

# S13 Metric Parallel Bolt Coupler, Plain, Worldwide Design



## CERTIFICATIONS



## FEATURES

Provides continuity between reinforcing bar and ISO® 965 metric all-thread rod or bolts

May be used to anchor load-bearing equipment to foundations, columns or walls

Machined from non-weldable grades of material, but can be tack welded

## SPECIFICATIONS

- Finish:** Plain
- Material:** Steel
- Design Version:** Worldwide (Globally Available Materials)

Table 1/2

| Catalog Number | Rebar Size, Metric | Rebar Size, US | Rebar Size, Canada | Hex Width (W) | Diameter (Ø) | Length (L) |
|----------------|--------------------|----------------|--------------------|---------------|--------------|------------|
| EL10S13N       | 10 mm              | #3             |                    | 17 mm         |              | 53mm       |

| CatalogNumber | Rebar Size, Metric | Rebar Size, US | Rebar Size, Canada | Hex Width (W) | Diameter (Ø) | Length (L) |
|---------------|--------------------|----------------|--------------------|---------------|--------------|------------|
| EL12S13N      | 12 mm              | #4             | 10M                | 22 mm         |              | 58mm       |
| EL14S13N      | 14 mm              |                |                    | 27 mm         |              | 63mm       |
| EL16S13N      | 16 mm              | #5             | 15M                | 27 mm         |              | 68mm       |
| EL18S13N      | 18 mm              |                |                    |               | 35 mm        | 75mm       |
| EL20S13AN     | 20 mm              | #6             | 20M                |               | 35 mm        | 83mm       |
| EL20S13BN     | 20 mm              | #6             | 20M                |               | 35 mm        | 81mm       |
| EL20S13N      | 20 mm              | #6             | 20M                |               | 35 mm        | 98mm       |
| EL22S13N      | 22 mm              | #7             |                    |               | 40 mm        | 104mm      |
| EL12S13AN     | 12 mm              | #4             | 10M                |               | 45 mm        | 86mm       |
| EL25S13BN     | 25 mm              | #8             | 25M                |               | 45 mm        | 85mm       |
| EL25S13AN     | 25 mm              | #8             | 25M                |               | 45 mm        | 103mm      |
| EL25S13N      | 25 mm              | #8             | 25M                |               | 45 mm        | 110mm      |
| EL28S13N      | 28 mm              | #9             | 30M                |               | 50 mm        | 115mm      |
| EL32S13AN     | 32 mm              | #10            |                    |               | 55 mm        | 115mm      |
| EL40S13CN     | 40 mm              |                |                    |               | 65 mm        | 127mm      |
| EL32S13N      | 32 mm              | #10            |                    |               | 55 mm        | 125mm      |
| EL34S13N      | 34 mm              |                |                    |               | 55 mm        | 134mm      |
| EL30S13N      | 30 mm              |                |                    |               | 55 mm        | 128mm      |

| CatalogNumber | Rebar Size, Metric | Rebar Size, US | Rebar Size, Canada | Hex Width (W) | Diameter (Ø) | Length (L) |
|---------------|--------------------|----------------|--------------------|---------------|--------------|------------|
| EL40S13BN     | 40 mm              |                |                    |               | 65 mm        | 133mm      |
| EL36S13N      | 36 mm              | #11            | 35M                |               | 65 mm        | 134mm      |
| EL38S13N      | 38 mm              | #12            |                    |               | 65 mm        | 139mm      |
| EL40S13N      | 40 mm              |                |                    |               | 65 mm        | 143mm      |
| EL40S13AN     | 40 mm              |                |                    |               | 65 mm        | 146mm      |
| EL50TS13N     | 50 mm              |                |                    |               | 85 mm        | 171mm      |

Table 2/2

| Catalog Number | A     | Bar Depth (BD) | Thread Size (TS) | Thread Depth (TD) | Unit Weight | Certifications                                                     |
|----------------|-------|----------------|------------------|-------------------|-------------|--------------------------------------------------------------------|
| EL10S13N       | 28 mm | 18mm           | M12              | 14mm              | 0.07 kg     | DIBt, AFCAB, nVent LENTON EPD - Product Specific, ITB, TZUS        |
| EL12S13N       | 33 mm | 19mm           | M16              | 19mm              | 0.12 kg     | nVent LENTON EPD - Product Specific, ITB, DIBt, CARES, TZUS, AFCAB |
| EL14S13N       | 35 mm | 21mm           | M18              | 21mm              | 0.12 kg     | AFCAB, CARES, DIBt, TZUS, nVent LENTON EPD - Product Specific, ITB |
| EL16S13N       | 37 mm | 24mm           | M20              | 23mm              | 0.21 kg     | AFCAB, ITB, CARES, DIBt, TZUS, nVent LENTON EPD - Product Specific |
| EL18S13N       | 39 mm | 29mm           | M22              | 25mm              | 0.4 kg      | nVent LENTON EPD - Product Specific, ITB, TZUS                     |

| CatalogNumber | A     | Bar Depth (BD) | Thread Size (TS) | Thread Depth (TD) | Unit Weight | Certifications                                                     |
|---------------|-------|----------------|------------------|-------------------|-------------|--------------------------------------------------------------------|
| EL20S13AN     | 39 mm | 35mm           | M22              | 25mm              | 0.43 kg     | nVent LENTON EPD - Product Specific                                |
| EL20S13BN     | 37 mm | 35mm           | M20              | 23mm              | 0.44 kg     | nVent LENTON EPD - Product Specific                                |
| EL20S13N      | 55 mm | 35mm           | M24              | 27mm              | 0.48 kg     | nVent LENTON EPD - Product Specific, ITB, CARES, AFCAB, TZUS, DIBt |
| EL22S13N      | 58 mm | 37mm           | M27              | 31mm              | 0.67 kg     | TZUS, ITB, nVent LENTON EPD - Product Specific                     |
| EL12S13AN     | 61 mm | 19mm           | M30              | 33mm              | 1.02 kg     | nVent LENTON EPD - Product Specific                                |
| EL25S13BN     | 37 mm | 40mm           | M20              | 24mm              | 0.8 kg      | nVent LENTON EPD - Product Specific                                |
| EL25S13AN     | 55 mm | 40mm           | M24              | 27mm              | 0.9 kg      | nVent LENTON EPD - Product Specific                                |
| EL25S13N      | 61 mm | 40mm           | M30              | 33mm              | 0.9 kg      | AFCAB, ITB, CARES, TZUS, DIBt, nVent LENTON EPD - Product Specific |
| EL28S13N      | 64 mm | 42mm           | M33              | 37mm              | 1.16 kg     | DIBt, TZUS, nVent LENTON EPD - Product Specific, ITB               |
| EL32S13AN     | 61 mm | 45mm           | M30              | 33mm              | 1.54 kg     | nVent LENTON EPD - Product Specific                                |
| EL40S13CN     | 61 mm | 57mm           | M30              | 33mm              | 2.44 kg     | nVent LENTON EPD - Product Specific                                |

| CatalogNumber | A     | Bar Depth (BD) | Thread Size (TS) | Thread Depth (TD) | Unit Weight | Certifications                                                     |
|---------------|-------|----------------|------------------|-------------------|-------------|--------------------------------------------------------------------|
| EL32S13N      | 70 mm | 45mm           | M39              | 43mm              | 1.42 kg     | CARES, DIBt, nVent LENTON EPD - Product Specific, AFCAB, ITB, TZUS |
| EL34S13N      | 70 mm | 55mm           | M39              | 43mm              | 1.52 kg     | nVent LENTON EPD - Product Specific                                |
| EL30S13N      | 67 mm | 52mm           | M36              | 40mm              | 1.62 kg     | nVent LENTON EPD - Product Specific                                |
| EL40S13BN     | 67 mm | 57mm           | M36              | 40mm              | 2.41 kg     | nVent LENTON EPD - Product Specific                                |
| EL36S13N      | 73 mm | 52mm           | M42              | 46mm              | 2.34 kg     | nVent LENTON EPD - Product Specific, TZUS                          |
| EL38S13N      | 77 mm | 53mm           | M45              | 49mm              | 2.26 kg     | nVent LENTON EPD - Product Specific                                |
| EL40S13N      | 77 mm | 57mm           | M45              | 49mm              | 2.28 kg     | AFCAB, DIBt, nVent LENTON EPD - Product Specific, TZUS, ITB, CARES |
| EL40S13AN     | 80 mm | 57mm           | M48              | 52mm              | 2.18 kg     | nVent LENTON EPD - Product Specific                                |
| EL50TS13N     | 88 mm | 70mm           | M56              | 60mm              | 4.83 kg     | CARES, nVent LENTON EPD - Product Specific                         |

**Designed to Meet:** AASHTO;ABNT NBR 8548:1984;ACI 318 Type 1 (125% Specified Yield);ACI 318 Type 2 (Specified Tensile);ACI 349;ACI 359;AS3600

## ADDITIONAL PRODUCT DETAILS

Bar dimensions and weights listed may vary by region. Coupler sizes not shown may be available by special order. Contact your nVent LENTON representative for more information.

Coupler supplied without bolt.

Bolt may be replaced by threaded rod of same class/grade.

All calculations based on a minimum bolt engagement equal to Thread Depth (TD).

System Capacity based on bolt to coupler connection. For rebar to coupler connection, refer to applicable building codes and approvals or contact your nVent LENTON representative.

| Bolt-to-Coupler Capacity (kN) |           |           |           |            |            |
|-------------------------------|-----------|-----------|-----------|------------|------------|
| Part Number                   | Grade 4.8 | Grade 5.8 | Grade 8.8 | Grade 10.9 | Grade 12.9 |
| EL10S13N                      | 33.7      | 42.1      | 67.4      | 67.7       | 67.7       |
| EL12S13AN                     | 224.2     | 280.3     | 448.5     | 526.3      | 526.3      |
| EL12S13N                      | 62.7      | 78.3      | 109.8     | 109.8      | 109.8      |
| EL14S13N                      | 77.0      | 96.2      | 154.0     | 192.5      | 193.4      |
| EL16S13N                      | 97.9      | 122.4     | 162.0     | 162.0      | 162.0      |
| EL18S13N                      | 121.4     | 151.7     | 242.7     | 303.4      | 364.1      |
| EL20S13AN                     | 121.4     | 151.7     | 242.7     | 303.4      | 356.8      |
| EL20S13BN                     | 97.9      | 122.4     | 195.8     | 244.8      | 289.4      |
| EL20S13N                      | 141.0     | 176.3     | 282.0     | 332.3      | 332.3      |
| EL22S13N                      | 183.8     | 229.7     | 367.5     | 449.9      | 449.9      |
| EL25S13AN                     | 141.0     | 176.3     | 282.0     | 352.5      | 422.9      |
| EL25S13BN                     | 97.9      | 122.4     | 195.8     | 244.8      | 293.8      |
| EL25S13N                      | 224.2     | 280.3     | 448.5     | 560.5      | 560.5      |
| EL28S13N                      | 277.4     | 346.8     | 554.8     | 693.6      | 728.0      |
| EL30S13N                      | 326.7     | 408.4     | 653.4     | 816.7      | 890.7      |
| EL32S13AN                     | 224.2     | 280.3     | 448.5     | 560.6      | 672.7      |
| EL32S13N                      | 390.3     | 487.9     | 780.6     | 783.8      | 783.8      |
| EL34S13N                      | 390.3     | 487.9     | 780.6     | 783.8      | 783.8      |
| EL36S13N                      | 448.4     | 560.5     | 896.7     | 1120.9     | 1197.1     |
| EL38S13N                      | 522.4     | 653.0     | 1044.8    | 1054.8     | 1054.8     |
| EL40S13AN                     | 589.3     | 736.6     | 1178.5    | 1312.4     | 1312.4     |
| EL40S13BN                     | 326.7     | 408.4     | 653.4     | 816.7      | 980.1      |
| EL40S13CN                     | 224.2     | 280.3     | 448.5     | 560.6      | 672.7      |
| EL40S13M33N                   | 522.4     | 653.0     | 1044.8    | 1054.8     | 1054.8     |
| EL40S13N                      | 522.4     | 653.0     | 1044.8    | 1054.8     | 1054.8     |
| EL50TS13M33N                  | 812.0     | 1015.0    | 1624.0    | 2030.0     | 2168.3     |
| EL50TS13N                     | 812.0     | 1015.0    | 1624.0    | 2030.0     | 2168.3     |

## DIAGRAMS



**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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