

# Insul 8® 8 Bar and Side Contact Overview

Conductix-Wampfler has designed and built state-of-the-art conductor bar systems for over 60 years. Our experienced engineering and sales people are recognized experts in the application of conductor bar in the most demanding applications.

Conductix-Wampfler USA was founded in 1944 as Insul-8 Corporation (San Carlos, CA). Insul-8 developed the first "Figure 8" conductor bar system, which became the standard method for electrifying overhead cranes. In 1991 the company moved its manufacturing facility to Harlan, Iowa.

With the merger of Conductix and Wampfler in 2007, **Conductix-Wampfler** is now the world leader in the design and manufacture of high-performance conductor bar systems for industry.

Our innovations include the "finger-safe", V-contact Safe-Lec 2 system, Hevi-Bar II with optional Dura-Coat corrosion protection, and Hevi-Bar MD for high-current mill applications.

Conductix-Wampfler 8 Bar and Side Contact systems are manufactured in the USA to provide unsurpassed service and quick delivery. Our plants are ISO9001-2008 certified and adhere to stringent quality standards.

We offer a full complement of other mobile electrification products to include Cable Festoon Systems, Cable Reels (spring and motor driven), Push-Button Pendants, Radio Remote Controls, and Crane Bumpers - see page 51 for details.



## 8 Bar

The first insulated conductor system for crane/monorail electrification. If you need 8 Bar, insist on the original! Many accessories available. Able to accommodate small bend radii for curved systems and slip rings. 40A, 90A, 110A, 250A, 350A, and 500A capacity bars.

UL / CSA Listed



## Side Contact

Similar in construction to 8 Bar, Side Contact is the appropriate system for constrained spaces and difficult installations. Side contact can accommodate very small bend radii for curved systems and slip rings. 40A, 90A, 110A, 250A, and 350A capacity bars.

UL / CSA Listed



## Safe-Lec 2 and Hevi-Bar II

For details on Safe-Lec 2 and Hevi Bar II conductor bar lines, please refer to catalog CAT1003 and CAT1006.

## 800 Series Conductor Rails

For details on 800 Series conductor bar products manufactured by Conductix-Wampfler, please refer to catalogs:

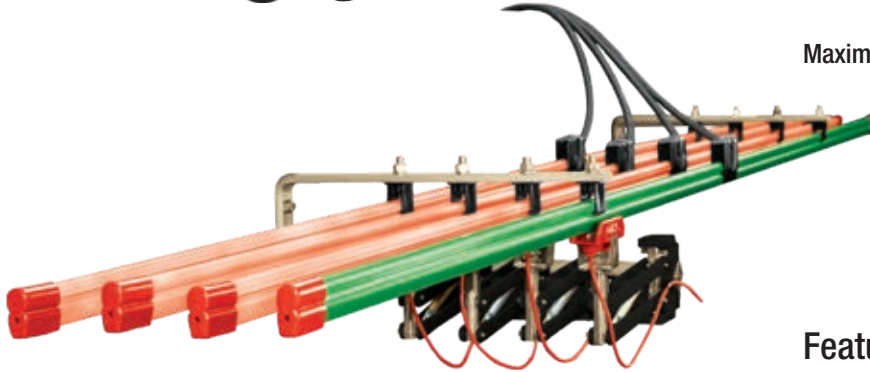
- KAT0811 811 Series
- KAT0812 812 Series
- KAT0813 813 Series
- KAT0815 815 Series
- KAT0831 831 Series, Multiline
- KAT0832 832 Series, EcoClick Line
- KAT0842 842 Series, Enclosed "Box Track"



# Insul 8® 8 Bar Design Features

Conductix-Wampfler "Insul 8® 8 Bar" was invented by Insul 8 Corporation over 60 years ago. This is the *original* "figure 8" conductor bar system! This innovative product was the first safe, insulated electrification solution for cranes, monorails, hoists, conveyors, and many other applications. Thousands of miles of 8 Bar are in use all around the world. There are many "copy cat" systems around. Don't settle for imitations; insist on the original 8 Bar system!

UL and CSA Listed



## Insul 8® 8 Bar is Ideal for:

- Small/Medium sized cranes
- Hoists
- Conveyors
- Tightly curved systems
- Monorails
- Other mobile power applications

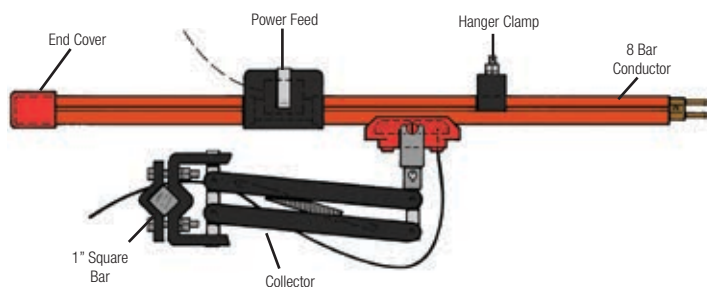
**Current range:** 40A, 90A, 110A, 250A, 350A, 500A  
@ 600 volts max.

**Maximum Speed:** 900 ft/min (274 M/min)

## Features

- Designed and built in the USA under stringent ISO 9001:2008 standard
- In stock availability for quick shipment
- A large number of special options and adaptations developed over 60 years of usage to handle numerous industrial situations.
- The ability to be curved into a tighter radius than most other systems.
- Knurled joint pins for secure joints. Won't pull apart under normal conditions when properly installed.
- Backed by the best after-sale services in the industry.

## Basic 8 Bar Components



<b>Power Feed</b>	Conducts the power source to the conductor bar
<b>Collector</b>	Transfers power from the bar to the moving machine. Connects to a 1" mounting staff
<b>Hanger Clamp</b>	Suspends the conductor bar from hanger bracket
<b>End Cover</b>	Caps off the end of the conductor bar
<b>Hanger Bracket</b>	Attaches to crane beam or other structure to support multiple hangers
<b>Anchor Clamp</b>	Connects the bar to the structure and directs movement of the conductors during thermal expansion and contraction

## Installs Quickly and Easily

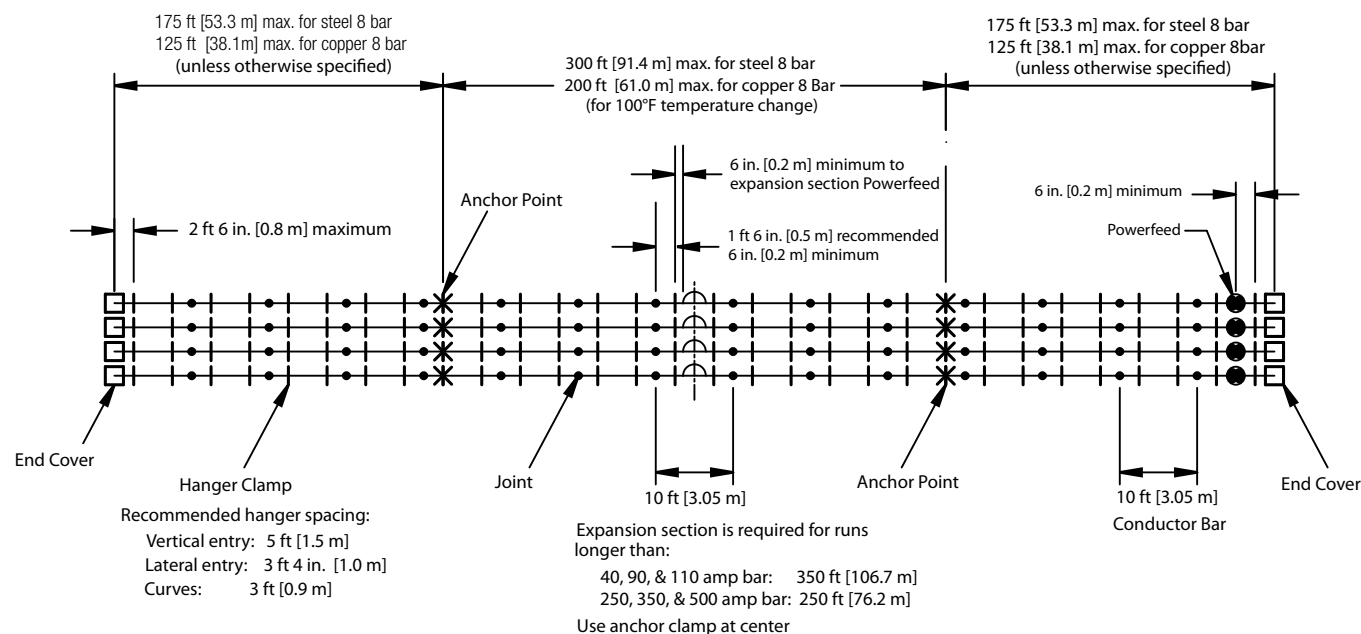
- Minimum number of basic parts
- Quick "pin-style" splice joints
- Bar snaps into mating hanger

## Many Options

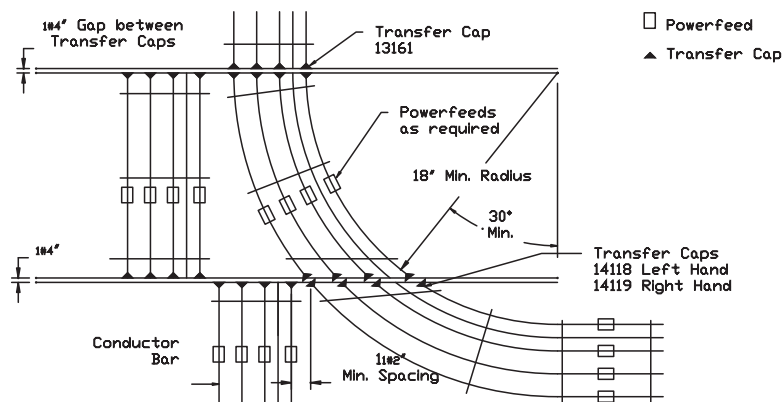
- Stainless steel hardware
- Green bonding (ground) conductor covers
- Black "UV stable" outdoor covers
- Curved systems with low heat cover; can be curved to 18" minimum radius with the bar profile vertical (i.e. the "easy" way) or 45" the "hard way" (low heat cover).

Use our advanced "Quick Quote Web" configuration tool to specify 8 Bar - See page 4.

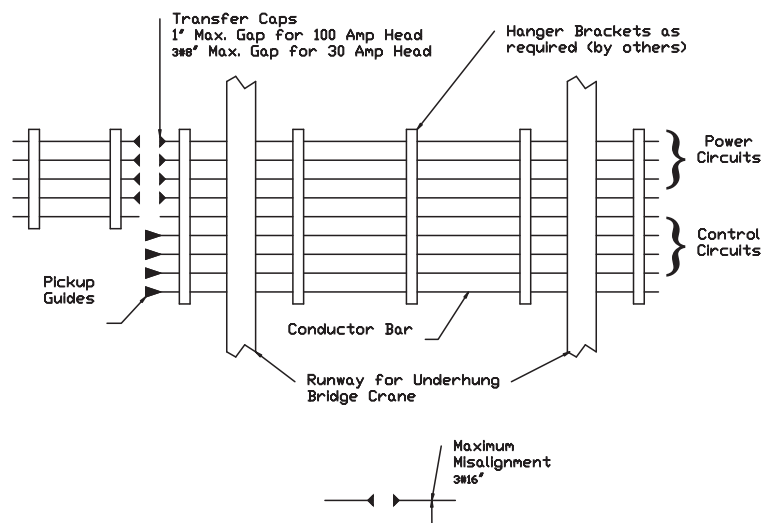
# Typical 4-Pole 8 Bar Layout



## 2-WAY STUB SWITCH



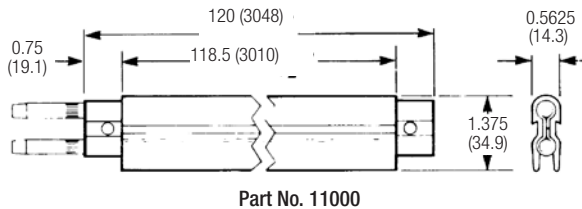
## BRIDGE CRANE INTERLOCK



# 8 Bar Specifications

## Conductor Bar Information

Please use the Specification Data Sheets on pages 6-7 and the information in Appendices I through III at the back of this catalog to determine your conductor bar needs. Contact Conductix-Wampfler Sales if you have any questions about the suitability of this product to your application.



Roll formed of 1/16" (1.59 mm) material except laminates which are 1/32" (0.79 mm) copper, steel, or stainless steel, and the 90 A galvanized bar. The cross-section area is 188 mcm (95 mm<sup>2</sup>); except solid copper bar which is 313 mcm (158 mm<sup>2</sup>). The equivalent rectangle for all conductors is 1" x 1/4" (25.4 x 6.3 mm). Supports are required every 3 feet (0.91 M) for curves, 3 feet 4 inches (1.01 M) for lateral mount, and 5 feet (1.52 M) standard.

Assembled with Connector Pins and Cover							Micro-ohms per foot *			
Part No.										
Material	Lgth ft (m)	w/PVC Cover	w/Med Heat Cover	w/High Heat Cover	Expansion Coefficient in./in./° F	Nominal Wt lb/ft (kg/M)	Max. Amps (cont. duty)	Resist. R (DC)	Reac- tance X (60 Hz, 3-Phase)	Imped- ance Z (60 Hz)
Stainless Steel	10 (3.05)	14299	24304	24307	.000007	0.72 ( 0.0995)	40	2310	67	2311
Galvanized Steel	10 (3.05)	22135	22141	22147	.000007	0.46 (0.0636)	90	771	73	774
Galvanized Steel	10 (3.05)	11000	11019	11038	.000007	0.65 (0.0899)	110	500	67	505
Stainless Clad Copper Laminate	10 (3.05)	11004	11023	11042	.000009	0.65 (0.0899)	250	110	73	132
Copper Steel Laminate	10 (3.05)	11008	11027	11046	.000009	0.65 ( 0.0899)	250	110	77	127
Rolled Copper	10 (3.05)	11012	11031	11050	.000009	0.76 ( 0.1051)	350	55	66	86
Solid Copper	20 (6.10)	11016	11035	11054	.000009	1.16 ( 0.5262)	500	32	60	68

\* Example: 0.000060 ohms/ft. X values are calculated at 3 inch center-line spacing, adjusted for three conductors with multiplier 1.26 a nominal permeability  $\mu$  of 10-12 is used for the steel conductor calculations. For reference,  $X = m 52.9 \log 10^3 \times \frac{1.26 + 34.5}{1250}$   $Z = \sqrt{R^2 + X^2}$

# 8 Bar Conductors

8 Bar conductor bars come with cover and connector pins installed. Bars are available in 40A, 90A, 110A, 250A, 350A, 500A capacities (@ 600 volts maximum). Expansion Sections, listed below, are required to compensation for thermal expansion; one every 350 feet (106.7 m) for 40A, 90A, and 100A systems or one every 250 feet (76.2 m) for 250A, 350A, and 500A systems.

Power Feeds are used to bring outside power to the conductor bar.

Factory installed covers are available in:

- **Rigid PVC:** -10° F to 160° F (- 23.3°C to 71.1°C)
- **Medium Heat:** - 25° F To 250° F (- 31.7°C to 121.1°C)
- **High Heat:** - 60° F To 400° F (-51.1°C to 204.2°C)

## Stainless Steel, 40A



Item	Rigid PVC Cover *		Med Heat Cover		High Heat Cover	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Conductor Bar, 10 ft (3.05 m)	<b>14299</b>	7.0 (3.18)	<b>24304</b>	6.6 (2.29)	<b>24307</b>	7.5 (3.40)
Conductor Bar, 5 ft (1.52 m)	<b>14823</b>	3.5 (1.59)	<b>24305</b>	3.3 (1.50)	<b>24308</b>	3.8 (1.72)
Expansion Section, 10 ft (3.05 m)	<b>24279</b>	7.5 (3.40)	<b>24306</b>	7.0 (3.18)	<b>24309</b>	8.2 (3.72)
Power Feed	<b>11091</b>	0.4 (0.18)	<b>11091</b>	0.4 (0.18)	<b>11122</b>	0.4 (0.18)
End Cover	<b>11088</b>	0.1 (0.05)	<b>11088</b>	0.1 (0.05)	<b>11633</b>	0.1 (0.05)

## Galvanized Steel, 90A



Item	Rigid PVC Cover *		Med Heat Cover		High Heat Cover	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Conductor Bar, 10 ft (3.05 m)	<b>22135</b>	4.4 (2.00)	<b>22141</b>	4.1 (1.86)	<b>22147</b>	4.9 (2.22)
Conductor Bar, 5 ft (1.52 m)	<b>22136</b>	2.2 (1.00)	<b>22142</b>	2.1 (0.95)	<b>22148</b>	2.5 (1.14)
Expansion Section, 10 ft (3.05 m)	<b>22140</b>	6.7 (3.31)	<b>22146</b>	6.3 (2.86)	<b>22152</b>	7.4 (3.36)
Power Feed	<b>11091</b>	0.4 (0.18)	<b>11091</b>	0.4 (0.18)	<b>11122</b>	0.4 (0.18)
End Cover	<b>22070</b>	0.1 (0.05)	<b>22070</b>	0.1 (0.05)	<b>11633</b>	0.1 (0.05)

## Galvanized Steel, 110A



Item	Rigid PVC Cover *		Med Heat Cover		High Heat Cover	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Conductor Bar, 10 ft (3.05 m)	<b>11000</b>	4.4 (2.00)	<b>11019</b>	4.1 (1.86)	<b>11038</b>	4.9 (2.22)
Conductor Bar, 5 ft (1.52 m)	<b>11001</b>	2.2 (1.00)	<b>11020</b>	2.1 (0.95)	<b>11039</b>	2.5 (1.13)
Expansion Section, 10 ft (3.05 m)	<b>11057</b>	6.7 (3.31)	<b>11064</b>	6.3 (2.86)	<b>11070</b>	7.4 (3.36)
Power Feed	<b>11091</b>	0.4 (0.18)	<b>11091</b>	0.4 (0.18)	<b>11122</b>	0.4 (0.18)
End Cover	<b>11088</b>	0.1 (0.05)	<b>11088</b>	0.1 (0.05)	<b>11633</b>	0.1 (0.05)

\* For Conductor Bar or Expansion Section with green PVC cover, add "G" to part no.

\* For Conductor Bar or Expansion Section with black UV resistant PVC, add "B" to the part no.

# 8 Bar Conductors

## Stainless Clad Copper, 250A

Requires a Joint Keeper (page 15) with each conductor bar - order separately



Item	Rigid PVC Cover *		Med Heat Cover		High Heat Cover	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Conductor Bar, 10 ft (3.05 m)	11004	6.6 (2.99)	11023	6.2 (2.81)	11042	7.1 (3.22)
Conductor Bar, 5 ft (1.52 m)	11005	3.3 (1.47)	11024	3.1 (1.41)	11043	3.6 (1.63)
Expansion Section, 10 ft (3.05 m)	11059	8.5 (3.86)	11065	8.0 (3.63)	11071	9.2 (4.17)
Power Feed	11092	0.7 (0.32)	11093	0.7 (0.32)	11093	0.7 (0.32)
End Cover	11088	0.1 (0.05)	11088	0.1 (0.05)	11633	0.4 (0.18)

## Copper Steel Laminate, 250A

Requires a Joint Keeper (page 15) with each conductor bar - order separately



Item	Rigid PVC Cover *		Medium Heat cover		High Heat Cover	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Conductor Bar, 10 ft (3.05 m)	11008	6.2 (2.81)	11027	5.8 (2.63)	11046	6.7 (3.04)
Conductor Bar, 5 ft (1.52 m)	11009	3.1 (1.41)	11028	2.9 (1.32)	11047	3.4 (1.54)
Expansion Section, 10 ft (3.05 m)	11060	10.0 (4.54)	11066	9.4 (4.26)	11072	10.8 (4.90)
Power Feed	11092	0.7 (0.32)	11093	0.7 (0.32)	11093	0.7 (0.32)
End Cover	11088	0.1 (0.05)	11088	0.1 (0.05)	11633	0.4 (0.18)

## Rolled Copper, 350A

Requires a Joint Keeper (page 15) with each conductor bar - order separately



Item	Rigid PVC Cover *		Medium Heat Cover		High Heat Cover	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Conductor Bar, 10 ft (3.05 m)	11012	7.0 (3.18)	11031	6.6 (2.99)	11050	7.5 (3.40)
Conductor Bar, 5 ft (1.52 m)	11013	3.5 (1.59)	11032	3.3 (1.50)	11051	3.8 (1.72)
Expansion Section, 10 ft (3.05 m)	11062	11.0 (4.99)	11068	11.0 (4.99)	11074	11.8 (5.35)
Power Feed	11094	0.7 (0.32)	11094	0.7 (0.32)	11094	0.7 (0.32)
End Cover	11088	0.1 (0.05)	11088	0.1 (0.05)	11633	0.4 (0.18)

## Solid Copper, 500A

500 amp solid copper bar requires copper connector clamp rather than connector pins, purchased separately see page 15.



Item	Rigid PVC Cover *		Medium Heat Cover		High Heat Cover	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Conductor Bar, 20 ft (6.10 m)	11016	23.6 (10.71)	11035	22.1 (10.02)	11054	24.6 (11.16)
Conductor Bar, 10 ft (3.05 m)	11017	11.8 (5.35)	11036	11.0 (4.99)	11055	12.3 (5.58)
Expansion Section, 10 ft (3.05 m)	11063	18.5 (3.39)	11069	17.3 (7.85)	11075	20.0 (9.07)
Power Feed	11094	2.6 (1.18)	11094	2.6 (1.18)	11094	2.6 (1.18)
End Cover	12171	0.2 (0.09)	11633	0.2 (0.09)	11633	0.4 (0.18)

\* For Conductor Bar or Expansion Section with green PVC cover, add "G" to part no.

\* For Conductor Bar or Expansion Section with black UV resistant PVC, add "B" to the part no.



# 8 Bar Replacement Covers, Connectors, & Joint Covers

## Replacement 8 Bar Covers



Meets all requirements for plastic electrical insulation and may be used indoors or outdoors. Covers are included with the conductors listed on pages 12-13.

Replacement length is 9 ft to 10.5 ft. (2.74 M to 3.20 M)

Material	Color	Temp-Rating	Part No.	Wt lb (kg)
Rigid PVC	Orange	-10° F to 160° F	<b>11114</b>	1.2 (0.54)
Rigid PVC	Green	-10° F to 160° F	<b>11114G</b>	1.2 (0.54)
UV Resistant PVC	Black	-10° F to 160° F	<b>11114B</b>	1.2 (0.54)
UV Resistant PVC	Green	-10° F to 160° F	<b>11114C</b>	1.4 (0.62)
Medium Heat Lexan	Red	-25° F to 250° F	<b>11115</b>	0.8 (0.36)
Medium Heat Lexan	Green	-25° F to 250° F	<b>11115B</b>	1.1 (0.50)
High Heat Polyester	Dark Orange	-60° F to 400° F	<b>11116</b>	1.7 (0.77)
High Heat Polyester	Green	-60° F to 400° F	<b>11116B</b>	1.2 (0.56)

## Replacement Connector Pins



21914



11120

Used to connect two bar sections together. For quick and easy installation. Supplied with conductors listed on pages 12-13. Two required per connection.

Pin Used With:	Material	Pin Lgth (in.)	Part No.
Stainless steel 40A 8 Bar	Stainless steel	2.50	<b>24196</b>
Galvanized steel 90A 8 Bar	Zinc plated steel	3.25	<b>21914</b>
Galvanized steel 110A 8 Bar	Zinc plated Steel	2.50	<b>11120</b>
Rolled copper and laminated 8 Bar	Copper	2.50	<b>11121</b>
Transition Pin: To join 90 to 110A 8 Bar	Zinc plated steel	2.94	<b>22885</b>

## Joint Covers



13601



13600



11123

Insulated protective covers for conductor bar joining parts. Required when ordering Conductor Bars from pages 12-13.

Used with:	Part No.	Wt lb (kg)
40A to 350A Rigid PVC Cover (Black)	<b>13601</b>	0.1 (0.05)
40A to 350A Medium Heat Cover	<b>13600</b>	0.1 (0.05)
40A to 350A High Heat Cover	<b>11123</b>	0.4 (0.18)

# 8 Bar Joint Parts & Tools

## Copper Connector Clamp and Case



11117 (Shown with only half of the cover)

To connect 500A solid copper conductor together. For all cover types.

Description	Part No.	Wt lb (kg)
Complete Assembly for Solid Copper 8 Bar	11117	1.5 (0.68)

## Joint Keeper



Required to secure and stabilize joints for all rolled copper or laminated copper Conductor Bar from page 13.

Used With:	Part No.	Wt lb (kg)
Rolled or laminated copper 8 Bar, 250A and 350A	11125	0.01 (0.004)

## Joint Repair Kit



24632 (Shown with only half cover)

To repair joints of damaged conductor bar.

Used For:	Part No.	Wt lb (kg)
40A to 350A formed 8 Bar	24632	0.7 (0.32)
High Heat Systems	51666	0.7 (0.32)

## Connector Pin Tool



Inserts into pre-punched holes of the conductor bar to pull conductor sections together securely. Supplied with the appropriate system at a nominal charge.

Used with:	Part No.	Wt lb (kg)
40A to 350A 8 Bar Conductors	11134	2.3 ( 1.04)



# 8 Bar End Covers & Power Feeds

## End Cover

For covering the exposed ends of 8 Bar Conductors.



11088

Used With 8 Bar Conductors:	Max. Temp. °F ( °C)	Part No.	Wt lb (kg)
40A, 110A thru 350A	300 (149)	<b>11088</b>	0.03 ( 0.02)
90A	250 (121)	<b>22070</b>	0.03 ( 0.02)
110A thru 350A	400 (204)	<b>11633</b>	0.03 ( 0.02)
500A Solid Copper	160 (71)	<b>12171</b>	0.40 (0.02)
500A Solid Copper w/ Stainless Steel Hardware	160 (71)	<b>27102</b>	0.40 ( 0.02)

## Power Feeds

Provides attachment of incoming power to the conductor rails. Fully insulated, simple clamp design for easy installation anywhere on the system.



11091

Current Cap.	Clamp Matl	Case Matl	Max. Temp °F ( °C)	Part No.	Wt lb (kg)
90 or 110	Steel	Rigid PVC	160 (71)	<b>11091</b>	0.4 ( 0.18 )
90 or 110	Steel	Polyester	400 (204)	<b>11122</b>	0.4(0.18)
250	Copper	Rigid PVC	160 (71)	<b>11092</b>	0.7 ( 0.32)
250	Copper	Polyester	400 (204)	<b>11093</b>	0.7 ( 0.32 )
500	Copper	Polyester	400 (204)	<b>11094</b>	2.60 (1.19)
250	Copper Clamp w/Stainless Steel Hardware	Rigid PVC	160 (71)	<b>27104</b>	0.7 ( 0.32 )
500	Copper Clamp w/Stainless Steel Hardware	Polyester	400 (204.2)	<b>27106</b>	2.60 (1.19)

## Power Feed Parts/Accessories

Description	Part No.	Wt lb (kg)
Case & clip only. PVC 90/110, 250A	<b>11131</b>	0.2 ( 0.09)
Case & clip only. High heat. 90/110, 250A	<b>11132</b>	0.3 ( 0.14)
Case only. High heat 500A	<b>11133</b>	1.0 ( 0.45)
Power Feed Clamp only. For Galvanized Steel, 90/110A	<b>11128</b>	0.1 ( 0.04)
Power Feed Clamp only. For Copper, 250A	<b>11129</b>	0.4 (0.18)

# 8 Bar Expansions & Isolation Sections

## Expansion Section

Required every 300 feet (94.1 m) for steel conductors or every 200 feet (61.0 m) for copper conductors to compensate for thermal expansion. Power feeds and flexible jumpers are factory installed to meet electrical and mechanical requirements of your system.

**Note: Part numbers are located in the Conductor Bar tables - See pages 12-13.**



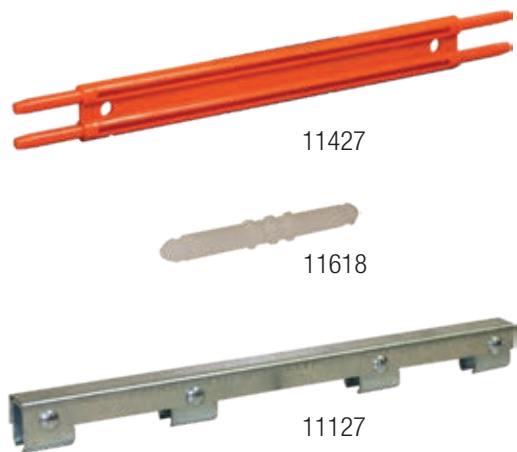
## Isolation Section



Conductor isolation sections are used to electrically isolate control circuits, maintenance bays, etc. The kit includes 11127 Guide Assembly, PVC Cover, and Isolation Section for 40A to 350A (not including 90A). Contact our factory for proper selection.

Part No.	Wt lb (kg)
21841	2.3 (1.04)

## Isolation Section Parts



Components used for in-field modification.

Description	Part No.	Wt lb (kg)
Molded plastic insulating piece; only for 21841	11427	0.3 (0.14)
Molded plastic 1" (25.4 mm) isolating pin. For 40-350A except for 90A; Two required per location.	11615	0.03 (0.01)
Molded plastic, 1" (25.4 mm) isolating pin. For 90A only. Two required per location.	11618	0.03 (0.01)
Galvanized Steel Guide Assembly. Provides rigid support at isolation areas.	11127	1.5 (0.68)

# 8 Bar Transfer Caps, Pickup Guides, Collector Brackets

## Transfer Caps



Used in switches and interlocks to accomplish smooth collector transfer.

Item Description	Part No.	Wt lb (kg)
End Transfer Cap for 90A bar.	<b>22070</b>	0.03 ( 0.01)
Left Transfer Cap for 90A bar.	<b>22395</b>	0.03 ( 0.01)
Right Transfer Cap for 90A bar.	<b>22396</b>	0.03 ( 0.01)
End Transfer Cap for 40-350A bar	<b>13161</b>	0.03 ( 0.01)
Left-hand Cap for 40-350A bar	<b>14118</b>	0.03 ( 0.01)
Right-hand Cap for 40-350A bar	<b>14119</b>	0.03 ( 0.01)

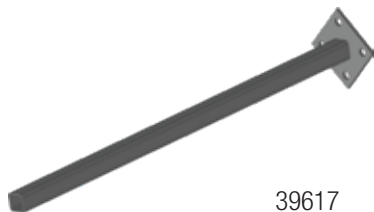
## Pick-Up Guides



The Pick-up Guide allows the collector to leave the conductor and re-track upon return. Requires use of "Self-Centering" J-Head Collectors, see pages 23-24. Contact factory for selection.

Used:	Part No.	Wt lb (kg)
Indoors, for 3" bar spacing	<b>13142</b>	1.75 (0.79)
Indoors, for 4" bar spacing	<b>11089</b>	1.75 (0.79)
Outdoors, for 3" bar spacing	<b>13143</b>	2.00 (0.91)
Outdoors, for 4" bar spacing	<b>11090</b>	2.00 (0.91)

## Collector Brackets



For mounting collectors to the moving vehicle. Applicable for all 8 Bar and Saf-T-Bar Series C Collectors. See pages 23 and 24 for Collector Assembly descriptions.

TYPE	Type	Post Size in. (mm)	Part No.	Wt lb (kg)
Single post	Plated steel	1.00 (25)	<b>39617</b>	1.77 (0.80)
Single post	Stainless steel	1.00 (25)	<b>52336</b>	1.77 (0.80)

# 8 Bar Hanger and Anchor Clamps

## Polycarbonate Snap-in Hanger Clamps



Hanger Clamps are designed to grip 8 Bar Conductors for stable support. Clamps are required every 5 foot (1.52 M) standard. These Polycarbonate Snap-in Hanger Clamps are recommended for standard mount only; not recommended for curves or lateral mount.

Type	Hardware	Part No.	Wt lb (kg)
Without Insulator	Zinc Plated	<b>22800</b>	0.3 (0.14)
Without Insulator	Stainless Steel	<b>23370</b>	0.3 (0.14)
With Insulator	Zinc Plated	<b>24405</b>	0.5 (0.23)
With Insulator	Stainless Steel	<b>28122</b>	0.5 (0.23)

## Steel Snap-in Hanger Clamp



The spring-steel Hanger Clamps are designed to grip 8 Bar Conductors for stable support.

Clamps are required every 5 foot (1.52 M) standard. Steel Snap-in Hanger Clamps are recommended for standard mounting; not recommended for curves or lateral mount.

Type	Part No.	Wt lb (kg)
Without Insulator	<b>21600</b>	0.2 (0.09)
With Insulator	<b>22000</b>	0.4 (0.18)

## Cross-Bolt Hanger Clamp



Cross-Bolt Hanger Clamps are designed to lock to 8 Bar Conductors for stable support.

Hangers are required every 5' for vertical entry, 3' for curved systems and every 3' 4" for lateral entry. Cross-Bolt Hanger Clamps are recommended for standard mounting, lateral mounting, and curved systems.

Type	Material	Part No.	Wt lb (kg)
Without Insulator	Plated Steel	<b>11076</b>	0.3 (0.14)
Without Insulator	Stainless Steel	<b>11078</b>	0.3 (0.14)
With Insulator	Plated Steel	<b>11082</b>	0.5 (0.23)
With Insulator	Stainless Steel	<b>11084</b>	0.5 (0.23)

## Anchor Clamp



For standard mount, not recommended for curves or lateral mount.

Type	Material	Part No.	Wt lb (kg)
Without Insulator	Plated Steel	<b>21833</b>	0.3 (0.14)
Without Insulator	Stainless Steel	<b>28123</b>	0.3 (0.14)
With Insulator	Plated Steel	<b>21982</b>	0.5 (0.23)
With Insulator	Stainless Steel	<b>28124</b>	0.5 (0.23)

# 8 Bar Standard Brackets - Without Hangers

## Web Bracket



22014

For top running, web-mounted, bottom entry systems. Zinc plated steel. See page 19 for hangers.

Distance to First Hole:	Part No.	Wt lb (kg)
6.0 (152)	<b>22014</b>	2.4 (1.09)
9.0 (229); with three more holes - At 12.0 (305), 15 (381), and 18 (457)	<b>29876</b>	4.5 (2.04)

## Flange Mount Brackets



27762

For bottom entry monorail and under-hung systems, flange-mounted. Zinc plated steel. See page 19 for hangers.

Type	Part No.	Wt lb (kg)
For 2 hangers each side	<b>27762</b>	2.5 (1.13)
For 4 hangers on one side	<b>27767</b>	2.5 (1.13)

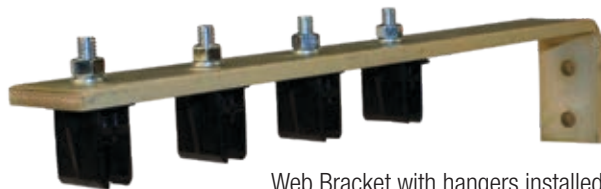
# 8 Bar Standard Brackets - With Hangers

## Brackets w/Pre-Assembled Hanger Clamps

The following brackets come with hanger clamps on 3" centers, brackets are zinc plated steel. **Hanger Clamp styles are described on page 19.**

### With Polycarbonate Snap-In Hanger Clamps

Description	Without Insulators		With Insulators	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Web type 6.0" (152)	<b>28829</b>	2.0 (0.91)	<b>51004</b>	2.4 (1.09)
Web type 9.0" (229)	<b>34189</b>	3.1 (1.40)	<b>50314</b>	3.5 (1.59)
Flange type, 2 hangers each side	<b>51864</b>	2.6 (1.18)	<b>51865</b>	3.1 (1.41)
Flange type, 4 hangers on one side	<b>51870</b>	2.6 (1.18)	<b>51871</b>	3.1 (1.41)



Web Bracket with hangers installed  
(# 34189 shown)



Flange Bracket with hangers installed  
(# 51864 shown)

### Steel Snap-In Hanger Clamps

Description	Without Insulators		With Insulators	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Web type 6.0" (152)	<b>30281</b>	1.6 (0.73)	<b>51005</b>	2.0 (0.91)
Web type 9.0" (229)	<b>50313</b>	2.7 (1.23)	<b>50315</b>	3.1 (1.41)
Flange type, 2 hangers each side	<b>51866</b>	2.1 (0.95)	<b>51867</b>	2.5 (1.11)
Flange type, 4 hangers on one side	<b>51872</b>	2.1 (0.95)	<b>51873</b>	2.5 (1.11)

### Cross-Bolt Hanger Clamps

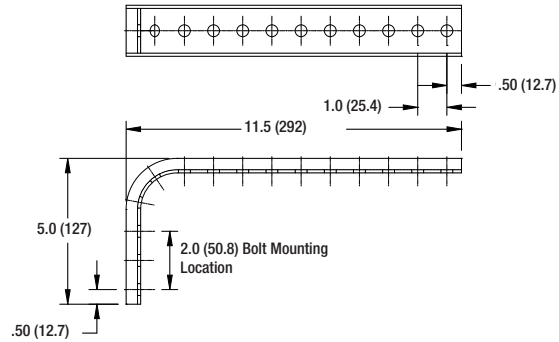
Description	Without Insulators		With Insulators	
	Part No.	Wt lb (kg)	Part No.	Wt lb (kg)
Web type 6.0" (152)	<b>31762</b>	2.0 (0.91)	<b>29534</b>	2.3 (1.04)
Web type 9.0" (229)	<b>50312</b>	3.1 (1.41)	<b>50316</b>	3.5 (1.59)
Flange type, 2 hangers each side	<b>51868</b>	2.5 (1.11)	<b>51869</b>	2.9 (1.32)
Flange type, 4 hangers on one side	<b>51874</b>	2.5 (1.11)	<b>51875</b>	2.9 (1.32)

# 8 Bar Universal Brackets

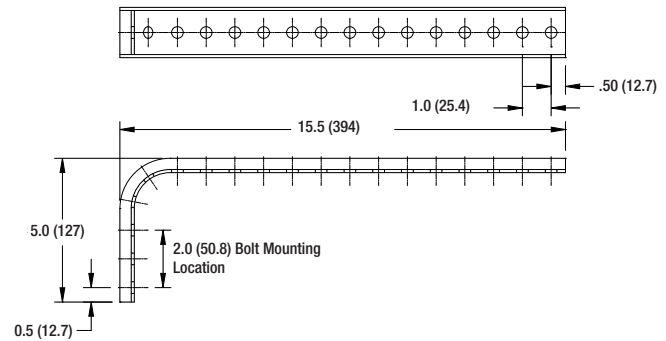
You can order pre-assembled brackets with your choice of hangers on page 21. Or, if these hanger locations don't work for the application, the "Universal Brackets" shown below should address most special applications. Holes are drilled on 1.0 inch (25.4 mm) centers.

Type	Length	Part No.	Wt lb (kg)
Web Bracket, Short	11.5 (29)	<b>31409</b>	1.0 (0.45)
Web Bracket, Long	15.5 (39)	<b>31407</b>	1.3 (0.59)
Flange Bracket	18.0 (46)	<b>31408</b>	1.2 (0.54)
Flange Bracket with Beam Clips	18.0 (46)	<b>31418</b>	1.6 (0.73)
Flange Bracket with Beam Clips	24.0 (61)	<b>31911</b>	2.0 (0.91)

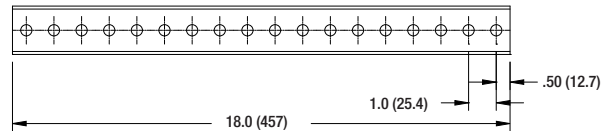
## Web Bracket - Short (31409)



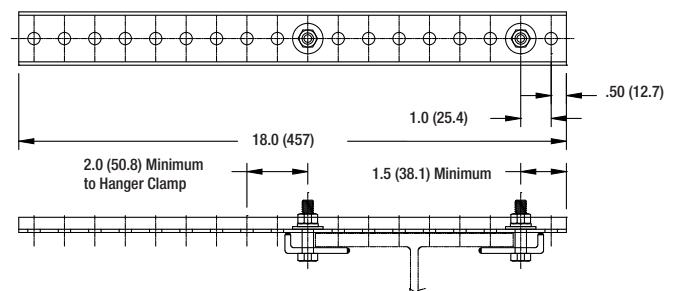
## Web Bracket - Long (31407)



## Flange Bracket (31408)



## Flange Bracket with Clips (31418)



# 8 Bar Universal Brackets with Pre-assembled Hangers

## Ordering Instructions:

- 1) Choose the part number of the desired bracket from the styles shown below.
- 2) Referring to the drawings below, choose the hole number locations at which hangers are to be assembled observing the minimum bar spacing table below:

### Recommended Minimum Conductor Bar Spacing

	Indoor, inch (mm)	Outdoor, inch (mm)
8 Bar (bottom entry)	2.0 (50.8)	3.0 (76.2)
Side Contact (Lateral Mount)	3.0 (76.2)	Not for outside use

For less than 2.0" (50.8 mm) spacing, contact factory

- 3) From page 19, select desired hanger type by part number.

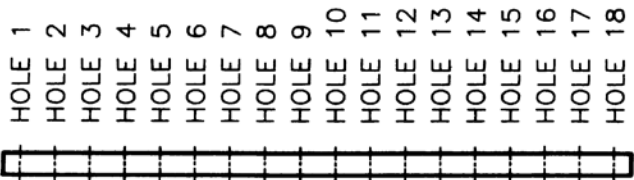
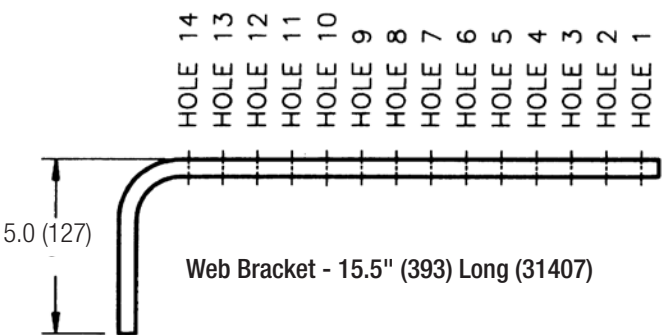
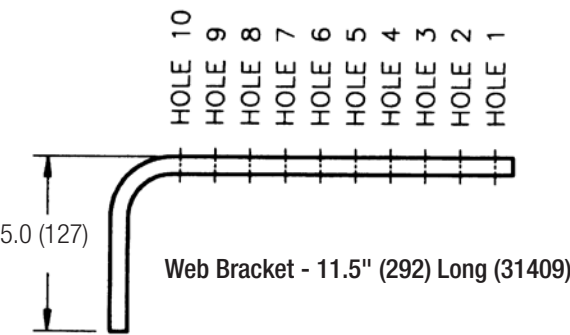
Example: 10 Universal Brackets with four polycarbonate snap-in hangers on each:

Qty	Part No. (hole numbers where hangers are to be mounted)	Description
10	31407 (1, 3, 5, 7)	Web Bracket, Long (from below)
40	22800	Polycarbonate Snap Hanger (from page 19)

**Note:** When the order is received, a unique part number will be created for the requested bracket and hanger combination.

## Bracket Hole Position Numbers

Holes start 0.5" from the end of the bracket and are 1" on-center.



Flange Bracket - 18" (457) Long (31408)

Flange Bracket with Beam Clips - 18" (457) Long (31418)



# 8 Bar Collector Assemblies

Sliding contact Collector Assemblies are offered in either single shoe or tandem shoe configurations. Current capacities range from 30A to 200A depending on the model. The shoes are supported by insulated holders on articulating, spring-loaded collector arms. Most collector arms are made from **Grivory GV-5**, a high-strength fiberglass-filled polymer material that is stronger and less porous than aluminum. Wear on the collector assembly is confined to easily replaceable contact shoes.

## 30A and 60A J-Head, C-Base Type

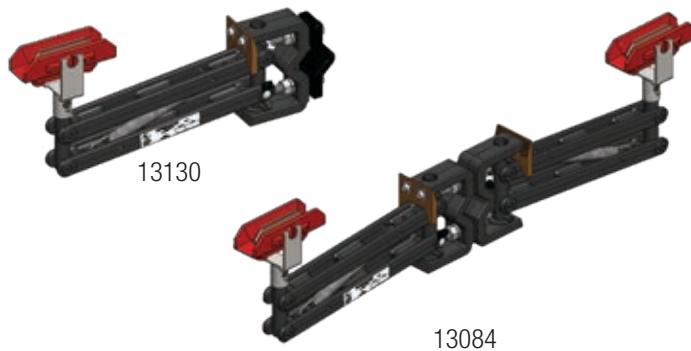


For systems up to 600 volts with straight runs and curves to 18" minimum radius. Assemblies have 19" pigtails (not shown in the illustration). Choose standard bottom entry or lateral-mount versions.

Replacement shoe for these collectors is Part No. [13136](#) - see page 25.

Type	Mounting	Cap.	Part No.	Wt lb (kg)
Single	Bottom Entry	30A	<b>13128</b>	2.5 (1.13)
Tandem	Bottom Entry	60A	<b>13082</b>	4.7 (2.13)
Single	Lateral-Mount	30A	<b>13129</b>	2.5 (1.13)
Tandem	Lateral-Mount	60A	<b>13083</b>	4.7 (2.13)

## 30A and 60A Self-Centering J-Head, C-Base Type

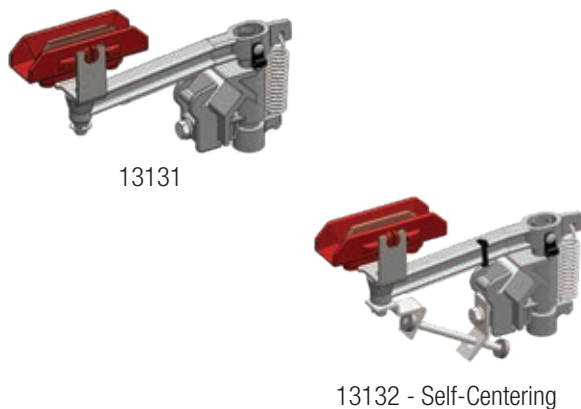


The "Self-Centering" versions below are used with Pick-up Guides, see page 18. These are for bottom entry mounting and have 19" pigtails (not shown in the illustration).

Replacement shoe for these collectors is Part No. [13136](#), see page 25.

Type	Cap.	Part No.	Wt lb (kg)
Self-Centering Single	30A	<b>13130</b>	2.6 (1.18)
Self-Centering Tandem	60A	<b>13084</b>	4.9 (2.22)

## 30A J-Head, H-Base Type



For systems up to 600 volts with straight runs and curves to 18" minimum radius. Assemblies have 15" pigtails (not shown in the illustration). Choose standard bottom entry or lateral-mount versions.

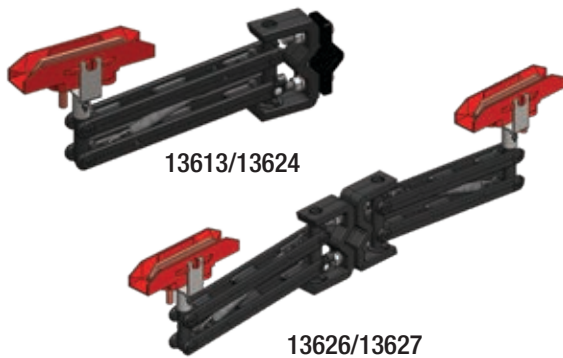
The "Self-Centering" version is used with Pick-up Guides, see page 18.

Replacement shoe for these collector is Part No. [13136](#), see page 25.

Type	Cap.	Part No.	Wt lb (kg)
Single	30A	<b>13131</b>	1.4 (0.64)
Self-Centering Single	30A	<b>13132</b>	1.7 (0.77)
Lateral-Mount Single	30A	<b>13133</b>	1.4 (0.64)

# 8 Bar Collector Assemblies

## 100A and 200A J-Head, C-Base Type

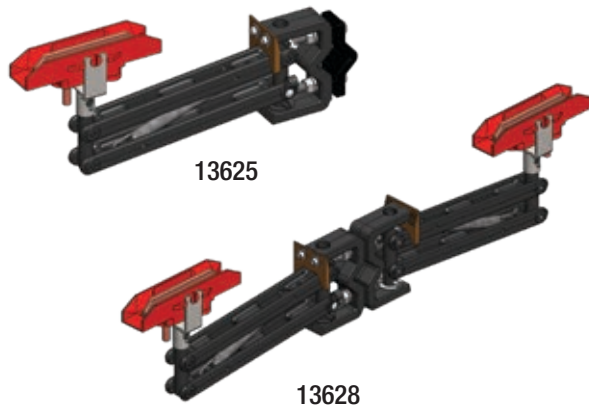


For straight system runs of 600V or less. Assemblies have 21" pigtails (not shown in the illustration). Choose standard "bottom entry" or lateral-mount versions.

Replacement shoe for this collector is Part No. [11157](#) - see page 25.

Type	Mounting	Cap.	Part No.	Wt lb (kg)
Single	Bottom Entry	100A	<b>13613</b>	3.1 (1.41)
Tandem	Bottom Entry	200A	<b>13626</b>	5.8 ( 6.23)
Single	Lateral-Mount	100A	<b>13624</b>	3.1 (1.41)
Tandem	Lateral-Mount	200A	<b>13627</b>	5.8 ( 6.23)

## 100A and 200A J-Head, C-Base Type Self-Centering

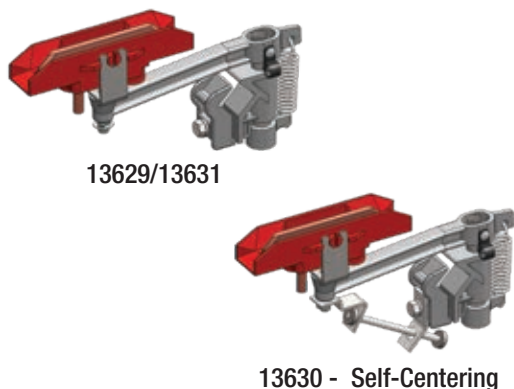


The "Self-Centering" versions are used with Pick-up Guides - See page 18. For straight system runs of 600V or less. These are for bottom entry mounting and have 21" pigtails (not shown in the illustration).

Replacement shoe for this collector is Part No. [11157](#) - see page 25.

Type	Capacity	Part No.	Wt lb (kg)
Self-Centering Single	100A	<b>13625</b>	3.2 (1.45)
Self-Centering Tandem	200A	<b>13628</b>	6.0 (0.72)

## 100A J-Head, H-Base Type



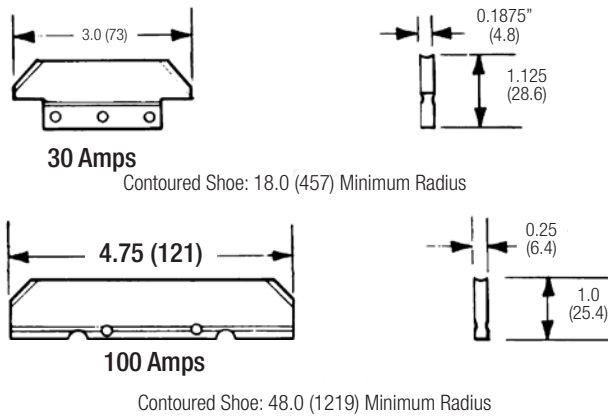
For straight system runs of 600V or less, and curves to a minimum of 48" radius. Assemblies have 21" pigtails (not shown in the illustration). Choose standard bottom entry or lateral-mount versions. The "Self-Centering" version is used with Pick-up Guides - See page 18 - and are for bottom-entry mounting.

Replacement shoe for this collector is Part No. [11157](#) - see page 25.

Type	Part No.	Wt lb (kg)
Single	<b>13629</b>	1.4 (0.65)
Self-Centering Single	<b>13630</b>	1.7 (0.77)
Lateral-Mount Single	<b>13631</b>	1.4 (0.65)

# 8 Bar Shoes, Curves, & Slip Rings

## Replacement Collector Shoes



Standard shoe material is copper graphite. The optional cast iron shoe is to be used temporarily to clean the bar. "Insuloy" has self-cleaning properties, but will cause more wear on the bar versus copper graphite.

Cap.	Material	Application	Part No.	Wt. lb (kg)
30A	Copper Graphite	Standard	<b>13136</b>	0.12 (0.05)
30A	Cast Iron	Cleaning shoe	<b>13138</b>	0.12 (0.05)
30A	Insuloy	Self-cleaning	<b>19678</b>	0.12 (0.18)
60A	Copper Graphite	Standard	<b>11154</b>	0.13 (0.06)
100A	Copper Graphite	Standard	<b>11157</b>	0.23 (0.10)
100A	Cast Iron	Cleaning shoe	<b>11159</b>	0.25 (0.11)
100A	Insuloy	Self-cleaning	<b>19347</b>	0.23 (0.10)

## Curved 8 Bar

Factory curved conductors. Refer to page 26 to specify your curve requirements. Contact factory for assistance. Maximum length: 10 feet (3.05 meters).

**Minimum bend radius:** PVC - 18.0" (457 mm); Lexan Medium Heat or Polyester High Heat- 57" (1447 mm)

Conductor Bar	Current Cap.	Part No.		
		PVC Cover	Lexan Cover	Polyester Cover
Galvanized Steel	110A	<b>11003</b>	<b>11022</b>	<b>11041</b>
Stainless Clad Copper Laminate	250A	<b>11007</b>	<b>11026</b>	<b>11045</b>
Copper Steel Laminate	250A	<b>11011</b>	<b>11030</b>	<b>11049</b>
Rolled Copper	350A	<b>11015</b>	<b>11034</b>	<b>11053</b>
Solid Copper	500A	<b>11018</b>	<b>11037</b>	<b>11056</b>

## Slip Rings

Factory manufactured curved segments for slip ring use. Contact factory for assistance.

Conductor Bar	Current Cap.	Ring Radius Range in. (mm)	Pieces	Part No.	
				PVC	Lexan
Galvanized Steel	110A	18-35 (457- 889)	2-180°	<b>23626</b>	n/a
Stainless Clad Copper Laminate	250A	18-35 (457- 889)	2-180°	<b>23627</b>	n/a
Copper Steel Laminate	250A	18-35 (457- 889)	2-180°	<b>23628</b>	n/a
Rolled Copper	350A	18-35 (457- 889)	2-180°	<b>23629</b>	n/a
Galvanized Steel	110A	35-54 (892-1371)	3-120°	<b>23630</b>	n/a
Stainless Clad Copper Laminate	250A	35-54 (892-1371)	3-120°	<b>23631</b>	n/a
Copper Steel Laminate	250A	35-54 (892-1371)	3-120°	<b>23632</b>	n/a
Rolled Copper	350A	35-54 (892-1371)	3-120°	<b>23633</b>	n/a
Solid Copper	500A	35-54 (892-1371)	3-120°	<b>24292</b>	n/a
Galvanized Steel	110A	54-72 (1374-1828)	4-90°	<b>23634</b>	<b>23638</b>
Stainless Clad Copper Laminate	250A	54-72 (1374-1828)	4-90°	<b>23635</b>	<b>23639</b>
Copper Steel Laminate	250A	54-72 (1374-1828)	4-90°	<b>23636</b>	<b>23640</b>
Rolled Copper	350A	54-72 (1374-1828)	4-90°	<b>23637</b>	<b>23641</b>
Solid Copper (500A)	500A	54-72 (1374-1828)	4-90°	<b>24293</b>	<b>24294</b>

## 8 Bar Curves & Slip Rings Specification Data

This worksheet is designed to help you choose the correct curved section for your application. Contact factory for assistance.

Customer:			
Project No.:		Item No.:	Date:
1. Bar type, Rating (Amps/Volts):			
2. Environment / Ambient Temp:			
3. Fill in			
Angle of curve:			
Left tangent 6" (152 mm) standard:			
Right tangent 6" (152 mm) standard:			
Radius to contact surface: (See page 25 for minimum radii.)			
4. Select style of bar:			
<input type="radio"/> Outside Contact		<input type="radio"/> Inside Contact	
		<input type="radio"/> Bottom Contact	
5. For systems with parallel curves, sketch layout below and indicate the radius, angle and tangent for each.			

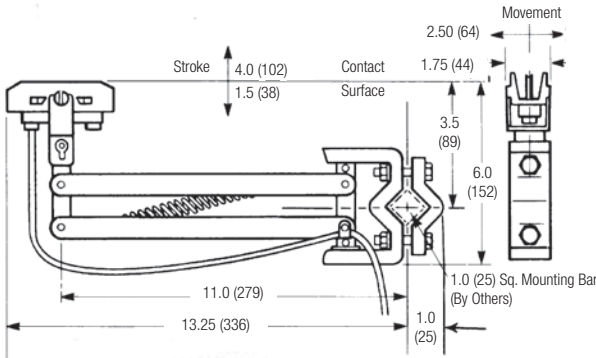
# 8 Bar Collector Dimensions

## C Base Collectors

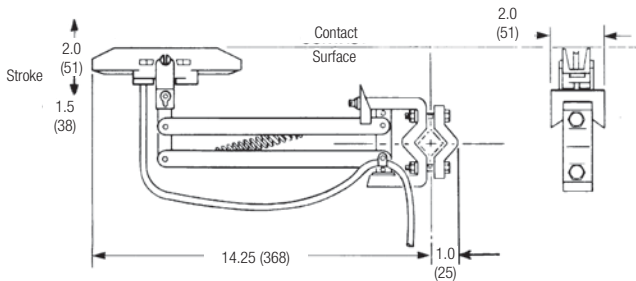
Dimensions common to all C-Base Collectors are not repeated.

Type	30 Amp	60 Amp Tandem	100 Amp	200 Amp Tandem
Standard Mount	13128	13082	13613	13626
Self-Centering	13130	13084	13625	13628

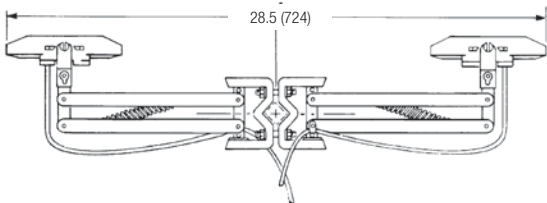
Standard Mount, Single - Part No. 13128 Shown



Self-Centering - Part No. 13625 Shown



Standard Mount, Tandem - Part No. 13626

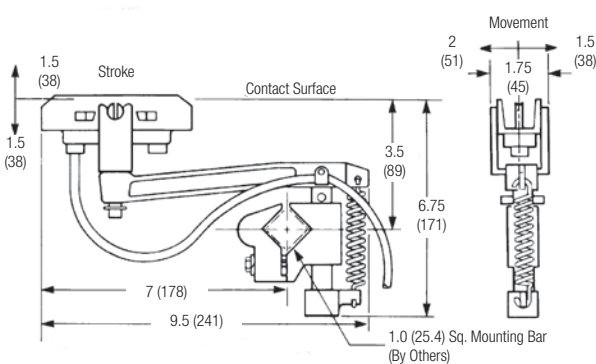


## H Base Collector

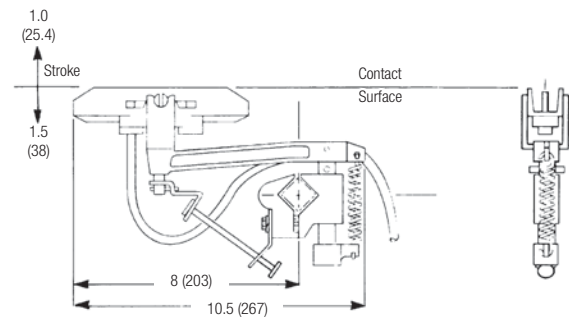
Dimensions common to all H-Base Collectors are not repeated.

Type	30 Amp	100 Amp
Standard Mount	13131	13629
Self-Centering	13132	13630

Standard Mount, Single - Part No. 13131 Shown

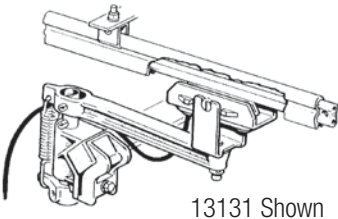


Standard Mount, Single - Part No. 13630 Shown



## Collector Mounting

Standard Mount  
(Vertical Entry)



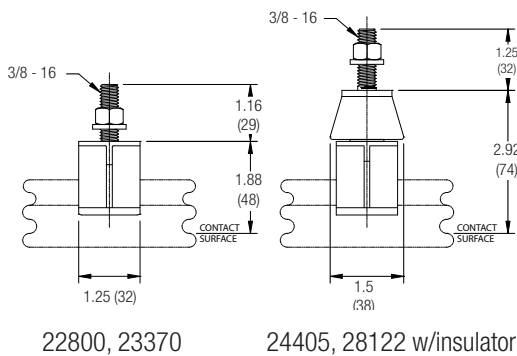
## Shoe Pressure

30 amp: 3-5 lb  
100 amp 6-9 lb

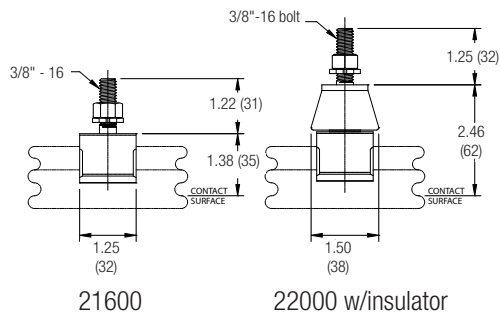
# 8 Bar Hanger and Anchor Dimensions

Note: Plastic or steel snap-in hangers are not recommended for lateral mounting or curves.

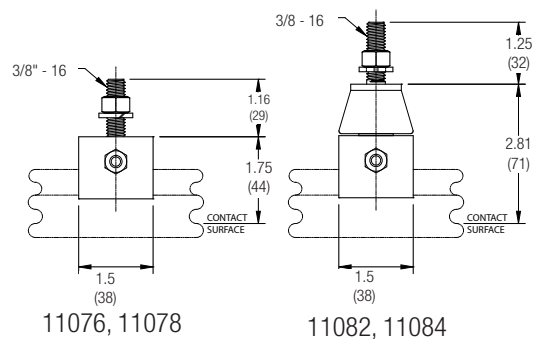
## Plastic Snap-in Hanger Clamps, 250° F



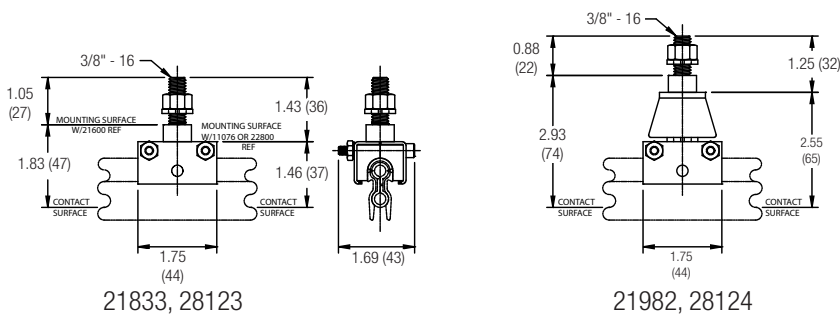
## Spring Steel Snap-in Hanger Clamps, 400° F



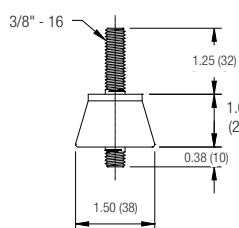
## Cross-Bolt Hanger Clamps



## Anchor Clamp, 400° F



## Insulator, 400° F



## Transfer Cap, 300° F

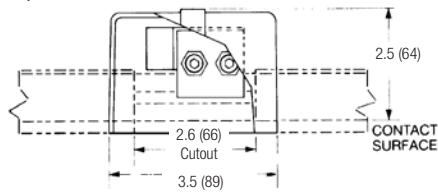


	Center	Left	Right
40, 110, 250, 350 amp	13161	14118	14119
90 amp only	22070	22395	22396

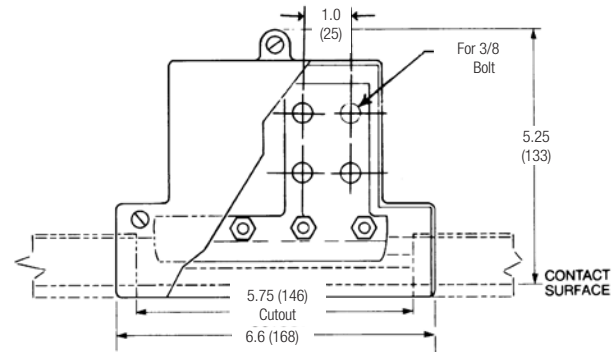
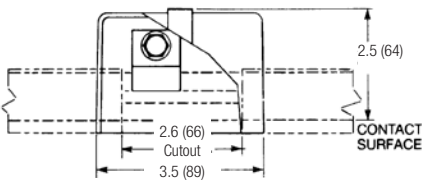
# 8 Bar Component Dimensions

## Power Feeds

11092, 11093, 27104



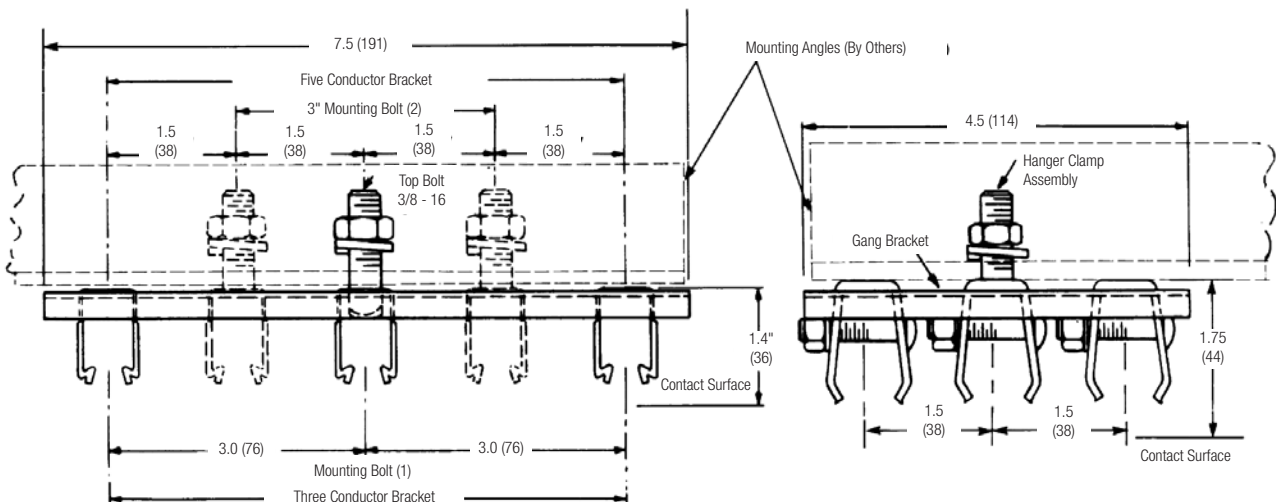
11091, 11122



11094, 27106

Part No.	Current Cap. (Amps)	Temp. Rating °F (°C)	Description
11091	90 / 110	160 (71.1)	Steel clamp type. Complete assembly of clamp and PVC case for steel systems only. Single bolt hole 1/4" for 3/0
11122	90 / 110	400 (204.4)	Steel clamp type. Complete assembly of clamp and high-heat case for steel systems only.
11092 / 27104	250	160 (71.1)	Copper clamp type. Complete assembly of clamp and PVC case for systems with feed wires from #8 AWG to 1/0.
11093	250	400 (204.4)	Copper clamp type. Complete assembly of clamp and high heat case for systems with feed wires from #8 AWG to 1/0.
11094 / 27106	500	400 (204.4)	Copper clamp type with stub. Complete assembly of clamp with NEMA standard 4-hole stub and case. Feed wires to 500 MCM.

## Gang Hanger Clamp Bracket



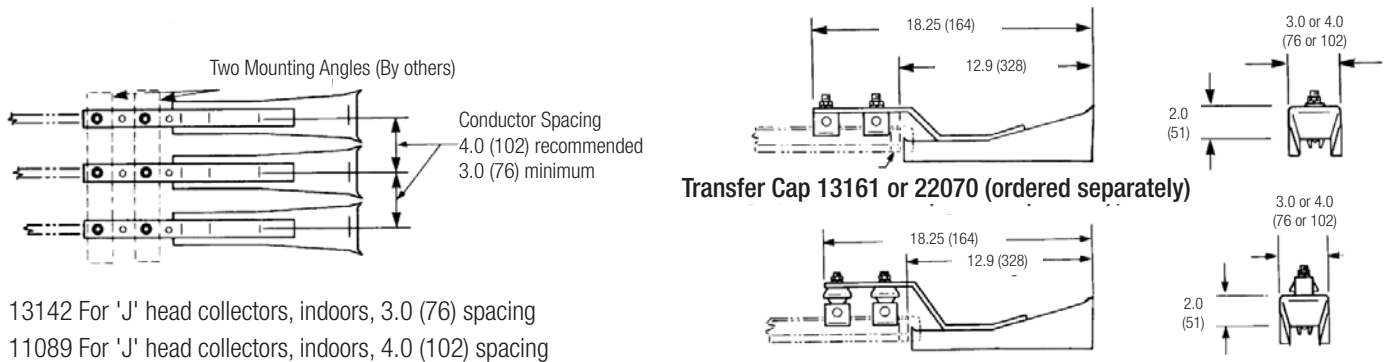
Snap-in Hanger 22646

Cross-Bolt Hanger 22649

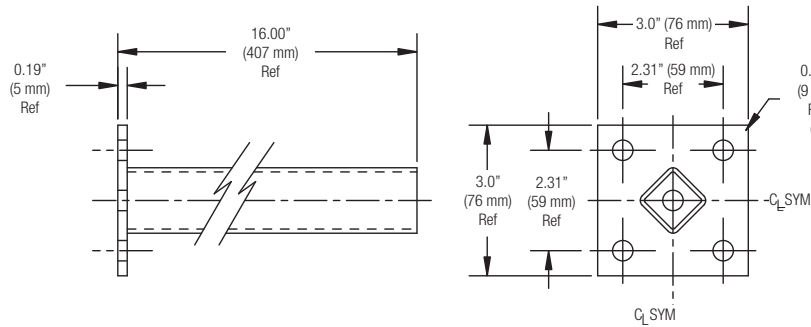


# 8 Bar Component Dimensions

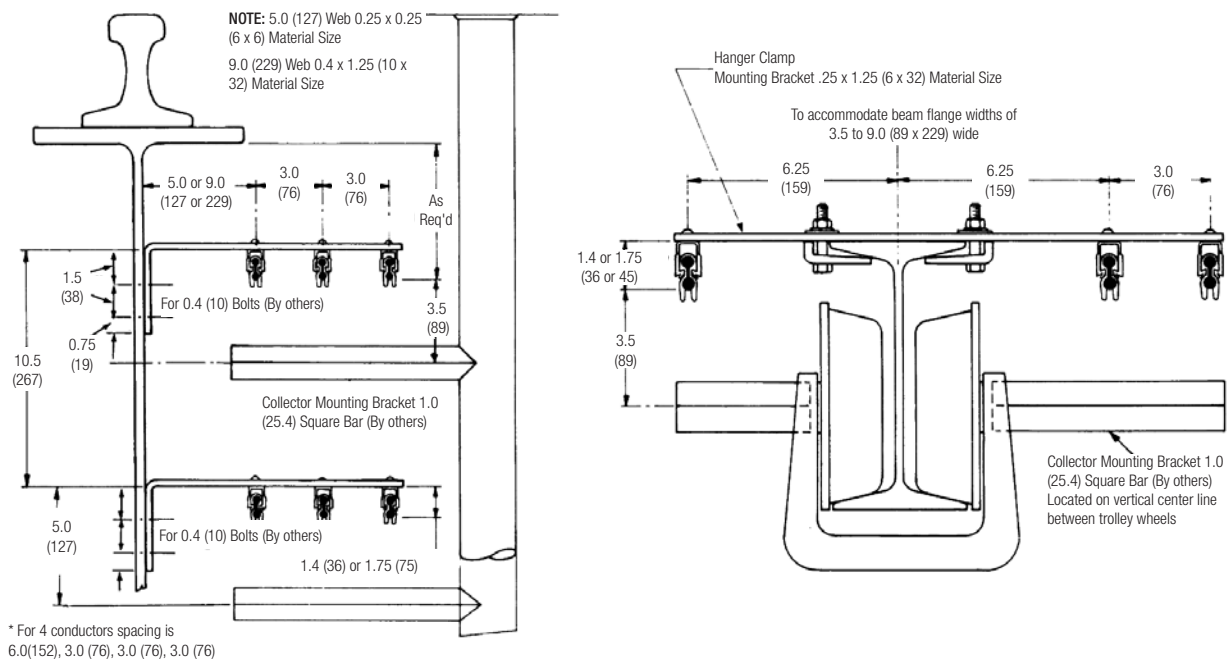
## Pick-up Guides



## Collector Bracket, 1.00" (25 mm) square (39617 & 52336)



## Crane Bridges and Runways



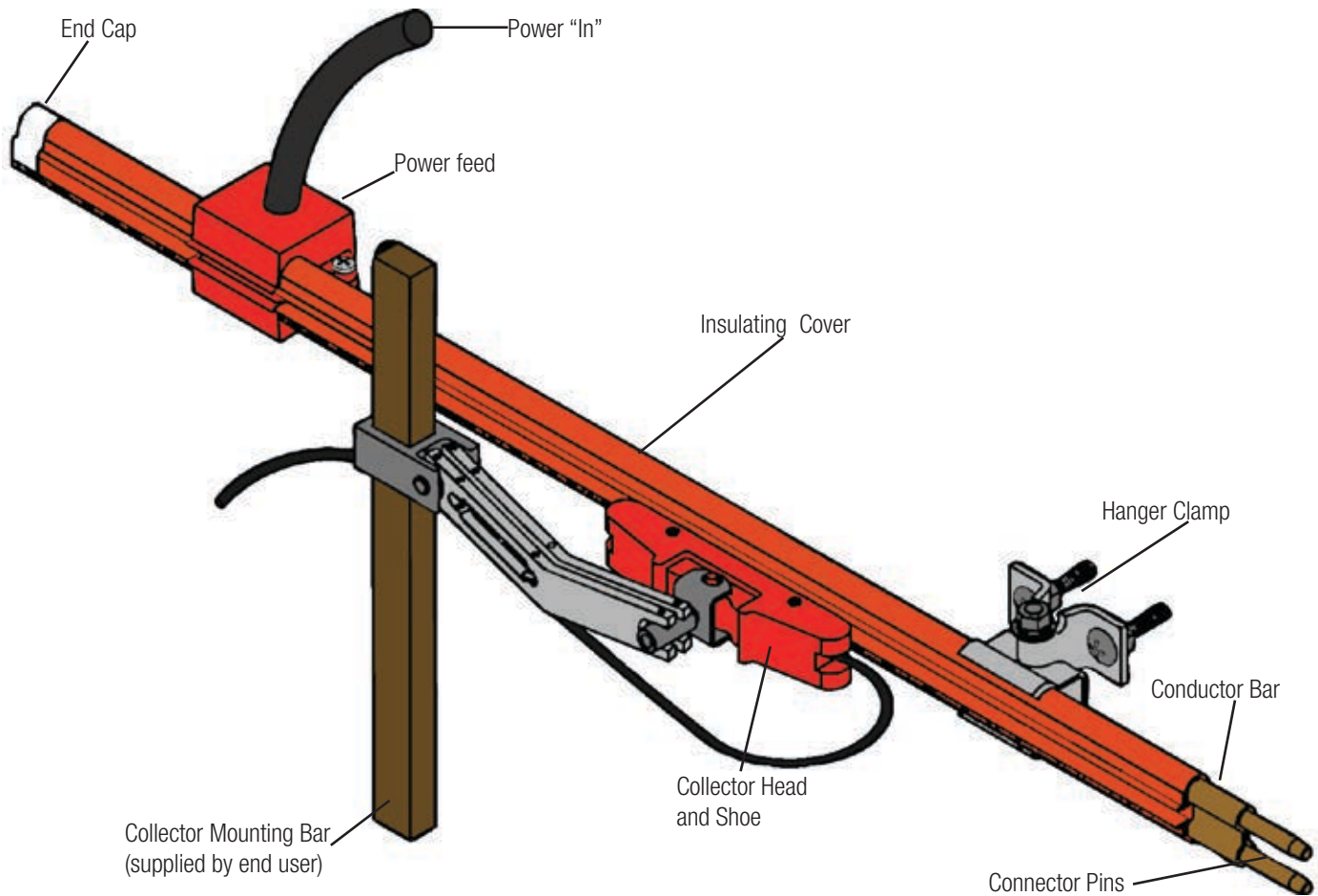
# Insul 8® Side Contact Design Features

Conductix-Wampfler Side Contact Conductor Bar is a variation of the 8 Bar system designed for lateral (side) entry of the collector. UL / CSA listed.



## Side Contact is Ideal When:

- There is insufficient room for standard "bottom entry" mounting
- Conductors must be more closely spaced than standard 8 Bar allows



## Component Descriptions

**Conductor Bar:** The supply of incoming power

**Power feed:** Attachment of incoming power

**Collector:** Collects the incoming power and transfers it to the moving machine

**Hangers:** Supports the conductor bar, may also be used as an anchor to direct movement due to expansion and contraction

**End Cover:** Safety protection at the end of conductor system