

CONNECT AND PROTECT

Rail Electrical Products

nVent Engineered Electrical & Fastening Solutions is a leading global manufacturer and marketer of superior engineered products for niche electrical, mechanical and concrete applications. These nVent products are sold globally under a variety of market-leading brands: nVent ERICO welded electrical connections, facility electrical protection, and rail and industrial products; nVent CADDY fixing, fastening and support products; nVent ERIFLEX low voltage power and grounding connections; and nVent LENTON engineered systems for concrete reinforcement.

For more information on nVent ERICO, CADDY, ERIFLEX and LENTON, please visit nVent.com.

NVENT CADDY FIXINGS, FASTENERS AND SUPPORTS FOR ELECTRICAL APPLICATIONS

Specialty clips, clamps, hangers and straps for electrical and information transport system installations.

NVENT CADDY FIXINGS, FASTENERS AND SUPPORTS FOR MECHANICAL APPLICATIONS

Hangers, fasteners and support products for plumbing, HVAC, fire protection and seismic systems.

NVENT ERIFLEX LOW VOLTAGE PANEL COMPONENTS

Current carrying connectors, supports and other non-active electric panel components.

nVent ERIFLEX Flexibar flexible insulated busbar.

NVENT ERICO ELECTRICAL PRODUCTS

Products for grounding, bonding, surge protection and lightning protection that are designed to offer a coordinated system approach to facility electrical protection.

nVent ERICO Cadweld welded electrical connections

nVent ERICO grounding and bonding products, lightning protection systems, surge protection devices

NVENT LENTON CONCRETE REINFORCEMENT PRODUCTS

Rebar splicing systems and other reinforcing products utilized to connect steel reinforcement rods in concrete.

RAIL AND INDUSTRIAL PRODUCTS

Connecting and bonding products based on exothermic connection technology

Cadweld welded connections

nVent ERICO surge protection devices

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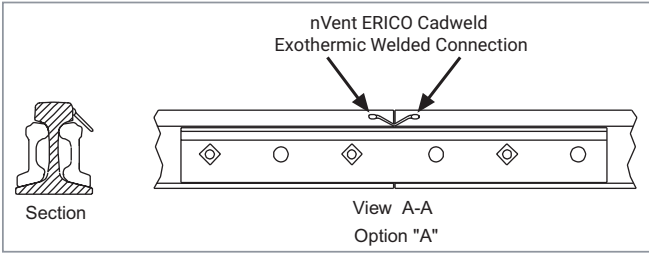
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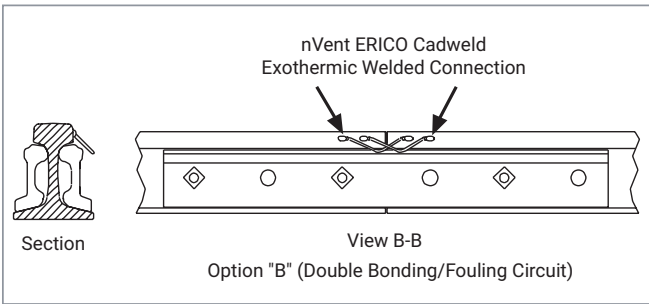
Typical Applications

SIGNAL BONDING

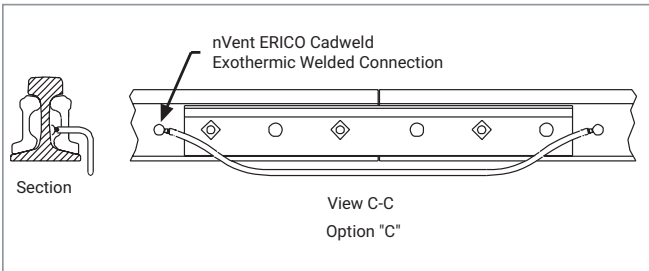
JOINT HEAD BOND



FOULING CIRCUIT



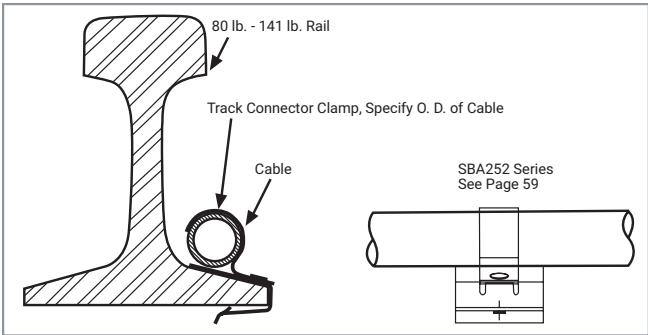
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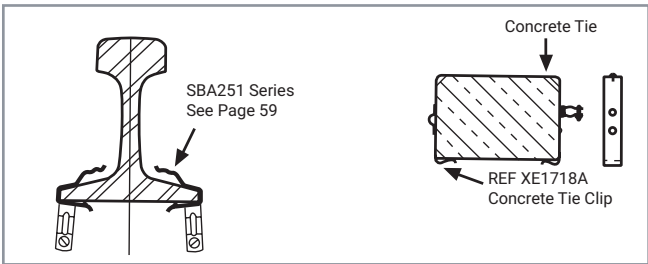
Typical Applications

TRACK CLIP OVERVIEW

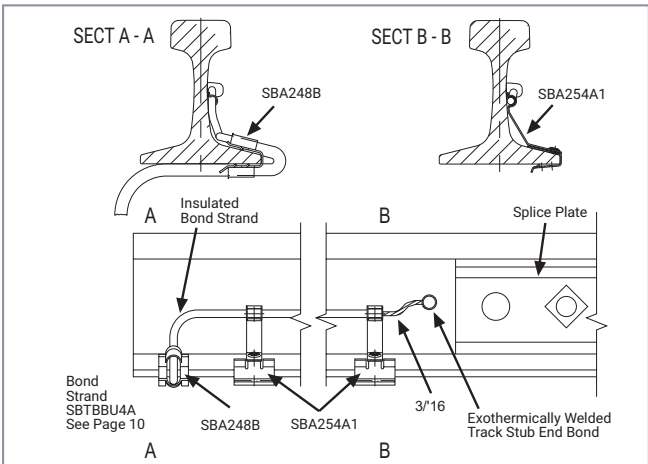
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RAIL CLIP AND CONCRETE TIE CLIP (CONTACT NVENT)



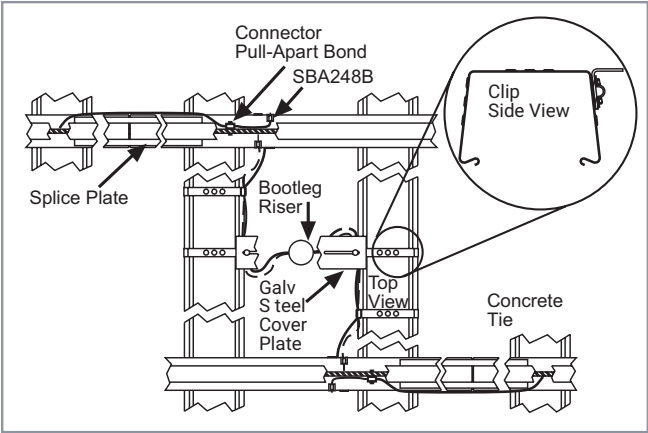
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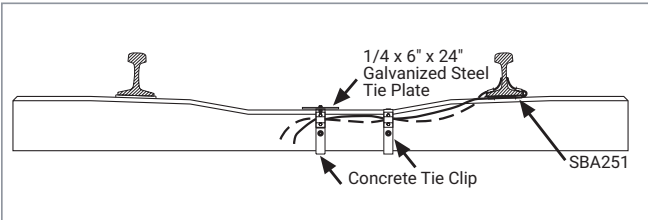
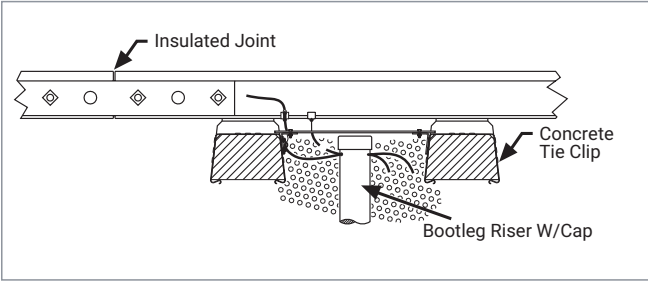
Typical Applications

CONCRETE TIE CLIPS

CONCRETE TIE CLIP BOOTLEG RISER 4-WIRE KIT



CONCRETE TIE CLIP APPLICATIONS

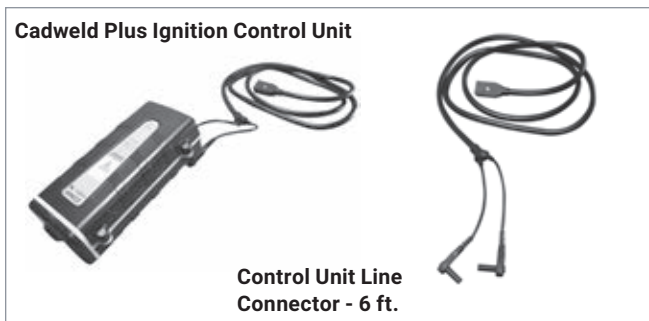


Cadweld Bonding Products

CONTROL UNIT

nVent ERICO Cadweld Plus Ignition Control Unit

Order in multiples of 60 - Includes one pair of replacement molds, necessary welding material, cleaning tool, 5 each combo cleaning/cutting wheels, 5 each 4.5" combo cleaning/cutting wheels.



Bond	6-1/2"	7"	7-1/2"	9-3/4"
3/16" DIA				
XS	SBS24882C-WPW2		SBS24883C-WPW2	SBS24884C-WPW2
XS-TINNED	SBXSHU2C-WPW2			
TAB	SB20104C-WPW2		SB20136C-WPW2	SB20108C-WPW2
HEAD FREE	SB0112C-WPW2			
5/16" DIA				
TAB		SB20175C-WPW2		
HEAD FREE		SB20175HF-CWPW2		

The PBPLUSCU battery powered ignition system must be ordered separately

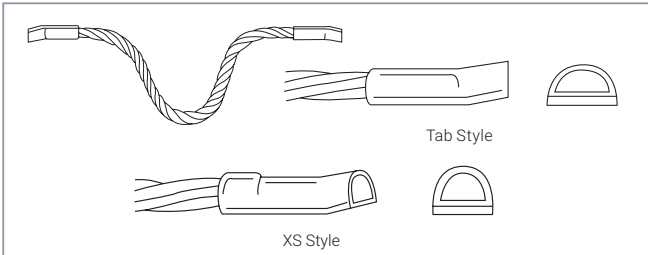
- Battery-powered controller box designed for 600 connections with one set of batteries
- Requires no special batteries or charger
- Comes standard with high temperature lead
- Connects to the welding material ignition strip with a custom made, purpose-designed termination clip
- Sends a predetermined voltage to the ignition strip and initiates the reaction
- The PBPLUSCU control unit electronic ignitor is primarily designed for ignition of nVent ERICO Cadweld Plus WELDING MATERIAL, F80
- PBPLUSCU meets AREMA® C&S Manual Recommendations; Part 8.1.34, 2013

Cadweld Bonding Products

BONDS

JOINT HEAD BONDS - Available in Cadweld Traditional (blue tube) and Cadweld Plus.

Order in multiples of 100



Bond	6-1/2"	7"	7-1/2"	9-3/4"	9-3/4"
------	--------	----	--------	--------	--------

3/16" Dia.

XS Style	SBS24882		SBS24883	SBS24884	
XS Style					
Tinned	SBXSHU2		SBXSHU3	SBXSHU4	
Conductor	SB20104		SB20136	SB20108	
Tab Style	SB20112		SB20128	SB20116	
Head Free					
Rail					

5/16" Dia.

Tab Style		SB20175			SB20118
Head Free		SB20175HF			
Rail					

Also available as bond only.

Cadweld rail head joint bonds provide:

- Maximum broken rail protection
- Unchanging electrical resistance
- Maximum corrosion resistance
- Easy installation, minimum installer skill required
- Simple and highly portable installation equipment
- Versatility, equally usable on old, worn, or new rail
- Durability, not destroyed by rail end build up

The nVent ERICO 4.5" Combo Cleaning and Cutting Wheel is available in a quantity of five with the following head bond part numbers & provided in the bond kit.

SBS24882W2, SBS24883W2, SBS24884W2, SB20108W2, SB20128W2, SB20116W2, SB20175W2, SB20118W2

Cadweld Bonding Products

BONDS

TRACK CONNECTORS - WEB

Available in Cadweld Traditional, and Cadweld Plus.

Order in multiples of 100 - Includes one pair of replacement molds, flint ignitor and necessary welding material and cleaning tool.

Part Number	Cadweld	Description
SBTBBU4A	Traditional	3/16" Dia. x 1" Tab x 4" Long Bootleg
SBTBCU412	Traditional	3/16" Dia. x 1" Tab x 12" Long Bootleg
SBTBBU4ACWP	Cadweld Plus	3/16" Dia. x 1" Tab x 4" Long Bootleg
SBTBCU412CWP	Cadweld Plus	3/16" Dia. x 1" Tab x 12" Long Bootleg

For complete Welder (SBTBT21C) see page 15 and compression tool (SBT031DJ) see page 54.

nVent ERICO combo cleaning /cutting wheels can be added by using part numbers: SBTBBU4AW2 or SBTBCU412W2

- SBTBBU4AW2 (Cadweld Traditional),
SBTBBU4ACWPW2 (Cadweld Plus)
- SBTBCU412W2 (Cadweld Traditional)
SBTBCU412CWPW2 (Cadweld Plus)

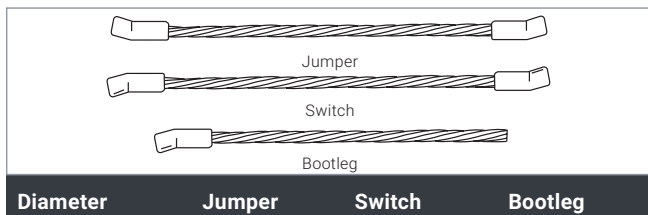
The Cadweld track connector from nVent ERICO is used when the advantages of a welded connection to the rail web are desired and standard compression connection to track wire is required. The connector provides flexibility and resistance to vibration fatigue by incorporating a length of bond strand between the Cadweld connection and the sleeved end. The SBTBBU4A and SBTBCU412 are 3/16" tinned copper alloy. (Other lengths available)

Cadweld Bonding Products

BONDS

JUMPER, SWITCH AND BOOTLEG BONDS

Substitute desired length of bond in even inches for 'X'. Replacement molds sold separately. All Cadweld bonds are furnished with the necessary F80 (Cadweld Traditional) and PLUSF80 (Cadweld Plus) formulation welding material.



Diameter	Jumper	Switch	Bootleg
3/16" Dia.			
3/4" XS Style	SBXSJ33"X"	SBXSS33"X"	SBXSB33"X"
3/4" Tab	SBTBJ33"X"	SBTBS33"X"	SBTBB33"X"
1" Tab	SBTBJ34"X"	SBTBS34"X"	SBTBB34"X"
1-1/2" Tab	SBTBJ36"X"	SBTBS36"X"	SBTBB36"X"
5/16" Dia.			
1" Tab	SBTBJ54"X"	SBTBS54"X"	SBTBB54"X"

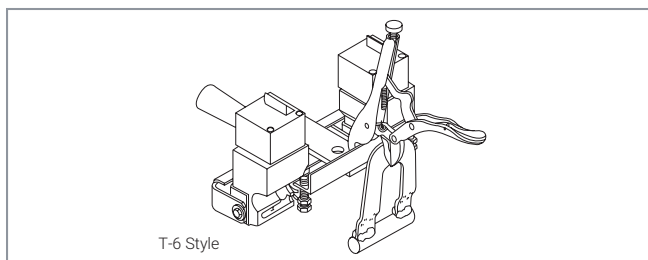
Also available as bond only.

STD Packs of 10 or 25

Cadweld Bonding Products

WELDERS AND MOLDS

RAIL HEAD WELDERS AND MOLDS



T-6 Style

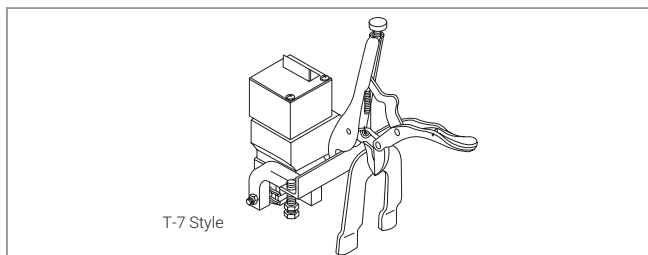
With Molds Bond	T-6 Style One-Piece Rail Welder Complete			
	6-1/2"	7"	7-1/2"	9-3/4"

3/16" Dia.

XS Style	SBXST6A	SBXST6C	SBXST6D
Tab Style	SBTBT6A	SBTBT6C	SBTBT6D
Head Free Style	SBHFT6A	SBHFT6C	SBHFT6D

5/16" Dia.

Tab Style	SBTBT6B	SBTBT6E
Head Free	SBHFT6B	



T-7 Style

T-7 Style Bond Terminal	3/16" Dia. Bonds		5/16" Dia. Bonds	
	Welder Pair	Molds Only (Pair)	Welder Pair	Molds Only (Pair)
3/4" XS	SBXST7D	SBM456		
3/4" Tab	SBTBT7F	SBS5838		
1" Tab	SBTBT7G	SBS5839	SBTBT7B	SBS898
Head Free	SBHFT7E	SBS925	SBHFT7K	SBB492

All welders and molds are compatible with Traditional Blue Tube & CADWELD PLUS welding material.

T-7 Welders are a convenient means of attaching rail head bonds wherever the standard T-6 Welder will not fit properly such as transposed rail and compromised joints.

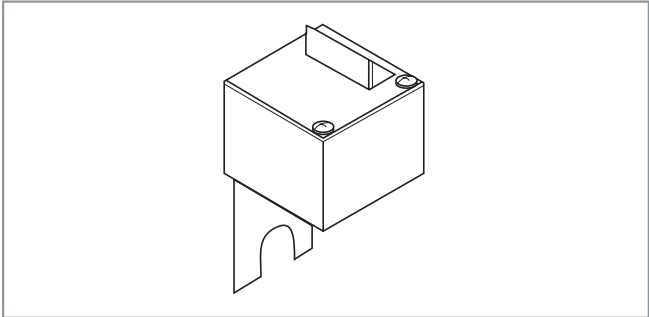
Cadweld Bonding Products

WELDERS AND MOLDS

RAIL HEAD WELDERS AND MOLDS CONTINUED

Bond	Replacement Parts		Bond Clips
	Molds Only (Pair)	Molds With Mounting Parts And Clips	
3/16" Dia.			
XS Style	SBM456	SBM456F	S2659
Tab Style	SBS5838	SBS5838F	S2659
Head Free Style	SBS925	SBS925F	S2044
5/16" Dia.			
Tab Style	SBS898	SBS898F	S119
Head Free	SBB492	SBB492F	B194D

REPLACEMENT MOLD COVERS FOR T-6 AND T-7 WELDERS



Part Number	Description
SBB2516A	Single Replacement Cover
SBB2516APRWH	Pair of Replacement Covers with Hardware

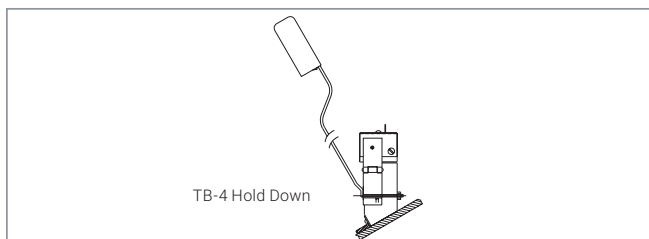
REPLACEMENT MOLD COVERS FOR T21 AND TB5 WELDERS

Part Number	Description
B30174	Single Replacement Cover
B2516C1	Single Replacement Cover Hardware
B2516C	Single Replacement Cover with Hardware

Cadweld Bonding Products

WELDERS AND MOLDS

FROG AND SPECIAL TRACK WORK

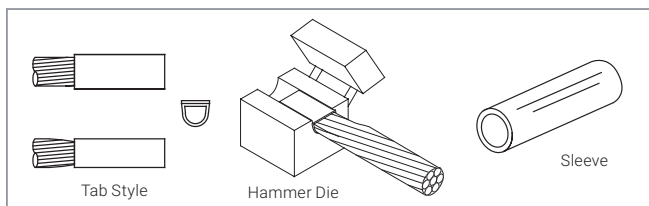


Terminal Style	TB-4 Welder		Replacement Mold
	Hold Down	Frame Only	
3/16" Dia.			
3/4" XS	SBXSTB4A	B323L	SBB343A
3/4" Tab	SBTBTB4B	B323L	SBB343B
1" Tab	SBTBTB4C	B323L	SBB343C
1-1/2" Tab	SBTBTB4D	B323L	SBB343D
5/16" Dia.			
1" Tab	SBTBTB4E	B323L	SBB343E

(Not to be used on base of load bearing rail)

FIELD MADE BONDS

TAB-STYLE TERMINALS



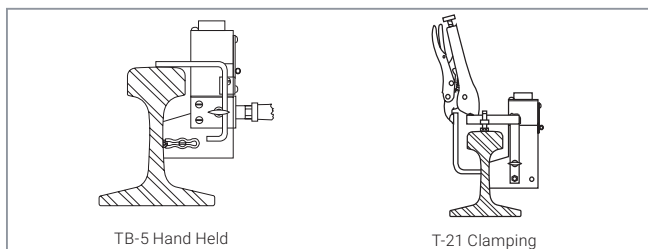
Cable Size	Terminal Length	Sleeves Part Number	Std. Pkg.	Hammer Dies	Weld Material (F80)		
				Part Number	Cadweld Traditoinal	Cadweld Plus	Std Pkg.
#6 Sol	1"	SBS10	100	N/A	SB25	SB25PLUS	50
3/16"	3/4"	SBS11C	100	SBD50	SB25	SB25PLUS	50
3/16"	1"	SBS12C	100	SBD50	SB25	SB25PLUS	50
3/16"	1-1/2"	SBS13C	100	SBD50	SB25	SB25PLUS	50
5/16"	1"	SBS09C	100	SBD51	SB32	SB32PLUS	50

Cable - supplied by nVent in 3/16" and 5/16" copper alloy stranded signal cable (bare) and 3/16" signal cable with 4/64" and 6/64" PVC insulation. Available in 100' coils, 500' and 1000' reels. See page 55.

Cadweld Bonding Products

WELDERS AND MOLDS

WEB (FIELD MADE AND FACTORY MADE)

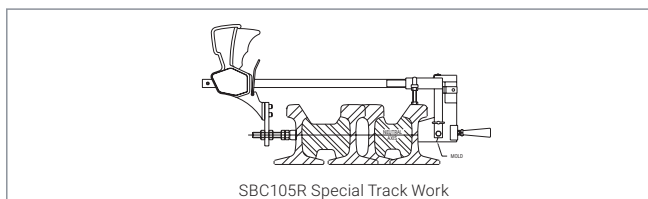


Terminal Style	TB-5 Welder		T-21 Welder		Replacement Mold
	Hand Held	Frame Only	Clamping	Frame Only	
3/16" Dia.					
3/4" XS	SBXSTB5A		SBXST21A		SBB200A
3/4" Tab	SBTBTB5B		SBTBT21B		SBB200B
1" Tab	SBTBTB5C	M22	SBTBT21C	C105B	SBB200C
1-1/2" Tab	SBTBTB5D		SBTBT21D		SBB200D
5/16" Dia.					
1" Tab	SBTBTB5E	M22	SBTBT21E	C105B	SBB200E

TB-5 & T-21 Web welders are for installation of track circuits and jumper bonds to the neutral axis.

TB-5 & T-21 Welders and replacement molds are supplied in pairs. Welder frames are sold as pairs.

EXTENSION CLAMPS ON RAIL HEAD AND RAIL WEB



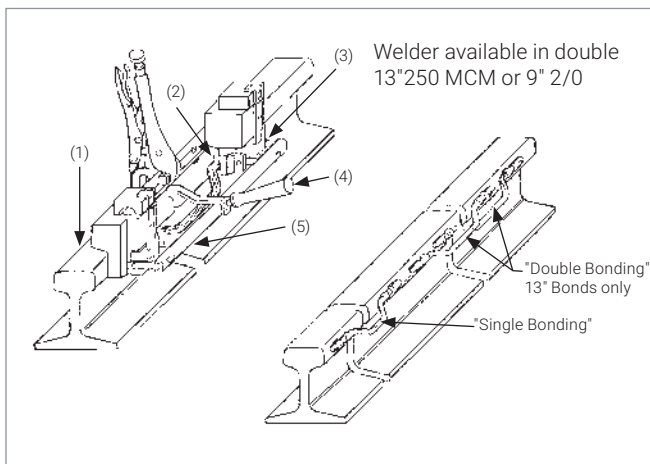
Part No.	Description	Mold
SBC105S	Head Ext. Clamp	See T-7 Style Molds
SBC105SA	Head Ext. Clamp w/ Mold Cover	See T-7 Style Molds
SBC105R	Web Ext. Clamp	See TB-5 / T-21 Style Molds

- Adjusts for wide span usage - e.g. frogs, switches, etc. (25-1/2" Max. Span)
- Easy to use and lightweight.
- Can be used with existing head and web molds.
- Can also be used on standard (single) rail.

Cadweld Transit Bonds

C BONDS

Head Bond Welders and Molds



Bond Information

Size AWG/KCM	Bond Clips Only (2) (1 Pair) Part #	Cadweld Tra- ditional Weld Material*	Cadweld Plus Weld Material*	Welder Complete
2/0 - 9"	PBC12J9	PB65	PB65PLUSF80	PBCT812J9
2/0 - 13"	PBC12J13	PB65	PB65PLUSF80	PBCT812J13
4/0 - 9"	PBC12S9	PB90	PB90PLUSF80	PBCT82S9
4/0 - 13"	PBC12S13	PB90	PB90PLUSF80	PBCT82S13
250 - 13"	PBC12W13	PB90	PB90PLUSF80	PBCT82W13
250 - 13"	PBC12W- 13CWP		PB90PLUSF80	PBCT82W- 13CWP

*Choose either Cadweld Traditional or Cadweld Plus Weld Material

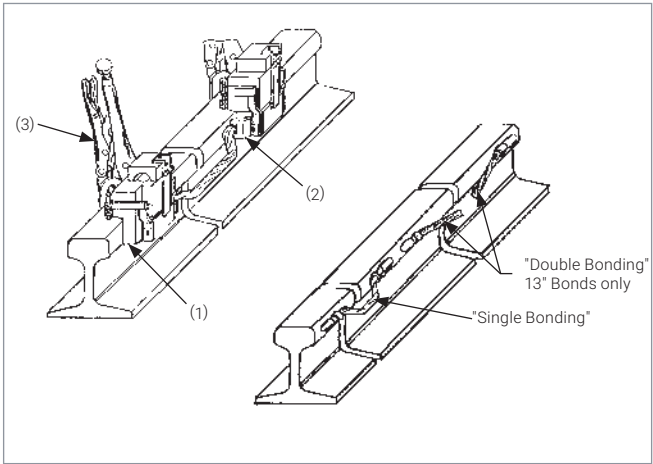
Replacement Part Catalog Numbers

Size AWG/ KCM	(1) Molds Only (1 Pair) Part #	(2) Bond Clips Only (1 Pair) Part Number	(3) Mold Suspension Assembly (1 pair) Part Number	(4) Clamp Assembly	(5) Ex- tension Bar
2/0 - 9"	PBC2JM	B194A	PBC2JF	M103E	S10212 / S1029
2/0 - 13"	PBC2JM	B194A	PBC2JF	M103E	S10212 / S1029
4/0 - 9"	PBC2SM	B194B	PBC2SF	M103E	S1025 / S1029
4/0 - 13"	PBC2SM	B194B	PBC2SF	M103E	S1025 / S1029
250 - 13"	PBC2WM	B194C	PBC2WF	M103E	S1029
250 - 13"	PBC2WC- WPM	B194C	PBC2WFCWP	M103E	S1029

Cadweld Transit Bonds

C BONDS

Head Bond Welders and Molds



Bond Information

Size AWG/ KCM	Part Number	Type	Cadweld Tradi- tional Weld Mate- rial*	Cadweld Tradi- tional Weld Mate- rial*	Cadweld Plus Weld Material*	Welder Com- plete
2/0 - 9"	PBC12J9"	Joint	PB65	PB65	PB-65PLUSF80	PBC-T912J9
2/0 - 13"	PBC12J13"	Joint	PB65	PB65	PB-65PLUSF80	PBC-T912J9
2/0 - A"	PBC32JA"	Stub End	PB65	PB65	PB-65PLUSF80	PBC-T912J9
4/0 - 9"	PBC12S9"	Joint	PB90	PB90	PB-90PLUSF80	PBCT92S
4/0 - 13"	PBC12S13"	Joint	PB90	PB90	PB-90PLUSF80	PBCT92S
4/0 - A"	PBC32SA"	Stub End	PB90	PB90	PB-90PLUSF80	PBCT92S
250 - 13"	PBC12W13"	Joint	PB90	PB90	PB-90PLUSF80	PBC-T92W
250 - A"	PB-C12W1A"	Stub End	PB90	PB90	PB-90PLUSF80	PBC-T92W
250 - 13"	PBC12W-13CWP	Joint			PB-90PLUSF80	PBCT-92WCWP
250 - A"	PBC-32WACWP	Stub End			PB-90PLUSF80	PBCT-92WCWP

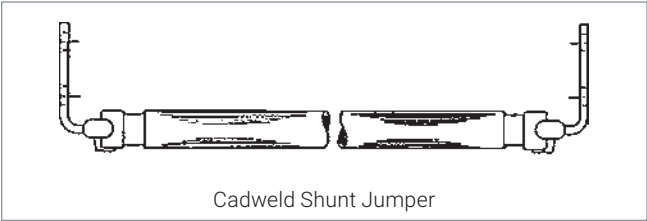
Cadweld Transit Bonds

C BONDS

Head Bond Replacement Part Catalog Numbers

Size AWG/KCM	(1) Molds Only (1 Pair) Part #	(2) Bond Clips Only (1 Pair) Part Number	(3) Welder Clips
2/0 - 9"	PBC2JM	B194A	B196A
2/0 - 13"	PBC2JM	B194A	B196A
2/0 - A"	PBC2JM	B194A	B196A
4/0 - 9"	PBC2SM	B194B	B196A
4/0 - 13"	PBC2SM	B194B	B196A
4/0 - A"	PBC2SM	B194B	B196A
250 - 13"	PBC2WM	B194C	B196A
250 - A"	PBC2WM	B194C	B196A
250 - 13"	PBC2WCWPM	B194C	B196A
250 - A"	PBC2WCWPM	B194C	B196A

C Style Jumper Bond Assembly

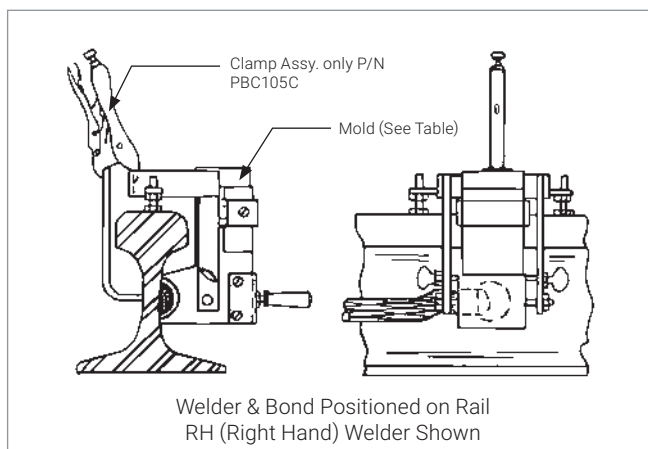


Part Number	DIM. A	Cable (1)			Lug (2)
		Size	Class	Insulation	
PBB 32590	90"	500 RLAY	H	PER BART SPEC.	PB-B102EG002

Cadweld Transit Bonds

C BONDS

C Style Web Bond Welders and Molds



Cable KCM Type	Bond Part No. Joint / Cross	Stub End	(1) Welder (Pair)
250 ROPELAY	PBW12W"X"	PBW32W"X"	PBWT202W
500 ROPELAY	PBW12W"X"	PBW33S"X"	PBWT203S
23.5 MM COMP	-	PBW257A"X"	PBWT2057

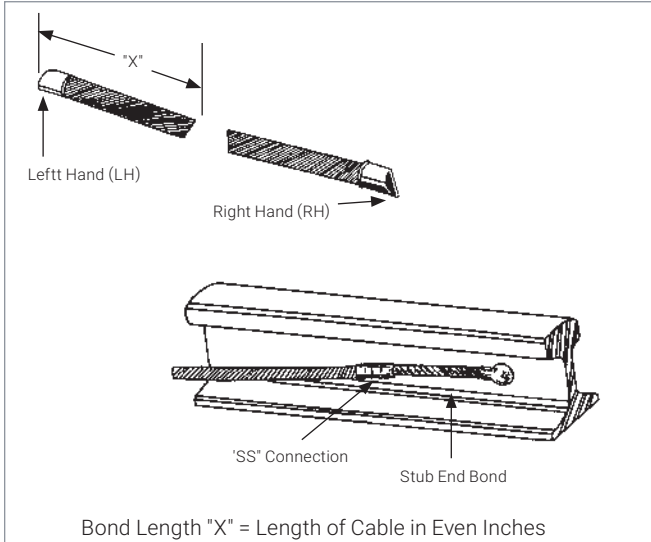
Cable KCM Type	Cadweld Traditional Weld Mat'l	Cadweld Plus Weld Mat'l*	Mold Pair
250 ROPELAY	PB115	PB115PLUSF80	PBW2W
500 ROPELAY	PB250	PB250PLUSF80	PBW3S
23.5 MM COMP	PB250	PB250PLUSF80	PBW57

*Choose either Cadweld Traditional or Cadweld Plus

Cadweld Transit Bonds

C BONDS

C Style Stub End Bonds

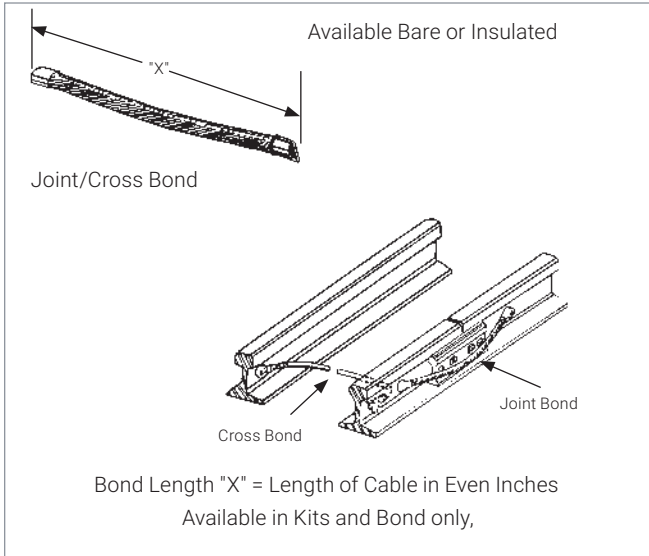


Bare Cable AWG/KCM Type	Stub End	Welder (Pair)	Cadweld Traditi- onal Weld Mate- rial*	Cadweld Plus Weld Mate- rial*	Mold Only (Pair)	Welder Frame Only
1/0 CON- CENTRIC	PBW3- 2C-"A"	PB- WT202C	PB65	PB- 65PLUSF80	PBW - 2C	PBC105C
1/0 ROPE- LAY	PBW3- 2E-"A"	PB- WT202E	PB65	PB- 65PLUSF80	PBW - 2E	PBC105C
2/0 CON- CENTRIC	PBW3- 2G-"A"	PB- WT202G	PB90	PB- 90PLUSF80	PBW - 2G	PBC105C
2/0 ROPE- LAY	PBW3- 2J-"A"	PB- WT202J	PB90	PB- 90PLUSF80	PBW - 2J	PBC105C
4/0' CON- CENTRIC	PBW3- 2Q-"A"	PB- WT202Q	PB90	PB- 90PLUSF80	PBW- 2Q	PBC105C
4/0 ROPE- LAY	PBW3- 2S-"A"	PB- WT202S	PB90	PB- 90PLUSF80	PBW- 2S	PBC105C
250 ROPELAY	PBW3- 2W-"A"	PB- WT202W	PB115	PB- 115PLUSF80	PBW- 2W	PBC105C
350 ROPE- LAY	PBW3- 3B-"A"	PB- WT203B	PB150	PB- 150PLUSF80	PBW- 3B	PBC105C
250 ROPELAY	PBW3- 3F-"A"	PB- WT203F	PB150	PB- 150PLUSF80	PBW- 3F	PBC105C
500 ROPE- LAY	PBW3- 3S-"A"	PB- WT203S	PB250	PB- 250PLUSF80	PBW- 3S	PBC105C

Cadweld Transit Bonds

C BONDS

C Style Joint/Cross Bonds

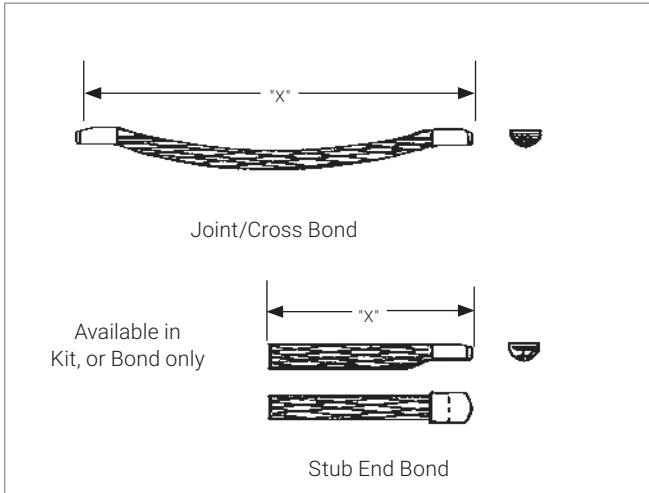


Bare Cable AWG/ KCM Type	Joint / Cross	Welder (Pair)	Cadweld Tradi- tional Weld Mate- rial*	Cadweld Plus Weld Mate- rial*	Mold Only (Pair)	Welder Frame Only
1/0 CON- CENTRIC	PBW1- 2C-"A"	PB- W1202C	PB65	PB- 65PLUSF80	PBW - 2C	PBC105C
1/0 ROPE- LAY	PBW1- 2E-"A"	PB- WT202E	PB65	PB- 65PLUSF80	PBW - 2E	PBC105C
2/0 CON- CENTRIC	PBW1- 2G-"A"	PB- WT202G	PB90	PB- 90PLUSF80	PBW - 2G	PBC105C
2/0 ROPE- LAY	PBW1- 2J-"A"	PB- WT202J	PB90	PB- 90PLUSF80	PBW - 2J	PBC105C
4/0' CON- CENTRIC	PBW1- 2Q-"A"	PB- WT202Q	PB90	PB- 90PLUSF80	PBW-2Q	PBC105C
4/0 ROPE- LAY	PBW1- -2S-"A"	PB- WT202S	PB90	PB- 90PLUSF80	PBW-2S	PBC105C
250 ROPELAY	PBW1- -2W- "A"	PB- WT202W	PB115	PB- 115PLUSF80	PBW-2W	PBC105C
350 ROPELAY	PBW1- -3B-"A"	PB- WT203B	PB150	PB- 150PLUSF80	PBW-3B	PBC105C
250 ROPELAY	PBW1- -3F-"A"	PB- WT203F	PB150	PB- 150PLUSF80	PBW-3F	PBC105C
500 ROPELAY	PBW1- -3S-"A"	PB- WT203S	PB250	PB- 250PLUSF80	PBW-3S	PBC105C

Cadweld Transit Bonds

C BONDS

C Style Joint/Cross, Stub End Bonds



HOW TO ORDER:

Bond Length "X" = Length of Cable in Even Inches

Joint Bonds - Bond Length "X" Must Be 12" or Longer Than Rail Angle Bar

Cross Bonds - Bond Length "X" Must Be 14" or Longer Than Track Gauge

Stub End Bonds - Standard Length + 9" Other Lengths Available

Welder Mold Only Part Numbers Indicate 1 Pair

Welder Pair Include 1 Pair of Molds Mounted in Pair of Clamps

Part No. - RH (Right Hand) or - LH (Left Hand) Indicates 1 Unit

(1) Bonds are Furnished with Necessary Welding Material and Steel Disks

A Pair of Replacement Molds is Supplied with Every 80 Joint/Cross Bonds

A Pair of Replacement Molds is Supplied with Every 100 Stub End Bonds or More

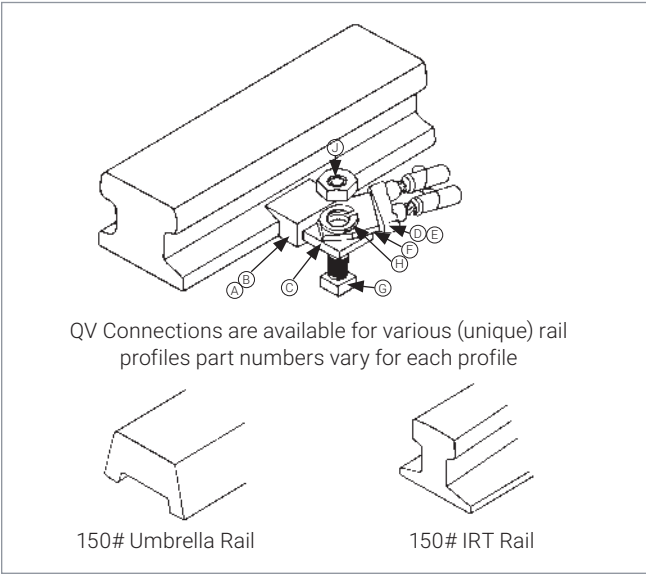
A Flint Ignitor and Mold Cleaner are Supplied with Every Complete Welder (Pair) and with Every Pair of Replacement Molds

(2) To Add Sleeve at End of Stub End Bond, Add "WS" Suffix to Bond Part No., PBW3312WS

Cadweld Transit Bonds

QV CONNECTIONS

Lug to Rail

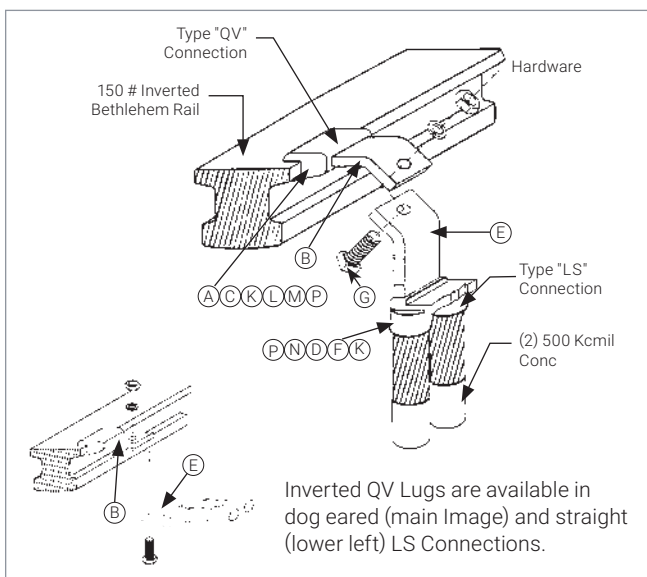


50 Kits Include		150# Bethlehem Rail	
Item	Quantity	Catalog Number	Description
A	1	PB72QVJH150B001	Mold (Only)
B	50	SCB6001A / SCB6001APLUSF80	Weld Material (Cadweld Traditional/ Cadweld Plus)
C	50	PBB103JH001	Lug
D	1	PB71LSJH3Q	Welder (Only)
E	50	PB500 / PB-500PLUSF80	Weld Material (Cadweld Traditional/ Cadweld Plus)
F	50	PBB103JH002	Lug
G	50	PBA136A	Bolt
H	50	PBA136B	Was
J	50	PBA136C	Nut
-	1	PBT320	Flint Ignitor

Cadweld Transit Bonds

QV CONNECTIONS

Connection Kit: Inverted 150# Rail



KIT NO. PBXLK206

Description	Item	Part Number Dog-Eared / Straight
Type	Mold Only	A PB99XLQVJHVMS
Qv	Lug	B PBB103JH45005 / PBB99XLQVJHVMS
Connection	Weld Material (Cadweld Traditional/ Cadweld Plus)	C XLSCB6001A / XLSCB6001APLUSF80
Type	Mold Only	D PB99XLLSJH3QS
Ls	Lug	E PBB103JH45005 / PBB99XLLSJH3QS
Connection	Weld Material (Cadweld Traditional/ Cadweld Plus)	F PBXL500 / PBXL500PLUSF80
Hardware	Bolt	G PBA927L007
	Washer	H PBA929B028
	Nut	J PBA928B042

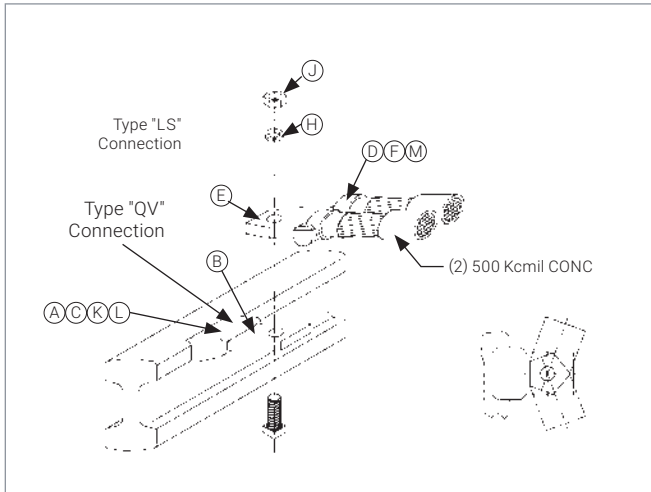
RELATED ITEMS NOT INCLUDED IN KIT:

Baffle 4 In	K	2	PBXLB973A1
Clamping Fixture For 'Qv' Connection	L	1	PBB466B
Frame For 'Qv' Connection	M	1	PBB466C
Bench Fixture For 'Ls' Connection	N	1	PBC104B
Relia Start Battery	P	2	PBXLB971A1

Cadweld Transit Bonds

LS CONNECTIONS

Connection Kit: Lug Dual Head Third Rail



Connection Kit Lug Dual Head 3rd Rail

Description		Item	Quantity	Part Number
Type	Mold Only	A	1*	PB80QVJH70S001
Qv	Lug	B	50	PBB103JH001
Connection	Weld Material (Cadweld Traditional/ Cadweld Plus)	C	50	SCB6001A / SCB6001APLUSF80
Type	Mold Only	D	1*	PB71LSJH3Q
Ls	Lug	E	50	PBB103JH002
Connection	Weld Material (Cadweld Traditional/ Cadweld Plus)	F	50	PB500/PB- 500PLUSF80
Hardware	Bolt	G	50	A927L007
	Washer	H	50	A929B028
	Nut	J	50	A928B042

Related Items Not Included in Kit:

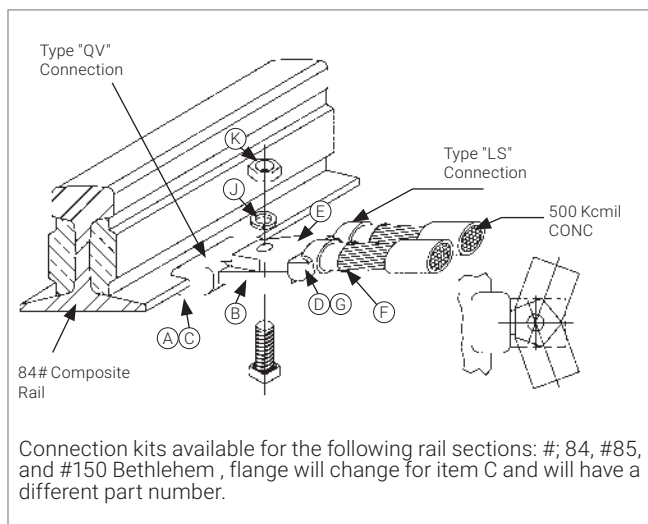
Clamping Fixture For "QV" Connection	K	PBB466B
Frame For "QV" Connection	L	PBB466C
Bench Fixture For "LS" Conn.	M	PBC104B

* (1) Mold Per 50 Connections

Cadweld Transit Bonds

LS CONNECTIONS

Connection Kit Lug Dual Head Third Rail (84C and 85C Rail)



Connection Kit Lug to Third Rail				
Description		Item	Quantity	Part Number
TYPE	Mold Only	A	1* (1)	PB72QVJH84C
"QV"	Lug	B	1	PBB103JH001
CONNECTION	Weld Material (Cadweld Traditional/ Cadweld Plus)	C	3	SCB6001A / SCB6001APLUSF80
TYPE	Mold Only	D	1* (2)	PB71LSJH3S001
"LS"	Lug	E	1	PBB103JH002
CONNECTION	Weld Material (Cadweld Traditional/ Cadweld Plus)	F	2	PBS429F3S20/ PBS429F- 3S20PLUSF80
	Bolt	G	2	PB250
	Washer	H	1	PBA927L007
HARDWARE	Nut	J	1	PBA929B028
	Nut	K	1	PBA928B042

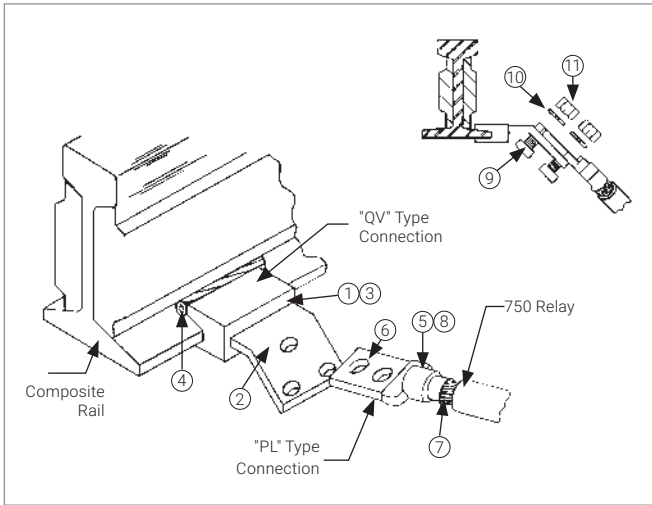
* (1) "QV" Connection Requires P/N PBC103C

* (2) Optional Bench Fixture for Shop Assembly for "LS" Connection Available, P/N PBC104B. REF. XE-1384

Cadweld Transit Bonds

LS CONNECTIONS

Connection Kit Lug Dual Head Third Rail (84C and 85C Rail)



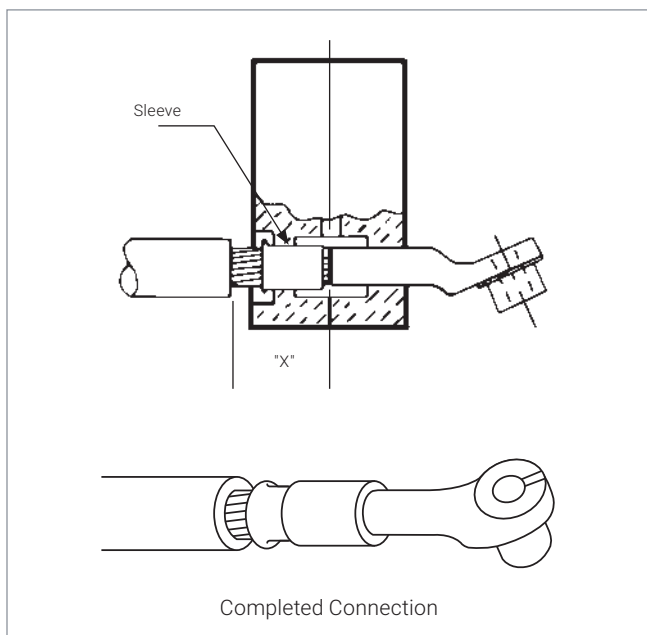
"QV" TO "PL" CONNECTION				
Description		Item	QTY	Part Number
Hardware	Lock Nut	11	2	PBA928B043
	Lockwasher	10	2	PBA929B018
	Hex Bolt	9	2	PBA927F067
Type	Weld Material (Cadweld Traditional/ Cadweld Plus)	8	2	PB200/ PB200
PL Connection	Sleeve	7	1	PB2429F4N24
	Lug	6	1	PBB242JH
	Mold W/ Frame	5	*1	A1928
Type	Pack Mat'l	4	1	SCB10002A
QV	Weld Material (Cadweld Traditional/ Cadweld Plus)	3	1	PBB103JM002 / PBB103JM002
Connection	Lug	2	1	PB80QYJM-B5A001
	Mold	1	*1	PB80QYJM-B5A001

*1 Mold Per 50 Lug Set Kits

Cadweld Transit Bonds

CROWN SOCKETS

Cable to Crown GF Connections



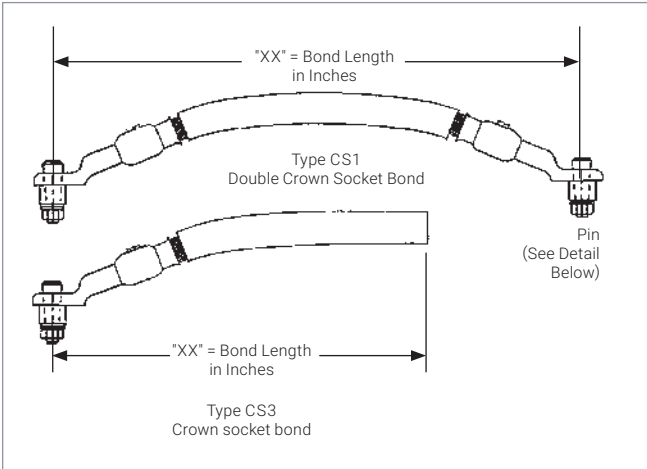
Cable Size	Mold Catalog Number	Sleeve Catalog Number	Cadweld Traditional Weld Material	Cadweld Plus Weld Material	E-Z Change -Ref-	Strip Length
350 ROPE-LAY	PB-10GF3FCS	PBS429F3F16	PB200	PB-200PLUSF80	PBL160	2"
500 CON-CENTRIC	PB10GF3QCS	-	PB250	PB-250PLUSF80	PBL160	2"
500 ROPE-LAY	PB10GF-3SCS	PBS429F3S20	PB250	PB-250PLUSF80	PBL160	2"

Cadweld Transit Bonds

CROWN SOCKETS

Cable to Crown Assemblies

Type CS1 (Double Crown Socket) and CS3 (Crown Socket Stub End) Insulated Bond With Pin Detail

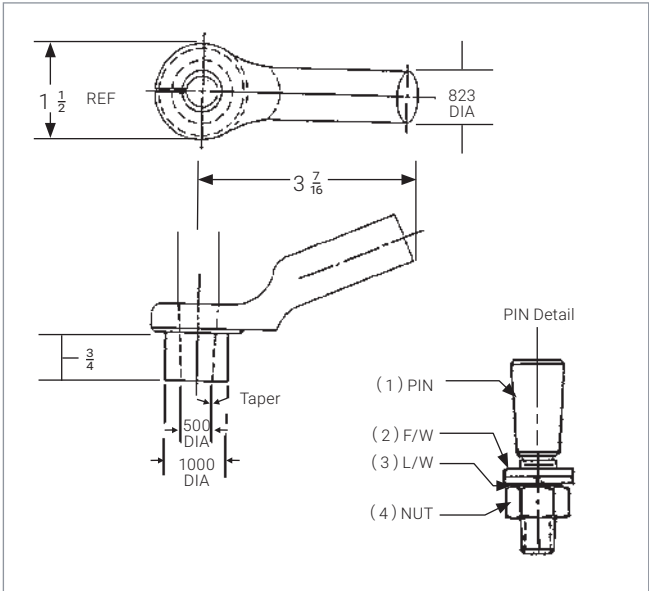


Bond Catalog Number	Type	Cable	Insulation
PBCS13S002"XX"	PB10GF3FCS	500 KCM ROPELAY	2 KV EPR
PBCS33S004"XX"	PB10GF3QCS	500 KCM ROPELAY	2 KV EPR
PBCSS13Q001"XX"	PB10GF3SCS	500 KCM CONCENTRIC	2 KV EPR

Cadweld Transit Bonds

CROWN SOCKETS

Lock Pin Assembly



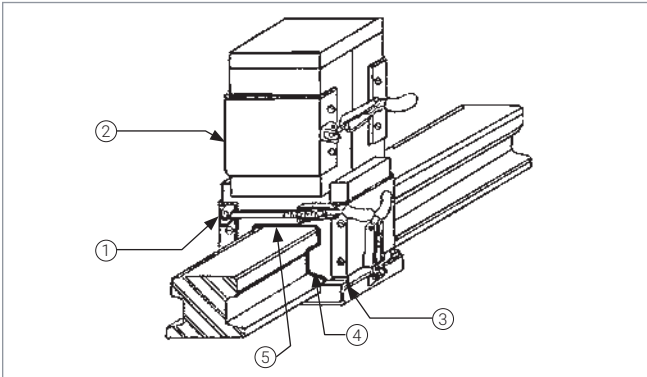
Part Number	Description
PBB 1883Q	CROWN SOCKET W/ LOCK PIN ASSY

Lock Pin Assembly Only		
Pin Detail	Standard	Oversize
(1) PIN	PBB1B83QB1	PBB1B83QB2
(2) F / W	PBA929A036	PBA929A036
(3) L/W	PBA929B008	PBA929B008
(4) NUT	PBA928B008	PBA928B008

Cadweld Transit Bonds

SPLICE CONNECTIONS

Contact Rail Splice XE1457



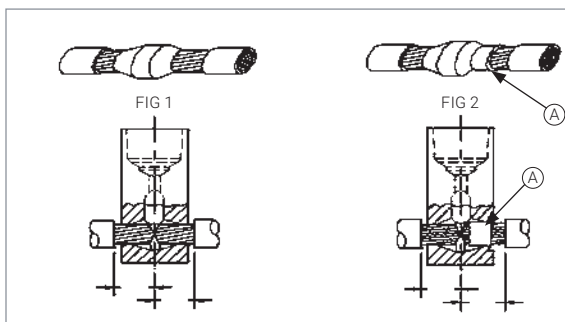
Type "SS" Connection

Part Number	Description	Quantity
PB99SS1 BM	Mold Only	2 PER 100 KITS
PBB23201 M	Crucible Only	2 PER 100 KITS
SCC292A / SCC292APLUSF80	Weld Material (Cadweld Traditional / Cadweld Plus)	1 PER KIT
PBB1 51008	BATT	1 PER KIT
PBB1 007	BATT	2 PER KIT
PBB140A	SHIM	2 PER KIT

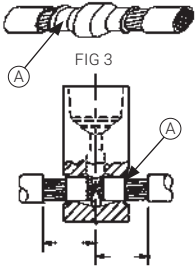
Cadweld Transit Bonds

SPLICE CONNECTIONS

Straight Splice



Mold	Sleeve "A"		Cadweld Traditional	Cadweld Plus
Part Number	Part Number	No Req'd	Weld Material	Weld Material
PB10SS2V	----	0	PB115	PB115PLUSF80
PB10SS2W2V	PBS429F2W16	1	PB115	PB115PLUSF80
PB10SS2W	PBS429F2W16	2	PB115	PB115PLUSF80
PB10SS3D	----	0	PB150	PB150PLUSF80
PB10SS3F3D	PBS429F3F16	1	PB150	PB150PLUSF80
PB10SS3F	PBS429 F3F16	2	PB150	PB150PLUSF80
PB10SS3Q	----	0	PB200	PB200PLUSF80
PB10SS3S3D	PBS429F3S20	1	PB200	PB200PLUSF80
PB10SS3S3D001	PBS429F3S20	1	PB90	PB90/PLUSF80
PB10SS3S3Q	PBS429F3S20	1	PB200	PB200PLUSF80
PB10SS3S3Q001	PBS429F3S20	1	PB90	PB90/PLUSF80
PB10SS3S	PBS429F3S30	2	PB200	PB200PLUSF80
PB10SS3S	PBS429F3S20	2	PB200	PB200PLUSF80

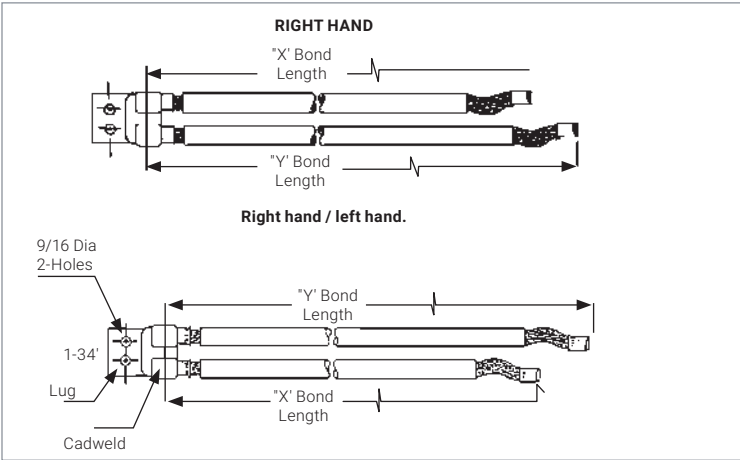


*Also useable with Double Stud End Bond (2-250 Kcm Doubled End is Compressed to be Equivalent to 500 Kcm Ropelay and Comes Complete with Sleeve PBS429F3S20 Attached).

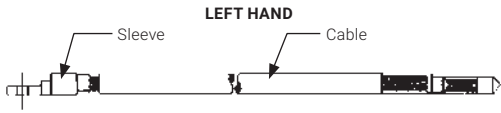
E-Z		STRIP LENGTH		
Change Ref	"X" (IN.)	"Y" (IN.)	See Figure	Description
PBL160	2	----	----	250 CON CENTRIC
PBL160	2	1 1/8	2	250 ROPELAY TO 250 CON-CENTRIC
PBL160		1 1/8	3	250 ROPELAY
PBL160	2	----	----	350 CON CENTRIC
PBL160	2	1 1/8	----	350 ROPELAY TO 350 CON-CENTRIC
PBL160		1 1/8	3	350 ROPELAY
PBL160	2	----	----	500 CON CENTRIC
PBL160	2	1 3/8	2	500 ROPELAY • TO 350 CONCENTRIC
PBL160	2	1 3/8	2	500 ROPELAY * TO 350 CONCENTRIC
PBL160	2	1 3/8	2	500 ROPELAY • TO 350 CONCENTRIC
PBL160	2	1 3/8	2	500 ROPELAY • TO 350 CONCENTRIC
PBL160	----	1 3/8	3	500 ROPELAY *
PBL160	----	1 3/8	3	23.5 "COBRA" COMPOSITE (A806A11)

Cadweld Transit Bonds

IMPEDANCE BOND SIDE LEAD



Lug		Cadweld		
Part Number	Part Number	Size	Mold	Cadweld Traditional Weld Material
PBB490A"X"Y"RH/LH	PBB242JK	1/2 X 3	PB71DS3SJK	PB500



Bonds are Furnished with Necessary Welding Material, and Steel Disks 2-PB250 Per Assembly.

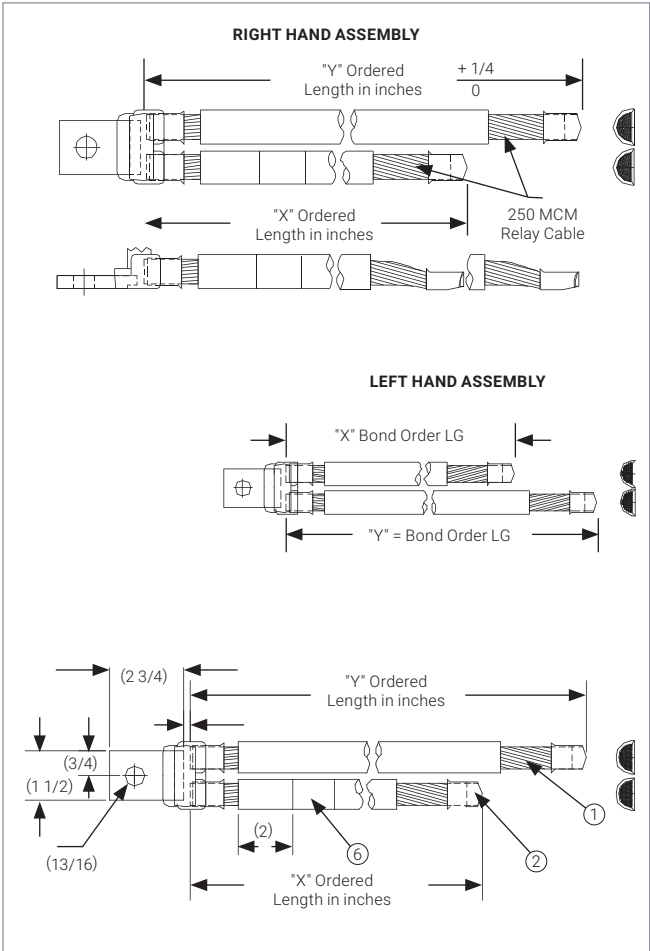
A Corresponding (RH/LH) Replacement Mold is Supplied with Every 40 Assemblies.

"X" and "Y" Indicate Bond Length I in inches as Shown Specify Part No. with Suffix RH (Right Hand) or LH (Left Hand) When Ordering.

CABLE				
Cadweld Plus Weld Material	Sleeve	Size	Insulation	STRAND
PB500PLUSF80	PBS429F3S20	500 ROPELAY	2 KV E.P.R.	CLASS H. 427

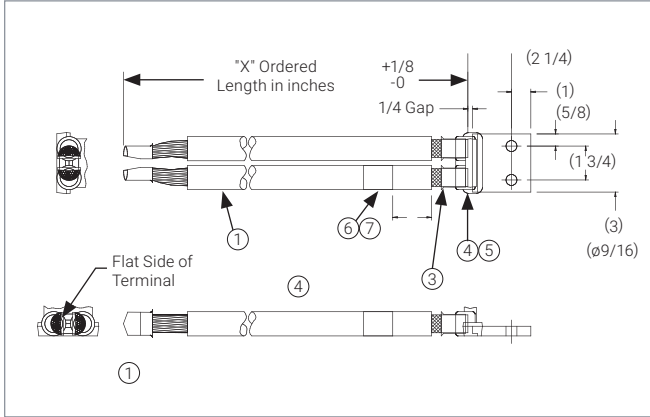
Cadweld Transit Bonds

IMPEDANCE BOND SIDE LEAD



Cadweld Transit Bonds

IMPEDANCE SIDE LEAD (EVEN LENGTHS)



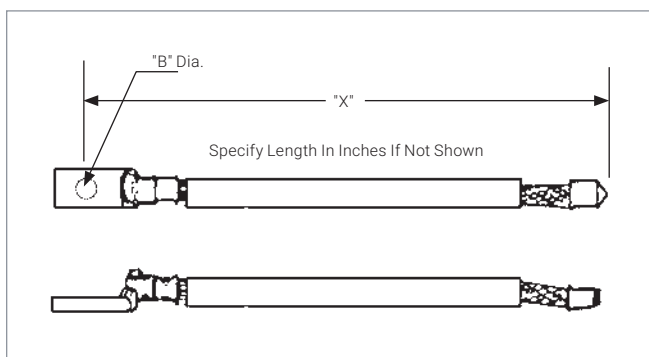
Item	Part Number	Quantity	Description
X	PBW33S27A'X'	X	BOND KIT,IMP,D,SIDE 500 RLAY INSUL'X'Y'LG
1	PBW33S008'X'B	2 'X'	STUB END BOND ONLY, 2 LENGTHS
2	8242JK	1	LUG,CU.IYPE UC 1 /2 X 3 X 3
3	93002520F	2	SLEEVE,CU {500 RLAY}
4	PB71DS3SJKM	1 / 50	MOLD ONLY,TYPE DS CONNECTION
5	#500	1	WELD METAL,F-20
6	B295BTFT	1	LABEL, BLANK 3 1/4 X 1 3/8
7	PBW3S	1 / 40	MOLD, TYPE W {PAIR} (NOT SHOWN)
8	PB250/ PB250PLUSF80	2	Cadweld Traditional/Cadweld Plus WELD METAL

1. 'X' Indicates Bond Ordered Length and Sub-Assy Stub End Bond only Length in in.: Lengths Identical.
2. Part No Suffix 'B' Indicates Bond only; Exclude Item 7(Mold) and Item B(Weld Metal).
3. For Complete Bond Assy Include (1) PBW.3S and (2) PB250.
4. Orientate Web Bond Terminals at Assy. As Shown
5. At the Start of the Job and After Every (75) Welds, A Weld shall be Tested by Q.C
6. Riser to be Rounded off with no Sharp or Rough Edges
7. Print Assy. Part No. and Description 'Impd, Bond, Side Lead' and Install as Shown

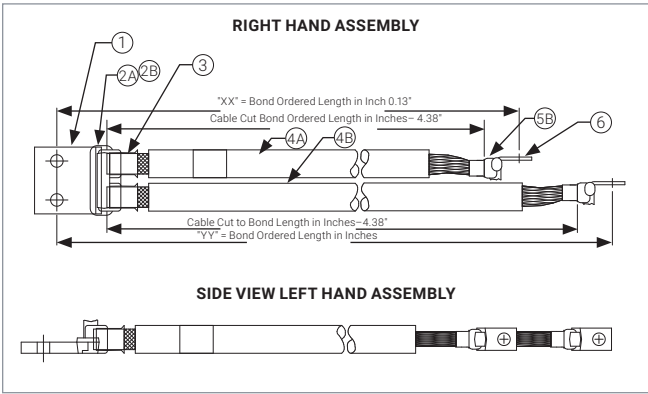
Cadweld Transit Bonds

IMPEDANCE SIDE LEAD

Type "W3" Web Bond - Impedance Side Lead



Bond (1) Part Number	Dim. "X"	Cable Size	Type	Insulation	Lub Size	DIA. "B"	Cadweld Connection Traditional/ Plus
PBW33S00548	48	500 KCM	CLASS "H"	2 KV E.P.R.	1/4 - 1 1/2	13/16	TYPE GL / TYPE GL PLUS
PBW33S00530	30	500 KCM	CLASS "H"	2 KV E.P.R.	1/4 - 1 1/2	13/16	TYPE GL / TYPE GL PLUS
PBW33S00560	60	500 KCM	CLASS "H"	2 KV E.P.R.	1/4 - 1 1/2	13/16	TYPE GL / TYPE GL PLUS
PBW32W00236	36	250 KCM	CLASS "H"	2 KV E.P.R.	1/4 - 1 1/2	13/16	TYPE GL / TYPE GL PLUS
PBW32W002"X"	SPEC- IFY "X"	250 KCM	CLASS "H"	2 KV E.P.R.	1/4 - 1 1/2	13/16	TYPE GL / TYPE GL PLUS
PBW32W005"X"	SPEC- IFY "X"	500 KCM	CLASS "H"	2 KV E.P.R.	1/4 - 1 1/2	13/16	TYPE GL / TYPE GL PLUS
PBW33S02642	42	500 KCM	CLASS "H"	2 KV E.P.R.	1/4 - 1 1/2	7 / 8	TYPE GL / TYPE GL PLUS

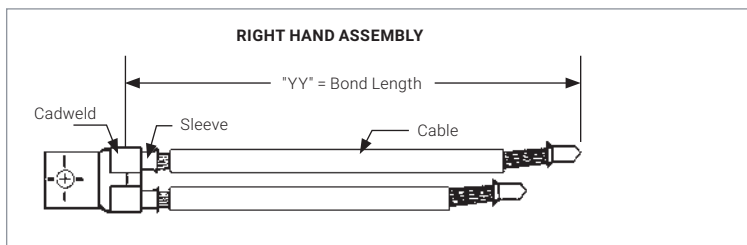


X	PBWA3S4248 (LH/RH)(B)	X	Bond, Power, Assy (Left Hand/ Right Hand)(Bond Only)
Item	Part Number	X	Description
1	B104JK002BLK	1	Lug, Bond, Cu 110000, Tinned
2A	TBD	0.02	Mold, Cadweld
2B	TBD	1	Weld Metal, Cadweld
3	S429F3S20	4	Sleeve, Cu, Flared, 500 Relay
4A	A810A19	91.63 inches	Cable, Insul, 500kcm Relay
4B	A810A19	91.63 inches	Cable, Insul, 500kcm Relay
5A	TBD	0.04	Mold, Cadweld
5B	TBD	2	Weld Metal, Cadweld
6	B102GG02BLK	2	Lug, Bond, Cu 110000, Tinned
7	B295BTFT	1	Label

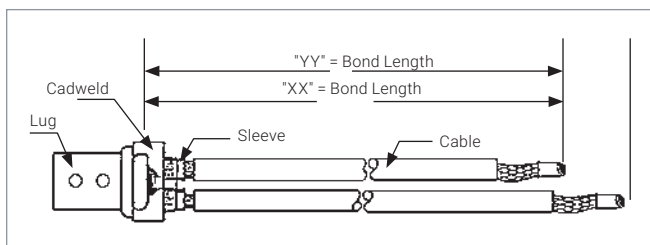
Cadweld Transit Bonds

IMPEDANCE SIDE LEAD

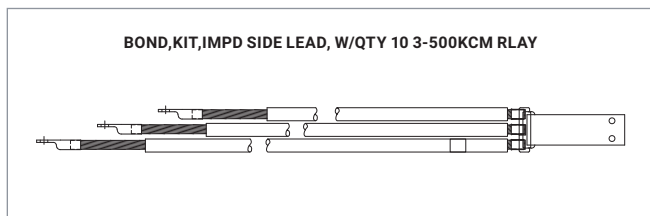
"W3" Web Bond



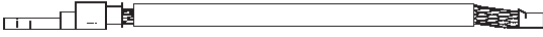
Part Number	Lug Part Number	Size	Cadweld Mold	Cadweld Traditional Weld Material
PBW33S012XX/YY - RH	PBB241JH002	1/2 X 2	PB71DS3SJH	PB500
PBW33S012XX/YY - RH	PBB241JH002	1/2 X 2	PB71DS3SJH	PB500



Part Number	Lug Part Number	Size	Cadweld Mold	Cadweld Traditional Weld Material
PBB526AXX-YY	PBB242JG	1/2x1-1/2	PB71 D53SJG	PB500
PBB526BXX-YY	PBB242JG	1/2x1-1/2	PB71 D53SJG	PB500



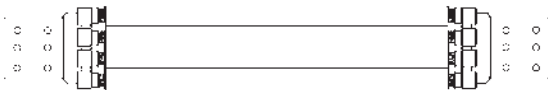
SIDE VIEW LEFT HAND ASSEMBLY



Cadweld Plus Weld Material	Cable		
	Sleeve	Size	Insulation
PB500PLUSF80	PBS429F3S20	500 ROPELAY	2 KV E.P.R.
PB500PLUSF80	PBS429F3S20	500 ROPELAY	2 KV E.P.R.

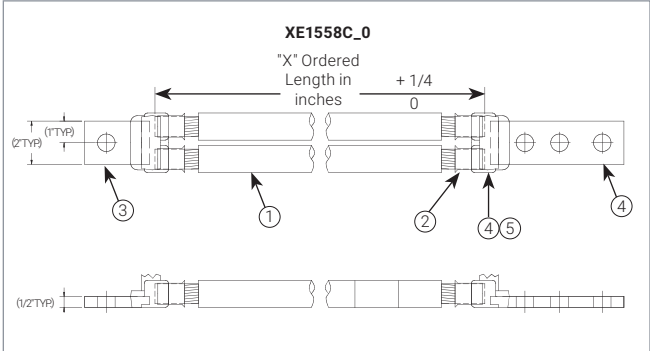
Cadweld Plus Weld Material	Cable		
	Sleeve	Size	Insulation
PB500PLUSF80	PBS429F3S20	500 ROPELAY	2 KV E.P.R.
PB500PLUSF80	500 ROPELAY	500 ROPELAY	2 KVTHW

4- 500 KcMIL B468



Cadweld Transit Bonds

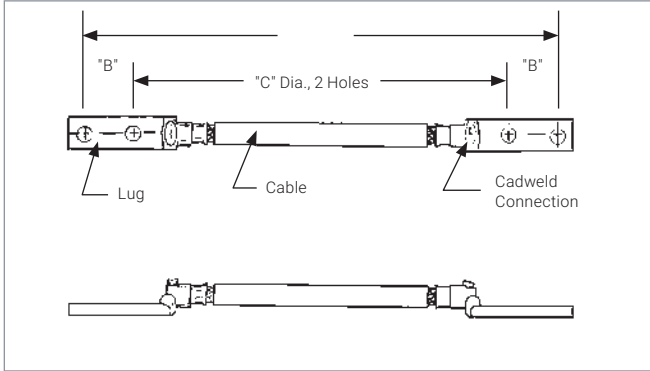
IMPEDANCE BOND CENTER LEAD



Item	Part Number	Quantity	Description
X	PBB489KA3S'XXX'	X	BOND, IMPD, CNTR LEAD 500 RLY INSUL 'XXX' IN. LG.
1	A810A19	2 PCS.	500 RLY CABLE, 2KV EPR INSULATED
2	93002520F	4	SLEEVE, COPPER FLARED
3	B241JH002BLK	1	LUG, COPPER 1/2 X 2 X 3 LG. 1-HOLE
4	B241JH001BLK	1	LUG, COPPER 1/2 X 2 X 6-3/8 LG. 3-HOLE
5	PB71DS3SJHM	0.04	MOLD ONLY, TYPE OS
6	#500	2	WELD METAL, TYPE F20

Cadweld Transit Bonds

IMPEDANCE BOND CENTER LEAD



Part Number	Dim. "A"
PBB2133S00160	60

Cable		
Size	Type	Insulation
500 KCM	CLASS H	2 KV E.P.R.

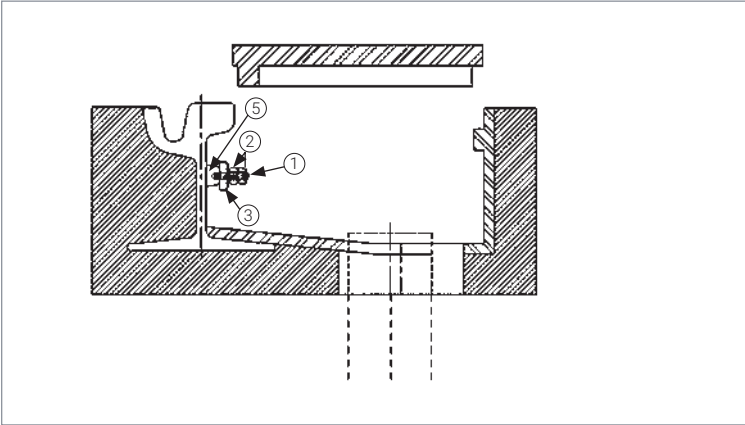
Lug		
Size	DIM. "B"	DIA. "C"
1/4 - 1 1/2	1/4 - 1 1/4	9 / 16

Cadweld Connection
TYPE GL / TYPE GL PLUS

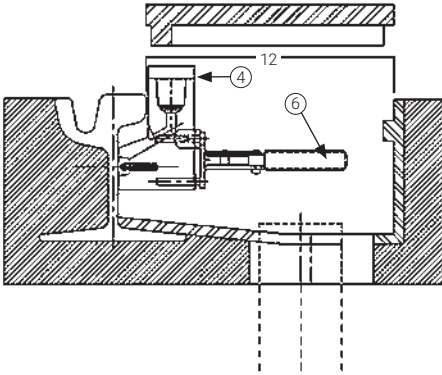
Cadweld Transit Bonds

GIRDER RAIL

Stud Rail



GRD Kit	(1) Stud / Quantity	(2) Nut / Quantity	(3) Washer / Quantity
PBK244	A927T039 1	A928B035 2	A929B027 1
PBK245	A927T038 1	A928B042 2	A929B028 1

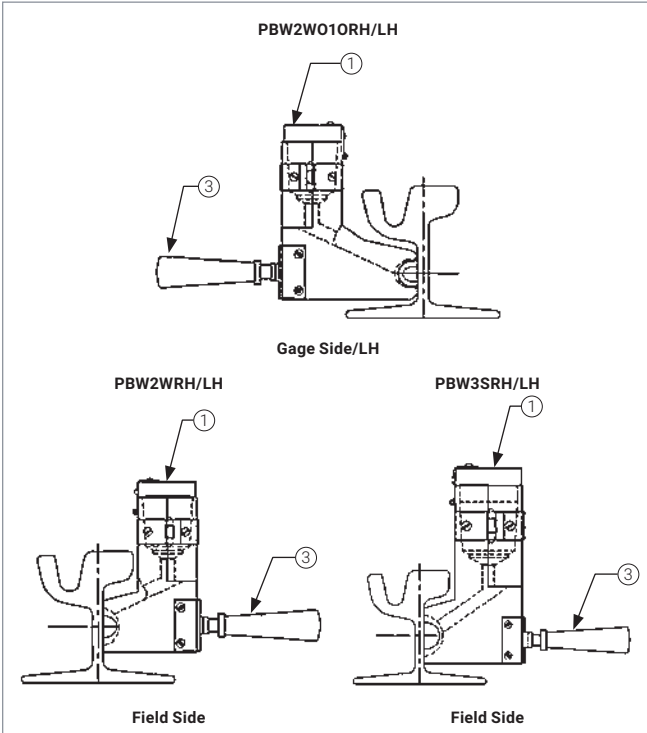


(4) MOLD	(5) Cadweld Traditional Weld Mate- rial	(5) Cadweld Plus Weld Material	(6) Rail Frame	Mold Cleaner	Flint Igniter
PBHV12A003	PB65	PB65PLUSF80	L160	B136A	T320
PBHV16A004	PB115	PB115PLUSF80	L160	B136B	T320

Cadweld Transit Bonds

GIRDER RAIL

Stub End Bond

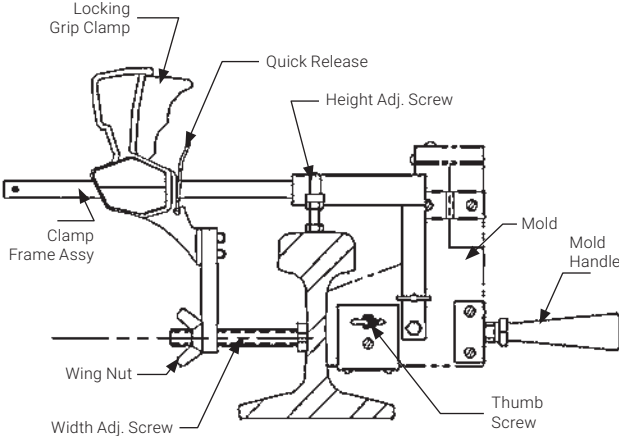


Mold (1)	Cadweld Traditional Weld Material	Cadweld Plus Weld Material	Qty (2)	Rail Frame (3)	Mold Cleaner	Bond No.	Cable Type	R152/R13 Rail Side
PBW2 W01 ORH	PB115	PB115 PLUSF80	1	B125 A01	B136B	PB-C32W	250 RLAY	Gage
PBW2 W01 OLH	PB115	PB115 PLUSF80	1	B125 A01	B136B	PB-C32W 'XX'	250 RLAY	Gage
PBW2W 001RH	PB115	PB115 PLUSF80	1	B125 A02	B136B	PB-W32W 'X' B	250 RLAY	Field
PBW2W 001 LH	PB115	PB115 PLUSF80	1	B125 A02	B136B	PB-W32W 'X' B	250 RLAY	Field
PBW3S 002RH	PB250	PB250 PLUSF80	1	B125 A02	B136B	PB-W33S 'X' B	500 RLAY	Field
PBW3S 002LH	PB250	PB250 PLUSF80	1	B125 A02	B136B	PB-W33S 'X' B	500 RLAY	Field

Cadweld Transit Bonds

CLAMPS

IP7674 Stud Weld



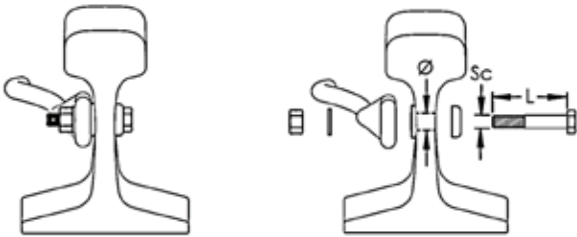
NOTES:

Mechanical Connections

NVENT ERICO ERICONTACT

The nVent ERICO Ericontact series of rail contacts provides a superior quality connection to the rail web with a very low contact resistance. The contacts are quickly and easily fitted by means of an insertion tool, regardless of weather conditions. All nVent ERICO Ericontact components are manufactured according to high standards and norms. Tested to the most demanding requirements of the Rail Industry Standards, nVent ERICO Ericontact is the ideal solution for mechanically applied connections such as signal engineering, earthing (grounding), or traction return current.

SINGLE RAIL CONTACT SK



COMPONENTS

1. M12 stainless steel washer
2. Electrolytically tin plated copper bush
3. M12 standard stainless steel bolt.
4. M12 stainless steel self-locking nut or galvanized
5. M12 stainless steel flat washer full metal locking nut (depending on contact type).



Mechanical Connections

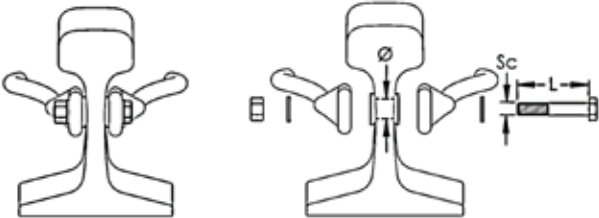
NVENT ERICO ERICONTACT

SK SERIES RAIL CONTACTS



The SK series of rail contacts are the ideal solution for signal engineering, earthing, traction return current and similar applications.

DOUBLE RAIL CONTACT DSK



COMPONENTS

1. Electrolytically tin plated copper bushes
2. M12 standard stainless steel bolt.
3. M12 stainless steel self-locking nut or galvanized full metal locking nut (depending on contact type).
4. M12 stainless steel washers.



Mechanical Connections

NVENT ERICO ERICONTACT

DSK SERIES RAIL CONTACTS



Detachable cable lugs can be connected to DSK series double rail contacts from both sides of the rail simultaneously. This is an enormous advantage when making interconnections in the station area, for example. Compared to the conventional SK rail contact, the DSK halves the number of necessary

contacts. The DSK double contact is the ideal solution even in confined spaces, such as around points, for example. With a clearance of only 50 mm between the rail heads, the contact can still be inserted and the cable lug fitted from both sides.

RAIL CONTACTS 19 MM

Description	Part Number	Web Thickness (mm)	Rail Types	
SK 19/12	SINGLE RAIL CONTACT	715045	12,0–13,9	S41, Ri59, Ri60, AS 41, BHP 42, BS90A
SK 19/14	SINGLE RAIL CONTACT	715050	14,0–16,9	S49, S54, UIC54, UIC60, R50, NP 46, AS50, AS60, BS110A, 132, 127, 115, 100, 85
SK 19/16	SINGLE RAIL CONTACT	715095	17,0–18,5	R65, 141, 136
SK 19/18	SINGLE RAIL CONTACT	715085	18,6–22,0	BS 113A, 95LB RBS, 140
DSK 19/12	DOUBLE RAIL CONTACT	715060	12,0–13,4	S41, Ri59, Ri60, AS41, BHP 42
DSK 19/14*	DOUBLE RAIL CONTACT	715055	13,5-15,5	S49, NP 46, AS50, 100, 85
DSK 19/14B	DOUBLE RAIL CONTACT	715056	12,0-14,0	S41, S49, NP46, Ri59, Ri60, BS90A
DSK 19/16*	DOUBLE RAIL CONTACT	715065	15,6-17,0	S54, UIC 54, UIC60, R50, AS60, BS110A, 132, 127, 115
DSK 19/14-16	UNIVERSAL DOUBLE CONTACT	715057	13,5–16,5	S54, UIC 54, UIC60, R50, AS60, BS110A, 132, 127, 115, 100, 85
DSK 19/18	DOUBLE RAIL CONTACT	715090	17,1-20,0	BS 113A, 95 LB RBS, R65, 141, 140, 136

FEATURES AND BENEFITS

- Easy to install
- A very low contact resistance ($< 5 \mu\Omega$).
- A standard bolt M12 is used for the single contact SK 19 and the double contact DSK 19. Easier for maintenance.

Mechanical Connections

NVENT ERICO ERICONTACT

RAIL CONTACTS 22 MM

Description		Part Number	Web Thickness (mm)	Rail Types
SK 22/14	SINGLE RAIL CONTACT	715074	14,0–17,9	S49, S54, UIC50, UIC54, UIC60, NP46, AS60KG, AS50KG, BHP53KG, BS110A, R50, 141, 136, 132, 127, 115, 100, 85
SK 22/20	SINGLE RAIL CONTACT	715070	18,0–22,0	BS113A, 95 LB RBS, R65, 140
DSK 22/14	DOUBLE RAIL CONTACT	715092	14,0–17,9	Same Rail types as SK 22/14

RAIL CONTACTS 13.5 MM

Description		Part Number	Web Thickness (mm)	Rail Types
SK 13,5	SINGLE RAIL CONTACT	715073	12,0–15,5	S41, S54, UIC50, UIC54, UIC60, BS90A, NP46, Ri59
SK 13,5 / 16,5	SINGLE RAIL CONTACT	715098	15,5–17,0	Ri60, AS60KG, AS50KG, AS41KG, BHP53KG, BHP42KG, BS110A, R50, 115, 100, 85
DSK 13,5	DOUBLE RAIL CONTACT	715091	12,0–16,5	Same Rail types as listed above

RAIL CONTACTS 8 MM (USED FOR SIGNALING)

Description		Part Number	Web Thickness (mm)	Rail Types
SK 8/12	SINGLE RAIL CONTACT	715071	12,0–14,0 / AS41KG, BHP42KG	S41, BS90A, NP46, Ri59, Ri60,
SK 8/14	SINGLE RAIL CONTACT	715072	14,0–16,5	S49, NP 46, AS50 S54, UIC 54, UIC60, R50, AS60, BS110A, 132, 127, 115, 100, 85

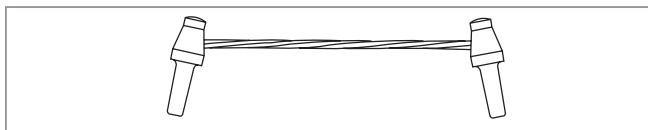
Mechanical Connections

BONDS

PLUG BONDS

Standard Package 50

Specify bond length as a suffix to part number (XX), i.e., SBPAJA24 is an S-1 cable type, 24" long.



Part Number	Cable Type AREMA + Drawing 8.1.25-#1	Description	Bare Dia. Inches
SBPAJA"XX"	S-1	1 Copper, 6 Galvanized Steel	0.3270 0.3300
SBPAJB"XX"	S-5	3 Copper, 16 Galvanized Steel	0.3060 0.2430
SBPAJC"XX"	7-#10	7-40% Copper-bonded	0.1875
SBPAJD"XX"	7-#12	7-40% Copper-bonded	0.1875
SBPAJ3"XX"	S-8	133 Cadmium Bronze	
SBPAJR"XX"	S-8 Insul	133 Cadmium Bronze w/ 4/64" PVC Insulation	0.2510
SBPAJG"XX"	S-12	42 Cadmium Bronze, 91 Hard Drawn Stain, Steel	
	AREMA Drawing 8.1.25-#2		
SBPAJP"XX"	DS-1		
SBPAJN"XX"	14-#12		

XX= Lengths 24, 30, 34, 36, 42, 48, 60, 72, and 96.

nVent ERICO plug bonds are designed for application to the rail web. Plug bonds are hammered into a 3/8" diameter hole drilled through the rail web (driven from same side hole was drilled).

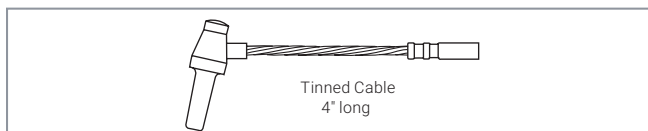
This recommended method of installation requires a bond 12 inches longer than the splice bar.

Mechanical Connections

BONDS

TRACK CONNECTORS "CHICKEN HEADS"

Standard Package 200



Part Number	Cable	Connector
SBPAC3A		3/16" - #6 str
SBPAC3G		#8 str/#6sol
SBPAC3R	3/16"	#9 str/#8sol
SBPAC3Y		#10 str/#9sol
SBPAW35		3/8" tapered plug
SBPACGBJ4	1/4"	3/16" - #6 str

The nVent ERICO track connector is used when bond strand is being utilized for track connections, fouling circuits, and even bonding around the splice bar. The plug terminal is hammered into a 3/8" diameter hole drilled through the rail web (driven from same side hole was drilled).

Compression tool (SBT031D.J) sold separately. See page 54.



MULTI-PURPOSE BONDS

Standard Package 48



Part Number	Cable Type
SBPMJ3 "X"	Bare - 3/16" S-8
SBPMJR "X"	Black Insul. - 3/16" S-8
SBPMJS "X"	Orange Insul. - 3/16" S-8

Substitute length for "X" (10", 12", or 14")

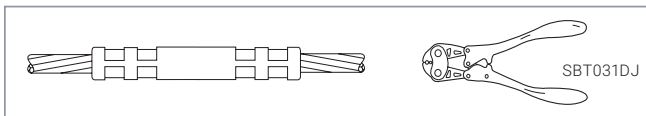
The nVent ERICO multi-purpose bond is used when a standard plug bond cannot be installed from the field side of rail due to tight areas such as frogs and switches.

Mechanical Connections

ASSOCIATED MATERIAL

SLEEVES - COMPRESSION TYPE

Standard Package 100



Part Number

3/16" Bond Strand To: Description

A2314J	#9 solid or #10 str
A2364J	#8 solid or #9 str
A2363J	#6 solid or #8 str
A2367J	#3/16" or #6 str
A2412J	1/4" Binding Post, Lug

SBT031DJ

Compression Tool

NO-OXIDE GREASE

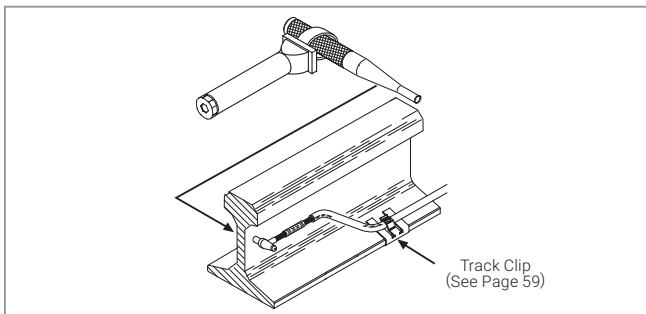
Part Number

Description

T369

1 ounce tube

BOND REMOVAL PUNCH



Part Number

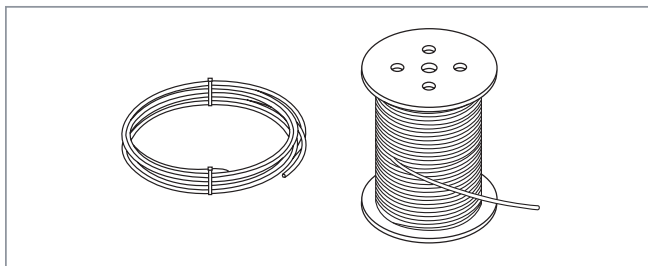
Description

SBT382B	Punch Only
SBT408	Plastic Handle Only
SBT382BWH	Punch w/Handle
SBT382BWPH	Punch w/Plastic Handle

Mechanical Connections

RELATED MATERIALS

BOND STRAND



Part Number			
100' Coil	500' Reel	1000' Reel	Description
SBS8CINSUL	SBS8LINSUL	SBS8INSUL	S-8, 3/16", Black 4/64 PVC
SBS8CINORG	SBS8LINSORG	SBS8INORG	S-8, 3/16", Orange 4/64 PVC
SBS8TCINS	SBS8TDINSUL	SBS8TINSUL	S-8, 3/16" Tinned, Black 4/64 PVC
SBS8TCINS664	SBS8TLINS664		S-8, 3/16" Tinned, Black 6/64 PVC
SBS8TCINSRD		SBS8TINSRD	S-8, 3/16" Tinned, Red 6/64 PVC
SBS8CBARE SBS17CBARE	SBS8LBARE	SBS8BARE	S-8, 3/16", Bare S-17, 5/16", Bare
A806A12F100		A806A12F1000	S-8, 3/16" Tinned, Orange 6/64 PVC

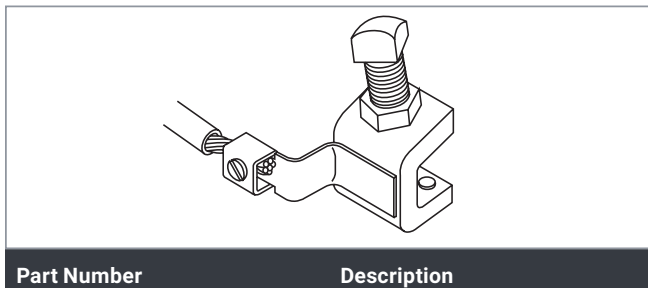
MISCELLANEOUS BONDING ITEMS

Part Number	Description	Std. Pkg.
B154A	3/8" Straight head plug terminal	25
B101AA	Lug - 1/16" x 1/2", 1-hole (1/4" stud)	25
SBK012A	1/4" split stud kit	10
SBK012B	1/4" split stud kit	100
SB25	Rail Welding Material F80	50
SB32	Rail Welding Material F80	50

Mechanical Connections

TEMPORARY CONNECTORS

TEMPORARY TRACK CONNECTOR



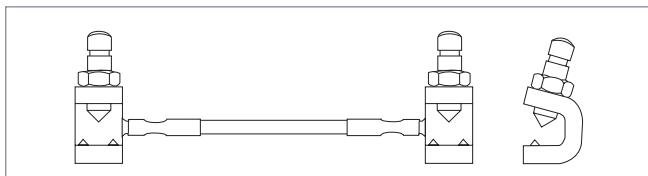
Part Number	Description
A140	Bolt Type
A140WT	T-Handle Type

Standard Package 4

Makes temporary signal bonds and track circuit connections using your cable.

- Accepts cable sizes #6 thru 1/0, including 3/16" and 5/16" diameter bond strand.
- Hardened contact points on clamps bite through rust and scale.

TEMPORARY SIGNAL BOND 3/16"



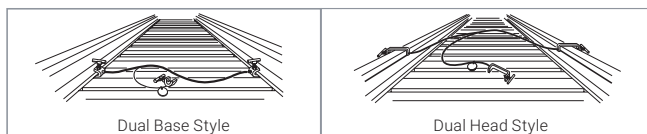
Part Number	Description
SBS3086S48	3/16" Orange Insul. 48" long
SBS3086S48WT	3/16" Orange Insul. w/T-handle 48" long
SBS3086R48	3/16" Black Insul. 48" long
SBS3086R48WT	3/16" Black Insul. w/T-handle 48" long

- Lightweight - made from 3/16" PVC insulated bond strand.
- PVC insulation available in black or orange.
- Hardened contact points on clamps bite through rust and scale.
- Cable welded to terminal for electrical reliability.

Mechanical Connections

TRACK CIRCUIT SHUNTS

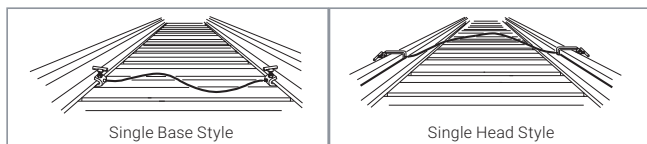
DUAL SHUNT



Part Number	Description
SBB2721S	Dual Shunt (0.06 ohm/hard) Base style 2 pt. clamp
SBB2721T	Dual Shunt (0.06 ohm/hard) Head style 2 pt. clamp
SBB2721G	Dual Shunt (0.06 ohm/hard) Head style 3 pt. clamp
SBB2721B	Dual Shunt (0.06 ohm/hard) Base style 3 pt. clamp
SBB2721V	Dual Shunt (0.06 ohm/hard) Head style 2 pt. clamp with locking hardware

- One easy-to-carry assembly.
- No resistor to fail. Product is pre-engineered to provide permanent 0.06 ohm shunting.
- 100% tested and tagged to assure reliability.
- Hardened contact points on clamps bite through rust and scale.
- 0.06 ohm clamps painted red for easy identification.

SINGLE SHUNT



Part Number	Description
SBB2721F	0.06 ohm Shunt only, Base style, 3 pt. clamp
SBB2721H	0.06 ohm Shunt only, Head style, 2 pt. clamp
SBB2721CS72	Hard Shunt only, Base style, 3 pt. clamp
SBB2721JS72	Hard Shunt only, Head style, 3 pt. clamp
SBB2721VS72	Hard Shunt only, Base style, 2 pt. clamp
SBB2721JS72SP	Hard Shunt only, Head style, 2 pt. clamp with locking hardware
SBB2721WS300	Hard Shunt only, Head style, 2 pt. clamp, 25 foot length
SBB2721WS600	Hard Shunt only, Head style, 2 pt. clamp, 50 foot length

- Two shunt assemblies are available - "hard" zero ohm or 0.06 ohm.
- 0.06 ohm style has no resistor to fail. Product is pre-engineered to provide permanent 0.06 ohm shunting.
 - Hardened contact points on clamps bite through rust and scale.
 - Bright orange insulation on "Hard" shunt for high visibility and easy identification.

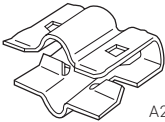

Cable Clips

RETAINER CLIPS


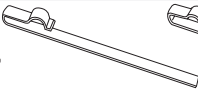
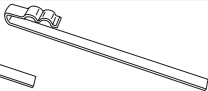
DESIGN FEATURES

- Spring steel and "snap-on" designs mean no more holes to drill.
- Flexibility - wide range of clips fit all standard rails and a variety of conductors.
- Versatility - nVent now enables you to secure cables—reducing maintenance and improving wayside safety.

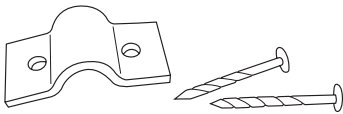
ELECTROPLATED SPRING STEEL

			
	A248B		A251
Part Number	Max Cable Diameter	Position on Rail Base	Standard Packaging
A248B	3/8"	Perpendicular	50
A251	3/8"	Double Parallel	50

ELECTROPLATED STEEL

					
	A154/A206		A203/A205		A219
Part Number	Max Cable Diameter	Position on Rail Base	Standard Packaging		
A154	5/16"	Perpendicular	50		
A203	5/16"	Parallel	100		
A205	1/2"	Parallel	100		
SBA206	1/2"	Perpendicular	50		
A219	5/16"	Double Parallel	100		

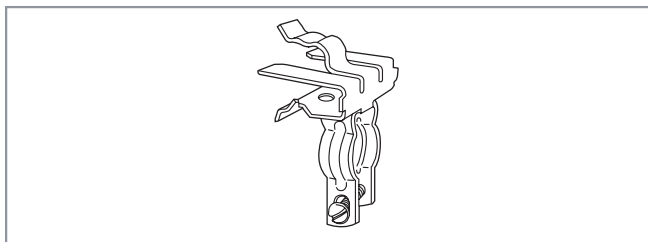
PVC CABLE KEEPER

	
Part Number	Description
T375	7/16" Diameter Cable Keeper—2 Holes w/nails

Cable Clips

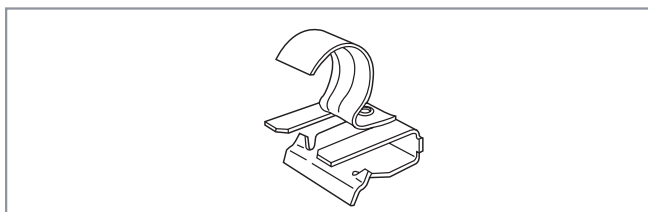
RETAINER CLIP ASSEMBLIES

BELOW RAIL BASE



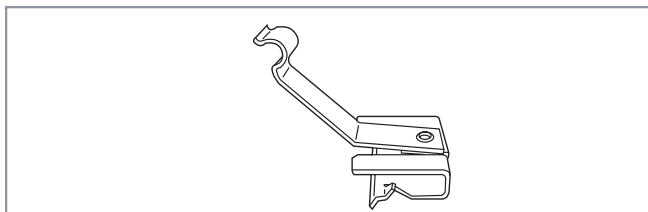
Part Number	Description	Standard Packaging
SBA2510B	3/4" Dia.	50
SBA2511B	1" Dia.	50
SBA2512B	1-1/4" Dia.	50

RAIL BASE



Part Number	Description	Standard Packaging
SBA252S0	3/4" Dia.	50
SBA252S1	1" Dia.	50
SBA252S2	1-1/4" Dia.	50

WEB

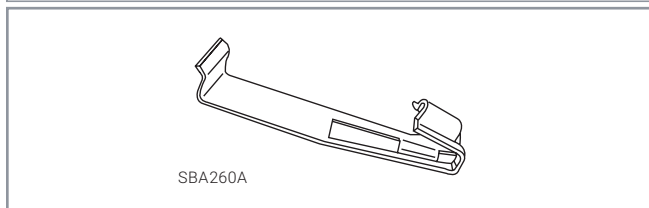
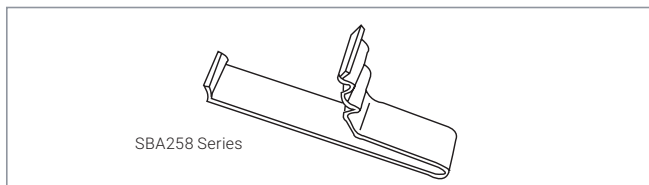


Part Number	Description	Standard Packaging
SBA254A1	3/8" Dia.	25
SBA255D1	1/2" Dia.	25

Cable Clips

"SNAP-ON" STYLES

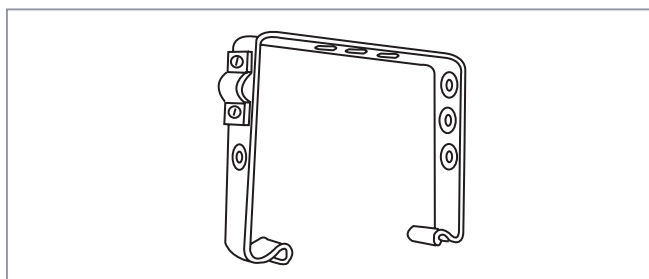
STAINLESS STEEL RAIL TYPE



Part Number	Description	Std Pack
SBA258A1	6" Rail Base—Two 3/8"	25
SBA258B1	5.5" Rail Base—Two 3/8"	25
SBA258D1	5.5" Rail Base—One .5" Cable	25
SBA260A	6" Rail Base—Perpendicular Cable - One 3/8" Cable	25

CONCRETE TIE CLIPS

"SNAP-ON" STYLE STAINLESS STEEL



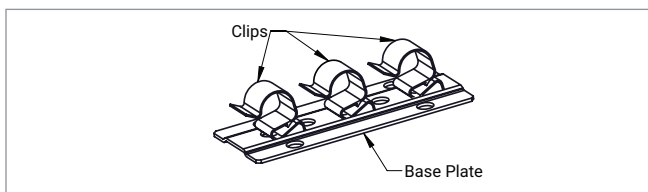
Flexible configurations

Contact nVent with Application Information & Concrete Tie Dimensions

Cable Clips

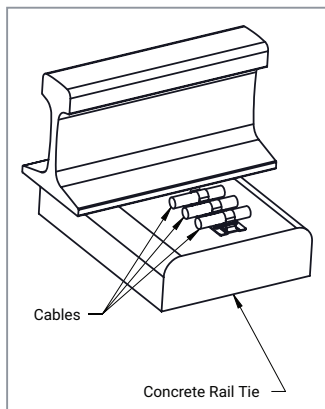
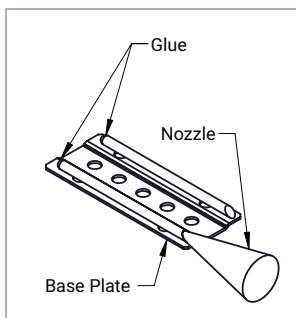
GLUED RAIL CLIPS

CABLE CLIP KIT FOR CONCRETE RAIL TIES



Part Number	Description	Std Pack		Max. clips per base
		Base	Clips	
GCHSC67	Cable Dia. 0.24-0.28 in	30	120	4
GCHSC78	Cable Dia. 0.28-0.31 in	30	120	4
GCHSC89	Cable Dia. 0.31-0.35 in	30	120	4
GCHSC910	Cable Dia. 0.35-0.39 in	30	120	4
GCHSC1011	Cable Dia. 0.39-0.43 in	30	120	4
GCHSC1214	Cable Dia. 0.47-0.55 in	30	120	4
GCHSC1518	Cable Dia. 0.59-0.71 in	30	90	3
GCHSC1924	Cable Dia. 0.75-0.94 in	30	90	3
GCHSC2530	Cable Dia. 0.98-1.19 in	30	60	2

- Each kit includes one container of adhesive. Additional containers available upon request with part no. GCGLUE.
- Glue container suitable for a 10 oz. dispensing gun.
- Usable for longitudinal or transversal cable applications.



Grinders & Bonding Accessories

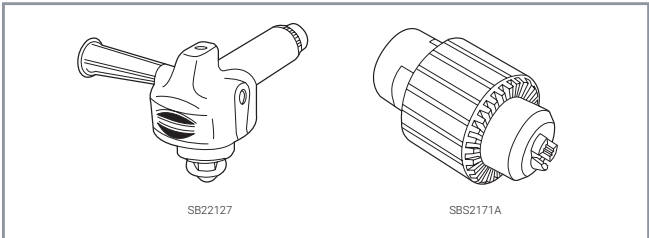
RAIL GRINDERS

PEDESTAL RAIL GRINDER (GAS POWERED)



Part Number	Description
SBG141	3.5 HP (Briggs & Stratton® I/C) Grinder with 6' Shaft & Housing Base Plate Shaft Adapter Straight Spindle 6" Wheel & Guard Dressing Stone

SBG141 DRILL ATTACHMENT PARTS

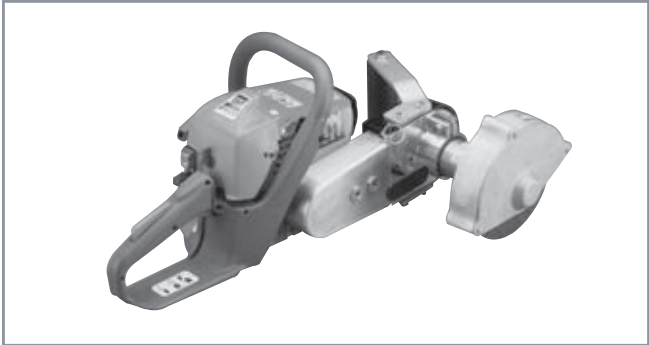


Part Number	Description
SBL165	Drill Attachment—complete with angle spindle & drill chuck
SBL165SA	Drill Attachment—Frame Only
SB22127	Angle spindle—10:1 ratio
SB22127A	Replacement gear kit for Angle spindle
SBS2171A	Drill chuck—1/8" to 5/8" key type
SBS2171AK	Drill chuck key
SBT385B	3/8" Bonding bit / round shank

Grinders & Bonding Accessories

RAIL GRINDERS

PORTABLE GRINDER (2 CYCLE GASOLINE POWERED)

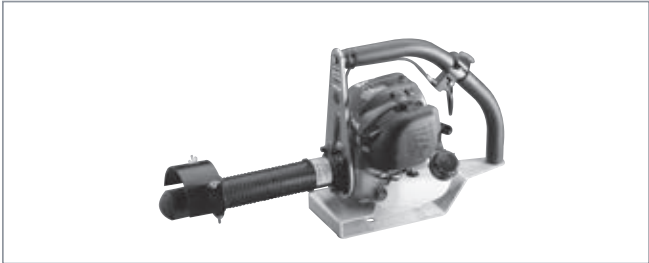


Part Number	Description
SBG150	Rail Grinder—39cc, 6,000 rpm, 18 lbs.
SBG150WC	Rail Grinder with Storage Case
SBS2333	6" Grinding Wheel—3/4" original replacement
SB22122	6" Grinding Wheel—1" replacement
S2129	6" Beveled Grinding Wheel—Head Free Rail
SBK104	Slotting Wheel Kit—Includes 6" x 1/8" slotting wheel, spacer, depth gauge, insulation
22128	6" Slotting Wheel with mounting spacer
22128P	6" Slotting Wheel
SBT365	Silicon Rubber Insulation—3 oz tube

Grinders & Bonding Accessories

RAIL GRINDERS

PORTABLE GRINDER (4 CYCLE GASOLINE POWERED)



Part Number	Description
SBG200	Rail Grinder—1.1 hp,10,500 rpm, 13 lbs.
SBG20015	Cup Style Wheel for SBG200
SBG20018	Plug Style Wheel for SBG200
SBG200COFF	Cutting Adapter, Guard, and Cutting Wheel
SBG20027	Cutting Wheel replacement (std. package of 5)

PORTABLE GRINDER (BATTERY POWERED)



Part Number	Description
SBG100	Rail Grinder, 18 volt, 6,500 rpm, 7 lbs
SBG20025	Cleaning Wheel, 4.5" x .25" Depressed center, designed for right angle use (std. package of 5)
	Cutting Wheel, Disk type, 4.5" x .08" (std. package of 5)
SBG20027	Cleaning and Cutting Wheel, Depressed center, designed for right angle use (std. package of 5)
SBG20046	

Grinders & Drilling Machines

RAIL DRILLING MACHINES

PORTABLE DRILLING MACHINE (2 CYCLE GASOLINE POWERED)



Part Number	Description
715685	Rail Drilling Machine SBV-VS, 28 lbs for drill hole dia. 3/8" up to 1-3/8", 267 rpm

PORTABLE DRILLING MACHINE (QUIET 4 CYCLE GASOLINE POWERED)

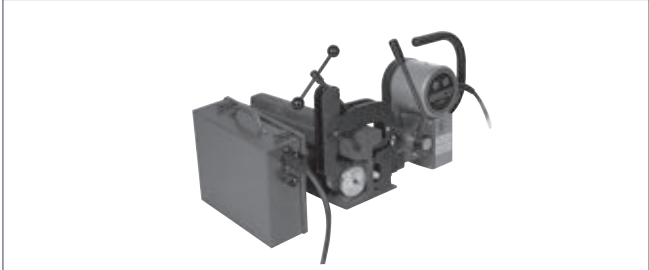


Part Number	Description
715412	Rail Drilling Machine SBV-V4, 28 lbs for drill hole dia. 3/8" up to 7/8", 267 rpm

Grinders & Drilling Machines

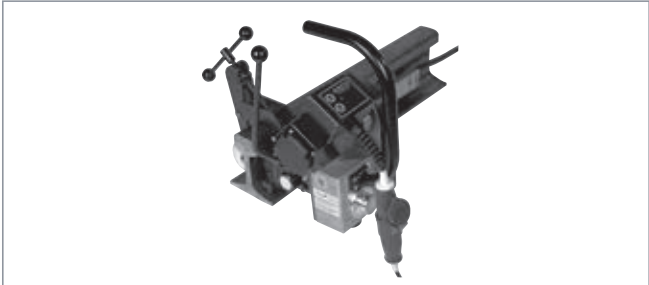
RAIL DRILLING MACHINES

PORTABLE DRILLING MACHINE (BATTERY POWERED)



Part Number	Description
715400	Rail Drilling Machine SBM-E391, 28 lbs, 48V for drill hole dia. 3/8" up to 7/8", 390 rpm

PORTABLE DRILLING MACHINE (AC ELECTRIC POWERED)



Part Number	Description
715404	Rail Drilling Machine SBM-E230, 28 lbs for drill hole dia. 3/8" up to 1-3/8", 280 rpm, requires 220/230V AC

Grinders & Drilling Machines

RAIL DRILLING MACHINES

CLAMPING DEVICES



Part Number	Description
715360	BSK1 head clamping for normal rails, 7 lbs.
715370	BSK2 head clamping for grooved rails, 9 lbs.
715380	BSF1 rail foot clamping device, 9 lbs.

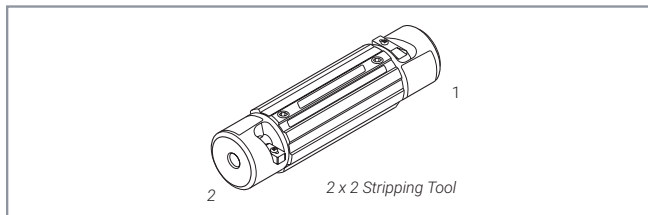
RAIL DRILLING ACCESSORIES



Part Number	Description
716207	Rail Drilling Template 90 LB, 2.58 in.
716204	Rail Drilling Template 100 LB, 2.63 in.
716203	Rail Drilling Template 115 LB, 2.98 in.
716211	Rail Drilling Template 132 RE, 3.20 in.
716212	Rail Drilling Template 136 LB, 3.36 in.
716213	Rail Drilling Template 141 AB, 3.47 in.
XXXXXX	Other Drilling Templates available on request
715075	Drilling Coolant Concentrate, 2.64 gal. (10 ltr.)
715375	Coolant Tank & Pump

Tools & Bonding Accessories

STRIPPING TOOLS 2 X 2



Part Number	Description Bushing 1	Bushing 2
SBRT36100106	3/16" Bond Strand, 4/64" Insulation	#6 Solid, Concentric 8/64" Insulation
SBRT36100134	3/16" Bond Strand, 6/64" Insulation	#6 Concentric, 5/64" Insulation
SBRT36100135	3/16" Bond Strand, 4/64" Insulation	#9 Solid, 10/64" Insulation
SBRT36100136	3/16" Bond Strand, 4/64" Insulation	3/16" Bond Strand, 6/64" Insulation
SBRT36100138	3/16" Bond Strand, 6/64" Insulation	#6 Solid, Concentric 8/64" Insulation
SBRT36100139	3/16" Bond Strand, 4/64" Insulation	#6 Solid, 11/64" Insulation
SBRT36100140	3/16" Bond Strand, 6/64" Insulation	#6 Solid, 11/64" Insulation
SBRT36100142	#6 Solid, 1/64" Insulation	#6 Solid, 12/64" Insulation
SBRT36100147	3 Conductor, 6/64" Insulation	#6 Solid, 6/64" Insulation
SBRT36100148	7 Conductor, 6/64" Insulation	#9 Solid, 6/64" Insulation
SBRT36100149	3/16" Bond Strand, 6/64" Insulation	#6 Solid, 7/64" Insulation
SBRT36100150	5 Conductor, 6/64" Insulation	#9 Solid, 6/64" Insulation
SBRT36100152	10 Conductor, 6/64" Insulation	12 Conductor, 6/64" Insulation
SBRT36100177	3/16" Bond Strand, 4/64" Insulation	#6 Solid, 12/64" Insulation

BLADES

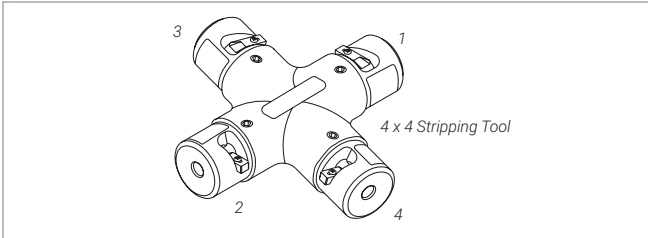
Part Number	Description
SBRTCB6667	Replacement Blades-Pkg of 5

ACCESSORY

Part Number	Description
SBRT36024	2 x 2 Tool Driver Adapter

Tools & Bonding Accessories

STRIPPING TOOLS 4 X 4



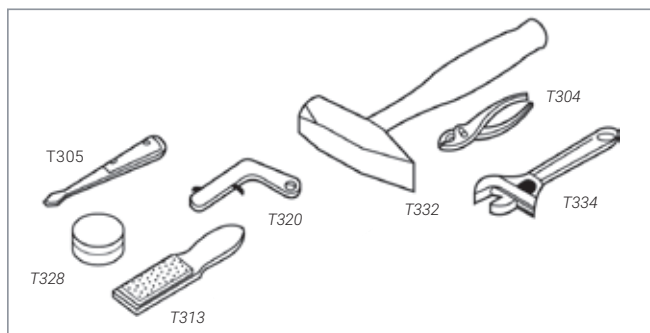
Part Number	Description	
	Bushing 1	Bushing 2
SBRT36000906	3/16" Bond Strand, 4/64" Insulation	#6 Solid, 11/64" Insulation
SBRT36000907	3/16" Bond Strand, 4/64" Insulation	#6 Solid, 11/64" Insulation
SBRT360001004	3/16" Bond Strand, 4/64" Insulation	3/16" Bond Strand, 6/64" Insulation
SBRT360001010	3/16" Bond Strand, 6/64" Insulation	
Part Number	Bushing 3	Bushing 4
	Description	
SBRT36000906	#6 Solid, 12/64" Insulation	#9 Solid, 10/64" Insulation
SBRT36000907	#6 Solid, 12/64" Insulation	2/0 Ropelay, 6/64" Insulation
SBRT360001004	#6 Solid, 12/64" Insulation	3/16" Bond Strand, 6/64" Insulation
SBRT360001010	#6 Solid, 11/64" Insulation	#6 Solid, 12/64" Insulation

REPLACEMENT & ADDITIONAL BUSHINGS

Part Number	Description
SBRT1034048	3/16" Bond Strand, 4/64 Insul.
SBRT1040075	3/16" Bond Strand, 6/64 Insul.
SBRT1037590	#6 Solid, 7/64" Insulation
SBRT10450110	#6 Solid, Concentric 8/64" Insul.
SBRT10515145	#6 Solid, 11/64" Insulation
SBRT10550162	#6 Solid, 12/64" Insulation
SBRT1030075	#9 Solid, 6/64" Insulation
SBRT10430135	#9 Solid, 10/64" Insulation
SBRT1036060	#6 Concentric, 5/64" Insulation
SBRT11102575	3 Conductor, 6/64" Insulation
SBRT11100075	5 Conductor, 6/64" Insulation
SBRT11105075	7 Conductor, 6/64" Insulation
SBRT1187575	10 Conductor, 6/64" Insulation
SBRT1197575	12 Conductor, 6/64" Insulation
SBRT1067575	2/0 Ropelay, 6/64" Insulation

Tools & Bonding Accessories

MISCELLANEOUS TOOLS



Part Number	Description
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T304	Slip Joint Pliers
T305	Screw Driver
T313	Card Cloth Brush

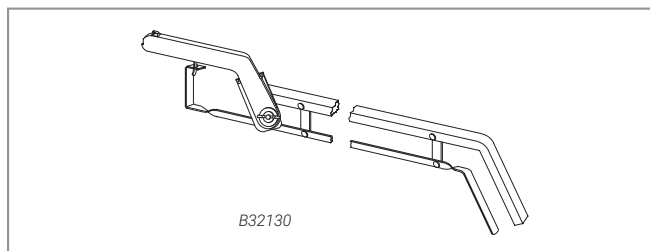
T320	Flint Ignitor
T320A	Replacement Flints (10 each/package)
T328	Disk Container
T332	Engineers Hammer, 3 lb. size
T334	Adjustable 6" Wrench for Welder

SBB394C	T-34 Rail Head and Web Cleaner, One Universal Tool
SBA127A	Replacement Cutting Disk for T-34

B136D	Mold Cleaner
T403	Mold Sealer - 2 Pound Tub

B32130	Flint Ignitor Extension (30")
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FLINT IGNITOR EXTENSION



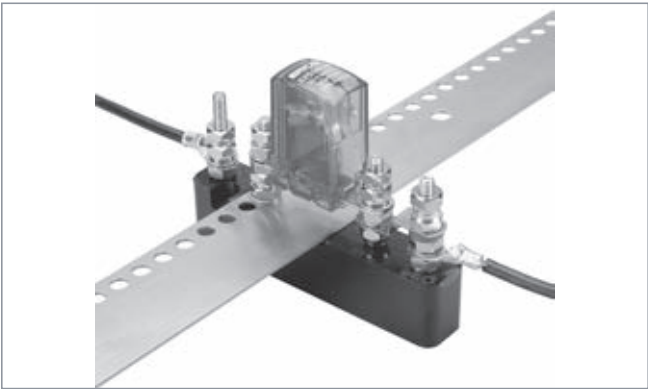
Railway Electrical Protection

PRODUCTS FOR HIGH FREQUENCY, LOW IMPEDANCE, PATH TO GROUND

- Meets AAR Recommendations
- Modular Design for Field Assembly and Future Expansion
- Pre-Engineered and Manufactured Panels
- Design Assistance for Special Applications
- Separation of "Clean" from "Dirty" Wiring
- Improved Arrester Performance

4 TERMINAL BLOCK

- Integrated Test Terminal
- Slot for Low Impedance Busbar
- Integral, High Current Busbar

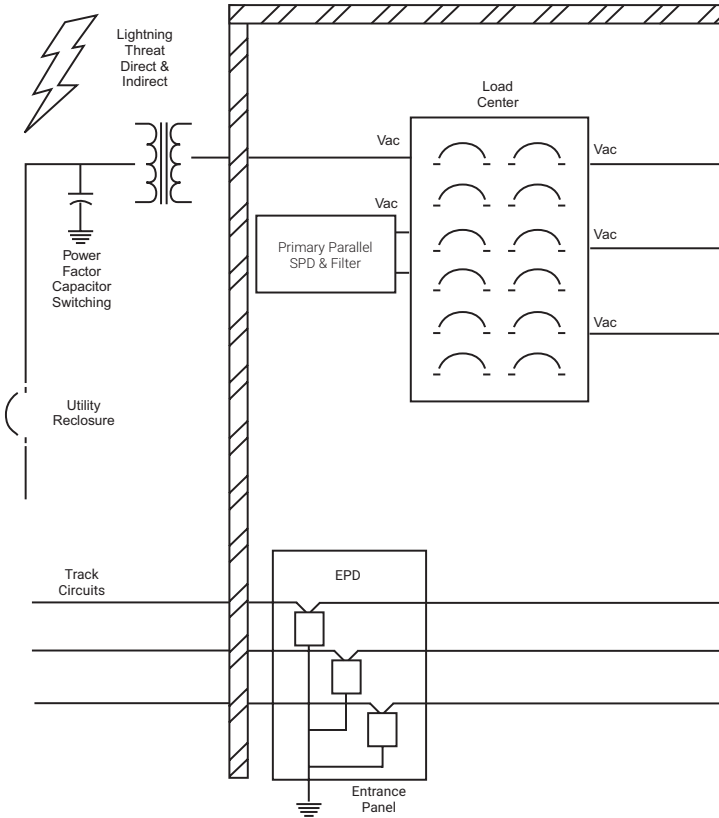


Part Number	Description
SBB2700A2B10	Terminal Block - Box of 10
B2700A2C1WH	Terminal Block with AAR Hardware
B2700HC36T	Terminal Strip - 36"
B2700HC48T	Terminal Strip - 48"
B2700HC60T	Terminal Strip - 60"

Contact nVent For Design Assistance

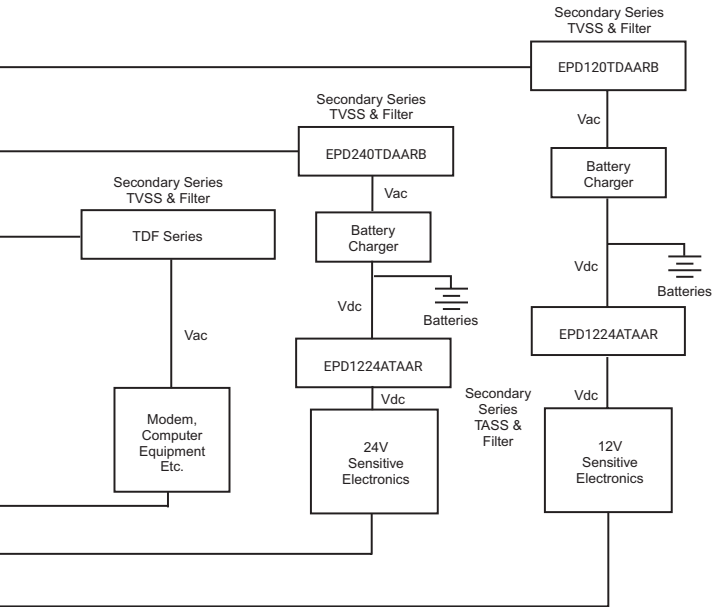
Railway Electrical Protection

TYPICAL SIGNAL BUNGALOW POWER PROTECTION LAYOUT



USING PROTECTION DEVICES FROM NVENT FOR TOTAL FACILITY PROTECTION

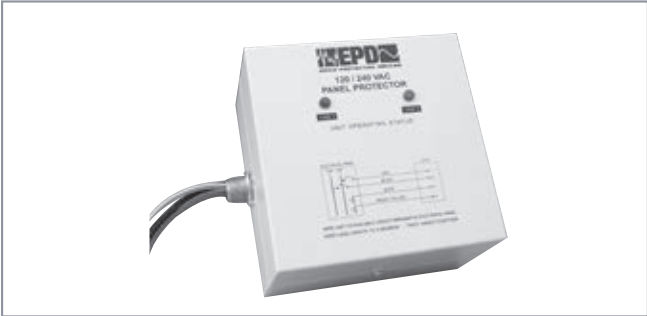
TRANSIENT DISCRIMINATING (TD) TECHNOLOGY



Primary Surge Protection

EPD POWER PROTECTION SURGE DEVICES

- Transient Discriminating Technology provides increased service life
- Parallel hybrid TVSS technology
- Low let-through voltage
- Visual status indication
- 5 year limited warranty



Part Number	Description
EPD120/240TDFL	120/240VAC primary surge protector, TD Technology, flying lead, 85kA

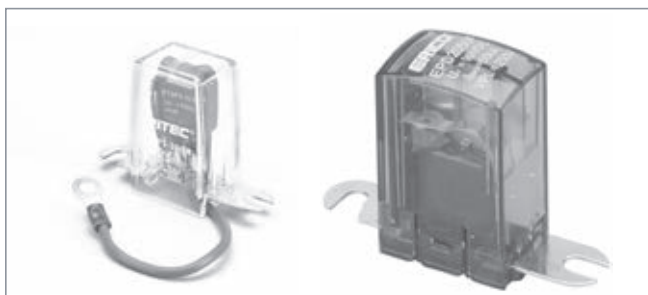
- Transient Discriminating Technology provides increased service life
- Series hybrid TVSS technology
- Optimal let-through voltage performance
- Visual status indication
- 5 year limited warranty

Part Number	Description
EPD100HZ120V	120VAC, 100HZ, primary surge protector, fused, TD Technology
EPD100HZ120240V	120/240VAC, 100HZ, primary surge protector, fused, TD Technology

Primary Surge Protection

EPD TRACK CIRCUIT PROTECTION DEVICES

- Hybrid technology comprising gap-type voltage switching and varistor-type voltage clamping components
- Design helps ensure a fail-safe, open-circuit, failure mode
- Visual status indication to aid serviceability
- Device and cover plainly marked with voltage and part number and unique colors to help ensure proper application
- 50kA maximum surge rating provides protection suitable for exposed trackside equipment
- Low let-through voltage
- Epoxy coating helps ensure stability of operation under adverse conditions and in locations of high humidity

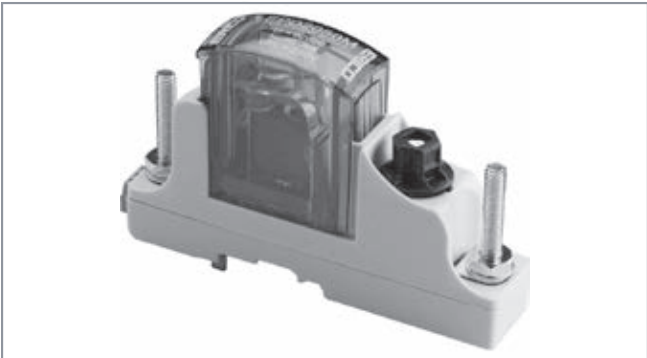


Part Number	Description
EPD2050F	50VDC/35VAC Signal Protector, 30kA, 2 terminal arrestor
EPD2170F	170VDC/120VAC Signal Protector, 20kA, 2 terminal arrestor
ET33050F	50VDC/35VAC Signal Protector, 30kA, 3 terminal arrestor
ETSP330170	170VDC/120VAC Signal Protector, 30kA, 3 terminal arrestor

Primary Surge Protection

EPD TRACK CIRCUIT PROTECTION

- Fusion of terminal block and surge protection technology
- Integrated disconnect
- Reduces installation time
- Open-circuit end-of-life mode
- Proven hybrid technology comprised of gap-type and varistor-type components
- Includes AREMA® hardware
- Two operating voltages
- 5-year limited warranty
- RoHS compliant

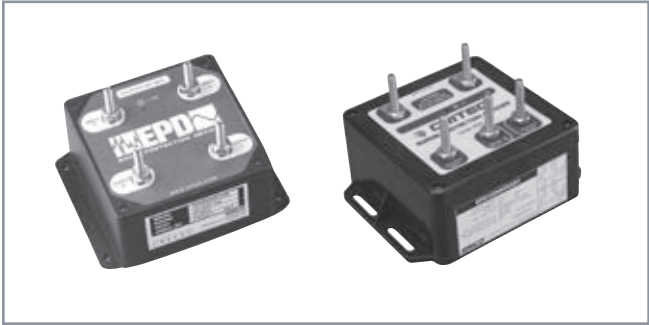


Part Number	Description
EPD101P	50 VDC/35VAC Signal Protector, 30 kA, MOV/GDT
EPD102P	170 VDC/120 VAC Signal Protector, 20 kA, MOV/GDT

Secondary Surge Protection

EPD POWER PROTECTION SURGE DEVICES

- Series hybrid TVSS technology
- Universal design for 12VDC & 24VDC applications
- 30A series filter
- High surge rating provides a high level of protection and long operational life
- Low let-through voltage
- RFI/EMI filtering
- Visual status indication
- AAR terminals



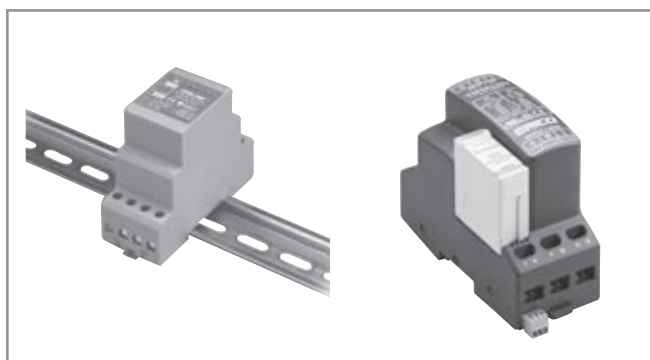
Part Number	Description
EPD1224ATAAR	12 & 24VDC secondary power protector, 30A max load
EPD120TDAARB	120VAC secondary power protector, 30A max load
EPD240TDAARB	240VAC secondary power protector, 30A max load

Peripheral Power Protection

DINLINE SURGE FILTERS

- Compact, space saving design
- Replaceable surge module reduces down time and unprotected time during maintenance
- Compliance to the latest UL 1449 Edition 4 and IEC 61643-11 surge standards and UL 1283 Electromagnetic Interference Filters (EMI) standard
- Low let-through voltages on the critical line to neutral mode
- Transient Discriminating (TD) Technology provides increased service life

TRANSIENT SURGE FILTER (TSF)



Part Number	Nominal System Voltage (Un)	Rated Load Current (IL)
TSF6A24V	24 V	6 A
TSF6A120V	120 V	6 A
TSF20A120V	120 V	20 A
TSF6A240V	240 V	6 A
TSF20A240V	240 V	20 A

DIN SURGE DIVERTER

- Photo Voltaic and Telepower distribution
- Surge rating to 40kA - Ideal for exposed wiring
- 24VDC & 48VDC distribution systems

Part Number	Description
DSD1402BR24/48	24/48VDC 36 mm DIN 43 880 Profile, 40kA 8/20 μ s

Communications & Data Equipment Protection

CONTROL SIGNAL EQUIPMENT PROTECTION

- Protection of low voltage circuits and transducers
- Separate plug and base design—facilitates ease of module replacement
- Efficient multiple stage clamping circuit technology helps ensure lowest possible residual let-through voltage
- Common-mode and differential-mode protection—protects against both possible surge conditions
- Ease of grounding—through DIN mounting rail or via terminal
- Surge rating to 20kA—ideal for exposed wiring

RAIL TRANSIENT BARRIER NEXT GENERATION



Part Number	Nominal System Voltage (Un)	Rated Load Current (IL)	Replacement Module
RTB12N	12 VDC 9 VAC	15 A	RTBN12M
RTB30N	30 VDC 21 VAC	15 A	RTBN30M
RTB50N	50 VDC 35 VAC	15 A	RTBN50M
RTB130N	130 VDC 110 VAC	15 A	RTBN130M

Grounding

GROUND RODS

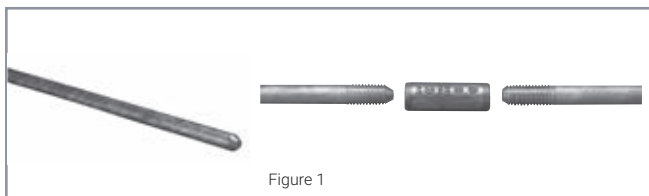


Figure 1

Part Number	Diameter	Figure	Standard Packaging	Length
Pointed Copper-Bonded Rods				
615850	5/8"	1	5	5'
615880	5/8"	1	5	8'
615800	5/8"	1	5	10'
613480	3/4"	1	5	8'
613400	3/4"	1	5	10'
Pointed Copper-Bonded Rod Couplings				
CC58	5/8"		25	
CC34	3/4"		25	
Sectional Copper-Bonded Rods				
635880	5/8"	2	5	8'
635800	5/8"	2	5	10'
633480	3/4"	2	5	8'
633400	3/4"	2	5	10'
Sectional Copper-Bonded Rod Couplers				
CR58	5/8"		25	
CR34	3/4"		25	

Grounding

CADWELD ONE SHOT

CONNECTIONS

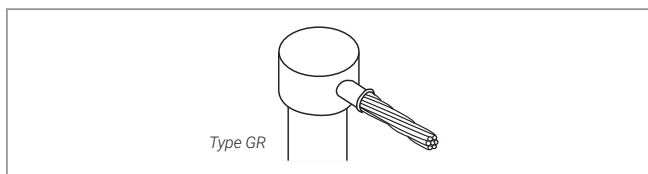
The Cadweld One Shot consists of a ceramic mold, disk, F80 welding material and cover.

- Disposable ceramic unit eliminates graphite mold.
- Produces a permanent connection that will not loosen or corrode.
- Fits both plain or threaded copperclad and full size, steel and stainless steel rods.

Standard Package 6

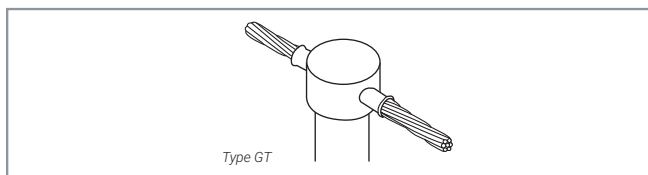
CABLE-TO-GROUND ROD

TYPE GR TRADITIONAL AND GR PLUS



Ground Rod Size	Conductor Size		Connector Part #	
	Solid	Stranded	Type GR	Type GR Plus
5/8'	6, 8	8	SBGR1161G	SBGR1161GPLUS
	3, 4	4,6	SBGR1161L	SBGR1161LPLUS
3/4'	6, 8	8	SBGR1181G	SBGR1181GPLUS
	3, 4	4,6	SBGR1181L	SBGR1181LPLUS

TYPE GT TRADITIONAL AND GT PLUS



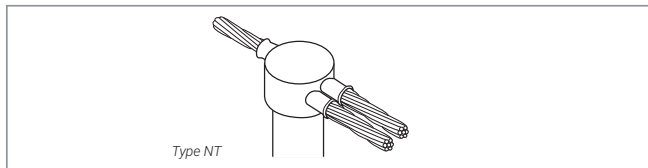
Ground Rod Size	Conductor Size		Connector Part #	
	Solid	Stranded	Type GT	Type GT Plus
5/8'	6, 8	8	SBGT1161G	SBGT1161GPLUS
	3, 4	4,6	SBGT1161L	SBGT1161LPLUS
3/4'	6, 8	8	SBGT1181G	SBGT1181GPLUS
	3, 4	4,6	SBGT1181L	SBGT1181LPLUS
	1,2	2,3	SBGT1181V	SBGT1181VPLUS

Grounding

CADWELD ONE SHOT

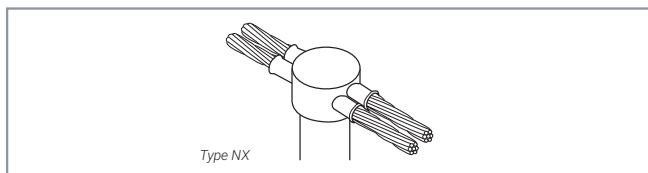
CONNECTIONS: CABLE-TO-GROUND ROD

TYPE NT TRADITIONAL AND NT PLUS



Ground Rod Size	Conductor Size		Connector Part #	
	Solid	Stranded	Type NT	Type NT Plus
5/8'	6, 8	8	SBNT1161G	SBNT1161GPLUS
	3, 4	4, 6	SBNT1161L	SBNT1161LPLUS
3/4'	6, 8	8	SBNT1181G	SBNT1181GPLUS
	3, 4	4, 6	SBNT1181L	SBNT1181LPLUS
	1, 2	2, 3	SBNT1181V	SBNT1181VPLUS

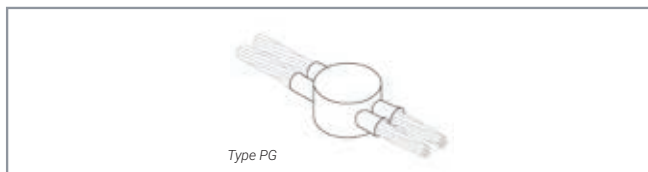
TYPE NX TRADITIONAL AND NX PLUS



Ground Rod Size	Conductor Size		Connector Part #	
	Solid	Stranded	Type NX	Type NX Plus
5/8'	6, 8	8	SBNX1161G	SBNX1161GPLUS
	3, 4	4, 6	SBNX1161L	SBNX1161LPLUS
3/4'	6, 8	8	SBNX1161V	SBNX1161VPLUS
	3, 4	4, 6	SBNX1181G	SBNX1181GPLUS
	1, 2	2, 3	SBNX1181L	SBNX1181LPLUS
			SBNX1181V	SBNX1181VPLUS

CONNECTIONS: CABLE-TO-CABLE

TYPE PG TRADITIONAL AND PG PLUS



Conductor Size		Connector Part #	
Solid	Stranded	Type PG	Type PG Plus
3, 4, 6	4, 6	SBPG11L	SBPG11LPLUS

Grounding

GROUND ENHANCEMENT MATERIAL

Number	Description	Part Number	Description
GEM25A	25 Pound Bag	QF25	25 Pound Bag



A superior conductive material that helps solve the toughest grounding problems.

- Improves grounding effectiveness regardless of soil conditions.
- Can use where ground rods cannot be driven or where limited land area makes adequate grounding difficult with conventional methods.
- Unmatched for reducing earthing resistance and maintaining
- low resistance permanently.
- Effective - Typical resistivity 12-18 OHM cms (20 times lower than Bentonite clay)

A no-mix ground-enhancing backfill that reduces resistance to ground with the versatility to be used in difficult environments.

- Ideal grounding solution for areas of poor conductivity such as rocky ground, mountain tops, and sandy soil.
- Fast and easy installation, convenient for one person to install with no mixing or curing time required, and has the versatility to be installed freezing temperatures as well as places without access to water.
- Complies to the U.S. Environmental Protection Agency (EPA) Toxicity Characteristic Leaching Procedure (TCLP), EPA test method 1311, and EN 12457-2 Characterization of Waste Leaching Procedure, ENV 12506 and ENV 13370.

Grounding

GROUND TESTERS

EARTH SYSTEMS TESTER UNITS

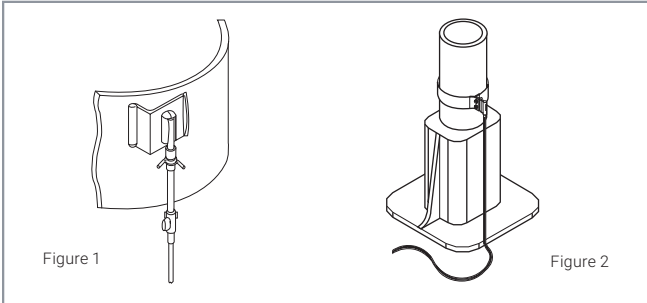


Part Number	Description
EST3640	Fall-of-Potential, ground resistance (2 & 3 Point) measurements
EST4620	4-Point Fall-of-Potential, 2 & 3-Point Fall-of-Potential Step Voltage measurements
EST4630	4-Point Fall-of-Potential, 2 & 3-Point Fall-of-Potential, Step Voltage measurements
EST6472	4-Point Fall-of-Potential, 3-Point Fall-of-Potential, 3-Point earth coupling measurements & frequency scan 40 to 513Hz noise

Grounding

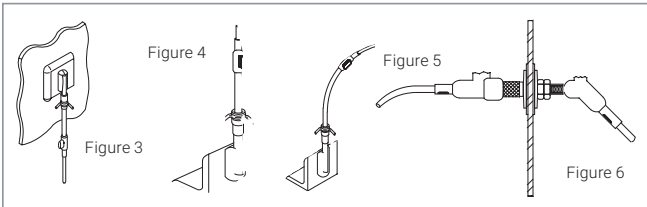
ALUMINUM-COPPER GROUNDING STUD

ALUMINUM SIGNAL MAST



Part Number	Description (#6 Solid Copper Pigtail)	Figure Number
Aluminum-Copper Grounding Stud		
SBB855E1G72	with 72" long Pigtail	1
SBB855E1G96	with 96" long Pigtail	1
Signal Mast Grounding Clamp		
SBB852A8C1G96	with 96" long Pigtail	2
SBB852A8C1G48	with 48" long Pigtail	2

ALUMINUM SIGNAL CASE

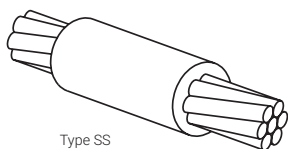


Part Number	Description	Figure Number
Aluminum-Copper Grounding Stud		
SBB855C1G36	with 36" long Pigtail, #6 Solid	3
SBB855C1G48	with 48" long Pigtail, #6 Solid	3
SBB855C1K48	with 48" long Pigtail, #4 Solid	3
SBB855F1G48	with 36" long Pigtail, #6 Solid	4
SBB855G1G30	with 30" long Pigtail, #6 Solid	5
Feed-Through Stud		
SBB853B	with Hardware	6
SBB853A72	with Hardware and 72" long Pigtail, #6 Solid	6

Other Pigtail sizes available.

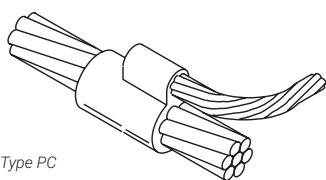
Grounding

CADWELD CONNECTIONS CABLE-TO-CABLE



Type SS

Cable Size	Welder Part No.	Weld Material (F80)	
		Cadweld Traditoinal	Cadweld Plus
#6 Sol	SB02SS6	SB25	SB25PLUSF80
4	SB03SS1L	SB25	SB25PLUSF80
2	SB10SS1V	SB32	SB32PLUSF80
3/16"	SB02SS3	SB25	SB25PLUSF80
3/16"	SB02SS3001	SB32	SB32PLUSF80



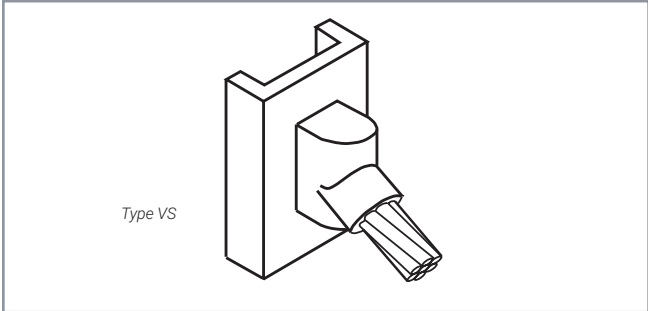
Type PC

Cable Size	Welder Part No.	Weld Material (F80)	
		Cadweld Traditoinal	Cadweld Plus
Run	Tap		
#6 Sol	#6 Sol	SB32	SB32PLUSF80
#6 Sol	#6 Sol	SB25	SB25PLUSF80
#6 Sol	5/16"	SB32	SB32PLUSF80
3/16"	#6 Sol	SB25	SB25PLUSF80
3/16"	3/16"	SB25	SB25PLUSF80

Grounding

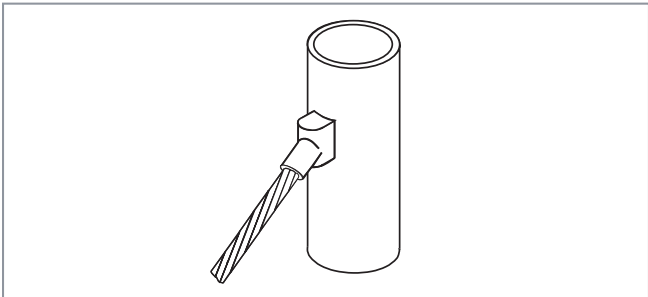
CABLE-TO-STEEL STRUCTURES

FLAT VERTICAL SURFACE



Cable Size	Welder Part No.	Weld Material (F80)	
		Cadweld Traditoinal	Cadweld Plus
Sol 4	SB01VS4	SB25	SB25PLUSF80
Sol 6	SB01VS6	SB25	SB25PLUSF80
Sol 6	SB01VS6001	SB32	SB32PLUSF80
Sol 8	SB01VS8	SB25	SB25PLUSF80
3/16"	SB01VS3	SB25	SB25PLUSF80

ROUND VERTICAL SURFACE

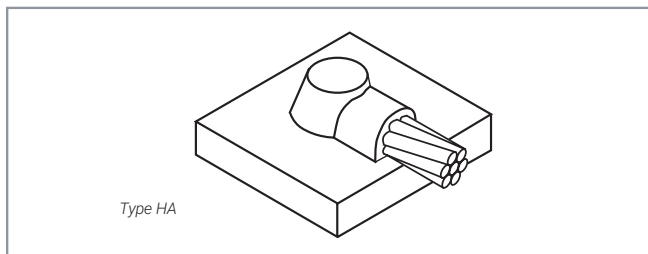


Cable Size	Welder Part No.	Weld Material (F80)	
		Cadweld Traditoinal	Cadweld Plus
Sol 6	SB01VS6V5C	SB25	SB25PLUSF80
Sol 6	SB01VS6V5C01	SB32	SB32PLUSF80

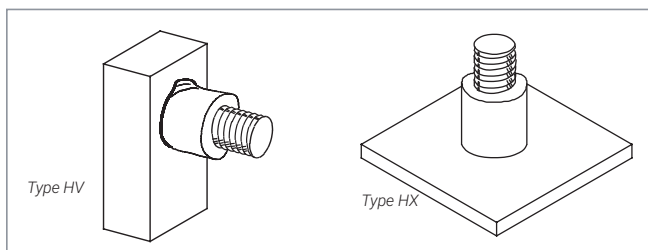
Grounding

CADWELD CONNECTIONS CABLE-TO-STEEL STRUCTURES

HORIZONTAL FLAT SURFACE



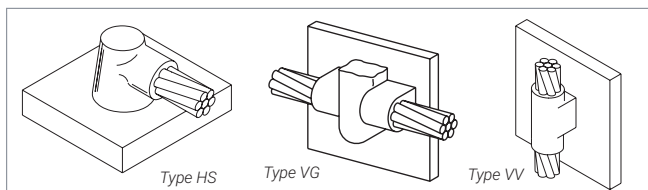
Cable Size	Welder Part No.	Weld Material (F80)	
		Cadweld Traditional	Cadweld Plus
Sol 6	SB41HA6	SB32	SB32PLUSF80
Sol 6	SB41HA6001	SB25	SB25PLUSF80



Cable Size	Welder Part No.	Weld Material (F80)	
		Cadweld Traditional	Cadweld Plus
1/4" AAR	SB01HV10001	SB32	SB32PLUSF80
Split Stud	SB01HV10002	2-SB25	2-SB25PLUSF80
	SB01HX10002	SB32	SB32PLUSF80

SBK012 - 1/4" Split Stud Kit (Includes AAR thread stud, washer, clamping nut and binding nut)

OTHER TYPES AND SIZES AVAILABLE



Notes

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Notes

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Notes

Our powerful portfolio of brands:

CADDY ERICO HOFFMAN RAYCHEM SCHROFF TRACER



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