

Wampfler

SAF-T-BAR

Electrification Systems

J 型電軌
容量 400-500 安培

Series J
400 - 500 amperes

Saf-T-Bar Feature

1 METAL GUIDEWAYS assure tracking of collector shoe. Collector tracks with or without insulating cover.

2 FLAT CONTACT SURFACE for long conductor wear, a stainless steel insert providing corrosion resistance and resistance to electrical pitting.

3 CONTACT SHOE with flat contact surface of sintered copper and graphite, self lubricating for effective draw of current to the collector.

4 SKIN TIGHT INSULATION runs cooler. It will not deform under clamp pressure. Standard insulation is 160°F. Higher temperature insulation to 260°F. is available.

5 COMPACT MOUNTING of conductor in vertical or horizontal position without special parts for fittings.

6 COLLECTORS are available in either single or dual head construction.

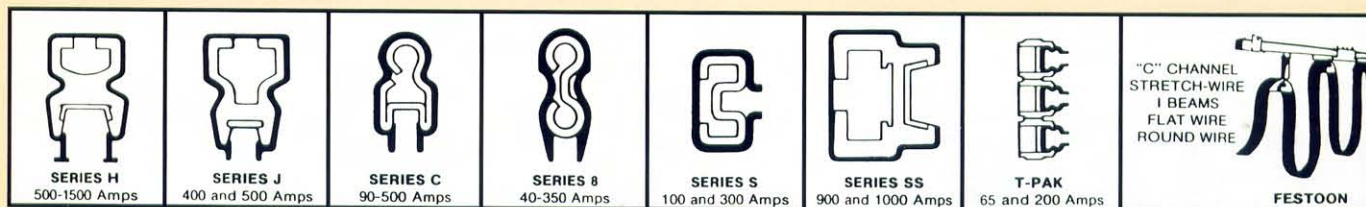
7 HAND-SAFE insulating cover.

For heavy duty cranes and monorails

The advanced Saf-T-Bar system reflects the basic engineering concept of an internal insulated conductor which provides years of safe economical, trouble-free service. It is designed for compact, low cost installation and minimum maintenance.

The Series J conductor can be mounted in any plane. In wet atmospheres the system should be mounted on spool insulators with the conductor in the downturn position. In dirty and dusty atmospheres, mount the conductor in the downturn position. If the atmosphere is likely to cause electrical oversurface tracking, choose the spool type hanger clamps rather than the standard coated hanger clamp. Conductors are supported on brackets on 5 foot spacing centers for all crane conductor positions.

Series J conductors are supplied in 20ft. lengths, assembled complete with insulating covers. Other lengths are available. Joint fittings and covers are to be ordered separately.



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wampfler

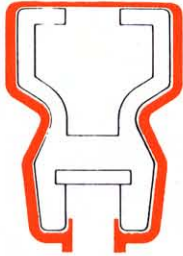
solutions for a moving world

Series J

SAF-T-BAR CONDUCTORS

400/500 AMPERES

J 型電軌的外形

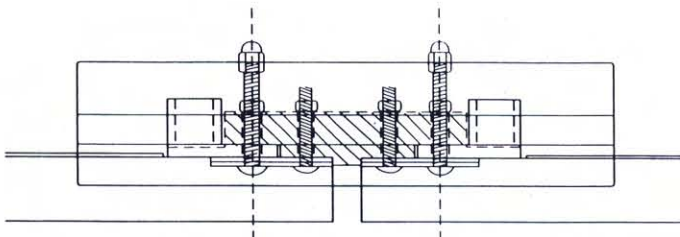
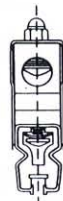
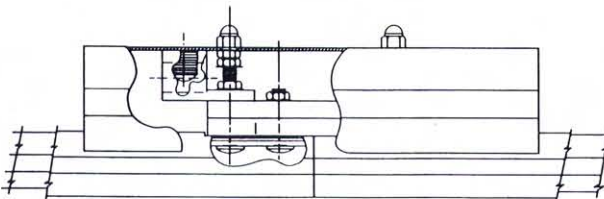
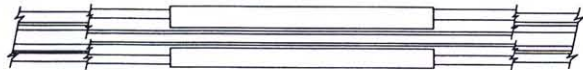
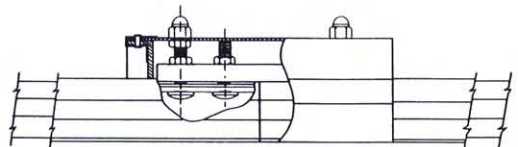


INSULATION TYPE & TEMP. RATINGS	CONDUCTOR CAT. NO.	SPICE JOINT	POWER FEED	HANGER CLAMPS		EXPANSION GAP KIT	END CAP
				CLAMP	SPOOL		
PVC 160°F	400A	JA-400	JA-400J	JA-400H	JA-400K	JA-400XG-4"	JA-400N
	500A	JA-504	JA-504J	PLATED	PLATED	JA-504XG-4"	JA-504N
LEXAN 200°F	400A	JA-400HH	JA400HHJ	JA-400HN	JA-400KN	JA-400HHXG-4"	COVER
	500A	JA-504HH	JA-504HHJ	COATED	COATED	JA-504HHXG-4"	EXTENSION
				JA-400P	JA-400PH		
				LEXAN + RAINHAT			

Conductor Rail Characteristics

Combined weight per foot	.696	R - Resistance OHMS/Foot at 20°C	.0000356
Weight of aluminum per foot 6101-T6	.49	Z - Impedance OHMS/Foot 3.5" c/c	.0000496
Weight of 304 stainless steel per foot	.085	Z - Impedance OHMS/Foot 5.0" c/c	.0000550
Aluminum cross sectional area, sq. in.	.408	Weight of vinyl cover/Foot	.12

Rate 600V AC 250V DC



Conductors are joined by a bolted splice assembly, comprised of two stacked concave stainless steel spring plates, aluminum splice bars, steel bolts, and hex assembly nuts. For correct installation, both spring plates are located as a pair inside the conductor cavity so that as the bolts are tightened, the stress goes to the outside of the concave surface. The steel bolts should be tightened to 60 inch lbs. The outer edges of the spring plates are forced into the top corners of the conductor cavity. 400 amps. use on aluminum splice bar, 500 amp. splices use two aluminum splice bars. The longitudinal cavity in the conductor may be used for a heater wire if required.

To join the adjacent conductor rails, abrade the joint surfaces of the conductor rail only, with a fine brush of abrasive cloth, coat thoroughly with Alcoa #2EJC compound immediately after abrading. *Do not abrade splice bar terminals, as they are tin plated to be corrosion free.* Assembly joint without removal of compound. Tighten assembly nuts until the joint is fully torqued. Snap the insulating splice cover into place to complete the joint. Make certain that the splice joints are at least 12 inches away from a hanger clamp to allow for adequate expansion and contraction movements of the rail assembly.

Powerfeeds for Supply Power connections are designed to be installed instead of a rail splice joint, where required. A suitable insulating cover is provided so that the terminal face is protected from accidental contact. Installation of powerfeed joints in the same procedure as for regular conductor rail splices.

Powerfeed conductor bar surfaces are prepared with electrical joint compound using the same procedure as on conductor splices. Powerfeed are installed and torqued the same as conductor splices.

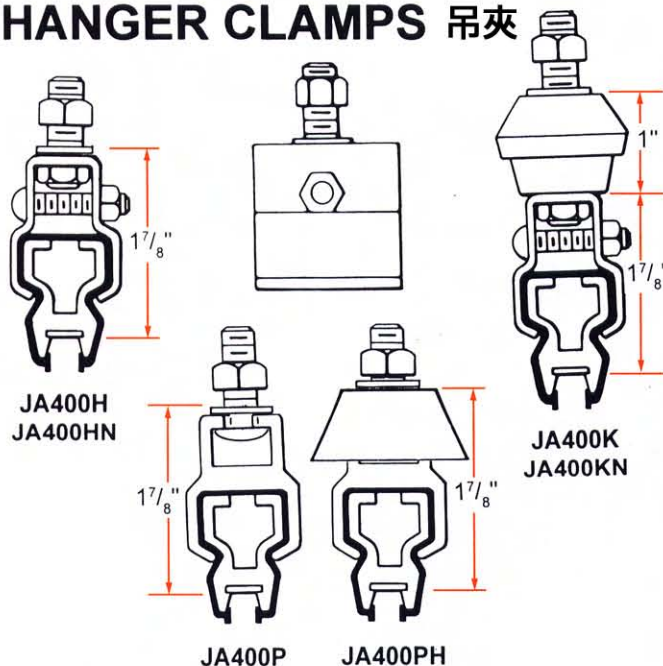
Isolation Joints are fabricated nylon blocks that separate conductor sections both electrically and mechanically. Powerfeeds at end of isolation blocks provide convenient electrical connections to isolated conductor bars. The complete assembly is protected by a bolted-in-place insulating plastic channel.

END CAPS 尾端蓋

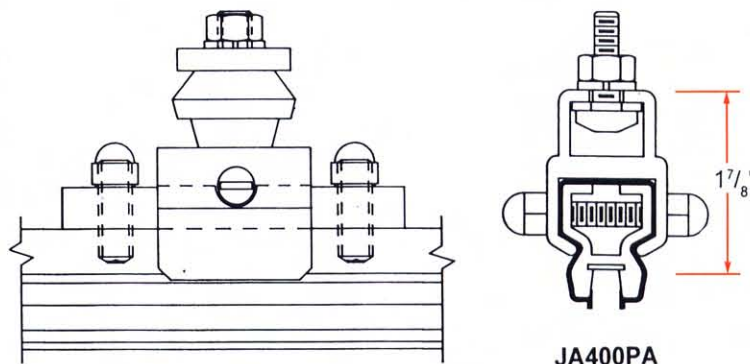
End Cap. Standard length rails have 2-1/2" exposed ends which may be insulated by a 4" flexible boot or end cap. Standard and short length rail ends may be insulated by a 4" extension of the cover beyond exposed rail and be designated as end lengths.

Cutting. Power rail may be field cut with a hacksaw as required. Remove all sharp edges on cut end of conductors by deburring with a file.

HANGER CLAMPS 吊夾



Mounting. Hanger clamp brackets can be attached to the runway beam by welding or bolting. Conductor must be spaced at least 2 inches apart. Hanger clamp brackets will require 3/8 inch holes for hanger clamp bolts of 5/16 inch. Conductor hanger clamps should be slid onto the rail and positioned relative to the appropriate hanger clamp bracket, so that when the rail is raised into place, the hanger clamps may be bolted to their respective bracket. Hanger clamp cross bolts should be tightened so that the rail will slide easily, but will be securely supported.



JA-400KA
TYPICAL ANCHOR

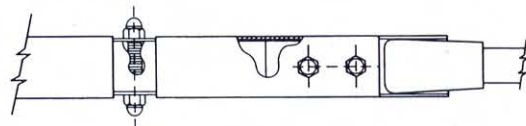
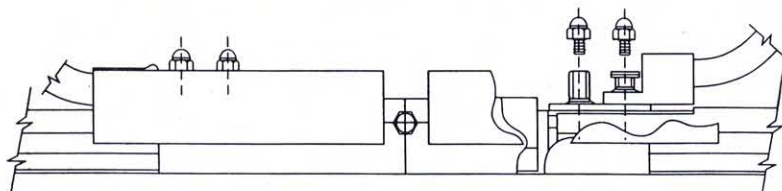
Hangers, by part number and indicated usage:

JA-400HN	Indoors, dirty, dry applications, coated
JA-400K	Indoors, outdoors, wet, dirty applications, spool and zinc plate:
JA-400KN	Indoors, outdoors, wet, dirty, corrosive applications, spool and coated
JA-400P	Can be used to replace all above hangers. Polycarbonate Lexan
JA-400PH	Lexan hanger and rain hat.

Anchor Clamps. Cross bolt hangers consist of a locating block used to secure the conductor to the hanger: to create a fixed point on the mid point of a system or the mid point between expansion gaps.

On the polycarbonate hanger, the anchor is achieved by drilling through the hanger body (factory drilled) and the upper conductor section (field drilled) and inserting a threaded rod, held in place by insulating acorn nuts on each side.

4" EXPANSION GAP 4"膨脹器



Expansion Gap Assemblies are preassembled, ready to be installed between two adjacent sections of rail. Each end of the expansion mechanism is attached to its mating rail end with a power feed type rail splice. The expansion mechanism is a telescoping interleaved unit, having a travel of 4 inches, providing a constant sliding surface for the collector shoe for mechanical support only. The gap assembly is 6 inches long closed, and 10 inches expanded. The gap assembly should be set at 2" when installed at 60°F for average use.

Expansion gap assemblies are based on 280 foot conductor intervals with a 100°F temperature variation. Aluminum conductors will expand one inch in 70 feet per 100°F temperature variation. If greater temperature variations are expected, a proportional decrease in the 280 foot interval is required. Conductor systems up to 280 feet in length

that are either all indoors or all outdoors can be center anchored and do not require an expansion gap assembly. Systems that are longer than 280 feet require expansion gap kits every 280 feet or fraction thereof. Systems that pass from inside to outside in areas of extreme temperature should have an expansion gap kit located just within the building.

The center point of all conductor runs using expansion gaps requires an anchor clamp to locate rail settings.

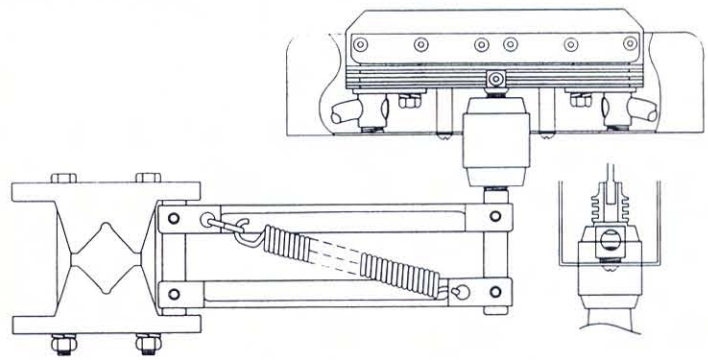
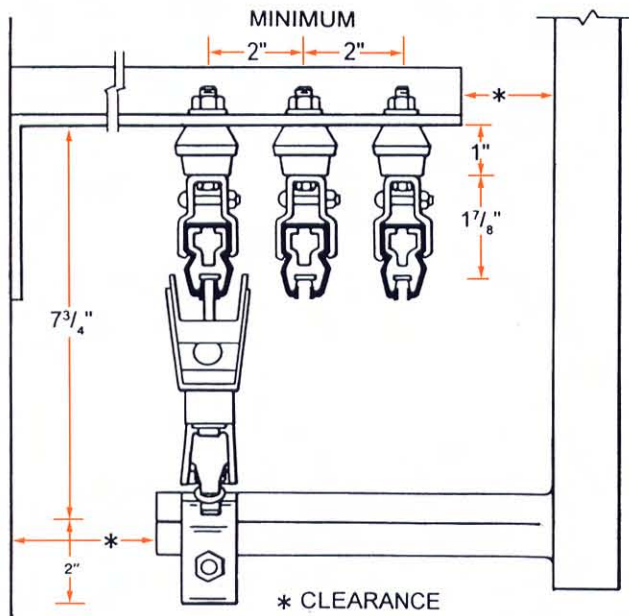
Jumper cables 3/0AWG for 400A and 500A are included to complete the electrical circuit across the expansion mechanism. Tandem collectors are required on any crane runway system using expansion gap kits to provide current draw when passing through the expansion gap mechanism.



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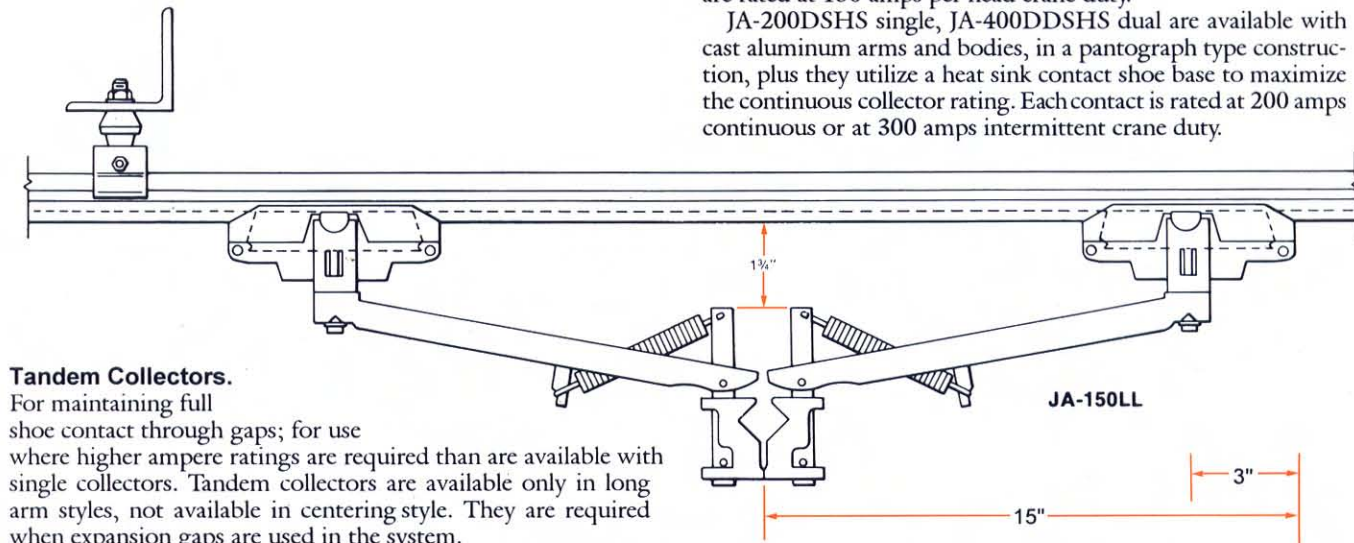
集電架的外觀及零件表



JA-200DSHS — JA-400DDSHS HEAT SINK COLLECTORS

Two types of collector are available. JA-150L single, JA-150LL dual are available with cast aluminum arms and bodies, or glass-filled polycarbonate plastic which offers double insulation, plus corrosion resistant components. Contact brushes have a contact base that can accept double #4 pigtails if required. Collectors are rated at 150 amps per head crane duty.

JA-200DSHS single, JA-400DDSHS dual are available with cast aluminum arms and bodies, in a pantograph type construction, plus they utilize a heat sink contact shoe base to maximize the continuous collector rating. Each contact is rated at 200 amps continuous or at 300 amps intermittent crane duty.



Tandem Collectors.

For maintaining full shoe contact through gaps; for use where higher ampere ratings are required than are available with single collectors. Tandem collectors are available only in long arm styles, not available in centering style. They are required when expansion gaps are used in the system.

PARTS LIST — SAF-T-BAR SERIES JA400/JA504

PART*	AMPS	WT	CAT #	PART	AMPS	WT	CAT #
20' Conductor Sections	400	14	JA-400	Isolation Joints	ALL	1.0	JA-400IS
Insulated PVC Cover	500	14	JA-504	End Cap - PVC only	ALL	.08	JA-400N/JA-504N
20' Conductor Sections	500	14	JA-400HH	Hanger Clamps	ALL		
Insulated Lexan Cover	500	14	JA-504HH	Plated	ALL	.25	JA-400H
Joint Kit with Cover	400	.50	JA-400J	Coated	ALL	.30	JA-400HN
PVC	500	1.00	JA-504J	Plated with Spool	ALL	.35	JA-400K
Joint Kit with Cover	400	.50	JA-400HHJ	Coated with Spool	ALL	.40	JA-400KN
Lexan	500	1.00	J-504HHJ	Lexan	ALL	.25	JA-400P
Powerfeeds with Cover	400	.60	JA-400F	Lexan with Rain Hat	ALL	.30	JA-400PH
PVC	500	1.0	JA-504F	Anchor Hangers			
Powerfeeds with Cover	400	.60	JA-400HHF	add suffix "A" - All Series			
Lexan	500	1.00	JA-504HHF	Collectors			
Expansion Gap Kit	400	5.0	JA-400XG-4"	Crane Rated - Single Head	150	3.0	JA-150L
PVC	500	6.0	JA-504XG-4"	Crane Rated - Dual Head	300	6.0	JA-150LL
Expansion Gap Kit	400	5.0	JA-400HHXG-4"	Crane Rated - Single	300	6	JA-200DSHS
Lexan	500	6.0	JA-504HHXG-4"	Crane Rated - Dual	600	12	JA-400DDSHS



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