

# Cable to Steel, Rail

## Data Solutions



nVent ERICO Cadweld applications for railway properties utilize the nVent ERICO Cadweld Plus F80 and the nVent ERICO Cadweld F80 welding material alloys. nVent ERICO Cadweld exothermically welded connections are engineered to provide a permanent, molecular bond that will not loosen or corrode, enabling connection of dissimilar materials. The connections are designed to perform for the life of the conductor and/or installation. The nVent ERICO Cadweld connection has a current carrying capacity equal to or greater than that of the conductor and will withstand repeated fault currents without failing during operation. Once completed, installers can clearly ensure quality by visually inspecting the new connection.

### 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 | Mold Family    | Connects To                | Conductor Size | Conductor Outer Diameter, Nominal | Outer Diameter | NB/DN   |
|----------------|----------------|----------------------------|----------------|-----------------------------------|----------------|---------|
| PB10VN1GRH2    | VN Mold Family | Steel Pipe                 | #6 Solid       | 4.11mm                            | 60.3mm         | 50      |
| SB01VS6M       | VS Mold Family | Steel Pipe or Flat Surface | #6 Solid       | 4.12mm                            | 609.6mm min    | 600 min |
| PB10VS1H       | VS Mold Family | Steel Pipe or Flat Surface | #6 Concentric  | 4.67mm                            | 609.6mm min    | 600 min |

| Catalog Number | Mold Family    | Connects To                | Conductor Size                | Conductor Outer Diameter, Nominal | Outer Diameter | NB/DN    |
|----------------|----------------|----------------------------|-------------------------------|-----------------------------------|----------------|----------|
| SB01VS4M       | VS Mold Family | Steel Pipe or Flat Surface | #4 Solid                      | 5.18mm                            | 609.6mm min    | 600 min  |
| PB10VS1L       | VS Mold Family | Steel Pipe or Flat Surface | #4 Concentric                 | 5.89mm                            | 609.6mm min    | 600 min  |
| PB41HA1L       | HA Mold Family | Steel Pipe or Flat Surface | #4 Concentric                 | 5.89mm                            | 609.6mm min    | 600 min  |
| PB20VT1L2.50   | VT Mold Family | Steel Pipe                 | #4 Concentric                 | 5.89mm                            | 73mm           | 65       |
| PB10VB1L       | VB Mold Family | Steel Pipe or Flat Surface | #4 Concentric                 | 5.89mm                            | 609.6mm min    | 600 min  |
| PB10HS1L       | HS Mold Family | Steel Pipe or Flat Surface | #4 Concentric                 | 5.89mm                            | 609.6mm min    | 600 min  |
| PB10VS1T       | VS Mold Family | Steel Pipe or Flat Surface | #2 Solid                      | 6.53mm                            | 609.6mm min    | 600 min  |
| PB10VB1H       | VB Mold Family | Steel Pipe or Flat Surface | #6 Concentric                 | 7.42mm                            | 609.6mm min    | 600 min  |
| PB10VB1V       | VB Mold Family | Steel Pipe or Flat Surface | #2 Concentric                 | 7.42mm                            | 609.6mm min    | 600 min  |
| PB41HA1Y       | HA Mold Family | Steel Pipe or Flat Surface | #1 Concentric                 | 8.43mm                            | 609.6mm min    | 600 min  |
| PB10VB2GV1.50  | VB Mold Family | Steel Pipe                 | 2/0 Concentric                | 10.62mm                           | 48.3mm         | 40       |
| PB10VB2G       | VB Mold Family | Steel Pipe or Flat Surface | 2/0 Concentric                | 10.62mm                           | 609.6mm min    | 600 min  |
| PB10VB2GV3C    | VB Mold Family | Steel Pipe                 | 2/0 Concentric                | 10.62mm                           | 60.3 – 114.3mm | 50 – 100 |
| PB10HS2G       | HS Mold Family | Steel Pipe or Flat Surface | 2/0 Concentric                | 10.62mm                           | 609.6mm min    | 600 min  |
| PB03VGY4       | VG Mold Family | Steel Pipe or Flat Surface | 70 mm <sup>2</sup> Concentric | 10.92mm                           | 609.6mm min    | 600 min  |
| PB10VS2Q       | VS Mold Family | Steel Pipe or Flat Surface | 4/0 Concentric                | 13.41mm                           | 609.6mm min    | 600 min  |
| PB10HS2Q       | HS Mold Family | Steel Pipe or Flat Surface | 4/0 Concentric                | 13.41mm                           | 609.6mm min    | 600 min  |

Table 2/2

| Catalog Number | Mold Family | Connects To | Conductor Size | Conductor Outer Diameter, Nominal | Outer Diameter | NB/DN |
|----------------|-------------|-------------|----------------|-----------------------------------|----------------|-------|
|----------------|-------------|-------------|----------------|-----------------------------------|----------------|-------|

|             |                |                            |                      |         |                |          |
|-------------|----------------|----------------------------|----------------------|---------|----------------|----------|
| PB10VN2QRH  | VN Mold Family | Steel Pipe or Flat Surface | 4/0 Concentric       | 13.41mm | 609.6mm min    | 600 min  |
| PB10VB2Q    | VB Mold Family | Steel Pipe or Flat Surface | 4/0 Concentric       | 13.41mm | 609.6mm min    | 600 min  |
| PB13VV2Q    | VV Mold Family | Steel Pipe or Flat Surface | 4/0 Concentric       | 13.41mm | 609.6mm min    | 600 min  |
| PB13VF2Q    | VF Mold Family | Steel Pipe or Flat Surface | 4/0 Concentric       | 13.41mm | 609.6mm min    | 600 min  |
| PB10VS2QV3C | VS Mold Family | Steel Pipe                 | 4/0 Concentric       | 13.41mm | 60.3 – 114.3mm | 50 – 100 |
| PB10VN2QLH  | VN Mold Family | Steel Pipe or Flat Surface | 4/0 Concentric       | 13.41mm | 609.6mm min    | 600 min  |
| PB10VS3D    | VS Mold Family | Steel Pipe or Flat Surface | 350 kcmil Concentric | 17.3mm  | 609.6mm min    | 600 min  |
| PB10HS2W    | HS Mold Family | Steel Pipe or Flat Surface | 250 kcmil Ropelay    | 19.05mm | 609.6mm min    | 600 min  |
| PB10HS4M    | HS Mold Family | Steel Pipe or Flat Surface | #24 Ropelay          | 19.02mm | 609.6mm min    | 600 min  |
| PB13VB3Q    | VB Mold Family | Steel Pipe or Flat Surface | 500 kcmil Concentric | 20.65mm | 609.6mm min    | 600 min  |
| PB10HS3S    | HS Mold Family | Steel Pipe or Flat Surface | 500 kcmil Ropelay    | 26.42mm | 609.6mm min    | 600 min  |

## ADDITIONAL PRODUCT DETAILS

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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 PB10GR162G becomes XLPB10GR162G). Similarly, nVent ERICO Cadweld Exolon welding material is also designated by the XL prefix (for example, PB90 becomes XLPB90).

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

| W-XXXX-XX-XX-LH-XX-L-M |                |  |
|------------------------|----------------|--|
| W*                     | Wear Plates    | Reduce mechanical abrasion of molds at cable entry points  |
| XXXX                   | Price Key      |  |
| XX                     | Mold Family    |  |
| XX                     | Conductor Size |  |
| LH                     | Weld End       | LH = Weld on left end of conductor<br>RH = Weld on right end of conductor<br>(For VN Mold Family only) |
| XX                     | Pipe Size      |  |
| L*                     | Split Crucible | Crucible section is split on molds designed with horizontal opening for easier cleaning                |
| M*                     | Mold Only      |  |

\* 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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