

# Cable to Steel, Heavy Duty



Heavy duty connections were originally developed to be used on reclaimed cable. The heavy duty connections use a larger size connection cavity in the mold and a larger size welding material than the equivalent standard duty connection.

The larger size welding material supplies extra BTU's to melt the heavy oxide coating on the conductor and to overcome some severe field conditions. Heavy duty connections eliminate cutting the run conductor on certain types of connections, reduce cable cleaning requirements for old or reclaimed cable, and increase reliability under adverse field conditions.

Heavy duty connections are increasingly being specified for copper-coated steel conductor connections.

## CERTIFICATIONS



## DIAGRAMS



## FEATURES

Forms a permanent, low resistance connection

Provides a molecular bond

nVent ERICO Cadweld Exothermic Connections are rated with the same current capacity as the conductor

Portable installation equipment with no external source of power required

Installers can be easily trained to make nVent ERICO Cadweld Exothermic Connections

Connections can be visually inspected

## SPECIFICATIONS

Table 1/2

| Catalog Number | Article Number | Mold Family | Connects To                | Conductor Size | Conductor Outer Diameter, Nominal | Outer Diameter |
|----------------|----------------|-------------|----------------------------|----------------|-----------------------------------|----------------|
| HDVSC1L        | 240292         | VS          | Steel Pipe or Flat Surface | #4 Concentric  | 5.89mm                            | 609.6 mm Min   |
| HDVSC1T        |                | VS          | Steel Pipe or Flat Surface | #2 Solid       | 6.53mm                            | 609.6 mm Min   |
| HDVBC1V        |                | VB          | Steel Pipe or Flat Surface | #2 Concentric  | 7.42mm                            | 609.6 mm Min   |
| HDVFC1V        |                | VF          | Steel Pipe or Flat Surface | #2 Concentric  | 7.42mm                            | 609.6 mm Min   |
| HDVSC1V        |                | VS          | Steel Pipe or Flat Surface | #2 Concentric  | 7.42mm                            | 609.6 mm Min   |
| HDVVRSD        |                | VV          | Steel Pipe or Flat Surface | 5/16" Stranded | 7.92mm                            | 609.6 mm Min   |
| HDVFC1Y        |                | VF          | Steel Pipe or Flat Surface | #1 Concentric  | 8.43mm                            | 609.6 mm Min   |
| HDVSC1Y        |                | VS          | Steel Pipe or Flat Surface | #1 Concentric  | 8.43mm                            | 609.6 mm Min   |
| HDVBC2C        |                | VB          | Steel Pipe or Flat Surface | 1/0 Concentric | 9.47mm                            | 609.6 mm Min   |
| HDVFR2C        |                | VF          | Steel Pipe or Flat Surface | 1/0 Concentric | 9.47mm                            | 609.6 mm Min   |
| HDVSC2C        |                | VS          | Steel Pipe or Flat Surface | 1/0 Concentric | 9.47mm                            | 609.6 mm Min   |
| HDHSC2G        |                | HS          | Steel Pipe or Flat Surface | 2/0 Concentric | 10.62mm                           | 609.6 mm Min   |
| HDHSC2GW       |                | HS          | Steel Pipe or Flat Surface | 2/0 Concentric | 10.62mm                           | 609.6 mm Min   |
| HDHTC2G        |                | HT          | Steel Pipe or Flat Surface | 2/0 Concentric | 10.62mm                           | 609.6 mm Min   |
| HDVBC2G        |                | VB          | Steel Pipe or Flat Surface | 2/0 Concentric | 10.62mm                           | 609.6 mm Min   |
| HDVFR2G        |                | VF          | Steel Pipe or Flat Surface | 2/0 Concentric | 10.62mm                           | 609.6 mm Min   |

| CatalogNumber | Article Number | Mold Family | Connects To                | Conductor Size  | Conductor OuterDiameter, Nominal | Outer Diameter  |
|---------------|----------------|-------------|----------------------------|-----------------|----------------------------------|-----------------|
| HDVSC2G       |                | VS          | Steel Pipe or Flat Surface | 2/0 Concentric  | 10.62mm                          | 609.6 mm Min    |
| HDVSC2GV3C    |                | VS          | Steel Pipe                 | 2/0 Concentric  | 10.62mm                          | 42.2 - 101.6 mm |
| HDVSC2GW      |                | VS          | Steel Pipe or Flat Surface | 2/0 Concentric  | 10.62mm                          | 609.6 mm Min    |
| HDVVF2G       |                | VV          | Steel Pipe or Flat Surface | 2/0 Concentric  | 10.62mm                          | 609.6 mm Min    |
| HDVVF9C       |                | VV          | Steel Pipe or Flat Surface | 7/#7 Copperweld | 11mm                             | 609.6 mm Min    |
| HDVVF9CV6     |                | VV          | Steel Pipe                 | 7/#7 Copperweld | 11mm                             | 158.75 mm       |
| HDVVF2P       |                | VV          | Steel Pipe or Flat Surface | 4/0 Solid       | 11.68mm                          | 609.6 mm Min    |
| HDVBC2P       |                | VB          | Steel Pipe or Flat Surface | 4/0 Solid       | 11.68mm                          | 609.6 mm Min    |
| HDHSC2L       |                | HS          | Steel Pipe or Flat Surface | 3/0 Concentric  | 11.94mm                          | 609.6 mm Min    |
| HDVBC2L       |                | VB          | Steel Pipe or Flat Surface | 3/0 Concentric  | 11.94mm                          | 609.6 mm Min    |
| HDVFR2L       |                | VF          | Steel Pipe or Flat Surface | 3/0 Concentric  | 11.94mm                          | 609.6 mm Min    |
| HDVSC2L       |                | VS          | Steel Pipe or Flat Surface | 3/0 Concentric  | 11.94mm                          | 609.6 mm Min    |
| HDHSC2Q       |                | HS          | Steel Pipe or Flat Surface | 4/0 Concentric  | 13.41mm                          | 609.6 mm Min    |
| HDHSC2QW      |                | HS          | Steel Pipe or Flat Surface | 4/0 Concentric  | 13.41mm                          | 609.6 mm Min    |
| HDHTC2Q       |                | HT          | Steel Pipe or Flat Surface | 4/0 Concentric  | 13.41mm                          | 609.6 mm Min    |
| HDVBC2Q       |                | VB          | Steel Pipe or Flat Surface | 4/0 Concentric  | 13.41mm                          | 609.6 mm Min    |
| HDVFR2Q       |                | VF          | Steel Pipe or Flat Surface | 4/0 Concentric  | 13.41mm                          | 609.6 mm Min    |
| HDVSC2Q       |                | VS          | Steel Pipe or Flat Surface | 4/0 Concentric  | 13.41mm                          | 609.6 mm Min    |

| CatalogNumber | Article Number | Mold Family | Connects To                | Conductor Size                 | Conductor OuterDiameter, Nominal | Outer Diameter |
|---------------|----------------|-------------|----------------------------|--------------------------------|----------------------------------|----------------|
| HDVSC2QW      |                | VS          | Steel Pipe or Flat Surface | 4/0 Concentric                 | 13.41mm                          | 609.6 mm Min   |
| HDVVF2Q       |                | VV          | Steel Pipe or Flat Surface | 4/0 Concentric                 | 13.41mm                          | 609.6 mm Min   |
| HDVSC9FW      |                | VS          | Steel Pipe or Flat Surface | 19/#9 Copperweld               | 14.53mm                          | 609.6 mm Min   |
| HDVVF9F       |                | VV          | Steel Pipe or Flat Surface | 19/#9 Copperweld               | 14.53mm                          | 609.6 mm Min   |
| HDVVF9FV6     |                | VV          | Steel Pipe                 | 19/#9 Copperweld               | 14.53mm                          | 158.75 mm      |
| HDVVF9FV8     |                | VV          | Steel Pipe                 | 19/#9 Copperweld               | 14.53mm                          | 219.1 mm       |
| HDHSC9F       |                | HS          | Steel Pipe or Flat Surface | 19/#9 Copperweld               | 14.53mm                          | 609.6 mm Min   |
| HDHSCY6       |                | HS          | Steel Pipe or Flat Surface | 120 mm <sup>2</sup> Concentric | 14.4mm                           | 609.6 mm Min   |
| HDVBR2V       |                | VB          | Steel Pipe or Flat Surface | 250 kcmil Concentric           | 14.61mm                          | 609.6 mm Min   |
| HDVBR9FV8     |                | VB          | Steel Pipe                 | 19/#9 Copperweld               | 14.53mm                          | 219.1 mm       |
| HDVSC2V       |                | VS          | Steel Pipe or Flat Surface | 250 kcmil Concentric           | 14.61mm                          | 609.6 mm Min   |
| HDVSC9F       |                | VS          | Steel Pipe or Flat Surface | 19/#9 Copperweld               | 14.53mm                          | 609.6 mm Min   |
| HDVSC9FV2.50  |                | VS          | Steel Pipe                 | 19/#9 Copperweld               | 14.53mm                          | 73 mm          |
| HDHSC3A       |                | HS          | Steel Pipe or Flat Surface | 300 kcmil Concentric           | 16mm                             | 609.6 mm Min   |
| HDVVF3A       |                | VV          | Steel Pipe or Flat Surface | 300 kcmil Concentric           | 16mm                             | 609.6 mm Min   |
| HDVVF9G       |                | VV          | Steel Pipe or Flat Surface | 19/#8 Copperweld               | 16.31mm                          | 609.6 mm Min   |
| HDVVF3D       |                | VV          | Steel Pipe or Flat Surface | 350 kcmil Concentric           | 17.3mm                           | 609.6 mm Min   |
| HDVVF7D       |                | VV          | Steel Pipe or Flat Surface | 2/0 Ropelay                    | 18.21mm                          | 609.6 mm Min   |

| CatalogNumber | Article Number | Mold Family | Connects To                | Conductor Size       | Conductor OuterDiameter, Nominal | Outer Diameter |
|---------------|----------------|-------------|----------------------------|----------------------|----------------------------------|----------------|
| HDHSC9H       |                | HS          | Steel Pipe or Flat Surface | 19/#7 Copperweld     | 18.31mm                          | 609.6 mm Min   |
| HDHSD3Q       |                | HS          | Steel Pipe or Flat Surface | 500 kcmil Concentric | 20.65mm                          | 609.6 mm Min   |
| HDHTD3Q       |                | HT          | Steel Pipe or Flat Surface | 500 kcmil Concentric | 20.65mm                          | 609.6 mm Min   |
| HDVSC3Q       |                | VS          | Steel Pipe or Flat Surface | 500 kcmil Concentric | 20.65mm                          | 609.6 mm Min   |
| HDVVF3Q       |                | VV          | Steel Pipe or Flat Surface | 500 kcmil Concentric | 20.65mm                          | 609.6 mm Min   |
| HDVVF3QV6     |                | VV          | Steel Pipe                 | 500 kcmil Concentric | 20.65mm                          | 158.75 mm      |

Table 2/2

| Catalog Number | Article Number | NB/DN   | Certifications |
|----------------|----------------|---------|----------------|
| HDVSC1L        | 240292         | 600 Min | cUL, UL        |
| HDVSC1T        |                | 600 Min | UL, cUL        |
| HDVBC1V        |                | 600 Min | UL, cUL        |
| HDVFC1V        |                | 600 Min |                |
| HDVSC1V        |                | 600 Min | cUL, UL        |
| HDVVRSD        |                | 600 Min |                |
| HDVFC1Y        |                | 600 Min |                |
| HDVSC1Y        |                | 600 Min | cUL, UL        |
| HDVBC2C        |                | 600 Min | cUL, UL        |
| HDVFR2C        |                | 600 Min |                |

| Catalog Number | Article Number | NB/DN   | Certifications |
|----------------|----------------|---------|----------------|
| HDVSC2C        |                | 600 Min | UL, cUL        |
| HDHSC2G        |                | 600 Min | UL, cUL        |
| HDHSC2GW       |                | 600 Min | cUL, UL        |
| HDHTC2G        |                | 600 Min | UL, cUL        |
| HDVBC2G        |                | 600 Min | UL, cUL        |
| HDVFR2G        |                | 600 Min |                |
| HDVSC2G        |                | 600 Min | cUL, UL        |
| HDVSC2GV3C     |                | 32 - 90 | cUL, UL        |
| HDVSC2GW       |                | 600 Min | UL, cUL        |
| HDVVF2G        |                | 600 Min |                |
| HDVVF9C        |                | 600 Min |                |
| HDVVF9CV6      |                | 150     |                |
| HDVVF2P        |                | 600 Min |                |
| HDVBC2P        |                | 600 Min | cUL, UL        |
| HDHSC2L        |                | 600 Min | UL, cUL        |
| HDVBC2L        |                | 600 Min | UL, cUL        |
| HDVFR2L        |                | 600 Min |                |
| HDVSC2L        |                | 600 Min | cUL, UL        |

| Catalog Number | Article Number | NB/DN   | Certifications |
|----------------|----------------|---------|----------------|
| HDHSC2Q        |                | 600 Min | UL, cUL        |
| HDHSC2QW       |                | 600 Min | cUL, UL        |
| HDHTC2Q        |                | 600 Min | cUL, UL        |
| HDVBC2Q        |                | 600 Min | UL, cUL        |
| HDVFR2Q        |                | 600 Min |                |
| HDVSC2Q        |                | 600 Min | cUL, UL        |
| HDVSC2QW       |                | 600 Min | UL, cUL        |
| HDVVF2Q        |                | 600 Min |                |
| HDVSC9FW       |                | 600 Min |                |
| HDVVF9F        |                | 600 Min |                |
| HDVVF9FV6      |                | 150     |                |
| HDVVF9FV8      |                | 200     |                |
| HDHSC9F        |                | 600 Min |                |
| HDHSCY6        |                | 600 Min | cUL, UL        |
| HDVBR2V        |                | 600 Min | UL, cUL        |
| HDVBR9FV8      |                | 200     |                |
| HDVSC2V        |                | 600 Min | cUL, UL        |
| HDVSC9F        |                | 600 Min |                |

| Catalog Number | Article Number | NB/DN   | Certifications |
|----------------|----------------|---------|----------------|
| HDVSC9FV2.50   |                | 65      |                |
| HDHSC3A        |                | 600 Min |                |
| HDVVF3A        |                | 600 Min |                |
| HDVVF9G        |                | 600 Min |                |
| HDVVF3D        |                | 600 Min |                |
| HDVVF7D        |                | 600 Min |                |
| HDHSC9H        |                | 600 Min |                |
| HDHSD3Q        |                | 600 Min |                |
| HDHTD3Q        |                | 600 Min |                |
| HDVSC3Q        |                | 600 Min |                |
| HDVVF3Q        |                | 600 Min |                |
| HDVVF3QV6      |                | 150     |                |

## ADDITIONAL PRODUCT DETAILS

For applications such as computer room, tunnel or other low-ventilation areas, specify a smokeless nVent ERICO Cadweld Exolon mold. Add an XL prefix to the standard mold part number when ordering (for example, a TAC2Q2Q becomes XLTAC2Q2Q). Similarly, nVent ERICO Cadweld Exolon welding material is also designated by the XL prefix (for example, 150 becomes XL150).

A test weld should be made to check for the possibility of burn through on thin sections and to determine detrimental metallurgical effects.

| HD-XX-X-XX-XX-L-M-W |                        |                                                                                         |
|---------------------|------------------------|-----------------------------------------------------------------------------------------|
| HD                  | Heavy Duty Designation |                                                                                         |
| XX                  | Mold Family            |                                                                                         |
| X                   | Price Key              |                                                                                         |
| XX                  | Conductor Code         |                                                                                         |
| XX                  | Pipe Size              |                                                                                         |
| L*                  | Split Crucible         | Crucible section is split on molds designed with horizontal opening for easier cleaning |
| M*                  | Mold Only              |                                                                                         |
| W*                  | Wear Plates            | Reduce mechanical abrasion of molds at cable entry points                               |

\* Empty if none

## WARNING

nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at [www.nvent.com](http://www.nvent.com) and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death and/or void your warranty.

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