Receiving, Handling, and Storing Motor Control Centers

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 motor control center, 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 the event that there is evidence of loss or damage, the buyer must follow the procedure outlined below:
   - 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.

For further assistance, contact Rockwell Automation support at (440) 646-5800. Navigate through the call tree by selecting option 2 for Allen-Bradley products, option 5 for motor control centers, and then option 1 for hardware support.

Handling

ATTENTION

Motor control centers are top- and front-heavy. To avoid personal injury and structural damage to the motor control center, never attempt to lift or move the motor control center by any means other than those listed in this publication.

The following guidelines are provided to help avoid personal injury and equipment damage during handling and facilitate moving the motor control center at the job site.

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

Handle the motor control center carefully in order to avoid damage to the components, sections, and finish. Keep the motor control center in an upright position. The motor control center should not have been tipped or laid flat during shipment. Before moving the motor control center, make sure that the route is clear of all obstructions and that fellow workers are a safe distance away.

The motor control center should be handled by a "qualified person" as defined by NEMA standards. For this definition and other references on the handling of motor control centers, refer to NEMA standards publication number ICS 2.3, *Instructions for the Handling, Installation, Operation, and Maintenance of Motor Control Centers.*

Forklifting

Standard motor control centers, front-mounted (15" or 20" deep) in 20" through 60" widths, have shipping skids that facilitate the insertion of lift truck forks, with fork access from the narrow end.

Non-standard motor control centers have flat shipping skids. Forklift flat shipping skids from the front or broad side. When forklifting a flat shipping skid, use a pry bar (Johnson bar) to lift the skid enough to insert the forks under it.

Refer to and follow the forklifting procedure outlined below.

1. Ensure that the forklift truck can handle the weight and size of the motor control center safely.

2. Forklift only from underneath the shipping skid, using the skid to support the load. Carefully position the motor control center on the forks for proper balance, noting that motor control centers are top- and front-heavy. Make sure that the forks support the load. Keep the load against the carriage. Tilt the load backward toward the lift truck's mast.

3. Use a belt to secure the motor control center to the forklift truck.

4. Start and stop the forklift truck gradually and slowly, avoiding 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.

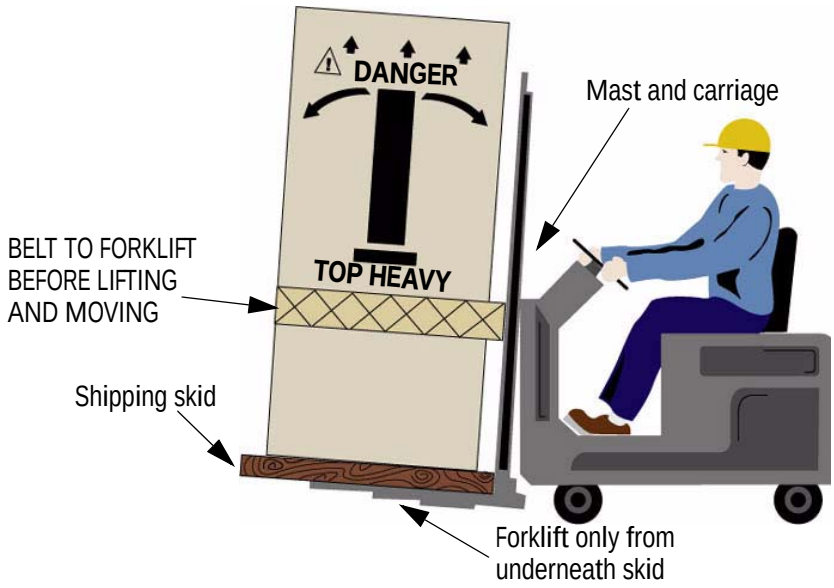

Figure 1 Forklifting a standard motor control center

Overhead lifting

Overhead lifting provides a convenient method for moving motor control centers. This handling method is recommended for motor control centers supplied with lifting angles (including NEMA Type 3R construction with optional lifting angle). Refer to Figure 2 and Figure 3 and follow the overhead lifting procedure outlined below.

1. Attach rigging to lifting means.

ATTENTION

Ensure that the load rating of the lifting device is sufficient to handle the load safely. Refer to 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 motor control center in an upright position.

4. Reduce tension on the rigging and compression on the lifting angle by ensuring the angle between the lifting cables and vertical plane does not exceed 45° .

ATTENTION

Some motor control centers contain heavy, mounted equipment, such as transformers, that could be adversely affected if tilted.

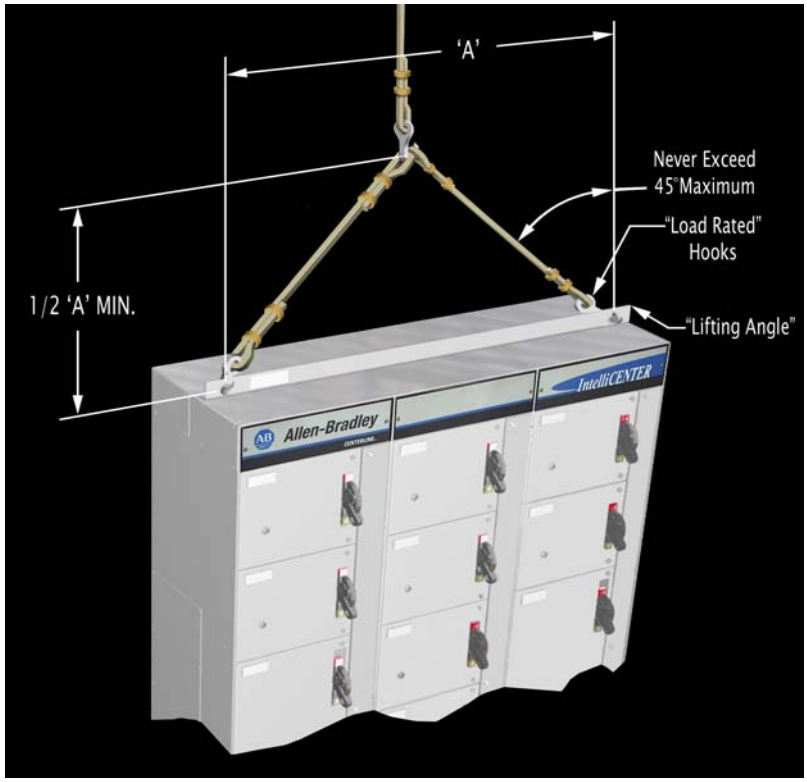

Figure 2 Overhead lifting a front mounted motor control center

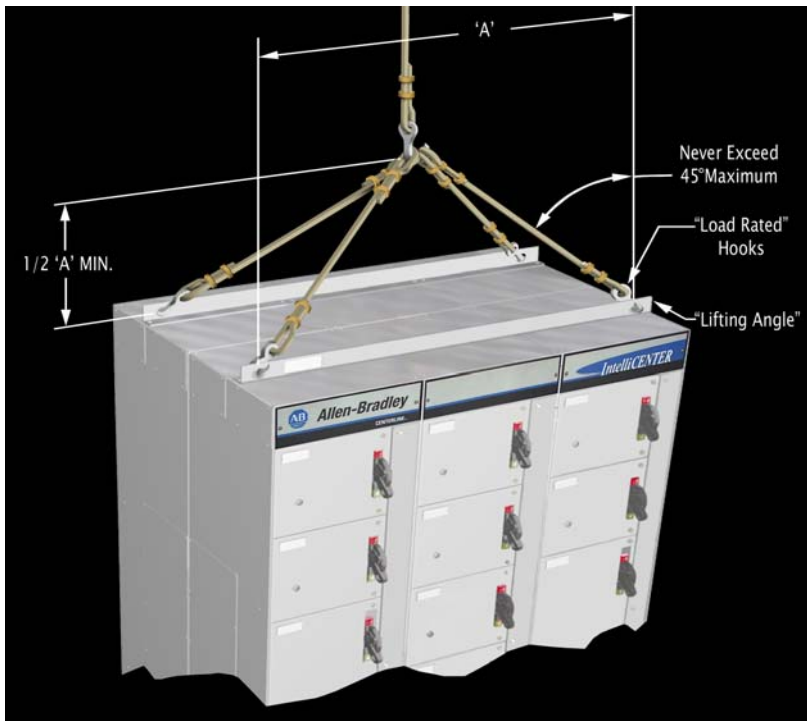

Figure 3 Overhead lifting a motor control center with back-to-back construction

Lifting sling

Using a lifting sling is the preferred method for overhead lifting of export packaged sections, but it may be used for all types of sections, including NEMA Type 3R without lifting angle. Refer to (export packaged) and (NEMA Type 3R without lifting angle) and follow the lifting sling procedure below.

1. Place the lifting sling under the shipping platform.
2. The spreader bar must have a larger span (overhang) than the motor control center load.
3. Carefully stabilize the motor control center during handling. All rigging must be designed to support the load (refer to shipping weights) with the appropriate safety factor.

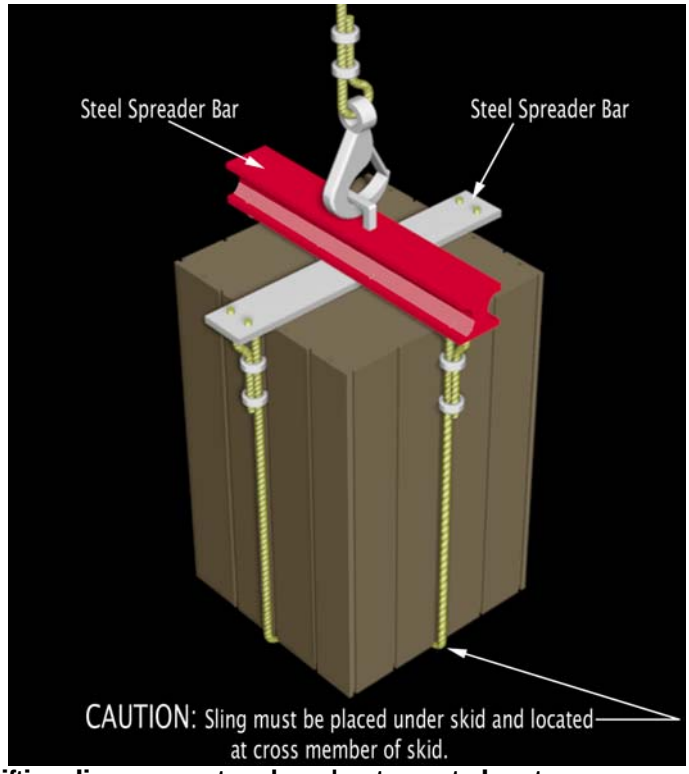

Figure 4 Lifting sling on export packaged motor control center

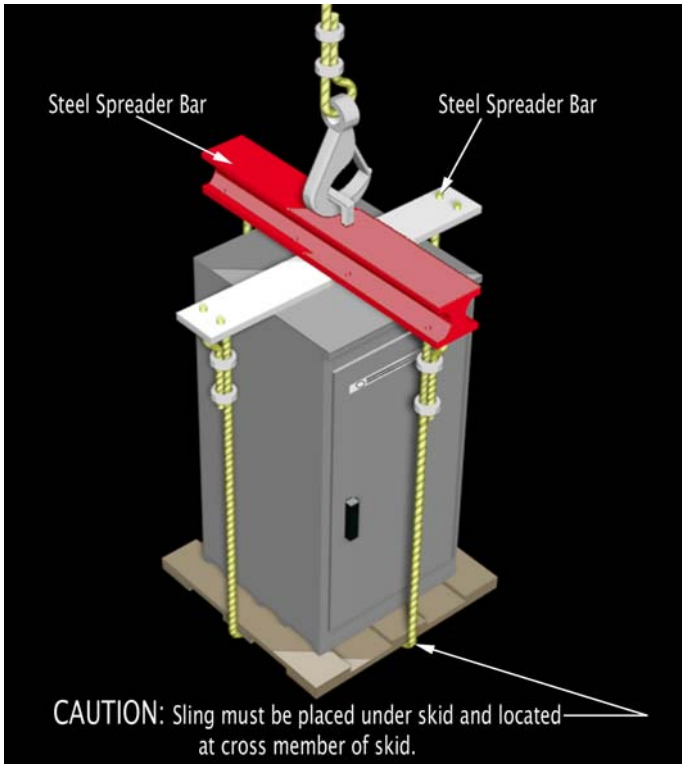

Figure 5 Lifting sling on NEMA Type 3R motor control center without lifting angle

Rod or pipe rollers

With the aid of pinch bars, pipe rolling provides a simple method of moving motor control centers on one floor level if there is no significant incline. This method of handling can be used for all types of sections. Refer to and follow the procedure outlined below.

1. Carefully ease the shipping platform over the pipes until the pipes support the full weight of the motor control center.

2. Roll the motor control center to its designated location. Use extreme caution to steady the load and prevent it from tipping.

Figure 6 Pipe rolling a motor control center with back-to-back construction

Storing

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

1. Wrap the motor control center in a covering of heavy-duty plastic or similar material to prevent the entry of dirt and dust.

2. Motor control centers not installed and energized immediately should be stored in a clean, dry place. Maintain a storage temperature between -30° C and +65° C. If the storage temperature fluctuates or humidity exceeds 60%, use a space heater to prevent condensation. It is preferable to store a motor control center in a heated building that offers adequate air circulation and protection from dirt and water.

3. Motor control centers 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 prevent condensation and add packaging for protection from the outside elements. A space heater rated at 200 watts per section is adequate for the average motor control center. All loose packaging and flammable materials should be removed prior to energizing space heaters.

4. Unenergized motor control centers for outdoor use should be kept dry internally by installing temporary heating (see item 3 above) or energizing optional self-contained space heaters.

5. Space heater and thermostat kits (kit number 2100-NH1) may be ordered from your local Rockwell Automation sales office or Allen-Bradley distributor.

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Publication 2100-IN040B-EN-P - October 2002
Supersedes Publication 2100-5.5 - January 1991