68	White
AA61SHLF1818	18.00 x 18.00 457 x 457	150	68	Gray
AA35SHLF1818	18.00 x 18.00 457 x 457	150	68	Light gray
AASHLF2424	24.00 x 24.00 610 x 610	150	68	White
AA61SHLF2424	24.00 x 24.00 610 x 610	150	68	Gray
AA35SHLF2424	24.00 x 24.00 610 x 610	150	68	Light gray

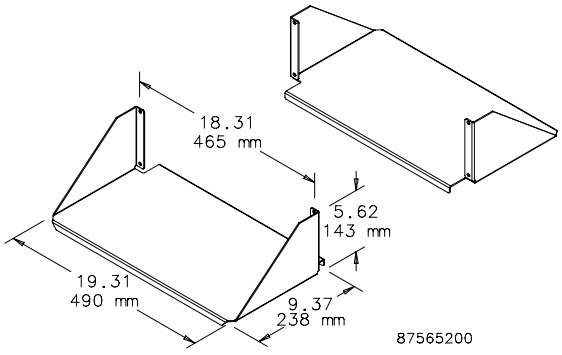


DOUBLE-SIDED SOLID ALUMINUM SHELF

Mounts on 19-in. open frame rack. Two shelves form double-sided shelf. Uses 4U rack space. Made of 0.090-in. thick aluminum with brushed finish.
Maximum load rating: 100 lb. (45.4 kg) per side, 200 lb. (90.7 kg) total

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Includes	Rack Units
ESHDA19	5.62 x 19.31 x 9.37 143 x 490 x 238	19 in.	2 shelves	4

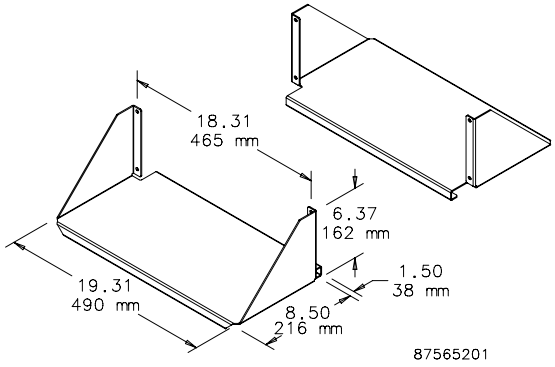


DOUBLE-SIDED, SOLID ALUMINUM, HEAVY DUTY SHELF

Mounts on open frame rack. Two shelves form double-sided shelf. Uses 4U rack space. Made of 0.090-in. thick aluminum with brushed finish.
Maximum Load Rating: 150 lb. (68.0 kg) per side, 300 lb. (136.1 kg) total

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Includes	Rack Units
ESHDHDA19	6.37 x 19.31 x 10.00 162 x 490 x 254	19 in.	2 shelves	4

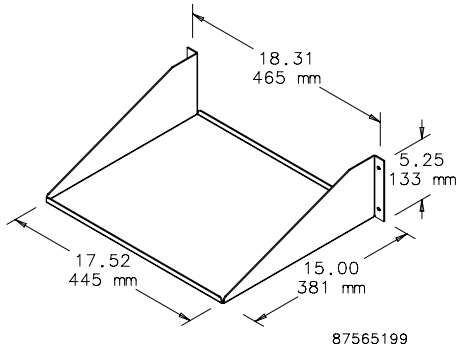


SINGLE-SIDED SOLID ALUMINUM SHELF

Mounts in a cabinet or on a 19-in. open-frame rack and can be wall mounted. Made of 0.090-in. thick aluminum with brushed finish.
Maximum load rating: 100 lb. (45.4 kg)

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
ESHA19	5.25 x 18.31 x 15.00 133 x 465 x 381	19 in.	3

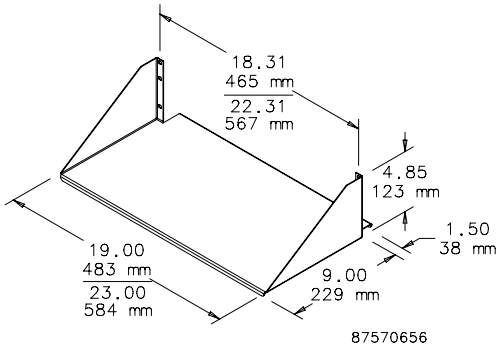


SINGLE-SIDED SOLID-STEEL SHELF

Solid shelf mounts to either front or rear flange of open-frame rack. Uses 3U of rack space. Steel with textured black finish.
Load rating: 150 lb. (68.0 kg)

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
ESH19S	4.85 x 19.00 x 10.50 123 x 483 x 267	19 in.	3
ESH23S	4.85 x 23.00 x 10.50 123 x 584 x 267	23 in.	3

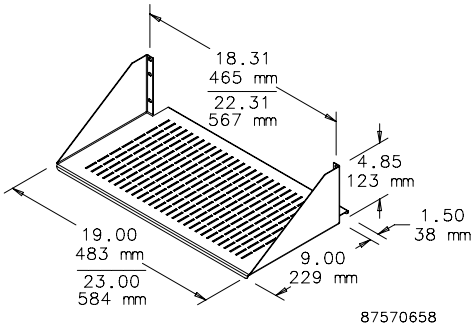


SINGLE-SIDED STEEL VENTED SHELF

Vented shelf mounts to either front or rear flange of open-frame rack. Steel with textured black polyester powder paint finish.
Load rating: 150 lb. (68.0 kg)

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
ESH19V	4.85 x 19.00 x 10.50 123 x 483 x 267	19 in.	3
ESH23V	4.85 x 23.00 x 10.50 123 x 584 x 267	23 in.	3

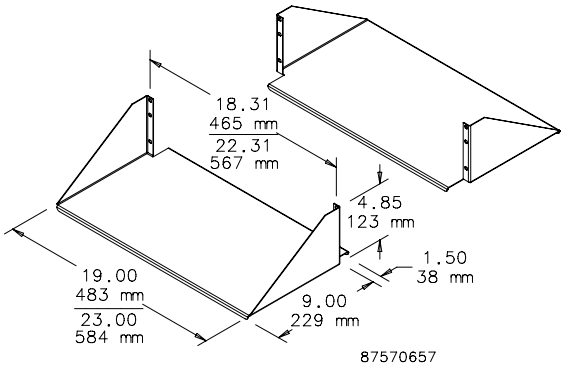


DOUBLE-SIDED SOLID-STEEL SHELF

Solid double-deep shelf mounts to both front and rear flanges of open frame rack. Steel with textured black polyester powder paint finish.
Load rating: 300 lb. (136.1 kg)

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
ESHD19	4.85x 19.00 x 10.50 123 x 483 x 267	19 in.	3
ESHD23	4.85 x 23.00 x 10.50 123 x 584 x 267	23 in.	3

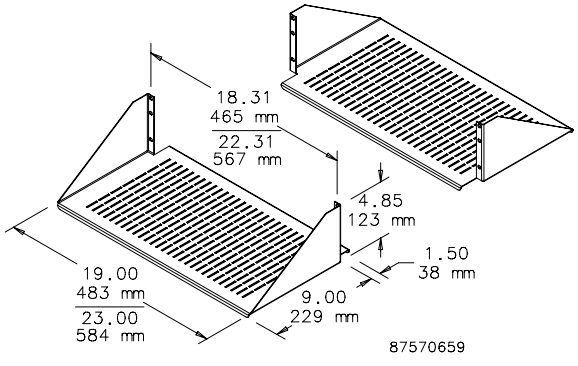


DOUBLE-SIDED STEEL VENTED SHELF

Vented, double-deep shelf mounts to both front and rear flanges of open frame rack. Steel with textured black polyester powder paint finish.
Load rating: 300 lb. (136.1 kg)

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
ESHDV19	4.85 x 19.00 x 10.50 123 x 483 x 267	19 in.	3
ESHDV23	4.85 x 23.00 x 10.50 123 x 584 x 267	23 in.	3

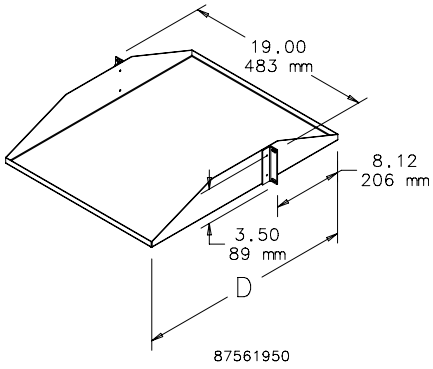


CENTER-MOUNT STEEL SHELVES

19-in. shelf mounts to the front of the rack. Ideal for supporting monitors or computers. Designed to evenly distribute load across the rack. Manufactured from 16 gauge steel. Black, low-gloss, light-textured polyester powder paint finish on all surfaces.
Load rating: 100 lb. (45.4 kg)

BULLETIN: DOFRC

Catalog Number	H x W x D in./mm	Style	Rack Units
ECMS1918	3.50 x 19.00 x 18.00 89 x 483 x 457	Solid	2
ECMS1922	3.50 x 19.00 x 22.00 89 x 483 x 559	Solid	2
ECMSV1918	3.50 x 19.00 x 18.00 89 x 483 x 457	Vented	2
ECMSV1922	3.50 x 19.00 x 22.00 89 x 483 x 559	Vented	2

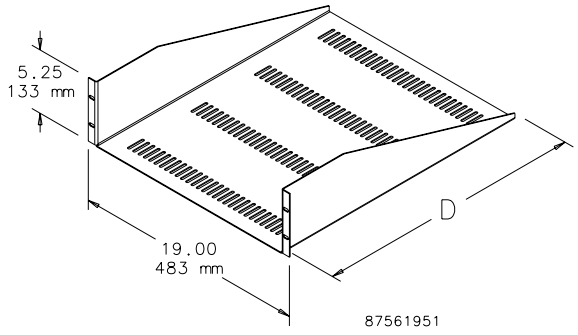


RACK-MOUNT STEEL SHELF

19-in. Rack-Mount Shelf mounts to the front of the rack. Ideal for holding non-19-in. rack-mount equipment. Available with or without vents. Manufactured from 16 gauge steel. Black, low-gloss, lightly-textured finish on all surfaces.
Load rating: 100 lb. (45.4 kg)

BULLETIN: DOFRC

Catalog Number	H x W x D in./mm	Style	Rack Units
EMS1918	5.25 x 19.00 x 18.00 133 x 483 x 457	Solid	3
EMS1922	5.25 x 19.00 x 22.00 133 x 483 x 559	Solid	3
EMSV1918	5.25 x 19.00 x 18.00 133 x 483 x 457	Vented	3
EMSV1922	5.25 x 19.00 x 22.00 133 x 483 x 559	Vented	3

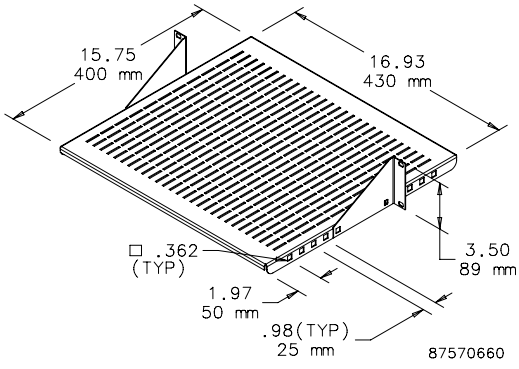


ADJUSTABLE STEEL VENTED SHELF

Vented shelf adjustable front to back in 25-mm increments. Shelf mounts to either front or rear flange of open frame rack. Steel with textured black polyester powder paint finish.
Load rating: 60 lb. (27.2 kg)

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
ESHVA19	3.50 x 16.93 x 15.75 89 x 430 x 400	19 in.	2
ESHVA23	3.50 x 19.93 x 15.75 89 x 506 x 400	23 in.	2

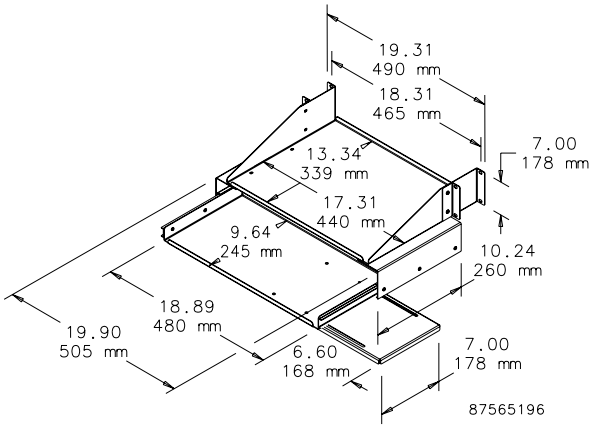


PULLOUT KEYBOARD TRAY WITH MONITOR SHELF

Mounts to the front and back surfaces of a standard 3-in. open frame rack. Fits full-size keyboard. Includes mouse tray. Extends 10.5 in. (267 mm) beyond front of open frame rack. Keyboard tray slides out an additional 7 in. (178 mm). Uses 4U rack space. 16 gauge steel with RAL 9005 black polyester powder paint finish. Monitor shelf load rating: 100 lb. (45.4 kg)

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
E19SKBM	7.00 x 19.90 x 10.24 178 x 505 x 260	19 in.	4

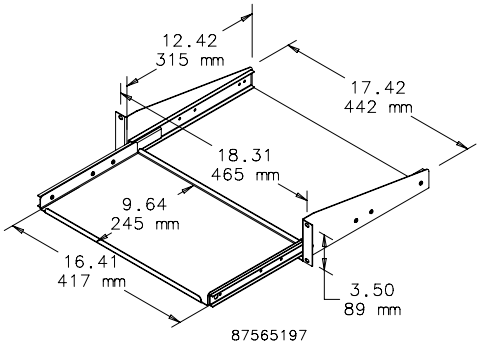


PULL-OUT SHELF FOR MINI KEYBOARD

Pull-Out Shelf for Mini Keyboard mounts either in a cabinet or on a 19-in. open-frame rack and fits a 16.25-in. (413-mm) wide keyboard. When closed, all parts slide between rack angles. Keyboard tray slides out 8.94 in. (227 mm). 16 gauge steel with RAL 9005 black polyester powder paint finish.

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
P19KBSM	3.50 x 18.31 x 12.42 89 x 465 x 315	19 in.	2

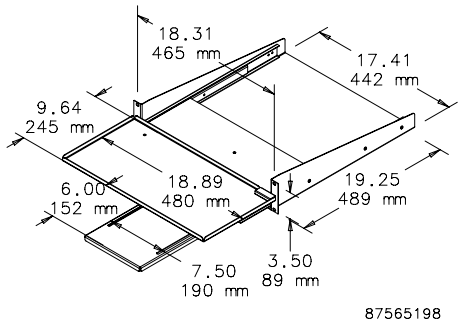


PIVOTING KEYBOARD SHELF WITH MOUSE TRAY

Mounts either in a cabinet or on a 19-in. open-frame rack. Shelf pulls out and pivots 90 degrees to access full-size keyboard. Shelf allows keyboard to slide between standard rack angles and includes mouse tray. 16 gauge steel with RAL 9005 black polyester powder paint finish. Keyboard tray extends 9.75 in. (248 mm) beyond front of rack angles or open-frame rack.

BULLETIN: DACCY

Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
P19KBPVT	3.50 x 18.89 x 19.25 89 x 480 x 489	19 in.	2

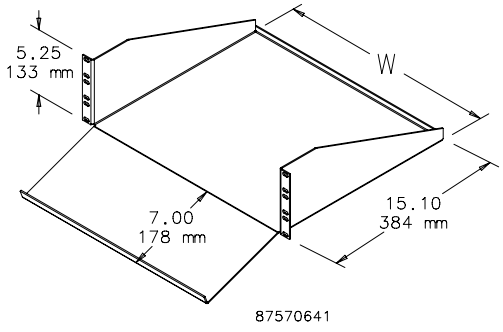


STEEL KEYBOARD/MONITOR SHELF

Designed to accommodate a monitor and keyboard in an ergonomically engineered design. Shelf mounts to front flange of open-frame rack. Can mount in a cabinet if rack angles are adjusted back for door clearance. Uses 3U of rack space. 19-in. and 23-in. rack versions. Steel with textured black finish.
Load rating: 200 lb. (91 kg)

BULLETIN: DACCY

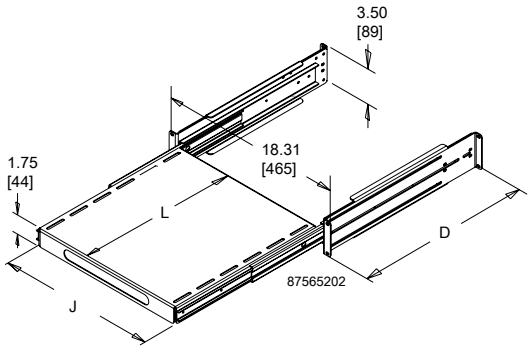
Catalog Number	H x W x D in./mm	Fits Rack	Rack Units
ESH19KBM	5.25 x 17.38 x 15.10 133 x 441 x 384	19	3
ESH23KBM	5.25 x 21.38 x 15.10 133 x 543 x 384	23	3



RACK-MOUNT, PULL-OUT SHELF

Rack-Mount, Pull-out Shelf mounts to front surface of front and back rack angles. Models fit 19- or 23-in. rack spacing. Adjusts to fit multiple-depth enclosures and rack angle placements. Shelf can be used on 2-post rack or cabinet with front rack angles only by reversing support bracket. Optional cable manager arm available. 14 gauge steel with 12 gauge supports and RAL 9005 black or RAL 7035 gray polyester powder paint finish. Load rating: 150 lb. (68.0 kg) with four corner mounting; 75 lb. (34.0 kg) with two-post or front-rack-angle cabinet mounting.
Optional Cable Manager Arm is recommended to help control cable movement as shelf slides in and out.

BULLETIN: DACCY, P20



Catalog Number	D Max. (in.)	D Max. (mm)	L (in.)	L (mm)	J (in.)	J (mm)	Shelf Pullout (in.)	Shelf Pullout (mm)	Fits Rack	Rack Units	Color
P19SHP68B	37.40	950	16.72	425	16.20	412	17.00	432	19 in.	2	Black
P19SHP68	37.40	950	16.72	425	16.20	412	17.00	432	19 in.	2	Gray
P19SHP810B	41.30	1050	24.59	625	16.20	412	17.00	432	19 in.	2	Black
P19SHP810	41.30	1050	24.59	625	16.20	412	17.00	432	19 in.	2	Gray
P23SHP68B	37.40	950	16.72	425	20.20	513	17.00	432	23 in.	2	Black
P23SHP68	37.40	950	16.72	425	20.20	513	17.00	432	23 in.	2	Gray
P23SHP810B	41.30	1050	24.59	625	20.20	513	17.00	432	23 in.	2	Black
P23SHP810	41.30	1050	24.59	625	20.20	513	17.00	432	23 in.	2	Gray

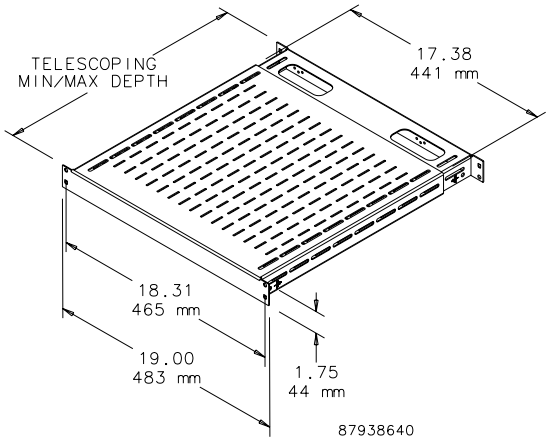
TOOL-LESS SHELF

An easy-to-install tool-less vented 19-in. shelf. Mounts onto rack angles that have EIA-spaced square holes (.375 in.). Shelf slides open and provides a variable-sized, continuous surface for equipment. Back of shelf has oval cutouts for power and data cables. Accessory hole patterns at back of shelf fit small and large D-rings to help manage cable. Made of steel with a 150 lb. (68 kg) static load rating. Available with RAL 9005 black or RAL 7035 gray polyester powder coat finish.
Note: For square-hole rack angles only!

BULLETIN: DACCY

Catalog Number	Description	Finish	Minimum Depth mm/in.	Maximum Depth mm/in.	Rack Angle Type
D19FVT69B	Shelf, vented, 19 in. tool-less	Black	495 19.50	851 33.50	Square hole only
D19FVT69G	Shelf, vented, 19 in. tool-less	Gray	495 19.50	851 33.50	Square hole only
D19FVT912B	Shelf, vented, 19 in. tool-less	Black	792 31.20	1151 45.30	Square hole only
D19FVT912G	Shelf, vented, 19 in. tool-less	Gray	792 31.20	1151 45.30	Square hole only

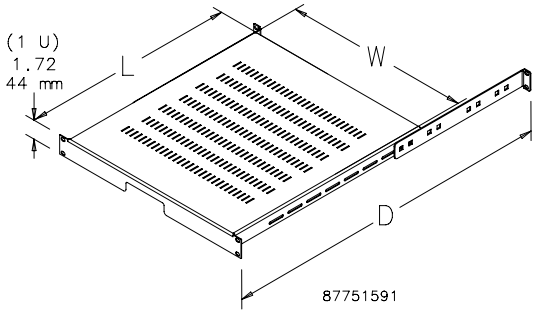
Minimum and maximum depth measured from rack angle to rack angle.



RACK-MOUNT ADJUSTABLE SHELF

Mounts to front surface of front and back rack angles. Shelf is made of painted 14 gauge steel and the adjustable support brackets are clear-plated 12 gauge steel. Adjustable to fit multiple-depth enclosures or rack angle placement. Both solid and vented models available. Fits 19- or 23-in. rack spacing. Requires only 1U of rack space. Shelf has RAL 7035 light-gray textured or RAL 9005 black textured polyester powder paint finish. Load rating: 150 lb. (68 kg)

BULLETIN: DACCY



Catalog Number	Type	Size	Finish	L x W (in.)	L x W (mm)	D max. (in.)	D max. (mm)	Fits Enclosure Depth Up To (in.)	Fits Enclosure Depth Up To (mm)
P19SH68	Solid	19 in.	Gray	19.68 x 17.32	500 x 440	30.71	780	31.50	800
P19SH68B	Solid	19 in.	Black	19.68 x 17.32	500 x 440	30.71	780	31.50	800
P19VSH68B	Vented	19 in.	Black	19.68 x 17.32	500 x 440	30.71	780	31.50	800
P19SH810	Solid	19 in.	Gray	27.56 x 17.32	700 x 440	38.58	980	39.37	1000
P19SH810B	Solid	19 in.	Black	27.56 x 17.32	700 x 440	38.58	980	39.37	1000
P19VSH810B	Vented	19 in.	Black	27.56 x 17.32	700 x 440	38.58	980	39.37	1000
P23SH68B	Solid	23 in.	Black	19.68 x 21.32	500 x 542	30.71	780	31.50	800
P23VSH68B	Vented	23 in.	Black	19.68 x 21.32	500 x 542	30.71	780	31.50	800
P23SH810B	Solid	23 in.	Black	27.56 x 21.32	700 x 542	38.58	980	39.37	1000
P23VSH810B	Vented	23 in.	Black	27.56 x 21.32	700 x 542	38.58	980	39.37	1000

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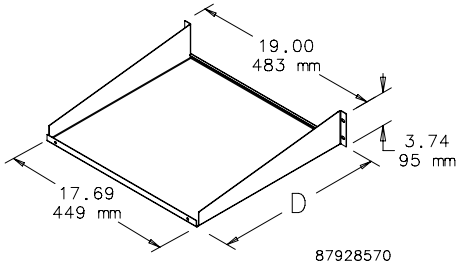
SINGLE-SIDED SHELF

Mounts to 19-in. rack angles to house voice/data networking equipment. RAL 9005 black finish. Load rating: 75 lb. (34 kg)

BULLETIN: DACCY

Catalog Number	H x W x D (in.)	H x W x D (mm)	Style	Rack Units
ESH198	3.74 x 19.00 x 8.00	95 x 483 x 203	Solid	2
ESH1915	3.74 x 19.00 x 15.00	95 x 483 x 381	Solid	2
ESH1915V	3.74 x 19.00 x 15.00	95 x 483 x 381	Vented	2
ESH1917	3.74 x 19.00 x 17.00	95 x 483 x 432	Solid	2

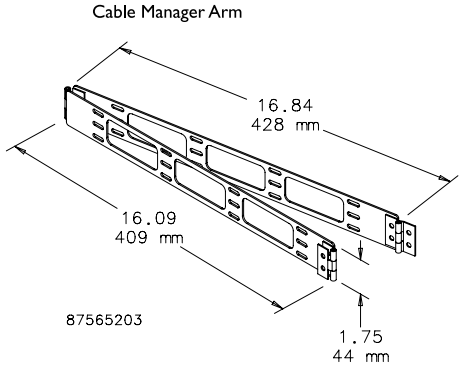


CABLE MANAGER ARM FOR SLIDING EQUIPMENT SHELF

Cable Manager Arm mounts to back of sliding equipment shelf on right or left side. Controls cable movement as shelf slides in and out. 14 gauge steel with RAL 9005 black polyester powder paint finish.

BULLETIN: DACCY

Catalog Number	Description	Use With
PHCB	Cable Manager Arm	Sliding Equipment Shelf

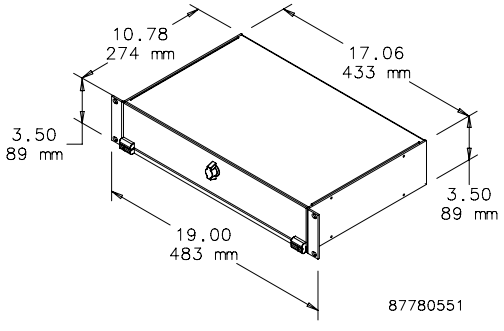


KEYBOARD COMPARTMENT FOR 19-IN. RACKS

Provides a convenient way to incorporate a keyboard with other 19-in. rack-mounted equipment. Uses 2 RU of space. Made of lightweight aluminum with brushed finish. Accommodates keyboard up to 16.50-in. (419-mm) wide. Mounting hardware included.

BULLETIN: DACCY

Catalog Number	Fits rack width	Rack Units
A19KBC2B	19	2

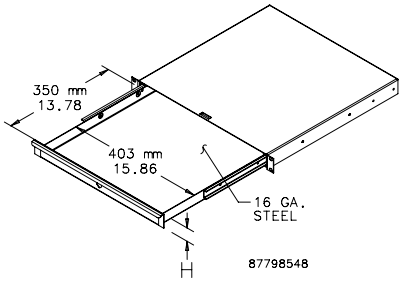


RACK-ANGLE MOUNTED DRAWER

Steel drawer for 19-in. rack-angle mounting. Mounts to the front surface of the rack angles. Integral steel box contains the drawer and protects surrounding internal equipment. Extends 13 in. (330 mm) on ball bearing slides. Front includes handle and key lock. Finish is RAL 7035 textured light-gray polyester powder paint. Mounting hardware is included.

BULLETIN: P20

Catalog Number	H (mm)	H (in.)	Fits Rack Width	Rack Units
P19DR1US	43	1.69	19 in.	1
P19DR2US	88	3.47	19 in.	2
P19DR3US	132	5.20	19 in.	3

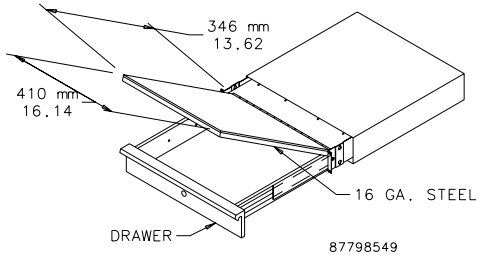


WRITING SURFACE FOR RACK-ANGLE-MOUNTED DRAWER

Steel cover mounts on top of the drawer and serves as a writing surface and drawer cover. Finish is RAL 7035 light-gray textured polyester powder paint. Drawer shown in illustration and photo must be ordered separately.

BULLETIN: P20

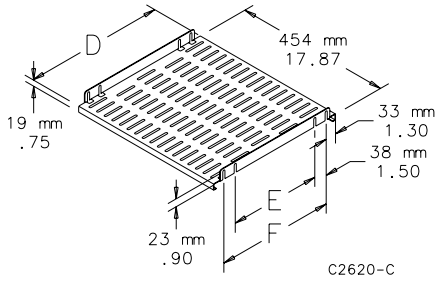
Catalog Number	Description	Fits
P19WS	Steel writing surface and cover	Drawer (order separately)



19-IN. FIXED SHELF

14 gauge steel fixed shelf has large ventilation slots in shelf surface. Mounts between two pair of rack mounting angles that have accessory mounting legs. Shelves have RAL 7035 light-gray polyester powder paint finish. Plated mounting hardware is furnished.

BULLETIN: P20



Catalog Number	D (in.)	D (mm)	E (in.)	E (mm)	F (in.)	F (mm)	Fits Rack Width
A19SH5	16.06	408	10.46	266	13.46	342	19 (in.)
A19SH6	20.00	508	14.40	366	17.40	442	19 (in.)
A19SH8	27.87	708	22.27	566	25.27	642	19 (in.)

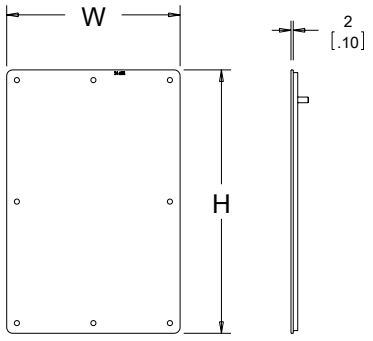
CONCEPT KEYBOARD BOX

Keyboard box is designed to fit on an outside surface of an enclosure to provide a self-contained external Type 4 housing for a keyboard. The box attaches to the enclosure surface with 4 bolts. A large hole and rubber plug are provided for keyboard cord and plug. The hinged cover is supported with flexible cables in the open position. A left and a right mouse tray slides out from under the keyboard mounting surface. VELCRO® strips with pressure-sensitive adhesive are supplied to attach a keyboard. An internal mouse storage pracket is provided. The box and cover are 16 gauge steel with ANSI 61 gray polyester powder paint finish. Cover latches with a single quarterturn slotted latch. Optional CONCEPT latches also fit.
VELCRO is a trademark of Velcro Industries B.V.

BULLETIN: A80

Catalog Number	AxBxC in./mm	Max. Keyboard Size W x D x H in./mm
CKBC24	10.00 x 23.30 x 4.79 254 x 592 x 122	20.20 x 8.00 x 2.34 513 x 203 x 59

12 GAUGE GLAND PLATE, TYPE 4 AND TYPE 12



Mild steel gland plates are constructed of 12 gauge steel and finished with ANSI 61 gray polyester powder paint. Gland plates provide a removable cable egress and entry plate while maintaining enclosure rating of UL Type 4 and Type 12. Easy installation by cutting a rectangular opening in the enclosure and fastening with included hardware kit.

BULLETIN: GP1

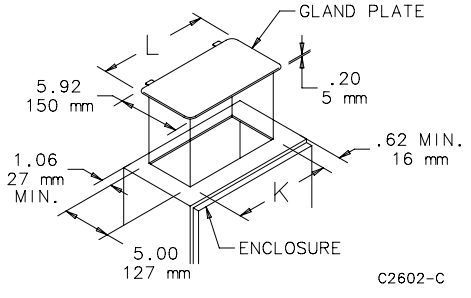
Catalog Number	Cutout Size (in.)	Cutout Size (mm)	W x H (in.)	W x H (mm)
GP126	9.50 x 3.75	241 x 95	10.98 x 5.23	279 x 133
GP128	9.50 x 5.75	241 x 146	10.98 x 7.23	279 x 184
GP166	13.50 x 3.75	343 x 95	14.98 x 5.23	380 x 133
GP168	13.50 x 5.75	343 x 146	14.98 x 7.23	380 x 184
GP206	17.50 x 3.75	446 x 95	18.98 x 5.23	482 x 133
GP208	17.50 x 5.75	446 x 146	18.98 x 7.23	482 x 184
GP248	21.50 x 5.75	546 x 146	22.98 x 7.23	584 x 184
GP2412	21.50 x 7.00	546 x 178	22.98 x 8.48	584 x 215

16 GAUGE GLAND PLATE

Constructed of 16 gauge steel. Gland plates will maintain UL/CSA Type 12 integrity while providing a removable cable egress and entry plate. Easily installed by cutting a rectangular opening in the enclosure. Finish is ANSI 61 gray polyester powder paint.

BULLETIN: GP1

Catalog Number	K in./mm	L in./mm
DLGP610	9.00 229	9.94 252
DLGP618	17.00 432	17.94 457



12 GAUGE GLAND PLATE

Constructed of 12 gauge steel and designed for use with 10 gauge and 12 gauge enclosures. Provides a removable cable egress and entry plate while maintaining UL/NEMA integrity of the enclosure. Gasket with pressure-sensitive adhesive is included to be applied after desired modifications are completed. Finish is ANSI 61 gray polyester powder paint. Maintains UL/NEMA Type 4 and Type 12 if properly installed in a Hoffman enclosure.

BULLETIN: GP1

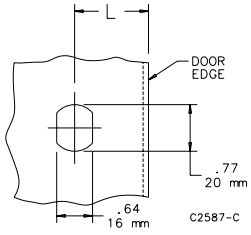
Catalog Number	Size in./mm	Opening Size in./mm
AGP618	6.50 x 18.50 165 x 470	4.00 x 16.00 102 x 406
AGP1218	12.50 x 18.50 318 x 470	10.00 x 16.00 254 x 406
AGP1618	16.50 x 18.50 419 x 470	14.00 x 16.00 356 x 406

LOCK KIT FOR CLAMP COVER JUNCTION BOXES

Designed for field installation in standard clamp-cover junction boxes. Includes complete installation instructions. One hole must be drilled or punched in the cover to receive the cylinder lock. Punches for Hoffman locks and latches are available from Greenlee Punches. For more information on Greenlee punches, go to **http://www.greenlee.textron.com/**

BULLETIN: A80

Catalog Number	L (in.)	L (mm)
ACLJIC	1.25	32

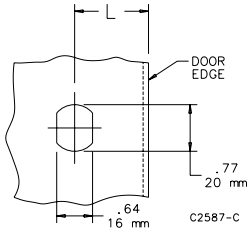


LOCK KIT FOR TYPE 3R AND 12 ENCLOSURES

Designed for field installation in standard one-door Type 3R and 12 enclosures. Includes complete installation instructions. One hole must be drilled or punched in the door to receive the cylinder lock.

BULLETIN: A80

Catalog Number	L, for NEMA 12 Enclosure in./mm	L, for Medium 3R Hinged-Cover Enclosure in./mm
ACLSN12	1.69	2.25
	43	57



PADLOCK KIT FOR JUNCTION BOXES

Designed for field installation on standard LP, CH and CHNF junction boxes. Maintains water-tight and dust-tight seal. To install simply drill two holes in the cover and two holes in the body. Includes complete instructions. Padlock Kit is plated steel or Type 316 stainless steel.

BULLETIN: A80

Catalog Number	Description
APLKJIC	Plated steel
APLKJIC6SS	Type 316 stainless steel

REPLACEMENT KEYS

Fits PROLINE Network Cabinet and Networking Wall-Mount Cabinet.

BULLETIN: DACCY

Catalog Number	Key Code	Includes	Use with
E2233KEY	2233	2 Keys	PROLINE, Net Series, PC Cabinet, SOHO
E333KEY	333	2 Keys	ACCESSPLUS, L-BOX, D-BOX

SAFETY LOCKOUTS

Provide a means of using multiple padlocks on a secured power source. Catalog number ASL6C includes a 10.00-in. (254-mm) plated steel chain. Manufactured from 10 gauge steel with six station holes. Red finish. Overall length is 5.06 in. (128 mm) and padlock holes are .38-in. (10-mm) in diameter.

BULLETIN: A80

Catalog Number	Description
ASL6	Without chain
ASL6C	With chain

DUAL-ACCESS SAFETY LOCKOUTS

Provide a means of using two padlocks on a secured power source. Either padlock can be removed enabling power to be interrupted and enclosure accessed. Catalog number ASLDAC includes a 10.00-in. (254-mm) plated steel chain. Lockouts are manufactured from 10 gauge steel and finished in red. Padlock holes are .38-in. (10-mm) in diameter. Padlock is not included.

BULLETIN: A80

Catalog Number	Description
ASLDA	Without chain
ASLDAC	With chain

T-HANDLE LATCH AND KEYED CYLINDER LOCK KITS

To install, simply remove the standard slotted latch and insert the kit. Complete installation instructions are furnished. Catalog number AL7A includes a Type L7 T handle and all hardware. Catalog number AL12AR includes a Type L12 cylinder lock, cam and all hardware. Latch and lock fit Type 1 enclosures and hinged-cover pull boxes.

BULLETIN: A80

Catalog Number	Description
AL7A	T handle latch kit
AL12AR	Cylinder lock kit

LATCH KIT FOR ONE-DOOR TYPE 12 ENCLOSURES

Designed for field installation on most standard one-door Type 12 enclosures. These latch kits will not fit Hoffman disconnect, CONCEPT or PROLINE enclosures. Each kit includes a handle, latch, latch rods, adjustable rod guides and all hardware. The latch rods can be adjusted to maintain the proper gasket compression by relocating the pins in the rod guides. When the pin is removed, the latch rod can also be removed. These kits are available with a key locking handle, a non-locking handle or a padlocking handle. All openings through the door are gasketed to assure a complete seal. Ends of latch rods have rollers for easier door closing.

BULLETIN: A80

Catalog Number	Handle Type	Opens	Description	Finish
AL2A	Keylock	Clockwise	1-point Latch kit	Brushed Chrome
AL2ABLK	Keylock	Clockwise	1-point Latch kit	Black
AL2ACCW	Keylock	Counterclockwise	1-point Latch kit	Brushed Chrome
AL2ACCWBLK	Keylock	Counterclockwise	1-point Latch kit	Black
AL36A	Padlock	Either Clockwise or Counterclockwise	1-point Latch kit	-
AL3A	Non-Locking	Clockwise	1-point Latch kit	Brushed Chrome
AL3ABLK	Non-Locking	Clockwise	1-point Latch kit	Black
AL2BCCW	Keylock	Counterclockwise	3-point Latch Kit where A is 16, 20, 24 or 30 in.	Brushed Chrome
AL2BCCWBLK	Keylock	Counterclockwise	3-point Latch Kit where A is 16, 20, 24 or 30 in.	Black
AL2BR	Keylock	Clockwise	3-point Latch Kit where A is 16, 20, 24 or 30 in.	Brushed Chrome
AL2BRBLK	Keylock	Clockwise	3-point Latch Kit where A is 16, 20, 24 or 30 in.	Black
AL36BR	Padlock	Either Clockwise or Counterclockwise	3-point Latch Kit where A is 16, 20, 24 or 30 in.	-
AL3BR	Non-Locking	Clockwise	3-point Latch Kit where A is 16, 20, 24 or 30 in.	Brushed Chrome
AL3BRBLK	Non-Locking	Clockwise	3-point Latch Kit where A is 16, 20, 24 or 30 in.	Black
AL2CCCW	Keylock	Counterclockwise	3-point Latch kit where A is 36, 42 or 48 in.	Brushed Chrome
AL2CCCWBLK	Keylock	Counterclockwise	3-point Latch kit where A is 36, 42 or 48 in.	Black
AL2CR	Keylock	Clockwise	3-point Latch kit where A is 36, 42 or 48 in.	Brushed Chrome
AL2CRBLK	Keylock	Clockwise	3-point Latch kit where A is 36, 42 or 48 in.	Black
AL36CR	Padlock	Either Clockwise or Counterclockwise	3-point Latch kit where A is 36, 42 or 48 in.	-
AL3CR	Non-Locking	Clockwise	3-point Latch kit where A is 36, 42 or 48 in.	Brushed Chrome
AL3CRBLK	Non-Locking	Clockwise	3-point Latch kit where A is 36, 42 or 48 in.	Black
AL2DCCW	Keylock	Counterclockwise	3-point Latch kit where A is 60 or 72 in.	Brushed Chrome
AL2DCCWBLK	Keylock	Counterclockwise	3-point Latch kit where A is 60 or 72 in.	Black
AL2DR	Keylock	Clockwise	3-point Latch kit where A is 60 or 72 in.	Brushed Chrome
AL2DRBLK	Keylock	Clockwise	3-point Latch kit where A is 60 or 72 in.	Black
AL36DR	Padlock	Either Clockwise or Counterclockwise	3-point Latch kit where A is 60 or 72 in.	-
AL3DR	Non-Locking	Clockwise	3-point Latch kit where A is 60 or 72 in.	Brushed Chrome
AL3DRBLK	Non-Locking	Clockwise	3-point Latch kit where A is 60 or 72 in.	Black

See price list for factory installation charges. A is enclosure height.

LATCH KITS FOR TYPE 4 AND 12 ENCLOSURES

Top left to right: AL32, AL3S. Bottom left to right: AL32Y, AL35Y, AL31

Fits Type 4 and 12 enclosures which have external screw clamps. Requires only a quarter-turn (90 degrees) to open or close. An internal O-ring and external gasket assure a watertight and dust-tight seal. Installation requires a hole punched or drilled in the door for each latch. Complete instructions are furnished. A square or triangular key is required for tamper-resistant latches. Latch is die-cast zinc with chrome finish.

BULLETIN: A80

Catalog Number	Description
AL31	Slotted insert
AL32	7-mm square insert
AL32Y	Key for AL32
AL35	7-mm triangle insert
AL35Y	Key for AL 35

TOGGLE LATCH FOR TYPE 4 AND 4X FLOOR-MOUNT AND FREE-STAND ENCLOSURES

Provides quick access to Type 4 and 4X floor-mount and free-stand enclosures with clamps. The 3/8-16 threaded, stainless steel toggle latches replace the standard stainless steel bolts. Operation of the toggle releases the door clamp so the door can be opened without tools. Two Type 316 stainless steel toggle assemblies included.

BULLETIN: A80

Catalog Number	Description
AFT44XSS	2 toggle latches

POWERGLIDE HANDLES

Easy-to-install medium-size POWERGLIDE Handles fit into existing handle holes. They are available in clockwise and counterclockwise non-defeater models and a clockwise defeater model. The clockwise defeater model includes door hardware for Bulletin A25 enclosures.

BULLETIN: A80

Catalog Number	Description
AL55CW	Medium POWERGLIDE Handle - Clockwise Opening
AL55CCW	Medium POWERGLIDE Handle - Counterclockwise Opening
AL55CWD	Medium POWERGLIDE Handle - Clockwise Opening with Defeater and Door Hardware

HANDLE KIT

Non-metallic handle for small enclosures. Includes four rubber bumpers that mount on back of enclosure to protect exterior finish. All mounting hardware and complete installation instructions are provided.

BULLETIN: A80

Catalog Number	Description
DHDLK	Handle kit

HANDLES

PUHK *PUHKA*

Handles attach to sides, top or bottom of sloped front to provide maximum operator control when using the suspension system, swivel or swivel tilt. Location dimples on the sides of sloped fronts indicate drill-hole location for standard mounting. Handles are fastened from inside the enclosure.

BULLETIN: P1

Catalog Number	Description	Fits
PUHKA	248 mm	PROLINE sloped fronts
PUHK	9.75 in.	PROLINE sloped fronts

FAST-OPERATING CLAMP-COVER JUNCTION BOX CLAMP

Provides quick access to enclosure or wireway interiors. Installs on standard clamp bracket used on Hoffman junction boxes, Type 12 trough and wireway, Type 4X wireway and similar custom enclosures. Clamps are available in plated steel or stainless steel.

BULLETIN: A80

Catalog Number	Description
AL23	Plated steel clamp
AL23SS	Stainless steel clamp

FAST-OPERATING CLAMP ASSEMBLY

Provides quick access to enclosures which have screw clamps. Install on clamp brackets used on single-door Type 4, 4X, 12 and 13 enclosures and similar custom order enclosures. The entire clamp assembly is Type 316 stainless steel.

BULLETIN: A80

Catalog Number	Qty.
AFC412SS	2

CLAMP KITS

These kits provide replacement clamps for clamp-cover junction boxes and wall-mount enclosures. Each kit contains two clamps and all mounting hardware.

BULLETIN: A80

Catalog Number	Material	Use with
AL15	Mild Steel	A12 enclosures
AL16	Stainless Steel	A4, A4S enclosures
AL17	Mild Steel	A51 junction boxes
AL18	Stainless Steel	A51S junction boxes

CLAMP BLOCK KIT

Used on floor-mount and free-stand Type 4X stainless steel enclosures with clamps. Kit includes two sets of screws, two Type 316L clamp blocks and mounting hardware.

BULLETIN: A50Y

Catalog Number	Description
ACBK6SS	2 clamp blocks and screw sets

DRIP SHIELD KIT FOR TYPE 12 ENCLOSURES

Protects door hardware from dripping water and settling dust. Attaches quickly and easily to the enclosure with stainless steel screws and sealing washers (hardware is furnished). Stainless steel hinge pin and stainless steel door clamping assemblies are furnished to replace the standard hinge pin and door clamping assemblies. A tube of sealing compound is also supplied with each kit. Manufactured from 14 gauge steel with an ANSI 61 gray polyester powder paint finish over pretreated surfaces.

BULLETIN: A80

Catalog Number	For	Fits Enclosure Size B in./mm
ADK12A	Single-Door Wall-Mount Enclosures	12.00 305
ADK16A	Single-Door Wall-Mount Enclosures	16.00 406
ADK20A	Single-Door Wall-Mount Enclosures	20.00 508
ADK24A	Single-Door Wall-Mount/Floor-Mount Enclosures with Continuous Hinge	24.00 610
ADK30A	Single-Door Wall-Mount/Floor-Mount Enclosures with Continuous Hinge	30.00 762
ADK36A	Single-Door Wall-Mount/Floor-Mount Enclosures with Continuous Hinge	36.00 914
ADK42A	Two-Door Floor-Mount, Continuous Hinge Enclosures	42.00 1067
ADK48A	Two-Door Floor-Mount, Continuous Hinge Enclosures-Door Floor-Mount Enclosures	48.00 1219
ADK60A	Two-Door Floor-Mount, Continuous Hinge Enclosuresoor Floor-Mount Enclosures	60.00 1524
ADK72A	Two-Door Floor-Mount, Continuous Hinge Enclosuresoor Floor-Mount Enclosures	72.00 1829

Two-Door Drip Shield kits are not designed for use on 48.00-in. (1219-mm) wide and 60.00-in. (1524-mm) wide Two-Door Type 12 Wall-Mount Enclosures.

DRIP SHIELD KIT FOR TYPE 12 FREE-STAND AND FLOOR-MOUNT ENCLOSURES WITH CONCEALED HINGES

Protects door hardware from dripping water and settling dust. Attaches quickly and easily to the enclosure with stainless steel screws and sealing washers (hardware is furnished). A tube of sealing compound is also supplied with each kit. Manufactured from 14 gauge steel with an ANSI 61 gray polyester powder paint finish over pretreated surfaces.

BULLETIN: A80

Catalog Number	For	Fits Enclosure Size B in./mm
ADK24HH	Single-Door Free-Stand/Floor-Mount Enclosures	24.00 610
ADK30HH	Single-Door Free-Stand/Floor-Mount Enclosures	30.00 762
ADK36HH	Single-Door Free-Stand/Floor-Mount Enclosures	36.00 914
ADK42HH	Two-Door Free-Stand/Floor-Mount Enclosures	42.00 1067
ADK48HH	Two-Door Free-Stand/Floor-Mount Enclosures	48.00 1067
ADK60HH	Two-Door Free-Stand/Floor-Mount Enclosures	60.00 1524
ADK72HH	Two-Door Free-Stand/Floor-Mount Enclosures	72.00 1829

STAINLESS STEEL DRIP SHIELD KIT FOR TYPE 4 AND 4X WALL-MOUNT ENCLOSURES

Easily installed on Type 4 and 4X wall-mount enclosures (excluding quick-release latch models). Protects door from dripping water and settling dust. Attaches quickly and easily to the enclosure with stainless steel screws and sealing washers (furnished). A tube of sealing compound is supplied with each kit. Manufactured from 14 gauge Type 316 stainless steel. Kits can be special ordered for other Hoffman enclosures. Consult factory for more information. Product maintains UL/CSA Type 4, 4X and 12 rating when properly installed on a Hoffman enclosure.

BULLETIN: A4SY

Catalog Number	Fits Enclosure Size B in./mm
ADK12SS6	12.00 305
ADK16SS6	16.00 406
ADK20SS6	20.00 508
ADK24SS6	24.00 610
ADK30SS6	30.00 762
ADK36SS6	36.00 914

WALL-MOUNT SOLAR SHIELDS

INDUSTRY STANDARDS

UL 508A Listed; Type 4, 12; File No. E61997
cUL Listed per CSA C22.2 No 94; Type 4, 12; File No. E61997

NEMA/EEMAC Type 4, 12
IEC 60529, IP66

APPLICATION

Wall-mount Solar Shield protects outdoor enclosures from overheating and provides weather protection from sun, rain and snow. Enclosures are shielded from the top, sides and rear; white powder paint finish maximizes solar heat reduction. Two sets of fully-adjustable mounting channels are provided to mount any type of wall-mount enclosure that fits inside the solar shield. Mounting hardware and step-by-step instructions are included.

Shielding Effectiveness

Hoffman's research of the effects of solar radiation on enclosures has shown the positive benefits of utilizing shielding to decrease temperature rise. Shielding has been found to be an effective, low-cost method of reducing solar heat gain in outdoor electrical and electronic applications.
Recent test results indicate that a wall-mount solar shield provides an approximately 56% reduction in temperature rise due to solar head load.

SPECIFICATIONS

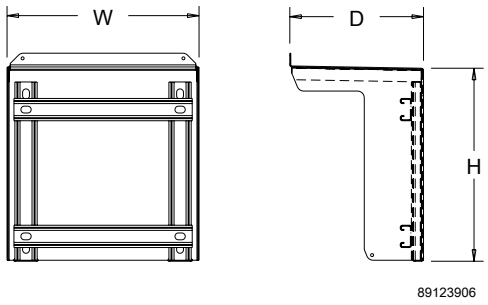
- 14 gauge galvanized steel
- Adjustable mounting allows various wall-mount enclosures to fit inside the solar shield. Refer to the table below to determine which solar shield fits your enclosure size.
- Fits most CONCEPT, INLINE and NEMA Type 4 wall-mount enclosures and junction boxes (i.e. Bulletins A51NF and A51FL)
- Hardware is included for mounting an enclosure to the solar shield

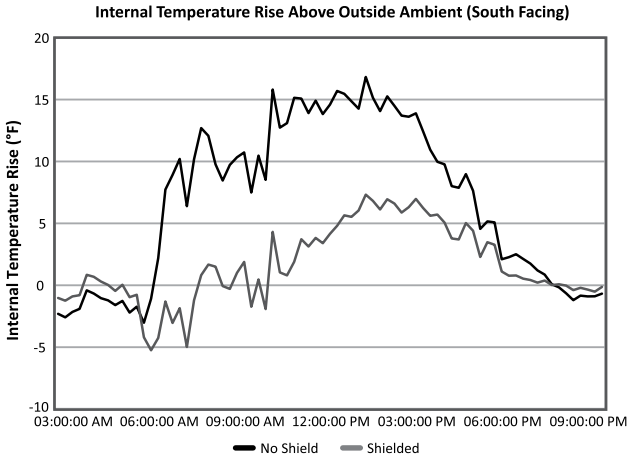
FINISH

- Hoffman #60 White powder paint finish inside and out

MODIFICATION AND CUSTOMIZATION

Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.





BULLETIN: A80SH

Standard Product **Solar Shield**

Catalog Number	Description	H (in.)	H (mm)	W (in.)	W (mm)	D (in.)	D (mm)	*Maximum overall enclosure size A x B x C (in.)	*Maximum overall enclosure size A x B x C (mm)
SW2SGLWH	Solar Shield, 2S, Galvanized, White	14.00	356	14.00	356	9.75	248	10.00 x 10.00 x 8.00	254 x 254 x 203
SW1MGLWH	Solar Shield, 1M, Galvanized, White	16.00	406	16.00	406	11.75	298	12.00 x 12.00 x 10.00	305 x 305 x 254
SW2MGLWH	Solar Shield, 2M, Galvanized, White	20.00	508	20.00	508	11.75	298	16.00 x 16.00 x 10.00	406 x 406 x 254
SW1LGLWH	Solar Shield, 1L, Galvanized, White	24.00	610	24.00	610	12.75	324	20.00 x 20.00 x 12.00	508 x 508 x 305
SW2LGLWH	Solar Shield, 2L, Galvanized, White	28.00	711	28.00	711	15.75	400	24.00 x 24.00 x 14.00	610 x 610 x 356

*Adjust the overall enclosure size if there are any components (such as cooling units or accessories) mounted externally to the enclosure

Standard Product **Solar Shield Replacement Hardware Kit**

Catalog Number	Description
SWHDK4	Replacement Hardware Kit: (12) clamping nuts; (12) screws; (8) sealing washers and (4) flat washers

Shielding Effectiveness **(Outside Temperature = 85.8 F)**

Enclosure (Color: ANSI 61 Gray)	Temperature Rise (F)	Temperature Reduction (%)
Without solar shield	16.8	--
With solar shield	7.3	56

nVent | HOFFMAN

HOL-SEALERS HOLE SEALS

INDUSTRY STANDARDS

Steel Hole Seals

UL 508A Component Recognized; Type 3R, 4, 12, 13; File No. E61997

CSA File No. 42186; Type 3R, 4, 12, 13
NEMA/EEMAC Type 3R, 4, 12, 13
IEC 60529, IP66

Stainless Steel Hole Seals

UL 508A Component Recognized; Type 3R, 4, 4X, 12, 13; File No. E61997

CSA File No. 42186; Type 3R, 4, 4X, 12, 13
NEMA/EEMAC Type 3R, 4, 4X, 12, 13
IEC 60529, IP66

APPLICATION

Seal extra pushbutton holes, conduit openings and knockout openings against dust, dirt, oil and water with Hoffman HOL-SEALERS. Seals will cover any size or shape of hole from .19-in. diameter to maximum diameter shown in table. Can be used on enclosure walls up to .31-in. (8-mm) thick.

FEATURES

- Available in multiple colors and sizes
- Oil-resistant gasket provided

SPECIFICATIONS

Steel Models

- 16 gauge galvanized steel backplate
- Plated stud (10-32x5/8) and wing nut

Stainless Steel Models

- 16 gauge stainless steel backplate
- Seal, backplate, stud (10-24x5/8) and wing nut are 300 series stainless steel

FINISH

Steel seals have polyester powder paint finish over galvanized front surface.
Stainless steel seals have polished front surface.

BULLETIN: A80HS

Standard Product

Catalog Number	Material	Finish/Color	For	Maximum Hole Diameter in./mm	Hol-Sealer Diameter in./mm
AS056M	Steel	ANSI 61 gray	Micro	0.56 14	0.80 20
AS056MSS	Stainless Steel	Stainless Steel	Micro	0.56 14	0.80 20
AS056CB	Steel	Chrysler beige	Micro	0.56 14	0.80 20
AS056MFB	Steel	Ford brown	Micro	0.56 14	0.80 20
AS056MLG	Steel	Light gray	Micro	0.56 14	0.80 20
ASPBG	Steel	ANSI 61 gray	22.5-mm pushbutton holes	0.88 22	1.22 31
ASPBGSS	Stainless Steel	Stainless Steel	22.5-mm pushbutton holes	0.88 22	1.22 31
AS050	Steel	ANSI 61 gray	1/2-in. conduit holes	0.88 22	1.38 35
AS050LG	Steel	Light gray	1/2-in. conduit holes	0.88 22	1.38 35
AS050SS	Stainless Steel	Stainless Steel	1/2-in. conduit holes	0.88 22	1.38 35
AS075	Steel	ANSI 61 gray	3/4-in. conduit holes	1.06 27	1.56 40
AS075SS	Stainless Steel	Stainless Steel	3/4-in. conduit holes	1.06 27	1.56 40
AS075LG	Steel	Light gray	3/4-in. conduit holes	1.06 27	1.56 40
ASPB	Steel	ANSI 61 gray	30.5-mm pushbutton holes	1.25 32	1.75 44
ASPBSS	Stainless Steel	Stainless Steel	30.5-mm pushbutton holes	1.25 32	1.75 44
ASPBLG	Steel	Light gray	30.5-mm pushbutton holes	1.25 32	1.75 44
AS100	Steel	ANSI 61 gray	1-in. conduit holes	1.38 35	1.88 48
AS100SS	Stainless Steel	Stainless Steel	1-in. conduit holes	1.38 35	1.88 48
AS100LG	Steel	Light gray	1-in. conduit holes	1.38 35	1.88 48
AS125	Steel	ANSI 61 gray	1 1/4-in. conduit holes	1.69 43	2.19 56
AS125SS	Stainless Steel	Stainless Steel	1 1/4-in. conduit holes	1.69 43	2.19 56
AS125LG	Steel	Light gray	1 1/4-in. conduit holes	1.69 43	2.19 56
AS150	Steel	ANSI 61 gray	1 1/2-in. conduit holes	2.00 51	2.50 64
AS150SS	Stainless Steel	Stainless Steel	1 1/2-in. conduit holes	2.00 51	2.50 64
AS150LG	Steel	Light gray	1 1/2-in. conduit holes	2.00 51	2.50 64
AS200	Steel	ANSI 61 gray	2-in. conduit holes	2.50 64	3.00 76
AS200SS	Stainless Steel	Stainless Steel	2-in. conduit holes	2.50 64	3.00 76
AS200LG	Steel	Light gray	2-in. conduit holes	2.50 64	3.00 76
AS250	Steel	ANSI 61 gray	2 1/2-in. conduit holes	3.00 76	3.50 89
AS250SS	Stainless Steel	Stainless Steel	2 1/2-in. conduit	3.00 76	3.50 89
AS300	Steel	ANSI 61 gray	3-in. conduit holes	3.62 92	4.12 105
AS300SS	Stainless Steel	Stainless Steel	3-in. conduit holes	3.62 92	4.12 105
AS350	Steel	ANSI 61 gray	3 1/2-in. conduit holes	4.12 105	4.62 117
AS350SS	Stainless Steel	Stainless Steel	3 1/2-in. conduit holes	4.12 105	4.62 117
AS400	Steel	ANSI 61 gray	4-in. conduit holes	4.62 117	5.12 130
AS400SS	Stainless Steel	Stainless Steel	4-in. conduit holes	4.62 117	5.12 130

nVent | HOFFMAN

HOL-SEALERS NON-METALLIC HOLE SEALS

INDUSTRY STANDARDS

UL 508A Component Recognized; Type 3R, 4, 4X, 12, 13; File No. E61997

CSA File No. 42186: Type 3R, 4, 4X, 12, 13
NEMA/EEMAC Type 3R, 4, 4X, 12, 13
IEC 60529, IP66

APPLICATION

Designed for use in corrosive environments to seal extra pushbutton holes, conduit openings and knockout openings against dust, dirt, oil and water. These hole seals are suitable for sealing enclosure openings in industries such as petroleum and chemical processing, wastewater processing, pulp and paper, outdoor monitoring and any other industry exposed to harsh environments.

Innovative 3-in-1 self-centering design

- Thread self-centers on one hole size
- Nut orientation "A" self-centers on a second hole size (see Nut Orientation drawing)
- Nut orientation "B" self-centers on a third hole size

FEATURES

- Innovative 3-in-1 self-centering design reduces inventory requirements; 4 models cover 12 common industry cutouts ranging from 1/2 in. to 4 in.
- Non-metallic construction provides superior corrosion resistance for reliability in harsh environments
- UV stabilized; ideal for direct sunlight (avoids fiberbloom associated with fiberglass)
- Chemically resistant to a broad range of chemicals
- Durable and impact resistant; resists cracking
- Sold in quantities of 2 per catalog number
- Cost-effective alternative to stainless steel
- Polyester material has a UL 94 rating of 5VA
- Easy to install; no tools required

SPECIFICATIONS

- Thread and nut are constructed of non-glass-filled polyester
- Oil-resistant gasket

FINISH

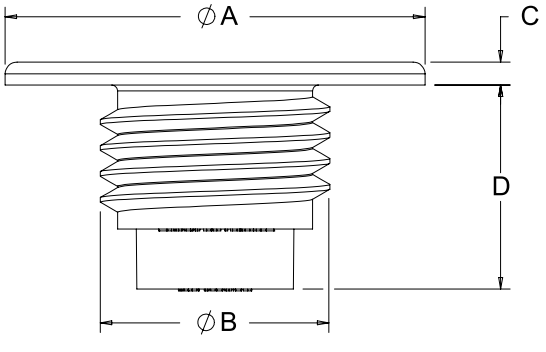
RAL 7035 light-gray textured finish

BULLETIN: A80HS

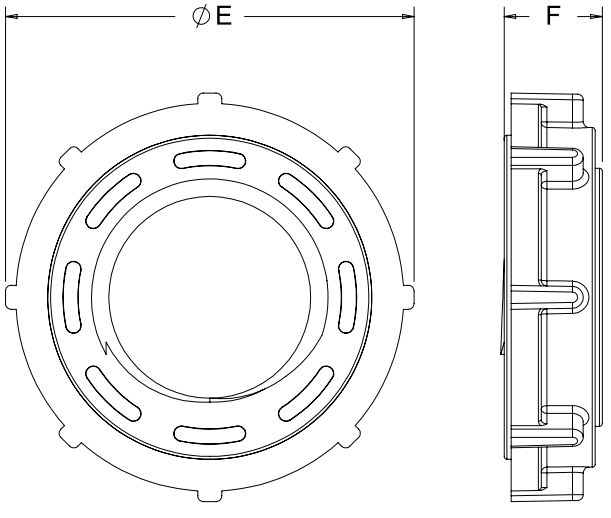
Standard Product **Non-Metallic Hole Seals**

Catalog Number	AxBxC in./mm	Qty.	D in./mm	E in./mm	F in./mm	Max. Hole Diameter in./mm	Outside Diameter in./mm	Torque (in.-lb.)
ASPB05075NM	1.56 x 0.85 x 0.12 40 x 22 x 3	2	1.28 32	1.48 38	.47 12	1.28 33	1.56 40	15
ASPB100125NM	2.19 x 1.19 x 0.12 56 x 30 x 3	2	1.18 30	2.14 54	.51 13	1.91 49	2.19 56	20
AS150200250NM	3.50 x 1.95 x 0.12 89 x 49 x 3	2	.95 24	3.42 87	.51 13	3.14 80	3.50 89	35
AS300350400NM	5.12 x 3.55 x 0.12 130 x 90 x 3	2	.81 21	5.05 128	.51 13	4.77 121	5.12 130	50

Seal



Nut



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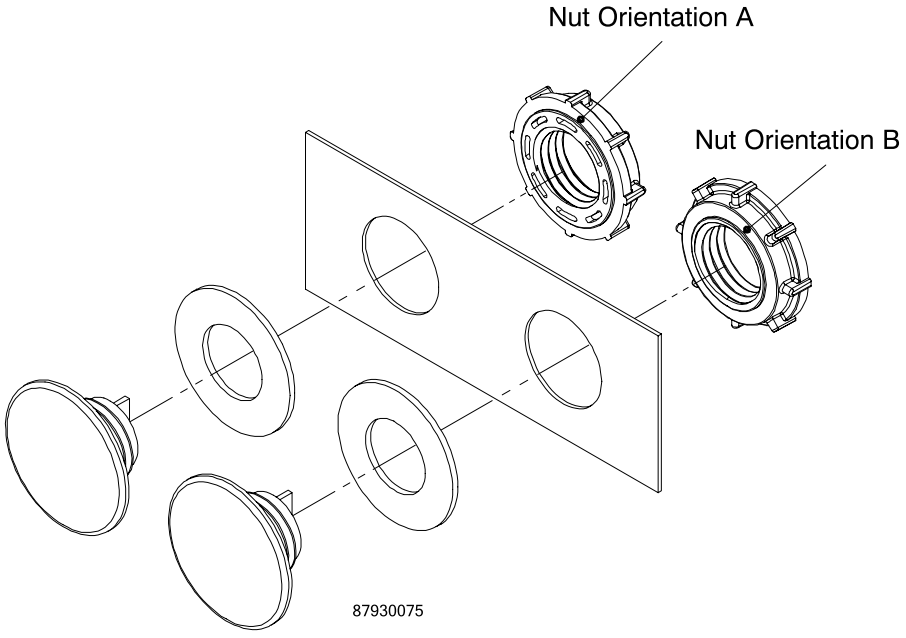
HOL-SEALERS Fit These Hole Sizes

Catalog Numbers	Fits	Min. Hole Dia. (inch)	Min. Hole Dia. (millimeter)	Nut Orientation
ASPB05075NM	.5-in. conduit holes	.86	22	A
	22.5-mm pushbutton holes	.88	22	A
	.75-in. conduit holes	1.09	28	A
ASPB100125NM	30.5-mm pushbutton holes	1.20	31	A
	1-in. conduit holes	1.36	35	B
	1.25-in. conduit holes	1.70	43	A
AS150200250NM	1.5-in. conduit holes	1.95	50	A
	2-in. conduit holes	2.38	60	B
	2.5-in. conduit holes	2.88	73	A
AS300350400NM	3-in. conduit holes	3.50	89	A
	3.5-in. conduit holes	4.00	102	B
	4-in. conduit holes	4.50	114	A



INDUSTRIAL CORROSION INHIBITORS

Hoffman corrosion inhibitors protect

- Interior components of electrical enclosures, boxes, consoles and wireways
- Interior components of electronic enclosures
- Electrical and electronic equipment and controls
- Parts and components that are packaged in crates during shipping and storage
- Switch gear and relay cabinets
- Interiors of pipes, conduits and fuse boxes
- Process control computers, instruments and recording devices
- Tool chest interiors and contents
- Equipment stored at construction sites

Chief Advantages

- Protects against salt and high humidity
- Eliminates the need of oiling, plating or dipping metal
- Puts protected equipment to use immediately without degreasing or coating removal

How They Work

Each inhibitor contains a special chemical combination that vaporizes and condenses on all surfaces in an enclosed area. Vapors will redeposit as needed in the event of condensation of moisture on surfaces. These vapors reach every part of an enclosure, protecting all interior components. Spraying, wiping or greasing are not required. This eliminates precoating, special wraps and drying agents. Protection is effective even in salt-water atmospheres. The AHCI5E and AHCI10E emitters have additional red-metal inhibitors for further protection. Enclosures containing corrosion inhibitors must be reasonably sealed.

Life Expectancy and Usage

The normal useful life-span of Hoffman corrosion inhibitors is in excess of one year. However, inhibitor life expectancy is shortened by approximately 25 percent when exposed to temperatures above 104 F (40 C). This product is not recommended for use where temperature exceeds 199 F. Since Hoffman corrosion inhibitors are vapor-phase protective, all surfaces to be protected should be accessible to the vapors. The maximum distance the vapors can travel is approximately 1.50 ft. (.46 m). Protection of long, narrow enclosures can be achieved with tape or multiple inhibitors.

Storage and Handling

Each Hoffman corrosion inhibitor is individually packaged in a resealable bag for maximum effectiveness at the time of usage. Corrosion inhibitors should be stored at temperatures not exceeding 120 F (45 C). Hoffman corrosion inhibitors are not returnable.

When determining the proper corrosion inhibitor for your application, assume the enclosure volume to be protected is greater than calculated if (1) cabinet doors are opened frequently, (2) cabinet is located in an extremely corrosive area and/or (3) cabinet length divided by depth is greater than four.

AHCI1DV

Foam device protects one cubic foot (28 liters) of enclosure volume for approximately one year.
Size: .25 x 1.25 x 3.00 in. (6 x 32 x 76 mm)

AHCI5E

Emitter protects 5 ft.^{3} (142 liters) of enclosure volume for approximately two years from the date of manufacture. The useful life (protection) depends on the moisture surrounding the application. Severe environments recommend no more than 3 months before replacing, less severe recommend no more than 6 months before replacing. Emitters contain additional red metal (non-ferrous) inhibitors.
Size: 2.31 in. (diameter) x 0.81 in. (high) (59 mm x 21 mm)

AHCI10E

Emitter protects 10 ft.^{3} (283 liters) of enclosure volume for approximately two years from the date of manufacture. The useful life (protection) depends on the moisture surrounding the application. Severe environments recommend no more than 3 months before replacing, less severe recommend no more than 6 months before replacing. Emitters contain additional red metal (non-ferrous) inhibitors.
Size: 2.31 in. (diameter) x 1.38 in. (high) (59 mm x 35 mm)

AHCI60R

Tape protects 60 ft.^{3} of enclosure volume per roll. Use approximately 2.50 in. (63 mm) of tape per cubic foot (28 liters) of enclosure volume to be protected. Each roll of tape is packaged individually in a resealable bag.
Size: .25 in. x .75 in. x 12.00 ft. (6 mm x 19 mm x 3.6 m)

AHCI240R

Tape protects 240 ft.^{3} of enclosure volume per roll. Use approximately 1.00 in. (25 mm) of tape per cubic foot (28 liters) of enclosure volume to be protected. Each roll of tape is packaged individually in a resealable bag.
Size: .25 in. x 2.00 in. x 20.00 ft. (6 mm x 51 mm x 6.1 m)

AHCI238S

Spray is a non-conductive, nonflammable, vapor-phase film and is non-toxic. It has essentially neutral pH value. Application provides instant protection against corrosion. Spray is water soluble and can be easily flushed away with water if desired. This product should be kept from freezing and has a shelf life of 2+ years in normal warehouse conditions.

BULLETIN: A80

Standard Product

Catalog Number	Enclosure Volume Protected (ft.^{3})	Enclosure Volume Protected (liters)	Package Qty.
AHCI1DV	1	28.32	50
AHCI5E	5	141.6	25
AHCI10E	10	283.2	12
AHCI60R	60 per roll	1699 per roll	3
AHCI240R	240 per roll	6797 per roll	1
AHCI238S	Corrosion Inhibitor Spray	Corrosion Inhibitor Spray	6

Metal Protection Chart

Metal	Protected by Chemical	Unprotected by Chemical
Aluminum	Marked reduction of surface attack; no pitting	Severe surface attack; tarnish; pitting
Brass[a]	Decreased tarnish; very minor surface attack	Surface discoloration; pitting
Steel, Iron	No change	Severe corrosion
Copper[a]	Slight staining	Heavy corrosive attack
Zinc Plate	Slight discoloration	Severe corrosion
Tin Plate	Slight discoloration	Moderate corrosive attack

[a] AHCI5E and AHCI10E emitters are recommended for these materials

EPOXY PATCH KIT

Applications include sealing rivets, bolts, metal joints, seams and welds, cement cracks, pipe couplings, joints and tees. Each kit has two tubes of material, application instructions and a mixing stick. When the resin and hardener are mixed, a gray epoxy is formed which cures at room temperature, has high adhesion and will not sag. It is resistant to oils, acids and chemicals.

BULLETIN: A80

Catalog Number	Description
A307	Epoxy Patch Kit

TOUCH-UP PAINT

Hoffman touch-up paint is used to repair the finish of enclosures and panels. Furnished in 12-oz. spray cans.

BULLETIN: A80, DACCY, P20

Catalog Number	Color
ATPWE	Hoffman #60 White
ATPW	RAL 9003 Signal White
ATPTW	RAL 9016 Traffic White (S094)
ATPPW	RAL 9010 Pure White
ATPBS	F63VXW8736 SW Cream
ATPC	RAL 9001 Cream
ATPOW	RAL 1013 Oyster White
ATPGW	RAL 9002 Gray White (IH148)

Catalog Number	Color
ATPLI	RAL 1015 Light Ivory
ATPDLB	Hoffman #78T DesignLine Beige Enamel
ATPG7035	RAL 7035 Light Gray (T012)
ATPPG	RAL 7032 Pebble Gray
ATPOF	RAL 9002 Gray White (S065)
ATPLGGMW	GMW-01 Light Gray
ATPLG	RAL 7035 Light Gray (S052)
ATPAG	RAL 7038 Agate Gray
ATPLGA70	ANSI 70 Light Gray
ATPPY61	ANSI 61 Hoffman Standard Gray
ATPDG	ANSI 49 Dark Gray
ATPBG	RAL 7012 Basalt Gray
ATPSG	Satin Gray Enamel
ATPMG	Hoffman #82 Slate Gray Enamel
ATPHS61	High Solids ANSI 61 Gray
ATPFG	Light Gray for fiberglass
ATPG7032	RAL 7032 Gray
ATPSY	#5. YB.0/12 OSHA Safety Yellow
ATPR	RAL 3001 Signal Red
ATPO	RAL 2004 Pure Orange
ATPSB	RAL 5015 Sky Blue
ATPSAB	#2.5PB3.5/10 OSHA Safety Blue
ATPPB	#96Y-23665 Precaution Blue
ATPB	RAL 5005 Signal Blue
ATPRG	RAL 6011 Reseda Green
ATPOG	RAL 6003 Olive Green
ATPMGN	PSPL350001 Munsell Green
ATPMB	#2.5Y 5/2 Munsell BrownB
ATPB9005	RAL 9005 Black
ATPB7021	RAL 7021 Black
ATPBL	Black Lava (S109)
ATPBM	RAL 9005 Jet Black (T009)
ATPJB	RAL 9005 Jet Black (S067)

TOUCH-UP PAINT PENS

Hoffman touch-up paint pens are used to repair the finish of enclosures and panels. Furnished in .33-oz. pens.

BULLETIN: A80

Catalog Number	Paint Color
ATPG7035LP	RAL 7035 Light Gray
ATPW60HGP	Hoffman #60 White
ATPG20GLP	ANSI 61 Gray

TERMINAL BLOCK KIT ASSEMBLY FOR JUNCTION BOXES

Provides a strong, versatile and easily installed means for mounting terminal blocks in Hoffman junction boxes and other enclosures. These kits can be installed in:

1. Oil-Tight Junction Boxes
2. Fiberglass Type 4X Enclosures
3. Hinged Cover Lift-Off Type 3R Enclosures (16 gauge only)

These kits will NOT fit in Small Wall-Mount Enclosures or HCR Type 3R Enclosures.

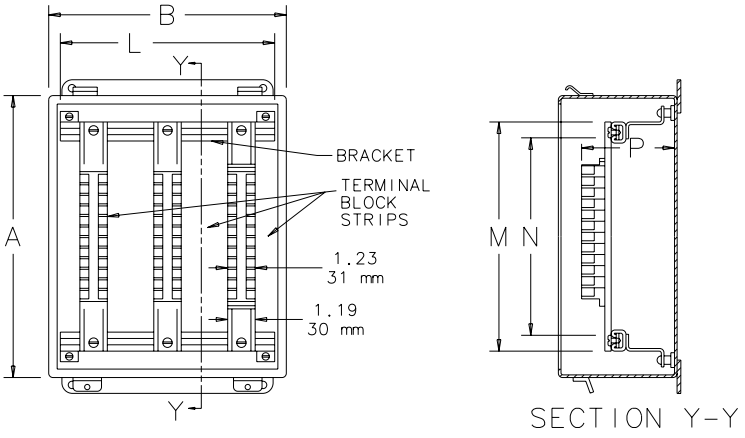
How To Order

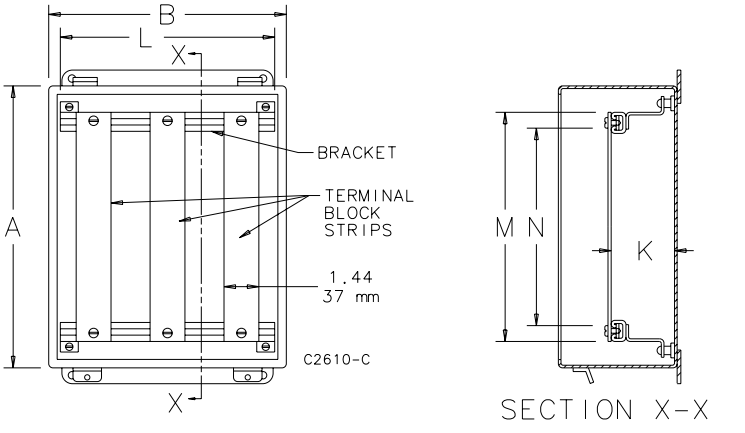
Terminal Kit Assemblies can be installed with the terminal straps or terminal strips parallel to the A dimension or the B dimension of the box. Each box requires one bracket assembly plus the desired number of terminal straps or terminal block strips. The bracket assembly and the terminal straps or terminal block strips must be ordered separately.

1. To select the correct terminal straps or terminal block strips, determine whether they will be mounted parallel to the A dimension or parallel to the B dimension of the box. **Be sure to specify the quantity required.**
2. To select the correct bracket assembly, determine whether the brackets will be mounted parallel to the A dimension or to the B dimension of the box.

Component	Quantity	Comments
Bracket Assembly	1	Mount parallel to A or B dimension
Terminal Straps	As required for installation; specify when ordering	Use straps or strips
Terminal Block Strips	As required for installation; specify when ordering	Use straps or strips

Terminal Block Kit Assembly for Junction Boxes





TERMINAL BLOCK BRACKET ASSEMBLIES FOR JUNCTION BOXES

Each bracket assembly consists of two brackets which mount on the weldnuts in the box. White finish over pretreated surfaces.

BULLETIN: A80

Catalog Number	Enclosure Dimension Parallel to Brackets	K in./mm	L in./mm
A6JTMA	6	1.44 37	5.00 127
A8JTMA	8	1.44 37	7.00 178
A10JTMA	10	1.44 37	9.00 229
A10JTMAXK	10	2.69 68	9.00 229
A12JTMA	12	2.69 68	11.00 279
A14JTMA	14	2.69 68	13.00 330

TERMINAL BOX STRAPS FOR JUNCTION BOXES

A terminal strap is a 12 gauge flat strap which mounts on top of the brackets. The straps can be positioned anywhere along the brackets and are held in place with spring locking nuts. White finish over pretreated surfaces. Terminal blocks are not included with terminal straps. Does not work with DIN rail-mounted terminal blocks.

BULLETIN: A80

Catalog Number	Enclosure Dimension Parallel to Straps	K in./mm	M in./mm	Useable Space, N in./mm
A8JS	8	1.44 37	5.75 146	4.62 117
A10JS	10	1.44 37	7.75 197	6.62 168
A12JS	12	1.44 37	9.75 248	8.62 219
A14JS	14	2.69 68	11.70 297	10.62 270
A16JS	16	2.69 68	13.70 348	12.62 321

TERMINAL BLOCK STRIPS FOR JUNCTION BOXES

A terminal block strip is a flat channel holding Buchanan 600V terminal blocks with tubular clamp contacts assembled on the channel. These terminal blocks will accept wire sizes from #22 through #10. The number of terminal blocks assembled on each channel is shown in the table. The terminal block strips can be positioned anywhere along the brackets and are held in place with spring locking nuts. The channel has a plated finish. Terminal blocks are included with terminal block strips. Marathon terminal blocks can be provided on special order. Other brands and sizes of terminal blocks are available on special order.

BULLETIN: A80

Catalog Number	Enclosure Dimension Parallel to Strips	Terminal Blocks per Strip	M in./mm	Useable Space, N in./mm	P in./mm
A8JBNS	8	8	5.75 146	4.62 117	3.00 76
A10JBNS	10	12	7.75 197	6.62 168	3.00 76
A12JBNS	12	16	9.75 248	8.62 219	3.00 76
A14JBNS	14	20	11.75 298	10.62 270	4.25 108
A16JBNS	16	24	13.75 349	12.62 321	4.25 108

TERMINAL BLOCK KIT ASSEMBLY FOR TYPE 4, 12 AND 13 ENCLOSURES

Provide strong, versatile and easily installed terminal block mounting supports. These assemblies fit many single-door Hoffman enclosures. They also fit large Type 1 enclosures and the larger sizes of Hinged Cover Lift-Off Type 3R enclosures as well as most of the Two-Door Wall-Mounted Type 12 enclosures. Kits have white finish over pretreated surfaces. Terminal Block Kit Assemblies can be installed with straps parallel to the A dimension or the B dimension of the enclosure.

How To Order
Each enclosure requires one bracket assembly plus the desired number of terminal straps. The bracket assembly and the terminal straps must be ordered separately.

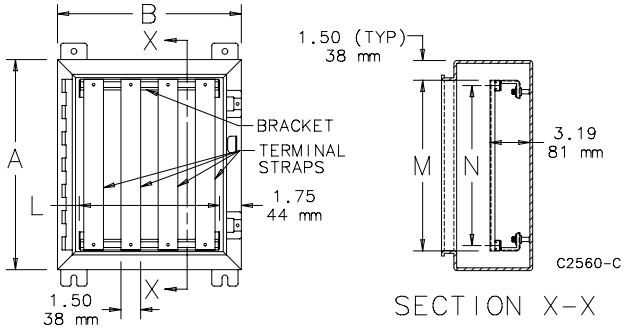
1. To select the correct terminal straps, determine whether the terminal straps will be mounted parallel to the A dimension or the B dimension of the enclosure. **Be sure to specify the quantity required.**
2. To select the correct bracket assembly, determine whether the brackets will be mounted parallel to the A dimension or the B dimension of the enclosure. Refer to the table.

One bracket is required for each row of collar studs parallel to the brackets. As a result, if the enclosure dimension is 24.00 in. (610 mm), 30.00 in. (762 mm) or 36.00 in. (914 mm) and if two brackets are needed to cover all of the collar studs order A___NTMA2; if three brackets are needed to cover the studs order A___NTMA3.

For example: If you have an A302406LP enclosure and want five terminal straps running horizontally, order one A24NTMA2 bracket assembly plus five A30T straps. If you have an A483008LP enclosure and want six terminal straps running vertically, order one A30NTMA3 bracket assembly plus six A48T straps. If you have an A363006LP enclosure and want seven terminal straps running horizontally, order one A36NTMA2 bracket assembly plus seven A30T straps.

Terminal blocks are not included. Be sure to order one bracket assembly plus the desired number of terminal straps for each enclosure.

Component	Qty Required	Comments
Bracket Assembly	1	Terminal blocks are not included
Terminal Straps	Depends on installation	Specify quantity when ordering
Terminal Strap Support Kit	One kit per strap	Optional



BRACKET ASSEMBLY FOR TYPE 4, 12 AND 13 ENCLOSURES

Each bracket assembly consists of two or three brackets which mount on the enclosure collar studs. White finish over pretreated surfaces.

BULLETIN: A80

Catalog Number	Number of Brackets	Enclosure Dimension Parallel to Brackets (in.)	Enclosure Dimension Parallel to Brackets (mm)	Bracket Length, L (in.)	Bracket Length, L (mm)
A12NTMA2	2	12.00	305	8.50	216
A16NTMA2	2	16.00	406	12.50	318
A20NTMA2	2	20.00	508	16.50	419
A24NTMA2	2	24.00	610	20.50	521
A24NTMA3	3	24.00	610	20.50	521
A30NTMA2	2	30.00	762	26.50	673
A30NTMA3	3	30.00	762	26.50	673
A36NTMA3	3	36.00	914	32.50	826

TERMINAL STRAPS FOR TYPE 4, 12 AND 13 ENCLOSURES

The terminal straps can be positioned anywhere along the brackets and are held in place with spring locking nuts. This feature makes wiring easy and simplifies the addition of terminal straps at a later date. White finish over pretreated surfaces.

BULLETIN: A80

Catalog Number	Enclosure Dimension Parallel to Straps	M (in.)	M (mm)	Useable Space, N (in.)	Useable Space, N (mm)
A16T	16	13.00	330	11.75	298
A20T	20	17.00	432	15.75	400
A24T	24	21.00	533	19.75	502
A30T	30	27.00	686	25.75	654
A36T	36	33.00	838	31.75	806
A42T	42	39.00	991	37.75	959
A48T	48	45.00	1143	43.75	1111
A60T	60	57.00	1448	55.75	1416

TERMINAL STRAP SUPPORT KIT

Designed to provide a simple and versatile method of mounting terminal straps. The Z-shaped brackets are 1.50-in. (38-mm) high with white finish. Brackets can be attached to panels or to enclosure walls. A terminal strap is then installed on the brackets. Terminal straps must be ordered separately. Two brackets are furnished with each kit. Spacing between brackets will depend on the number and size of terminal blocks installed on the terminal strap. We recommend a maximum spacing of 15 in. (381 mm) for an average installation.

BULLETIN: A80

Catalog Number	Description
ATZ	Two Z-shaped brackets

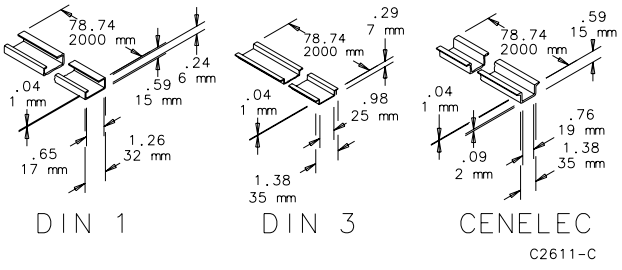
Terminal strap NOT included.

DIN TYPE RAILS

DIN Type Rails receive terminal blocks, relays, switches, filters, timers and various other electrical and electronic components manufactured by European, Japanese and U.S. firms. Available in three styles: (1) asymmetric, DIN 1 profile; (2) symmetric, DIN 3 profile; (3) heavy-duty CENELEC profile. All DIN rails are 78.74-in. (2000-mm) long and plated.

BULLETIN: A80

Catalog Number	Description
ADNR1	DIN 1 mounting rail TS32
ADNR3	DIN 3 mounting rail TS35x7.5
ACENR1	CENELEC mounting rail TS35x15



NEMA 5-15R DIN-MOUNTED OUTLETS

INDUSTRY STANDARDS

UL Component Recognized; File No. E222026
cUL Component Recognized; File No. E222026

Ingress protection: IP 20

APPLICATION

The DIN rail-mounted electrical receptacle can be quickly fitted and connected inside enclosures, allowing the use of auxiliary products such as hand lamps and power tools. The unit is available with and without fuses, and in many world outlet standards.

FEATURES

- Tool-less touch-safe wire connections
- Fused and non-fused offerings
- Light-weight composite enclosures
- Easily DIN-mounted
- Small form factor
- Wide operating temperature ranges

SPECIFICATIONS

- Connection: three cage clamps for solid and stranded wire AWG 20-14 (0.5-2.5mm²)
- Housing: plastic, UL94 V-0, light grey
- Fuse: Type 5 x 20 mm dia. (Tubular)
- Integral mounting clip for 35mm DIN rail, EN 60 715
- Mounting position: vertical
- Operating / storage temperature -49 F to +158 F (-45 C to 70 C)
- Dimensions : 3.6 x 2.4 x 1.9 (92mm x 62mm x 48mm)
- Weight: approximately 7.1 oz. (200g)
- Standard NEMA receptacle 5-15R
- Maximum Voltage: 125 VAC
- Protection class I (grounded)

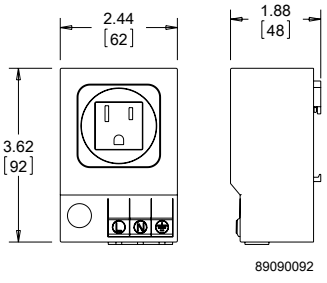
FINISH

Composite, smooth texture, light gray

BULLETIN: A80

Standard Product

Catalog Number	AxBxC in./mm	AMP Rating	Fused
ADINP120A	3.54 x 2.44 x 1.97 90 x 62 x 50	15 A	No
ADINP120F	3.54 x 2.44 x 1.97 90 x 62 x 50	6.3 A	Yes



DIN 3 RAIL, SELF-ADHESIVE

FEATURES

- DIN 3-style, symmetrical
- Adhesive mount; fastener-capable
- 43mm length
- Constructed from UL 94V-0 rated black plastic
- Sold in qty. five per catalog number
- Optional screw mount; (5) 10-32 / M5 provided

SPECIFICATIONS

- Load 1.1 lbs. (500g) after a 24-hour waiting period
- Mounting self-adhesive (non-aging, high-performance adhesive strip)
- Material plastic UL 94V-0, black
- Hole pattern 0.5 in. (12.8 mm) distance, Ø 0.14 in. (3.6mm)
- Operating / Storage temperature -49 F to +158 F (-45 C to 70 C)
- Dimensions 1.7 x 1.5 x 0.55 (43mm x 38mm x 14mm)

FINISH

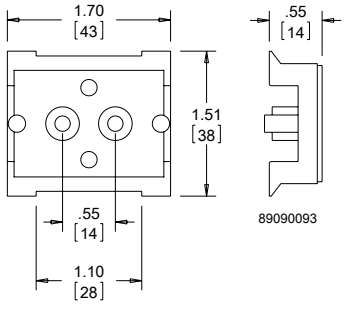
Composite, smooth texture, black

BULLETIN: A80

Standard Product

Catalog Number	AxBxC in./mm	Max. Load Rating[a]
ADIN3PA42	0.47 x 1.65 x 1.42 12 x 42 x 36	1.1 lbs (500g)

[a] 24-hour cure time prior to applying load



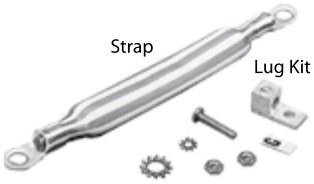
INDUSTRY STANDARDS

Material conforms to UL 94V-0

APPLICATION

Convenient, symmetrical, 1.7 in. (43mm) DIN 3 rail with pressure-sensitive, peel-and-stick adhesive. Can be mounted to various surfaces, in a variety of locations. Fasteners may also be used (five provided per kit) for increased load rating. DIN rail is made of UL 94V-0 rated material. Five self-adhesive DIN rails per kit.

GROUNDING DEVICE



Grounding lug is designed to provide a means of attaching a grounding conductor to an electrical enclosure. Will accept wire sizes 2 through 14. Grounding Straps can be used to provide electrical continuity between metal parts which must be electrically connected. Each strap consists of a length of braided copper with a ring terminal at both ends. Braid is insulated with green and yellow striped plastic.

BULLETIN: A80

Catalog Number	Description	Approximate Wire Size (AWG)	Length Between Ring Terminals C-to-C (in.)	Length Between Ring Terminals C-to-C (mm)	Ring Terminal Hole Diameter (in.)	Ring Terminal Hole Diameter (mm)
AGS808	Grounding Strap	#8	8.19	208	0.406	10
AGS816	Grounding Strap	#8	16.19	411	0.406	10
AGS408	Grounding Strap	#4	8.19	208	0.406	10
AGS416	Grounding Strap	#4	16.19	411	0.406	10
AGLK2	Grounding lug kit	2-14	—	—	—	—

GROUNDING BAR SYSTEM

APPLICATION

Three sizes of grounding bars and insulated mounting brackets are available. Bars are plated copper with M6 and M5 tapped holes to provide a common point for grounding equipment. Fits all enclosures if mounted vertically. See table for horizontal mounting.

BULLETIN: P20

Catalog Number	Description	Length mm/in.	Number of Holes and Screws M6	Number of Holes and Screws M5
PGS2K	Fits 400-mm deep frame front-to-back horizontally	200 7.87	3/5	10/10
PGS4K	Fits 600-mm deep frame front-to-back horizontally	400 15.75	9/11	20/20
PGS6K	Fits 800-mm deep frame front-to-back horizontally	600 23.62	15/17	30/31

INDUSTRY STANDARDS

UL Component Recognized; File No. E61997

PROLINE GROUNDING KIT

The Grounding Kit allows a PROLINE or PROLINE G2 enclosure to be grounded to VDE specifications. Includes six 12-gauge wires 411 mm (16.19) long with ring terminations and M6 mounting hardware.

BULLETIN: P20

Catalog Number	Wire Size	Length Between Ring Terminals mm/in.	Ring Terminal Hole Diameter mm/in.
PGK	12 ga.	411 16.19	7 .29

REPLACEMENT PANEL-MOUNT HARDWARE KIT

Replacement hardware kit for panel mounting and grounding. Suitable for CONCEPT enclosures. Hardware kit comes with M8 panel mounting nuts, panel grounding hardware and sealing washers.

BULLETIN: A80

Catalog Number	Description
GRDM8PMHDWK	Panel Mount Hardware Kit

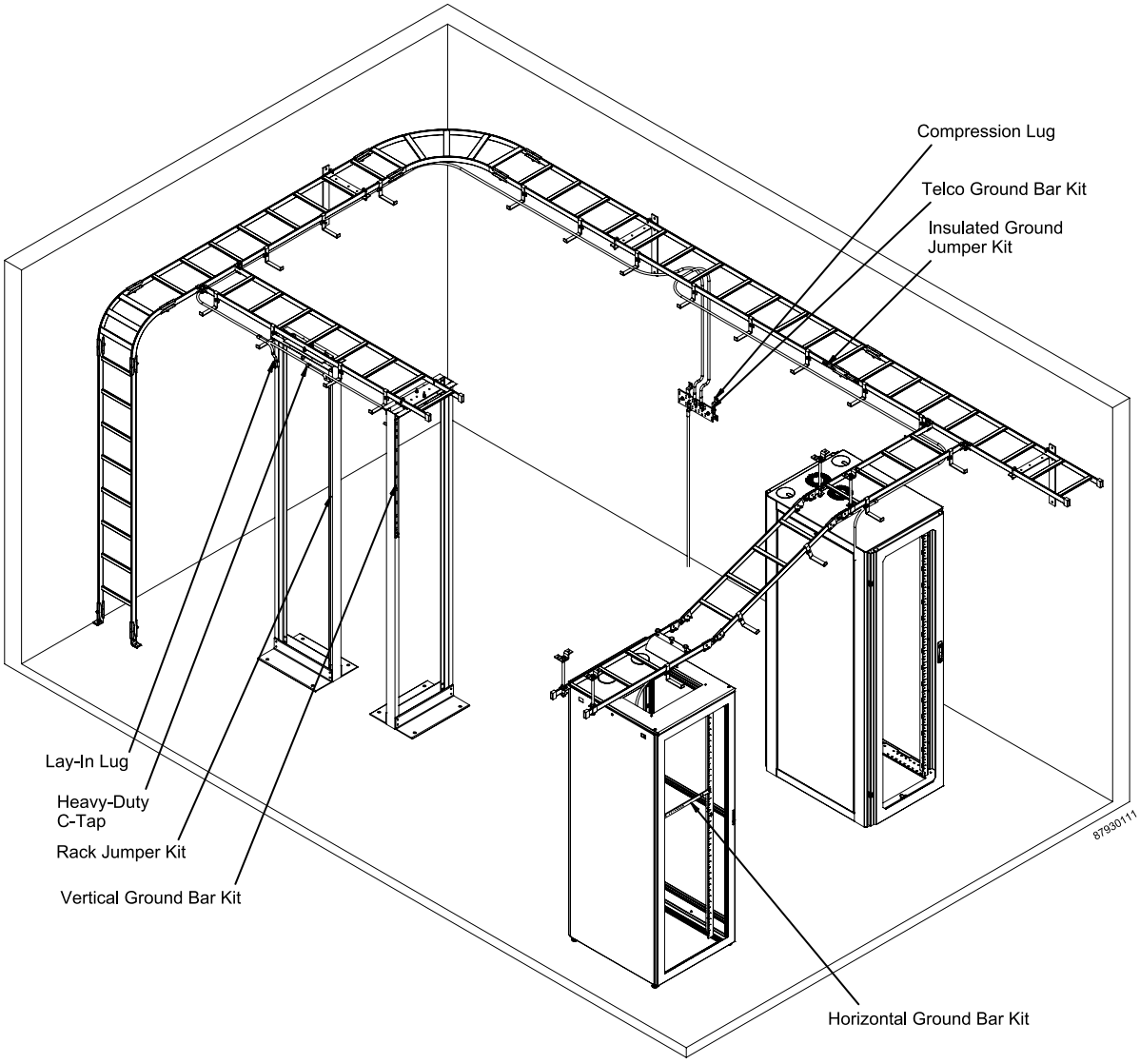
GROUNDING KIT

These grounding kits come with mounting hardware, ground label and installation instruction. Cables are not included.

BULLETIN: A80

Catalog Number	Description	Hardware Size
SMGDK	Small grounding kit	10-32
LRGGDK	Large grounding kit	1/4-20
LRGGDKSS	Large grounding kit for stainless steel	M6

BONDING AND GROUNDING OVERVIEW



INDUSTRY STANDARDS

Ground Bar Kits:

UL 467 Listed
cUL Listed per CSA C22.2 No. 41
File No. E319377

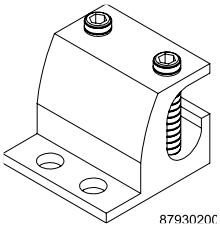
APPLICATION

These components meet open frame rack and cabinet bonding and grounding requirements for telecommunication room and server room applications.

FEATURES

- Components specially designed to efficiently facilitate reliable connections
- Enable system to meet equipment manufacturer grounding requirements
- Components fit EIA 310-D-rated open frame racks

LAY-IN LUG

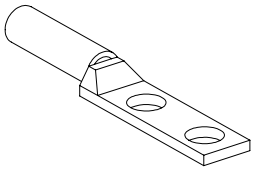


Dual-rated, UL486B listed lay-in lug bonds end of cable securely to rack. Made of electroplated 6061-T6 aluminum. Requires 3/16-in. hex key (not included).

BULLETIN: DBG

Catalog Number	For Cable Size Range	Size (in.)	Size (mm)	Pkg. Qty.
DGLG	#14 AWG to 2/0	1.75 x 1.50	44 x 38	10

COMPRESSION LUGS

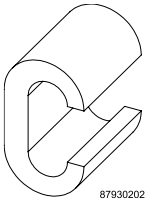


Compression lugs terminate copper or tinned-copper conductors for connection to busbars, cabinets, racks, and cable runway. Color-coded by conductor size. Made of electroplated, tinned copper. Require two screws (not included).

BULLETIN: DBG

Catalog Number	Cable Size (#)	On-Center Dimension Between Holes	Required Screw Size	Color Code	Pkg. Qty.
DGCL61	6	.625	1/4	Blue	10
DGCL62	6	1.00	3/8	Blue	10
DGCL21	2	.625	1/4	Brown	10
DGCL22	2	1.00	3/8	Brown	10
DGCL201	2/0	1.00	3/8	Black	10
DGCL402	4/0	1.00	3/8	Purple	10

HEAVY-DUTY C-TAPS

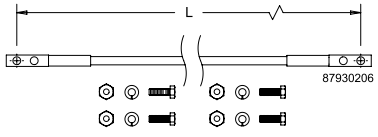


C-Taps splice two stranded or solid connectors together. Made of copper. Require a crimping tool (not included) to correctly tighten C-Taps around connectors.

BULLETIN: DBG

Catalog Number	Conductor Run	Conductor Tap	Pkg. Qty.
DGT1	#2 stranded or solid	#4 stranded, #8 solid	10
DGT2	#2 stranded or solid	#2 stranded or solid	10

INSULATED GROUND JUMPER KIT



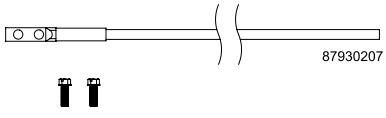
Fastens across splices to provide a secure ground between sections of ladder rack. Made of #6 AWG x 7 strand wire with green THW insulation and two-hole compression lugs mounted on each end. Includes fasteners.

BULLETIN: DBG

Catalog Number	Conductor Type	L (in.)	L (mm)
DGJ	#6-7 Stranded	12.00	305

cULus requires 2 kits per splice on all painted ladder sections

RACK JUMPER KIT



Grounds rack or cabinet to common bonding network under floor or overhead. Made of #6 AWG x 7 strand wire with green THW insulation and two-hole compression lug mounted on one end. Includes fasteners.

BULLETIN: DBG

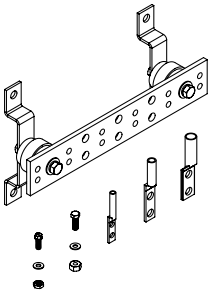
Catalog Number	Conductor Type	Length (ft.)	Length (m)
DGRJ	#6-7 stranded	9	2.7

TELECOMMUNICATIONS GROUND BAR KITS

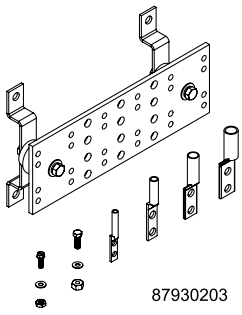
Provide a convenient central location for connecting grounds from telecommunications equipment, computers, and other network equipment. Made of copper. Kits include ground bar with two mounting brackets, an assortment of connectors, and a tube of antioxidant.

BULLETIN: DBG

2-inch Wide Bar



4-inch Wide Bar



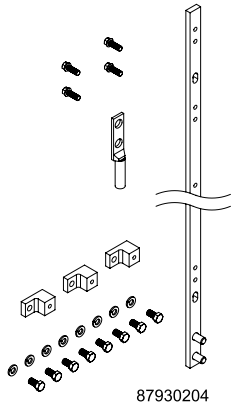
87930203

Standard Product

Catalog Number	Bar Size in./mm	No. of 5/16-in. Hole Sets	No. of 7/16-in. Hole Sets	#6 Wire Size (DGCL61)*	#2 Wire Size (DGCL22)*	#2/0 Wire Size (DGCL201)*	#4/0 Wire Size (DGCL402)*
DGTB212	2.00 x 12.00 x .25 51 x 305 x 6	6	3	6 lugs	3 lugs	1 lug	0 lugs
DGTB216	2.00 x 16.00 x .25 51 x 406 x 6	8	3	6 lugs	3 lugs	1 lug	0 lugs
DGTB412	4.00 x 12.00 x .25 102 x 305 x 6	12	6	6 lugs	3 lugs	1 lug	1 lug
DGTB420	4.00 x 20.00 x .25 102 x 508 x 6	24	6	6 lugs	3 lugs	1 lug	1 lug

* Number of compression lugs included with Ground Bar Kits

VERTICAL GROUND BAR KITS



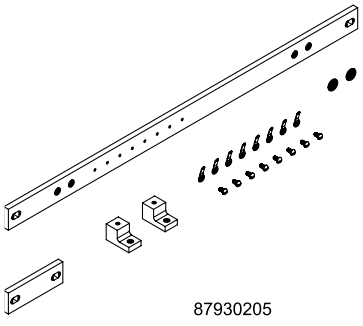
87930204

Mount vertically on rack, providing a convenient place to connect equipment grounds. Made of electrolytic tough-pitch 110 copper alloy. Kits include ground bar with compression lug for #2 wire, connection hardware, and mounting hardware.

BULLETIN: DBG

Catalog Number	Bar Size (in.)	Bar Size (mm)
DG36	36.00 x .625 x .25	914 x 16 x 6
DG72	72.00 x .625 x .25	1829 x 16 x 6

HORIZONTAL GROUND BAR KITS



87930205

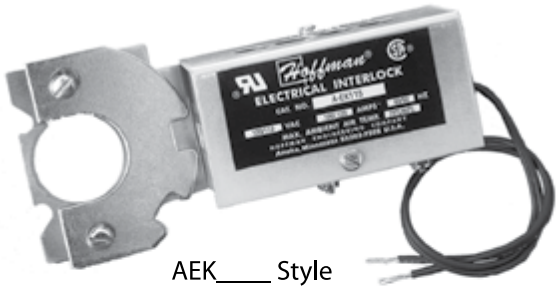
Mount horizontally on rack, providing a convenient place to connect equipment grounds. Made of electrolytic tough-pitch 110 copper alloy. Kits include ground bar with mounting hardware, eight #6-32 x 14 machine screws, and eight #6 ring terminals.

BULLETIN: DBG

Catalog Number	Bar Size (in.)	Bar Size (mm)
DG19	1.00 x 19.25 x .25	25 x 489 x 6
DG23	1.00 x 23.25 x .25	25 x 591 x 6

nVent | HOFFMAN

ELECTRICAL INTERLOCKS



AEK____ Style

AEK____NDH Style

INDUSTRY STANDARDS

UL 508A Component Recognized; File No. E61997

CSA Certified; File No. 42186

APPLICATION

Provide positive internal safety lockout on electrical enclosures while the equipment is energized. Use catalog numbers AEK115, AEK230 and AEK460 are used with standard Hoffman door latching mechanisms. When energized, these interlocks prevent the door handle from being turned to open the door. Fit either clockwise or counterclockwise handles in the following enclosures:

1. All two-door Type 4 and 12 enclosures
2. All Type 4X with 3-point latch enclosures
3. Free-standing Type 12 enclosures
4. All one-door Type 12 enclosures with latch kits installed

The interlocks will fit the following enclosures, but modifications are required. Consult the factory for more information.

1. Two-door Type 12 enclosures for flange-mounted disconnects
2. Heavy duty free-standing Type 12 enclosures for flange-mounted disconnects
3. Modular Type 12 enclosures for flange-mounted disconnects
4. Multi-door Type 12 enclosures

The interlocks will also fit most Hoffman custom enclosures with door latching mechanisms similar to the mechanisms used on the preceding enclosures. AC electrical interlocks will not fit CONCEPT enclosures or Bulletin A25 and A26 enclosures. Interlocks are not designed to be used in place of the standard door or cover latch.

Catalog numbers AEK115NDH, AEK230NDH and AEK460NDH are designed to be used on some Hoffman enclosures and boxes which have exterior latching only. When energized, these interlocks will prevent the enclosure door from being opened. They fit on the door or cover of the following enclosures and maintain UL Type 4, 4X and 12 when properly installed per Hoffman instructions:

1. One-door Type 4 and 4X enclosures
2. Two-door Type 4 and 4X enclosures
3. One-door Type 12 enclosures
4. Larger sizes of CH, CHS, CHNF, CHNFSS and CHAL junction boxes
5. Type 1 and large Type 1 enclosures

The interlocks also fit in most Hoffman custom enclosures and boxes which have doors or covers hinged similar to doors or covers on the preceding enclosures.

Installation

AEK115, AEK230 and AEK460 mount on the inside of the enclosure door using the same screws which hold the door handle in place. The strike plate attaches to the existing latch assembly.

SPECIFICATIONS

- Rugged steel construction and plated finish
- Solenoids are rated for continuous duty and will stand up under heavy industrial use
- Packaged complete with a solenoid assembly, strike plate or bracket and instructions for field installation
- Handles and latch mechanisms are not included.

BULLETIN: A80

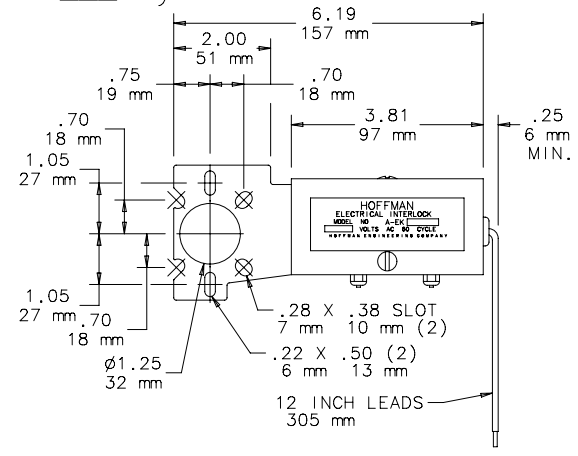
Standard Product **A-EK___ Style**

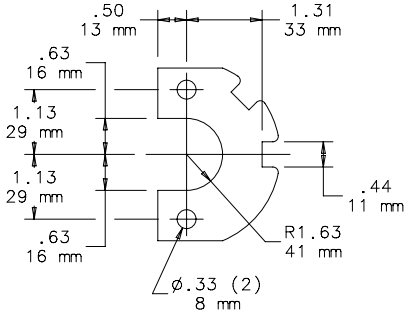
Catalog Number	Volts @ 50/60 Hz	Normal/Inrush Amps @ 60 Hz	Normal/Inrush Amps @ 50 Hz
AEK115	110/120	.100/.63	.120/.69
AEK230	220/240	.050/.32	.060/.35
AEK460	440/480	.025/.16	.030/.18

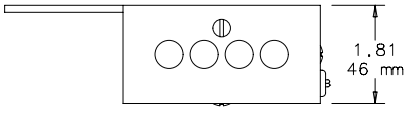
Standard Product **AEK___NDH Style**

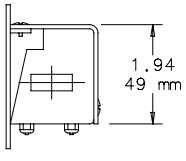
Catalog Number	Volts @ 50/60Hz	Normal/Inrush Amps @ 60 Hz	Normal/Inrush Amps @ 50 Hz
AEK115NDH	110/120	.100/.63	.120/.69
AEK230NDH	220/240	.050/.32	.060/.35
AEK460NDH	440/480	.025/.16	.030/.18

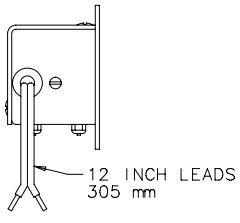
AEK____Style



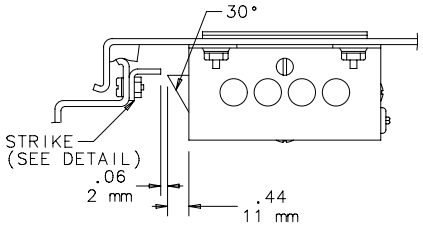


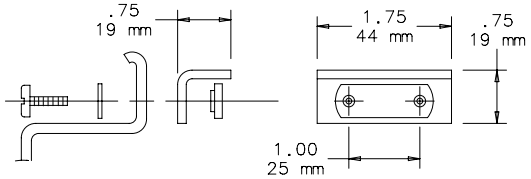




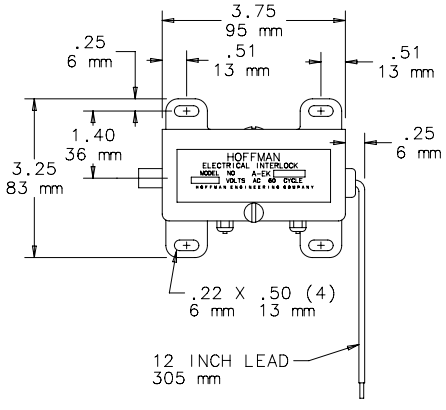


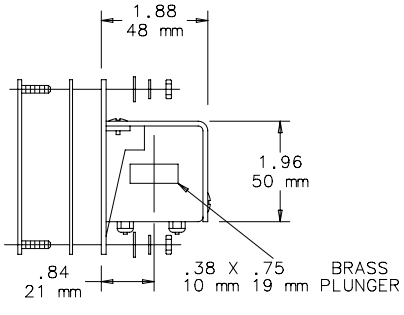
AEK____NDH Style





STRIKE DETAIL





C2603-C

ELECTRICAL INTERLOCK DEFEATER

Enables authorized personnel to enter an enclosure while the enclosure contents are energized. Defeater is a key-operated momentary contact switch with contacts normally closed. Turning the key disengages the circuit to the electrical interlock. Can be used with all 110/120 volt Hoffman electrical interlocks. A relay must be used in conjunction with switch for 220/240 volt and 440/480 volt applications.

BULLETIN: A80

Catalog Number	Description	Amps @ 120V/60 Hz Normal/ Inrush	Amps @ 110V/50 Hz Normal/ Inrush
AEKDF	Electrical interlock defeater	10 Max.	10 Max.

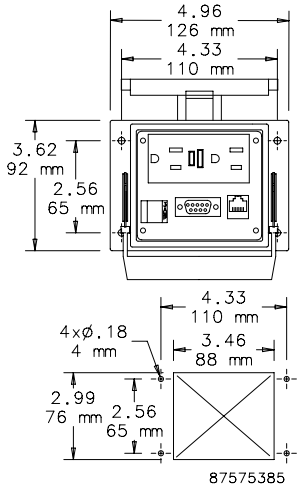
PANEL INTERFACE CONNECTOR

The panel interface connector provides a connection for a PLC or computer housed inside an enclosure without opening the enclosure door. It mounts on the outside of the enclosure. The HBE size 32 housing and hinged cover are die cast aluminum. The closed assembly is rated UL Type 4. The panel interface connector enclosure includes:

- A duplex receptacle
- A 9-pin D-sub pass-through connector
- An RJ 45 pass-through connector
- A 3-amp reset
- A covered terminal block with screw connections for the internal power connection

BULLETIN: A80

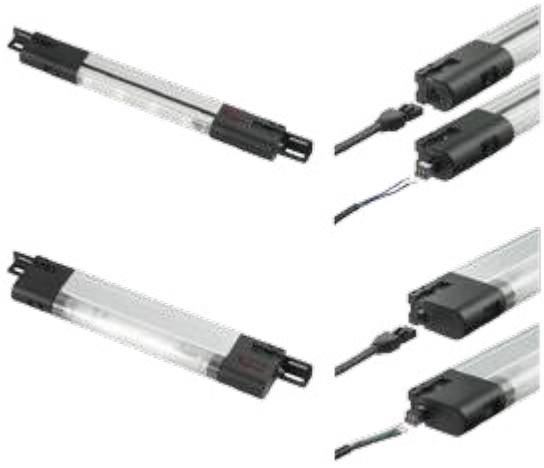
Catalog Number	Description
AC4DB9RJ45GFI	Panel Interface Connector



INDUSTRY STANDARDS

UL 508A Component Recognized; File No. E61997

PANELITE ENCLOSURE LIGHTS



INDUSTRY STANDARDS

PANELITE LED and Fluorescent Enclosure Lights

UL 508A Component Recognized; File No. E61997 cUL Component Recognized per CSA C22.2 No 14; File No. E61997

CSA File No. 42186
Maintains UL/CSA Type 4, 4X and 12 enclosure rating when properly installed in a Hoffman enclosure.

230 VAC Fluorescent Enclosure Light

UL 508A Component Recognized; File No. E234324 cUL Component Recognized per CSA C22.2 No 14; File No. E61997

CE

LED Light

UL 508A Component Recognized; File No. E234324 cUL Component Recognized per CSA C22.2 No 14; File No. E234324

CE
Ingress protection : IP 20
Maintains enclosure type rating up to 4X when installed per instructions

APPLICATION

Versatile, slim-profile LED and fluorescent lights provide mounting flexibility and are easy to install in any enclosure. Terminal blocks allow for easy wiring. Accessories include ganging cables, power cords and door switches, all provided with plug-and-play connectors for easy connection to the terminal blocks with an innovative terminal connection system. LED version provides superior lighting performance with minimal power consumption.

FEATURES

- Slim profile allows light to be tucked out of the way for easy panel installation
- Versatile mounting allows the light to be positioned horizontally or vertically; two-way mounting provides for ideal orientation
- Includes mounting hardware for the following enclosure installations: PROLINE Frame, Enclosure Top, Panel Mount and Unistrut
- On/off switch incorporated in light; optional remote door switch accessory available to activate light when enclosure door is opened (230 VAC Fluorescent Enclosure Light has switch or door-activated sensor)

PANELITE Only:

- Mounting tabs provide easy access point for attachment hardware; light does not need to be disassembled for installation
- Up to five lights can be daisy-chained together
- Plug-and-play terminal connection system:
  - Pre-wired connection sockets on both ends of light allow use of Hoffman cable accessories
  - Optional terminal blocks snap into the connection sockets, allowing customers to use their own wiring methods; two terminal blocks provided with each light kit
  - Power supply can be wired manually with Hoffman PANELITE Power Cable with Leads or with Hoffman optional PANELITE Power Cord
  - Ganging cables are available in 2-, 4- and 6-ft. lengths to easily join up to five lights together using one power supply
  - Remote door switch for easy door activation eliminates need to mount light in the exact location required to activate the light

LED Light Only:

- Mechanical screw- or magnetic mount (non-slip rubberized)
- Protection Class II (double insulated)
- Operating temperature -22 F to 140 F (-30 C to 60 C)
- On / Off or motion-sensor activation
- LED lights with 400 LM illumination; 120° angle of illumination
- Low, 5-watt power requirement
- Light-weight, all-composite construction
- Input and output connectors included with light (16 AWG)

SPECIFICATIONS

PANELITE:

- Extruded aluminum center support
- Black composite end caps
- Black composite mounting tabs
- Each light fixture includes two mounting tabs, two pre-wired connection sockets, two optional terminal blocks that snap into the connection sockets and enclosure attachment hardware (bulb not included with fluorescent light)

230 VAC Fluorescent Enclosure Light:

- Light gray composite construction – UL 94V-0 material
- Hardware kit provides fasteners to mount to PROLINE, NEMA (4, 4X, 12, and 13), CONCEPT, FUSION and other cabinets
- Easy-access terminal block that accommodates up to 16 AWG wires
- Fluorescent light bulb included (2G7 Base)

LED Light:

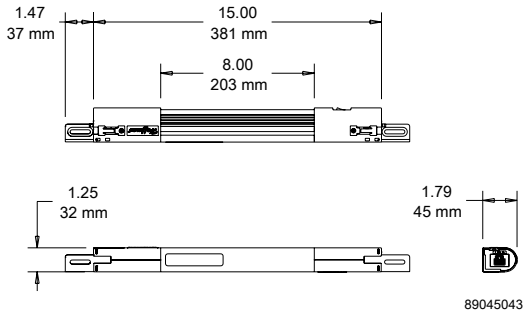
- LED (Light Emitting Diode) low-power light kit
- Screw mounting using included hardware kit (maintains enclosure rating up to UL Type 4X)
- No user-serviceable parts
- Life expectancy of 60,000 hours at 68 F (20 C) under specifications
- Operating temperature: -22 to +140 F (-30 to +60 C) under specifications
- 5-watt power consumption
- Transparent, composite construction

PANELITE LED ENCLOSURE LIGHT

- 24 VDC operation for superior lighting performance with minimal power consumption
- 140-degree cone angle casts a broad covering of neutral light between 3500 and 4500K color temperature
- Center section rotates 120 degrees to redirect light where needed
- Long life; 70 percent of initial luminance at 50,000 hours (at 25 C)
- High power LED emitters produce 470 Lumens for superior lighting performance
- Can be wired using optional PANELITE Cable Accessories or can be hard-wired with terminal blocks included in hardware kit
- Up to five lights can be daisy-chained together using hard-wired connection to power supply or catalog number LPC72 power cable with leads

BULLETIN: A80LT

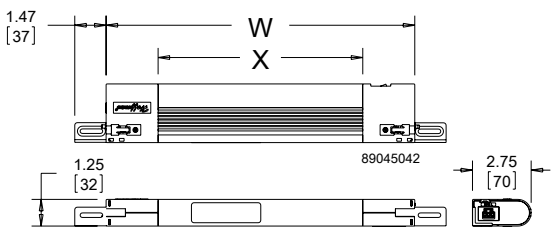
Catalog Number	Description	VDC	Amps	W in./mm	X in./mm
LED24V15	LED Light, 15 in.	24	.5	15.00 381	8.00 203



PANELITE FLUORESCENT ENCLOSURE LIGHT

- 120 VAC, 50/60 Hz operation
- Can be wired using optional PANELITE Cable Accessories or can be hard-wired with terminal blocks included in hardware kit
- Available in 15-, 18- and 28-in. lengths with ability to daisy chain up to five lights together using one power supply
- Fluorescent bulb not included

BULLETIN: A80LT



Catalog Number	Description	VAC	Hz	Amps	W in./mm	X in./mm	Bulb (purchase separately)	Replacement Lens Cover
LF120V15	Fluorescent Light, 15 in.	120	50/60	.13	14.50 368	9.63 245	F6T5	LFL15
LF120V18	Fluorescent Light, 18 in.	120	50/60	.13	17.50 445	12.63 321	F8T5	LFL18
LF120V28	Fluorescent Light, 28 in.	120	50/60	.26	27.75 705	22.88 581	F14T5	LFL28

REPLACEMENT HARDWARE KIT FOR PANELITE LED AND FLUORESCENT ENCLOSURE LIGHT

Relacement hardware kit is available for the replacement of lost or damaged hardware supplied with the PANELITE LED or Fluorescent Lights. Kit includes mounting brackets and all mounting hardware.

BULLETIN: A80LT

Catalog Number	Description
LED24VHDWK	Replacement hardware kit for PANELITE Enclosure Lights

PANELITE POWER CORDS

- Connects light to standard North American wall socket
- LF120VCORD is for 120 VAC Fluorescent lights (up to five lights can be daisy chained together using one power cord)
- LED24VCORD is for 24 VDC LED lights and includes a transformer to convert 100-240 VAC power supply (capable of powering only one LED light)
- Plugs directly into a connection socket on switch end of the light
- Includes one cable

Power cord not required. Terminal blocks are provided with each light for wired connection to electric supply.

BULLETIN: A80LT

Catalog Number	Description	Length
LF120VCORD	Fluorescent Light Power Cord	72 in.
LED24VCORD	LED Light Power Cord	60 in.

PANELITE POWER CABLE WITH LEADS

- 72-in. power cord provides convenient connection to an electrical supply
- Eliminates need to run and tag individual wires into the light
- Compatible with PANELITE LED and Fluorescent lights
- Plugs directly into connection socket on switch end of the light
- Includes one 16 AWG cable, black

Power Cable not required. Terminal blocks are provided with each light for wired connection to electric supply.

BULLETIN: A80LT

Catalog Number	Length
LPC72	72 in.

PANELITE GANGING CABLES

- Ganging Cables provide convenient method for joining up to five lights together while utilizing one power supply
- Available in 24-, 48- and 72-in. lengths
- Plugs directly into connection socket on either end of the light
- Compatible with PANELITE LED and Fluorescent lights
- Includes one 16 AWG cable, black

Ganging Cables not required. Terminal blocks are provided with each light for hard-wired connections.

BULLETIN: A80LT

Catalog Number	Length
LGCABLE24	24 in.
LGCABLE48	48 in.
LGCABLE72	72 in.

PANELITE DOOR SWITCH CABLE

- Easily connects PANELITE LED or Fluorescent Light to a Remote Door Switch
- T-connector allows the Door Switch Cable to be connected with a ganging cable or power supply to the switch end of the light
- Available in 18- and 72-in. lengths
- Includes one 18 AWG cable, black

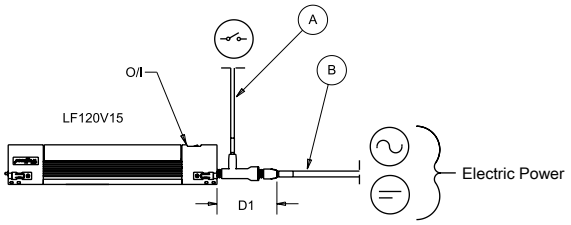
Door Switch Cables not required. Terminal blocks are provided with each light for hard-wired connection to remote door switch.

BULLETIN: A80LT

Catalog Number	Length
LDSWITCH18	18 in.
LDSWITCH72	72 in.

PANELITE WIRING OPTIONS

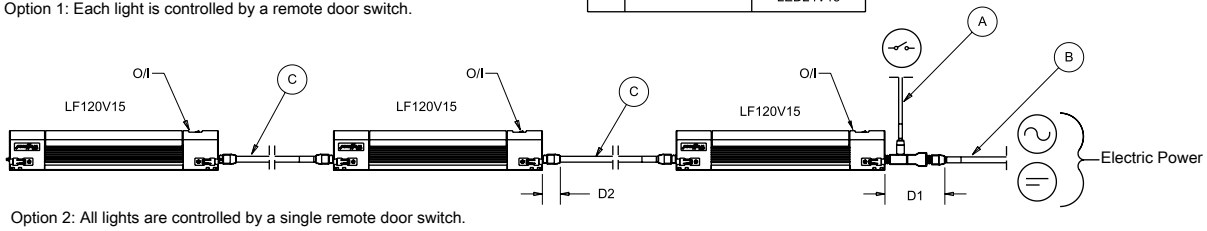
See the table on the drawing for cable clearance dimensions.



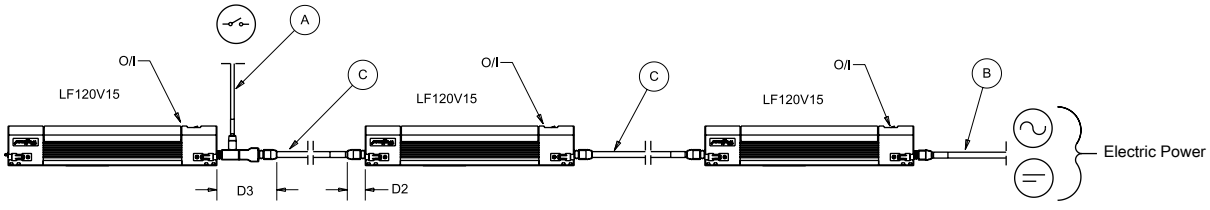
ITEM	CONNECTOR TYPE	LIGHT FIXTURE
A	LDSWITCH18 LDSWITCH72	LF120V15 LF120V18 LF120V28 LED24V15
B	LF120VCORD LPC72	LF120V15 LF120V18 LF120V28
	LED24VCORD	LED24V15
C	LGCABLE24 LGCABLE48 LGCABLE72	LF120V15 LF120V18 LF120V28 LED24V15

PLUG	DIMENSION	'D' MIN
A + B	D1	127 MM 5.00 IN
C	D2	51 MM 2.00 IN
A + C	D3	127 MM 5.00 IN

Option 1: Each light is controlled by a remote door switch.



Option 2: All lights are controlled by a single remote door switch.



Option 3: The last light is controlled by a remote door switch. The first two lights are manually operated.

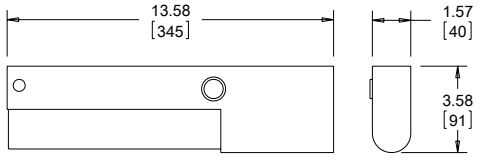
89046495

230 VAC FLUORESCENT ENCLOSURE LIGHT

- 230 VAC, 50/60 Hz operation with electronic ballast
- Compact light-gray plastic housing, UL 94V-0
- Easy access to wiring terminals, integral strain relief, 16 AWG max.
- Versatile mounting to many enclosure types
- Complete assembly, long-life fluorescent bulb included, Luminosity 900 LM
- Switch and Door motion sensor offering

BULLETIN: A80LT

Catalog Number	AxBxC in./mm	Description
LF230VM	1.57 x 13.58 x 3.58 40 x 345 x 91	Light Kit, 230VAC, Manual switch
LF230VD	1.57 x 13.58 x 3.58 40 x 345 x 91	Light Kit, 230VAC, IR Motion Sensor



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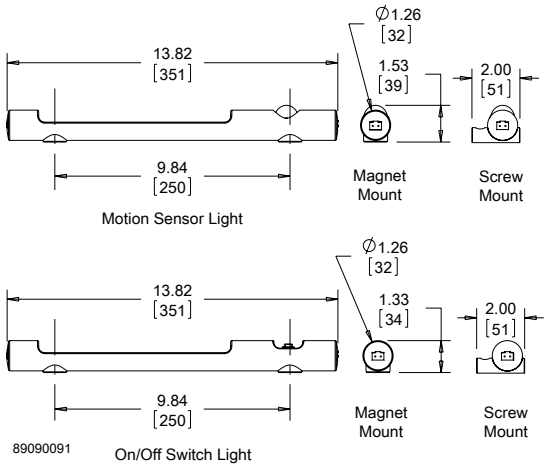
LED LIGHT KIT

BULLETIN: A80LT



LED light kits provide interior enclosure lighting. These light kits are ideal for remote and darkened enclosure applications. The light can be mechanically fastened with included hardware to maintain enclosure UL listing (up to Type 4X), or can be magnetically attached to flat steel surfaces. The lights have auto-sensing circuitry (AC voltage 90 VAC to 260 VAC and DC voltage 20 VDC to 60 VDC). LED lights are light-weight and in a small form factor while providing 400 LM of 6000-7000K light. Power consumption for all models is 5 watts.

Catalog Number	AxBxC in./mm	Weight (oz)	Weight (gm)	Mounting Style	Power Source	Activation	Voltage
LEDA1M35	1.34 x 1.26 x 13.82 34 x 32 x 351	4.8	135	Magnetic	AC	On/off switch	90 VAC-260 VAC
LEDA2M35	1.54 x 1.26 x 13.82 39 x 32 x 351	5.0	140	Magnetic	AC	IR Motion Sensor	90 VAC-260 VAC
LEDA1S35	1.42 x 2.05 x 13.82 36 x 52 x 351	4.8	135	Screw	AC	On/off switch	90 VAC-260 VAC
LEDA2S35	1.63 x 2.05 x 13.82 41 x 52 x 351	5.0	140	Screw	AC	IR Motion Sensor	90 VAC-260 VAC
LEDD1M35	1.34 x 1.26 x 13.82 34 x 32 x 351	4.8	135	Magnetic	DC	On/off switch	20 VDC-60 VDC
LEDD2M35	1.54 x 1.26 x 13.82 39 x 32 x 351	5.0	140	Magnetic	DC	IR Motion Sensor	20 VDC-60 VDC
LEDD1S35	1.42 x 2.05 x 13.82 36 x 52 x 351	4.8	135	Screw	DC	On/off switch	20 VDC-60 VDC
LEDD2S35	1.63 x 2.05 x 13.82 41 x 52 x 351	5.0	140	Screw	DC	IR Motion Sensor	20 VDC-60 VDC

LED LIGHT INPUT CONNECTOR/CABLE ASSEMBLY

The input connector/cable assembly is used to provide supply power to the LED light. Preassembled connector/cable assembly with 78.7-in. (2000 mm) long cable whip. Cables are constructed of 16 AWG copper wire.

BULLETIN: A80LT

Catalog Number	A in./mm	Power Source	Use with
LEDA20C	78.74 2000	AC	AC LED Lights
LEDD20C	78.74 2000	DC	DC LED Lights

LED LIGHT EXTENSION CONNECTOR/CABLE ASSEMBLY

The extension connector/cable assembly is used to connect adjacent LED lights (daisy chain). Up to 10 LED lights can be ganged or connected in series. Pre-assembled connector/cable assembly with 39.4-in. (1000 mm) long cable between input and output connectors. Cables are constructed of 16 AWG copper wire.

BULLETIN: A80LT

Catalog Number	A in./mm	Power Source	Use with
LEDA10E	39.37 1000	AC	AC LED Lights
LEDD10E	39.37 1000	DC	DC LED Lights

REMOTE DOOR SWITCHES

- The remote door switch can activate a light or other electrical component when the enclosure door is opened
- Mounts on enclosure frame and includes mounting hardware
- Mounting plate is 14 gauge steel with a plated finish
- Can be hard-wired to the PANELITE LED or Fluorescent light or connected via the PANELITE Door Switch Cable

BULLETIN: A80LT, P20

Catalog Number	Description
ALFSWD	Door switch assembly (order connection cable separately)
PLFSWD	Door switch assembly for PROLINE and PROLINE G2 (order connection cable separately)

TOUCH-SAFE UL LIGHT SWITCH

APPLICATION

The Touch-Safe light switch is designed to be used with Hoffman light kits (AC and DC). It provides a UL listed touch-safe switch that can be used on many enclosure types and includes hardware for most applications. The light switch maintains enclosure overall rating up to UL 508A Type 4X or 12.

FEATURES

- UL listed for a touch-safe wire connection
- Easily mounted to various enclosure types; common bracket and hardware included for many enclosure types (NEMA, CONCEPT/FUSION G7, PROLINE, Free-Stand Type 12)
- Cable PG compression hub
- Wide operating temperature range: -49°F to +158°F (-45°C to 70°C)
- Rugged die-cast anodized zinc construction
- Connection 3 cage clamps for solid and stranded wire AWG 20-14 (0.5-2.5mm²)
- Protection class I (grounded)

BULLETIN: A80LT

Catalog Number	Max. Cable Dia.	Max. Voltage
LDSWITCH	.375 in.	250 AC / 48 DC

MOUNTING BRACKET KIT FOR LIGHT PACKAGE

Kit simplifies mounting light package in Hoffman PROLINE disconnect enclosures. Includes brackets, all mounting hardware and complete instructions.

BULLETIN: A80LT

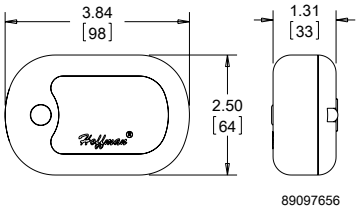
Catalog Number	Description
PDLFBRKT	Mounting Bracket Kit

LED PUCK LIGHT

The LED Puck Light is ideal for remote and darkened applications. This versatile light provides mounting flexibility; it can be magnetically attached to flat steel surfaces or can be hung with a swivel hook. This small form factor, light-weight LED light provides superior lighting performance with minimal power consumption. It can be used as a three-LED flashlight or as a 24-LED work light with operating temperature of 40 F to 120 F (4 C to 48 C). An on/off switch is incorporated in the light and three AAA batteries are included.

BULLETIN: A80LT

Catalog Number	AxBxC in./mm	Product Weight
LEDPUCK	2.25 x 3.75 x 1.38 57 x 95 x 35	0.22 lbs.



RACK- AND PANEL-MOUNT POWER DISTRIBUTION UNITS (PDUS)

FEATURES

- Power on/off LED indicates whether power is available at the PDU
- External ground stud provided on single-phase models for secure grounding
- Circuit breakers provide additional equipment protection
- Circuits are isolated on dual circuit model; each has its own circuit breaker
- Reset button provides easy access to circuit breaker reset
- Surge protector models have an indicator LED to verify surge circuitry protection
- Rack-mount models mount directly to rack or with adapter bracket
- Rack-mount models designed for single-phase applications
- Panel-mount models can be mounted flush or with hanging bracket

SPECIFICATIONS

- Steel housing
- Power cord with molded-on plug:
  - 12-in. (305-mm) long single-phase model: 6 ft. (1.8 m)
  - Other single-phase models: 15 ft. (4.6 m)

Contact Hoffman for custom modifications and non-standard offerings.

FINISH

Black, low-gloss textured paint.

BULLETIN: DPS

INDUSTRY STANDARDS

UL/cUL 60950 listed
UL 1449 (Surge protector models only)

EIA 310-D (19-in. rack-mount models only)

APPLICATION

Rack- and Panel-Mount PDUs not only provide convenient, reliable power to equipment mounted in cabinets or on open frame racks, they can also be configured to meet a wide range of design specifications.

Standard Product **Single-Phase Rack-Mount**

Catalog Number	Surge Protection	Amp Meter	Load Rating	Voltage (VAC)	Joule Rating	Receptacle Location	No. of Receptacles	Receptacle Style	Power Cord Plug	Rack Units
DP1N190615	No	No	15A	120	—	Front	6	NEMA 5-15R	NEMA 5-15P	1
DP1N191415	No	No	15A	120	—	6 front, 8 back	14	NEMA 5-15R	NEMA 5-15P	1
DP1N191015S	Yes	No	15A	120	2000	2 front, 8 back	10	NEMA 5-15R	NEMA 5-15P	1
DP1N191020	No	No	20A	120	—	2 front, 8 back	10	NEMA 5-20R	NEMA 5-20P	1
DP1N191020S	Yes	No	20A	120	2000	2 front, 8 back	10	NEMA 5-20R	NEMA 5-20P	1
DP1N191020ST	Yes	No	20A	120	2000	2 front, 8 back	10	NEMA 5-20R	NEMA L5-20P Twist Lock	1

Isolated circuits on dual-circuit models with separate circuit breakers.

Plugs and Receptacles

NEMA Type	Plug	Receptacle
NEMA 15 Amp, 120V, Duplex	5-15P	5-15R
NEMA 20 Amp, 120V, Duplex	5-20P	5-20R
NEMA 20 Amp, 120V, Twist Lock	L5-20P	L5-20R
30 Amp, 120/208V Wye, Twist Lock	L21-30P	L21-30R

IEC Type	Inlet	Outlet
IEC 15 Amp, 125/250V	C-14	C-13
IEC 20 Amp, 125/250V	C-20	C-19

87922518

Standard Product **Single-Phase Vertical-Mount**

Catalog Number	Length (in.)	Length (mm)	Surge Protection	Amp Meter	Load Rating	Voltage (VAC)	Joule Rating	No. of Receptacles	Receptacle Style	Power Cord Plug
DP1N120615	12.00	305	No	No	15A	120	—	6	NEMA 5-15R	NEMA 5-15P
DP1N160620S	16.00	406	Yes	No	20A	120	2000	6	NEMA 5-20R	NEMA 5-20P
DP1N481815	48.00	1219	No	No	15A	120	—	18	NEMA 5-15R	NEMA 5-15P
DP1N622415	62.00	1575	No	No	15A	120	—	24	NEMA 5-15R	NEMA 5-15P
DP1N622420	62.00	1575	No	No	20A	120	—	24	NEMA 5-20R	NEMA 5-20P
DP1N622420T	62.00	1575	No	No	20A	120	—	24	NEMA 5-20R	NEMA L5-20P Twist Lock
DP1N622420MT	62.00	1575	No	Yes	20A	120	—	24	NEMA 5-20R	NEMA L5-20P Twist Lock
DP1E2663030MT	66.00	1676	No	Yes	30A	208	—	36	24 IEC C-13, 6 IEC C-19	NEMA L6-30P Twist Lock

Isolate circuits on dual circuit models with separate circuit breakers.

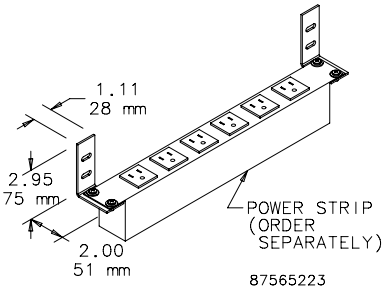
DP1E2663030MT includes input power monitoring with breaker level current monitoring, daisy chain Ethernet connectivity.

RACK-MOUNT PDU BRACKET

Allows rack-mount power strips to be mounted to cabinet sides without using up rack space. Made of plated steel. Includes two brackets and mounting hardware. Order power strip separately.

BULLETIN: DPS

Catalog Number	Finish	Pkg. Qty.
A19PSMB	Plated	2 brackets



UNIVERSAL POWER STRIP BRACKET

This bracket fits in the corner of the frame of all PROLINE cabinets and facilitates mounting a variety of power strips.

BULLETIN: DPY

Catalog Number	Description
EPDUBK	Universal Power Strip Bracket fits all PROLINE cabinets

IEC CORD SETS

Cord sets help minimize cord tangle, increasing airflow to equipment.

BULLETIN: DPS

Catalog Number	Description	Pkg. Qty.
DP5E	0.5-m (1.64-ft.) IEC patch cord. 18/3 SJT Black. C-14 to C-13	1
DP10E	1-m (3.28-ft.) IEC patch cord, 18/3 SJT Black. C-14 to C-13	1

IEC C-13 RETAINING CLIP

Secures the IEC C-14 inlet into the C-13 outlet. Helps to prevent inadvertently unplugging the cord set.

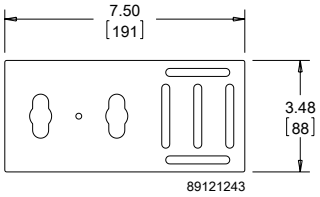
BULLETIN: DPS

Catalog Number	Description	Pkg. Qty.
DPCLIP	IEC C-13 Retaining Clip	10

PDU BRACKET KIT

The PDU Bracket Kit includes two mounting plates and hardware to effectively mount power strips within enclosures.

BULLETIN: DCY



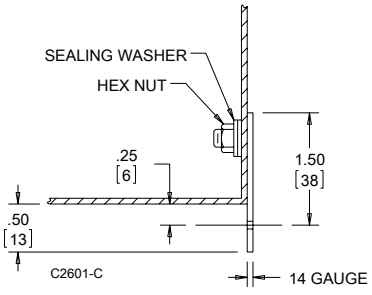
Catalog Number	Finish	Pkg. Qty
DPDU1	Painted black	2

MOUNTING BRACKET KITS (DMFK)

Mounting bracket kits are field-installable. Includes two 14-gauge, steel, external mounting brackets and fasteners. Sealing washers are provided with each kit to maintain Type 4 or 12 rating after installation. Steel mounting brackets are plated.

BULLETIN: A80

Catalog Number	Description	Fastener Thread Size
DMFK1	Mounting bracket kit	#10-32
DMFK2	Mounting bracket kit	#10-32



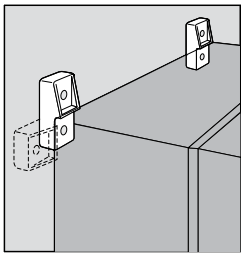
MOUNTING BRACKET KITS (CMFK, CMTGFT)

Mounting-Bracket Kits are field installable. Composite and stainless steel brackets are rated to Type 4X. Set of four (4) brackets can support 500 lb. (227 kg) maximum load. All hardware is included. Four brackets per kit.
Mounting brackets are required to maintain UL/CSA external mounting requirement.

BULLETIN: A80

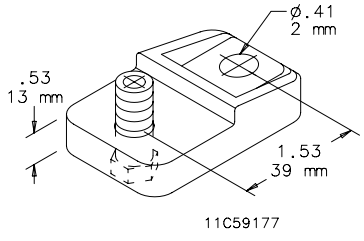
Catalog Number	Description	Fastener Thread Size
CMFK	Steel	#3/8-16
CMFKSS	Stainless Steel	#3/8-16
CMTGFT	Composite	#3/8-16

ULTRX MOUNTING BRACKET KIT



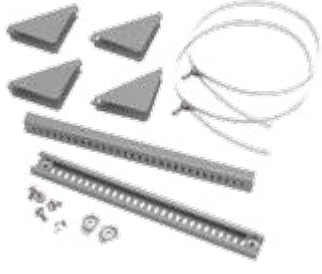
Kit is field-installable. Corrosion-resistant fiberglass material. Type 316 stainless steel mounting hardware is included. Four mounting brackets per kit.

BULLETIN: UX1Y



Catalog Number	Description	Kit Qty.
UUMF	Mounting Bracket Kit	4

POLE-MOUNT KIT



Use to mount CONCEPT, Networking and wall-mount enclosures to poles of various sizes and shapes. Simply attach the plated steel channel bar to the mounting holes at the back of the enclosure and wrap the stainless steel strap around the pole and through the bar. Kit includes two mounting channels, two straps suitable for 3-in. (76-mm) to 12-in. (305-mm) diameter pole and mounting hardware.

BULLETIN: CWY

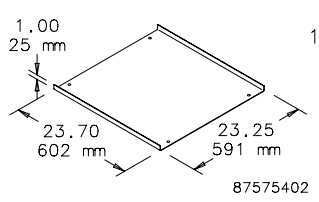
Catalog Number	Fits Enclosure (in.)	Fits Enclosure (mm)
CPMK12	when B = 12.00	when B = 305
CPMK16	when B = 16.00	when B = 406
CPMK20	when B = 20.00	when B = 508
CPMK24	when B = 24.00	when B = 610
CPMK30	when B = 30.00	when B = 762

BOTTOM SUPPORT KIT

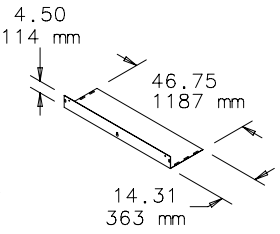
Bolt-in bottom support plate with mountng hardware. Coated with ANSI 61 gray polyester powder paint. Required when installing Hoffman floor stands or casters on A17 fiberglass free-standing enclosures.

BULLETIN: A17Y

Catalog Number	Use With
A17SUPPORT1	A17 One-Door Fiberglass Enclosures
A17SUPPORT2	A17 Two-Door Fiberglass Enclosures



A17SUPPORT1



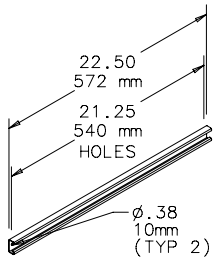
A17SUPPORT2

UNISTRUT MOUNTING KIT

Bolt-in internal unistrut channel (8 pieces) with mounting hardware. Required to install Hoffman unistrut-mounted free-stand panels and accessories in two-door A17 fiberglass enclosures. Hoffman A17SUPPORT2 plate must also be installed to secure unistrut.

BULLETIN: A17Y

Catalog Number	Use With
A17UNISTRUT	A17 Two-Door Fiberglass Enclosures



ENCLOSURE STABILIZERS

Helps prevent injury to workers by stabilizing floor-mount enclosures which are not bolted down. To install, slip the stabilizer under the floor stand and tighten two thumb screws. Made from .19-in. (5-mm) steel plate. Bright orange finish.

BULLETIN: A80

Catalog Number	Description
AENST	Two stabilizers

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FLOOR STAND KIT

INDUSTRY STANDARDS

Product maintains UL/CSA Type 4, 4X (stainless steel only) and Type 12 when properly installed on Hoffman Type 4 or Type 12 enclosures.

APPLICATION

Kits are easily installed on most wall-mount Hoffman enclosures. Can also be used to elevate Hoffman free-stand enclosures.

To install, drill holes in the bottom of the enclosure and bolt the floor stands to the enclosure. It is not necessary to remove the wall-mount brackets from the enclosure.

SPECIFICATIONS

12 gauge steel floor stand has an ANSI 61 gray polyester powder finish over pretreated surfaces. Stainless steel floor stand is available in Type 316 and Type 304.

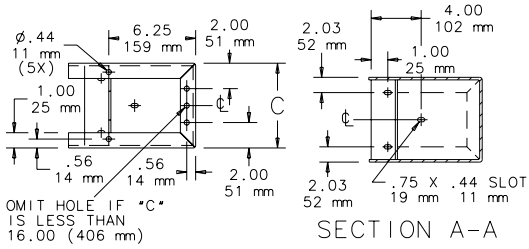
COMPONENTS

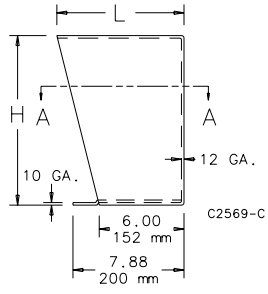
Each kit includes two stands. Two sets of floor stands are recommended for enclosures larger than double door free-stand enclosures.

ORDERING

Special heights, depths, materials and finishes can be provided on custom order. Consult factory for information.

BULLETIN: A4SY, A80





Catalog Number	Material	Height, H (in.)	Height, H (mm)	Width, C (in.)	Width, C (mm)	L (in.)	L (mm)
AFK0608	Steel	6.00	152	8.06	205	7.06	179
AFK0610	Steel	6.00	152	10.06	256	7.06	179
AFK0612	Steel	6.00	152	12.06	306	7.06	179
AFK0618	Steel	6.00	152	18.06	459	7.06	179
AFK1208	Steel	12.00	305	8.06	205	8.12	206
AFK1210	Steel	12.00	305	10.06	256	8.12	206
AFK1212	Steel	12.00	305	12.06	306	8.12	206
AFK1216	Steel	12.00	305	16.06	408	8.12	206
AFK1218	Steel	12.00	305	18.13	461	8.12	206
AFK1220	Steel	12.00	305	20.06	510	8.12	206
AFK1808	Steel	18.00	457	8.06	205	9.17	233
AFK1810	Steel	18.00	457	10.06	256	9.17	233
AFK1812	Steel	18.00	457	12.06	306	9.17	233
AFK1816	Steel	18.00	457	16.06	408	9.17	233
AFK2408	Steel	24.00	610	8.06	205	10.23	260
AFK2410	Steel	24.00	610	10.06	256	10.23	260
AFK2412	Steel	24.00	610	12.06	306	10.23	260
AFK2416	Steel	24.00	610	16.06	408	10.23	260
AFK0608SS	Stainless Steel, 304	6.00	152	8.06	205	9.09	231
AFK0610SS	Stainless Steel, 304	6.00	152	10.06	256	9.09	231
AFK0612SS	Stainless Steel, 304	6.00	152	12.06	306	9.09	231
AFK0618SS	Stainless Steel, 304	6.00	152	18.06	459	9.09	231
AFK0624SS	Stainless Steel, 304	6.00	152	24.06	611	9.09	231
AFK1208SS	Stainless Steel, 304	12.00	305	8.06	205	9.09	231
AFK1210SS	Stainless Steel, 304	12.00	305	10.06	256	9.09	231
AFK1212SS	Stainless Steel, 304	12.00	305	12.06	306	9.09	231
AFK1216SS	Stainless Steel, 304	12.00	305	16.06	408	9.09	231
AFK1218SS	Stainless Steel, 304	12.00	305	18.06	459	9.09	231
AFK1224SS	Stainless Steel, 304	12.00	305	24.06	611	9.09	231
AFK1808SS	Stainless Steel, 304	18.00	457	8.06	205	9.09	231
AFK1810SS	Stainless Steel, 304	18.00	457	10.06	256	9.09	231
AFK1812SS	Stainless Steel, 304	18.00	457	12.06	306	9.09	231
AFK1816SS	Stainless Steel, 304	18.00	457	16.06	408	9.09	231
AFK1818SS	Stainless Steel, 304	18.00	457	18.06	459	9.09	231
AFK1824SS	Stainless Steel, 304	18.00	457	24.06	611	9.09	231
AFK2408SS	Stainless Steel, 304	24.00	610	8.06	205	9.09	231
AFK2410SS	Stainless Steel, 304	24.00	610	10.06	256	9.09	231
AFK2412SS	Stainless Steel, 304	24.00	610	12.06	306	9.09	231

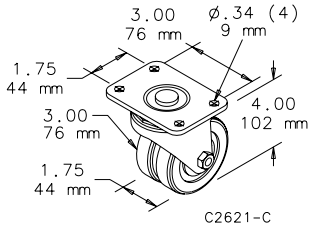
Catalog Number	Material	Height, H (in.)	Height, H (mm)	Width, C (in.)	Width, C (mm)	L (in.)	L (mm)
AFK2416SS	Stainless Steel, 304	24.00	610	16.06	408	9.09	231
AFK2418SS	Stainless Steel, 304	24.00	610	18.06	459	9.09	231
AFK2424SS	Stainless Steel, 334	24.00	610	24.06	611	9.09	231
AFK0608SS6	Stainless Steel, 316	6.00	152	8.06	205	9.09	231
AFK0610SS6	Stainless Steel, 316	6.00	152	10.06	256	9.09	231
AFK0612SS6	Stainless Steel, 316	6.00	152	12.06	306	9.09	231
AFK0618SS6	Stainless Steel, 316	6.00	152	18.06	459	9.09	231
AFK0624SS6	Stainless Steel, 316	6.00	152	24.06	611	9.09	231
AFK1208SS6	Stainless Steel, 316	12.00	305	8.06	205	9.09	231
AFK1210SS6	Stainless Steel, 316	12.00	305	10.06	256	9.09	231
AFK1212SS6	Stainless Steel, 316	12.00	305	12.06	306	9.09	231
AFK1216SS6	Stainless Steel, 316	12.00	305	16.06	408	9.09	231
AFK1218SS6	Stainless Steel, 316	12.00	305	18.06	459	9.09	231
AFK1224SS6	Stainless Steel, 316	12.00	305	24.06	611	9.09	231
AFK1808SS6	Stainless Steel, 316	18.00	457	8.06	205	9.09	231
AFK1810SS6	Stainless Steel, 316	18.00	457	10.06	256	9.09	231
AFK1812SS6	Stainless Steel, 316	18.00	457	12.06	306	9.09	231
AFK1816SS6	Stainless Steel, 316	18.00	457	16.06	408	9.09	231
AFK1818SS6	Stainless Steel, 316	18.00	457	18.06	459	9.09	231
AFK1824SS6	Stainless Steel, 316	18.00	457	24.06	611	9.09	231
AFK2408SS6	Stainless Steel, 316	24.00	610	8.06	205	9.09	231
AFK2410SS6	Stainless Steel, 316	24.00	610	10.06	256	9.09	231
AFK2412SS6	Stainless Steel, 316	24.00	610	12.06	306	9.09	231
AFK2416SS6	Stainless Steel, 316	24.00	610	16.06	408	9.09	231
AFK2418SS6	Stainless Steel, 316	24.00	610	18.06	459	9.09	231
AFK2424SS6	Stainless Steel, 316	24.00	610	24.06	611	9.09	231

PLATE CASTERS

Plate casters can be used on any enclosure to provide mobility. Casters have dual hard rubber wheels. Each caster has a 350-lb. (159-kg) load rating. Caster plates are heavy gauge steel with a zinc plated finish. Casters have ball bearing swivels. A caster kit includes 4 swivel casters and necessary mounting hardware. Catalog number DMCKC caster kit also includes four caster skirts which partially conceal caster plate and mounting hardware. Caster skirts are painted medium gray.

BULLETIN: D10

Catalog Number	Description
DMCKC	Set of four casters, four mounting plates and hardware



CASTER KIT

A set of four casters (two locking, two non-locking) that mount directly to the bottom of a PROLINE frame, 0-mm or 100-mm Solid Base or a Console. **(Do not use on plinth bases.)** Casters elevate the enclosure 110 mm (4.33) when installed. Caster frames are plated steel with ball-bearing pivots. Caster wheels are made of a black polyamide material. Kit includes M12 mounting hardware. Order separately.

Casters Maximum Load: 1000 lb. (453 kg)

Exercise care when using casters to move the cabinet. Avoid tipping and damage to the cabinet and its contents by slowly moving the cabinet on its casters across smooth, flat flooring.

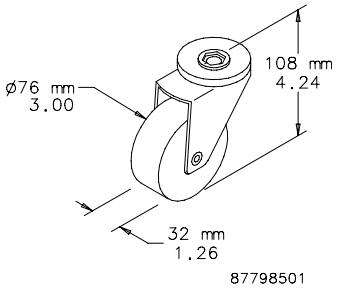
NOTE: Avoid large cracks, floor displacement, seams, gravel and any other obstructions.

Never use casters while transporting a cabinet by truck on roadways.

Contact Hoffman if further information is needed.

BULLETIN: P20

Catalog Number	Description
PC1M12	Set of 4 Casters



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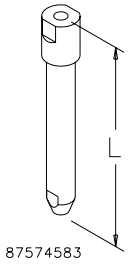
SANITARY LEG KITS

Sanitary Leg Kits provide space between the enclosure and the floor for better washdown accessibility. Available with fixed or independently adjustable legs. Adjustable leg shown. Four legs per kit. Maintains NEMA Type 4X rating when properly installed on a Hoffman Type 4X enclosure.

BULLETIN: WSY

Catalog Number	Description	Size L (in.)	Size L (mm)
WSASLKSS	Adjustable Sanitary Leg Kit	11.50 -12.50	292 -318
WSFSLKSS	Fixed Sanitary Leg Kit	12.00	305



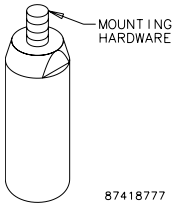
STAINLESS STEEL LEGS

Legs mount to the bottom of a solid base to elevate the enclosure 4 in. (100 mm) from the floor. The legs are made of Type 304 stainless steel and are appropriate for hose-down applications. Mounting hardware is included.

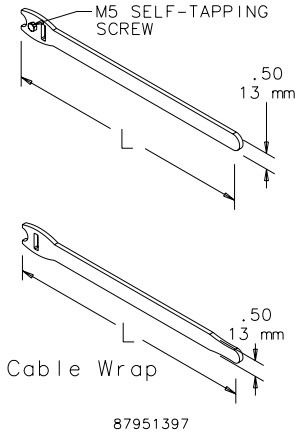
NOTE: These legs will not fit on the PROLINE G2 Fully-Sealed Plinth Base.

BULLETIN: P20S

Catalog Number	Description
PLEGSS	(4) Stainless Steel Legs



VELCRO® CABLE WRAP



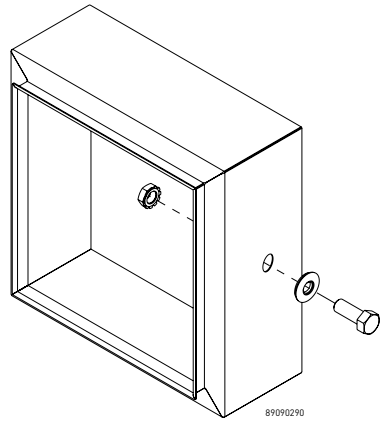
Securely holds cable to cable manager and unfastens easily for cable maintenance. VELCRO® is 0.5-in. (12.7-mm) wide. Available in 8- and 12-in. (203- and 305-mm) lengths in both screw fastener and wrap styles. M5 self-tapping screw is used on Net Series or PROLINE frames.

VELCRO is a trademark of Velcro Industries B.V.

BULLETIN: DACCY

Catalog Number	Description	L (in.)	L (mm)	Color	Pkg. Qty.
ECWTD8B	Screw fastener style. Includes M5 mounting screw.	8.00	203	Black	10
ECWTD12B	Screw fastener style. Includes M5 mounting screw.	12.00	305	Black	10
ECW8B	Wrap style	8.00	203	Black	10
ECW8R	Wrap style	8.00	203	Red	10
ECW8BL	Wrap style	8.00	203	Blue	10
ECW8Y	Wrap style	8.00	203	Yellow	10
ECW12B	Wrap style	12.00	305	Black	10
ECW12R	Wrap style	12.00	305	Red	10
ECW12BL	Wrap style	12.00	305	Blue	10
ECW12Y	Wrap style	12.00	305	Yellow	10

UL RECOGNIZED HARDWARE KITS



APPLICATION

These UL-recognized mountings kits are designed to maintain the overall UL Type rating of the enclosure when component mounting holes penetrate the exterior of the enclosure. These hardware kits are conveniently offered in three common fastener sizes to meet various applications.

FEATURES

- Each kit provides the capability of sealing 10 hole penetrations
- Kits are offered in 10-32, 1/4-20 and 3/8-16 fastener sizes
- Stainless steel fasteners
- Kit contains screws, sealing washers and locking nuts
- Kit is UL-recognized as a means to maintain UL enclosure cabinet rating up to Type 4X

SPECIFICATIONS

- Fasteners are made of stainless steel
- Sealing washer has integral rubber sealing and stainless steel washer

FINISH

Brushed, bright stainless steel

BULLETIN: A80HS

INDUSTRY STANDARDS

UL 508A Component Recognized; File No. E61997

CSA File No. 42186: Type 4, 4X, 12, 13

Cabinet maintains up to UL Type 4X when included hardware is used per instructions.

Standard Product

Catalog Number	Fastener Size (Nominal)	Fastener Length (Dia. Inches)	Drill/Hole Size (Inches)
AHK10324X	10-32	5/8	7/32
AHK14204X	1/4-20	1	9/32
AHK38164X	3/8-16	1	13/32

TAMPER-RESISTANT SCREWS

Designed for field installation on screw cover pull boxes and screw cover Type 3R enclosures (size 16.00 x 12.00 x 6.00 in. or smaller), consolets, pushbutton enclosures and Type 12 screw cover wiring trough. Each package consists of four Type 18-8 stainless steel screws and four nylon captivating washers. Driver bit must be ordered separately (functions in any handle or socket capable of holding 1/4-in. hex insert bits).

BULLETIN: A80

Catalog Number	Description	Pkg. Qty.
ATRSK	Tamper-resistant screw (10-32)	4
ATRSDVR	Driver bit	1

SCREW PACKAGES

Screw Packages are for mounting rack panels and equipment to rack angles.

BULLETIN: A80, DACCY

Catalog Number	Color	Description	Pkg. Qty.
ES1224	Silver	12-24 x 5/8 in. combo head	20
ES1224250	Silver	12-24 x 5/8 in. combo head	250
ES1224B	Black	12-24 x 5/8in. combo head	20
ES1224B250	Black	12-24 x 5/8 in. combo head	250
ASM5	Silver	M5 x 20 mm Combo Head	20
ASM6	Silver	M6 x 16 mm combo head	20
ASM5T	Silver	M5 x 12 mm thread-forming Phillips hex head screws	20
ASM6250	Silver	M6 x 16 mm combo head	250
AS1032	Silver	10-32 x 5/8 in. combo head	20
AS1032250	Silver	10-32 x 5/8 in. combo head	250
AS1032B	Black	10-32 x 5/8 in. combo head	20

Use ASM5T on PROLINE frame or Net Series extruded holes.

CAGE NUT PACKAGE

Cage Nut Packages are for use with square-hole rack angles. Cage nuts are plated steel.

BULLETIN: DACCY

Catalog Number	Color	Description	Pkg. Qty.
PM5CN	Silver	M5 cage nut	20
PM6CN	Silver	M6 cage nut	20
PM6CN250	Silver	M6 cage nut	250
P1032CN	Silver	10-32 cage nut	20
P1032CN250	Silver	10-32 cage nut	250
P1224CN	Silver	12-24 cage nut	20
P1224CN250	Silver	12-24 cage nut	250

CLIP NUT PACKAGE

Twenty plated clip nuts fit all rack-mounting angles with .281-in. (7-mm) diameter holes (through-hole type).

BULLETIN: A80

Catalog Number	Description	Pkg. Qty.	Fits
AN1032	Clip Nut 10-32	20	.281-diameter mounting holes
ANM5	Clip Nut M5 (Metric)	20	.281-diameter mounting holes

CLAMPING NUT PACKAGE

Twenty plated clamping nuts with top-grip nut retainers. Clamping nuts fit into mounting channels that are used on inside walls of Hoffman enclosures. Clamping nuts are included with all Hoffman accessories that attach to mounting channels. These clamping nuts can be used for mounting other equipment (brackets, etc.) to the enclosure walls.

BULLETIN: A80

Catalog Number	Description	Thread
APS1032CN	Package of 20	10-32
APS1420CN	Package of 20	1/4-20
APS51618CN	Package of 20	5/16-18

PROLINE FASTENER PACKAGES

Use to fasten components to the grid system. PGF Packages include 20 front-loading clip nuts (M6) and 20 combination-drive washer-head bolts (M6).
Grounding Package is used with the rectangular holes in the PROLINE frame to provide electrical continuity between the frame and the grid system. ASM5T Package is used with PROLINE frames having round holes. Package includes 20 M5 self-tapping screws.

BULLETIN: DACCY

Catalog Number	Description	Use in	Pkg. Qty.
ASM5T	M5 x 12 mm thread-forming Phillips hex head screws	Round holes	20
PGFM6	Standard Package - M6 cage nuts and bolts	Rectangular holes	20
PGFGM6	Grounding Package - M6 grounding cage nuts and bolts	Tapped holes	20

FASTENER PACKAGE

Kit includes a set of 8 cage nuts and screws. Used to mount 19-in. rack equipment to 9-mm square holes in uprights. Cage nuts are metric (M6). Screws are pan head Phillips metric M6x16.

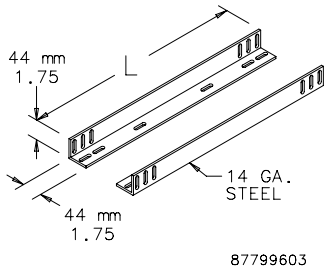
BULLETIN: DACCY

Catalog Number	Color	Description
ECNSM6	Silver	M6 x 16 pan head posidrive screws. M6 cage nuts.

GUIDES

14 gauge steel chassis guides mount between two pairs of rack-mounting angles that have accessory mounting legs. Guides and mounting hardware are plated. (XSFG mount on one pair of Type RA rack-mounting angles that have accessory mounting legs.)

BULLETIN: P20

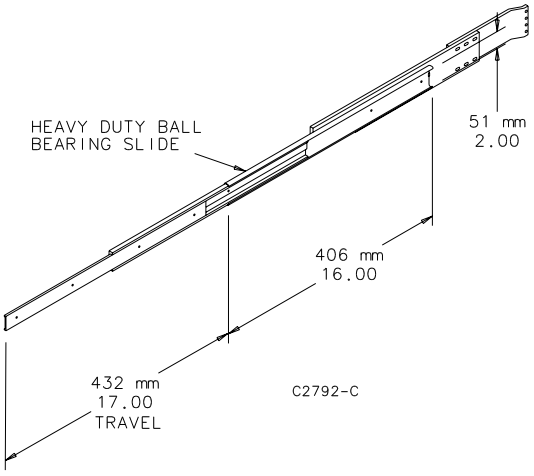


Catalog Number	Length in./mm	Rack Units
AG1U5	15.00 381.0	1
AG1U6	21.00 533.4	1
AG1U8	26.00 660.4	1

SLIDES

Heavy-duty ball bearing, plated, three-section Slides are 16-in. (406-mm) long and allow 17-in. (423-mm) extension. They are attached to supports that mount between two pairs of rack-mounting angles that have accessory mounting legs. Mounting hardware is furnished. Equipment 16.75-in. (425-mm) wide can be mounted between Slide assemblies installed on 19-in. rack angles. A pair of Slides can support up to 160 lb. (73 kg) at the extended position when load is distributed evenly along the 16-in. (406-mm) Slide length. Requires Rack Angle Adapter Bracket to fit PROLINE. *Needs to be used with the Rack Angle Adapter Bracket (PBRAA, PBRAA19 or PBRAA24).*

BULLETIN: P20



Catalog Number	Quantity
A16SL2U	2

FAN SPEED CONTROL, RACK-MOUNT

APPLICATION

These Hoffman Fan Speed Controls provide a means to optimize airflow in a cabinet or rack, balancing air volume requirements with noise level and power use. The AFANTSC Panel Mount Fan Speed Control adjusts fan speed automatically based on remote temperature sensor inputs. The A19FANSC 19-in. Rack-Mount Fan Speed Control allows manual control over fan speed. Both units are designed to work with Hoffman 3-, 6- and 10-in. Compact Cooling Fans and with 19-in. fan trays, as well as door- and top-mount fan trays. These fan speed controls are ideal for offices, classrooms and other acoustic noise-sensitive areas.

SPECIFICATIONS

- Continuously variable fan speed control knob with minimum speed adjustment
- Uses 1 RU rack space
- Steel construction
- Two NEMA 5-15R outlets provide power to fan
- Six-foot (1.83-m) power cord plugs into standard 120V 60 Hz outlet

INDUSTRY STANDARDS

UL 508A Listed; File No. E249700
cUL Listed per CSA C22.2 No. 14; File No. E249700

FINISH

AFANTSC: Light-gray polycarbonate control housing
A19FANSC: RAL 9005 black polyester powder paint

BULLETIN: DTHRM

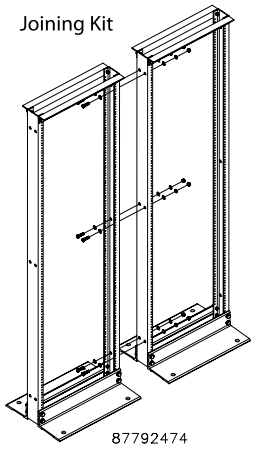
Catalog Number	Description	Application	Voltage and Frequency	Current Draw	Temperature Settings (C)	Temperature Settings (F)
A19FANSC	19-in. Rack-Mount Fan Speed Control	Fan speed adjusted manually	120V, 60 Hz	4A max.	Continously variable	Continously variable

JOINING KIT

Hardware kit to join two open-frame racks. Made of steel with plated finish.

BULLETIN: DOFRY

Catalog Number	Description
EJ2DR	Joining Kit, Side-to-Side

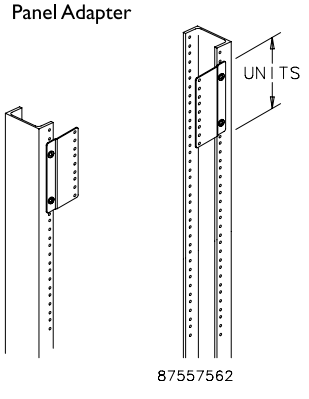


PANEL ADAPTER

Adapts 23-in. open frame rack to accept 19-in. equipment. Offset provides flush mounting surface. Steel with plated finish. Furnished in pairs.

BULLETIN: DACCY

Catalog Number	Rack Units
ERB1U2319	1
ERB3U2319	3
ERB5U2319	5



RACK UNIT LABEL

Self-adhesive clear Mylar label with white numbers enables numbering along sides of open frame racks or rack angles. Numbers spaced one rack unit apart. Can be used for bottom-up or top-down numbering of rack units to simplify equipment installation. Each label provided in two pieces (numbers 1-29 and 30-58) for easier installation. Two labels per catalog number. Label shown mounted on rack angle.
Mylar is a registered trademark of DuPont Tejin Films.

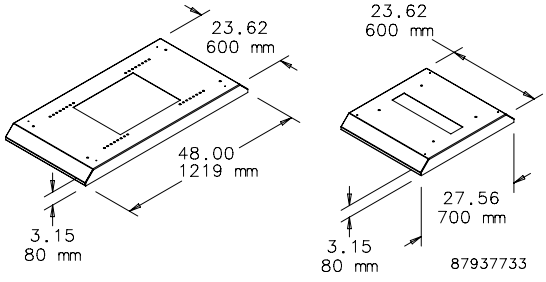
BULLETIN: DOFRY

Catalog Number	Installed Length in./mm	Width in./mm
ARULABEL	101.50 2578	.50 13

MOBILE BASE FOR OPEN FRAME RACKS

Models for 19-in. 2- and 4-Post Open Frame Racks. Includes four non-locking casters. Will also accept standard levelers. Order catalog number PMBLM12 separately. The rack mounts on the base to provide greater stability with mobility. Made of steel with RAL 9005 black polyester powder paint finish. Mounting hardware included.

BULLETIN: DOFRY



Catalog Number	Fits
A19MB600	2-post open-frame racks
A19MB1000	4-post open-frame racks with depth adjustable between 17.7- and 29.5-in. (450- and 750-mm) in 0.98-in. (25-mm) increments

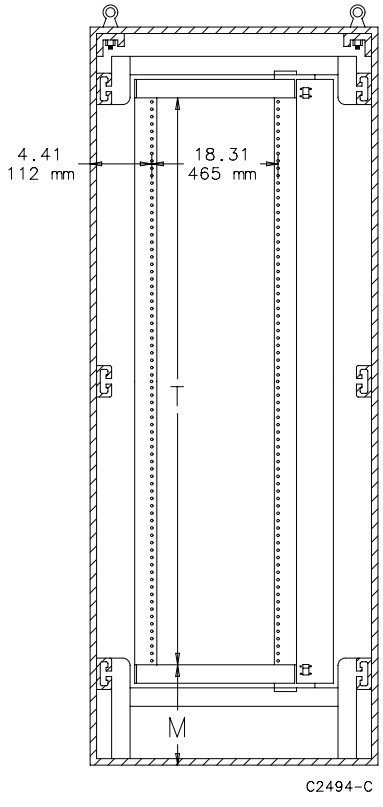
SWING-OUT RACK MOUNTING FRAMES

Full-length 10 gauge swing-out rack mounting frames are available for mounting 19-in. (483-mm) rack mounting equipment. The frame pivots within the enclosure to allow access to the back of the mounted equipment. The frames can be installed in 72.00-in. (1829-mm) and 90.00-in. (2286-mm) high enclosures that are 30.00-in. (762-mm) or 36.00-in. (914-mm) wide. They can be installed in 60.00-in. (1524-mm) or 72.00-in. (1829-mm) wide enclosures if a center panel support is used. Mounting holes are tapped with #10-32 threads spaced per EIA standard. The design features smooth operation and secure positioning anywhere along the horizontal mounting channels. Frame swings from the left side.
All frames are white and furnished with plated mounting hardware.

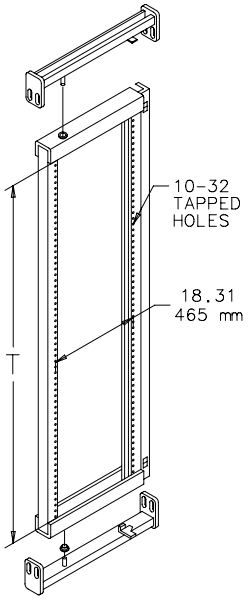
BULLETIN: A80

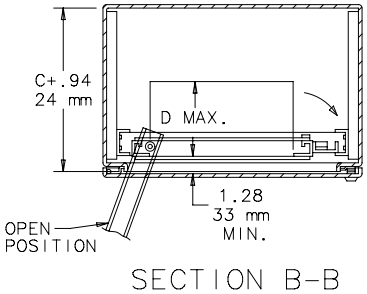
Catalog Number	Fits Enclosure Size A x B in./mm	T in./mm	M in./mm	D max in./mm	Number of Units
A7230SOF19	72.06 x 30.06 1830 x 764	57.88 1470	9.09 231	16.25 413	33
A7236SOF19	72.06 x 36.06 1830 x 916	57.88 1470	9.09 231	24.25 616	33
A9036SOF19	90.06 x 36.06 2287 x 916	75.28 1915	9.34 237	24.25 616	43

One unit equals 1.75 inches (44mm).

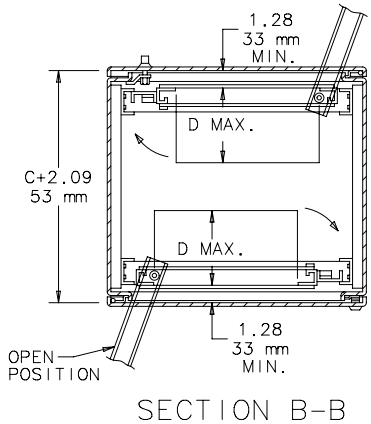


SECTION A–A





SECTION B–B

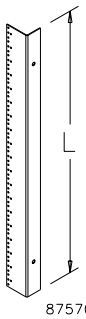


SECTION B–B

19-IN. AND 23-IN. RACK ANGLES

Made of 14 gauge steel with square holes or 12 gauge steel with 10-32 tapped holes. Provides 19- or 23-in. rack spacing depending on frame width. Finished with flat black RAL 9005 polyester powder paint or plated. Furnished in pairs.

BULLETIN: DNCY



87570462

Catalog Number	Rack Spacing	Hole Type	Finish	Use With	Fits Frame Height	Fits Frame Width	Rack Units	L (mm)	L (in.)
ERA197THLN	19 in.	Square	Black	Networking Cabinet - SOHO	700mm	600mm	11	492	19.38
ERA197TPLN	19 in.	Tapped	Black	Networking Cabinet - SOHO	700mm	600mm	11	492	19.38
ERA1921TPL	19 in.	Tapped	Black	Seismic Cabinet	2100mm	700mm	45	2003	78.87
ERA192321TPL	19 and 23 in.	Tapped	Black	Seismic Cabinet	2100mm	800mm	45	2003	78.87
ERA1910TPL	19 in.	Tapped	Black	Network PC Cabinet	Bottom Section	—	19	848	33.37

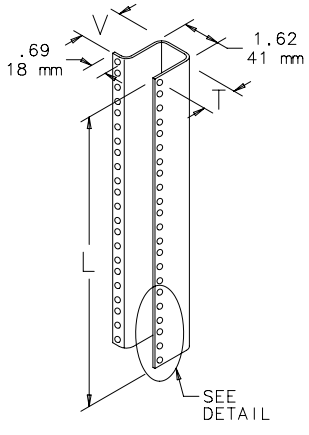
RACK MOUNTING ANGLES - U STYLE (TYPE RA)

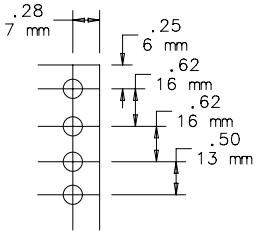
For Free-Stand Enclosures, Type 12 (Bulletin A30), Free-Stand Enclosures, Type 4 (Bulletin A4L) and One-Door Free-Stand Fiberglass Enclosures, Type 4X (Bulletin A17).
Pairs of full-length rack mounting angles are available for mounting 19-in. (483-mm) and 24-in. (610-mm) rack-mounted equipment.
Type RA rack mounting angles are 14 gauge steel with mounting holes .281 in. (7 mm) in diameter and spaced per EIA standard RS-310-D universal spacing. Use clip nut package AN1032 to provide tapped holes at desired locations.
Angles and mounting hardware are plated. All mounting hardware is furnished. Includes two full-length angles.

BULLETIN: A80

Catalog Number	Fits Enclosure A x B in./mm	K in./mm	L in./mm	M in./mm	T in./mm	V in./mm	For Rack Size in./mm	Number of Units
A60RA19TH	60.00 x 24.00 60 x 24	3.78 96	49.00 1245	7.78 198	1.95 50	1.89 48	19.00 483	28
A72RA19TH	72.00 x 24.00 1829 x 610	3.66 93	61.25 1556	7.66 195	1.95 50	1.89 48	19.00 483	35
A72RA24TH	72.00 x 30.00 1829 x 762	3.66 93	61.25 1556	7.66 195	2.45 62	2.39 61	24.00 610	35
A90RA19TH	90.00 x 24.00 2286 x 610	3.91 99	78.75 2000	7.91 201	1.95 50	1.89 48	19.00 483	45

One unit equals 1.75 inches (44 mm).

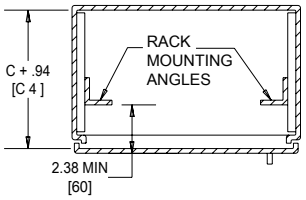




HOLE DETAIL

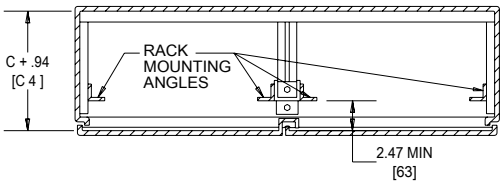
87799724

Rack Mounting Angles Installed in Enclosures



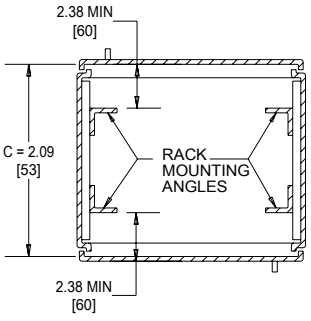
SECTION B-B

Showing rack mounting angles installed in single-door enclosure



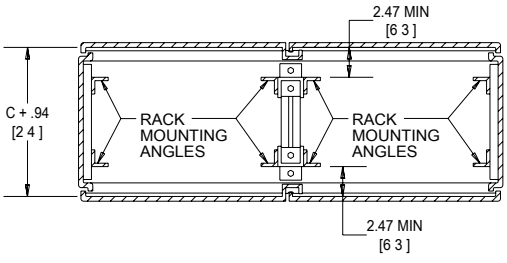
SECTION B-B

Showing two sets of rack mounting angles and center panel supports mounted in two-door enclosure



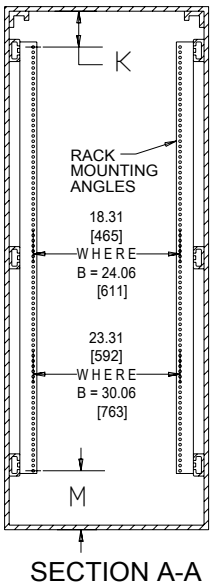
SECTION B-B

Showing two sets of rack mounting angles mounted in single-door, dual-access enclosure

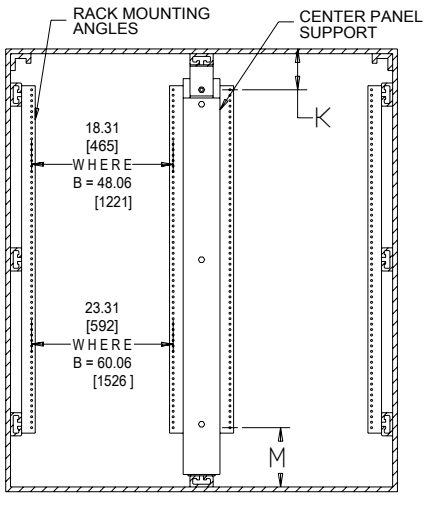


SECTION B-B

Showing four sets of rack mounting angles and two center panel supports mounted in two-door, dual-access enclosure



SECTION A-A



SECTION A-A

C2497-C

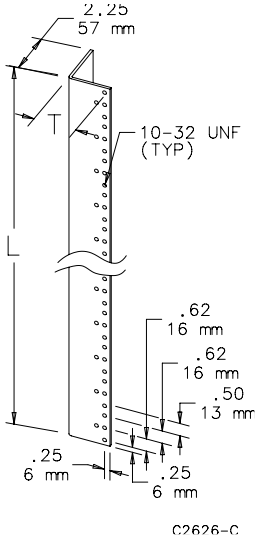
RACK MOUNTING ANGLES - L STYLE (TYPE RP)

For Free-Stand Enclosures, Type 12 (Bulletin A30), Free-Stand Enclosures, Type 4 (Bulleting A4L) and One-Door Free-Stand Fiberglass Enclosures, Type 4X (Bulletin A17). Pairs of full-length or half-length rack mounting angles are available for mounting 19-in. (483-mm) and 24-in. (610-mm) rack-mounted equipment. Type RP rack mounting angles are 10 gauge steel with mounting holes tapped #10-32 thread and spaced per EIA standard RS-310-D universal spacing. Angles and mounting hardware are plated. All mounting hardware is furnished.

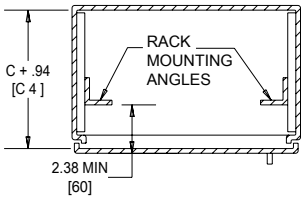
BULLETIN: A80

Catalog Number	Description	Fits Enclosure A x B in./mm	For Rack Size in./mm	K in./mm	L in./mm	M in./mm	T in./mm	Number of Units
A60RP24F5	Two full-length angles	60.00 x 24.00 1524 x 610	19.00 483	3.78 96	49.00 1245	7.78 198	1.94 49	28
A60RP24F6	Two half-length angles	60.00 x 24.00 1524 x 610	19.00 483	3.59 91	26.25 667	7.59 193	1.94 49	15
A72RP24F5	Two full-length angles	72.00 x 24.00 1829 x 610	19.00 483	3.66 93	61.25 1556	7.66 195	1.94 49	35
A72RP24F6	Two half-length angles	72.00 x 24.00 1829 x 610	19.00 483	3.97 1.01	31.50 800	7.97 202	1.94 49	18
A72RP30F5	Two full-length angles	72.00 x 30.00 1829 x 762	24.00 610	3.66 93	61.25 1556	7.66 195	2.44 62	35
A72RP30F6	Two half-length angles	72.00 x 30.00 1829 x 762	24.00 610	3.97 101	31.50 800	7.97 202	2.44 62	18
A90RP24F5	Two full-length angles	90.00 x 24.00 2286 x 610	19.00 483	3.91 99	78.75 2000	7.91 201	1.94 49	45
A90RP24F6	Two half-length angles	90.00 x 24.00 2286 x 610	19.00 483	4.09 104	40.25 1022	8.09 205	1.94 49	23

One unit equals 1.75 inches (44 mm).

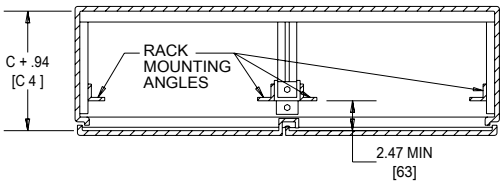


Rack Mounting Angles Installed in Enclosures



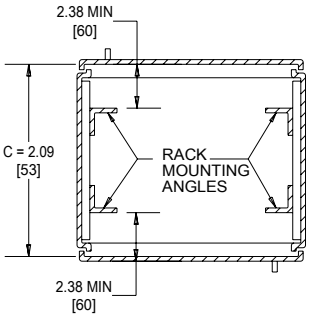
SECTION B-B

Showing rack mounting angles installed in single-door enclosure



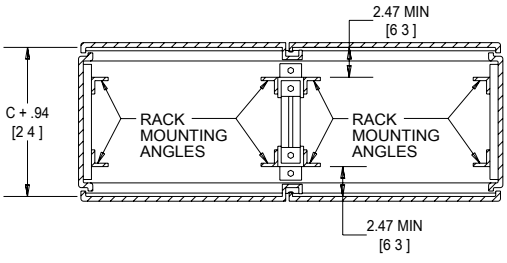
SECTION B-B

Showing two sets of rack mounting angles and center panel supports mounted in two-door enclosure



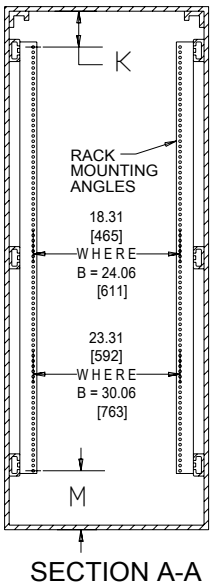
SECTION B-B

Showing two sets of rack mounting angles mounted in single-door, dual-access enclosure

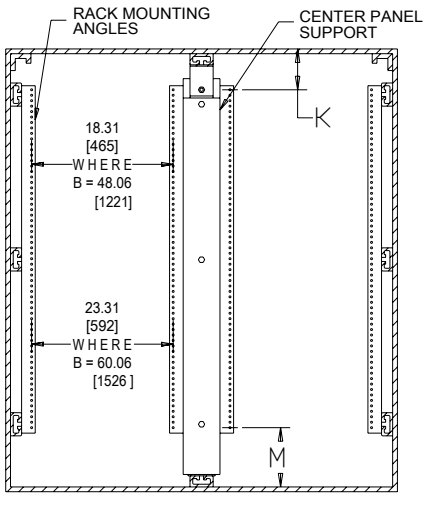


SECTION B-B

Showing four sets of rack mounting angles and two center panel supports mounted in two-door, dual-access enclosure



SECTION A-A



SECTION A-A

C2497-C

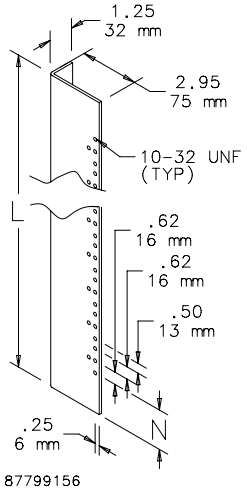
RACK MOUNTING ANGLE KIT - L STYLE

Designed for mounting 19-in. (483-mm) rack-mount equipment in standard 24-in. (610-mm) wide one-door, wall-mount Type 4 and 12 enclosures. Heavy 10 gauge steel angles are tapped with #10-32 threads spaced to meet EIA RS-310-D. To install, drill small holes in the sides of the enclosure and bolt angles in place.
All mounting hardware and instructions are furnished. Sealing washers also are provided to maintain original enclosure standards rating after installation. Rack angles are zinc-plated. External screws are stainless steel. Special sizes, materials and finishes are available on custom order.

BULLETIN: A80

Catalog Number	Description	For Enclosure Size A x B in./mm	L in./mm	N in./mm	Number of Units
ARAK24	Two Angles	24.00 x 24.00 610 x 610	23.75 603	1.62 41	12
ARAK30	Two Angles	30.00 x 24.00 762 x 610	29.75 756	2.00 51	15
ARAK36	Two Angles	36.00 x 24.00 914 x 610	35.75 908	1.50 38	19

One unit equals 1.75 inches (44 mm).



INTERSAFE DATA INTERFACE PORTS, TYPE 4/4X/12

INDUSTRY STANDARDS

Mild Steel Painted Ports

UL 508A Component Recognized; Type 4, 12; File No. E61997
cUL Component Recognized per CSA C22.2 No 94; Type 4, 12; File No. E61997

NEMA/EEMAC Type 4, 12
IEC 60529, IP66

Stainless Steel Ports

UL 508A Component Recognized; Type 4, 4X, 12; File No. E61997
cUL Component Recognized per CSA C22.2 No 94; Type 4, 4X, 12; File No. E61997

NEMA/EEMAC Type 4, 4X, 12
IEC 60529, IP66

Clear-Cover (polycarbonate) Ports

UL 508A Component Recognized; Type 4X, 12; File No. E61997
cUL Component Recognized per CSA C22.2 No 94; Type 4, 4X, 12; File No. E61997

IEC 60529, IP66

APPLICATION

INTERSAFE Data Interface Ports are mounted on an enclosure to allow programming access to devices inside without opening the enclosure door.

FEATURES

- Ready to use
- Frame and door assembly with aluminum back plate included with all models; 120 VAC receptacles and programming connectors are mounted to the plate in 42 standard configurations
- All standard configurations include a GFCI or standard duplex receptacle with a 5-A circuit breaker for added safety
- Door gasket (between the door and plate assemblies) and plate gasket (between the plate assembly and the enclosure) together provide a tight seal
- Template provided for accurate enclosure cutout dimensions
- Quarter-turn latch with screwdriver slot and padlock hasp on all steel and stainless steel door models for convenience and security
- Quarter-turn latch with screwdriver slot on polycarbonate models
- Disk drive enclosure provides access to one or two customer-supplied disk drives without opening the cabinet
- Modifications and customization available to accommodate a wide variety of additional connectors

SPECIFICATIONS

- Door assembly and frame manufactured from 16 gauge steel or stainless steel
- Clear-cover models have a molded polycarbonate door
- Steel and stainless steel doors are welded and ground
- Back plate is aluminum

FINISH

- RAL 9005 black fine-textured polyester powder coating—mild steel door assemblies
- Brushed finish—stainless steel door assemblies
- Brushed finish—aluminum back plates

MODIFICATION AND CUSTOMIZATION

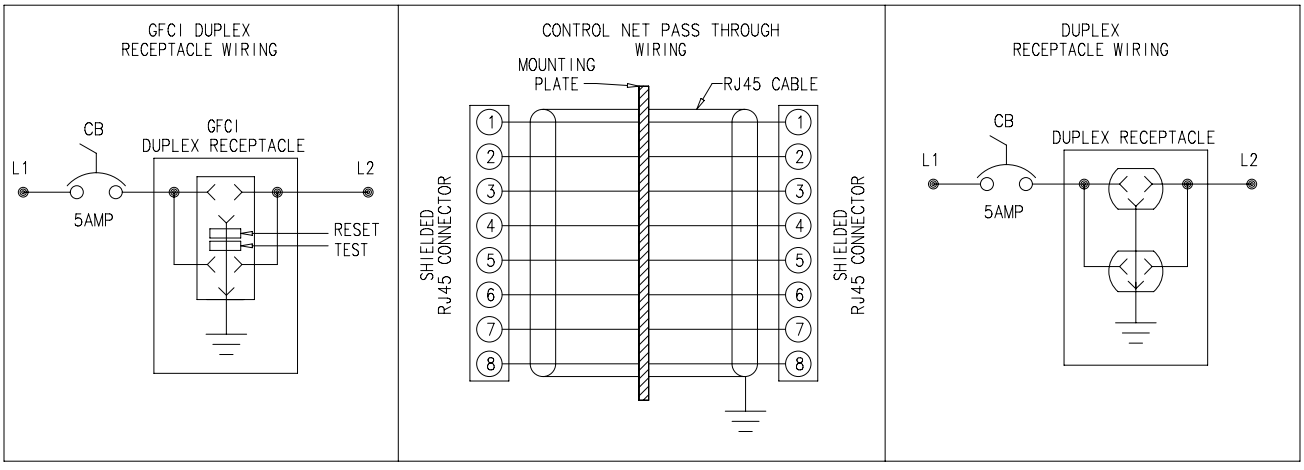
Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.

INTERSAFE DATA PORTS FOR CONTROLNET PROTOCOL

Left-hand image shows front view, GFCI Receptacle Models. Right-hand image shows Front front view, Duplex Receptacle Models. Rear view with and without terminal cover are below the table.

BULLETIN: A70E

Catalog Number	Material	Configuration	Primary Connector/ Termination	Secondary Connector/ Termination	Supports Devices Sold by the Following Manufacturers
HGF5CN	Steel	- 120 VAC GFCI receptacle - Shielded RJ45 - 5-amp circuit breaker	- Shielded RJ45 - 10-ft. shielded cable with male RJ45	—	Allen-Bradley
HGF5CNSS	Stainless Steel	- 120 VAC GFCI receptacle - Shielded RJ45 - 5-amp circuit breaker	- Shielded RJ45 - 10-ft. shielded cable with male RJ45	—	Allen-Bradley
HGF5CNCC	Composite	- 120 VAC GFCI receptacle - Shielded RJ45 - 5-amp circuit breaker	- Shielded RJ45 - 10-ft. shielded cable with male RJ45	—	Allen-Bradley
HDP5CN	Steel	- 120 VAC duplex receptacle - Shielded RJ45 - 5-amp circuit breaker	- Shielded RJ45 - 10-ft. shielded cable with male RJ45	—	Allen-Bradley
HDP5CNSS	Stainless Steel	- 120 VAC duplex receptacle - Shielded RJ45 - 5-amp circuit breaker	- Shielded RJ45 - 10-ft. shielded cable with male RJ45	—	Allen-Bradley
HDP5CNCC	Composite	- 120 VAC duplex receptacle - Shielded RJ45 - 5-amp circuit breaker	- Shielded RJ45 - 10-ft. shielded cable with male RJ45	—	Allen-Bradley



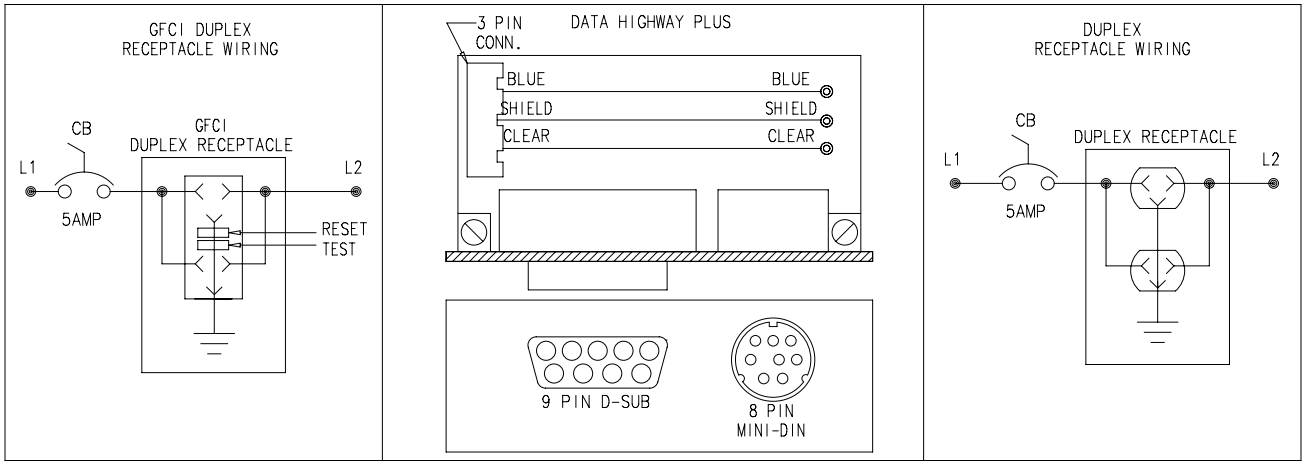
87929485

INTERSAFE DATA INTERFACE PORTS FOR DATA HIGHWAY PLUS PROTOCOL

Left-hand image shows front view, GFCI Receptacle Models. Right-hand image shows front view, Duplex Receptacle Models. Rear view with and without terminal cover are below the table.

BULLETIN: A70E

Catalog Number	Material	Configuration	Primary Connector/ Termination	Secondary Connector/ Termination	Supports Devices Sold by the Following Manufacturers
HGF58MDH	Steel	- 120 VAC GFCI receptacle - 8-pin mini DIN - DB9F - 5-amp circuit breaker	Female 8-pin mini DIN	DB9F terminal block	Allen-Bradley
HGF58MDHSS	Stainless Steel	- 120 VAC GFCI receptacle - 8-pin mini DIN - DB9F - 5-amp circuit breaker	Female 8-pin mini DIN	DB9F terminal block	Allen-Bradley
HGF58MDHCC	Composite	- 120 VAC GFCI receptacle - 8-pin mini DIN - DB9F - 5-amp circuit breaker	Female 8-pin mini DIN	DB9F terminal block	Allen-Bradley
HDP58MDH	Steel	- 120 VAC duplex receptacle - 8-pin mini DIN - DB9F - 5-amp circuit breaker	Female 8-pin mini DIN	DB9F terminal block	Allen-Bradley
HDP58MDHSS	Stainless Steel	- 120 VAC duplex receptacle - 8-pin mini DIN - DB9F - 5-amp circuit breaker	Female 8-pin mini DIN	DB9F terminal block	Allen-Bradley
HDP58MDHCC	Composite	- 120 VAC duplex receptacle - 8-pin mini DIN - DB9F - 5-amp circuit breaker	Female 8-pin mini DIN	DB9F terminal block	Allen-Bradley



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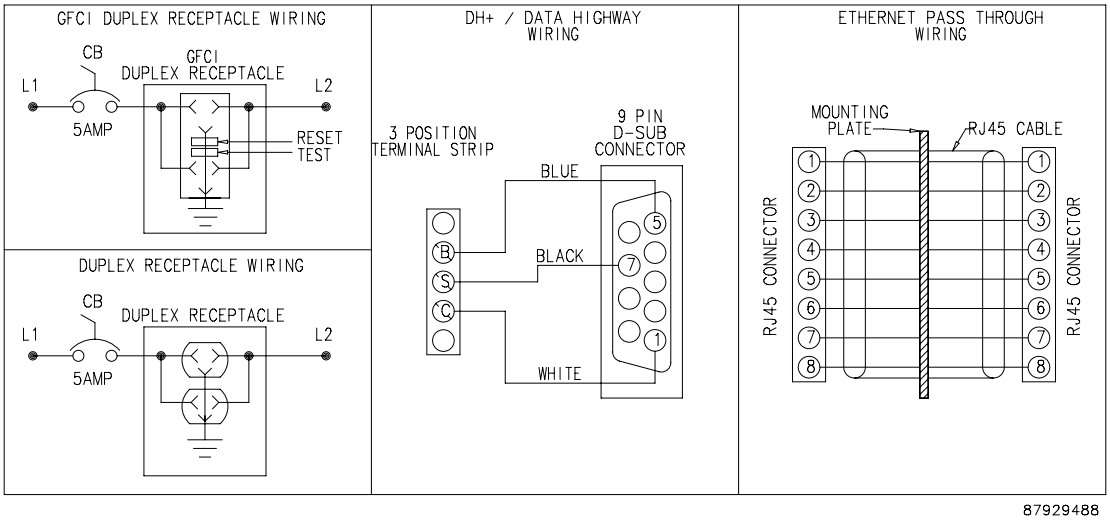
nVent | HOFFMAN

INTERSAFE DATA INTERFACE PORTS FOR DH+, MODBUS PLUS, ETHERNET PROTOCOL

Left-hand image shows front view, GFCI Receptacle Models. Right-hand image shows front view, Duplex Receptacle Models. Rear view with and without terminal cover are below the table.

BULLETIN: A70E

Catalog Number	Material	Configuration	Primary Connector/ Termination	Secondary Connector/ Termination	Supports Devices Sold by the Following Manufacturers
HGF5ETHDH	Steel	- 120 VAC GFCI receptacle - RJ45 - DB9F - 5-amp circuit breaker	DB9F terminal block	- RJ45 - 10-ft. cable with male RJ45	Allen-Bradley Group Schneider Computer peripherals
HGF5ETHDHSS	Stainless Steel	- 120 VAC GFCI receptacle - RJ45 - DB9F - 5-amp circuit breaker	DB9F terminal block	- RJ45 - 10-ft. cable with male RJ45	Allen-Bradley Group Schneider Computer peripherals
HGF5ETHDHCC	Composite	- 120 VAC GFCI receptacle - RJ45 - DB9F - 5-amp circuit breaker	DB9F terminal block	- RJ45 - 10-ft. cable with male RJ45	Allen-Bradley Group Schneider Computer peripherals
HDP5ETHDH	Steel	- 120 VAC duplex receptacle - RJ45 - DB9F - 5-amp circuit breaker	DB9F terminal block	- RJ45 - 10-ft. cable with male RJ45	Allen-Bradley Group Schneider Computer peripherals
HDP5ETHDHSS	Stainless Steel	- 120 VAC duplex receptacle - RJ45 - DB9F - 5-amp circuit breaker	DB9F terminal block	- RJ45 - 10-ft. cable with male RJ45	Allen-Bradley Group Schneider Computer peripherals
HDP5ETHDHCC	Composite	- 120 VAC duplex receptacle - RJ45 - DB9F - 5-amp circuit breaker	DB9F terminal block	- RJ45 - 10-ft. cable with male RJ45	Allen-Bradley Group Schneider Computer peripherals



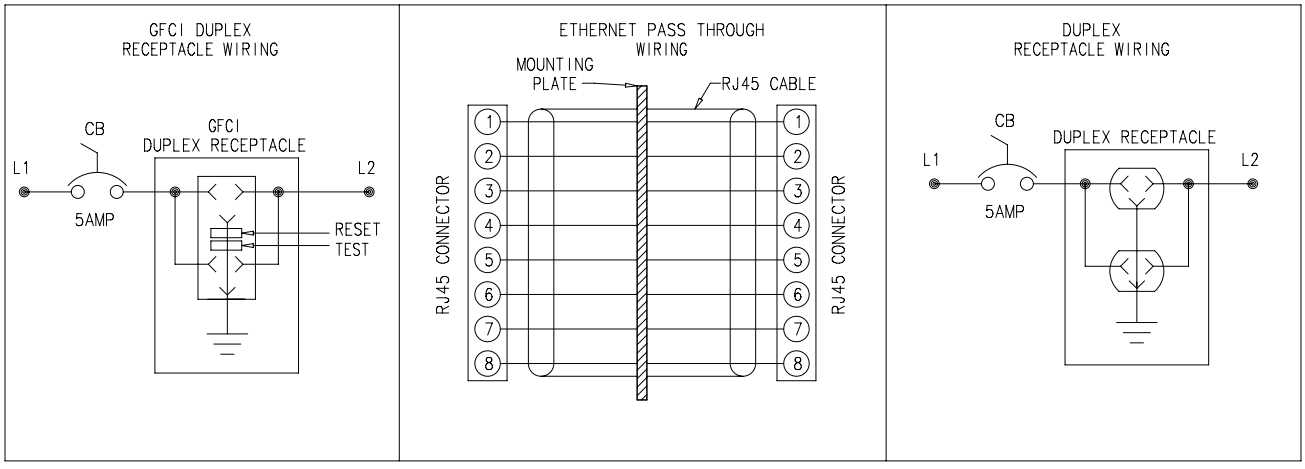
87929488

INTERSAFE DATA INTERFACE PORTS FOR ETHERNET PROTOCOL

Left-hand image shows front view, GFCI Receptacle Models. Right-hand image shows front view, Duplex Receptacle Models. Rear view with and without terminal cover are below the table.

BULLETIN: A70E

Catalog Number	Material	Configuration	Primary Connector/ Termination	Secondary Connector/ Termination	Supports Devices Sold by the Following Manufacturers
HGF5ETHETH	Steel	- 120 VAC GFCI receptacle - RJ45 - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	- RJ45 - 10-ft. cable	Computer peripherals
HGF5ETHETHSS	Stainless Steel	- 120 VAC GFCI receptacle - RJ45 - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	- RJ45 - 10-ft. cable	Computer peripherals
HGF5ETHETHCC	Composite	- 120 VAC GFCI receptacle - RJ45 - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	- RJ45 - 10-ft. cable	Computer peripherals
HDP5ETHETH	Steel	- 120 VAC duplex receptacle - RJ45 - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	- RJ45 - 10-ft. cable	Computer peripherals
HDP5ETHETHSS	Stainless Steel	- 120 VAC duplex receptacle - RJ45 - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	- RJ45 - 10-ft. cable	Computer peripherals
HDP5ETHETHCC	Composite	- 120 VAC duplex receptacle - RJ45 - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	- RJ45 - 10-ft. cable	Computer peripherals



87929489

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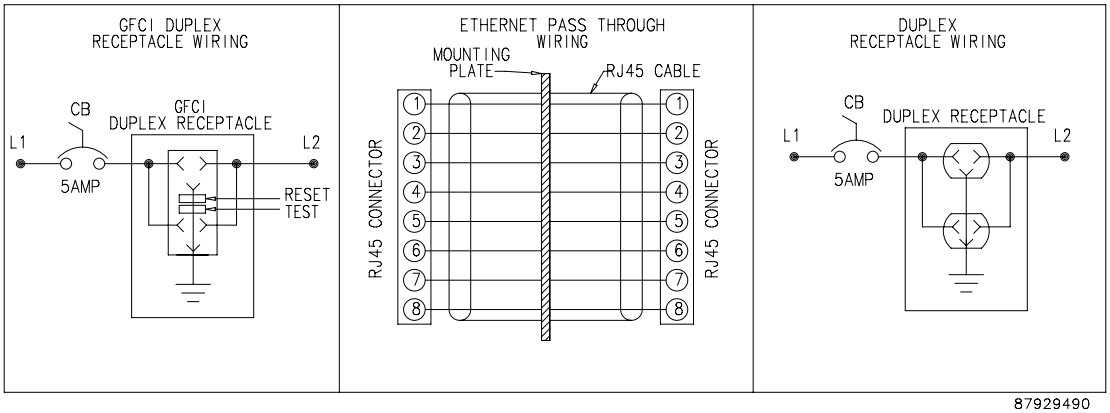
INTERSAFE DATA INTERFACE PORTS FOR ETHERNET/PROFINET PROTOCOL

Left-hand image shows front view, GFCI Receptacle Models. Right-hand image shows front view, Duplex Receptacle Models. Rear view with and without terminal cover are below the table.

BULLETIN: A70E

Catalog Number	Material	Configuration	Configuration	Secondary Connector/ Termination	Supports Devices Sold by the Following Manufacturers
HGF5ETH	Steel	- 120 VAC GFCI receptacle - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	---	Allen-Bradley GE Fanuc Groupe Schneider Siemens Computer peripherals
HGF5ETHSS	Stainless Steel	- 120 VAC GFCI receptacle - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	---	Allen-Bradley GE Fanuc Groupe Schneider Siemens Computer peripherals
HGF5ETHCC	Composite	- 120 VAC GFCI receptacle - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	---	Allen-Bradley GE Fanuc Groupe Schneider Siemens Computer peripherals
HDP5ETH	Steel	- 120 VAC duplex receptacle - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	---	Allen-Bradley GE Fanuc Groupe Schneider Siemens Computer peripherals
HDP5ETHSS	Stainless Steel	- 120 VAC duplex receptacle - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	---	Allen-Bradley GE Fanuc Groupe Schneider Siemens Computer peripherals
HDP5ETHCC	Composite	- 120 VAC duplex receptacle - RJ45 - 5-amp circuit breaker	- RJ45 - 10-ft. cable	---	Allen-Bradley GE Fanuc Groupe Schneider Siemens Computer peripherals



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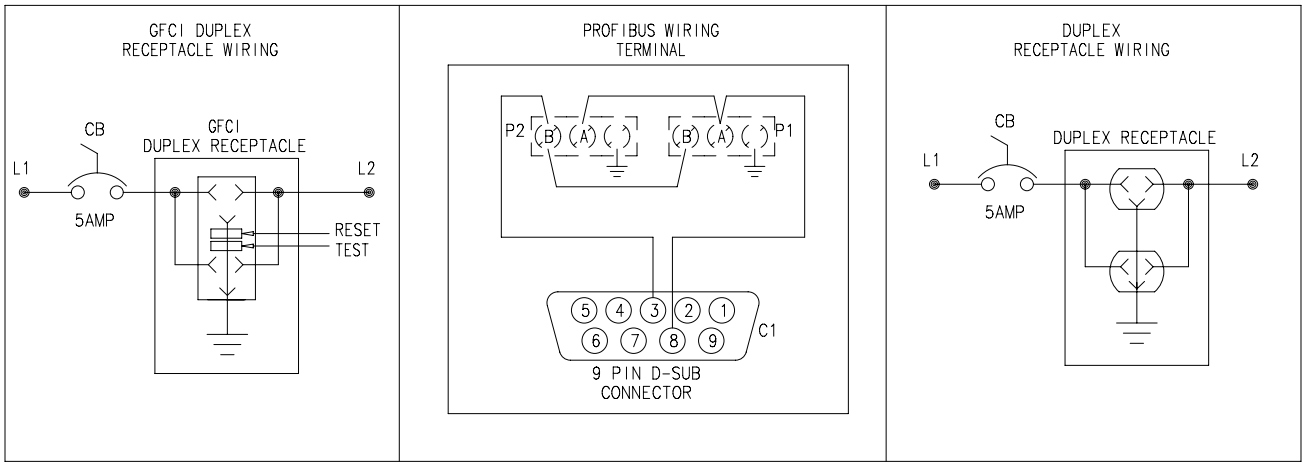
INTERSAFE DATA INTERFACE PORTS FOR PROFIBUS PROTOCOL

Left-hand image shows front view, GFCI Receptacle Models. Right-hand image shows front view, Duplex Receptacle Models. Rear view with and without terminal cover are below the table.

BULLETIN: A70E

Catalog Number	Material	Configuration	Primary Connector/ Termination	Secondary Connector/ Termination	Supports Devices Sold by the Following Manufacturers
HGF5PB	Steel	- 120 VAC GFCI receptacle - 9-pin Profibus - 5-amp circuit breaker	9-pin Profibus terminal	---	Allen-Bradley GE Fanuc Siemens
HGF5PBSS	Stainless Steel	- 120 VAC GFCI receptacle - 9-pin Profibus - 5-amp circuit breaker	9-pin Profibus terminal	---	Allen-Bradley GE Fanuc Siemens
HDP5PB	Steel	- 120 VAC duplex receptacle - 9-pin Profibus - 5-amp circuit breaker	9-pin Profibus terminal	---	Allen-Bradley GE Fanuc Siemens
HDP5PBCC	Composite	- 120 VAC duplex receptacle - 9-pin Profibus - 5-amp circuit breaker	9-pin Profibus terminal	---	Allen-Bradley GE Fanuc Siemens



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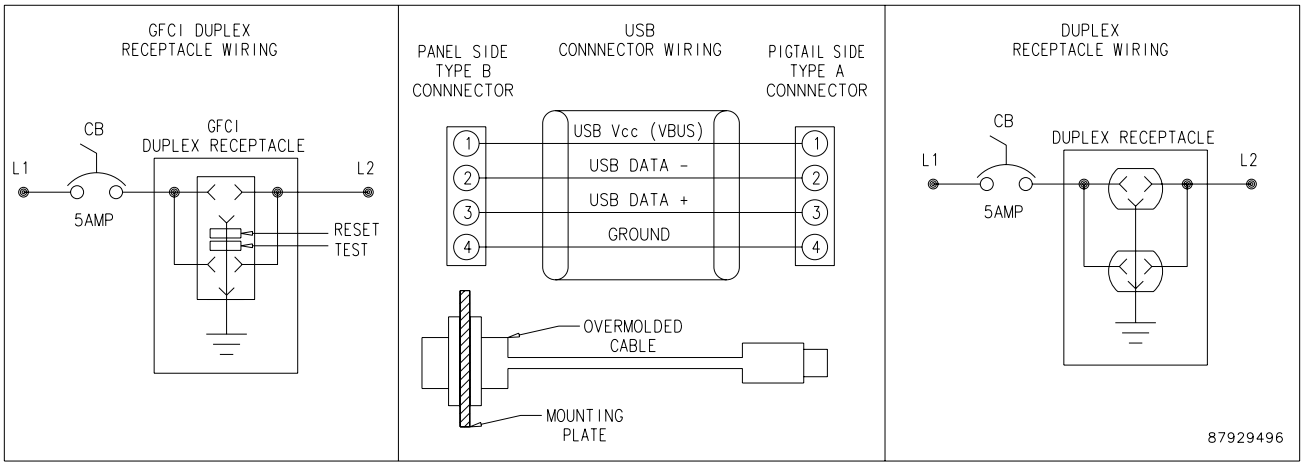
INTERSAFE DATA INTERFACE PORTS FOR USB PROTOCOL, 10-FT. CABLE

Left-hand image shows front view, GFCI Receptacle Models. Right-hand image shows front view, Duplex Receptacle Models. Rear view with and without terminal cover are below the table.

BULLETIN: A70E

Catalog Number	Material	Configuration	Primary Connector/ Termination	Secondary Connector/ Termination	Supports Devices Sold by the Following Manufacturers
HGF5USBUSB	Steel	- 120 VAC GFCI receptacle - USB Type A - USB Type A - 5-amp circuit breaker	- USB Type Ab- 10-ft. cable with female USB Type B connector	- USB Type A - 10-ft. cable with female USB Type B connector	Computer peripherals
HGF5USBUSBSS	Stainless Steel	- 120 VAC GFCI receptacle - USB Type A - USB Type A - 5-amp circuit breaker	- USB Type A - 10-ft. cable with female USB Type B connector	- USB Type A - 10-ft. cable with female USB Type B connector	Computer peripherals
HGF5USBUSBCC	Composite	- 120 VAC GFCI receptacle - USB Type A - USB Type A - 5-amp circuit breaker	- USB Type A - 10-ft. cable with female USB Type B connector	- USB Type A - 10-ft. cable with female USB Type B connector	Computer peripherals
HDP5USBUSB	Steel	- 120 VAC duplex receptacle - USB Type A - USB Type A - 5-amp circuit breaker	- USB Type A - 10-ft. cable with female USB Type B connector	- USB Type A - 10-ft. cable with female USB Type B connector	Computer peripherals
HDP5USBUSBSS	Stainless Steel	- 120 VAC duplex receptacle - USB Type A - USB Type A - 5-amp circuit breaker	- USB Type A - 10-ft. cable with female USB Type B connector	- USB Type A - 10-ft. cable with female USB Type B connector	Computer peripherals
HDP5USBUSBCC	Composite	- 120 VAC duplex receptacle - USB Type A - USB Type A - 5-amp circuit breaker	- USB Type A - 10-ft. cable with female USB Type B connector	- USB Type A - 10-ft. cable with female USB Type B connector	Computer peripherals

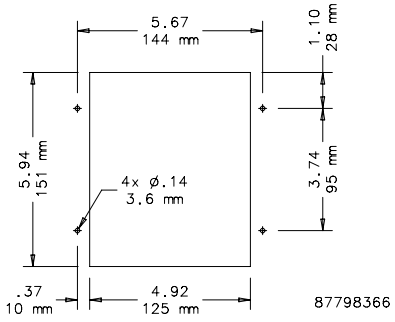


INTERSAFE TYPE 4/4X/12 DATA INTERFACE PORT DISK DRIVE ENCLOSURE

This enclosure, available in both steel and stainless steel, allows access to one or two customer-supplied disk drives from outside the cabinet, allowing computer system use and updates without opening the cabinet.

BULLETIN: A70E

Catalog Number	Configuration	Description
HCP514B	CP2/514b	Steel 2 gang dual CD/DVD drive cover
HCP514BSS	CP2/514b	Stainless steel 2 gang dual CD/DVD drive cover



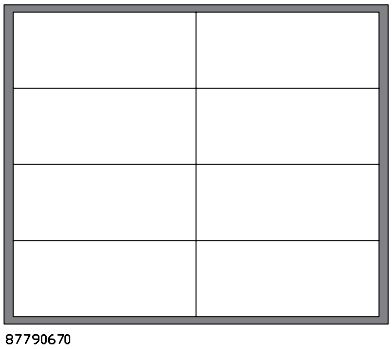
CUTOUT
(NOT TO SCALE)

TO ORDER A MODIFIED CONFIGURATION FOR INTERSAFE TYPE 4/4X/12 DATA INTERFACE PORTS

- Choose the required connectors to a maximum of 8 plate sectors (refer to Plate Sector Diagram)
- Order connectors using the code in the Connector ID column of the INTERSAFE Connectors table
- Hoffman will determine the layout of the connectors. If a specific layout is required, contact your local Hoffman Sales Office for a quotation.
- 5-amp circuit breakers will be provided with 120VAC receptacles unless otherwise specified
- To order, contact your local Hoffman sales representative

Configuration Example **Plate Sectors, 8 Maximum**

Customer Requires	Code	Sectors Used
(1) 6-pin mini DIN (female)	MD6	1
(1) RJ45 connector (female)	R45	1
(1) GFCI duplex receptacle with 3-amp circuit breaker	GF3	5



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INTERSAFE CONNECTOR 8M

Connector Description	Connector Termination	Plate Sectors Used
8-pin mini DIN	Terminal Block	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 9FG

Connector Description	Connector Termination	Plate Sectors Used
GE Fanuc Genius 9-pin female with bracket	10 ft. cable to male 9-pin D-Sub with bracket	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 9FT

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 9-pin female	9-pin terminal	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 9M

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 9-pin male with cable	10 ft cable to female 9-pin D-Sub	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 9MT

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 9-pin male	9-pin terminal	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 15F

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 15-pin female	10 ft. cable to male 15-pin D-Sub	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 15FT

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 15-pin female with 15-pin terminal	15-pin terminal	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 15H

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 15-pin high density female (Monitor)	10 ft cable to male 15-pin high-density D-Sub	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 15M

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 15-pin male	10-ft. cable to female 15-pin D-Sub	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 25F

Connector Description	Connector Termination	Plate Sectors Use
D-Sub 25-pin female with cable	10 ft. cable to male 25-pin D-Sub	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 25FT

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 25-pin female with 25-pin terminal	25-pin terminal	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 25M

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 25-pin male with cable	10-ft. cable to female 25-pin D-Sub	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR 25MT

Connector Description	Connector Termination	Plate Sectors Used
D-Sub 25-pin male	25-pin terminal	2

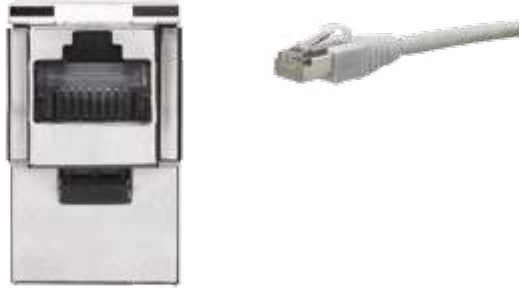
Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR BNC

Connector Description	Connector Termination	Plate Sectors Used
BNC	BNC female receptacle with 10-ft. cable to male BNC	1

Left-hand image shows front view. Right-hand image shows rear view.

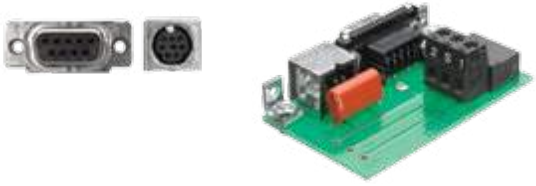
INTERSAFE CONNECTOR CN



Connector Description	Connector Termination	Plate Sectors Used
ControlNet shielded RJ45 female connector	10-ft. shielded cable with male RJ45	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR DH



Connector Description	Connector Termination	Plate Sectors Used
Data Highway Plus DB9F	Terminal block	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR DNM

Connector Description	Connector Termination	Plate Sectors Used
DeviceNet Mini	Terminal block	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR DNP

Connector Description	Connector Termination
DeviceNet Phoenix	Terminal block

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR DPO

Connector Description	Connector Termination	Plate Sectors Used
Duplex receptacle with no circuit breaker	Terminal block	4

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR DP3

Connector Description	Connector Termination	Plate Sectors Used
Duplex receptacle with 3-amp circuit breaker	Terminal block	5

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR DP5

Connector Description	Connector Termination	Plate Sectors Used
Duplex receptacle with 5-amp circuit breaker	Terminal block	5

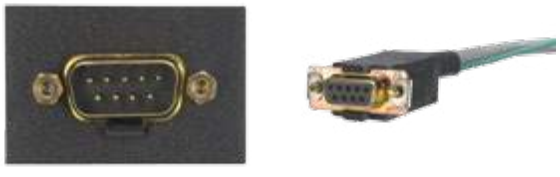
Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR ETH

Connector Description	Connector Termination	Plate Sectors Used
RJ45 female connector	10-ft. cable with male RJ45	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR GEG



Connector Description	Connector Termination	Plate Sectors Used
DB9 GE Genius	10-ft. cable	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR GFO

Connector Description	Connector Termination
GFCI receptacle	Terminal block

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR GF3

Connector Description	Connector Termination	Plate Sectors Used
GFCI receptacle with 3-amp circuit breaker	Terminal block	5

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR GF5

Connector Description	Connector Termination	Plate Sectors Used
GFCI receptacle with 5-amp circuit breaker	Terminal block	5

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR MCL

Connector Description	Connector Termination	Plate Sectors Used
Micrologix	10-ft. cable	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR MD6

Connector Description	Connector Termination
6-pin mini DIN (female)	10-ft. cable with female 6-pin mini DIN

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR MD8

Connector Description	Connector Termination	Plate Sectors Used
8-pin mini DIN (female)	10-ft. cable with male 8-pin mini DIN	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR PB

Connector Description	Connector Termination	Plate Sectors Used
ProfiBus 9-pin	Terminal	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR R11

Connector Description	Connector Termination	Plate Sectors Used
RJ11 female connector with male RJ12	10-ft. cable with male RJ12	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR RJS

Connector Description	Connector Termination	Plate Sectors Used
RJ45 shielded female connector	10-ft. shielded cable with male RJ45	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR SNP

Connector Description	Connector Termination	Plate Sectors Used
DB15F GESNP	DB15 male GESNP with 10-ft. cable	1

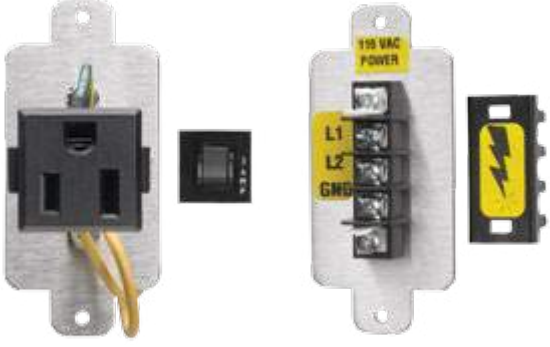
Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR SP0

Connector Description	Connector Termination	Plate Sectors Used
Single receptacle with no circuit breaker	Terminal block with terminal cover	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR SP3



Connector Description	Connector Termination	Plate Sectors Used
Single receptacle with 3-amp circuit breaker	Terminal block with terminal cover	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR SP5

Connector Description	Connector Termination	Plate Sectors Used
Single receptacle with 5-amp circuit breaker	Terminal block with terminal cover	2

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR TMB

Connector Description	Connector Termination	Plate Sectors Used
DB9F Modbus	10-ft. cable	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR TMM

Connector Description	Connector Termination	Plate Sectors Used
DB9F Micro	10-ft. cable	1

Left-hand image shows front view. Right-hand image shows rear view.

INTERSAFE CONNECTOR USB

Connector Description	Connector Termination	Plate Sectors Used
USB Type A, female input	10-ft. cable, USB Type B connector	1

Left-hand image shows front view. Right-hand image shows rear view.

BONDING CABLE CLAMPS

These cable clamps are used when securing cables. They provide the conductivity required to ground the shielding on EMC-shielded cable.

BULLETIN: A80

Catalog Number	Max. Cable Diameter (in.)	Max. Cable Diameter (mm)
ABCC6	0.25	6
ABCC95	0.38	10
ABCC125	0.50	13
ABCC19	0.75	19

EMC CABLE STRAIN RELIEFS

These cable strain reliefs have provisions for grounding the EMC shielding of cables entering an enclosure while maintaining a NEMA Type 4 seal.

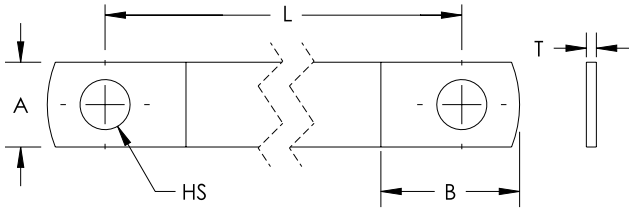
BULLETIN: A80

Catalog Number	Size	Cable Diameter mm/in.	Hole Diameter mm/in.
ACSR4EMC	PG9	4 - 6 0.16 - 0.24	16 0.63
ACSR6EMC	PG11	6 - 10 0.24 - 0.39	19 0.75
ACSR10EMC	PG16	10 - 14 0.39 - 0.55	23 0.91
ACSR14EMC	PG16	14 - 17 0.55 - 0.67	23 0.91
ACSR17EMC	PG21	17 - 20 0.67 - 0.79	29 1.14
ACSR19EMC	PG29	19 - 23 0.75 - 0.91	38 1.50
ACSR22EMC	PG29	22 - 27 0.87 - 1.06	38 1.50
ACSR25EMC	PG36	25 - 30 0.98 - 1.18	48 1.89
ACSR29EMC	PG36	29 - 32 1.14 - 1.26	48 1.89

BONDING STRAPS

FEATURES

- Integral palm, without tin or crimped lugs for superior electrical contact and tensile strength resistance
- Resistant to vibration and fatigue, reducing maintenance
- Provides weight savings, material savings and lower impedance when compared to similar lugged cables with insulation
- Ready to use out of the box, eliminates the need for cutting, stripping, crimping and punching
- Quick and easy to install
- Recommended by the EMC/EMI directives and less impedance than cables



BULLETIN: A80

INDUSTRY STANDARDS

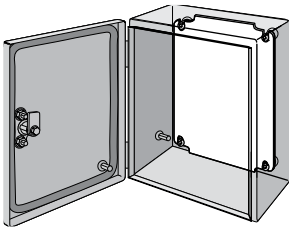
UL467 Listed: File No. E220029
cUL Listed per CSA C22.2 No. 41. File No. E220029

APPLICATION

Bonding straps are a reliable and convenient grounding solution for applications that require flexibility and durability. The tinned copper ground braids with massivated palms come ready to install without any additional cutting, stripping, crimping or punching and do not require the addition of tin or crimped lugs. Bonding straps optimize the electrical contact between each wire and help eliminate moisture issues in the palms, preventing corrosion and lengthening the useful life of the braid.

Catalog Number	A in./mm	B in./mm	T in./mm	L in./mm	HS in./mm	Intensity	Cross Section kcmil	Cross Section mm²
ABS6	.59 15	.79 20	.06 1.5	5.91 150	.26 6.5	120	31.57	16
ABS12	.59 15	.79 20	.06 1.5	11.81 300	.26 6.5	120	31.57	16

PANEL



Panels are 12 gauge steel with a white polyester powder paint or conductive finish. Ground hole is labeled. Sized for M6 fastener.

BULLETIN: A53, A54P

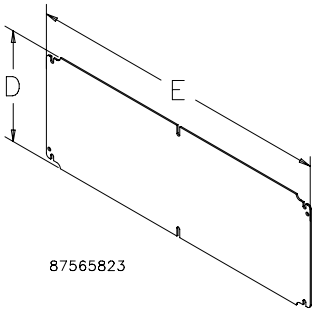
Catalog Number	Material	Panel Size D x E (mm)	Panel Size D x E (in.)	Fits INLINE Enclosure Size (mm)
LP1515	Painted Steel	131 x 131	5.16 x 5.16	150 x 150
LP1515G	Conductive	131 x 131	5.16 x 5.16	150 x 150
LP2015	Painted Steel	181 x 131	7.13 x 5.16	200 x 150
LP2015G	Conductive	181 x 131	7.13 x 5.16	200 x 150
LP2520	Painted Steel	231 x 181	9.10 x 7.13	250 x 200
LP2520G	Conductive	231 x 181	9.10 x 7.13	250 x 200
LP3025	Painted Steel	281 x 231	11.07 x 9.10	300 x 250
LP3025G	Conductive	281 x 231	11.07 x 9.10	300 x 250
LP3530	Painted Steel	331 x 281	13.04 x 11.07	350 x 300
LP3530G	Conductive	331 x 281	13.04 x 11.07	350 x 300

LANDSCAPE PANELS

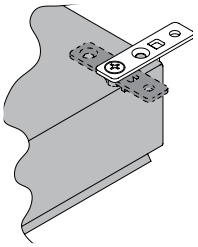
Panels are 12 gauge steel with a white polyester powder paint or conductive finish. They include a labeled ground hole sized for an M6 screw. Panels mount on studs provided in the enclosure or to optional DIN mounting brackets.

BULLETIN: A54P

Catalog Number	Conductive Panel	Material	Panel Size D x E (mm)	Panel Size D x E (in.)
LP2331	LP2331G	Painted Steel	211 x 291	8.31 x 11.46
LP2346	LP2346G	Painted Steel	211 x 441	8.31 x 17.36
LP2360	LP2360G	Painted Steel	211 x 581	8.31 x 22.87
LP2377	LP2377G	Painted Steel	211 x 751	8.31 x 29.57
LP2393	LP2393G	Painted Steel	211 x 906	8.31 x 35.67



MOUNTING BRACKET KIT, PLATED AND 316



Kit is field-installable on all solid-back-body enclosures. Hardware included. Four brackets per kit.

BULLETIN: A54SY, A54Y

Catalog Number	Description
LMFK	Plated steel mounting-bracket kit
LMFKSS	Type 316L stainless steel mounting-bracket kit

Use of LMFKSS recommended to maintain Type 4X rating.

LOCK INSERTS

Lock Inserts can replace the standard slotted quarter-turn latch. Key included.

BULLETIN: A54SY, A54Y

Catalog Number	Description
LLKSM7	Square 7 mm, Chrome Finish
LLKSM7SS	Square 7 mm, Type 316L Stainless Steel
LLKSM8	Square 8 mm, Chrome Finish
LLKDB	Daimler Benz, Chrome Finish
LLKDBM3	Double bit 3 mm, Chrome Finish
LLKSS	Slotted screw, Chrome Finish

WING KNOB LATCH

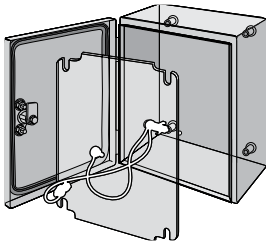
Wing Knob Latch can replace the standard slotted, quarter-turn latch on all hinged-cover and window-cover enclosures. Latch is black die-cast zinc. Includes two keys and installation instructions.

BULLETIN: A54Y

Catalog Number	Product Weight
LLKWK	0.2 lb.

Reduces UL Type rating from 4 or 4X to 12.

GROUNDING KIT

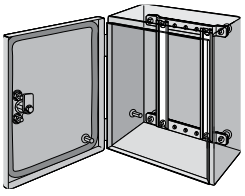


Grounding Kit provides means to attach a grounding conductor to the enclosure. Kit includes two insulated copper wires with a ring terminal at each end, all installation hardware and instructions.

BULLETIN: A54Y

Catalog Number	Product Weight
LLGK	0.2 lb.

DIN3 TYPE RAILS

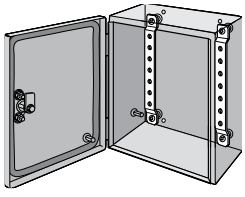


Rails furnish mounting surfaces for DIN3 mount snap-on devices. Rails attach vertically or horizontally to mounting brackets. Kit includes 4 rails and installation instructions. DIN3 Rail Mounting Brackets are required in order to mount rails.

BULLETIN: A54Y

Catalog Number	Fits INLINE Enclosure	L (mm)	L (in.)	Pkg. Qty.
LDR3P15	when A or B = 150 mm	125	4.92	4
LDR3P20	when A or B = 200 mm	175	6.89	4
LDR3P25	when A or B = 250 mm	225	8.86	4
LDR3P30	when A or B = 300 mm	275	10.83	4
LDR3P31	when A or B = 310 mm	285	11.22	4
LDR3P35	when A or B = 350 mm	325	12.80	4
LDR3P40	when A or B = 400 mm	375	14.76	4
LDR3P46	when A or B = 460 mm	435	17.13	4
LDR3P60	when A or B = 600 mm	575	22.64	4
LDR3P77	when A or B = 770 mm	745	29.33	4
LDR3P93	when A or B = 925 mm	900	36.43	4

DIN RAIL OR PANEL-MOUNTING BRACKETS

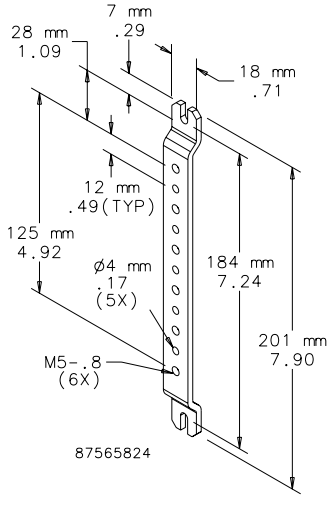


Use as a mounting framework to install DIN rails or a panel. Bracket is offset for additional space in front of or behind mounted equipment. Plated 12 gauge steel. Mounting hardware included. Brackets are required for DIN3 type rails.

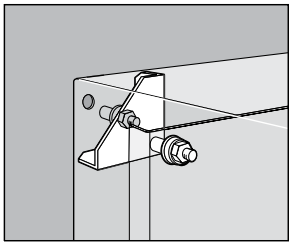
BULLETIN: A54Y

Catalog Number	Fits INLINE Enclosure
LMK15	when A or B = 150 mm
LMK20	when A or B = 200 mm
LMK25	when A or B = 250 mm
LMK30	when A or B = 300 mm
LMK35	when A or B = 350 mm

600-mm and longer enclosures require two sets of brackets for mounting panels.



CONCEPT PANEL CONVERSION KIT



Panel Conversion Kit adapts enclosure for mounting standard NEMA-style panels in CONCEPT enclosures. Bracket attaches to rear collar stud. Kit includes four adapter plates and hardware for mounting panel.

BULLETIN: CWY

Catalog Number	Material	Fits CONCEPT Enclosure
CCPM4	Steel	When A x B is equal to or less than 30.00 x 30.00 in. (762 x 762 mm)

SWING-OUT RACK FRAME

Swing-Out Rack Frames provide 120-degree swing-out access for 19-in. rack equipment. Welded rack frame mounts to front flange. Distance from frame to door surface is 1.32 in. (33 mm) for solid doors and 1.07 in. (27 mm) for window doors. Frame is painted white. Mounting hinge and latching hardware provided.
Order separately clip nut package catalog number XNM5 and screws XSM5 (metric) or AN1032 and screws AS1032 (English).
Swing-Out Rack Frame cannot be mounted on adjustable mounting kit.

BULLETIN: CWY

Catalog Number	Material	Fits Enclosure A x B
CSF2424	Painted steel	24.00 x 24.00 in. (610 x 610 mm)
CSF3024	Painted steel	30.00 x 24.00 in. (762 x 610 mm)
CSF3624	Painted steel	36.00 x 24.00 in. (914 x 610 mm)

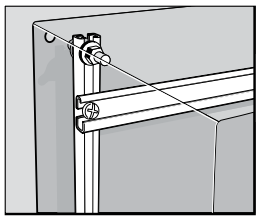
CONCEPT ADJUSTABLE-DEPTH MOUNTING KITS

Adjustable-Depth Mounting Kits provide mounting means for installing panels, swing-out panels, DIN rails, rack angles, mounting channels or grid straps at any depth from front to rear of enclosure. Kits include slide mechanisms and hardware. Use two kits when enclosure has six collar studs for mounting panel. Kit catalog numbers ending in 2 contain two slide mechanisms; catalog numbers ending in 4 contain four slide mechanisms.
Dead Front Panel and Swing-Out Rack Frame cannot be mounted on adjustable mounting kit.

BULLETIN: CWY

Catalog Number	Fits CONCEPT Enclosure (in.)	Fits CONCEPT Enclosure (mm)
CAM64	when C = 6.00	when C = 152
CAM82	when C = 8.00	when C = 203
CAM84	when C = 8.00	when C = 203
CAM102	when C = 10.00	when C = 254
CAM104	when C = 10.00	when C = 254
CAM122	when C = 12.00	when C = 305
CAM124	when C = 12.00	when C = 305
CAM162	when C = 16.00	when C = 406
CAM164	when C = 16.00	when C = 406
CAM202	when C = 20.00	when C = 508
CAM204	when C = 20.00	when C = 508

MOUNTING CHANNELS

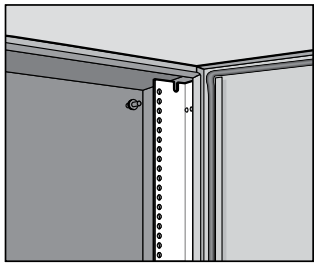


Mounting Channels provide mounting framework for installing DIN rails and grid straps at various positions within the enclosure. Channels can be mounted vertically or horizontally to collar studs or to the slide mechanisms of the adjustable-depth mounting kit. Kit includes two channels.

BULLETIN: CWY

Catalog Number	Fits CONCEPT Enclosure
CMC12	when A or B = 12.00 in. (305 mm)
CMC16	when A or B = 16.00 in. (406 mm)
CMC20	when A or B = 20.00 in. (508 mm)
CMC24	when A or B = 24.00 in. (610 mm)
CMC60	when A or B = 60.00 in. (1524 mm)

RACK-MOUNT ANGLES



Rack-Mount Angles are a mounting means for 19-in. rack equipment in 24-in. wide enclosures. L-shaped through-hole angles attach to enclosure flange or the adjustable-depth mounting kit. Holes are .281 in. (7 mm) in diameter. Clear plated 14 gauge steel construction. Mounting hardware included.
Order separately clip nut package catalog number XNM5 and screws XSM5 (metric) or AN1032 and screws AS1032 (English).

BULLETIN: CWY

Catalog Number	Fits CONCEPT Enclosure	Rack Units
CRA12TH	when A = 24.00 in. (610 mm)	12
CRA16TH	when A = 30.00 in. (762 mm)	16

DIN3 RAIL KITS

DIN3 Rail Kits supply mounting surfaces for DIN mount snap-on devices in either DIN 1, DIN 3 or CENELEC styles. Rails attach vertically or horizontally to rear collar stud or to mounting channels. Kit includes three rails and mounting hardware.

BULLETIN: CWY

Catalog Number	Fits CONCEPT Enclosure
CDR3P12	when A or B = 12.00 in. (305 mm)
CDR3P16	when A or B = 16.00 in. (406 mm)
CDR3P20	when A or B = 20.00 in. (508 mm)
CDR3P24	when A or B = 24.00 in. (610 mm)

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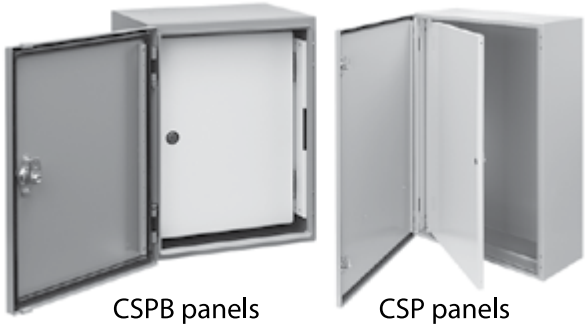
CONCEPT SWING-OUT PANELS



CSPB panels CSP panels

Panels swing clear from the front of the enclosure to provide access to mounted internal equipment. For CSPB panels, maximum swing is 94 degrees. For CSP panels, maximum panel swing is 106 degrees. Distance from panel surface to door when in the latched position is 1.71 in. (43 mm) for solid doors and 1.45 in. (37 mm) for window doors. Kits include panel, brackets and hardware to mount to the front flange. Panel is painted white.

Swing-out panels also can be mounted on front-to-back adjustable rails. CSPB panels require adapter CSPBADB and front-to-back adjustable rails for front-to-back adjustment.

BULLETIN: CWY

CSPB Panels

Catalog Number	Fits Enclosure Size (in.)	Fits Enclosure Size (mm)	Panel Size (in.)	Panel Size (mm)
CSPB1212	12.00 x 12.00	305 x 305	9.72 x 9.75	247 x 248
CSPB1612	16.00 x 12.00	406 x 305	13.72 x 9.75	349 x 248
CSPB1616	16.00 x 16.00	406 x 406	13.72 x 13.75	349 x 349
CSPB1620	16.00 x 20.00	406 x 508	13.72 x 17.75	349 x 451
CSPB2016	20.00 x 16.00	508 x 406	17.72 x 13.75	450 x 349
CSPB2020	20.00 x 20.00	508 x 508	17.72 x 17.75	450 x 451
CSPB2024	20.00 x 24.00	508 x 610	17.72 x 21.75	450 x 553
CSPB2416	24.00 x 16.00	610 x 406	21.72 x 13.73	552 x 349
CSPB2420	24.00 x 20.00	610 x 508	21.72 x 17.75	552.452
CSPB2424	24.00 x 24.00	610 x 610	21.72 x 21.75	552 x 553
CSPB2430	24.00 x 30.00	610 x 762	21.72 x 27.75	552 x 705
CSPB3020	30.00 x 20.00	762 x 508	27.72 x 17.75	704 x 451
CSPB3024	30.00 x 24.00	762 x 610	27.72 x 21.75	704 x 553
CSPB3030	30.00 x 30.00	762 x 762	27.72 x 27.75	704 x 705
CSPB3624	36.00 x 24.00	914 x 610	33.72 x 21.75	857 x 553
CSPB3630	36.00 x 30.00	914 x 762	33.72 x 27.75	857 x 705
CSPB3636	36.00 x 36.00	914 x 914	33.72 x 33.75	857 x 857
CSPB4236	42.00 x 36.00	1067 x 914	39.72 x 33.75	1009 x 857
CSPB4824	48.00 x 24.00	1219 x 610	45.72 x 21.75	1161 x 553
CSPB4836	48.00 x 36.00	1219 x 914	45.72 x 33.75	1161 x 857
CSPB6036	60.00 x 36.00	1542 x 914	57.72 x 33.75	1466 x 857

CSP Panels

Catalog Number	Fits Enclosure (in.)	Fits Enclosure (mm)	Panel Size (in.)	Panel Size (mm)
CSP1212	12.00 x 12.00	305 x 305	9.78 x 9.84	248 x 250
CSP1612	16.00 x 12.00	406 x 305	13.78 x 9.84	350 x 250
CSP1616	16.00 x 16.00	406 x 406	13.78 x 13.84	350 x 352
CSP1620	16.00 x 20.00	406 x 508	13.78 x 17.84	350 x 453
CSP2016	20.00 x 16.00	508 x 406	17.78 x 13.84	452 x 352
CSP2020	20.00 x 20.00	508 x 508	17.78 x 17.84	452 x 453
CSP2024	20.00 x 24.00	508 x 610	17.78 x 21.84	452 x 555
CSP2416	24.00 x 16.00	610 x 406	21.78 x 13.84	553 x 352
CSP2420	24.00 x 20.00	610 x 508	21.78 x 17.84	553 x 453
CSP2424	24.00 x 24.00	610 x 610	21.78 x 21.84	553 x 555
CSP3020	30.00 x 20.00	762 x 508	27.78 x 17.84	706 x 453
CSP3024	30.00 x 24.00	762 x 610	27.78 x 21.84	706 x 555
CSP3030	30.00 x 30.00	762 x 762	27.78 x 27.84	706 x 707
CSP3624	36.00 x 24.00	914 x 610	33.78 x 21.84	858 x 555
CSP3630	36.00 x 30.00	914 x 762	33.78 x 27.84	858 x 707
CSP3636	36.00 x 36.00	914 x 914	33.78 x 33.84	858 x 860

CONCEPT ADAPTER BRACKET

Adapter bracket for use with CONCEPT B-style Swing-Out Panels and Adjustable-Depth Mounting Kits. Bracket enables the B-style swing-out panels to be mounted in infinite front-to-back positions within a CONCEPT enclosure.

BULLETIN: CWY

Catalog Number	Material
CSPBADB	Steel

HANDLES

Handles can replace the standard slotted insert on all CONCEPT wall-mount enclosures. The CONCEPT non-locking handle provides quick and easy access to the enclosure contents. Handle is black plastic. A zinc die-cast keylock handle is available for applications requiring quick access and security. A padlocking handle, also zinc die-cast, accommodates a padlock with up to a 5/16-in. locking bar. Each latch system can be converted from clockwise to counterclockwise opening. Kit includes all hardware.

BULLETIN: CWY

Catalog Number	UL Rating	Description
CWHK	Maintains UL/CSA Type 12 when properly installed	Keylock handle
CWHNL	Maintains UL Type 3, 4, 4X, 12 when properly installed	Non-locking handle
CWHPTO	Maintains UL/CSA Type 3, 4, 4X, 12 when properly installed	Padlock handle

CWHNL is not suitable for 3-point latch operation.

DOOR STOP KIT

Door Stop Kit secures the door in the open position. Kit can be installed at the top or bottom of a door which opens horizontally. Door opening angle can be easily adjusted by means of a wing nut. Stop arm slides neatly out of the way when the door is closed. All parts are plated. Mounting hardware included.

- *Door stop kits should not be installed on enclosures configured with a swing-out panel or swing-out rack frame*
- *Door stop kits cannot be used with CONCEPT window doors*

BULLETIN: A80

Catalog Number	Finish
ADSTOPK	Plated Steel

DATA POCKETS

Data Pockets provide convenient storage for wiring diagrams, operation manuals and other documentation inside an enclosure. Pocket mounts on studs located on the inside of a solid-door enclosure. Constructed of high-impact thermoplastic, pockets are dark gray and have cutout areas for easy access and visibility to contents. Mounting hardware included.

BULLETIN: A80DP

Catalog Number	Length x Width in./mm	Fits CONCEPT Enclosure
ADP1	6.00 x 6.00 152 x 152	when A is less than or equal to 24 and B is less than or equal to 24
ADP2	12.00 x 12.00 305 x 305	when A is greater than or equal to 30 and B is greater than or equal to 20

Use ADP2 when A = 24 and B = 30

HINGE PINS

Contact Customer Service to order new mild steel hinge pins for an existing product.

BULLETIN: VM3

Catalog Number	Description	Qty.
GHPINMS	Hinge Pin	2

LOCK INSERTS

Lock inserts can be substituted for the standard 3-mm double-bit latch insert. Inserts have a chrome finish. Matching key is zinc die-cast.

BULLETIN: A4GY, CWY

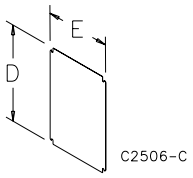
Catalog Number	Description
CLKTM7	Triangular 7-mm insert with key
CLKSM7	Square 7-mm insert with key
CLKDBM3	Double bit with key
CLKSLOT	Slotted Insert no key

CONCEPT PANELS

These panels are taller and wider than corresponding NEMA-size panels. Panels are 14 or 12 gauge steel and painted white or have a conductive finish.

Panels have a formed flange along any side that is longer than 22.20 in. (564 mm).

BULLETIN: CWP, CWY, DWDH2



Catalog Number	Panel Type	Panel Size D x E (in.)	Panel Size D x E (mm)	Gauge
CP1210	Painted steel	10.20 x 8.20	259 x 208	14
CP1210G	Conductive	10.20 x 8.20	259 x 208	14
CP1212	Painted steel	10.20 x 10.20	259 x 259	12
CP1212G	Conductive	10.20 x 10.20	259 x 259	12
CP1612	Painted steel	14.20 x 10.20	361 x 259	12
CP1612G	Conductive	14.20 x 10.20	361 x 259	12
CP1616	Painted steel	14.20 x 14.20	361 x 361	12
CP1616G	Conductive	14.20 x 14.20	361 x 361	12
CP2012	Painted steel	18.20 x 10.20	462 x 259	12
CP2012G	Conductive	18.20 x 10.20	462 x 259	12
CP2014	Painted steel	18.20 x 12.20	462 x 310	12
CP2014G	Conductive	18.20 x 12.20	462 x 310	12
CP2016	Painted steel	18.20 x 14.20	462 x 361	12
CP2016G	Conductive	18.20 x 14.20	462 x 361	12
CP2020	Painted steel	18.20 x 18.20	462 x 462	12
CP2020G	Conductive	18.20 x 18.20	462 x 462	12
CP2412	Painted steel	22.20 x 10.20	564 x 259	12
CP2412G	Conductive	22.20 x 10.20	564 x 259	12
CP2416	Painted steel	22.20 x 14.20	564 x 361	12
CP2416G	Conductive	22.20 x 14.20	564 x 361	12
CP2420	Painted steel	22.20 x 18.20	564 x 462	12
CP2420G	Conductive	22.20 x 18.20	564 x 462	12
CP2424	Painted steel	22.20 x 22.20	564 x 564	12
CP2424G	Conductive	22.20 x 22.20	564 x 564	12
CP2442	Painted steel	22.20 x 40.20	564 x 1021	12
CP2442G	Conductive	22.20 x 40.20	564 x 1021	12
CP3012	Painted steel	28.20 x 10.20	716 x 259	12
CP3012G	Conductive	28.20 x 10.20	716 x 259	12
CP3016	Painted steel	28.20 x 14.20	716 x 361	12
CP3016G	Conductive	28.20 x 14.20	716 x 361	12
CP3020	Painted steel	28.20 x 18.20	716 x 462	12
CP3020G	Conductive	28.20 x 18.20	716 x 462	12
CP3024	Painted steel	28.20 x 22.20	716 x 564	12
CP3024G	Conductive	28.20 x 22.20	716 x 564	12
CP3030	Painted steel	28.20 x 28.20	716 x 716	12
CP3030G	Conductive	28.20 x 28.20	716 x 716	12
CP3048	Painted steel	28.20 x 46.20	716 x 1173	12
CP3048G	Conductive	28.20 x 46.20	716 x 1173	12
CP3060	Painted steel	28.20 x 58.20	716 x 1478	12
CP3060G	Conductive	28.20 x 58.20	716 x 1478	12
CP3220	Painted steel	30.20 x 18.20	762 x 462	12
CP3624	Painted steel	34.20 x 22.20	869 x 564	12
CP3624G	Conductive	34.20 x 22.20	869 x 564	12
CP3630	Painted steel	34.20 x 28.20	869 x 716	12
CP3630G	Conductive	34.20 x 28.20	869 x 716	12
CP3636	Painted steel	34.20 x 34.20	869 x 869	12
CP3636G	Conductive	34.20 x 34.20	869 x 869	12
CP4230	Painted steel	40.20 x 28.20	1021 x 716	12
CP4230G	Conductive	40.20 x 28.20	1021 x 716	12
CP4236	Painted steel	40.20 x 34.20	1021 x 869	12
CP4236G	Conductive	40.20 x 34.20	1021 x 869	12
CP4242	Painted steel	40.20 x 40.20	1021 x 1021	12
CP4242G	Conductive	40.20 x 40.20	1021 x 1021	12
CP4260	Painted steel	40.20 x 58.20	1021 x 1478	12
CP4260G	Conductive	40.20 x 58.20	1021 x 1478	12
CP4420	Painted steel	42.20 x 18.20	1072 x 462	12
CP4824	Painted steel	46.20 x 22.20	1173 x 564	12
CP4824G	Conductive	46.20 x 22.20	1173 x 564	12
CP4836	Painted steel	46.20 x 34.20	1173 x 869	12
CP4836G	Conductive	46.20 x 34.20	1173 x 869	12
CP4848	Painted steel	46.20 x 46.20	1173 x 1173	12
CP4848G	Conductive	46.20 x 46.20	1173 x 1173	12
CP5620	Painted steel	53.20 x 18.20	1351 x 462	12
CP6036	Painted steel	58.20 x 34.20	1478 x 869	12
CP6036G	Conductive	58.20 x 34.20	1478 x 869	12
CP7230	Painted steel	70.20 x 28.20	1783 x 716	12
CP7230G	Conductive	70.20 x 28.20	1783 x 716	12
CP7236	Painted steel	70.20 x 34.20	1783 x 869	12

Catalog number CP4230 is used on CONCEPT disconnect enclosures.

SEISMIC ACCESSORIES

To meet GR-63-CORE Zone 4 seismic standards, Free-Stand enclosures must include the following accessories (purchased separately):

For Seismic Free-Stand with Panel
- Seismic Mounting Plate Kit
- Seismic Panel Mounting Kit
- Panel, Full-Length

For Seismic Free-Stand with Rack Angles
- Seismic Mounting Plate Kit
- Rack Mounting Angles - L-Style (Type RP), Full

SEISMIC MOUNTING PLATE KITS

Kit of six (6) stainless steel mounting plates install over the mounting holes in the base of the enclosure. The mounting plates come predrilled to accept 1/2-in., 5/8-in. or 3/4-in. diameter mounting hardware (not included). Plate dimensions are 3.75 x 3.75 x .25 in. (95 x 95 x 6 mm).

BULLETIN: DCY

Standard Product

Catalog Number	Description	Anchor Size
ASMP12SS	Seismic Mounting Plate, 1/2-in.	1/2 in.
ASMP58SS	Seismic Mounting Plate, 5/8-in.	5/8 in.
ASMP34SS	Seismic Mounting Plate, 3/4-in.	3/4 in.

SEISMIC PANEL MOUNTING KITS

Kit of two (2) panel supports install within the enclosure. Use mounting hardware furnished within these kits along with panel hardware to mount full panels.

BULLETIN: DCY

Standard Product

Catalog Number	Description	Fits Enclosure A in./mm
ASPANKIT60	Seismic Panel Mounting Kit, 60-in.	60 1524
ASPANKIT72	Seismic Panel Mounting Kit, 72-in.	72 1829
ASPANKIT90	Seismic Panel Mounting Kit, 90-in.	90 2286

PANELS

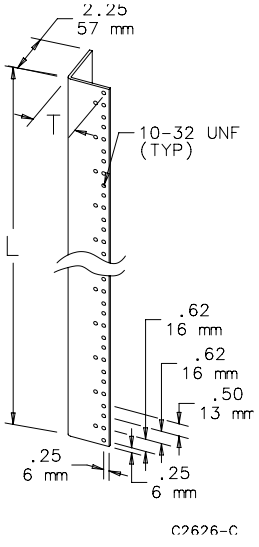
Full panels mount within the enclosure using seismic panel mounting kits. Panels are 12 gauge steel and are finished with white polyester power paint or a conductive, corrosion resistant coating.

BULLETIN: PNL30

Standard Product

Catalog Number	Description	Panel Size in./mm	Fits Enclosure A x B in./mm
A60P24F1	Steel	48.00 x 20.00 1219 x 508	60.00 x 24.00 1524 x 610
A60P24F1G	Conductive	48.00 x 20.00 1219 x 508	60.00 x 24.00 1524 x 610
A72P24F1	Steel	60.00 x 20.00 1524 x 508	72.00 x 24.00 1829 x 610
A72P24F1G	Conductive	60.00 x 20.00 1524 x 508	72.00 x 24.00 1829 x 610
A90P24F1	Steel	1829 x 610 1981 x 508	90.00 x 24.00 90.00 x 24.00
A90P24F1G	Conductive	1829 x 610 1981 x 508	90.00 x 24.00 90.00 x 24.00
A72P30F1	Steel	60.00 x 26.00 1524 x 660	1524 x 660 1829 x 762
A72P30F1G	Conductive	60.00 x 26.00 1524 x 660	1524 x 660 1829 x 762
A60P36F1	Steel	48.00 x 32.00 48.00 x 32.00	60.00 x 36.00 1524 x 914
A60P36F1G	Conductive	48.00 x 32.00 48.00 x 32.00	60.00 x 36.00 1524 x 914
A72P36F1	Steel	60.00 x 32.00 1524 x 813	72.00 x 36.00 1829 x 914
A72P36F1G	Conductive	60.00 x 32.00 1524 x 813	72.00 x 36.00 1829 x 914
A90P36F1	Steel	78.00 x 32.00 1981 x 813	90.00 x 36.00 2286 x 914
A90P36F1G	Conductive	78.00 x 32.00 1981 x 813	90.00 x 36.00 2286 x 914

RACK MOUNTING ANGLES - L-STYLE (TYPE RP)



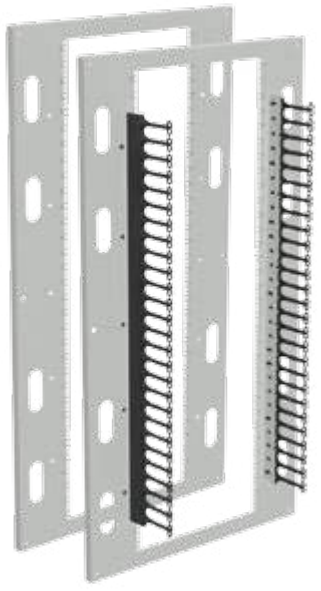
Pairs of full-length rack mounting angles are available for mounting 19-in. and 24-in. rack-mounted equipment. Type RP rack mounting angles are 10 gauge steel with mounting holes tapped #10-32 thread and spaced per EIA standard RS-310-D universal spacing. Angles and mounting hardware are plated. All mounting hardware is furnished.

BULLETIN: A80

Catalog Number	Fits Enclosure A x B in./mm	For Rack Size in./mm	K in./mm	K (m)	L in./mm	M in./mm	T in./mm	Number of Units
A60RP24F5	60.00 x 24.00 1524 x 610	19.00 483	3.78	96	49.00 1245	7.78 198	1.94 49	28
A72RP24F5	72.00 x 24.00 1829 x 610	19.00 483	3.66	93	61.25 1556	7.66 195	1.94 49	35
A72RP30F5	72.00 x 30.00 1829 x 762	24.00 610	3.66	93	61.25 1556	7.66 195	2.44 62	35
A90RP24F5	90.00 x 24.00 2286 x 610	19.00 483	3.91	99	78.75 2000	7.91 201	1.94 49	45

One unit equals 1.75 inches (44 mm).

SEISMIC RACK PANEL KIT



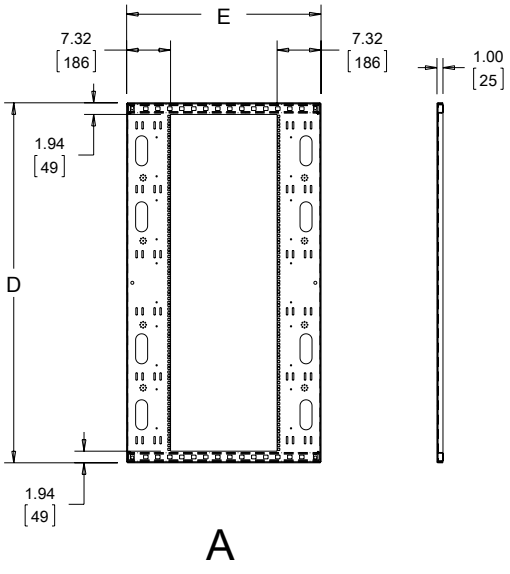
Used when converting a standard Free-Stand Enclosure to a Seismic Free-Stand Enclosure. Rack Panel allows rack-mount equipment to be installed in 36-in. wide enclosures. Seismic Rack Panel has EIA 310 specified square-holes (.375x.375) and larger openings to allow cables to pass through panel. Use with Seismic Panel Support Kits (included) and Seismic Mounting Plate Kits to obtain Seismic standards. Made from 12 gauge steel and painted RAL 7035.

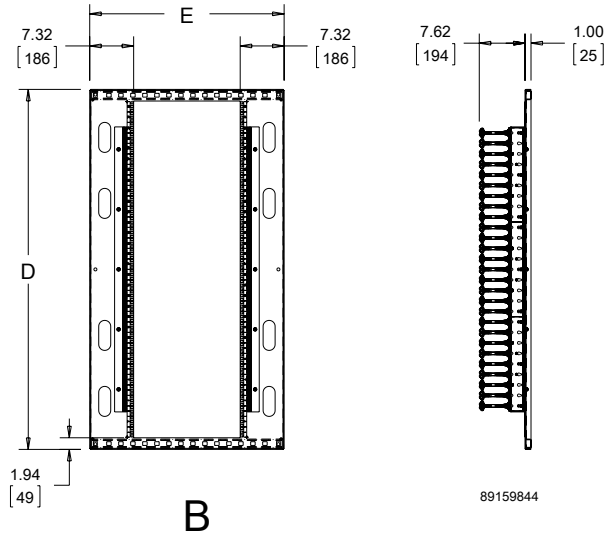
Available with or without vertical cable management for copper and fiber networking cables. Kit includes one (1) Seismic Rack Panel and two (2) Seismic Panel Supports with hardware.

BULLETIN: DSFS

Standard Product

Catalog Number	D in./mm	E in./mm	Fits Enclosure Height x Width in./mm	Cable Managers	Ref. Drawing
A72P36RP	60.00 1524	32.40 823	72.22 x 36.14 1834 x 918	No	A
A72P36RPC	60.00 1524	32.40 823	72.22 x 36.14 1834 x 918	Yes	B
A90P36RP	78.00 1981	32.40 823	90.26 x 36.14 2293 x 918	No	A
A90P36RPC	78.00 1981	32.40 823	90.26 x 36.14 2293 x 918	Yes	B





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