

# Rail Electrical Products



**ERICO<sup>®</sup>**

Incorporated in 1903 as the Electric Railway Improvement Company, ERICO originally specialized in rail bonding for the railroad and mining industry. Today, ERICO is a leading designer, manufacturer and marketer of precision - engineered specialty metal products serving global niche product markets in a diverse range of electrical, construction, utility and rail applications. ERICO has ongoing engineering programs in research, development and quality control for all of its markets, which helps ensure continuous development and marketing of innovative product and service solutions.

## **CADDY\* Fixings, Fasteners and Supports for Electrical Applications**

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

## **CADDY\* Fixings, Fasteners and Supports for Mechanical Applications**

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

## **ERIFLEX\* Low Voltage Panel Components**

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

ERIFLEX® FLEXIBAR flexible insulated busbar.

## **ERITECH\* Electrical Products**

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

CADWELD® welded electrical connections

ERITECH® grounding and bonding products, lightning protection systems, surge protection devices

## **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

ERITECH® surge protection devices

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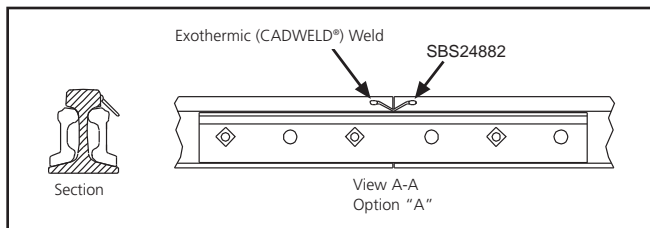
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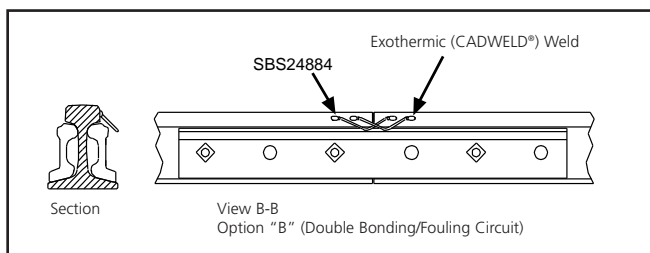
# Typical Applications

## Signal Bonding

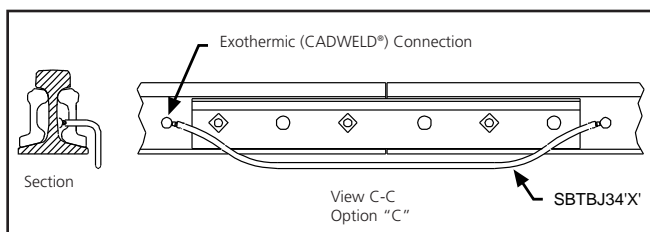
### Joint Head Bond



### Fouling Circuit



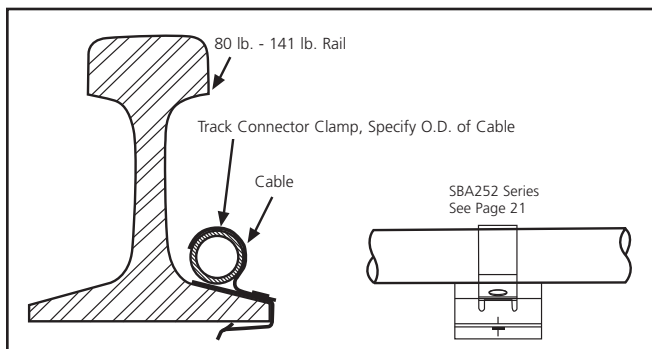
### Web Bonding



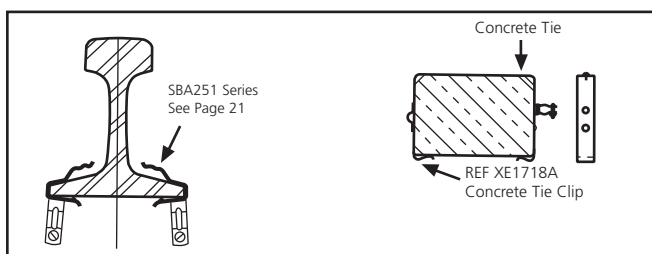
# Typical Applications

## Track Clips

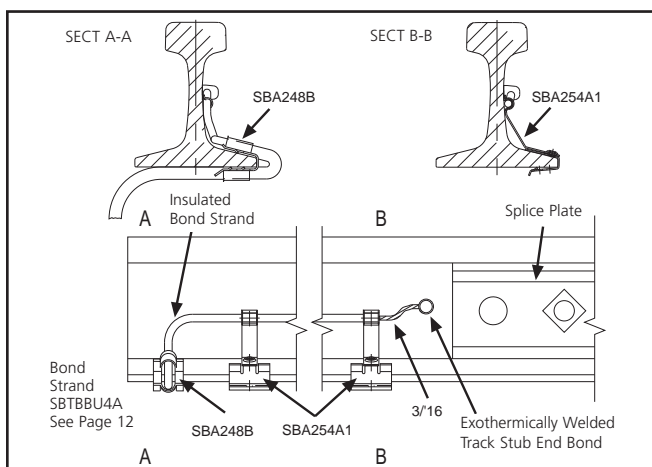
### Track Retainer Clip



### Rail Clip and Concrete Tie Clip (Contact ERICO)



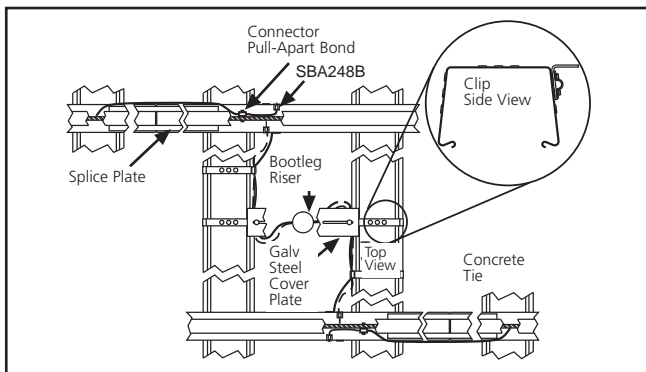
### Clip, Bootleg, Track Connector



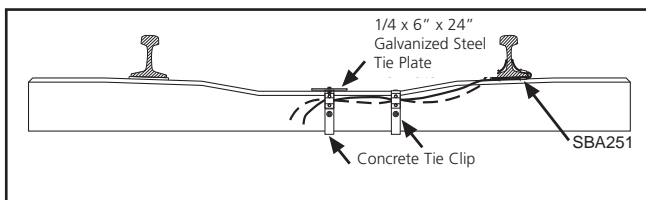
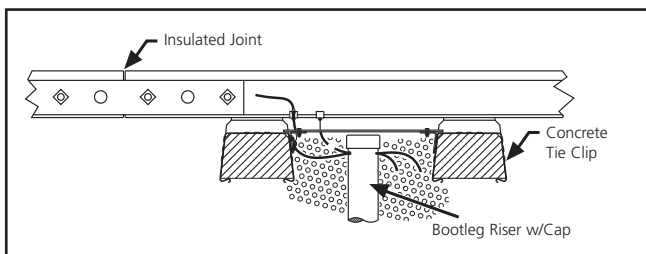
# Typical Applications

## Concrete Tie Clips

### Concrete Tie Clip Bootleg Riser 4-Wire Kit



## Concrete Tie Clip Applications



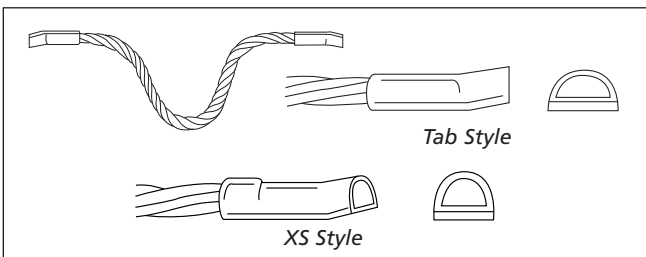


# CADWELD® Bonding Products

## Bonds

### Joint Head Bonds

**Order in boxes of 100** - Includes one pair of replacement molds, flint ignitor and necessary F80 formulation welding material.



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 Conductor	SBXSHU2		SBXSHU3	SBXSHU4	
Tab Style	SB20104		SB20136	SB20108	
Head Free Rail	SB20112		SB20128	SB20116	
5/16" Dia. Tab Style		SB20175			SB20118
Head Free Rail		SB20175HF			

Also available as bond only.

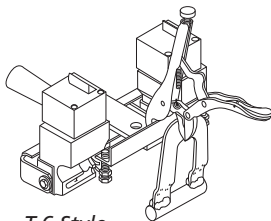
CADWELD® rail head joint bonds provide:

- 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

# CADWELD<sup>®</sup> Bonding Products

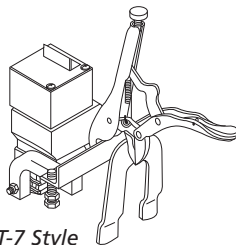
## Welders and Molds

### Rail Head Welders And Molds



*T-6 Style*

	T-6 Style One-Piece Rail Welder Complete			
With Molds Bond	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

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.

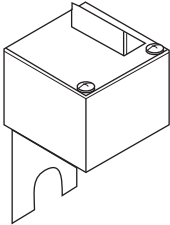
# CADWELD<sup>®</sup> Bonding Products

## Welders and Molds

### Rail Head Welders And Molds Continued

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

### Replacement Mold Covers for T-6 and T-7 Welders

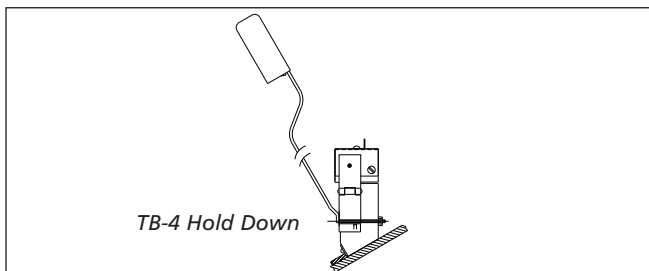
	
Part Number	Description
SBB2516A SBB2516APRWH	Single Replacement Cover Pair of Replacement Covers with Hardware

### Replacement Mold Covers for T21 and TB5 Welders

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

# CADWELD<sup>®</sup> Bonding Products

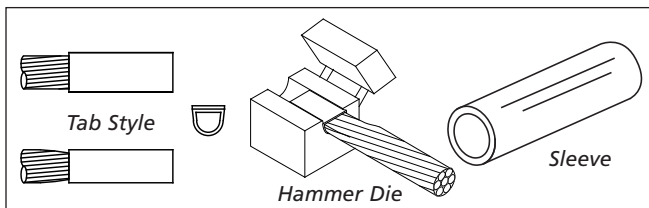
## Welders and Molds Frog and Special Track Work



Terminal Style	TB-4 Welder		Replacement Mold
	Hold Down	Frame Only	
3/16" Dia.	SBXSTB4A	B323L	SBB343A
3/4" XS	SBTBTB4B	B323L	SBB343B
3/4" Tab	SBTBTB4C	B323L	SBB343C
1" Tab	SBTBTB4D	B323L	SBB343D
1-1/2" Tab			
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		Hammer Dies	F80 Welding Material	
		Part Number	Std. Pkg.		Part Number	Std. Pkg.
#6 Sol	1"	SBS10	100	NA	SB25	50
3/16"	3/4"	SBS11C	100	SBD50	SB25	50
	1"	SBS12C	100			
	1-1/2"	SBS13C	100			
5/16"	1"	SBS09C	100	SBD51	SB32	50


Cable - supplied by ERICO 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 17.

# CADWELD<sup>®</sup> Bonding Products

## Bonds

### Track Connectors - Web

**Order in boxes of 100** - Includes one pair of replacement molds, flint ignitor and necessary F80 formulation welding material.

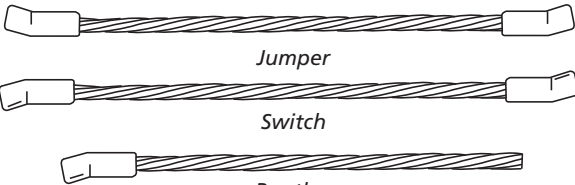
 <p style="text-align: center;"><i>Tab Style</i></p>	
Part Number	Description
SBTBBU4A	3/16" Dia. x 1" Tab x 4" Long Bootleg
SBTBCU412	3/16" Dia. x 1" Tab x 12" Long Bootleg

For complete Welder (SBTBT21C) see page 13 and compression tool (SBT031DJ) see page 16.

The CADWELD<sup>®</sup> track connector from 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.)

### 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 formulation welding material.

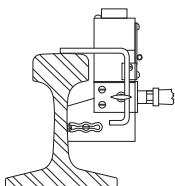
 <p style="text-align: center;"><i>Jumper</i></p> <p style="text-align: center;"><i>Switch</i></p> <p style="text-align: center;"><i>Bootleg</i></p>			
Diameter	Jumper	Switch	Bootleg
3/16" Dia.			
3/4" XS Style	SBXSJ33 "X"	SBXSS33 "X"	SBXSB33 "X"
3/4" Tab	SBTBJ33 "X"	SBTBS33 "X"	SBTBB33 "X"
1" Tab	SBTBJ34 "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

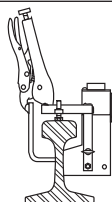
# CADWELD<sup>®</sup> Bonding Products

## Welders and Molds

Web (Field Made and Factory Made)



*TB-5 Hand Held*



*T-21 Clamping*

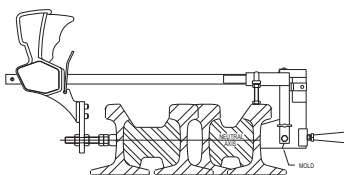
Terminal Style	TB-5 Welder		T-21 Welder		Replace-ment Mold
	Hand Held	Frame Only	Clamping	Frame Only	
3/16" Dia. 3/4" XS 3/4" Tab 1" Tab 1-1/2" Tab	SBXSTB5A SBTBTB5B SBTBTB5C SBTBTB5D	M22	SBXST21A SBTBT21B SBTBT21C SBTBT21D	C105B	SBB200A SBB200B SBB200C SBB200D
5/16" Dia. 1" Tab	SBTBTB5E	M22	SBTBT21E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



*SBC105R Special Track Work*

Part No.	Description	Mold
SBC105S SBC105SA	Head Ext. Clamp Head Ext. Clamp w/ Mold Cover	See T-7 Style Molds 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.


# Mechanical Connectors

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

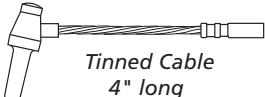
ERICO plug bonds are designed for application to the rail web. Plug bonds are hammered into a 3/8" diameter hole drilled through the rail web (driven from same side hole was drilled). This recommended method of installation requires a bond 12 inches longer than the splice bar.

# Mechanical Connectors

## Bonds

### Track Connectors "Chicken Heads"

#### Standard Package 200

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


The 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 (SBT031DJ) sold separately. See page 16.



## 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 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.

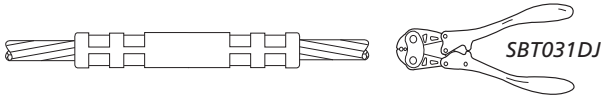


# Mechanical Connectors

## Associated Material

### Sleeves - Compression Type

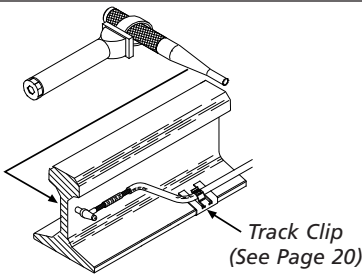
Standard Package 100

	
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

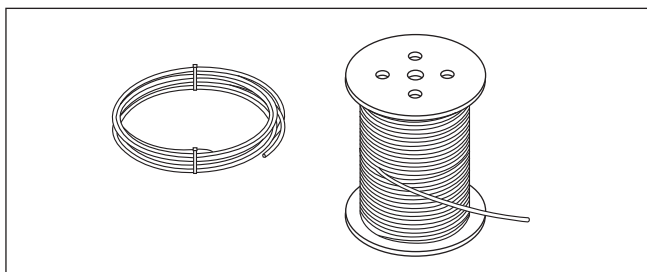
### Bond Removal Punch

	
Part Number	Description
SBT382B	Punch Only
SBT408	Plastic Handle Only
SBT382BWH	Punch w/Handle
SBT382BWP	Punch w/Plastic Handle

# Mechanical Connectors

## Related Materials

### Bond Strand



Part Number			Description
100' Coil	500' Reel	1000' Reel	
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	SBS8LBARE	SBS8BARE	S-8, 3/16", Bare
SBS17CBARE			S-17, 5/16", Bare
A806A12F100		A806A12F1000	S-8, 3/16" Tinned, Orange 6/64 PVC

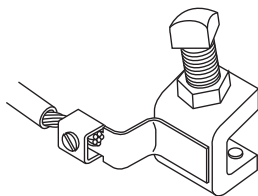
## Miscellaneous Bonding Items

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 Connectors

## Temporary Connectors

### Temporary Track Connector



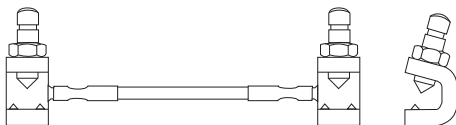
Part Number	Description
A140	Bolt Type
A140WT	T-Handle Type

#### 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"



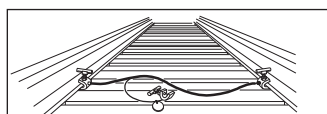
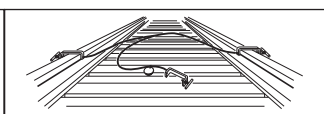
Part Number	Description
SBS3086S48	3/16" Orange Insul. 48" long
SBS3086S48WT	3/16" Orange Insul. w/T-handle 48" long
SBS3086R48	3/16" Black Insul. 48" long
SBS3086R48WT	3/16" Black Insul. w/T-handle 48" long

- 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 Connectors

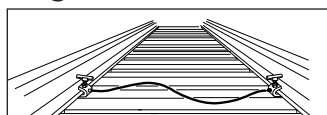
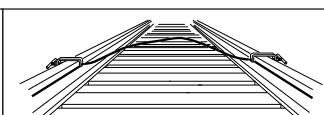
## Track Circuit Shunts

### Dual Shunt

 <p><i>Dual Base Style</i></p>	 <p><i>Dual Head Style</i></p>
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

 <p><i>Single Base Style</i></p>	 <p><i>Single Head Style</i></p>
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.

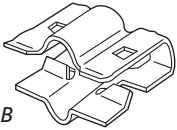

# Cable Clips

## Retainer Clips


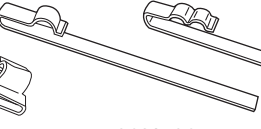
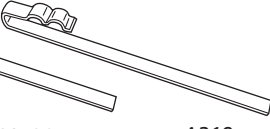
### Design Features

- 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 - ERICO now enables you to secure cables — reducing maintenance and improving wayside safety.

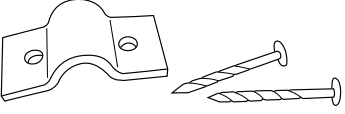
## Electroplated Spring Steel

			
<b>A248B</b>		<b>A251</b>	
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		

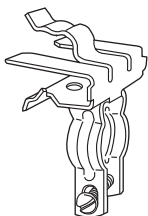
## PVC Cable Keeper

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

# Cable Clips

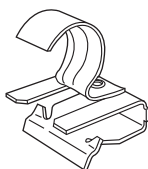
## Retrainer Clip Assemblies

### Below Rail Base



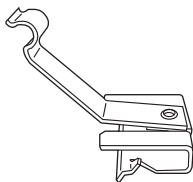
Part Number	Description	Standard Packaging
SBA2510B	3/4" Dia.	50
SBA2511B	1" Dia.	50
SBA2512B	1-1/4" Dia.	50

### Rail Base



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

### Web



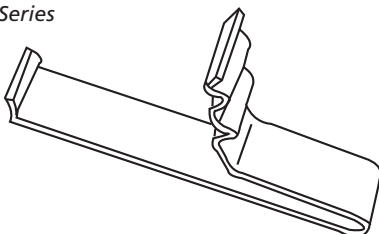
Part Number	Description	Standard Packaging
SBA254A1	3/8" Dia.	25
SBA255D1	1/2" Dia.	25

# Cable Clips

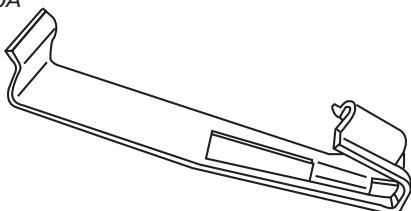
## "Snap-on" Styles

### Stainless Steel Rail Type

*SBA258 Series*



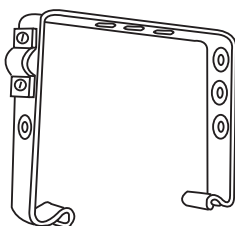
*SBA260A*



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

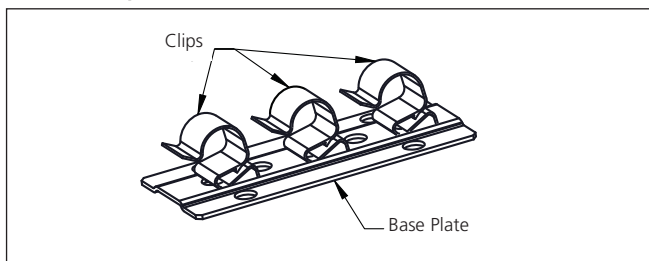
Contact ERICO with Application Information &

Concrete Tie Dimensions

# Cable Clips

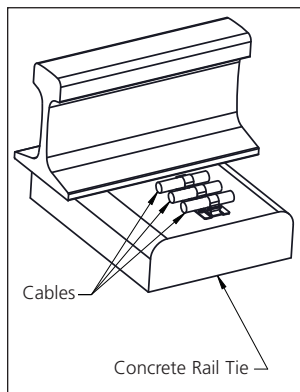
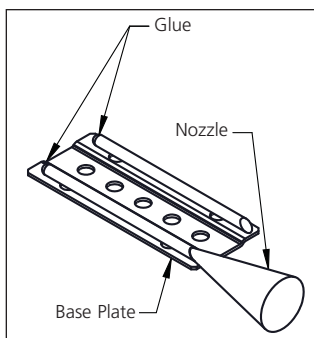
## Glued Rail Clips

### Cable Clip Kit for Concrete Rail Ties



Part Number	Description	Std Pack Base	Clips	Max. clips per base
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

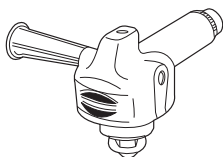
## Rail Grinders

### Pedestal Rail Grinder (Gas Powered)

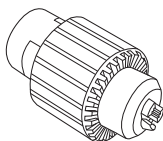


Part Number	Description
SBG141	3.5 HP (Briggs & Stratton® I/C) Grinder with 6' Shaft & Housing Base Plate Shaft Adapter Straight Spindle 6" Wheel & Guard Dressing Stone

### SBG141 Drill Attachment Parts



**SB22127**



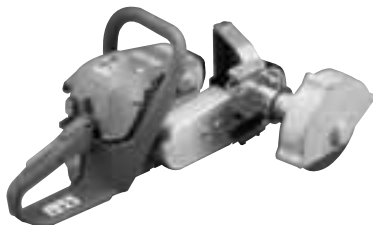
**SBS2171A**

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)

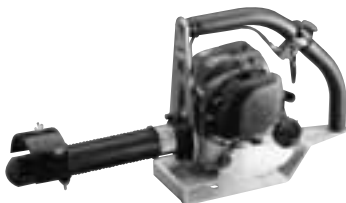


Part Number	Description
SBG150	Rail Grinder – 39cc, 6,000 rpm, 18 lbs.
SBG150WC	Rail Grinder with Storage Case
SBS2333	6" Grinding Wheel – 3/4" original replacement
SB22122	6" Grinding Wheel – 1" replacement
S2129	6" Beveled Grinding Wheel – Head Free Rail
SBK104	Slotting Wheel Kit – Includes 6" x 1/8" 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)
SBG20027	Cutting Wheel, Disk type, 4.5" x .08" (std. package of 5)
SBG20046	Cleaning and Cutting Wheel, Depressed center, designed for right angle use (std. package of 5)

# Grinders & Drilling Machines

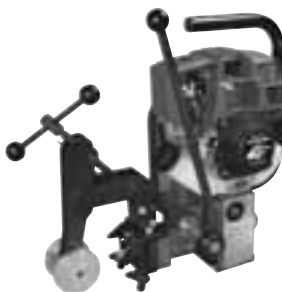
## Rail Drilling Machines

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)

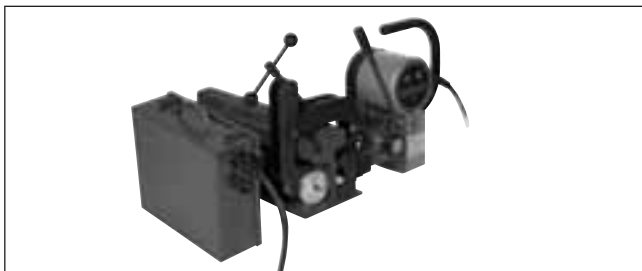


Part Number	Description
715412	Rail Drilling Machine SBV-V4, 28 lbs for drill hole dia. 3/8" up to 7/8", 267 rpm

# Grinders & Drilling Machines

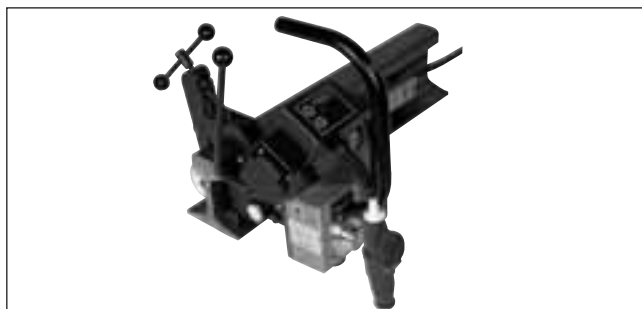
## Rail Drilling Machines

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)

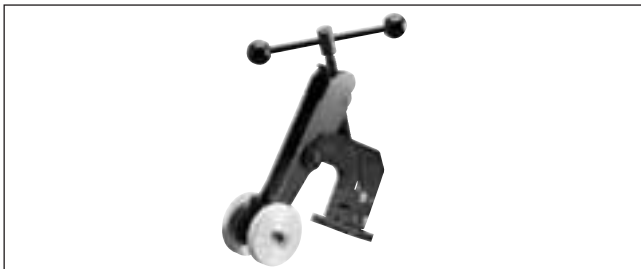


Part Number	Description
715404	Rail Drilling Machine SBM-E230, 28 lbs for drill hole dia. 3/8" up to 1-3/8", 280 rpm, requires 220/230V AC

# Grinders & Drilling Machines

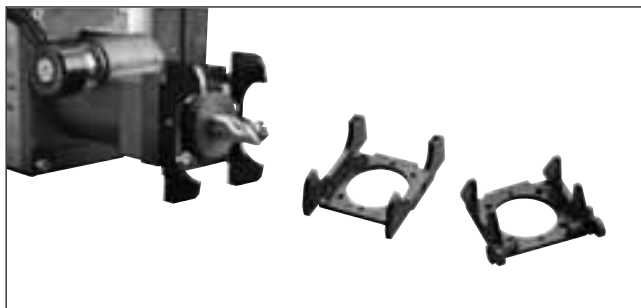
## Rail Drilling Machines

### 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.

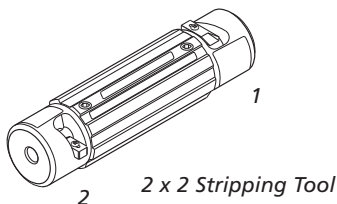
### Rail Drilling Accessories



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

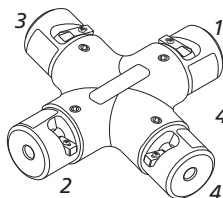
Part Number	Description
SBRTCB6667	Replacement Blades-Pkg of 5

## Accessory

Part Number	Description
SBRT36024	2 x 2 Tool Driver Adapter

# Tools & Bonding Accessories

## Stripping Tools 4 x 4



4 x 4 Stripping Tool

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	#6 Solid, 11/64" Insulation
SBRT360001010	3/16" Bond Strand, 6/64" Insulation	3/16" Bond Strand, 6/64" Insulation
	Bushing 3	Bushing 4
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

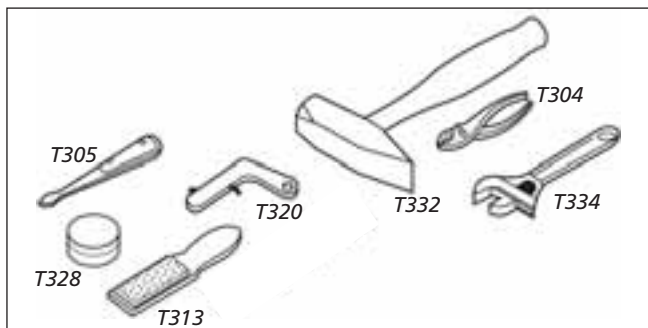
## Replacement & Additional Bushings

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



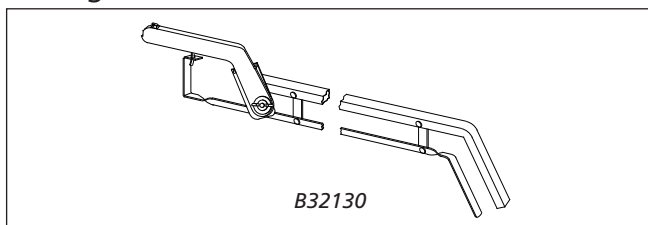
# Tools & Bonding Accessories

## Miscellaneous Tools



Part Number	Description
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")

## Flint Ignitor Extension



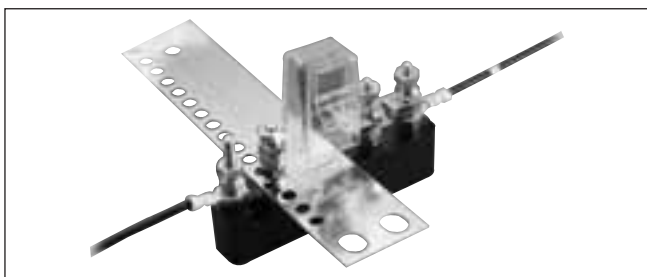
# Total Facility Protection

## 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



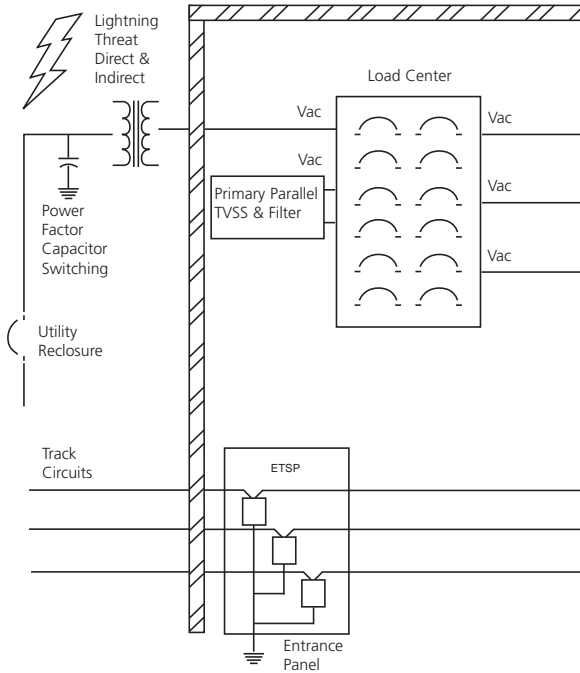
Part Number	Description
SBB2700A2B10	Terminal Block - Box of 10
B2700A2C1WH	Terminal Block with AAR Hardware
B2700HC36T	Terminal Strip - 36"
B2700HC48T	Terminal Strip - 48"
B2700HC60T	Terminal Strip - 60"

Contact ERICO For Design Assistance

# Solutions to Power

## Typical Signal Bungalow Power Protection Layout

### *With Transient*

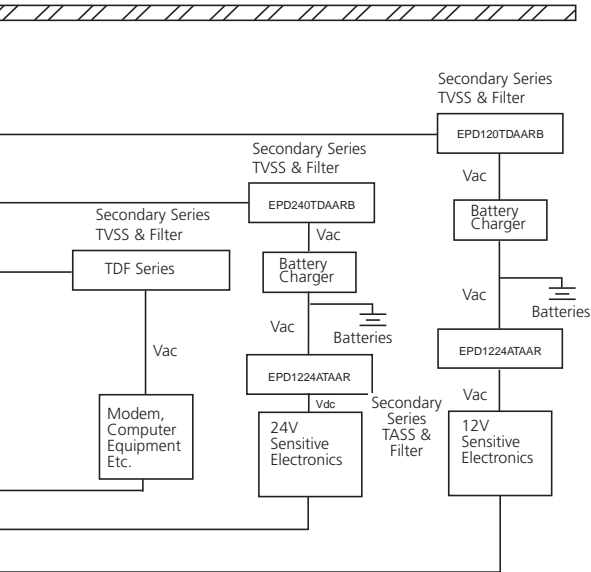


Part Number	Description
EPD120/240TDFL	120/240VAC primary surge protector, TD Technology, flying lead, 85kA
EPD100HZ120V	120VAC, 100HZ primary surge protector, fused, TD Technology, 120kA
EPD100HZ120240V	120/240VAC, 100HZ, primary surge protector, fused, TD Technology, 120kA
EPD100HZ240V	240VAC, 100HZ primary surge protector, fused, TD Technology, 120kA

# Quality Problems

Using Protection Devices From ERICO For Total Facility Protection

## Discriminating (TD) Technology



Part Number	Description
EPD1224ATAAR EPD120TDAARB EPD240TDAARB	12 & 24VDC secondary power protector, 30A max load 120VAC secondary power protector, 30A max load 240VAC secondary power protector, 30A max load
ETSP23050	50VDC / 35VAC Signal Protector, 30kA, 2 terminal arrestor
ETSP33050	50VDC / 35VAC Signal Protector, 30kA, 3 terminal arrestor
ETSP230170	170VDC / 120VAC Signal Protector, 30kA, 2 terminal arrestor
ETSP330170	170VDC / 120VAC Signal Protector, 30kA, 3 terminal arrestor

# Primary Surge Protection

## EPD Power 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

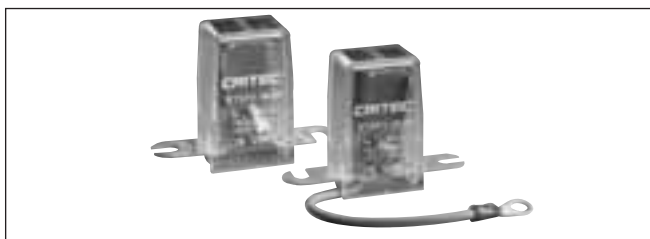
Part Number	Description
EPD100HZ120V	120VAC, 100HZ, primary surge protector, fused, TD Technology, 120kA
EPD100HZ120240V	120/240VAC, 100HZ, primary surge protector, fused, TD Technology, 120kA
EPD100HZ240V	240VAC, 100HZ, primary surge protector, fused, TD Technology, 120kA

Contact ERICO for additional information on our full line of ERITECH® surge protection devices.

# Primary Surge Protection

## ETSP 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 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
- 5 year limited warranty



Part Number	Description
ETSP23050	50VDC/35VAC Signal Protector, 30kA, 2 terminal arrestor
ETSP33050	50VDC/35VAC Signal Protector, 30kA, 3 terminal arrestor
ETSP230170	170VDC/120VAC Signal Protector, 30kA, 2 terminal arrestor
ETSP330170	170VDC/120VAC Signal Protector, 30kA, 3 terminal arrestor

# Secondary Surge Protection

## EPD Power 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
- 5 year limited warranty



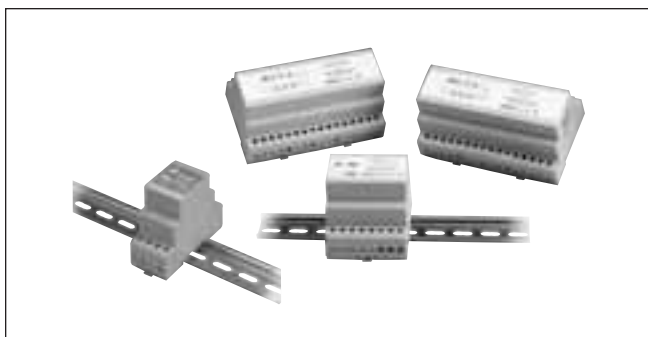
Part Number	Description
EPD1224ATAAR	12 & 24VDC secondary power protector, 30A max load
EPD120TDAARB	120VAC secondary power protector, 30A max load
EPD240TDAARB	240VAC secondary power protector, 30A max load

# Peripheral Power Protection

## Dinline Surge Filters

- Compact design – small footprint
- High efficiency sine wave filtering
- DIN rail mount
- Status indication
- High surge rating, 50kA (TDF), 8kA (DSF)
- TD technology

## Transient Discriminating Filter & DINLINE Surge Filter (TDF & DSF)



Part Number	Description
DSF6A30V	24VDC/30VAC 1 phase 2W+G, 6A series filter
TDF3A120V	120V 1 phase 2W+G, 50kA, 3A series filter
TDF3A240V	240V 1 phase 2W+G, 50kA, 3A series filter
TDF10A120V	120V 1 phase 2W+G, 50kA, 10A series filter
TDF10A240V	240V 1 phase 2W+G, 50kA, 10A series filter
TDF20A120V	120V 1 phase 2W+G, 50kA, 20A series filter
TDF20A240V	240V 1 phase 2W+G, 50kA, 3A series filter
557850	Din Rail, 2 meters in length, 7.5 mm height

## 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 8/20μs

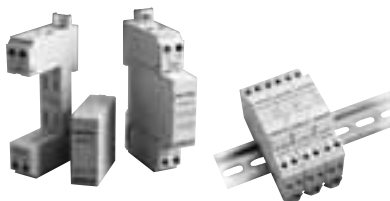


# Communications & Data Equipment Protection

## 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
- 5 year Limited Warranty

## Universal Transient Barrier (UTB and UTBTA)



Part Number	Description
UTB5SP	0-7V <sub>dc</sub> pk, 20kA, 2A Load Current
UTB15SP	5-18V <sub>dc</sub> pk, 20kA, 2A Load Current
UTB30SP	15-33V <sub>dc</sub> pk, 20kA, 2A Load Current
UTB60SP	30-64V <sub>dc</sub> pk, 20kA, 2A Load Current
UTB110SP	170V <sub>dc</sub> , 20kA, 2A Load Current
UTBTA	UTB, Secondary Telephone Protector
557850	Din Rail, 2 meters in length, 7.5 mm height

## Rail Transient Barriers (RTB)

- Includes all features of UTB plus fail-safe, open circuit, failure mode.

Part Number	Description
RTB12S3	12V <sub>dc</sub> , 20kA, 1.5A Load Current
RTB30S3	30V <sub>dc</sub> , 20kA, 1.5A Load Current
RTB50S2	50V <sub>dc</sub> , 20kA, 1.5A Load Current
RTB60S1	60V <sub>dc</sub> , 20kA, 1.5A Load Current

# Communications & Data Equipment Protection

## Radio Communications Protection

- Robust design
- Simple plug-in installation
- CSP models to suit N and BNC cable terminations
- CSP bulkhead N-type versions available
- High impulse current rating (20kA 8/20μs)
- Wide operating frequency spectrum
- Low insertion and return loss
- Mounting bracket and ground lead included
- CE approved

## Coaxial Surge Protector - CSP



Part Number	Description
CSPNMF90	N-Type M to F, 72-108V
CSPNMF600	N-Type M to F, 480-720V
CSP1BN90	BNC-Type M to F, 72-108V
CSPBNC600	BNC-Type M to F, 480-720V
CSPNB90	Bulkhead N-Type F to F, 72-108V
CSPNB600	Bulkhead N-Type F to F, 480-720V

### How to Choose the Correct CSP

For RF circuit protection the CSP is available with a choice of two nominal clamping voltages. The selection of the CSP unit is based on the peak transmitting power of the communication circuit. From this the peak circuit voltage is calculated and the CSP with the next highest clamping voltage is selected.

The formula is:

$$V_{\text{peak}} = \text{VSWR} \times 1.4 \times \text{Sqrt}(50 \times \text{Transmit Power})$$

Where VSWR is the Voltage Standing Wave Ratio (use 1.5 if unsure) and Transmit Power is in Watts.

If  $V_{\text{peak}} < 72\text{V}$  use CSPxxx90

If  $V_{\text{peak}} > 72\text{V}$  &  $< 480\text{V}$  use CSPxxx600

# Grounding

## Ground Rods



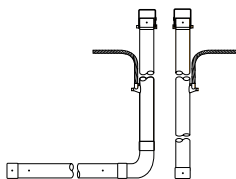
Figure 1



Figure 2

Part Number	Diameter	Figure	Standard Packaging	Length
<b>Pointed Copper-Bonded Rods</b>				
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'
<b>Pointed Copper-Bonded Rod Couplings</b>				
CC58	5/8"		25	
CC34	3/4"		25	
<b>Sectional Copper-Bonded Rods</b>				
635880	5/8"	2	5	8'
635800	5/8"	2	5	10'
633480	3/4"	2	5	8'
633400	3/4"	2	5	10'
<b>Sectional Copper-Bonded Rod Couplers</b>				
CR58	5/8"		25	
CR34	3/4"		25	

## Chemical Ground Rod Electrode Kit



Part Number	Description
ECRV10 "xx"4"y"	10' Vert. w/4' Pigtail, Backfill Material, Cover
ECRV12 "xx"4"y"	12' Vert. w/4' Pigtail, Backfill Material, Cover
ECRV15 "xx"4"y"	15' Vert. w/4' Pigtail, Backfill Material, Cover
ECRV20 "xx"4"y"	20' Vert. w/4' Pigtail, Backfill Material, Cover
ECRH10 "xx"4"y"	10' Horz. w/4' Pigtail, Backfill Material, Cover
ECRH12 "xx"4"y"	12' Horz. w/4' Pigtail, Backfill Material, Cover
ECRH15 "xx"4"y"	15' Horz. w/4' Pigtail, Backfill Material, Cover
ECRH20 "xx"4"y"	20' Horz. w/4' Pigtail, Backfill Material, Cover

"xx" – Cable code for specified pigtail conductor (4/0 conc typical)

"y" – Pigtail orientation: U-up, D-down

Extended "sectional" versions available for rods longer than 20 feet.

# Grounding

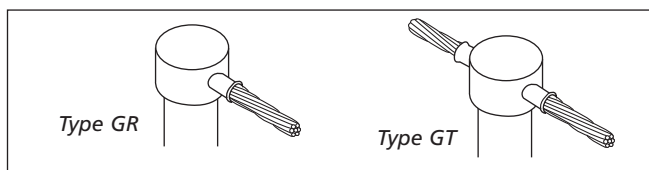
## CADWELD® ONE SHOT Connections

The CADWELD ONE SHOT consists of a ceramic mold, disk, F80 welding material and cover.

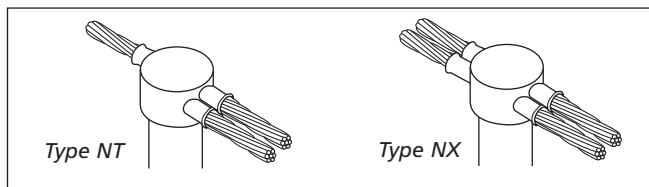
- Disposable ceramic unit eliminates graphite mold.
- Produces a permanent connection that will not loosen or corrode.
- Fits both plain or threaded copperclad and full size, steel and stainless steel rods.

### Standard Package 6

#### Cable-To-Ground Rod



Ground Rod Size	Conductor Size		Connector Part Number	
	Solid	Stranded	Type GR	Type GT
1/2"	#6, 8	#8	SBGR1141G	SBGT1141G
	3, 4	4, 6		SBGT1141L
	1, 2	2, 3		SBGT1141V
5/8"	6, 8	8	SBGR1161G	SBGT1161G
	3, 4	4, 6	SBGR1161L	SBGT1161L
	1, 2	2, 3	SBGR1161V	SBGT1161V
3/4"	6, 8	8	SBGR1181G	SBGT1181G
	3, 4	4, 6	SBGR1181L	SBGT1181L
	1, 2	2, 3	SBGR1181V	SBGT1181V



Ground Rod Size	Conductor Size		Connector Part Number	
	Solid	Stranded	Type NT	Type NX
1/2"	#6, 8	#8	SBNT1141G	
	3, 4	4, 6	SBNT1141L	
	1, 2	2, 3	SBNT1141V	
5/8"	6, 8	8	SBNT1161G	SBNX1161G
	3, 4	4, 6	SBNT1161L	SBNX1161L
	1, 2	2, 3	SBNT1161V	SBNX1161V
3/4"	6, 8	8	SBNT1181G	SBNX1181G
	3, 4	4, 6	SBNT1181L	SBNX1181L
	1, 2	2, 3	SBNT1181V	SBNX1181V

Other sizes available - Contact ERICO with application.

# Grounding

## GEM Ground Enhancement Material



Part Number	Description
GEM25A	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)

## 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 Fall-of-Potential, 3-Point earth coupling measurements & frequency scan 40 to 513Hz noise

# Grounding

## Aluminum-Copper Grounding Stud

### Aluminum Signal Mast

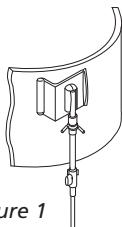


Figure 1

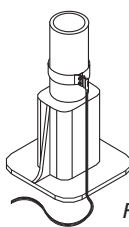


Figure 2

Part Number	Description (#6 Solid Copper Pigtail)	Figure Number
	<b>Aluminum-Copper Grounding Stud</b>	
SBB855E1G72	with 72" long Pigtail	1
SBB855E1G96	with 96" long Pigtail	1
	<b>Signal Mast Grounding Clamp</b>	
SBB852A8C1G48	with 48" long Pigtail - 3" to 8" Mast Dia.	2
SBB852A8C1G72	with 72" long Pigtail - 3" to 8" Mast Dia.	2
SBB852A12C1G96	with 96" long Pigtail - 3" to 12" Mast Dia.	2

### Aluminum Signal Case

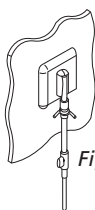


Figure 3

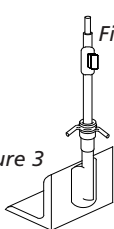


Figure 4

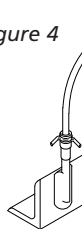


Figure 5

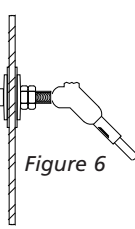


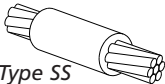
Figure 6

Part Number	Description	Figure Number
	<b>Aluminum-Copper Grounding Stud</b>	
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
	<b>Feed-Through Stud</b>	
SBB853B	with Hardware	6
SBB853A72	with Hardware and 72" long Pigtail, #6 Solid	6

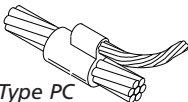
Other Pigtail sizes available.

# Grounding

## CADWELD® Connections Cable-to-Cable

 Type SS		
Cable Size	Welder Part No.	F80 Welding Material
#6 Sol	SB02SS6	SB25
4	SB03SS1L	SB25
2	SB10SS1V	SB32
3/16"	SB02SS3	SB25
3/16"	SB02SS3001	SB32

 Type PC		
Cable Size	Welder Part No.	F80 Welding Material
Run		
#6 Sol	SB10PC66	SB32
#6 Sol	SB02SC66001	SB25
#6 Sol	SB02SC65001	SB32
3/16"	SB02SC36001	SB25
3/16"	SB02SC33001	SB25
Tap		
#6 Sol		
#6 Sol		
5/16"		
#6 Sol		
3/16"		

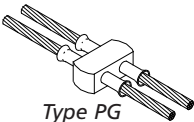
## CADWELD® ONE SHOT Connections

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.

### Standard Package 6

### Cable-To-Cable

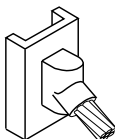
 Type PG		
Conductor Size		Parallel Tap Part Number
Solid	Stranded	
3, 4, 6	4, 6	SBPG11L

# Grounding

## Cable-to-Steel Structures

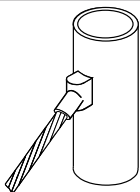
### Flat Vertical Surface

Type VS



Cable Size	Welder Part No.	F80 Welding Material
Sol 4	SB01VS4	SB25
Sol 6	SB01VS6	SB25
Sol 6	SB01VS6001	SB32
Sol 8	SB01VS8	SB25
3/16"	SB01VS3	SB25

### Round Vertical Surface



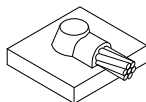
Cable Size	Welder Part No.	F80 Welding Material
Sol 6	SB01VS6V5C	SB25
Sol 6	SB01VS6V5C01	SB32



# Grounding

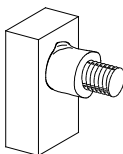
## CADWELD® Connections Cable-to-Steel Structures

### Horizontal Flat Surface

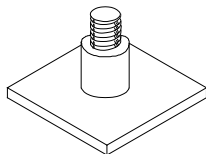


*Type HA*

Cable Size	Welder Part No.	F80 Welding Material
Sol 6 Sol 6	SB41HA6 SB41HA6001	SB32 SB25



*Type HV*

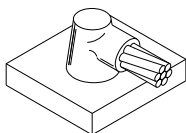


*Type HX*

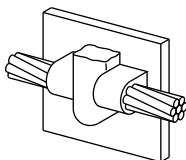
Cable Size	Welder Part No.	F80 Welding Material
1/4" AAR Split Stud	SB01HV10001 SB01HV10002 SB01HX10002	SB32 2-SB25 SB32

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

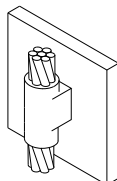
### Other Types and Sizes Available



*Type HS*



*Type VG*



*Type VV*

# Alpha-Numeric Listing

Part Number	Page	Part Number	Page
22128	25	B136D	32
22128P	25	B154A	17
557850	39, 40	B194D	10
613400	42	B2516C1	10
613480	42	B2516C	10
615800	42	B2700A2C1WH	33
615850	42	B2700HC36T	33
615880	42	B2700HC48T	33
633400	42	B2700HC60T	33
633480	42	B30174	10
635800	42	B32130	32
635880	42	B323L	11
715075	29	C105B	13
715360	29	CC34	42
715370	29	CC58	42
715375	29	CR34	42
715380	29	CR58	42
715400	28	CSPBNC600	41
715404	28	CSP1BN90	41
715412	27	CSPNB600	41
715685	27	CSPNB90	41
716203	29	CSPNMF600	41
716204	29	CSPNMF90	41
716207	29	DSD1402BR24/48	39
716211	29	DSF6A30V	39
716212	29	ECRH10"XX"4"Y"	42
716213	29	ECRH12"XX"4"Y"	42
A140	18	ECRH15"XX"4"Y"	42
A140WT	18	ECRH20"XX"4"Y"	42
A154	20	ECRV10"XX"4"Y"	42
A203	20	ECRV12"XX"4"Y"	42
A205	20	ECRV15"XX"4"Y"	42
A219	20	ECRV20"XX"4"Y"	42
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A2363J	16	EPD100HZ120V	34, 36
A2364J	16	EPD100HZ240V	34, 36
A2367J	16	EPD120/240TDFL	34, 36
A2412J	16	EPD120TDAARB	35, 38
A248B	20	EPD1224ATAAR	35, 38
A251	20	EPD240TDAARB	35, 38
A806A12F100	17	EST3640	44
A806A12F1000	17	EST4620	44
B101AA	17	EST4630	44

# Alpha-Numeric Listing

Part Number	Page	Part Number	Page
EST6472	44	SB10SS1V	46
ETSP230170	35, 37	SB20104	8
ETSP23050	35, 37	SB20108	8
ETSP330170	35, 37	SB20112	8
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GCHSC78	23	SB20128	8
GCHSC89	23	SB20136	8
GCHSC910	23	SB20175	8
GCHSC1011	23	SB20175HF	8
GCHSC1214	23	SB22122	25
GCHSC1518	23	SB22127	24
GCHSC1924	23	SB22127A	24
GCHSC2530	23	SB25 11, 17, 46 - 48	
GEM25A	44	SB32 11, 17, 46 - 48	
M22	13	SB41HA6	48
RTB12S3	40	SB41HA6001	48
RTB30S3	40	SBA127A	32
RTB50S2	40	SBA206	20
RTB60S1	40	SBA2510B	21
S119	10	SBA2511B	21
S2044	10	SBA2512B	21
S2129	25	SBA252S0	21
S2659	10	SBA252S1	21
SB01HV10001	48	SBA252S2	21
SB01HV10002	48	SBA254A1	21
SB01HX10002	48	SBA255D1	21
SB01VS3	47	SBA258A1	22
SB01VS4	47	SBA258B1	22
SB01VS6	47	SBA258D1	22
SB01VS6001	47	SBA260A	22
SB01VS6V5C	47	SBB200A	13
SB01VS6V5C01	47	SBB200B	13
SB01VS8	47	SBB200C	13
SB02SC33001	46	SBB200D	13
SB02SC36001	46	SBB200E	13
SB02SC65001	46	SBB2516A	10
SB02SC66001	46	SBB2516APRWH	10
SB02SS3	46	SBB2700A2B10	33
SB02SS3001	46	SBB2721B	19
SB02SS6	46	SBB2721CS72	19
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# Alpha-Numeric Listing

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SBB2721H	19	SBG20046	26
SBB2721JS72	19	SBG200COFF	26
SBB2721JS72SP	19	SBGR1141G	43
SBB2721S	19	SBGR1161G	43
SBB2721T	19	SBGR1161L	43
SBB2721V	19	SBGR1161V	43
SBB2721VS72	19	SBGR1181G	43
SBB2721WS300	19	SBGR1181L	43
SBB2721WS600	19	SBGR1181V	43
SBB343A	11	SBGT1141G	43
SBB343B	11	SBGT1141L	43
SBB343C	11	SBGT1141V	43
SBB343D	11	SBGT1161G	43
SBB343E	11	SBGT1161L	43
SBB394C	32	SBGT1161V	43
SBB429F	10	SBGT1181G	43
SBB492	9, 10	SBGT1181L	43
SBB852A8C1G72	45	SBGT1181V	43
SBB852A8C1G48	45	SBHFT6A	9
SBB852A12C1G96	45	SBHFT6B	9
SBB853A72	45	SBHFT6C	9
SBB853B	45	SBHFT6D	9
SBB855C1G36	45	SBHFT7E	9
SBB855C1G48	45	SBHFT7K	9
SBB855C1K48	45	SBK012A	17
SBB855E1G72	45	SBK012B	17
SBB855E1G96	45	SBK104	25
SBB855F1G48	45	SBL165	24
SBB855G1G30	45	SBL165SA	24
SBC105R	13	SBM456	9, 10
SBC105SA	13	SBM456F	10
SBC105S	13	SBNT1141G	43
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SBG150	25	SBNT1161V	43
SBG150WC	25	SBNT1181G	43
SBG200	26	SBNT1181L	43
SBG20015	26	SBNT1181V	43
SBG20018	26	SBNX1161G	43
SBG20025	26	SBNX1161L	43
SBG20027	26	SBNX1161V	43

# Alpha-Numeric Listing

Part Number	Page	Part Number	Page
SBNX1181G	43	SBRT36100135	30
SBNX1181L	43	SBRT36100136	30
SBNX1181V	43	SBRT36100138	30
SBPAC3A	15	SBRT36100139	30
SBPAC3G	15	SBRT36100140	30
SBPAC3R	15	SBRT36100142	30
SBPAC3Y	15	SBRT36100147	30
SBPACGBJ4	15	SBRT36100148	30
SBPAJ3 "XX"	14	SBRT36100149	30
SBPAJA "XX"	14	SBRT36100150	30
SBPAJB "XX"	14	SBRT36100152	30
SBPAJC "XX"	14	SBRT36100177	30
SBPAJD "XX"	14	SBRTCB6667	30
SBPAJG "XX"	14	SBS09C	11
SBPAJN "XX"	14	SBS10	11
SBPAJP "XX"	14	SBS11C	11
SBPAJR "XX"	14	SBS12C	11
SBPAW35	15	SBS13C	11
SBPG11L	46	SBS17CBARE	17
SBPMJ3 "X"	15	SBS2171A	24
SBPMJR "X"	15	SBS2171AK	24
SBPMJS "X"	15	SBS2333	25
SBRT1030075	31	SBS24882	8
SBRT1034048	31	SBS24883	8
SBRT1036060	31	SBS24884	8
SBRT1037590	31	SBS3086R48	18
SBRT1040075	31	SBS3086R48WT	18
SBRT10430135	31	SBS3086S48	18
SBRT10450110	31	SBS3086S48WT	18
SBRT10515145	31	SBS5838	9, 10
SBRT10550162	31	SBS5838F	10
SBRT1067575	31	SBS5839	9
SBRT11100075	31	SBS898	9, 10
SBRT11102575	31	SBS898F	10
SBRT11105075	31	SBS8BARE	17
SBRT1187575	31	SBS8CBARE	17
SBRT1197575	31	SBS8CINORG	17
SBRT360001004	31	SBS8CINSUL	17
SBRT360001010	31	SBS8INORG	17
SBRT36000906	31	SBS8INSUL	17
SBRT36000907	31	SBS8LBARE	17
SBRT36024	30	SBS8LINSORG	17
SBRT36100106	30	SBS8LINSUL	17
SBRT36100134	30	SBS8TCINS	17

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SBS8TCINS664	17	SBTBTB4E	11
SBS8TCINSRD	17	SBTBTB5B	13
SBS8TDINSUL	17	SBTBTB5C	13
SBS8TINSRD	17	SBTBTB5D	13
SBS8TINSUL	17	SBTBTB5E	13
SBS8TLINS664	17	SBXSB33 "X"	12
SBS925	9, 10	SBXSHU2	8
SBS925F	10	SBXSHU3	8
SBT031DJ	16	SBXSHU4	8
SBT365	25	SBXSJ33 "X"	12
SBT382B	16	SBXSS33 "X"	12
SBT382BWH	16	SBXST21A	13
SBT382BWPH	16	SBXST6A	9
SBT385B	24	SBXST6C	9
SBT408	16	SBXST6D	9
SBTBB33 "X"	12	SBXST7D	9
SBTBB34 "X"	12	SBXSTB4A	11
SBTBB36 "X"	12	SBXSTB5A	13
SBTBB54 "X"	12	T304	32
SBTBBU4A	12	T305	32
SBTBCU412	12	T313	32
SBTBJ33 "X"	12	T320	32
SBTBJ34 "X"	12	T320A	32
SBTBJ36 "X"	12	T328	32
SBTBJ54 "X"	12	T332	32
SBTBS33 "X"	12	T334	32
SBTBS34 "X"	12	T369	16
SBTBS36 "X"	12	T375	20
SBTBS54 "X"	12	T403	32
SBTBT21B	13	TDF10A120V	39
SBTBT21C	13	TDF10A240V	39
SBTBT21D	13	TDF20A120V	39
SBTBT21E	13	TDF20A240V	39
SBTBT6A	9	TDF3A120V	39
SBTBT6B	9	TDF3A240V	39
SBTBT6C	9	UTB110SP	40
SBTBT6D	9	UTB15SP	40
SBTBT6E	9	UTB30SP	40
SBTBT7B	9	UTB5SP	40
SBTBT7F	9	UTB60SP	40
SBTBT7G	9	UTBTA	40
SBTBTB4B	11		
SBTBTB4C	11		
SBTBTB4D	11		

# Product Literature

## Capabilities

R195S	Six Point Plan of Protection for Railway Facilities
R503B	Rail Products Brochure
X7A	Facility Electrical Protection Solutions

## Grounding

E1A	CADWELD® - Welded Electrical Connections
RT7F	GEM - Ground Enhancement Material

## Lightning Protection

E256C	ERITECH® SYSTEM 2000 - Passive Protection
E429B	ERITECH® SYSTEM 3000 - Active Protection
R196S	Terminal Block
RT7J	Lightning Protection for Railway Electrical Equipment

## Surge Protection

E430C	Catalog
R199S	EPD Primary Surge Protection Device
R558S	Electronic Track Circuit Protection
R601S	EPD 120V & 240V Secondary AC Surge Protection
R604S	EPD 12/24V <sub>DC</sub> 30A Secondary DC Surge Protection

# Product Literature

## Tools

R337S	SBG150 Portable Grinder
R408C	ERICO® ERICONTACT Mechanical Connections to Rail
R464S	SBG100 Portable Grinder
R474S	SBG200 Portable Grinder

## Training

R383D	Signal Bond Training CD
SBA7D	Installers & Inspectors Guide



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