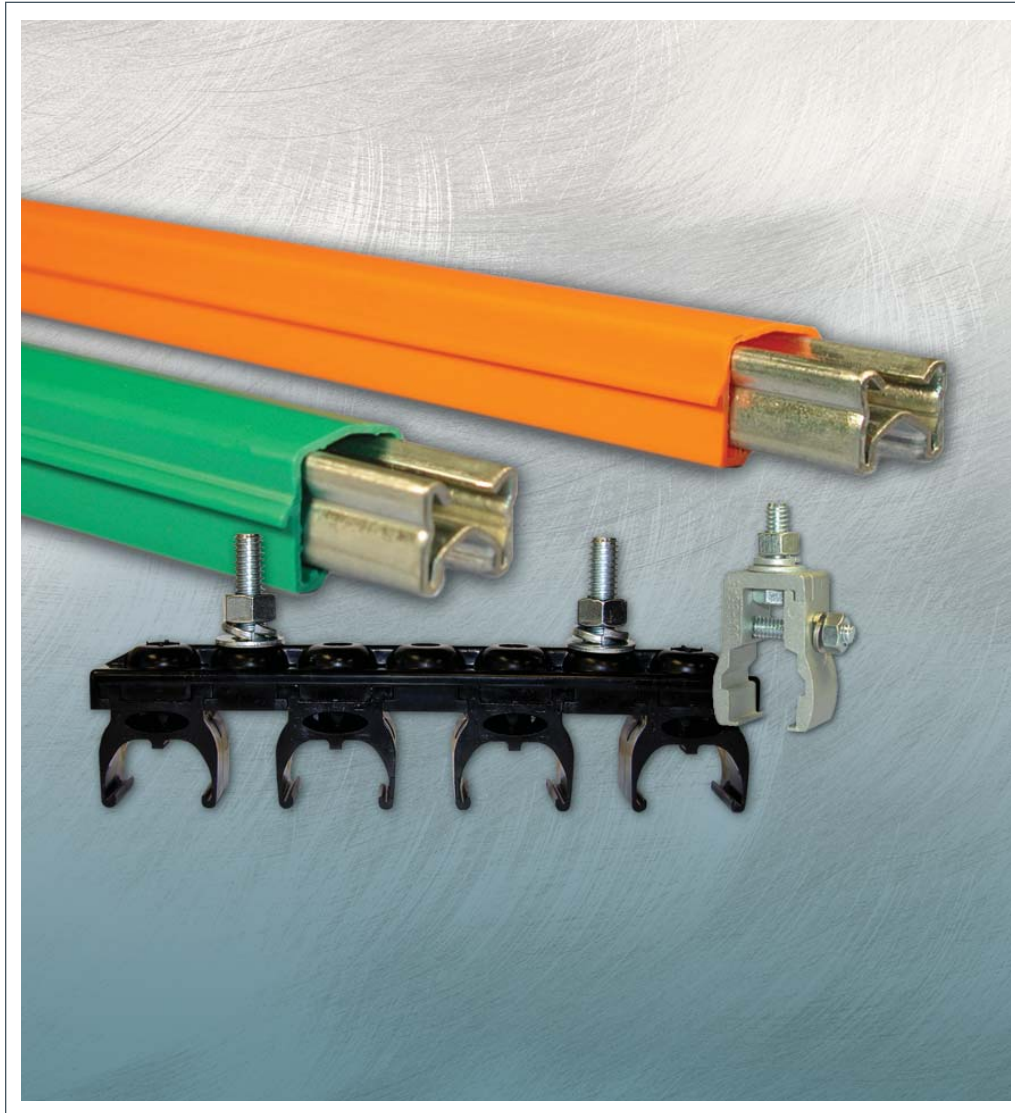


Electromotive Systems

ELECTROBAR® FS
Conductor Bar System



ELECTROBAR[®] FS

CONDUCTOR BAR SYSTEM

Magnetek knows the safety and performance of your overhead material handling system are top priorities. That's why we proudly offer the Electromotive Systems Electrobar FS Conductor Bar System for the electrification of cranes, monorails and automated storage and retrieval systems.

UNIQUE CONDUCTOR BAR SHAPE ENHANCES PERFORMANCE

- Contoured bar design ensures electrical contact between the collector shoe and conductor bar.
- Wear to the conductor bar cover is minimized.
- Potential loss of electrical contact at the joints is significantly reduced.
- Rigid conductor bar design minimizes deflection between hangers.

EASY TO INSTALL AND MAINTAIN

- Modular, snap-in multi-pole conductor bar hangers reduce installation and maintenance time.
- Compression-type anchors eliminate the need for field drilling.
- Expansion line elements come completely pre-assembled.
- Minimal system maintenance required—just periodically replace collector brush assemblies.
- Snap-in collector shoe assembly.

VALUE-PACKED SYSTEM

- Systems up to 490 feet in length can be installed without expansion assemblies.
- Standard 15' bar lengths mean fewer joints to purchase. (Custom lengths available by request).
- Common hangers and joint assemblies allow for reduced inventory levels.
- System design reduces installation labor costs.

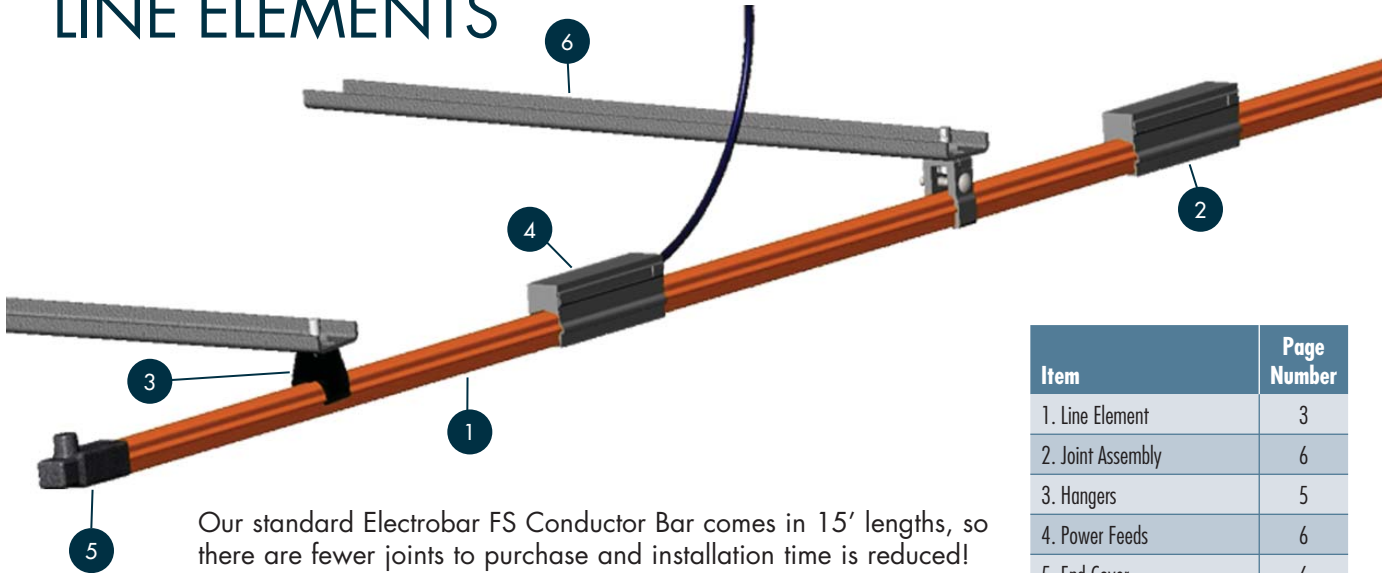
DESIGNED WITH SAFETY IN MIND

- Finger safe design minimizes potential for electrical contact.
- Grounding conductor bar available with green cover for ease of identification.

AVAILABLE IN A VARIETY OF CONFIGURATIONS

- Single and double shoe collector assemblies.
- 90, 110, 125, 250 and 400 Amp ratings.
- Snap-in hanger kits available for 2, 3 and 4 pole applications.
- Single hangers also available for special configurations.
- Single or tandem pantograph style collectors.
- Can be used in horizontal or vertical mounted applications.

LINE ELEMENTS

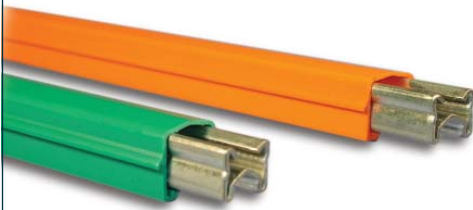


Our standard Electrobar FS Conductor Bar comes in 15' lengths, so there are fewer joints to purchase and installation time is reduced! Systems may be installed up to 490' without expansion assemblies, and in operating environments up to 160 degrees Fahrenheit. We include a green PVC conductor bar cover to provide electrical protection and easy identification of the grounding conductor.

Note: It is permissible to use the smallest rated bar as the ground.
 Example: 90, 110, 125 Amp Electrobar FS System - use the 90 Amp FS Bar as the ground.

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1. ELECTROBAR FS GALVANIZED STEEL LINE ELEMENTS



Catalog Number	Description	Standard Length	Weight	
			Lbs.	Kgs.
FS-90P15	90 Amp Electrobar FS Phase (Orange)	15' - 0"	7.4	3.4
FS-110P15	110 Amp Electrobar FS Phase (Orange)	15' - 0"	9.0	4.0
FS-125P15	125 Amp Electrobar FS Phase (Orange)	15' - 0"	9.0	4.0
FS-90G15	90 Amp Electrobar FS Ground (Green)	15' - 0"	7.4	3.4
FS-110G15	110 Amp Electrobar FS Ground (Green)	15' - 0"	9.0	4.0
FS-125G15	125 Amp Electrobar FS Ground (Green)	15' - 0"	9.0	4.0

Special length line elements are available from 1' to 14' in 1' increments designated by FS-(Amp Rating)(Phase or Ground)X, where X is equal to the length in feet.

Example: FS-90P5 is a 90 Amp Electrobar FS Phase X 5'-0".

1. ELECTROBAR FS COPPER LINE ELEMENTS



Catalog Number	Description	Standard Length	Weight	
			Lbs.	Kgs.
FS-250P15	250 Amp Electrobar FS Phase (Orange)	15' - 0"	7.5	3.4
FS-400P15	400 Amp Electrobar FS Phase (Orange)	15' - 0"	10.0	4.5
FS-250G15	250 Amp Electrobar FS Phase (Green)	15' - 0"	7.5	3.4
FS-400G15	400 Amp Electrobar FS Ground (Green)	15' - 0"	10.0	4.5

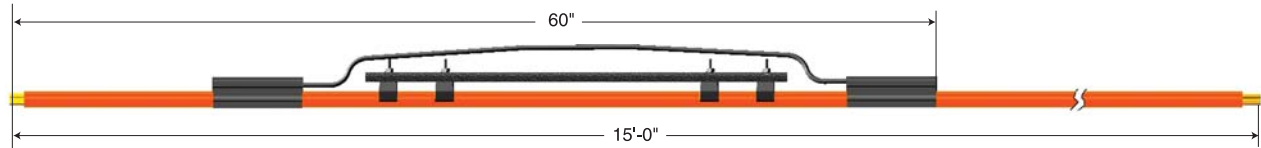
Special length line elements are available from 1' to 14' in 1' increments designated by FS-(Amp Rating)(Phase or Ground)X, where X is equal to the length in feet.

Example: FS-250P5 is a 250 Amp Electrobar FS Phase X 5'-0".

EXPANSION ELEMENTS

Our standard Electrobar FS expansion elements come in 15' lengths and include our PVC conductor bar cover and power feed covers. Expansions are completely pre-assembled, requiring only proper gap setting by the installer (refer to technical bulletin for gap setting data). Expansions may be installed in operating environments up to 160 degrees Fahrenheit.

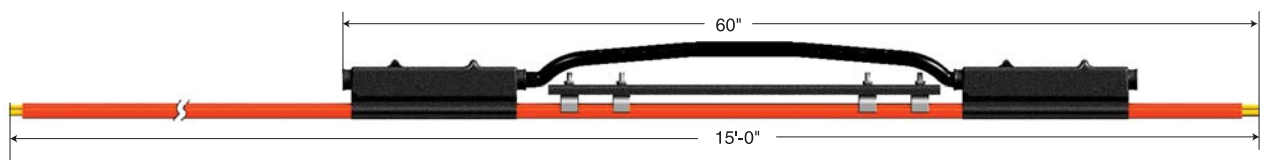
7. ELECTROBAR FS GALVANIZED STEEL EXPANSION ELEMENTS



Systems at 490' or less do not require expansion elements when installed with anchor hangers at the center of the line. In systems longer than 490', expansions are needed every 240' based on a 100 degree Fahrenheit change in ambient temperature.

Catalog Number	Description	Standard Length	Weight	
			Lbs.	Kgs.
FS-90EP15	90 Amp Electrobar FS Expansion Phase	15' - 0"	9.5	4.3
FS-110EP15	110 Amp Electrobar FS Expansion Phase	15' - 0"	11.5	5.2
FS-125EP15	125 Amp Electrobar FS Expansion Phase	15' - 0"	11.5	5.2
FS-90EG15	90 Amp Electrobar FS Expansion Ground	15' - 0"	9.5	4.3
FS-110EG15	110 Amp Electrobar FS Expansion Ground	15' - 0"	11.5	5.2
FS-125EG15	125 Amp Electrobar FS Expansion Ground	15' - 0"	11.5	5.2

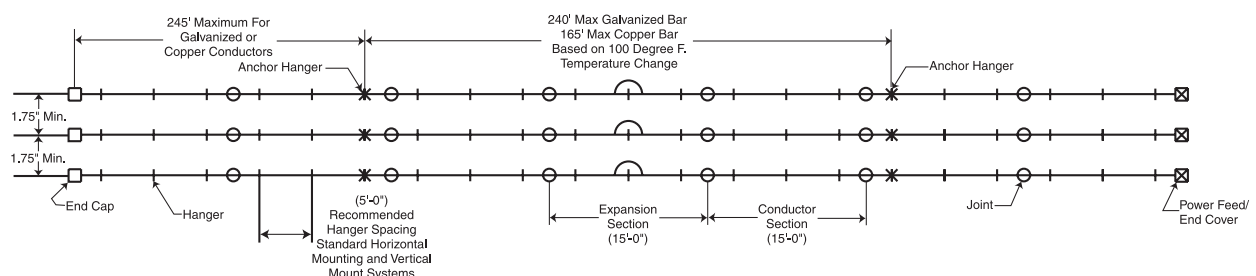
7. ELECTROBAR FS COPPER EXPANSION ELEMENTS



Systems at 490' or less do not require expansion elements when installed with anchor hangers at the center of the line. In systems longer than 490', expansions are needed every 165' based on a 100 degree Fahrenheit change in ambient temperature.

Catalog Number	Description	Standard Length	Weight	
			Lbs.	Kgs.
FS-250EP15	250 Amp Electrobar FS Expansion Phase	15' - 0"	14.5	6.6
FS-400EP15	400 Amp Electrobar FS Expansion Phase	15' - 0"	17.0	7.7
FS-250EG15	250 Amp Electrobar FS Expansion Ground	15' - 0"	14.5	6.6
FS-400EG15	400 Amp Electrobar FS Expansion Ground	15' - 0"	17.0	7.7

TYPICAL SYSTEM LAYOUT



HANGERS

Electrobar FS multi-pole line element hangers have a modular, snap-in design for quick installation and ease of maintenance. Compression anchors are available, eliminating the need for drilling.

A variety of configurations are available:

- Horizontal mount
- Vertical mount
- Modular hanger base for 2, 3 and 4 pole configurations
- Single plastic and steel hangers for special applications

3. HANGERS

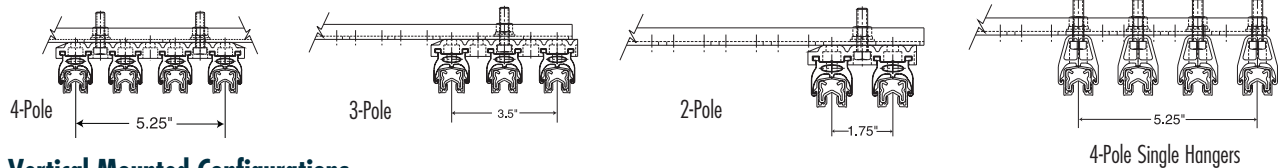


Catalog Number	Description	Weight	
		Lbs.	Kgs.
FS-H4	4-Pole with 4 Snap-in Hangers	0.30	0.14
FS-H3	3-Pole with 3 Snap-in Hangers	0.18	0.08
FS-H3L	3-Pole with 3 Snap-in Hangers (Vertical Mount Only)	0.18	0.08
FS-H2	2-Pole with 2 Snap-in Hangers	0.13	0.06
FS-SH	Single Hanger	0.10	0.05
FS-AH	Anchor Hanger	0.14	0.05
FS-HST	Steel Single Hanger	0.10	0.05
FS-H	Snap-in Hanger (Replacement)	0.03	0.01

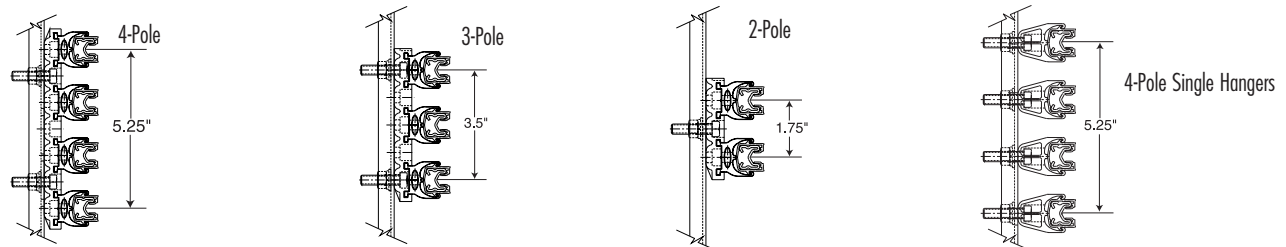


MOUNTING CONFIGURATIONS

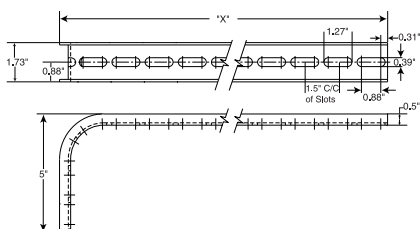
Horizontal Mounted Configurations



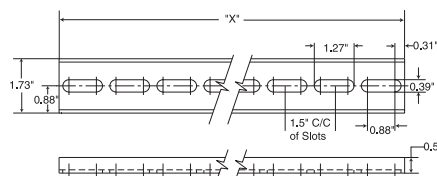
Vertical Mounted Configurations



6. MOUNTING BRACKETS



Bracket Catalog #	"X" Dimension
BKS-W15-G	11"
BKS-W18-G	14"
BKS-W24-G	20"



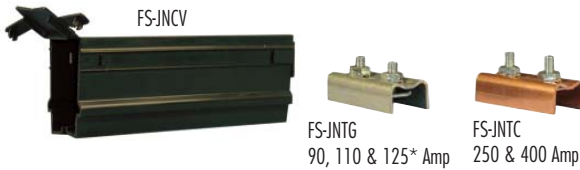
Bracket Catalog #	"X" Dimension
BKS-F18-G	18"
BKS-F24-G	24"

(Add an "A" after the F18 or F24 when ordering flange mount brackets including two mounting clamps.)

SYSTEM COMPONENTS

2. JOINT ASSEMBLY/JOINT COVER

90, 110, 125, 250 and 400 Amp

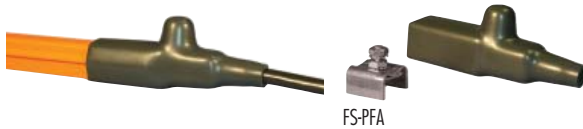


One joint cover and one joint assembly are required between each line element.

Catalog Number	Description	Weight	
		Lbs.	Kgs.
FS-JNTG	FS Joint Assembly Galvanized	0.10	0.05
FS-JNTC	FS Joint Assembly Copper	0.08	0.04
FS-JNCV	FS Joint Cover	0.05	0.02
FS-JNJC	FS Joint Compound	0.30	0.14

4. END POWER FEED

125 Amp



Power feed may be installed at the end of conductor bar line to feed power from one end of the conductor bar.

Catalog Number	Description	Weight	
		Lbs.	Kgs.
FS-PFA	End Power Feed	0.11	0.05

5. END COVER

90, 110, 125, 250 and 400 Amp



Required for installation at each end of the conductor bar system (required at only one end when end power feeds are used).

Catalog Number	Description	Weight	
		Lbs.	Kgs.
FS-END	FS End Cover	0.10	0.05

4. JOINT POWER FEED

90, 110 and 125 Amp



May be installed between any two line elements along the length of the system.

Catalog Number	Description	Weight	
		Lbs.	Kgs.
FS-PFB	FS Joint Power Feed	0.15	0.07

4. JOINT POWER FEED

250 and 400 Amp



May be installed between any two line elements along the length of the system.

Catalog Number	Description	Weight	
		Lbs.	Kgs.
FS-PFC	FS Joint Power Feed	1.25	0.57

8. TRANSFER CAP

90, 110, 125, 250 and 400 Amp



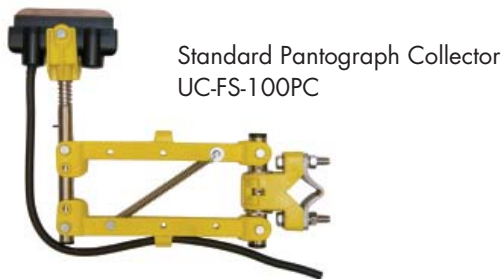
May be installed at switches or other breaks along the line where the collector shoe needs to transition between two conductor bar lines.

Catalog Number	Description	Weight	
		Lbs.	Kgs.
FS-TCAP	FS Transfer Cap	0.08	0.04

COLLECTOR ASSEMBLIES

Collector assemblies are designed to travel at speeds up to 900 ft. per minute using standardized components. They provide constant spring force throughout the entire stroke due to the parallelogram effect between the arm and the spring. Electrobar FS collectors feature a snap-in shoe assembly—simply make the electrical connection and snap the shoe into place. Our graphite impregnated copper contact shoes are designed for long life and minimal drag. Standard Electrobar FS collectors have a 100 and 200 Amperes continuous current rating. Single or tandem collector shoe assemblies are available.

9. PANTOGRAPH/TANDEM ARM COLLECTOR ASSEMBLIES



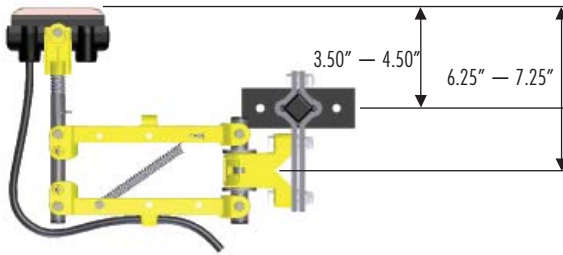
Single Arm

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

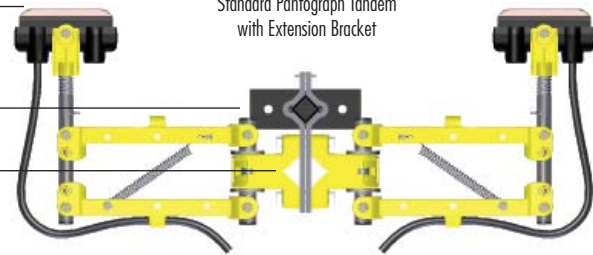
Tandem Arm

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

Standard Pantograph with Extension Bracket



Standard Pantograph Tandem with Extension Bracket



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

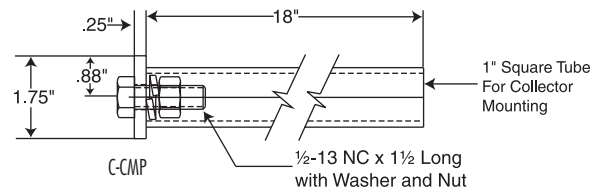
UNIVERSAL SNAP-IN REPLACEMENT SHOE ASSEMBLY



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

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

COLLECTOR MOUNTING POST



Catalog Number	Description	Weight	
		Lbs.	Kgs.
C-CMP	Collector Mounting Post	4	1.8



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