



Receiving, Handling, and Storing Industrial Control Panels

Bulletin Number 1000

Receiving

IMPORTANT Delivery of equipment from Rockwell Automation to the carrier is considered delivery to the buyer. The carrier becomes liable for any damage that occurs during transit. It is then the buyer's responsibility to notify the proper party if damage is found. The buyer may forfeit any right to recovery for loss or damages by failing to comply with the following steps.

1. Upon delivery of the industrial control panel, inspect the shipment for lost items and any damage that may have occurred during transit.

If the package appears to be damaged, it may be necessary to unpack the equipment and inspect it for further damage.
2. In case there is evidence of loss or damage, the buyer must follow this procedure:
 - Note on the delivery receipt that the equipment being received is damaged.
 - Contact the carrier that made the delivery and schedule an inspection.
 - Inform the local Rockwell Automation representative that the equipment is damaged.
 - Retain all product packaging for review by the carrier's inspector.

Handling



ATTENTION: Large or freestanding industrial control panels are top- and front-heavy. To avoid personal injury and structural damage to the industrial control panel, never attempt to lift or move the industrial control panel by any means other than those listed in this publication.

These guidelines are provided to help avoid personal injury and equipment damage during handling and facilitate moving the large or freestanding industrial control panel at the job site.

Due to varying industrial control panel configurations, a number of different shipping skids are used. To help prevent distortion and minimize tipping of the industrial control panel during the moving process, keep the shipping skid bolted to the industrial control panel until the industrial control panel is delivered to its final installation area.

Handle the industrial control panel carefully to avoid damage to the components, enclosure, and finish. Keep the industrial control panel in an upright position. Do not tip or lay flat the industrial control panel unless intentionally done by the factory. Before moving the industrial control panel, make sure that the route is clear of all obstructions and that fellow workers are a safe distance away.

Industrial control panels are similar in size, shape, and weight to motor control centers. Only a qualified person, as defined by NEMA standards, can handle the industrial control panel. For this definition and other references on the handling of motor control centers and large industrial control panels, see NEMA standards publication number ICS 2.3, Instructions for the Handling, Installation, Operation, and Maintenance of Motor Control Centers.

Use a Forklift Truck

Many large industrial control panels have shipping skids that facilitate the insertion of lift truck forks, with fork access from the narrow end.

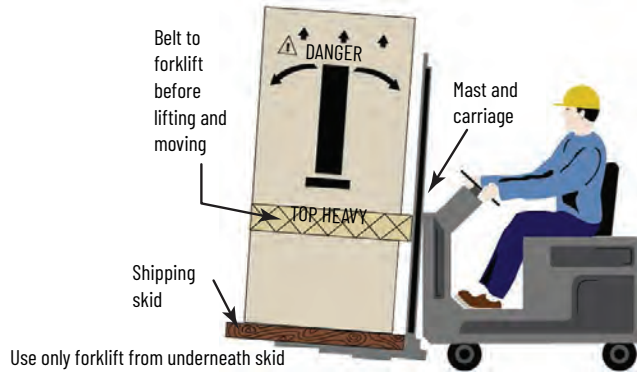
Some industrial control panels have flat shipping skids. Forklift flat shipping skids from the front or broad side. When you use a forklift on a flat shipping skid, use a pry bar (Johnson bar) to lift the skid enough to insert the forks under it.

1. Verify that the forklift truck can handle the weight and size of the industrial control panel safely.
2. Forklift only from underneath the shipping skid, by using the skid to support the load.
 - a. Carefully position the industrial control panel on the forks for proper balance, noting that industrial control panels are top- and front-heavy.
 - b. Make sure that the forks support the load.
 - c. Keep the load against the carriage.
 - d. Tilt the load backward toward the mast of the forklift truck.
3. Use a belt to secure the industrial control panel to the forklift truck.

IMPORTANT Start and stop the lift truck gradually and slowly and avoid jerky movements. When traveling with the load, drive slowly with the forks carried as low as possible, consistent with safe operation.

For further information on the use of forklift trucks, refer to National Safety Council Data Sheet I-653.

Figure 1 - Use a Forklift Truck to Move a Large Industrial Control Panel



Overhead Lifting

Overhead lifting provides a convenient method for moving industrial control panels. This handling method is recommended for industrial control panels that are supplied with lifting angles (including NEMA Type 3R construction with optional lifting angle) or lifting eyes. See [Figure 2](#) and follow the overhead lifting procedure.

1. Attach rigging to lifting means.



ATTENTION: Verify that the load rating of the lifting device is sufficient to handle the load safely. See the shipping weights on the packing slip enclosed in the shipment.

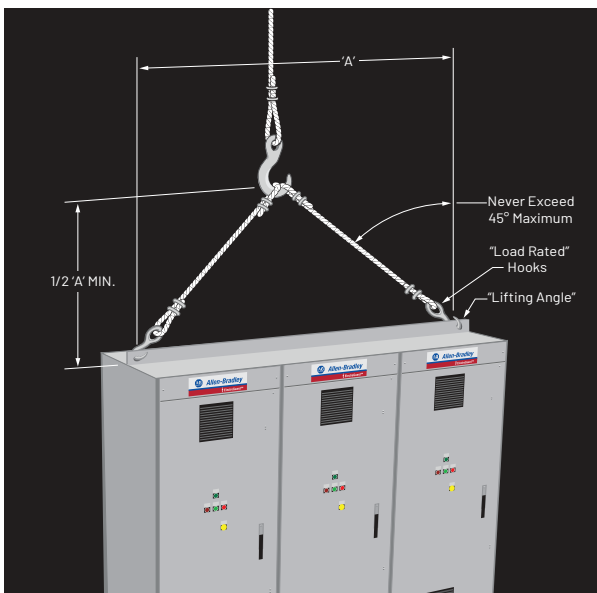
2. Do not pass ropes or cables through the support holes in the lifting angle. Use slings with load-rated hooks or shackles.
3. Select or adjust the rigging lengths to compensate for any unequal weight distribution of the load and support the industrial control panel in an upright position.
4. Reduce tension on the rigging and compression on the lifting angle by making sure the angle between the lifting cables and vertical plane does not exceed 45°.



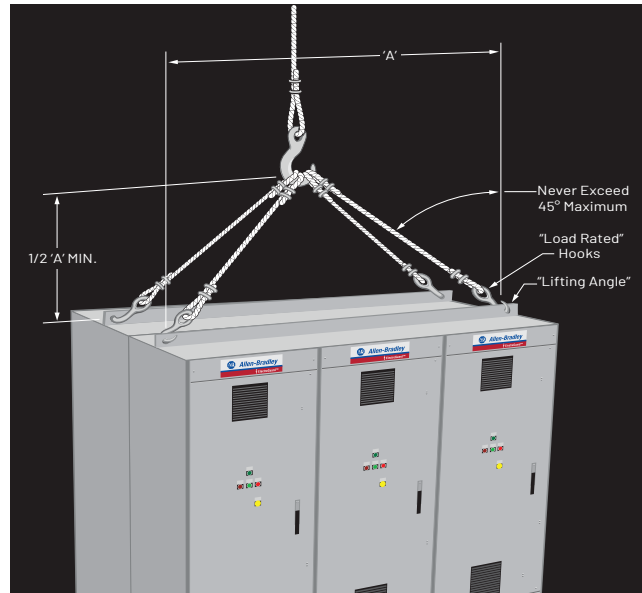
ATTENTION: Some industrial control panels contain heavy, mounted equipment, such as transformers, that could be adversely affected if tilted.

Figure 2 - Overhead Lifting of an Industrial Control Panel

With One Lifting Angle (Single-front Column)



With Two Lifting Angles (Double Front Column)



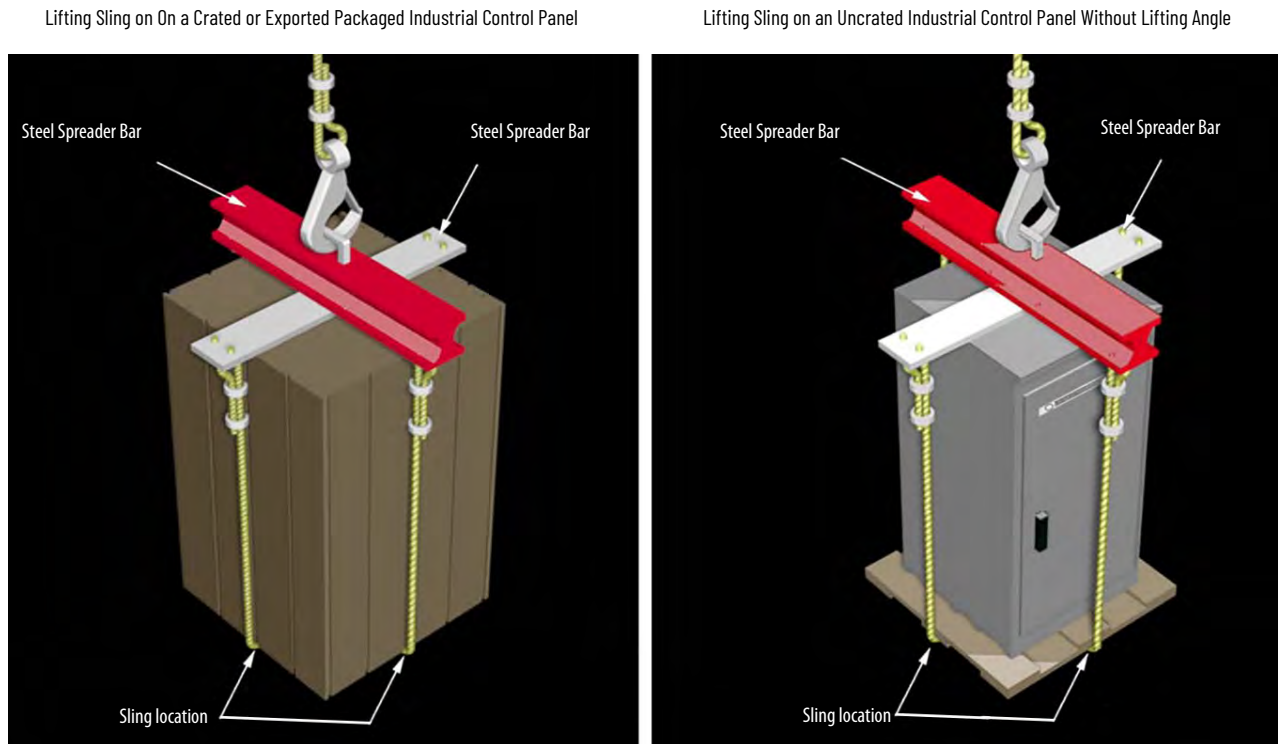
Lifting Sling

The use of a lifting sling is the preferred method for overhead lifting of export packaged sections, but you can use this method for all types of sections, including NEMA Type 3R without a lifting angle. See [Figure 3](#) and follow the lifting sling procedure.

1. Place the lifting sling under the shipping platform.
2. The spreader bar must have a larger span (overhang) than the industrial control panel load.
3. Carefully stabilize the industrial control panel during handling.

IMPORTANT All rigging must be designed to support the load (see the shipping weights) with the appropriate safety factor.

Figure 3 - Lifting Sling a Industrial Control Panel



IMPORTANT Sling must be placed under skid and located at cross member of the skid.

Rod or Pipe Rollers

With the aid of pinch bars, pipe rolling provides a simple method of moving industrial control panels on one floor level if there is no significant incline. This method of handling can be used for all types of sections. See [Figure 4](#) and follow these steps.

1. Carefully ease the shipping platform over the pipes until the pipes support the full weight of the industrial control panel.
2. Roll the industrial control panel to its designated location.



ATTENTION: Use extreme caution to steady the load and help prevent it from tipping.

Figure 4 - Pipe Rolling an Industrial Control Panel



Storing

If it is necessary to store the industrial control panel for any length of time, take the following precautions:





- Wrap the industrial control panel in a covering of heavy-duty plastic or similar material to help prevent the entry of dirt and dust.
- For industrial control panels not installed and energized immediately, store in a clean, dry place. Maintain a storage temperature between $-30...+65^{\circ}\text{C}$ ($-22...+149^{\circ}\text{F}$). If the storage temperature fluctuates or humidity exceeds 60%, use a space heater to help prevent condensation. We recommend that you store industrial control panels in a heated building that offers adequate air circulation and protection from dirt and water.
- Industrial control panels that are designed for indoor applications do not have sufficient packaging for outdoor storage. If they are to be stored outdoors, install temporary electrical heating to help prevent condensation and add packaging for protection from the outside elements. A space heater that is rated at 200 watts per section is adequate for the average industrial control panels. Remove all loose packaging and flammable materials before you energize space heaters.
- Keep dry internally all unenergized industrial control panels for outdoor use by installing temporary heating or energizing optional self-contained space heaters.

Rockwell Automation maintains current product environmental information on its website at rok.auto/pec.

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