Hoffman®

A Pentair Company

A17Y / A17W3

Fiberglass Wall–Mount Enclosure

BULLETIN A–17 INSTRUCTIONS

Hoffman cannot assure the safety or effectiveness of any alterations or additions not made by Hoffman Enclosure Inc. However, the following information may be helpful. These instructions do not eliminate the need to consult with equipment manufacturers and to observe all regulatory agency procedures and safe practices to assure the proper electrical and mechanical function of HOFFMAN products in each particular application.

1. PAINTING
The finish on the outside of this enclosure is a molded polyester surface. Should a color change be necessary, the enclosure may be painted with an appropriate lacquer or enamel. For maximum durability, exterior polyurethane is recommended. Very thorough sanding and priming is required for paints to properly adhere.

IMPORTANT: TO AVOID DISCOLORATION OR GASKET DAMAGE, DO NOT BAKE OVER 175° FOR MORE THAN TWO HOURS.

2. DOOR CLOSING ADJUSTMENTS

A. SINGLE DOOR (WALL MOUNTED)
Doors are factory fit to close and mate perfectly to the body. If the surface on which the enclosure is mounted is not flat, the enclosure will not be square and the door may not open and close properly. Also, if equipment is mounted on a door, the door may sag slightly. Should the top of the door appear to sag when closed, place shims behind the mounting foot which is located at the bottom of the enclosure and closest to the door hinge. Shims should be of a material suitable for the intended environment. Place the shims between the mounting foot and the wall or mounting surface. Be sure all mounting screws are tight. Should the top of the door appear to be higher than the body when closed, shim the upper mounting foot closest to the door hinge.

B. TWO DOOR (FLOOR MOUNTED)
The individual doors are factory–fitted to meet evenly at the top and bottom. If the floor under the enclosure is not level, the doors will not close evenly. In this case, place shims under the corners of the enclosure.

3. PANEL INSTALLATION
When installing the interior panel, it may be necessary to enlarge the panel hole(s) slightly to permit the panel to fit in place. Do not attempt to straighten studs.

4. REMOVING AND REINSTALLING DOOR
This is an easy operation requiring a 7/16" wrench. When reinstalling hinges to the body, use a high quality sealant in order to maintain NEMA 4 sealing. Torque fasteners to 35 inch/pounds.

5. WINDOWS
Hoffman standard window kit accessories can be installed in fiberglass wall–mount and free–standing enclosures. Stainless steel window kits will maintain NEMA 4X rating.

6. DRILLING OR PUNCHING HOLES
A standard sharp metal cutting drill bit or hole saw may be used to drill holes in Bulletin A17 enclosures. Greenlee punches may be used. For large quantities of close tolerance holes, machining the holes is recommended.

7. PRINT POCKET
The print pocket is supplied loose with the enclosure. It can be mounted at a customer determined location with the tape and adhesive provided.

8. LIFTING ENCLOSURES
To lift an enclosure which has eyebolts or mounting feet, be sure to use all of the eyebolts and top mounting feet provided. Arrange the chains or cables with spreader bars, so you are lifting straight up on the eyebolts or top mounting feet.

9. VENTILATION
Some ventilation options require cutouts in an enclosure and may derate the enclosure rating. Hoffman offers UL Type 3R fan shrouds that may be installed over some accessories to maintain a Type 3R rating.

10. TRANSPORTATION
Hoffman gasketed enclosures have exceptionally good seals. This quality can prove to be detrimental when a sealed enclosure is transported by air or over the mountains. Under certain conditions descent will create a vacuum inside the enclosure which can cause permanent damage to the enclosure. Always allow some type of venting in the enclosure when shipping. We recommend using the packaging spacers provided with the factory shipping carton.

11. INTENDED APPLICATION
Standard Hoffman enclosures are designed for static applications. Enclosures to be subjected to dynamic load from vibration, wind, shock, etc., will require additional evaluation which is the responsibility of the specifying engineer.

12. ENCLOSURE RATING
To maintain enclosure rating when introducing holes and/or cutouts in an enclosure, openings need to be filled with an appropriately rated device. To obtain a UL/CSA 3R rating, one or two 1/4 inch (6 mm) diameter hole(s) must be drilled in the bottom surface of the enclosure at the lowest point(s), typically in opposite corners (see ventilation).

SEE THE ACCESSORIES SECTION OF THE HOFFMAN CATALOG FOR ADDITIONAL ITEMS

1. INSTALLATION OF CONDUIT

Conduit holes can be cut in the ends and side walls of this enclosure when required. (See table below for the required hole size). Use a hole saw or Greenlee–type hole cutter to cut the required holes. Conduit connections must be properly aligned to the enclosure wall to prevent unnecessary stress on the enclosure walls.

CONDUIT CONNECTORS (HUBS) TO BE USED FOR INSTALLATION OF CONDUIT	
CONDUIT SIZE	TYPICAL HOLE SIZE
1/2”	7/8”
3/4”	1 1/8”
1”	1 3/8”
1 1/4”	1 3/4”
1 1/2”	2”
2”	2 1/2”
2 1/2”	3”
3”	3 5/8”

⚠WARNING

To avoid electric shock, grounding must be installed by the customer as part of the installation. Non–metallic enclosures do not provide grounding between conduit connections.

2. GROUNDING OF EQUIPMENT AND CONDUIT

Ground in accordance with the requirements of the National Electrical Code.

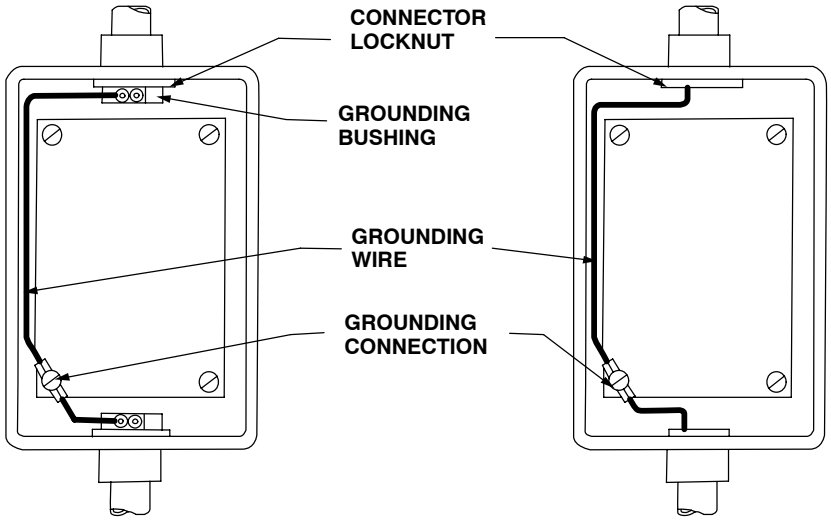
Conduit hubs for metallic conduit must have a grounding bushing attached to the hub on the inside of the enclosure. Grounding bushings have provisions for connection of a grounding wire.

Non–metallic conduit and hubs require the use of a grounding wire in the conduit. Grounding bushings are not required.

System grounding is provided by connection wires from all conduit entries to the subpanel or to other suitable point which provides continuity. Any device having a metal portion or portions extending out of the enclosure must also be properly grounded.

TYPICAL GROUNDING ILLUSTRATIONS

METALLIC CONDUIT **NON–METALLIC CONDUIT**



Hoffman Enclosures Inc.
2100 Hoffman Way
Anoka, MN 55303–1745
(763) 422–2211
www.hoffmanonline.com

Pentair Electronic Packaging
170 Commerce Drive
Warwick, RI 02886
(401) 732–3770
www.pentair–ep.com

Mexico
Pentair Enclosures, S. de R.L. de C.V.
Federico T. de la Chica No. 8 Piso 4 A
Circuito Comercial Plaza Satélite
Ciudad Satélite,
Naucalpan, México C.P. 53100
011–52–55–5393–8263

Canada
Hoffman–Schroff
111 Grangeway Avenue, Suite 504
Scarborough, Ontario M1H 3E9
(416) 289–2770
1–800–668–2500 (Canada only)

Germany
Schroff GmbH
Langenalber Str. 96–100
75334 Straubenhardt
49 (07082) 794–0 www.schroff.de

Great Britain
Schroff UK Ltd.
Maylands Avenue
Hemel Hempstead, Herts HP2 7DE
44 (01442) 240471 www.schroff.co.uk

Sweden
Schroff Scandinavia AB
Box 2003
12821 Skarpnäck
46 08683 61 00 www.schroff.se

France
Schroff Sas
Z.I., 4 rue du Marais
67660 Betschdorf
33 03 88 90 64 90 www.schroff.fr

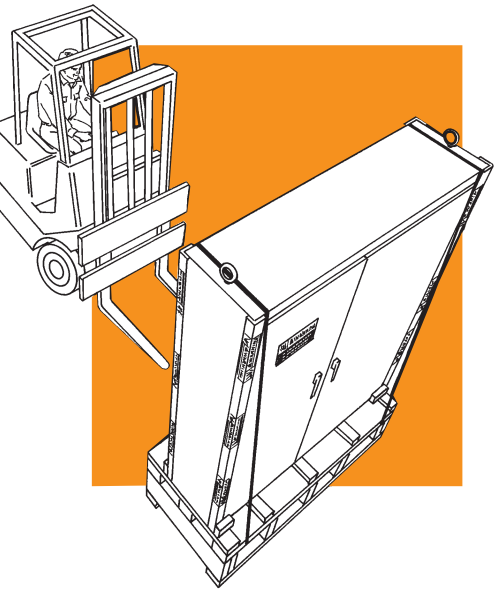
Italy
Schroff srl
Viale Milano, 119
21013 Gallarate (Varese)
39 0331 79 40 03

Singapore
Hoffman–Schroff Pte. Ltd.
#01–68/71 German Centre
25 International Business Park
Singapore 609916
65 5 62–78 90

Japan
Schroff K.K.
Nisso No. 13 Bldg. 4F
2–5–1 Shinyokohama
Kohoku–Ku, Yokohama shi
Kanagawa 222–0033
81 (045) 476–02 81

Finland
Schroff Scandinavia AB
Peräsimentie 8
03100 Nummela
358 09 222 68 00

Norway
Schroff Scandinavia AB
Bjoernerudveien 24
1266 Oslo
47 022 76 33 60



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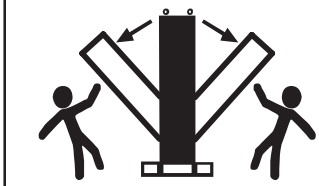
SAFE HANDLING REQUIREMENTS



⚠ WARNING

Enclosure is TOP-HEAVY

Store on level surface

Follow guidelines in "Large Enclosure Handling Manual"

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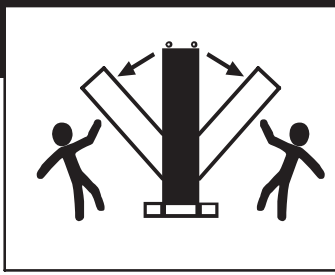


⚠ WARNING

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.	

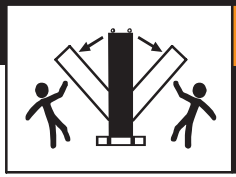
GENERAL SAFE HANDLING CONSIDERATIONS

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.



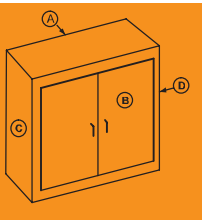
⚠ WARNING

Enclosure is TOP-HEAVY
Store on level surface
Follow guidelines in "Large 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.

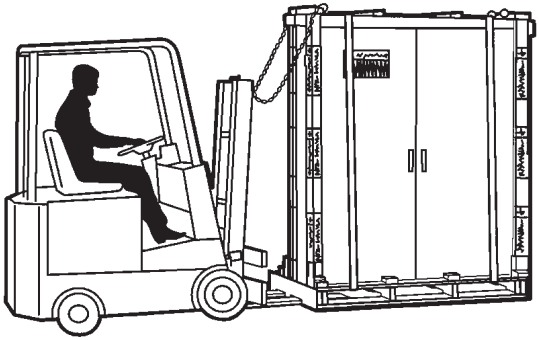
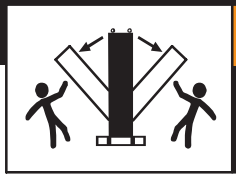


Figure No. 1



⚠ WARNING

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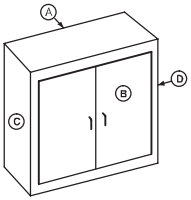
Follow guidelines in "Large Enclosure Handling Manual"

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 duringtransportation.



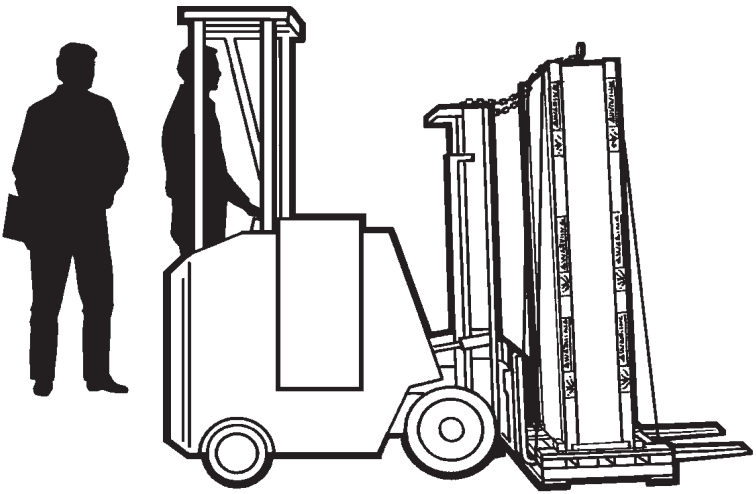
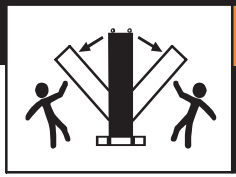


Figure No. 2



⚠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.

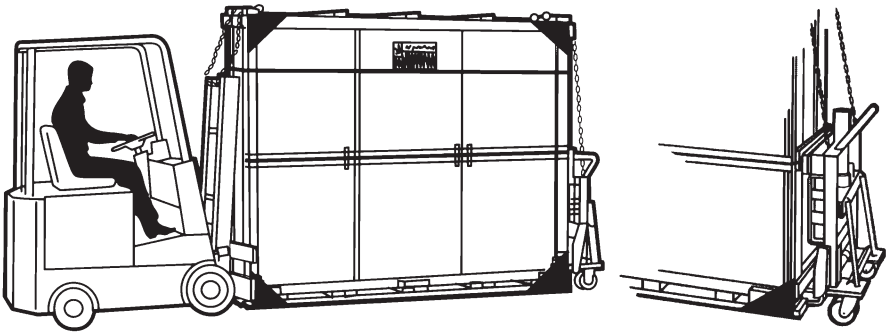
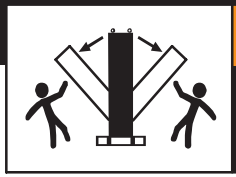


Figure No. 3

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.**



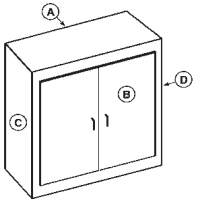
⚠ WARNING

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

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

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

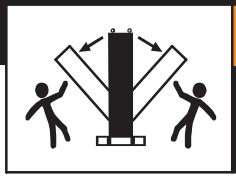
1. Spread forks to maximum distance or as dictated by skid width.
2. Enter skid from rear (Side A). Carefully position enclosure on the forks for proper balance.
3. Position enclosure as far back on forks as possible to avoid the bottom of load from being pulled from forks in the event it should catch 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

Enclosure is TOP-HEAVY
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.

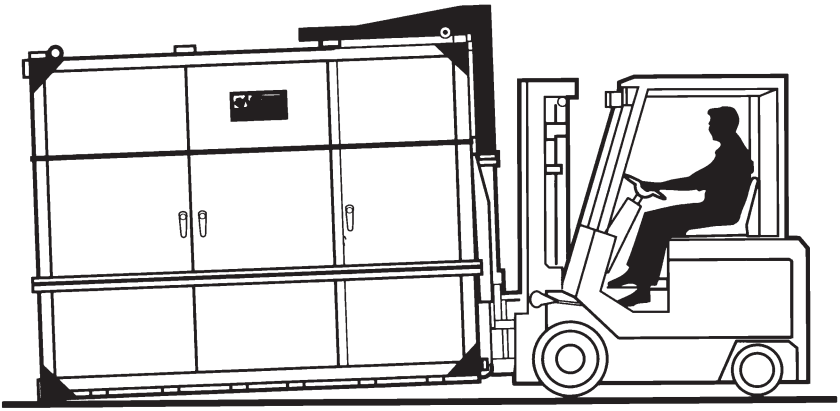
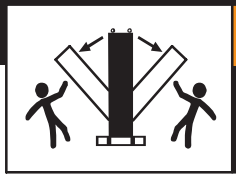


Figure No. 5

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
Follow guidelines in "Large 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).

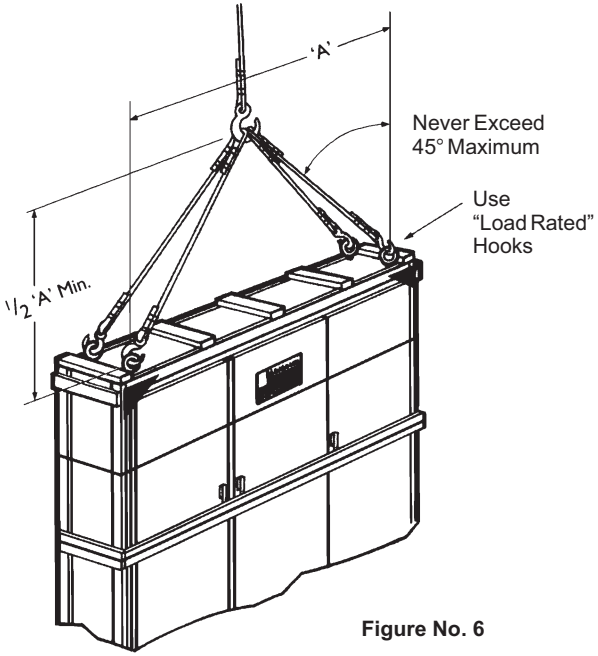

Figure No. 6

Print Pocket

A Pentair Company

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

1. Verify you have all the parts needed to install the print pocket.

- Print pocket (with tape adhered to back)
- Tube of adhesive

2. Determine desired print pocket location, and examine the surface for contaminants such as dust or oil. Dust should be removed by wiping surface with water dampened rag. For oil or grease, the surface should be wiped using a rag dampened with mineral spirits or isopropyl alcohol. After removing contaminants, thoroughly dry the surface using a clean, dry rag to remove moisture or flashing solvents.

⚠ CAUTION

When using flammable solvent, care should be used in the proper disposal and handling of these materials.

3. Using the tube of adhesive sealant provided, apply sealant to the sides of the print pocket. Dispense a 3/16 inch diameter bead of adhesive from the upper to the lower corner along center of each side flange. Adhesive sealant bead should end before contacting double face adhesive tape along lower flange.

4. Remove protective backing from double faced tape along bottom of print pocket. Position the print pocket in the desired location, pressing the bottom edge firmly to assure good adhesion of double face adhesive to both substrates. With light pressure, slide finger along both side flanges to form a consistent film thickness of adhesive sealant along these flanges. Adhesive sealant will skin over in approximately fifteen minutes, with full cure occurring in twenty–four hours. Refrain from placing heavy objects or large quantities of documents in print pocket for at least twenty–four hours.

