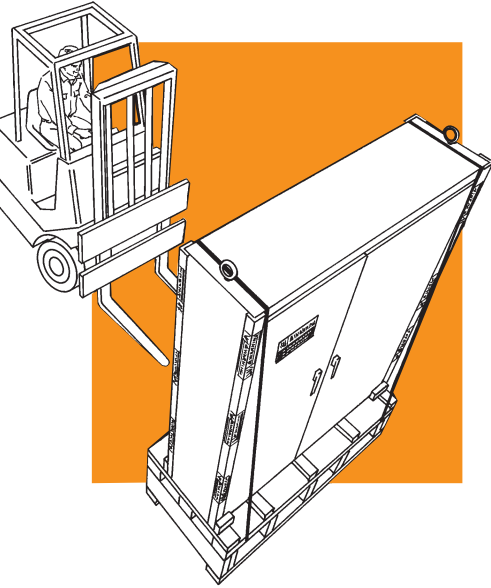
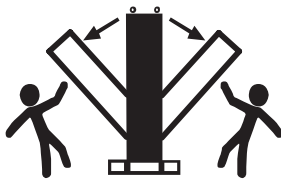




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SAFE HANDLING REQUIREMENTS

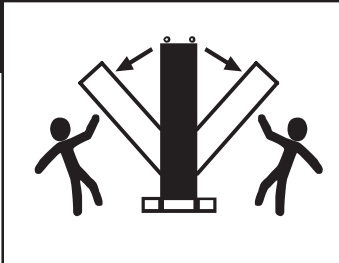


WARNING

Enclosure is TOP-HEAVY

Store on level surface

Follow guidelines in "Large
Enclosure Handling Manual"



WARNING

Enclosure is TOP-HEAVY

Store on level surface

Follow guidelines in “Large Enclosure Handling Manual”

The following procedures are provided to help avoid **equipment damage, personal injury, and possible death** during handling of large top-heavy enclosures.

WARNING



These procedures apply only to enclosures in original packaging without electrical components installed.

Due to varying enclosure sizes, a number of different shipping skids are used. To reduce the possibility of tipping during the moving process, the original shipping skid should remain secured to the enclosure until electrical components are installed or the unit is bolted or secured at its final destination.

GENERAL SAFE HANDLING CONSIDERATIONS

1. Before moving the top-heavy enclosure, make sure that the route is clear of all obstructions, and workers are at a distance no less than the overall height of the enclosure.
2. The enclosures must be handled by trained and authorized forklift operators only. This is required by OSHA Standard 1910.178 and ANSI Standard B56.1. **IT'S THE LAW!**
3. Know the safe lifting capabilities of the lifting equipment; be certain it can safely handle the weight and size of the enclosure. (Refer to the product label and the nameplate data on the forklift.)
4. Carefully position the enclosure on the forks for proper balance, noting that enclosures are top-heavy. Keep the load against the carriage. Always tilt the load backward toward the forklift's mast.
5. When using a forklift, secure enclosure to forklift mast before attempting to move unit (see Figure No. 2).
6. Start and stop the forklift gradually and slowly; avoid jerking movements. When traveling with the load, drive slowly with the forks carried as low as possible, consistent with safe operation.
7. A person should assist the forklift operator at a safe distance no less than the height of the enclosure in guiding or directing larger top-heavy enclosures.

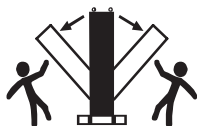
WARNING



To avoid personal injury or structural damage to the enclosures, never attempt to lift or move the enclosure by any means other than the methods shown in this manual.

DISCLAIMER OF LIABILITY

This information is offered as an aid in the handling of Hoffman products and illustrates enclosure handling methods. The handling methods referenced apply to enclosures in original packaging only, without electrical components installed. The user should comply with all recommendations of the manufacturer for the material handling equipment being used. Hoffman Enclosures Inc. hereby disclaims any and all liability in regard to the handling of our enclosures as actual conditions involving such handling are beyond our control. If you have any questions about how to safely handle any of our products, please call 763-422-2211. Hoffman Enclosures Inc., 2100 Hoffman Way, Anoka, MN 55303-1745.



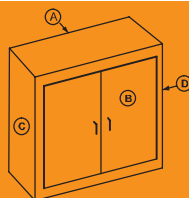
WARNING

Enclosure is **TOP-HEAVY**
Store on level surface
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Enclosure Handling Manual"

■ Procedures for end loading two-door enclosures on and off trailer.

See Figure No. 1 and follow procedures listed below.

Preferred handling method is from Side A, and must be used when possible. If Side A is not accessible, use the following method for loading/unloading from Side C and D. DO NOT transport enclosures from side C or D. Enclosures must be handled from Side A as soon as it is accessible.



1. Spread forks to match the pallet end slot openings. Enter the pallet from the narrow side (side C or D).

WARNING



Always use both forks. Do not attempt to load or unload enclosures on one fork. The capacity of the lift truck may be exceeded and the load will not be centered properly.

2. Position enclosure as far back on the forks as possible.
3. To load or unload, secure the enclosure on the mast of the forklift. To accomplish this, insert a 3000 lb.-rated chain or strap through the eye bolts provided on top of the enclosure and securely fasten it to the forklift mast assembly. Sufficient tension should be placed on the chain or strap to prevent the top-heavy enclosure from tipping.

WARNING

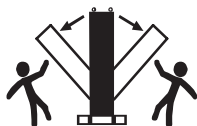


Do not use chains or straps to lift enclosure as the capacity of the forklift may be exceeded due to a change of load centers. The chains/straps are only to be used to help prevent unit from tipping as enclosures are top-heavy.

4. To load or unload the enclosure, tilt mast a sufficient amount to take the weight off the opposite end of the enclosure and slide or push the enclosure as required.
5. Transportation after off loading from trailer must be done from Side A following the procedures in the next section.



Figure No. 1



⚠ WARNING

Enclosure is **TOP-HEAVY**
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Follow guidelines in "Large
Enclosure Handling Manual"

■ Standard forklift procedures for handling single- and two-door, top-heavy enclosures.

See Figure No. 2 and follow procedures listed below.

1. Spread forks to maximum distance or as dictated by skid width.
2. Enter skid from rear (Side A). Carefully position the enclosure on the forks for proper balance. Keep the load against the carriage/mast.
3. Before lifting with forklift, secure the enclosure to the mast of the forklift. To accomplish this, insert a 3000 lb.-rated chain or strap through the eye bolts provided on top of the enclosure and securely fasten it to the forklift mast assembly. Sufficient tension should be placed on the chain or strap to prevent the top-heavy enclosure from tipping during transportation.

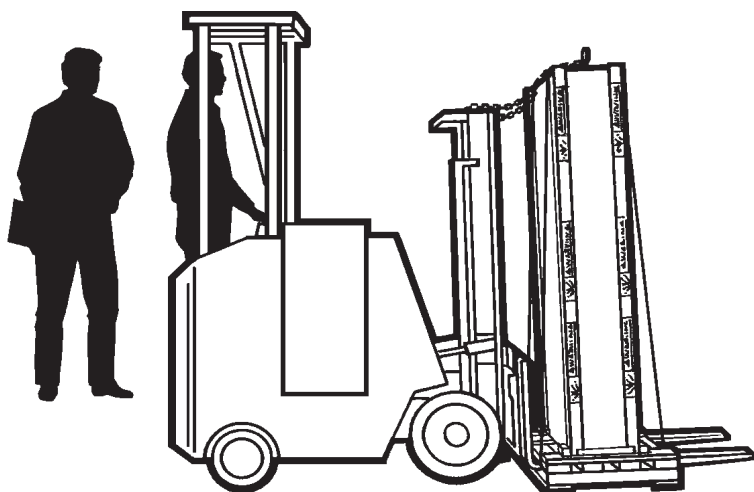
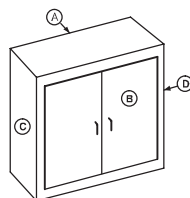
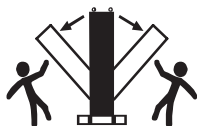


Figure No. 2



WARNING

Enclosure is **TOP-HEAVY**
Store on level surface
Follow guidelines in "Large
Enclosure Handling Manual"

■ Procedures for handling three-, four-, five-, and six-door enclosures with a standard forklift and ROLL•A•LIFT™.

See Figure No. 3 and follow the procedures outlined below.

1. Enter the skid from the narrow side (Side C or D) of the enclosure. Forks should be spaced just wide enough to enter skid. Do not place forks completely together.
2. Secure the enclosure to the mast of the forklift. To accomplish this, insert a 3000 lb.-rated chain or strap through the eye bolts provided on top of the enclosure and securely fasten it to the forklift mast assembly. Sufficient tension should be placed on chain or strap to prevent the top-heavy enclosure from tipping during transportation.

WARNING



Do not use chains or straps to lift enclosure as the capacity of the forklift may be exceeded due to a change of load centers. The chains/straps are only to be used to help prevent unit from tipping as enclosures are top-heavy.

3. On opposite end, place a ROLL•A•LIFT™ or similar device. Lift this end a minimum distance to ensure skid is clear of floor surface. Secure ROLL•A•LIFT™ to enclosure using eye bolts provided.
4. Lift end with forklift a sufficient distance so skid is clear of floor. Re-check tension on chain/strap to ensure enclosure is secure.

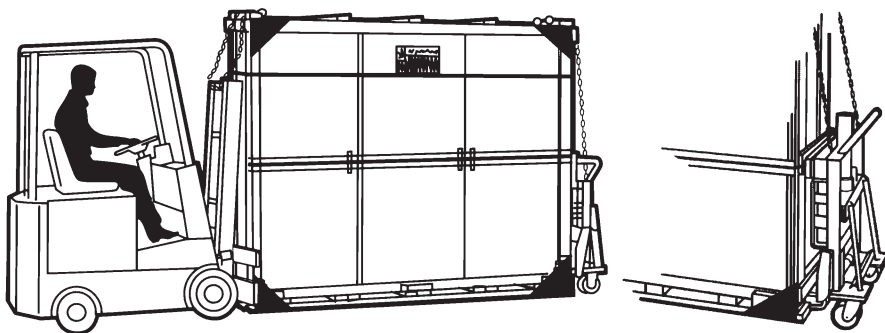


Figure No. 3

WARNING



Do not use two ROLL•A•LIFT™, or similar devices to move an enclosure. The enclosures are very top-heavy and could easily tip if not secured to a forklift. When using a ROLL•A•LIFT™, always use a forklift at opposite end.



■ Procedures for handling one-, two-, three-, four-, five-, and six-door enclosures

One- and Two-Door Enclosures (See Figure No. 4)

1. Spread forks to maximum distance or as dictated by skid width.
2. Enter skid from rear (Side A). Carefully position enclosure on the forks for proper balance.
3. Position enclosure as far back on forks as possible to avoid the bottom of load from being pulled from forks in the event it should catch on or strike a fixed object.
4. Do not touch fixed objects. If the enclosure should catch on or strike a fixed object, the enclosure could be pulled from forks.
5. Apply maximum clamping pressure that will not damage enclosure.

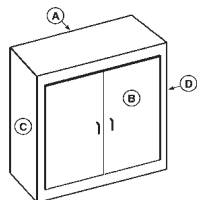
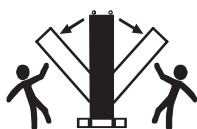


Figure No. 4

6. Check load to make sure it is secure.
7. Lift enclosure a minimum distance so skid is clear of floor.
8. Never attempt to move more than one enclosure at a time; capacity of lift truck may be exceeded. The entire enclosure must be completely within the clamping device to ensure adequate clamping pressure.



WARNING

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Store on level surface
Follow guidelines in "Large
Enclosure Handling Manual"

with a standard forklift and overhead clamping devices.

Three-, Four-, Five-, and Six-Door Enclosures (See Figure No. 5)

1. Enter the skid from the narrow side (Side C or D) of the enclosure. Forks should be spaced just wide enough to enter skid. Do not place forks completely together.

WARNING



Always use both forks. Do not attempt to move enclosure on one fork. The capacity of the lift truck fork may be exceeded and the load will not be centered properly.

2. Position enclosure as far back on forks as possible.
3. Apply maximum clamping pressure that will not damage enclosure.

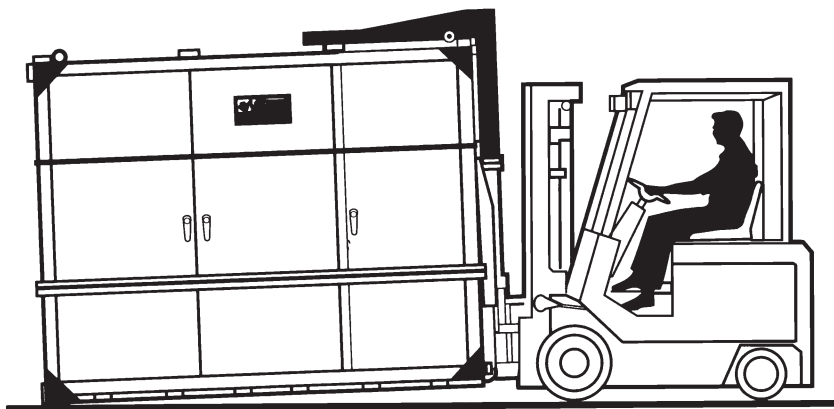


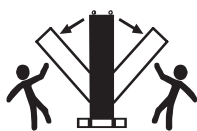
Figure No. 5

4. Check load to make sure it is secure.
5. Tilt mast a sufficient amount to take the weight off the opposite end of enclosure and slide/push enclosure as required.

WARNING



Do not attempt to lift enclosure completely off the ground.
The capacity of lift truck may be exceeded.



WARNING

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Store on level surface
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Enclosure Handling Manual"

Overhead lifting procedures (recommended for enclosures provided with eye bolts)

See Figure No. 6 and follow procedures as listed below.

1. Attach rigging to eye bolts **always maintaining the 45° maximum angle** illustrated in Figure No. 6. When lifting three-, four-, and five-door enclosures, **four** eye bolts must be used.

WARNING



Ensure that the load rating of the lifting device and rigging is sufficient to safely handle the load.

2. Do not pass ropes or cables through eye bolts as sharp angles may cause excessive wear and possible failure. 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 to support the enclosure in an upright position.
4. To reduce tension on the rigging and compression on the enclosure, do not allow the angle between the lifting cables and the vertical to exceed 45 degrees (Figure No. 6).

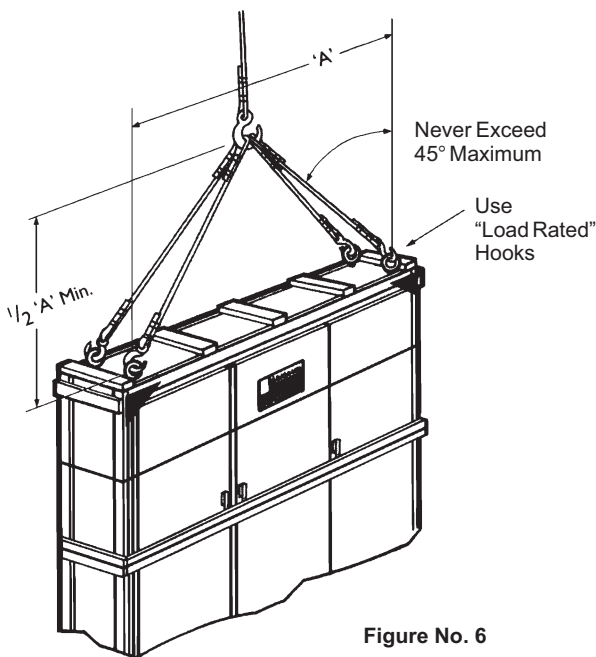


Figure No. 6

Installation Instructions For Large Grounding Kit 99411400



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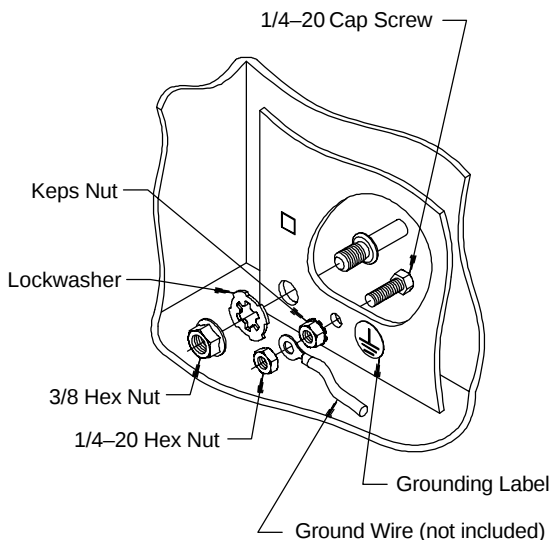
Hoffman Enclosures Inc.

2100 Hoffman Way

Anoka, MN 55303-1745

(763) 422-2211 Tel

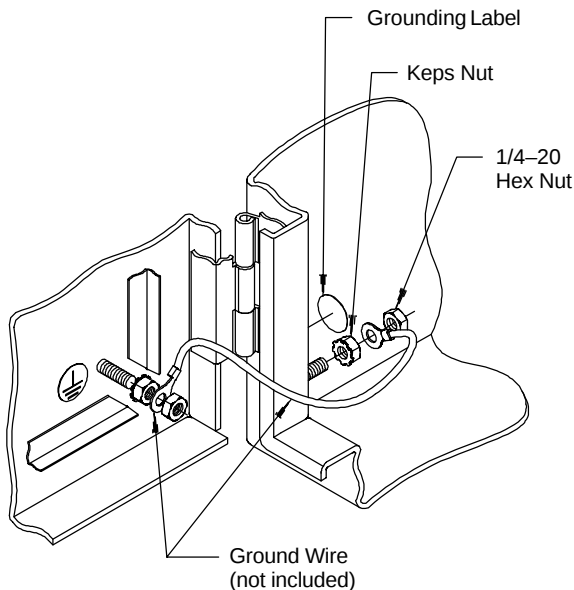
www.hoffmanonline.com



1. Insert the 1/4-20x7/8 bolt through the hole in the panel as shown.
2. Secure bolt with keps nut. The keps nuts must penetrate into the paint to insure electrical continuity.
3. Attach the ground wire and secure with 1/4-20 hex nut as shown.
4. Install the lockwasher under one of the nuts securing the panel to insure grounding between the panel and the enclosure.
5. Attach grounding label included adjacent to the bolt as shown.

Installation Instructions For Large Grounding Kit 99411400

1. Secure keps nut on each ground stud. The keps nuts must penetrate into the paint to insure electrical continuity.
2. Attach the ground wire and secure with the 1/4–20 hex nuts as shown.
3. Attach the grounding labels included adjacent to the studs as shown.



LOCKWASHER INSTRUCTION



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Hoffman Enclosures Inc.

2100 Hoffman Way
Anoka, MN 55303-1745
(763) 422-2211 Tel
www.hoffmanonline.com

1. Install the enclosed external toothed lockwasher under one of the nuts securing the panel to ensure bonding between the panel and enclosure

HUB INSTALLATION INSTRUCTION

1. Use only CSA approved, watertight, rigid conduit hubs that are designed to fit into standard conduit openings.
2. Conduit entry can be made in the top or bottom end or through the side walls of this enclosure.
3. Use a hole saw or greenlee-type punch to cut the required holes.
(see the table below for the hole size and flat surface area required)

Trade Size of Conduit	Recommended Diameter of Opening	Recommended Minimum Diameter of Flat Surface
1/2	7/8	1 3/16
3/4	1 3/32	1 1/2
1	1 23/64	1 7/8
1 1/4	1 23/32	2 3/8
1 1/2	1 31/32	2 5/8
2	2 15/32	3 1/4
2 1/2	3	3 3/4
3	3 41/64	4 7/16
3 1/2	4 5/32	4 15/16
4	4 11/16	5 7/16
5	5 25/32	6 3/8
6	6 29/32	8

4. Install the hub according to the hub manufacturer's instructions.