

# Electromotive Systems

ELECTROBAR® ELITE  
Conductor Bar System



**MAGNETEK**  
MATERIAL HANDLING

**ELECTROMOTIVE SYSTEMS**

# ELECTROBAR® ELITE

## ENCLOSED CONDUCTOR BAR SYSTEMS

Magnetek's Electromotive Systems division proudly offers ELECTROBAR® Elite, our most advanced conductor bar design. The design is ideally suited for low headroom applications, preventing incidental contact with a power conductor bar.

ELECTROBAR Elite is also Electromotive's most versatile conductor bar, offering you more options than any other conductor bar on the market today.

And you'll be happy to know ELECTROBAR Elite's total system cost is lower because it's so easy to install and maintain.

### IMPROVED SAFETY IN TIGHT SPACES

- Compact enclosed design allows you to safely put the conductors in a small dimensional package compared to traditional 8-Bar—a key feature where space is critical.
- Finger safe rating of IP23.
- The collector assembly can only be installed in one orientation to the line element, insuring the ground conductor and ground collector brush are always in correct locations.

### MAXIMUM VERSATILITY

#### **More options make this our most versatile conductor bar:**

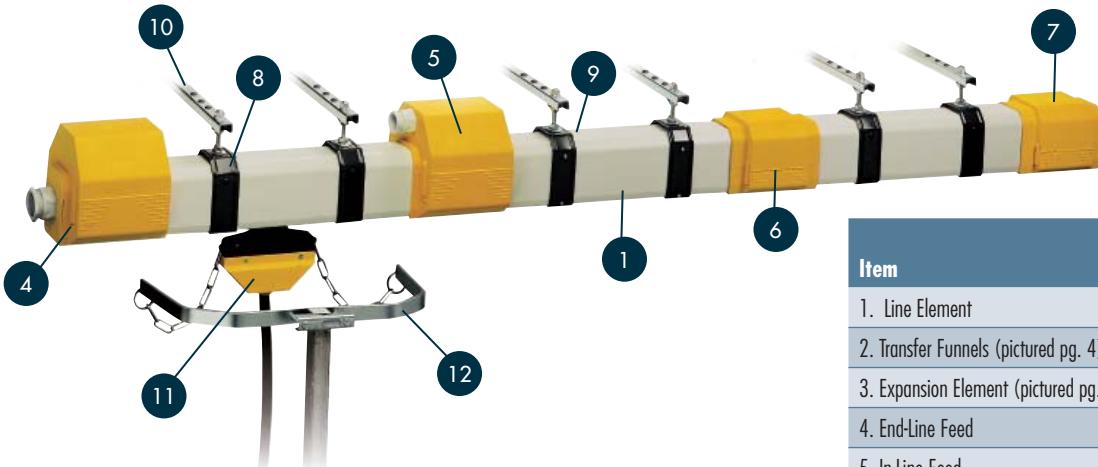
- Inlet Gates allow for installation or removal of collector trolleys for maintenance.
- Curved line elements available from 32" minimum radius.
- Line element covers prevent contamination build-up on copper conductors.
- High speed collector assemblies allow for travel speeds exceeding 325 feet/minute.
- Ventilated line elements prevent condensation build-up on the system.
- High temperature line elements available for 55°C to 75°C ambient operating environments.

### LOWER TOTAL SYSTEM COST

**ELECTROBAR Elite is designed to significantly reduce installation time compared to traditional 8-Bar systems. Plus, maintenance is minimized. This means your total installed system cost is actually lower.**

- Line elements are easily connected to each other by means of snap away bolts, which prevent over-torquing of the line element connection points.
- Line elements are easily attached to a snap-in hanger, which mounts with one bolt to the hanger bracket.
- Joint covers and power feed assemblies simply snap together over the line elements.
- Lightweight, rigid construction.
- Inexpensive collector brushes, which simply snap in and out of the collector assemblies, are the only items that may need replacement during periodic service intervals.

# LINE ELEMENTS



## STANDARD FEATURES & BENEFITS

- Snap together covers, power feeds and hangers.
- Lightweight, rigid construction.
- Ease of installation, lower total system cost, and low maintenance.
- Improved safety (finger safe rating of IP23).

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## 1. 4-POLE AND 5-POLE LINE ELEMENTS



- Line Elements are constructed of self-extinguishing PVC with copper conductors.
- 4-Pole standard line element lengths are 1, 2, and 4 meters and are available for immediate shipment. 5-Pole line elements, special lengths and 3 meter line elements require approximately a four-week lead time.
- Maximum rated operational voltage 600 volts.

### 4-POLE LINE ELEMENTS

Catalog Number	Description	Length		Weight Lbs.
		Meters	Feet	
FM-4604	60 Amp, 4-Pole Line Element	4	13.123	15.88
FM-4603		3	9.843	11.91
FM-4602		2	6.562	7.94
FM-4601		1	3.281	3.97
FM-4104	100 Amp, 4-Pole Line Element	4	13.123	17.64
FM-4103		3	9.843	13.23
FM-4102		2	6.562	8.82
FM-4101		1	3.281	4.41
FM-4134	130 Amp, 4-Pole Line Element	4	13.123	21.16
FM-4133		3	9.843	15.87
FM-4132		2	6.562	10.58
FM-4131		1	3.281	5.29
FM-8284	200 Amp, 4-Pole Line Element	4	13.123	31.72
FM-8283		3	9.843	23.79
FM-8282		2	6.562	15.86
FM-8281		1	3.281	7.93

### 5-POLE LINE ELEMENTS

Catalog Number	Description	Length		Weight Lbs.
		Meters	Feet	
FM-5604	60 Amp, 5-Pole Line Element	4	13.123	16.76
FM-5603		3	9.843	12.57
FM-5602		2	6.562	8.38
FM-5601		1	3.281	4.19
FM-5104	100 Amp, 5-Pole Line Element	4	13.123	18.48
FM-5103		3	9.843	13.86
FM-5102		2	6.562	9.24
FM-5101		1	3.281	4.62
FM-5134	130 Amp, 5-Pole Line Element	4	13.123	23.80
FM-5133		3	9.843	17.85
FM-5132		2	6.562	11.90
FM-5131		1	3.281	5.95
FM-8285	200 Amp, 5-Pole Line Element	4	13.123	37.04
FM-8289		3	9.843	27.78
FM-8286		2	6.562	18.52
FM-8287		1	3.281	9.26

# TRANSFER FUNNELS

## 2. TRANSFER FUNNEL LINE ELEMENTS



- Transfer funnel is pre-mounted on 1 meter line element. Special lengths available upon request.
- Short funnels may be used for switch applications from 0.375" to 1" gap.
- Long funnels may be used when gap distance exceeds 1".
- Special collector trolleys and tow brackets are required. Contact factory.
- Funnels designed to accommodate ground to the right or left.
- IP23 "finger safe" Rated.

### SHORT FUNNEL ASSEMBLIES\*

Catalog Number	Description	Amp. Rating
FM-2517	4-Pole 1 Meter Element Ground Right	60
FM-2518	4-Pole 1 Meter Element Ground Left	60
FM-2525	4-Pole 1 Meter Element Ground Right	100
FM-2526	4-Pole 1 Meter Element Ground Left	100
FM-2533	4-Pole 1 Meter Element Ground Right	130
FM-2534	4-Pole 1 Meter Element Ground Left	130
FM-2541	4-Pole 1 Meter Element Ground Right	200
FM-2542	4-Pole 1 Meter Element Ground Left	200

### LONG FUNNEL ASSEMBLIES\*

Catalog Number	Description	Amp. Rating
FM-2567	4-Pole 1 Meter Element Ground Right	60
FM-2568	4-Pole 1 Meter Element Ground Left	60
FM-2575	4-Pole 1 Meter Element Ground Right	100
FM-2576	4-Pole 1 Meter Element Ground Left	100
FM-2583	4-Pole 1 Meter Element Ground Right	130
FM-2584	4-Pole 1 Meter Element Ground Left	130
FM-2591	4-Pole 1 Meter Element Ground Right	200
FM-2592	4-Pole 1 Meter Element Ground Left	200

\* Funnel assemblies require approximately a four-week lead time. Special Collector Assemblies are required. Please contact factory for additional information.

# EXPANSION ELEMENTS

## 3. EXPANSION ELEMENT



The expansion element is designed to absorb the difference in expansion between the support structure and the electrification line.

Expansions are needed in 60 Amp and 100 Amp applications longer than 494 feet (150 meters).

Expansions are needed in 130 Amp and 200 Amp applications longer than 820 feet (250 meters).

When expansions are used, an extra single collector trolley must be used.

### 4-POLE EXPANSION ASSEMBLY

Catalog Number	Description	Standard Length Meters	Standard Length Feet	Weight Lbs.
FM-8060	4-Pole Expansion Element 60 Amp	2	6.56	14.33
FM-8100	4-Pole Expansion Element 100 Amp	2	6.56	16.75
FM-8013	4-Pole Expansion Element 130 Amp	2	6.56	19.18
FM-8290	4-Pole Expansion Element 200 Amp	2	6.56	25.13

### 5-POLE EXPANSION ASSEMBLY\*

Catalog Number	Description	Standard Length Meters	Standard Length Feet	Weight Lbs.
FM-8560	5-Pole Expansion Element 60 Amp	2	6.56	15.43
FM-8510	5-Pole Expansion Element 100 Amp	2	6.56	18.07
FM-8513	5-Pole Expansion Element 130 Amp	2	6.56	21.60
FM-8291	5-Pole Expansion Element 200 Amp	2	6.56	28.88

\* 5-Pole expansion elements require approximately a four-week lead time.

# SYSTEM COMPONENTS

## 4. & 5. POWER FEEDS

Designed to feed power to the system either from the end or along the line element run.

Allows for quick power connection with a snap together cover.

Power feed selection based upon location and power feed cord diameter.

### END-LINE POWER FEED

Catalog Number	Description	Cable Dia. In.	Weight Lbs.
FM-1200	60–100 Amp, 4 & 5-Pole, M25 Cable Opening	0.51 to 0.75	0.9
FM-1230	60–100 Amp, 4 & 5-Pole, M32 Cable Opening	0.59 to 0.98	0.9



End-Line Feed Box\*

### IN-LINE POWER FEED

Catalog Number	Description	Cable Dia. In.	Weight Lbs.
FM-1300	60–100 Amp, 4 & 5-Pole, M25 Cable Opening	0.51 to 0.75	0.66



In-Line Feed Box\*



In-Line Feed Box with Junction Box\*

### IN-LINE POWER FEED WITH JUNCTION BOX

Catalog Number	Description	Cable Dia. In.	Weight Lbs.
FM-1332	60–100 Amp, 4 -Pole, M40 Cable Opening	0.83 to 1.25	3.75
FM-1329*	60–100 Amp, 5 -Pole, M40 Cable Opening	0.83 to 1.25	3.75

\* 5-Pole material is not stocked at the factory. Allow 4-5 weeks for delivery.

### PRE-FABRICATED POWER FEED IN 1 METER LINE ELEMENT (NOT SHOWN)

Catalog Number	Description	Cable Dia. In.	Weight Lbs.
FM-1313	130 Amp, 4-Pole with 1 Meter Connecting Cable	0.63	17.6
FM-8299	200 Amp, 4-Pole with 1 Meter Connecting Cable	0.81	28.6
FM-1317*	130 Amp, 5-Pole with 1 Meter Connecting Cable	0.63	19.8
FM-8294*	200 Amp, 5-Pole with 1 Meter Connecting Cable	0.81	34.32

\* 5-Pole material is not stocked at the factory. Allow 4-5 weeks for delivery.

## 6. JOINT COVER



Self centering,  
snap-on joint cover,  
no tools required.

Catalog Number	Description	Weight Lbs.
FM-1000	Joint Covering Flange for All Systems	0.44

\* Constructed of self-extinguishing thermoplastic.

## 7. END CAP



Clipped assembly,  
no tools required.  
Snaps over the end  
of a line element and  
includes end stop to  
prevent over travel  
of collector.

Catalog Number	Description	Weight Lbs.
FM-1400	End Cap for All Systems	0.66

# SYSTEMS COMPONENTS

## 8. & 9. MOUNTING HANGERS



Galvanized steel construction and premounted M8 x 60 bolt. Snaps onto line element.



Anchor Hangers secure the line element to the structure. Galvanized steel construction and premounted M8 x 60 bolt with (2) anchoring screws.

### SLIDING HANGER

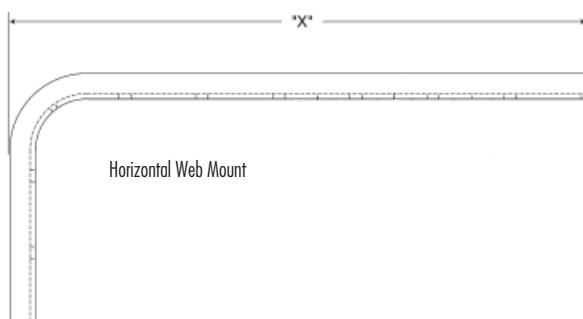
Catalog Number	Description	Weight Lbs.
FM-1510	Snap-In Hanger, New Style	0.22
Two (2) required for 60 to 130 Amp, 4 meter line elements.		
Three (3) required for 200 Amp, 4 meter line elements.		

### ANCHOR HANGER

Catalog Number	Description	Weight Lbs.
FM-1500	Anchor Hanger, New Style	0.22
Two (2) anchor hangers required on systems with an expansion.		

## 10. HANGER MOUNTING BRACKETS

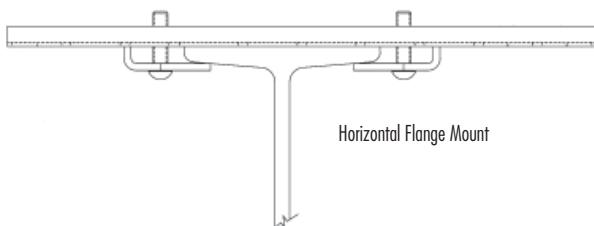
Mounting Brackets for all systems are comprised of roll-formed galvanized steel.



Horizontal Web Mount



Horizontal Mounting Brackets



Horizontal Flange Mount

### WEB MOUNTING BRACKETS

Catalog Number	Description	"X" Dimension	Weight Lbs.
BKS-W15-G	Galvanized, Web Mounted, 15 in.	11 in.	1.5
BKS-W18-G	Galvanized, Web Mounted, 18 in.	14 in.	1.9
BKS-W24-G	Galvanized, Web Mounted, 24 in.	20 in.	2.2

### FLANGE MOUNTING BRACKETS

Catalog Number	Description	"X" Dimension	Weight Lbs.
BKS-F18-G	Galvanized, Flange Mounted, 18 in.	18 in.	2.2
BKS-F24-G	Galvanized, Flange Mounted, 24 in.	24 in.	2.7

To order Flange Mount Brackets with two mounting clamps, add "A" after F18 or F24.

# COLLECTOR ASSEMBLIES

## 11. STANDARD (RIGID) COLLECTOR TROLLEY

Collector selection based on amperage requirements.

The collector assembly can be installed only in one orientation to the line element, insuring the ground conductor and the ground collector brush are always together.

The brushes snap into the collector assembly for quick and easy replacement.

Factory stocked collectors come standard with (1) meter of cable and are for systems without curves or dust protection.

### RIGID COLLECTOR TROLLEY FOR 4-POLE SYSTEMS

Catalog Number	Description	Amp Rating	Weight Lbs.
FM-2043-1M	Single Collector Trolley with 1 Meter Cable	40 Amp	1.32
FM-4047-1M	Double Collector Trolley with Two 1 Meter Cables	80 Amp	2.42
FM-5049-1M	Triple Collector Trolley with Three 1 Meter Cables	120 Amp	3.52
FM-4514	Cleaning Collector Trolley (not pictured)		0.88

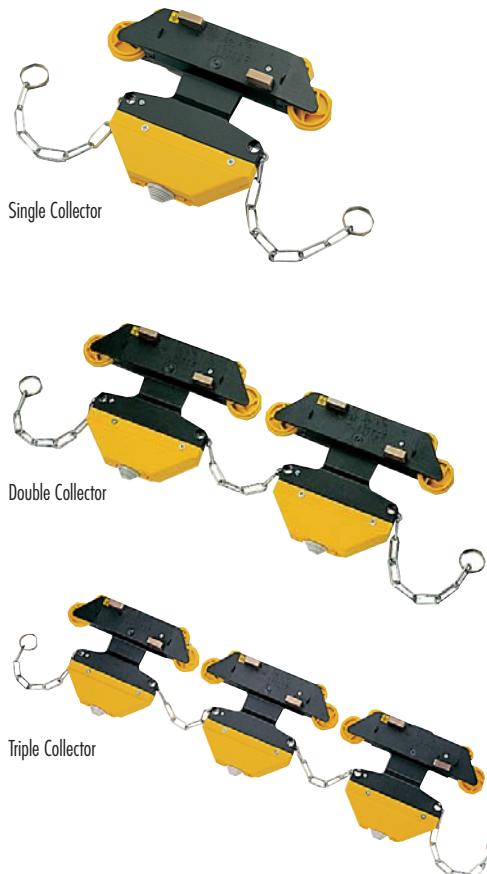
### RIGID COLLECTOR TROLLEY FOR 5-POLE SYSTEMS\*

Catalog Number	Description	Amp Rating	Weight Lbs.
FM-2051-1M	Single Collector Trolley with 1 Meter Cable	40 Amp	1.32
FM-4051-1M	Double Collector Trolley with Two 1 Meter Cables	80 Amp	2.42
FM-5059-1M	Triple Collector Trolley with Three 1 Meter Cables	120 Amp	3.52
FM-4525	Cleaning Collector Trolley (not pictured)		0.88

Collectors shown are for standard applications composed of straight line elements.

For all other applications, please consult the factory for an application specific quotation.

\* 5-Pole collector trolleys require approximately a four-week lead time.



### REPLACEMENT PARTS

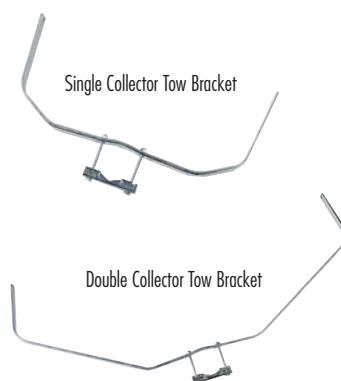
Catalog Number	Description
FM-0022	Carbon Brush
FM-0118	Brush for Cleaning Collectors

## 12. TOW BRACKETS

Tow Brackets (standard carriers) provide the mechanical link between the collector trolley and the moving equipment.

Galvanized steel, to be mounted onto a round tow bar 0.79" (20mm) to 1.97" (50mm) or a square tow bar 0.19" (20mm) to 1.57" (40mm).

Junction boxes are available for tow brackets. Consult the factory.



Catalog Number	Description	Weight Lbs.
FM-1600	Tow Bracket for Single Trolley	1.3
FM-1610	Tow Bracket for Double Trolley	2.4
FM-1630	Tow Bracket for Triple Trolley	5.7



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ELECTROBAR® ELITE — 60, 100, 130, 200 Amps  
ELECTROBAR® HX — 400, 700, 1000 Amps  
FABA® Conductor Bar Systems — 100 Amps

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4"–19" Diameter  
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AC, DC, Hydraulic Actuators  
AC Explosion Proof Actuators

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

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

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