

Electromotive Systems

ELECTROBAR® 8-Bar
Conductor Bar System



ELECTROBAR[®] 8-BAR

CONDUCTOR BAR SYSTEMS

The practical, proven and economical way to deliver electricity to overhead cranes, hoists, monorails and other types of moving equipment.

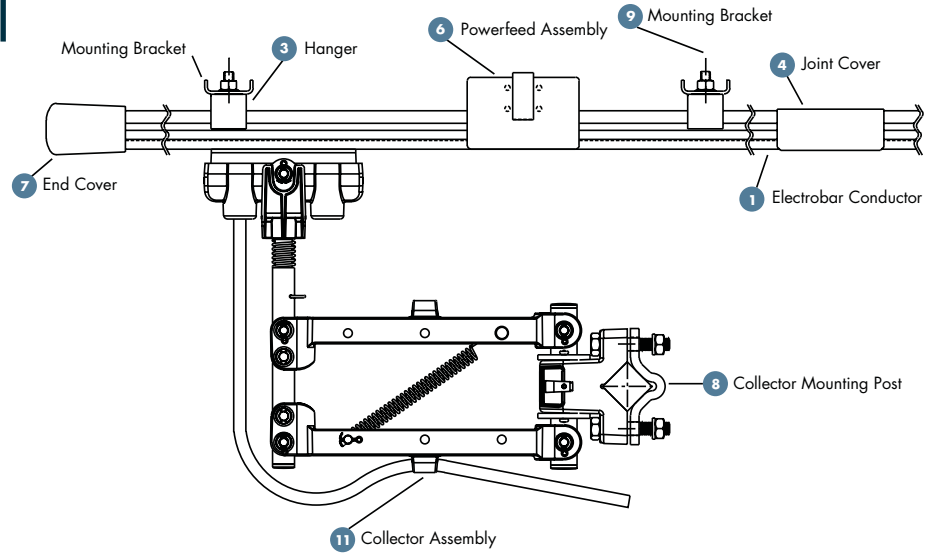
Whether you need power for a simple top running application or a curved monorail, the Electromotive Systems ELECTROBAR[®] 8-Bar Conductor Bar System from Magnetek is the solution.

- Assembles easily and can be mounted either vertically or horizontally
- Figure 8 design allows you to use it interchangeably with common bottom-entry 8-bar systems
- Available for 90, 110, 250 and 350 Amp applications
- Cover options available for high temperature environments
- Collector assemblies feature: corrosion resistant pivot pins; impact-resistant, universally interchangeable polycarbonate arms; and electrically insulated collector bodies
- Single and tandem collector assemblies available for smooth, continuous contact along straight runways or curved applications
- Conductor sections are roll-formed galvanized steel in 90 and 110 Amp ratings, or copper in 250 and 350 Amp ratings
- All systems are designed to carry the specified current rating using a duty cycle of 70% (84 seconds on and 36 seconds off)*
- Most items are available from stock for same day shipment!

Please call our Magnetek Material Handling Sales Professionals today at 1-800-288-8178 to answer all of your questions, confirm your selection, or provide a customized quotation for your specific application needs!

*Several critical factors determine the proper and safe sizing of Electrification Conductor Bar. The selection criteria and technical specifications found on pages 4 and 5 will assist you in the selection of a proper conductor size and system type to meet the ampacity and voltage drop criteria, environmental conditions, and expansion locations for your application.

COMPONENT SELECTION GUIDE



STANDARD SYSTEM COMPONENTS

#	Ampere Rating	Standard Cover				High Temperature Cover				Page Number
		90	110	250	350	90	110	250	350	
1	Conductor	8-90A	8-110A	8-250AL	8-350A	8-90AH	8-110AH	8-250ALH	8-350AH	4
2*	Expansion	8-90E	8-110E	8-250EL	8-350E	8-90EH	8-110EH	8-250ELH	8-350EH	5
4	Joint Cover	8-JC				8-JCH				5
5*	Joint Keeper	N/A		8-JK		N/A		8-JK		5
6	Power Feed	8-90CF	8-110CF	8-350CF-N		8-90CF	8-110CF	8-350CF-N		6
7	End Cap	8-EC								6
8	Collector Mounting Post	C-CMP								7
10*	Connecting Tool	8-T								7

* Not shown

HANGER ASSEMBLIES

#	Options	Snap-In			Steel with Cross Bolt		Single Steel Snap-In with Hardware	Stainless Steel with Cross Bolt	Anchor	Page Number
		Single	3-Pole	4-Pole	Single	Triple				
3		8-H	8-H3	8-H4	8-SH	8-SH3	8-SPH	8-SSH	8-HA	5-6

COLLECTOR ASSEMBLIES

#	Type	100 Amp Pantograph Arm	200 Amp Pantograph Tandem Arm	Page Number
11	Pantograph	UC-8-100PC	UC-8-200PC	7
	Replacement Shoe Assembly	UC-8-100CS		

MOUNTING BRACKETS

#	Length in Inches	Galvanized			Page Number
		15"	18"	24"	
9	Web Mount	BKS-W15-G	BKS-W18-G	BKS-W24-G	6
	Flange Mount	BKS-F15-G	BKS-F18-G	BKS-F24-G	
	Flange Mount with Clips	N/A	BKS-F18A-G	BKS-F24A-G	
	4-Conductor				
	Vertical Mount Web	BK-L4			

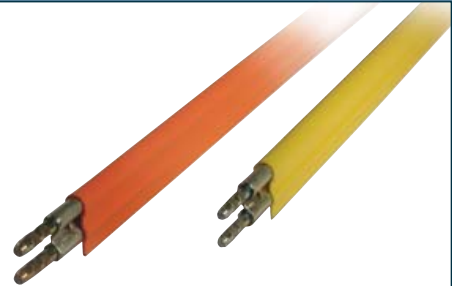
ELECTROBAR® 8-BAR

CONDUCTOR BAR SYSTEMS

Conductor bar sections are easily installed in the field using a connecting tool and joint cover, or joint keeper, to join each 10 foot bar or expansion section. Expansion sections accommodate the expected temperature variance and ambient temperature considerations of the installation, and when used with the proper anchoring, control the expansion and contraction of the conductor bar. Electrobar figure 8 systems on straight runways are to be supported every 5 feet for horizontal applications, and every 4 feet for vertical mount applications (consult the factory for curved system requirements). Hanger assemblies are available in several different styles, from single steel clamp to 4-Pole arrangements, and are easily installed in our slotted web or flange mount brackets. Electrobar components can be selected to complete electrification systems for main line/top-running, monorail/under-hung, and bottom-entry applications, operating at speeds of up to 900 feet per minute.

1. CONDUCTOR BAR SECTIONS

Available in 10 foot sections or cut to whole foot lengths (conductor bar sections include cover, connecting pins and joint covers). Multiply the number of conductors required by the total length of the runway to be electrified, and divide the result by 10 to arrive at the proper number of conductor bar sections.



Description	Catalog Number			
	90 Amp	110 Amp	250 Amp	350 Amp
Standard Orange Cover	8-90A	8-110A	8-250AL	8-350A
Standard Green Cover	8-90A-G	8-110A-G	8-250A-G	8-350A-G
High Temperature Yellow Cover Rated to 280° F	8-90AH	8-110AH	8-250ALH	8-350AH
Approximate Shipping Weight	4.5 lbs.	5.50 lbs.	6.5 lbs.	7.10 lbs.

NOTE: It is permissible to use the smallest rated bar as the ground. Example: 90, 110, 250 or 350 Amp Electrobar 8-Bar system - use the 90 Amp 8-Bar as the ground.

VOLTAGE DROP CALCULATIONS

Single Phase–A.C. 2 x Amps x Zac x distance (feet from power feed)
 Three Phase–A.C. 1.732 x Amps x Zac x distance (feet from power feed)
 Direct Current 2 x Amps x Rdc x distance (feet from power feed)

$$\text{Voltage Drop} = (\text{voltage drop} \times 100) / 460 \text{ (voltage)}$$

System	A.C. Impedance (Zac)	D.C. Resistance (Rdc)
90 Amp	.0011 Ohms/Ft.	.00073 Ohms/Ft.
110 Amp	.0008 Ohms/Ft.	.0005 Ohms/Ft.
250 Amp	.0001 Ohms/Ft.	.00008 Ohms/Ft.
350 Amp	.00008 Ohms/Ft.	.00005 Ohms/Ft.

The Voltage Drop for most installations should not exceed 3%.

CONDUCTOR APPLICATION

Minimum spacing between conductor is 1.5" with standard collectors.
 Minimum spacing between conductor is 3" if an expansion section is utilized.

2. CONDUCTOR BAR EXPANSION SECTIONS

Expansion sections are complete 10 foot assemblies, shipped with power feed and two anchor hangers. Expansions should be used at all building expansion joints, and compensate for ambient and environmental temperature variations.

EXPANSION CONSIDERATIONS/ANCHOR LOCATIONS

Expansion Locations: 90 and 110 Amp Steel Conductor Bar Systems

- Mid-Span for straight systems 300 feet long
- Every 150 feet for straight systems over 300 feet long

250 and 350 Amp Rolled Copper and Copper/Steel Conductor Bar Systems

- Mid-Span for straight systems 200 feet long
- Every 100 feet for straight systems over 200 feet long

All Systems

- At all building expansion joints



Description	Catalog Number			
	90 Amp	110 Amp	250 Amp	350 Amp
Standard Orange Cover	8-90E	8-110E	8-250EL	8-350E
Standard Green Cover	8-90E-G	8-110E-G	8-250E-G	8-350E-G
High Temperature Yellow Cover Rated to 280° F	8-90EH	8-110EH	8-250ELH	8-350EH
Approximate Shipping Weight	6.80 lbs.	9.50 lbs.	10.50 lbs.	12.00 lbs.

3. NYLON HANGER ASSEMBLIES

90, 110, 250 and 350 Amp Single, Snap-In, and 4-Pole



Description	Catalog Number	Approx. Shipping Wt.
Single Hanger	8-H	0.11 lbs.
3-Pole Hanger	8-H3	0.80 lbs.
4-Pole Hanger	8-H4	0.90 lbs.

3. ANCHOR HANGERS

90, 110, 250 and 350 Amp

Anchor hangers should be used on all systems to restrict conductor movement. They are also to be used at mid-points between expansion sections and ends.



One set of anchor hangers shown installed with single snap-in hanger.

Description	Catalog Number	Approx. Shipping Wt.
Anchor Hanger	8-HA	0.12 lbs.

4. JOINT COVERS

90, 110, 250 and 350 Amp



Insulating joint covers are installed over each juncture of conductor bar to guard against accidental contact. One joint cover is included with each conductor section purchased.

Description	Catalog Number
Standard Black Cover	8-JC
High Temperature Yellow Cover Rated to 290° F	8-JCH
Approximate Shipping Weight	0.2 lbs.

5. JOINT KEEPERS

For Copper 250 and 350 Amp

Joint Keepers are used over each juncture of copper bar to guard against accidental contact and to secure the joint. One joint keeper is included with each copper conductor section purchased.

Description	Catalog Number
Standard and High Temperature 250 Amp and 350 Amp Systems	8-JK
Approximate Shipping Weight	0.2 lbs.

ACCESSORIES

3. STEEL HANGER ASSEMBLIES



Description	Catalog Number	Approx. Shipping Wt.
Hanger with Cross Bolt	8-SH	0.20 lbs.
Steel Snap-In with Hardware	8-SPH	0.24 lbs.

6. POWER FEED ASSEMBLY



Power feed assembly has special insulating cover and is installed at the conductor bar joint.

Description	Catalog Number	Approx. Shipping Wt.
90 Amp Power Feed	8-90CF	0.33 lbs.
110 Amp Power Feed	8-110CF	0.34 lbs.
250/350 Amp Power Feed	8-350CF-N	1.40 lbs.

7. END CAP



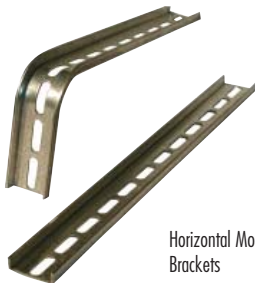
Vinyl cover for protecting ends of conductor bar at the beginning and the end of a system.

Description	Catalog Number	Approx. Shipping Wt.
End Cap	8-EC	0.05 lbs.

9. MOUNTING BRACKETS



Vertical Web Mount Brackets



Horizontal Mounting Brackets

Mounting Brackets for all systems are comprised of roll-formed steel and are available with galvanized finish. Hanger assemblies sold separately.

- Web Mount brackets are for bottom-entry, main line/top-running applications.
- Flange Mount brackets are for bottom-entry, monorail/under-hung applications and are available with or without mounting clips.
- Vertical Mount brackets for web mount, side-entry systems.

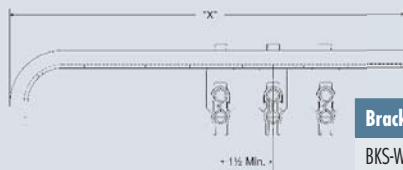
Length in Inches	Galvanized		
	15"	18"	24"
Web Mount	BKS-W15-G	BKS-W18-G	BKS-W24-G
Flange Mount	BKS-F15-G	BKS-F18-G	BKS-F24-G
Flange Mount with Clips	N/A	BKS-F18A-G	BKS-F24A-G
Ship Weight	1.50 lbs.	2.15 lbs.	2.65 lbs.
4-Conductor			
Vertical Mount Web	BK-L4		
Ship Weight	2.00 lbs.		

SUPPORT SPACING

Standard 8-Bar 90, 110, 250 and 350 Amp Systems:

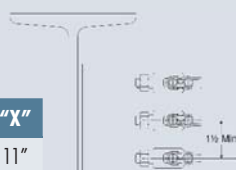
- Horizontal Mounting Applications—Support Every 5 Feet
- Vertical Mounting Applications—Support Every 4 Feet

TYPICAL INSTALLATIONS



A. Horizontal Web Mount (bottom-entry)

Bracket	"X"
BKS-W15	11"
BKS-W18	14"
BKS-W24	20"



B. Vertical Mount (Side-Entry)



C. Horizontal Flange Mount (Bottom-Entry)

8. COLLECTOR MOUNTING POST

1" square bar welded to mounting plate.

Post for mounting collectors.
One required for each crane running on the system.



Description	Catalog Number	Approx. Shipping Wt.
Collector Mounting Post	C-CMP	2 lbs.

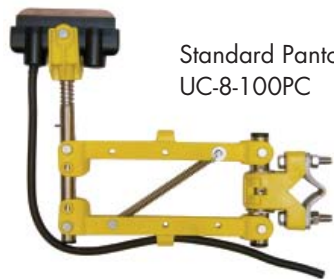
10. CONNECTING TOOL

Connecting tool for joining conductor bar sections during installation.



Description	Catalog Number	Approx. Shipping Wt.
Connecting Tool	8-T	2.80 lbs.

11. COLLECTOR ASSEMBLIES



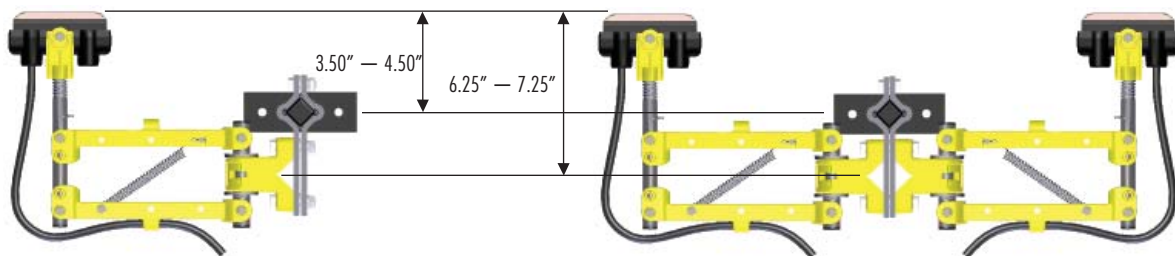
Standard Pantograph Collector
UC-8-100PC



Standard Pantograph
Tandem Collector
UC-8-200PC

Single Arm				
Amps	Description	Catalog Number	Weight	
			Lbs.	Kgs.
100 Amp	Pantograph Collector	UC-8-100PC	2.0	0.91

Tandem Arm				
Amps	Description	Catalog Number	Weight	
			Lbs.	Kgs.
200 Amp	Pantograph Collector	UC-8-200PC	4.0	1.81



Extension brackets provided with each collector for retrofit applications — for fixed mounting posts 3.50" – 4.50" from conductor bar running surface.

UNIVERSAL SNAP-IN REPLACEMENT SHOE ASSEMBLY



Single collector shoe for quick and easy replacement. Used on all collector assemblies.

Description	Catalog Number	Weight	
		Lbs.	Kgs.
Replacement Shoe Assembly	UC-8-100CS	0.24	0.11



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POWER DELIVERY SYSTEMS

ELECTROBAR® 8-Bar — 90, 110, 250, 350 Amps
ELECTROBAR® FS — 90, 110, 125, 250, 400 Amps
ELECTROBAR® ELITE — 60, 100, 130, 200 Amps
ELECTROBAR® HX — 400, 700, 1000 Amps
FABA® Conductor Bar Systems — 100 Amps

ELECTROMOTIVE™ FESTOONING SYSTEMS

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Custom Configured Stations

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6–2,250 Lb. Ft. Torque
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AC Explosion Proof Actuators

AIST-NEMA 300M Mill Duty Shoe Brakes

5"–30" Diameter
10–11,000 Lb. Ft. Torque
AC, DC, Hydraulic Actuators
AC Explosion Proof Actuators

400D Heavy Duty Disc Brakes

8"–50" Diameter
50–30,000 Lb. Ft. Torque
AC, DC, Hydraulic Actuators
AC Explosion Proof Actuators

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