

# Cable to Rail



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.

## 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 1/3

| Catalog Number | Mold Family | Conductor Size | Conductor Outer Diameter, Nominal | Rail Type | Orientation |
|----------------|-------------|----------------|-----------------------------------|-----------|-------------|
| PB13ST1ERI52RH | ST          | #8 Concentric  | 3.71mm                            | RI52      | Right Hand  |
| PB13ST1ERI52LH | ST          | #8 Concentric  | 3.71mm                            | RI52      | Left Hand   |

| Catalog Number | Mold Family | Conductor Size | Conductor Outer Diameter, Nominal | Rail Type                       | Orientation |
|----------------|-------------|----------------|-----------------------------------|---------------------------------|-------------|
| PB13ST1ERH     | ST          | #8 Concentric  | 3.71mm                            | 85 lb to 150 lb T-Rail Sections | Right Hand  |
| PB13ST1GRI59LH | ST          | #6 Solid       | 4.11mm                            | RI59 Girder Rail                | Left Hand   |
| PB13ST1HLH     | ST          | #6 Concentric  | 4.67mm                            | 85 lb to 150 lb T-Rail Sections | Left Hand   |
| PB13ST1HRH     | ST          | #6 Concentric  | 4.67mm                            | 85 lb to 150 lb T-Rail Sections | Right Hand  |
| PB13TP1H       | TP          | #6 Concentric  | 4.67mm                            | 85 lb to 150 lb T-Rail Sections |             |
| PB13ST1LLH     | ST          | #4 Concentric  | 5.89mm                            | 85 lb to 150 lb T-Rail Sections | Left Hand   |
| PB13ST1LRH     | ST          | #4 Concentric  | 5.89mm                            | 85 lb to 150 lb T-Rail Sections | Right Hand  |
| PB10QT1L84C    | QT          | #4 Concentric  | 5.89mm                            | 84 lb Composite                 |             |
| PB13ST1L150BLH | ST          | #4 Concentric  | 5.89mm                            | 150 lb Bethlehem                | Left Hand   |
| PB13TP1L       | TP          | #4 Concentric  | 5.89mm                            | 85 lb to 150 lb T-Rail Sections |             |
| PB13ST1VRH     | ST          | #2 Concentric  | 7.42mm                            | 85 lb to 150 lb T-Rail Sections | Right Hand  |
| PB13TP1V       | TP          | #2 Concentric  | 7.42mm                            | 85 lb to 150 lb T-Rail Sections |             |
| PB13ST1YLH     | ST          | #1 Concentric  | 8.43mm                            | 85 lb to 150 lb T-Rail Sections | Left Hand   |
| PB13ST1YRH     | ST          | #1 Concentric  | 8.43mm                            | 85 lb to 150 lb T-Rail Sections | Right Hand  |
| PB10QT1Y84C    | QT          | #1 Concentric  | 8.43mm                            | 84 lb Composite                 |             |
| PB13ST2CRH     | ST          | 1/0 Concentric | 9.47mm                            | 85 lb to 150 lb T-Rail Sections | Right Hand  |
| PB13ST2GRH     | ST          | 2/0 Concentric | 10.62mm                           | 85 lb to 150 lb T-Rail Sections | Right Hand  |
| PB13TP2G       | TP          | 2/0 Concentric | 10.62mm                           | 85 lb to 150 lb T-Rail Sections |             |

Table 2/3

| Catalog Number | Mold Family | Conductor Size | Conductor Outer Diameter, Nominal | Rail Type  | Orientation |
|----------------|-------------|----------------|-----------------------------------|------------|-------------|
| PB13ST2G30ASLH | ST          | 2/0 Concentric | 10.62mm                           | 30 lb ASCE | Left Hand   |
| PB13ST2G60ASLH | ST          | 2/0 Concentric | 10.62mm                           | 60 lb ASCE | Left Hand   |
| PB13TP2G60AS   | TP          | 2/0 Concentric | 10.62mm                           | 60 lb ASCE |             |

| Catalog Number  | Mold Family | Conductor Size       | Conductor Outer Diameter, Nominal | Rail Type                       | Orientation |
|-----------------|-------------|----------------------|-----------------------------------|---------------------------------|-------------|
| PB13ST2GLH      | ST          | 2/0 Concentric       | 10.62mm                           | 85 lb to 150 lb T-Rail Sections | Left Hand   |
| PB13ST2LLH      | ST          | 3/0 Concentric       | 11.94mm                           | 85 lb to 150 lb T-Rail Sections | Left Hand   |
| PB13TP2Q        | TP          | 4/0 Concentric       | 13.41mm                           | 85 lb to 150 lb T-Rail Sections |             |
| PB13ST2Q30ASRH  | ST          | 4/0 Concentric       | 13.41mm                           | 30 lb ASCE                      | Right Hand  |
| PB13ST2QLH      | ST          | 4/0 Concentric       | 13.41mm                           | 85 lb to 150 lb T-Rail Sections | Left Hand   |
| PB13ST2QRH      | ST          | 4/0 Concentric       | 13.41mm                           | 85 lb to 150 lb T-Rail Sections | Right Hand  |
| PB13ST2Q40ASRH  | ST          | 4/0 Concentric       | 13.41mm                           | 60 lb ASCE                      | Right Hand  |
| PB13ST2Q150BRH  | ST          | 4/0 Concentric       | 13.41mm                           | 150 lb Bethlehem                | Right Hand  |
| PB13ST2Q175CRLH | ST          | 4/0 Concentric       | 13.41mm                           | 175 lb Crane Rail               | Left Hand   |
| PB13ST2Q171CRLH | ST          | 4/0 Concentric       | 13.41mm                           | 171 lb Crane Rail               | Left Hand   |
| PB13ST2Q30ASLH  | ST          | 4/0 Concentric       | 13.41mm                           | 30 lb ASCE                      | Left Hand   |
| PB13ST2Q171CRRH | ST          | 4/0 Concentric       | 13.41mm                           | 171 lb Crane Rail               | Right Hand  |
| PB13ST2Q175CRRH | ST          | 4/0 Concentric       | 13.41mm                           | 175 lb Crane Rail               | Right Hand  |
| PB13ST9FLH      | ST          | 19/#9 Copperweld     | 14.53mm                           | 85 lb to 150 lb T-Rail Sections | Left Hand   |
| PB13ST9FRH      | ST          | 19/#9 Copperweld     | 14.53mm                           | 85 lb to 150 lb T-Rail Sections | Right Hand  |
| PB13ST2V171CRLH | ST          | 250 kcmil Concentric | 14.61mm                           | 171 lb Crane Rail               | Left Hand   |
| PB13TP9F        | TP          | 19/#9 Copperweld     | 14.53mm                           | 85 lb to 150 lb T-Rail Sections |             |

Table 3/3

| Catalog Number  | Mold Family | Conductor Size       | Conductor Outer Diameter, Nominal | Rail Type                       | Orientation |
|-----------------|-------------|----------------------|-----------------------------------|---------------------------------|-------------|
| PB13ST2V171CRRH | ST          | 250 kcmil Concentric | 14.61mm                           | 171 lb Crane Rail               | Right Hand  |
| PB13ST3Q171CRLH | ST          | 500 kcmil Concentric | 20.65mm                           | 171 lb Crane Rail               | Left Hand   |
| PB13ST3QLH      | ST          | 500 kcmil Concentric | 20.65mm                           | 85 lb to 150 lb T-Rail Sections | Left Hand   |

| Catalog Number  | Mold Family | Conductor Size                | Conductor Outer Diameter, Nominal | Rail Type         | Orientation |
|-----------------|-------------|-------------------------------|-----------------------------------|-------------------|-------------|
| PB13ST3Q175CRRH | ST          | 500 kcmil Concentric          | 20.65mm                           | 175 lb Crane Rail | Right Hand  |
| PB13ST3Q175CRLH | ST          | 500 kcmil Concentric          | 20.65mm                           | 175 lb Crane Rail | Left Hand   |
| PB72QT3Q84C     | QT          | 500 kcmil Concentric          | 20.65mm                           | 84 lb Composite   |             |
| PB13ST3Q171CRRH | ST          | 500 kcmil Concentric          | 20.65mm                           | 171 lb Crane Rail | Right Hand  |
| PB72RX3S150BLH  | RX          | 500 kcmil Ropelay             | 26.42mm                           | 150 lb Bethlehem  | Left Hand   |
| PB72QT3S150B    | QT          | 500 kcmil Ropelay             | 26.42mm                           | 150 lb Bethlehem  |             |
| PB72RX3S150BRH  | RX          | 500 kcmil Ropelay             | 26.42mm                           | 150 lb Bethlehem  | Right Hand  |
| PB72QW4Y85ARH   | QW          | 10 mm <sup>2</sup> Concentric | 29.26mm                           | 85 lb Composite   | Right Hand  |
| PB72QW4Y85ALH   | QW          | 10 mm <sup>2</sup> Concentric | 29.26mm                           | 85 lb Composite   | Left Hand   |
| PB53RX4Y150BLH  | RX          | 10 mm <sup>2</sup> Concentric | 29.26mm                           | 150 lb Bethlehem  | Left Hand   |
| PB72QT4Y150B    | QT          | 10 mm <sup>2</sup> Concentric | 29.26mm                           | 150 lb Bethlehem  |             |
| PB72QT4Y84C     | QT          | 10 mm <sup>2</sup> Concentric | 29.26mm                           | 84 lb Composite   |             |
| PB72QT4Y85A     | QT          | 10 mm <sup>2</sup> Concentric | 29.26mm                           | 85 lb Composite   |             |
| PB53RX4Y150BRH  | RX          | 10 mm <sup>2</sup> Concentric | 29.26mm                           | 150 lb Bethlehem  | Right Hand  |
| PB53RX5A150BLH  | RX          | 1000 kcmil Ropelay            | 33.78mm                           | 150 lb Bethlehem  | Left Hand   |
| PB53RX5A150BRH  | RX          | 1000 kcmil Ropelay            | 33.78mm                           | 150 lb Bethlehem  | Right Hand  |

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

Rail materials, characteristics, use, and locations of weld should be considered when selecting connections to a rail.

| XXXX-XX-XX-XX-XX-L-M-W |                |   |
|------------------------|----------------|---|
| XXXX                   | Price Key      |   |
| XX                     | Mold Family    |   |
| XX                     | Conductor Code |   |
| XX                     | Rail Type      |   |
| XX*                    | Orientation    | LH = Left Hand<br>RH = Right Hand   |
| 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.

### North America

+1.800.753.9221  
Option 1 – Customer Care  
Option 2 – Technical  
Support

### Europe

Netherlands:  
+31 800-0200135  
France:  
+33 800 901 793

### Europe

Germany:  
800 1890272  
Other Countries:  
+31 13 5835404

### APAC

Shanghai:  
+ 86 21 2412 1618/19  
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