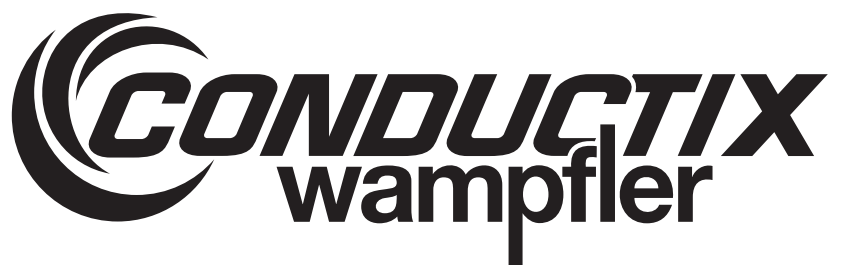
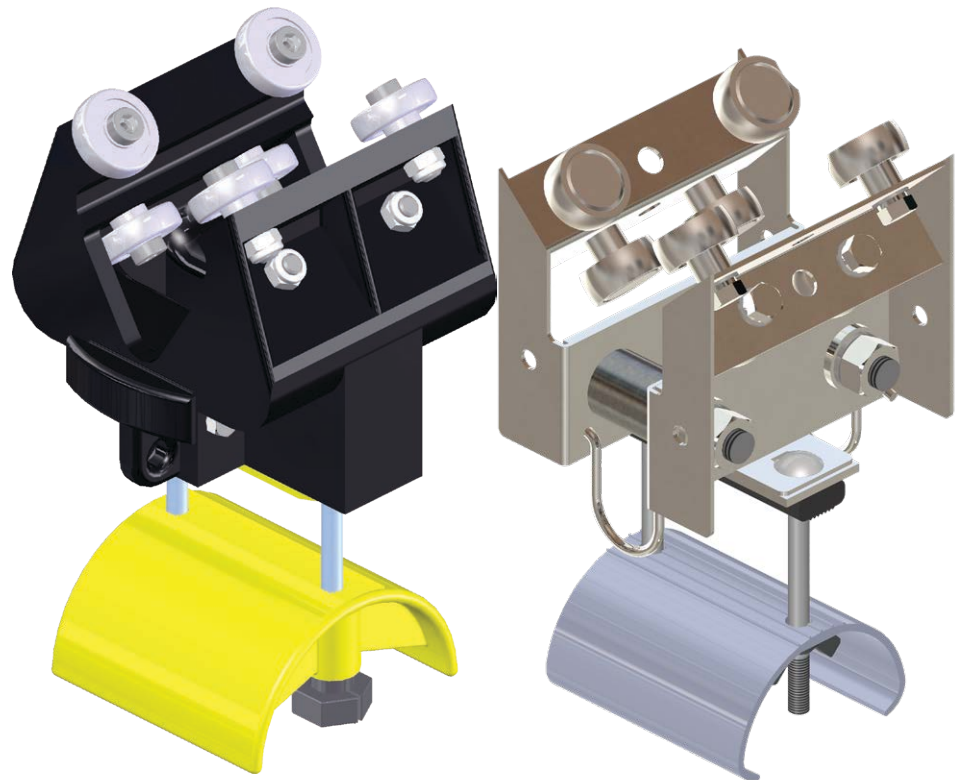


Festoon Manual Standard Duty Square Bar



Conductix Incorporated

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Additionally, Seller's obligation shall be limited by the manufacturer's warranty (and is not further warranted by Seller) for all parts procured from others according to published data, specifications or performance information not designed by or for Seller.

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1.0 Safety

- 1.1 Electrical Warnings
- 1.2 Operational Warnings
- 1.3 Maintenance Warnings

2.0 Installation

3.0 Operation

- 3.1 Pre-Operation Inspection
- 3.2 Operation Instructions

4.0 Maintenance

1.0 Safety

1.1 Electrical Warnings

- 1.1.1 Properly ground all electrical connections in accordance with the National Electric Code and local codes and ordinances.
- 1.1.2 Disconnect the electrical power from the system before any service is performed.
- 1.1.3 Do not use cable for loads greater than the voltage and current rating. The ampacity rating of the cable should be in accordance with the National Electric Code.

1.2 Operational Warnings

- 1.2.1 Exercise care when handling the festoon system during normal operations.
- 1.2.2 **IMPORTANT:** Do not use cable different from that for which the system is intended. **Changes in diameter, weight per foot, length of cable or flexibility will affect the operation of the system.**
- 1.2.3 Mounting hardware and fasteners should be installed to maintain tightness under vibration and check periodically to insure tightness.

1.3 Maintenance Warnings

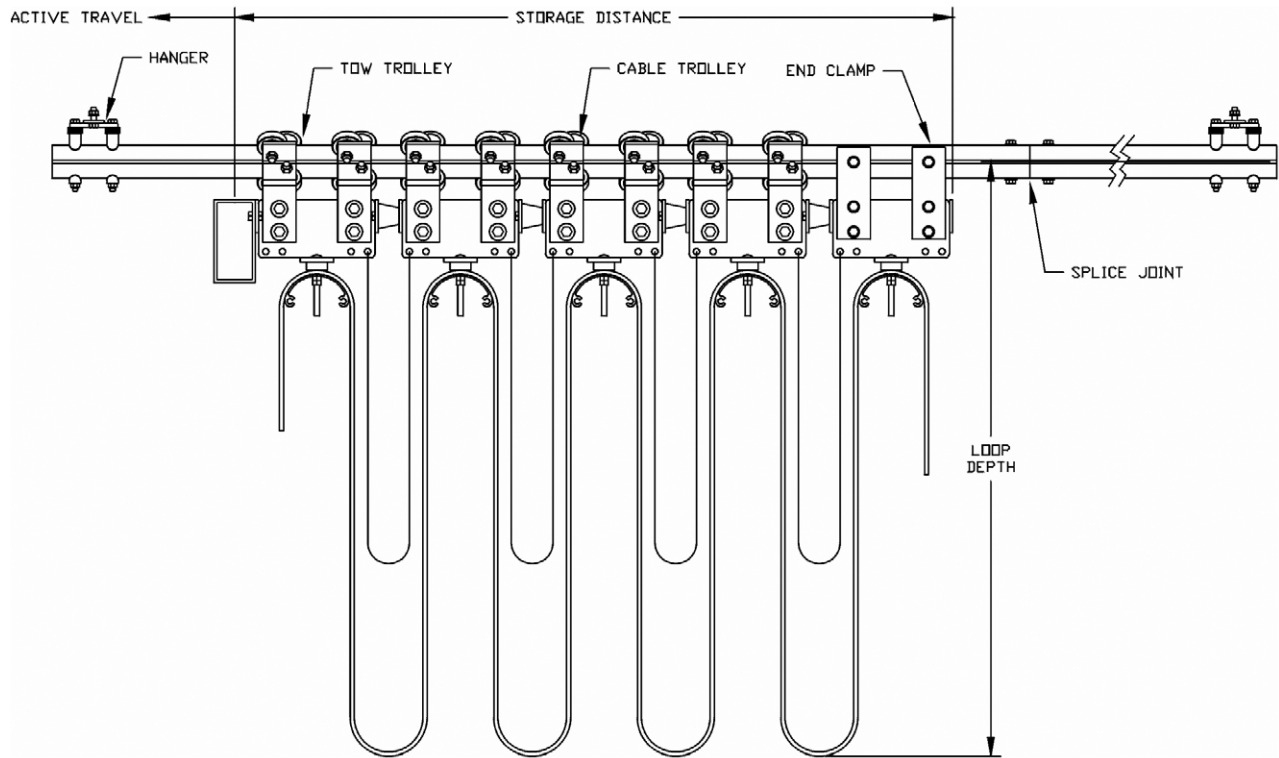
- 1.3.1 **WARNING: Modification of this equipment may cause excessive wear and will void the warranty.** Contact Conductix-Wampfler regarding changes or modifications of equipment which could affect reliability or safety.

2.0 Installation

2.1 Square Bar

- 2.1.1 Cut straight length square bar(s) to proper length(s). Drill hanger support structure locations.
Note: Review hanger position and splice locations before drilling.
- 2.1.2 Attach hangers to support structure. Recommendations: Hanger spacing is 5 ft for Standard Duty, additional hanger location in storage area.
- 2.1.3 Mark hanger and end clamp position on square bar. Position drill fixture and drill as required.
Note: Standard Duty Square Bar uses 1/4" drill bit.
- 2.1.4 Mount square bar onto hangers.
- 2.1.5 Adjacent square bar lengths:
 - a) mark and drill hanger locations
 - b) attach splice couplers
 - c) mount square bar hangers and splice to existing bar
- 2.1.6 Determine loop depth of cable. Mark cable where it will be positioned on the saddle, install cable onto trolley saddles, placing the cable mark between the clamp bolts. Allow extra length of cable for hook-up area **BEFORE** tow trolley and **AFTER** end clamp. Attach tow cables between each trolley.
- 2.1.7 Install carriers onto square bar.
- 2.1.8 Mount end clamp onto square bar.
- 2.1.9 Install tow device. Towing device shall move the trolley parallel to the track and not strain against the trolley travel direction.
- 2.1.10 Verify electrical power is off. Cycle the system manually to ensure proper travel.
- 2.1.11 Terminate all electrical connections and test mobile electrical system. Cycle the system under supervision.

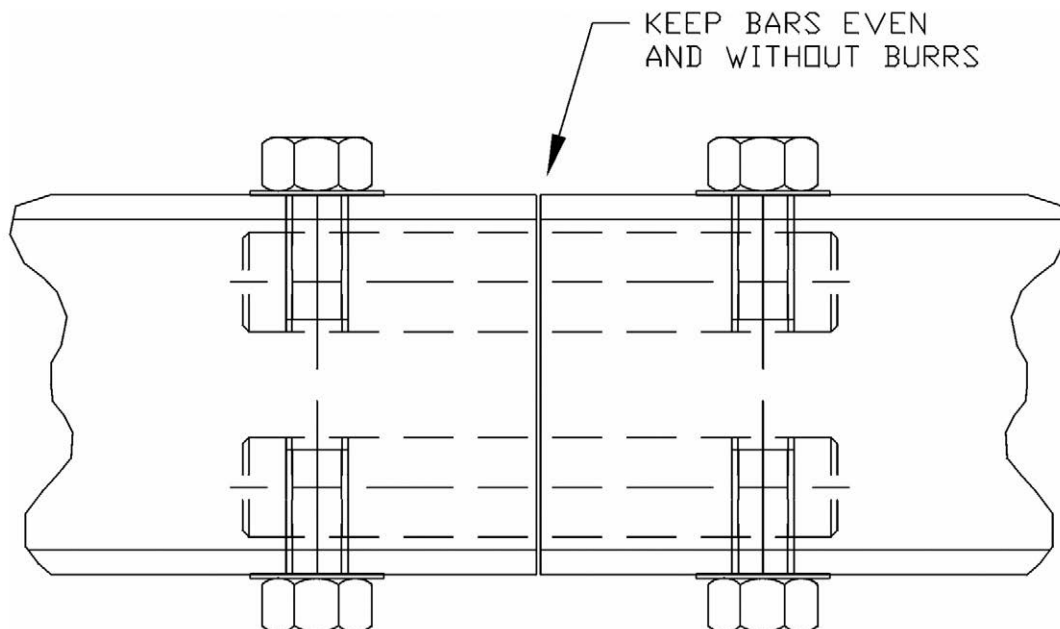
2.0 Installation



3.0 Operation

3.1 Pre-Operation Inspection

- 3.1.1 Check for proper mounting of end clamp.
- 3.1.2 Check for obstructions on square bar joints.



3.0 Operation

- 3.1.3 Check cable clearances and that cables are hanging properly and are not tangled.
- 3.1.4 Check that tow arm is not disengaged from tow trolley during test operation and remains within the confines of the tow box. (Tow arm must move freely in the tow box)
- 3.1.5 If new system is a replacement system, double check the storage distance requirement to ensure there is enough room for the festoon in the stored position.

3.2 Operation Instructions

- 3.2.1 Do not exceed the voltage or ampere rating of the cable. Overheating, fire, damage to equipment or personal injury could result.
- 3.2.2 Operate the festoon system within the electrical and mechanical limits for which it was intended.

4.0 Maintenance

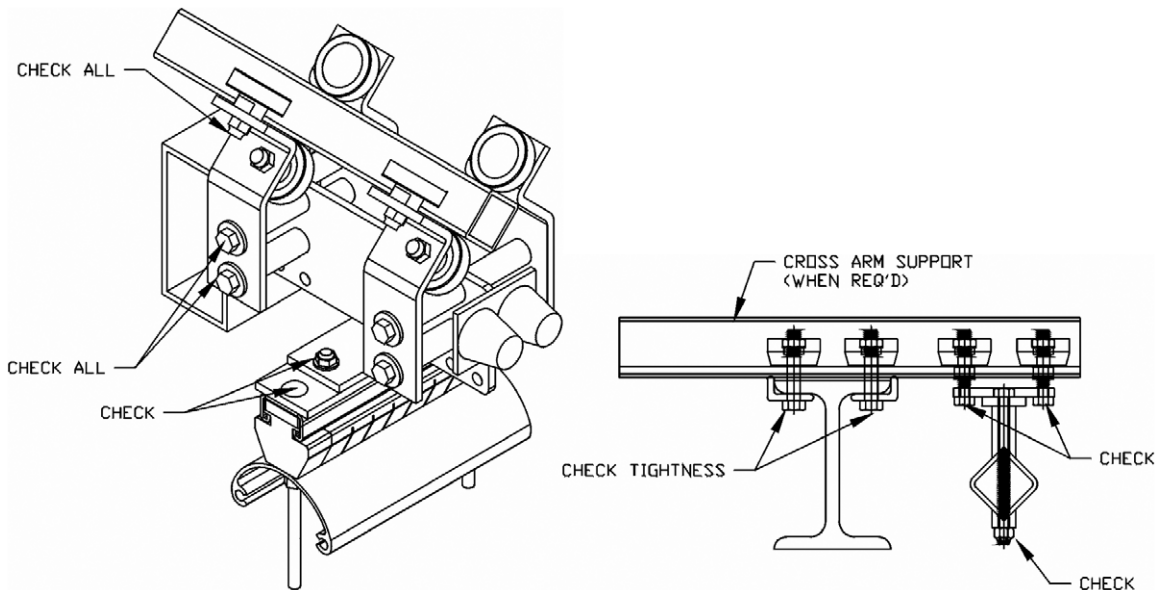
4.1 Maintenance Instructions

4.1.1 In general, since all trolley rollers are lubricated and sealed, no re-greasing is required. However, customer should conduct periodic inspections of the square bar system. Determine the inspection intervals based on severity of duty cycle (level of usage) and environment. A reference schedule of inspections is listed below:

Service	Inspection Rates
Severe	3 months
Normal	6 months
Light	12 months

4.1.2 Conductix-Wampfler recommends the following checks during inspections:

- a) Check all rollers for wear.
- b) Check tightness of all hardware
- c) Check cable clamp of all trolleys, making sure cable remains secure
- d) Inspect cable insulation for any cuts or cracks
- e) Check bumper condition
- f) Check condition of all accessories, tow ropes, shock cords and cable organizers
- g) Inspect square bar for wear, clean running surface of any debris or build up.



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