

INCOMMAND Gantry Crane



Installation, Operation, & Maintenance Manual



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Date purchased _____

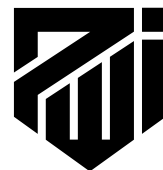
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Order Number _____

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INCOMMAND Gantry Crane



Before you begin. Read the instructions carefully, from beginning to end, and follow the proper sequence.

Thank you for purchasing a PWI crane! We have been building cranes for years and our experience and knowledge should give you peace of mind. We too use cranes in our manufacturing processes. From design & engineering, all the way to installation of our crane systems, our experience and passion for quality crane systems is shown in our products. We hope you find the installation ease and use of our PWI products to be among the best items you have purchased.

Thank you from the entire staff at PWI.

General Safety:

- Safety comes first when unloading and assembling your crane system. Many of the components are heavy and require lifting equipment to move and set them in place. Make sure the equipment you choose to support and lift each piece is capable of the task with extra capacity to do the job. Do not end up in a dangerous situation.
- Start with checking any lifting fixtures/tools for damage or wear that could lead to severe injury or death.
- This manual assumes that you have considered the condition of the surfaces that this gantry crane will be rolling on. This gantry crane is designed for flat hard level surfaces only. Do not use this gantry crane in gravel, soft material, or areas where stability of the frame could potentially be a problem. The potential for instability when the load is raised requires a well thought out plan and consideration of the soundness of the floor structure.
- Please call PWI if you are unsure of the slab/foundation requirement for your crane system.
- Obstructions. Whether on the floor or overhead, be aware of the workspace and realize that anything at floor level and anything above can be a potential obstruction to your gantry crane. **DO NOT LET THE GANTRY CRANE RUN OVER OR INTO OBSTRUCTIONS IN THE WORK AREA.**



WARNING

There must be 3" minimum clearance to any obstruction above the unit.

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Pre-Installation Checklist:

- Check your shipment for the correct components and hardware. Your shipment should include shipping sheets that were checked off by our team.
- Check your shipment for drawings for layout and installation of components.
- Clear the area as much as possible of items that could be damaged or create hazards during the installation. When assembling near electrical panels be aware of any regulations regarding perimeters required around those objects.
- Forklift or suitable lifting equipment.
- Should you have any technical questions, or feel you have defective components or missing items, call us immediately. We will be glad to assist you.

Tools Needed:

- Proper PPE:
- Forklift
- Ladder/Man Lift
- Nylon Lifting Sling
- Marker
- Tape Measure
- Level
- Hammer
- Torque Wrench
- Wrench Set
- Laser Level
- Paint Brush



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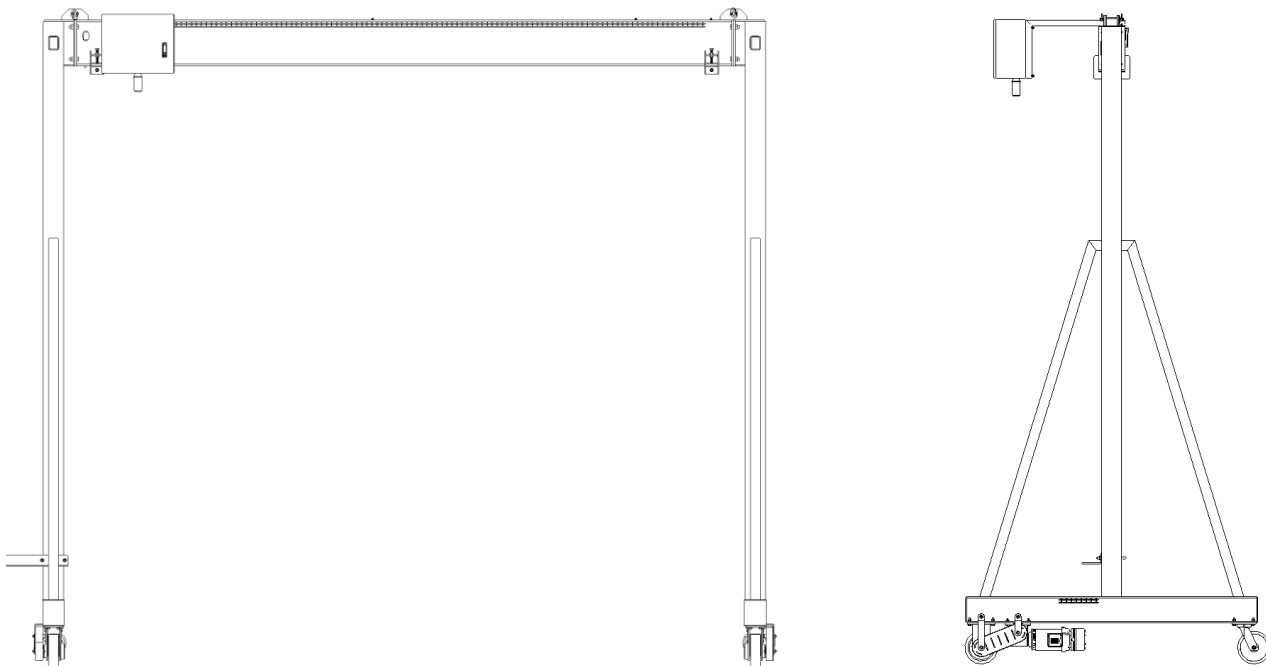
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System Capacity Information:

The innovative design and heavy-duty construction of the PWI Gantry Crane will provide a superior quality product that will offer years of long-term value. The hoist weight allowance is 15% of the cranes capacity (for example, a crane rated for 6000 pounds allows for a 6000-pound live load plus 900 pounds for the weight of the hoist). There is also an allowance of 15% of the crane capacity for impact caused by hoist use. PWI systems will provide many years of dependable service by following the installation and maintenance procedures described herein.

Note: Any dimensions shown in this manual are for illustration purposes only. Refer to the drawings that were sent with your system for the exact measurements and configuration of the system we built for you.



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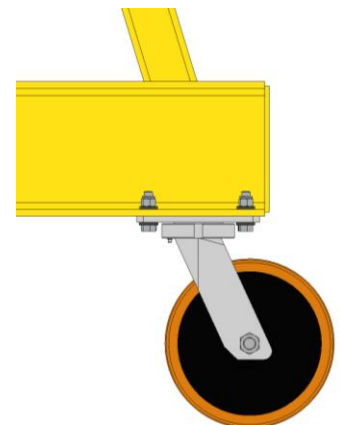
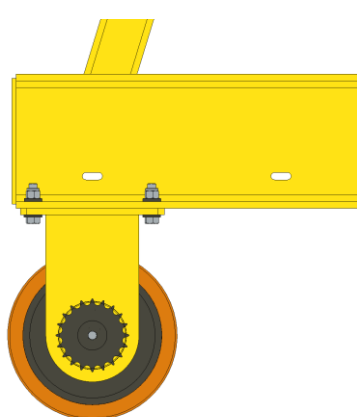
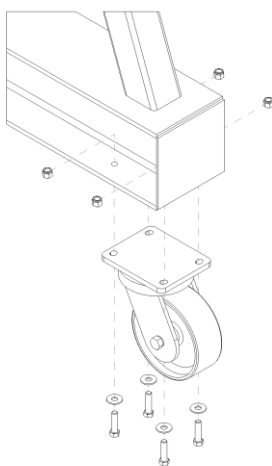
Assembly

Lay out the parts of the PWI Manual Gantry Crane.



- (1) RH Leg Assembly
- (1) LH Leg Assembly
- (4) Casters
- (1) Hardware Kit
- (1) Upper beam
- (2) Floor Brake (Optional)
- (1) Festoon Kit & Components

If casters are not preassembled, bolt the casters to the end truck with the provided hardware as shown.



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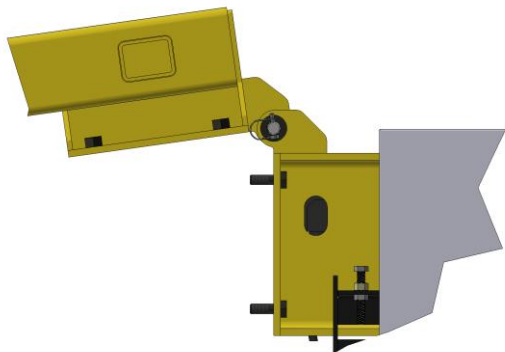
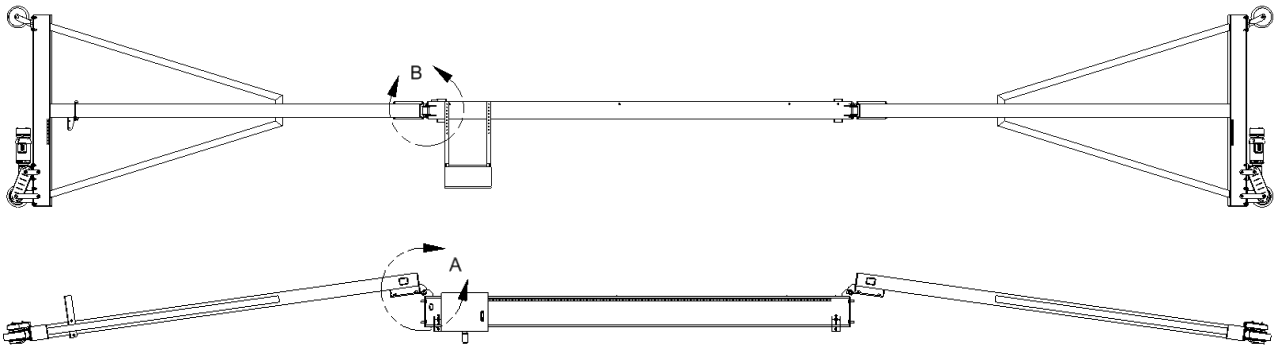
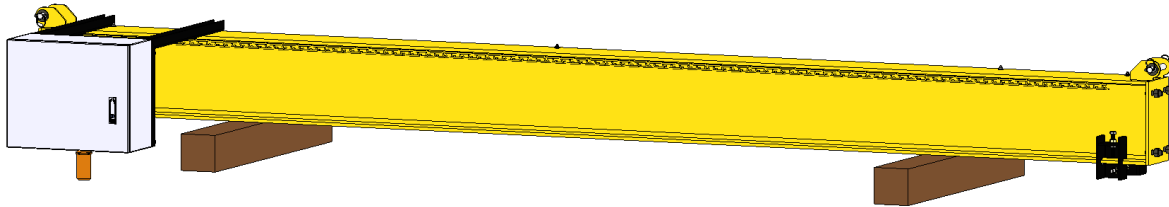


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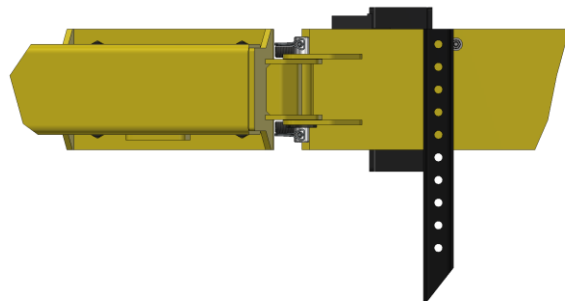


In your designated assembly area, place the Gantry beam on blocks, to avoid damage to the panel.

For ease of construction, assemble structure in the reclined position, in reference to the Installation Drawings.



DETAIL A



DETAIL B

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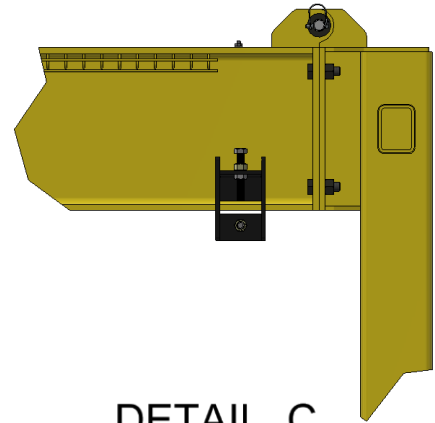
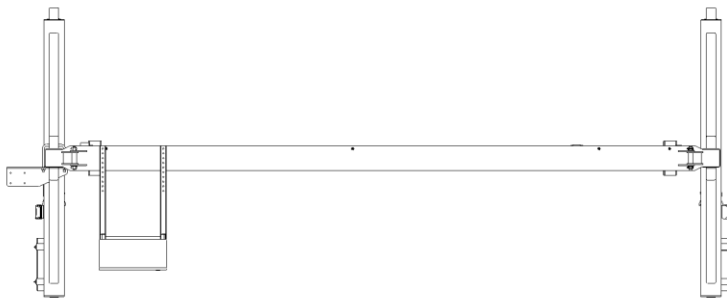
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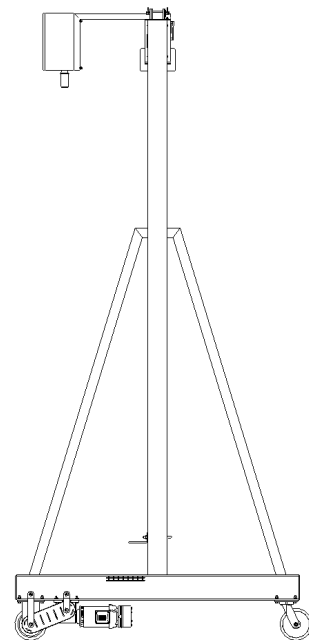
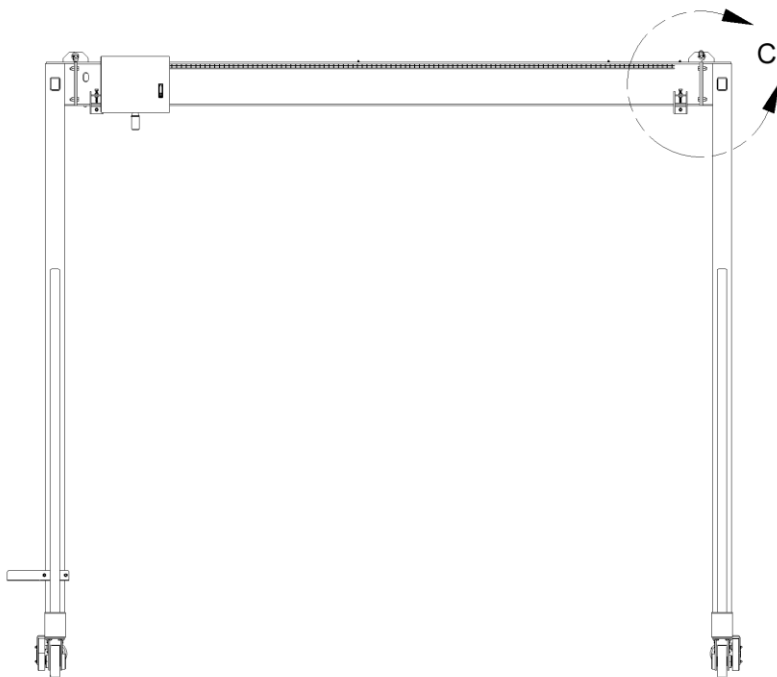
Secure gantry beam with appropriate lifting equipment and lift from Center of Gravity on the gantry beam.

Allow legs to fold under the structure. Then secure with hardware on the mating surfaces.

Toque Accordingly.



DETAIL C



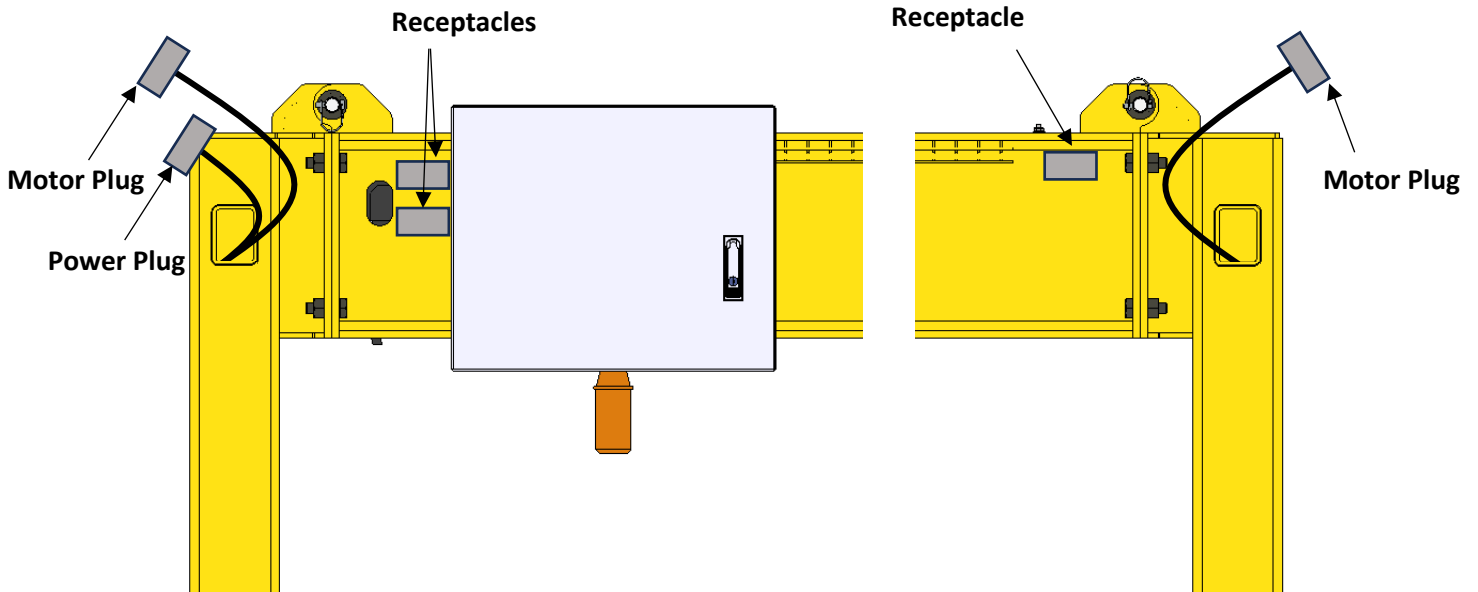
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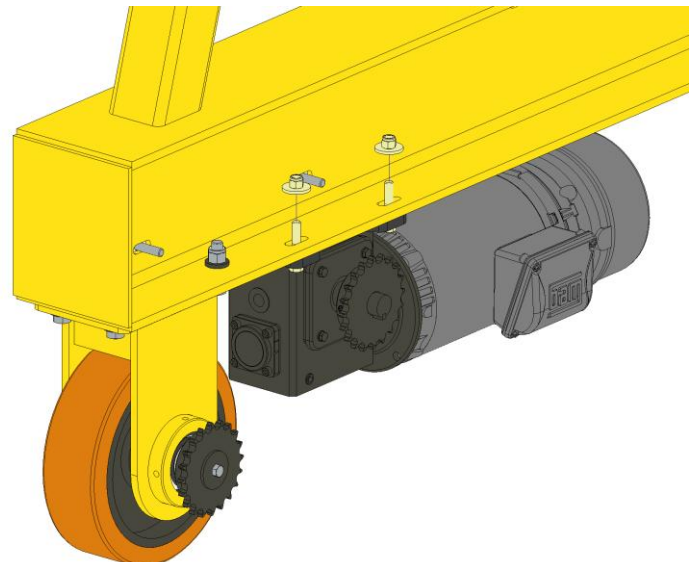
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Connect the Motor Plugs and Power Plug into the Receptacles at both ends of the beam.



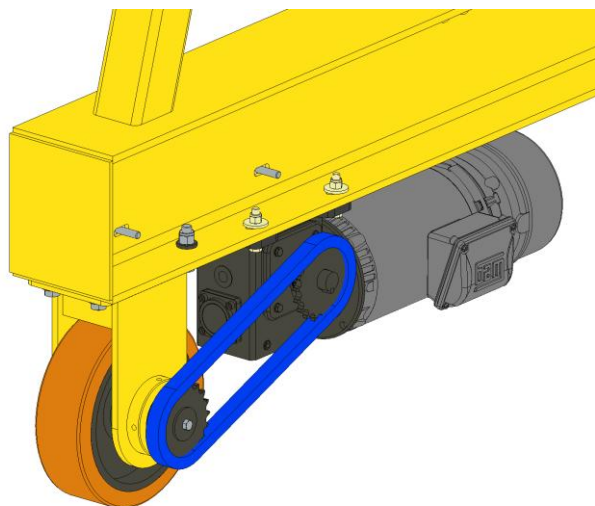
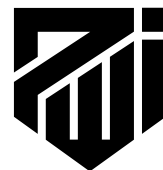
Loosely mount the motor and gear box to the underside of the end truck.



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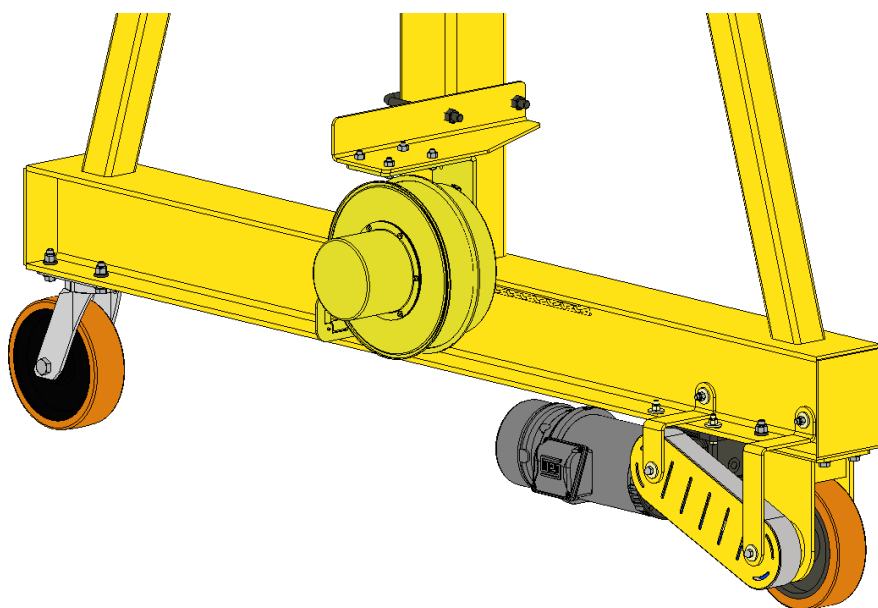
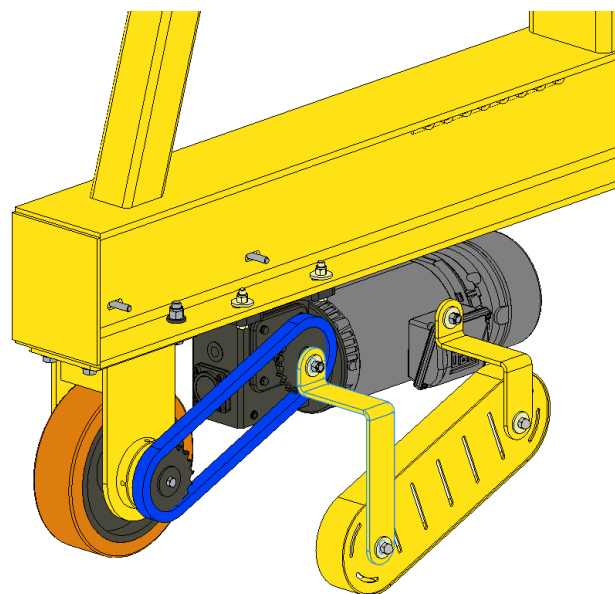


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Loop the drive chain around the gears.
Pull the Motor back tightening the chain.
Tighten Motor mounting hardware

Mount chain cover and brackets for personal safety.



Ensure the cord reel is securely attached at an appropriate height to avoid collisions with surrounding structure and materials.

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Install the Trolley and Hoist on your Gantry Crane

Please refer to trolley manufacturer's assembly instructions.

Loosely assemble your Trolley with the proper spacing for your beam.

Place your trolley on the gantry crane beam and tighten hardware.

Ensure safety hardware has been installed to prevent undesired loosening of the Trolley

Mount the hoist to the trolley in accordance with manufactures specifications.

► **TIP:** Do not throw away this manual: the maintenance schedule is included. Keep Packing List, Installation Manual, General Arrangement Drawing, and any other inserts filed together in a safe place

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Installing Electrification (Electrotrack)

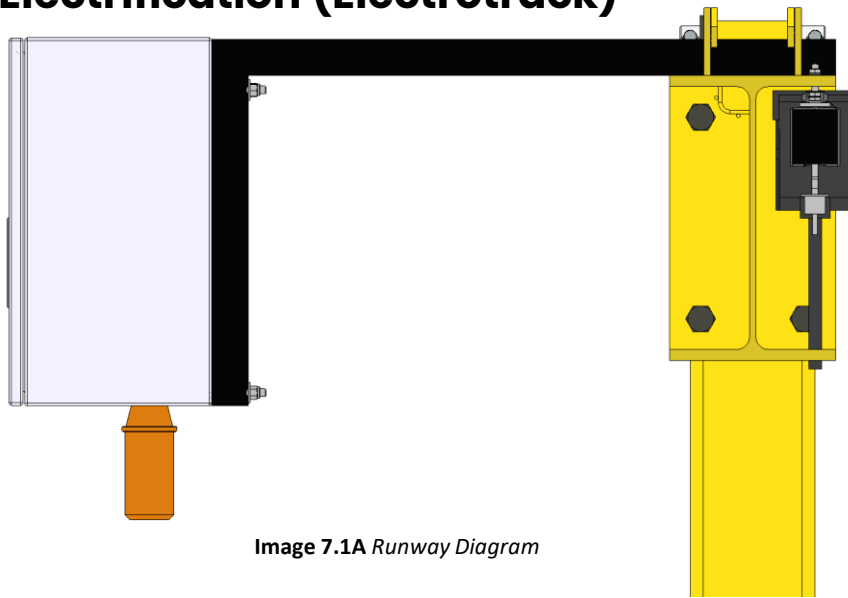


Image 7.1A Runway Diagram

Image 7.1B Runway Beam Web

2. Install one Starke Electrotrack hanger. Keep fasteners loose. **(Image 7.2).**

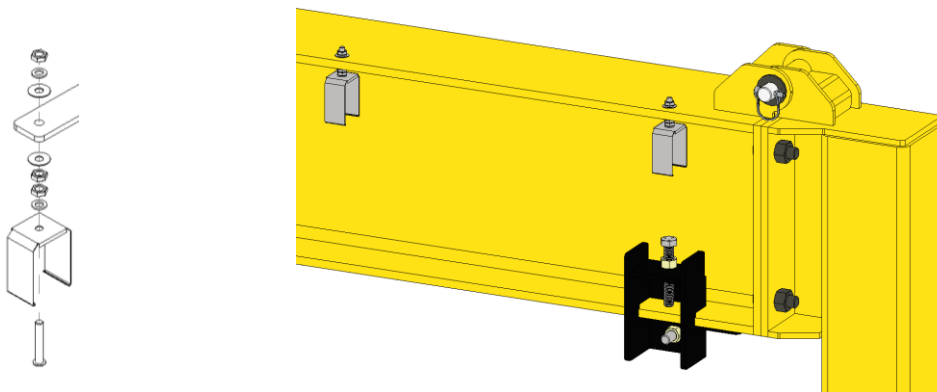


Image 7.2 Bracket Assembly

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3. At the end of the system closest to building power supply install one full length Starke Electrotrack section to be used for "Incoming Power". **(Image 7.3)**
4. Drill a ¼" hole in each copper conductor rail to connect incoming power. Just drill holes at this time for wires to connect to later. Then, insert the End Feature onto the end of the track. **(Image 7.4)**
5. Leaving a 4-6" gap install the second section, making sure the grounding conductors are oriented the same way. Note: each orange track is marked with a yellow and green line. This line indicates where the ground conductor is located. **(Image 7.5)**
6. Press a conductor coupler onto the dimpled end of each of the 4 conductors as far as it will go. Note: coupler body goes to the outside of the conductor leaving a smooth transition on the inside face of each coupler. **(Image 7.6)**
7. Push the other conductors into the corresponding coupler. Once all 4 conductors are started, use a needle nose plier to work the conductors the rest of the way in. Conductor ends must be in tight contact. **(Image 7.7)**

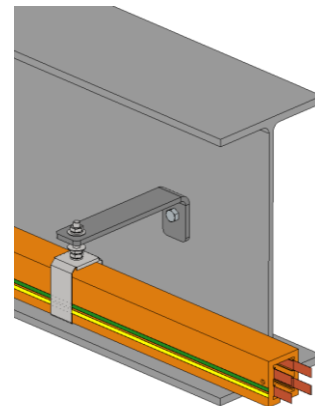


Image 7.3 Install Track

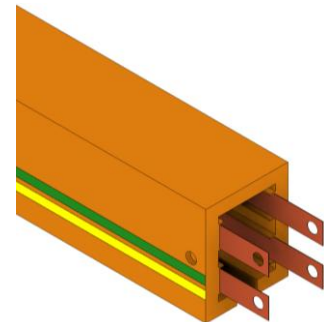


Image 7.4 ¼" Drill Holes

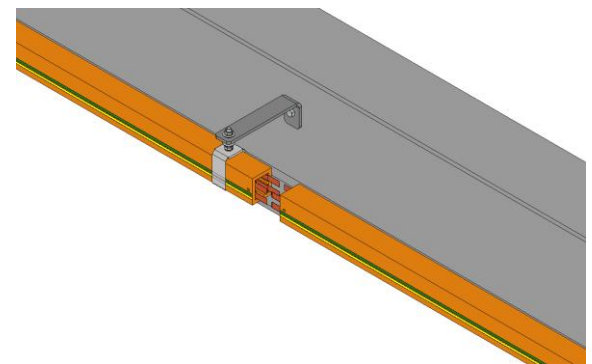


Image 7.5 Second Section

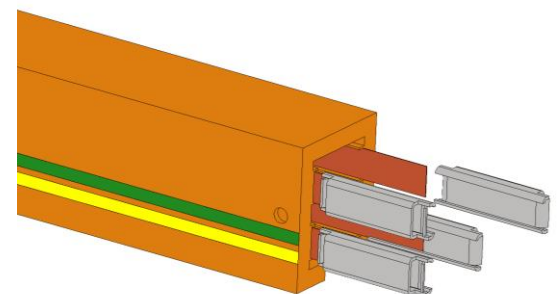


Image 7.6 Conductor Couplers

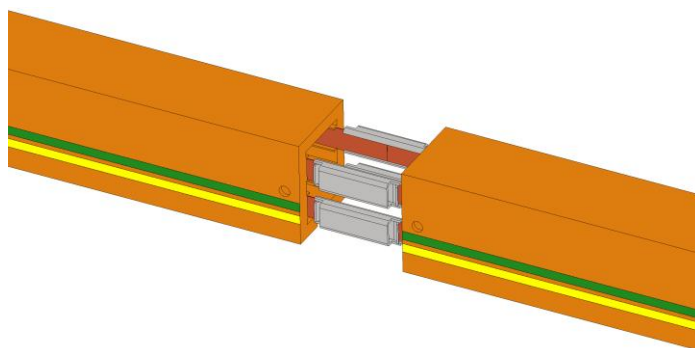


Image 7.7 Attach to Second Section

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- Place 1 half of a splice cover (**Image 7.8A**) around the conductor couplers and tight to the casing on both sides. 2 pins on the cover should align with 2 holes in the casing (**Image 7.8B**). Clip the other half of the splice cover into place locking rails together. Insert provided hardware into Splice Cover Holes (**Image 7.8C**).

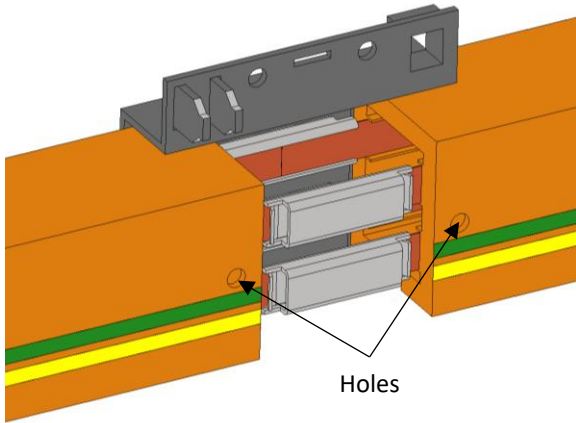


Image 7.8A Attach Splice Cover

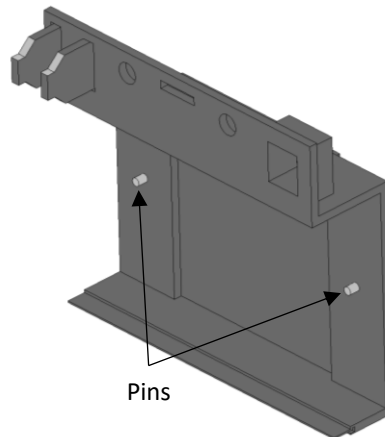


Image 7.8B Opposite Splice Cover

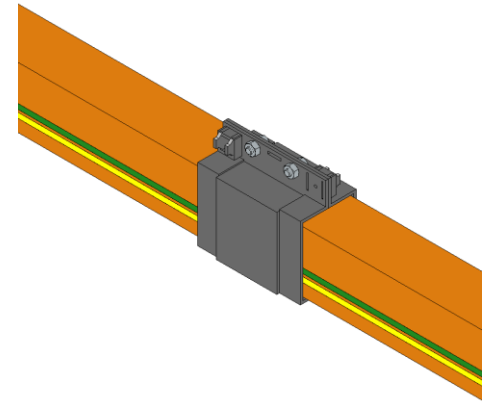


Image 7.8C Locked Splice Cover

- Repeat **steps 7.5 - 7.8** as necessary until Electrotrack is complete. (**Image 7.9**)

- Once the Electrotrack is complete, Place the power supply box on the "Incoming Power" end of the rail. (**Image 7.10**)
- Insert a bolt through each conductor hole so that the bolt head is between the conductors (**Image 7.11**)
- Place a terminal ring over the bolt on the outside of conductor followed with the locknut. (**Image 7.12**)

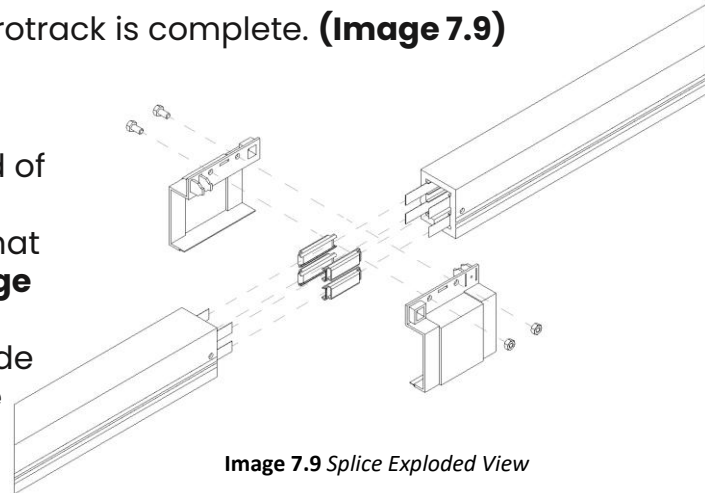


Image 7.9 Splice Exploded View

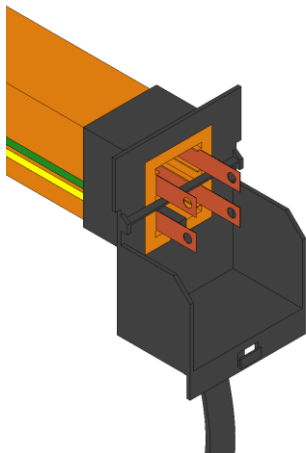


Image 7.10 Power Supply Box

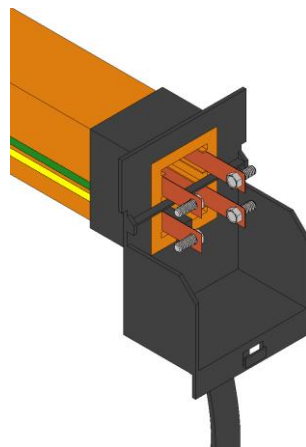


Image 7.11 Bolts Inserted

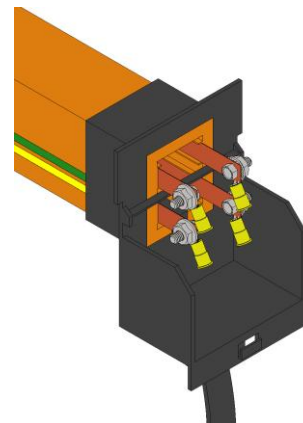


Image 7.12 Terminal Ring and Locknut

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13. With the power disconnected and verified with voltage tester connect supply wire to conductors. Starting with grounding terminal (green/yellow stripe) attach green wire then proceed clockwise with black, white, then red (red opposite to ground) **(Image 7.13)**

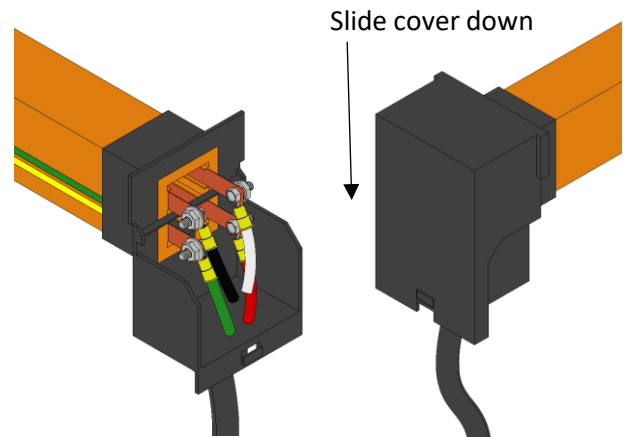


Image 7.13 Attached Wires Image 7.14A Supply Box Cover

14. Tighten the cord grip and tighten the connection nuts and bolts. Double check your assembly, then slide the power supply box cover in place and install the power supply cover. **(Images 7.14A & 7.14B)**

15. At the other end of the Electrotrack, position the Collector Trolley ready to insert. Make sure the grounding brush (yellow wire w/green stripe) is aligned with the ground terminal of the Electrotrack. **(Image 7.15)**

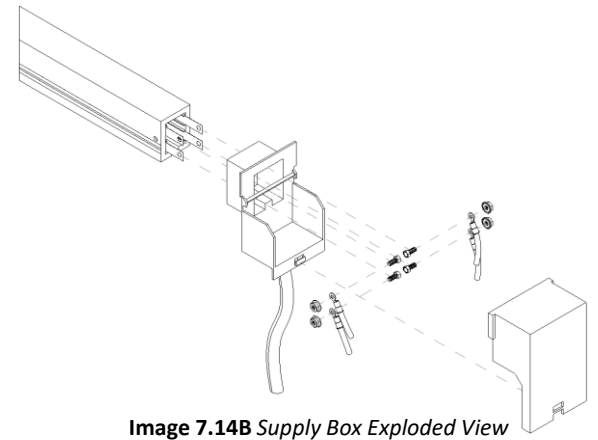


Image 7.14B Supply Box Exploded View

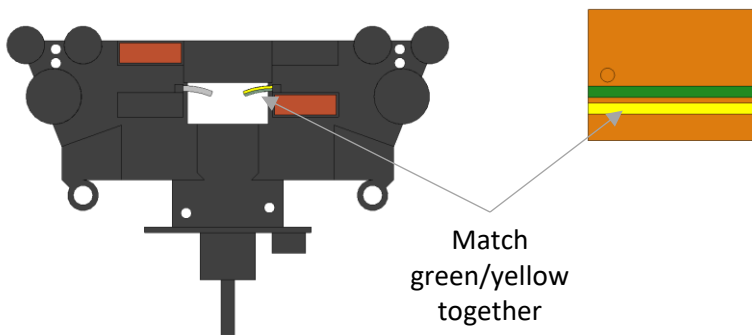


Image 7.15 Positioning Collector Trolley

16. Push the brushes in and slide the collector trolley into the Electrotrack. Depress the remaining brushes as you slide the trolley all the way in. **(Image 7.16)**

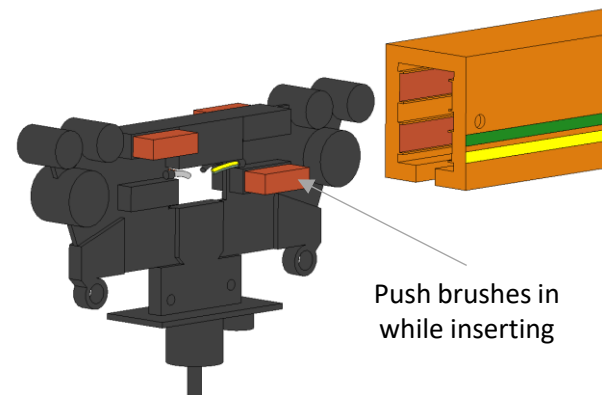


Image 7.16 Inserting Collector Trolley

17. Repeat steps **7.15 – 7.16** as needed for each Collector Trolley.

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18. Once all Collector Trolley's are inserted, place an End Cap on the end of the Electrotrack. **(Image 7.18)**

19. Approximately insert the Tow Bar the guides the Collector through the Electrotrack, then align the Bridge and the Tow Bar. **(Images 7.19A, 7.19B)**

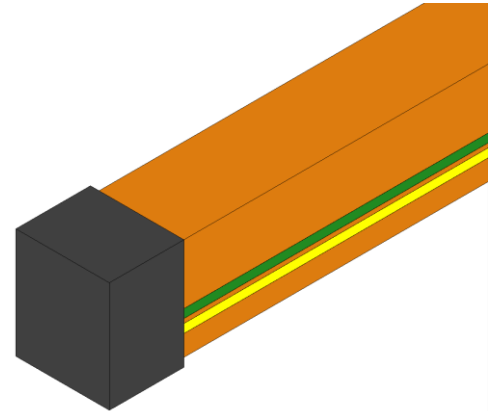


Image 7.18 End Cap

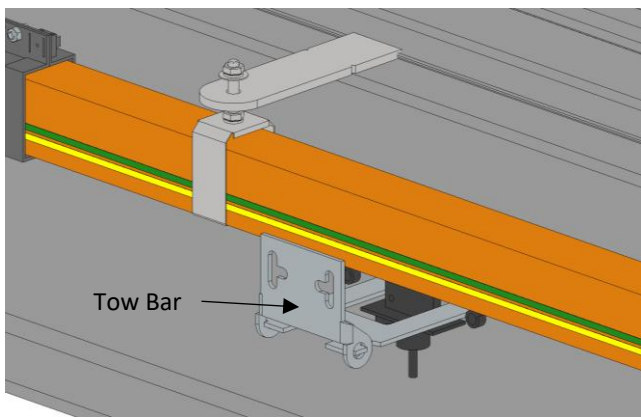


Image 7.19A Insert Tow Bar

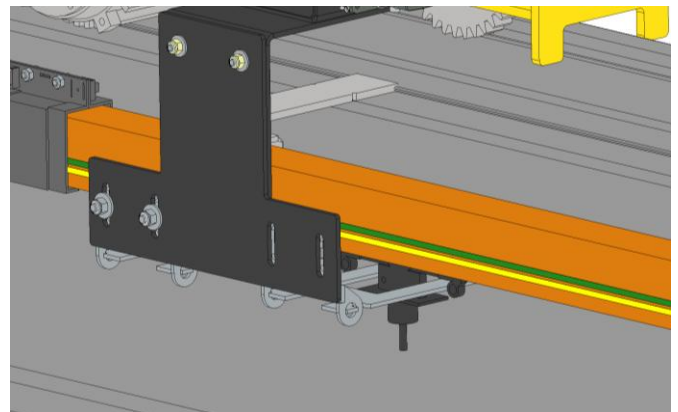


Image 7.19B Align Bridge and Tow Bar

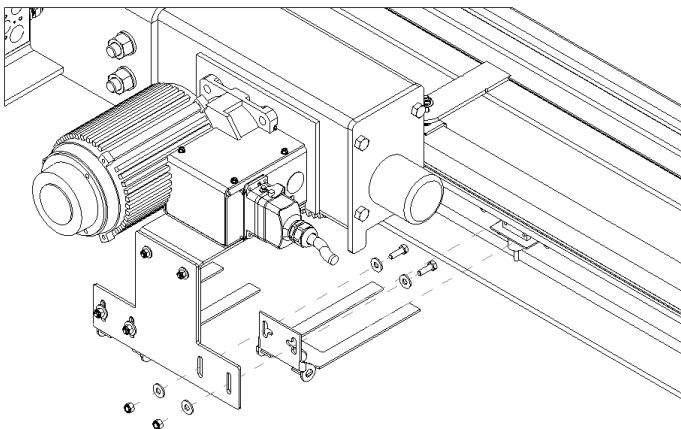


Image 7.20 Tow Bar Exploded View

20. Once the Tow Bar, Bridge, and Collector Trolley are lined up, attach the Bridge and Tow Bar using the hardware provided **(Image 7.20)**

21. Repeat steps **7.19 – 7.20** as needed for all Collector Trolley's.

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If your Electrotrack is powered via line feed rather than end feed, follow these steps to power your Electrotrack.

- 1) At the desired splice to insert power, leave a 4–6" gap between the Electrotrack pieces making sure the grounding conductors are oriented the same way. *Note: each orange track is marked with a yellow and green line. This line indicates where the ground conductor is located.*

(Image 1.1)

- 2) Press a conductor coupler with a soldered wire attached onto the dimpled end of each of the 4 conductors as far as it will go. Make sure the soldered wire with the green cover goes on the grounding conductor. *Note: coupler body goes to the outside of the conductor leaving a smooth transition on the inside face of each coupler.*

(Image 1.2)

- 3) Push the other conductors into the corresponding coupler. Once all 4 conductors are started, use a needle nose plier to work the conductors the rest of the way in. Conductor ends must be in tight contact. **(Image 1.3)**

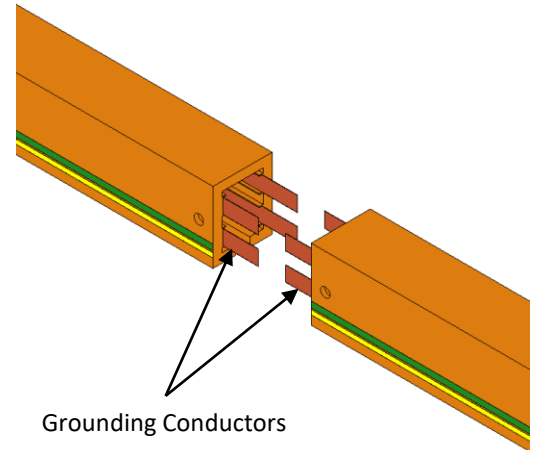


Image 1.1 Spaced Electrotrack

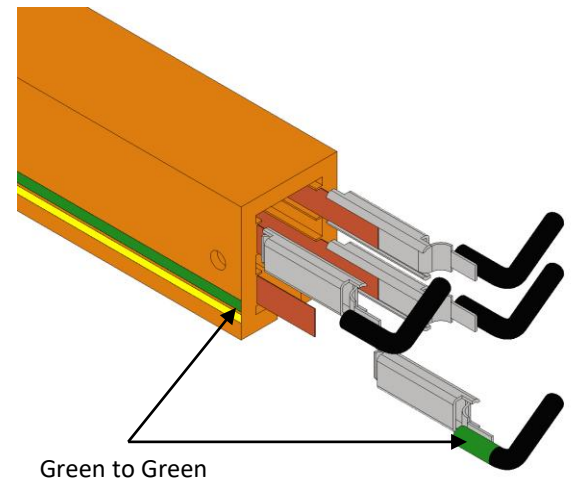


Image 1.2 Insert Conductor Couplers

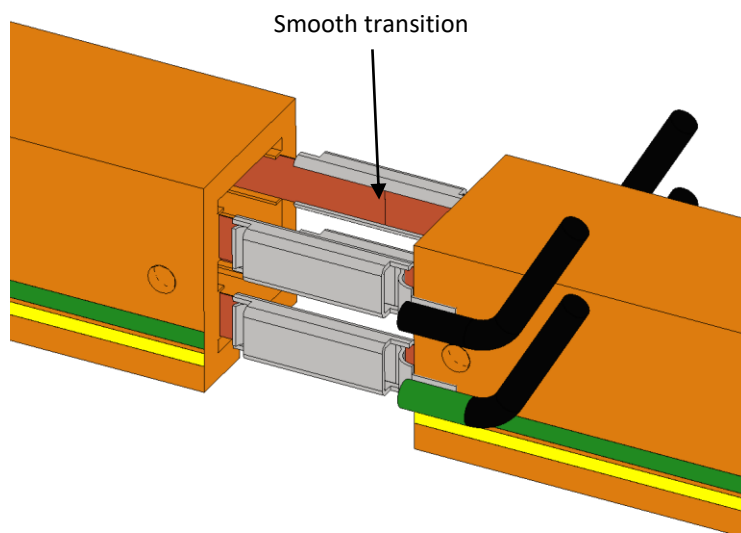


Image 1.3 Insert Other Conductors

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- 4) Place 1 half of a splice cover (**Image 1.4A**) around the conductor couplers and tight to the casing on both sides. A pin on the cover should align with a hole in the casing (**Image 1.4B**). The holes in the splice cover should align with the wires feeding out.

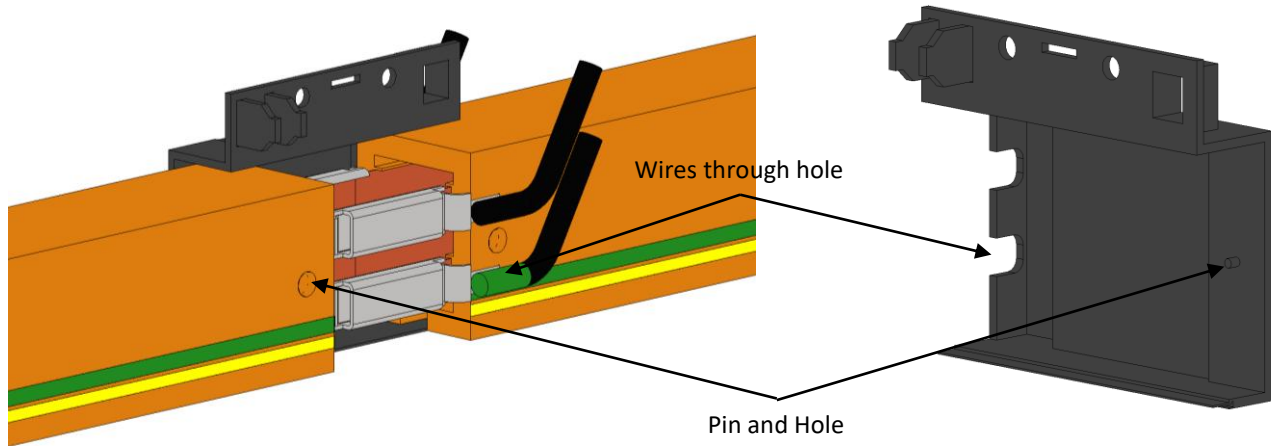


Image 1.4A Attach Splice Cover

Image 1.4B Opposite Splice Cover

- 5) If the Splice Cover with the pin needs to be put on the side without the holes in the Electrotrack, the conductor couplings will need to be turned around to feed the wires through the casing holes.
- 6) Clip the other half of the splice cover into place locking rails together. Insert provided hardware into Splice Cover Holes (**Images 1.6A & 1.6B**).

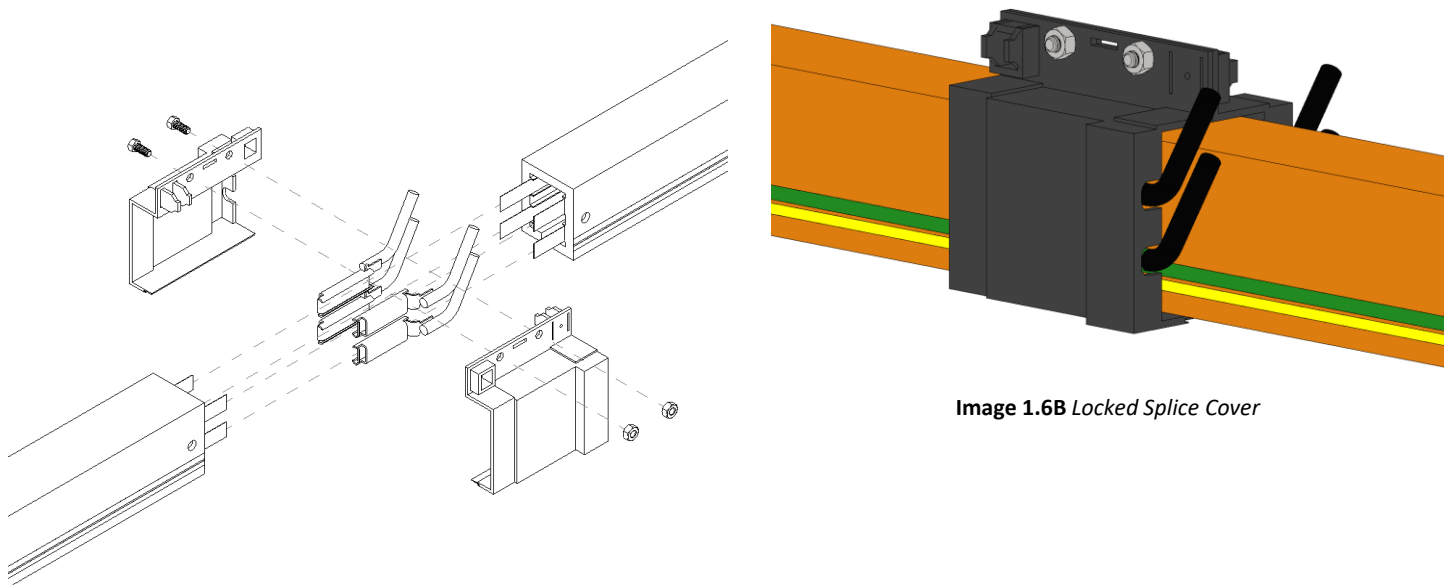


Image 1.6A Splice Cover Exploded View

Image 1.6B Locked Splice Cover

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TORQUE SPECIFICATIONS

The torque specifications for ASTM A325 Structural Bolts are defined by Table 2. The torque specifications for SAE Grade 5 Bolts are defined by Table 3. The torque specifications for SAE Grade 8 Bolts are defined by Table 4. These include standard and reduced values depending on the finish type and lubrication type.

ASTM A325 STRUCTURAL BOLTS									
Bolt Diameter	TPI	Tightening Torque Range (ft-lbs)							
		Plain		Plain, Light Oil		Plain, Heavy Oil		Galvanized, Waxed	
		Min	Max	Min	Max	Min	Max	Min	Max
1/2	13	100	117	80	94	60	70	50	58
5/8	11	198	240	158	192	119	144	99	120
3/4	10	350	425	280	340	210	255	175	213
7/8	9	569	685	455	548	341	411	284	343
1	8	850	1,017	680	814	510	610	425	508
1 1/8	7	1,200	1,444	960	1155	720	866	600	722
1 1/4	7	1,687	2,042	1350	1634	1012	1225	844	1,021
1 3/8	6	2,223	2,681	1778	2145	1334	1609	1,111	1,341
1 1/2	6	2,950	3,575	2360	2860	1770	2145	1,475	1,788

Table 2

SAE Grade 5				
Bolt Diameter	TPI	Tightening Torque Range (ft-lbs)		
		Min	Mid	Max
		Lubricated	Zinc, Dry	Plain Dry
1/4	20	6	7	8
5/16	18	13	14	17
3/8	16	23	26	31
7/16	14	37	42	49
1/2	13	57	64	75
5/8	11	82	92	109
3/4	10	113	128	150
7/8	9	200	227	267
1	8	322	365	429

Table 3

SAE Grade 8				
Bolt Diameter	TPI	Tightening Torque Range (ft-lbs)		
		Min	Mid	Max
		Lubricated	Yellow Zinc, Dry	Plain, Dry
1/4	20	9	10	12
5/16	18	18	21	24
3/8	16	33	37	44
7/16	14	52	59	70
1/2	13	80	90	106
5/8	11	159	180	212
3/4	10	282	320	376
7/8	9	455	515	606
1	8	681	772	909

Table 4

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INCOMMAND Gantry Crane



CRANE OPERATOR INSTRUCTIONS

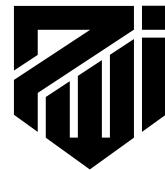
- 1. General:** At PWI, safety is our top priority, especially when operating overhead cranes and jib cranes in work areas where personnel are present. Proper training and attention to detail are essential to prevent accidents and ensure safe operation. These guidelines are designed to supplement your existing safety protocols and OSHA regulations, not replace them. Reviewing this information will help operators better understand safe practices, protecting both employees and equipment on the job site. It is important to note that these guidelines serve as recommendations for crane operators. Employers are responsible for ensuring their teams are aware of and comply with all relevant federal, state, and local regulations and that operators are adequately trained.
- 2. Operator Qualifications:** Safe crane operation demands skill, attentiveness, and a strong commitment to safety. All crane operators should meet the following criteria:
 - A. **Language Proficiency:** The operator must understand the appropriate language and be able to read safety and instruction materials.
 - B. **Legal Age:** Operators must meet the minimum legal age requirement for operating such equipment.
 - C. **Health and Fitness:** Operators must have sufficient vision and hearing (corrected if necessary) and must not suffer from health conditions, such as heart issues, that could impair performance.
 - D. **Training and Knowledge:** Operators must have read and understood all operating instructions, completed proper training, and demonstrated their knowledge through practical application.
- 3. Operating the Jib Crane Boom:**
 - A. Before using the boom, ensure the hook is positioned high enough to avoid obstructions.
 - B. Align the jib boom directly over the load before attempting to lift.
 - C. Operate the boom gradually, starting slowly and increasing speed smoothly. As the boom approaches the stopping point, reduce speed to ensure a controlled stop.
- 4. Operating the Trolley:**
 - A. Position the hoist directly over the load before lifting. Ensure all slack in the slings is taken up.
 - B. Avoid starting to lift until the hoist is properly centered to prevent the load from swinging.
 - C. Start trolley motion at a slow speed and decelerate gradually when nearing the destination.
- 5. Hoist Operation:**
 - A. Refer to the operating manual specific to your lifting equipment for detailed instructions. Always follow the manufacturer's recommendations and guidelines for safe operation.



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INCOMMAND Gantry Crane



- 6. Know Your Crane:** Crane operators must be familiar with the key components of a crane and possess a thorough understanding of crane control functions and movements. Operators must know the location and correct operation of the main disconnecting means for all power to crane attachments.
- 7. Responsibility:** Crane operators bear direct responsibility for the safe operation of the crane. If there is any doubt regarding ****safety****, the operator must stop the crane and refuse to handle loads until either:
 - A. Safety is ensured, or
 - B. The operator is directed to proceed by a supervisor, who then assumes full responsibility for the safety of the lift.
- 8. Riding Policy:** Never allow anyone to ride on the hook or a load.
- 9. Inspection:** At the start of each shift, test crane movements and all attachments. If an issue is identified, report it immediately to a supervisor, and ensure corrective action is taken before operating.
- 10. Operating:** A skilled crane operator ensures smooth and controlled crane operation. Adhere to the following guidelines for safe and efficient crane handling:
 - A. Move the crane smoothly to avoid abrupt or jerky load movements. Remove slack from slings and hoisting ropes before lifting.
 - B. Position the crane directly over the load before lifting to minimize swinging. Avoid swinging loads to reach areas not directly beneath the crane.
 - C. Keep crane-hoisting ropes vertical. Cranes must not be used for side pulls.
 - D. Ensure the area around the load is clear, and everyone is aware of the movement.
 - E. Never exceed the rated load capacity of the crane, slings, or lifting devices.
 - F. Confirm slings, chains, or lifting devices are fully seated in the hook saddle with the latch closed (if equipped).
 - G. Verify the load and/or block is high enough to clear obstructions when moving the boom or trolley.
 - H. Do not leave a suspended load unattended. When holding a load, keep the power on and stay at the controls with the load positioned as low as possible.
 - I. Do not lift with loose sling hooks. Store unused hooks securely or switch to an appropriate sling.
 - J. Remove all slings or cables from crane hooks when not in use to prevent snagging.
 - K. Avoid carrying loads or blocks over personnel. Exercise additional caution with magnets or vacuum devices, as load failure can occur.
 - L. Operator Procedure when they leave the crane:
 - a. Raise hooks to an intermediate position.
 - b. Park the crane at a designated location.
 - c. Turn all controls off.
 - d. Shut off the main switch.
 - e. Visually inspect the area before leaving.



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INCOMMAND Gantry Crane



- 11. Emergency Procedures:** In emergencies or during maintenance, display warning signs and lock the main switch in the "off" position. This applies regardless of who is performing the task.
- 12. End Stops:** Contact end stops cautiously. Ensure the safety of people below and communicate clearly with other crane operators in the area.
- 13. Safety Features:** All safety mechanisms and features provided by PWI are essential for crane operation. Do not disable or remove any safety features. Any such actions void all warranties.
- 14. Turning Procedure:**
 - Set down all loads before turning.
 - Stop All Crane Motions
 - Press and Hold the Start Button
 - Forward and Reverse Buttons will now act as Clockwise and Counterclockwise.
 - Allow bridge to stop completely before Releasing Start.
 - Resume normal operation.



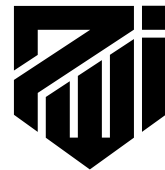
Clockwise/ Counterclockwise

Hold Start



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ANY SAFETY FEATURES AND MECHANISMS BUILT IN OR OTHERWISE PROVIDED WITH THE CRANE BY PWI ARE REQUIRED FOR THE SAFE OPERATION OF THE CRANE. DO NOT, UNDER ANY CIRCUMSTANCES, REMOVE OR OTHERWISE IMPAIR OR DISABLE THE PROPER FUNCTIONING OF ANY CRANE SAFETY MECHANISMS OR FEATURES BUILT-IN OR OTHERWISE PROVIDED BY PWI FOR SAFE OPERATION OF THE CRANE. ANY REMOVAL, IMPAIRMENT OR DISABLING OF ANY SUCH SAFETY MECHANISMS OR FEATURES OR OTHER USE OR OPERATION OF THE CRANE WITHOUT THE COMPLETE AND PROPER FUNCTIONING OF ANY SUCH SAFETY MECHANISMS OR FEATURES AUTOMATICALLY AND IMMEDIATELY VOIDS ANY AND ALL EXPRESS AND IMPLIED WARRANTIES OF ANY KIND OR NATURE.

Parts- Your system is custom designed for your space. The drawings that you received are specific to your system. PWI has copies of your drawings in a file under the company name or the name of the purchaser. If you require replacement parts, please call or email PWI and we will be glad to assist you in getting what you need.

574-646-2015

parts@pwiworks.com

LIMITED WARRANTY

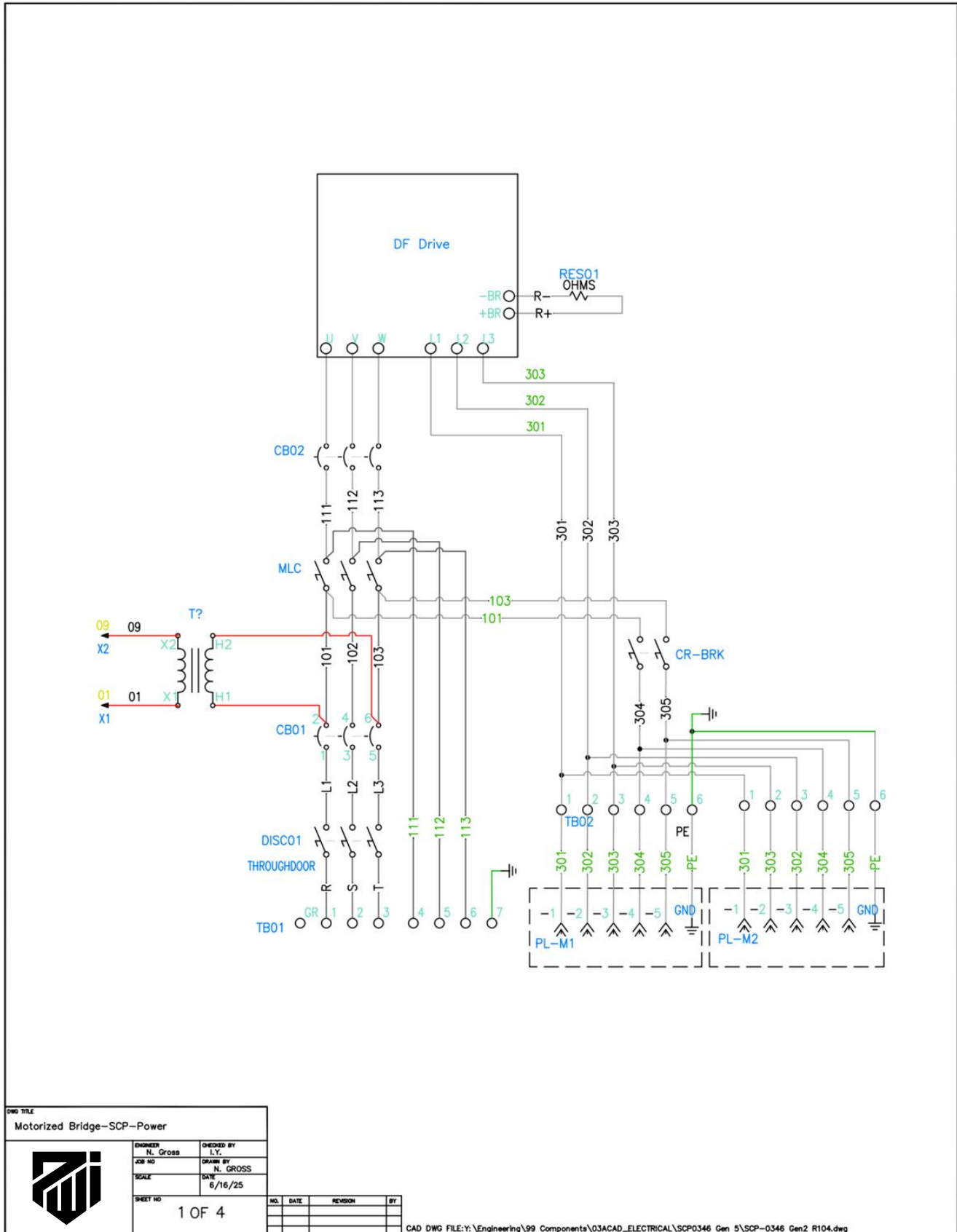
STRUCTURAL: 3-Year (36 Month) Parts & Workmanship Warranty

Structural items include but are not limited to columns, headers, runways, and other stationary components of this PWI Ultra Lite System.

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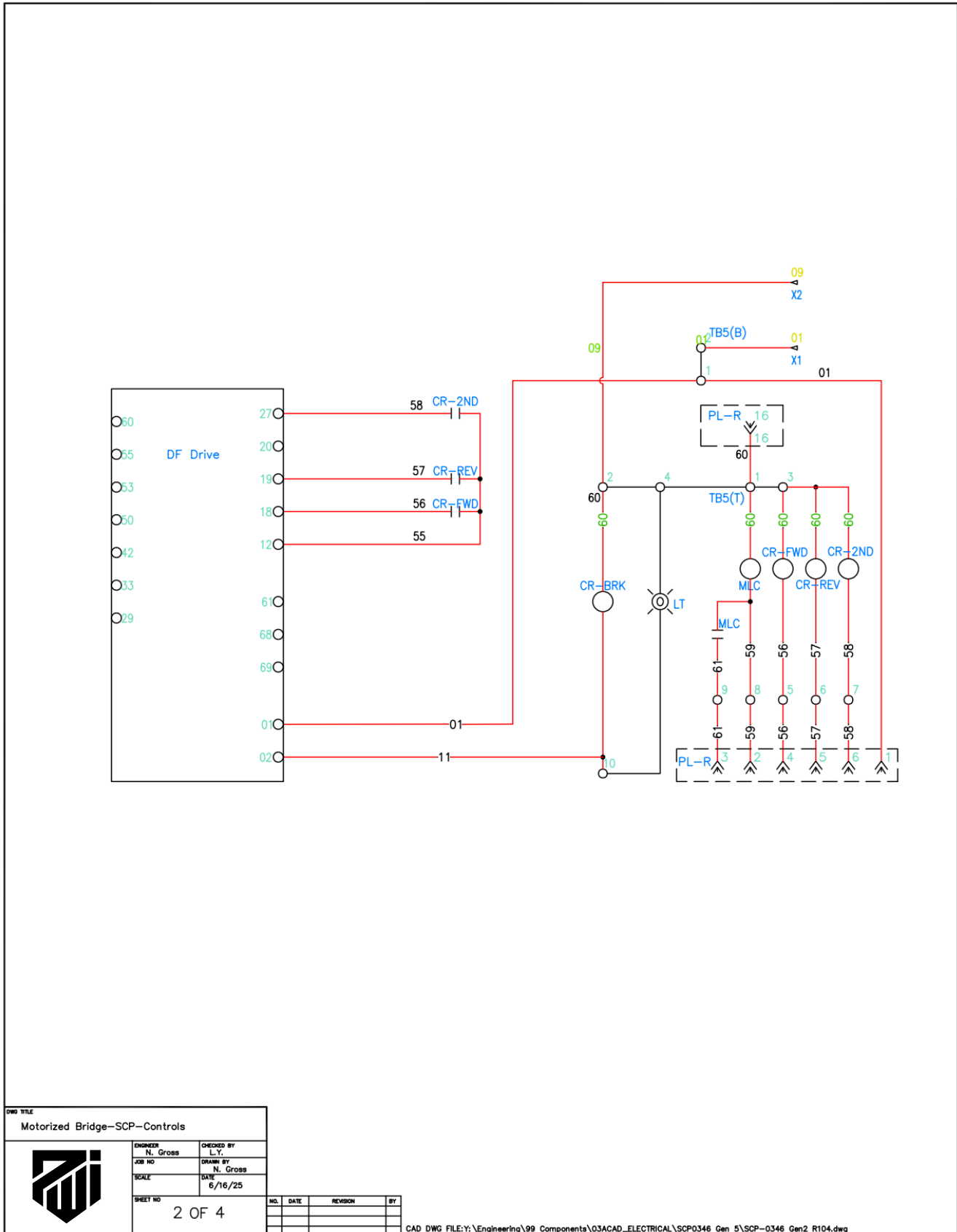
INCOMMAND Gantry Crane



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INCOMMAND Gantry Crane



DWG TITLE	
Motorized Bridge-SCP-Controls	
ENGINEER N. Gross	CHECKED BY L.Y.
JOB NO	DRAWN BY N. Gross
SCALE	DATE 6/16/25
SHEET NO	
2 OF 4	

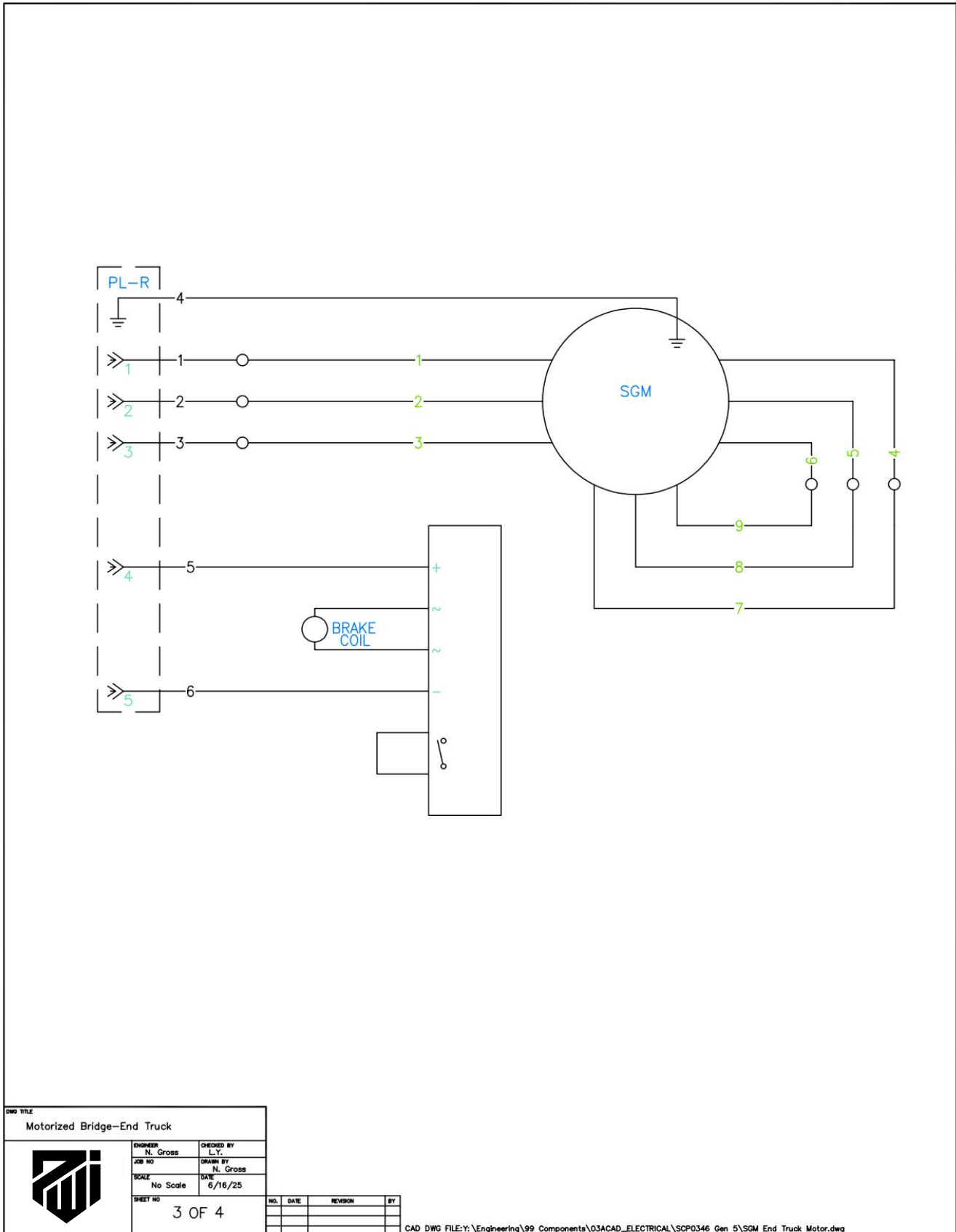
NO.	DATE	REVISION	BY

CAD DWG FILE:Y:\Engineering\99 Components\03ACAD_ELECTRICAL\SCP0346 Gen 5\SCP-0346 Gen2 R104.dwg

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INCOMMAND Gantry Crane



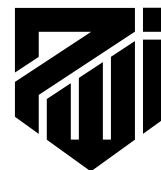
DWG TITLE	
Motorized Bridge-End Truck	
ENGINEER N. Gross	CHECKED BY L.Y.
JOB NO	DRAWN BY N. Gross
SCALE No Scale	DATE 6/16/25
SHEET NO 3 OF 4	

NO.	DATE	REVISION	BY

CAD DWG FILE:Y:\Engineering\99 Components\03ACAD_ELECTRICAL\SCP0346 Gen 5\SGM End Truck Motor.dwg

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GENERAL WARRANTY

This warranty will not apply to any product that has been repaired or altered outside of PWI manufacturing plant, or without specific instructions from PWI to make alterations. PWI will in no case, allow or offer reimbursement for outside sources to perform repairs or make alterations to product in reference. If the product has (in PWI's judgment), had alterations made which adversely affect its serviceability or was subject to misuse, negligence, accident, or operated contrary to instructions or common practice, warranty shall be considered void.

Defective items will be repaired or replaced and returned to PWI at the cost of the owner. If PWI, at its discretion, finds the warranty claims to be justifiable, PWI will compensate by means of replacing or repairing faulty products or components free of charge. The sole liability of PWI for warranty claims is limited to those here. In no event will PWI be liable for damages in excess of the original sale price of the defective product, or for any consequential damages, nor will PWI be liable for any special or other work done unless specifically agreed to in writing. This warranty does not include or apply to fire, natural disasters, or other Acts of God.

Should the warrantee destroy, intentionally or not, any part of the warranted product, or any evidence concerning the origin of an alleged defect, or try to conceal evidence of causation, this warranty is cancelled, and warrantee will have no claim against PWI whatsoever.

This warranty does not cover coatings on any PWI products including paint, powder-coat, zinc, or galvanized coatings. Coating life can vary greatly based on the ambient environment your PWI product is installed in, which is simply out of the manufacturer's control. Touch-up painting or coating repair (after initial installation by PWI or customer) shall be the responsibility of the owner, unless specifically guaranteed in writing on project quotation.

Any interpretation of this warranty shall be done in common pleas court in Indianapolis under Indiana law.

ALL OTHER REPRESENTATIONS, EXPRESS OR IMPLIED, WARRANTY, OR LIABILITY RELATING TO THE CONDITION OR USE OF THE PRODUCT ARE SPECIFICALLY, DISAVOWED, AND IN NO EVENT SHALL PWI BE LIABLE TO BUYER, OR ANY THIRD PARTY, FOR ANY DIRECT OR INDIRECT CONSEQUENTIAL OR INCIDENTAL DAMAGES



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LIMITED WARRANTY

STRUCTURAL: 3-Year (36 Month) Parts & Workmanship Warranty

Structural items include but are not limited to columns, headers, runways, and other stationary components of this PWI jib crane.

Unless otherwise specified, PWI guarantees that the structure of this product is free from material defects in design, materials, and workmanship under normal use, proper maintenance, and service. A corrosive or abrasive atmosphere is not to be considered a normal atmosphere.

This warranty is strictly limited to 36 months for single shift operation or 6,000 hours after installation, or 38 months after shipment, whichever is shorter. Within ten days after defect is found, warrantee must deliver a written notice to PWI. All requested warranty information must be received promptly by PWI in no more than 5 business days.

MECHANICAL: 1 Year (12 Month) Parts & Workmanship Warranty

Mechanical items include but are not limited to all types of Overhead Cranes, and other non-stationary PWI products that are designed for specific functional operation.

Unless otherwise specified, PWI guarantees that this mechanical product is free from material defects in design and workmanship under normal use, proper maintenance, and service.

This warranty is strictly limited to 12 months for single shift operation or 2,000 hours after installation, or 14 months after shipment, whichever is shorter. Within ten days after defect is found, warrantee must deliver a written notice to PWI. All requested warranty information must be received promptly by PWI in no more than 5 business days.

All standard non-engineered products including but not limited to hoists, trolleys, wheels, gearmotors, controls, and safety products, will fall under the default warranty of that specific manufacturer.



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PERIODIC INSPECTION AND LUBRICATION RECOMMENDATIONS

The following is a checklist to be followed in performing periodic inspections and preventative maintenance on PWI Crane Systems. It is intended that this checklist be supplemented with any additional instruction sheets and maintenance manuals sent with each job.

The frequency of inspection and lubrication recommendations presented herein is based upon normal operating conditions of one complete handling cycle every 10 minutes throughout a 40-hour week. If the actual duty cycle of a particular unit is greater or less than this, the inspections and lubrications should be performed more frequently or less frequently in proportion.

Each industry has conditions peculiar to it, which may cause wear of certain parts. The tabulation given is only general and may be supplemented by an individual maintenance department program to meet its own particular requirements. Particular attention should be given to corrosive conditions, excessive vibrations, extreme ambient temperature variations, and rough handling conditions.

Questions regarding damaged, worn or cracked equipment components should be directed to the PWI Inside Sales Department at 574-646-2015.

The recommendations contained herein are to be supplemented by any vendor instructions, which are included in this manual.

Power should be off and locked when performing maintenance.

Please check the state and local code manuals in your area to ensure compliance

Parts: Your system is custom designed for your space. The drawings that you received are specific to your system. PWI has copies of your drawings in a file under the company name or the name of the purchaser. If you require replacement parts, please call or email PWI and we will be glad to assist you in getting what you need. parts@pwiworks.com



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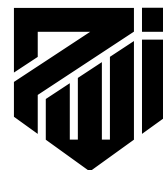
RUNWAYS & SUPPORT STEEL

COMPONENT	MAINTENANCE	FREQUENCY
Header-Column Hardware	Check for loose bolts & cracked fittings. Check for full compression of lock washer. Bolt should be tightened to manufacturer's specifications.	Every 1,000 hours or 6 months
Header-Runway Hardware	Check for loose bolts & cracked fittings. Check for full compression of lock washer. Bolt should be tightened to manufacturer's specifications.	Every 1,000 hours or 6 months
Column Anchoring	Check for loose bolts & cracked fittings.	Every 1,000 hours or 6 months
Sway Brace Connection (If used)	Check for loose bolts & cracked fittings.	Every 1,000 hours or 6 months
Runway	Check for runway wear or damage.	Every 2,000 hours or yearly
Joints	Check for loose or worn hardware or if welded type, for incipient cracks. Check for runway alignment and that wheel rolling surface is flush.	Every 2,000 hours or yearly
End Stops	Check for loose bolts and for incipient cracks.	Every 2,000 hours or yearly
Paint	Clean periodically and repaint where corrosion is present.	Every 2,000 hours or yearly



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BRIDGE

COMPONENT	MAINTENANCE	FREQUENCY
Controls	Check for burned contacts, broken shading coils, worn or cracked arc barriers, auxiliary contacts, and proper seating.	Every 1,000 hours or 6 months
Push Buttons & Pendant	Check contacts. Tighten leads. Check for sticking buttons. Check ground wire continuity. Check pendant cable top and bottom for broken wires. Check strain chain to see that any pulling force is not put on pendant cables.	Every 1,000 hours or 6 months
Bridge Girder	Check Bridge Girder for wear or damage.	Every 2,000 hours or yearly
End Stops	Check for loose bolts and for incipient cracks.	Every 2,000 hours or yearly
Paint	Clean periodically and repaint where corrosion is present.	Every 2,000 hours or yearly

END TRUCK, & HOIST TROLLEY

COMPONENT	MAINTENANCE	FREQUENCY
Structural Frame & Load Bars	Check for incipient cracks in welds and castings. Check for loose bolts.	Every 2,000 hours or yearly
Suspension Point	Check for wear and loose or missing screws or pins.	Every 150 hours or 1 month
Wheels & Guide Rollers	Check for loose wheel bearings. Check wheels for proper contact and tracking on rail. Check wheel diameter for wear (Replace when 1/4" under original diameter). Check axle nuts for tightness.	Every 500 hours or 3 months
Gears and Chains	Check for excessive wear Check for sufficient lubrication	Every month



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FESTOON ELECTRIFICATION

COMPONENT	MAINTENANCE	FREQUENCY
Connections	Check connections to ensure no wires are worn and no conductors are exposed.	Every 150 hours or 1 month
Insulation	Check to ensure no damage is visible.	Every 2,000 hours or yearly
Complete System	In environments that are subject to considerable buildup of dust, especially conductive dust, remove this dust by brushing.	Every 2,000 hours or yearly

STARKE ELECTROTRACK

COMPONENT	MAINTENANCE	FREQUENCY
Rail	Check for corrosion, bowing, or sagging. Check alignment at moving gaps. Realign if necessary.	Every 2,000 hours or yearly
Couplings	Check bolt or screw tightness. Check for corroded contact surfaces.	Every 2,000 hours or yearly
Supports	Check for loose bolts and/or screws and bent brackets.	Every 2,000 hours or yearly
Insulators	Check for loose bolts, sheared support ears, current carrying deposits on surface.	Every 2,000 hours or yearly
Rail Covering	Check for accidental abrasion and peeled covering.	Every 2,000 hours or yearly
Current Taps	Check bolt and terminal screw tightness. Check for corroded contact surface.	Every 2,000 hours or yearly
Ground	Check for ground continuity. Check at load side of disconnect switch (current off), with meg-ohm tester, for overall system insulation resistance.	Every 2,000 hours or yearly
Collectors	Check for worn shoes. Check flexible leads from wheel clevis pigtail or slide shoe shaft. Check tightness of lead connections. Check for cracked insulators. Replace if necessary.	Every 750 hours or 4 months

HOIST (Refer to Hoist Manufacturer)



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