![Great Lakes Case & Cabinet logo]

GREAT LAKES
CASE & CABINET
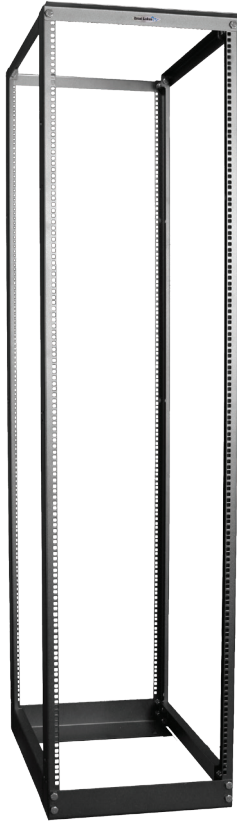*Invest in Solid Engineering*

Four Post Rack
Installation Instructions
(UL60950-1/UL2416, 4 Post Equipment Racks)

Instructions for the following Great Lakes Racks:
4PHD29, 4PM6-24, 4PM6-29, 4PM6-32, 4PM6-36,
4P1224-24, 4P1224-29, 4P1224-32, 4P1224-36, 4P36-1224-29,
4P48-1224-29, 4P60-1224-29, 4P66-1224-29, 4P72-1224-29,
4P96-1224-29, 4P108-1224-29

WeRackYourWorld.com
1-866-TRY-GLCC (879-4522)

PREFACE

This manual is provided to prevent service personnel from committing an act that results in the risk of fire, electric shock, or injury to persons. Only trained service personnel should receive, unpack, and assemble the racks. In addition, only trained service personnel should install equipment in enclosures.

SAFETY SYMBOLS USED IN THIS MANUAL

This manual provides general safety guidelines to be observed during installation, operation, and maintenance of the racks.

WARNING: Failure to follow directions in the warning could result in injury to persons or loss of life.

INSTALLATION

RECEIVING, UNPACKING, AND REMOVING THE RACK

Inspect and report damage before receiving. Unpack the rack by carefully removing the corrugated cartons and corners. Avoid damaging the rack when removing packaging.

SERVICE

The 4 Post Racks should be repaired by personnel trained by Great Lakes, or returned to Great Lakes for repair or replacement. Contact Great Lakes Technical Support at 814.734.7303 or at werackyourworld.com

WARNING: Improper handling and use of the racks could result in equipment damage, serious injury, or possible death.

SAFETY CONSIDERATIONS

Only trained service personnel should be used to remove the enclosure from the pallet. Also, be sure you have a sufficient number of service personnel. Do not attempt to move enclosures by yourself.

LOADING EQUIPMENT

WARNING: Only install equipment after the 4 Post Rack has been properly secured. Do not move the rack assembly while loaded. To maintain a uniform distribution of the mechanical load in the rack, load the heaviest equipment first, at the bottom of the rack and load the lighter units at the top.

Only UL®Listed ITE (Information Technology Equipment) units should be installed inside the rack.

Be sure to read and follow all individual manufacturer equipment manuals for safety and installation instructions.

Proper spacing is required when installing electrical equipment to avoid electrical shock. Maintain minimum spacing between the accessories and components and the computer enclosure assembly for safe operation of the equipment when installed in accordance with the National Electric Code ANSI/NFPA 70-1999.

The ambient temperature operating range for the racks and accessories is +50 to +95° F (+10 to +35° C). The non-operating temperature is -4 to +140° F (-20 to +60° C).

4PM6 FOUR POST RACK
OVERVIEW
4PM6 Racks are designed to securely hold 19" rack mount equipment, networking equipment, etc.

Components of the 4 Post Rack will ship in three separate boxes. Boxes will be marked with the box number and an item number.

What's Included:

Component	Qty.	Component will ship in:
Vertical Uprights (2 left/2 right)	4	Box #1, Item GL4PM6
Rack Mounting Hardware	50	
Top Width Brackets	2	Box #2, Item GL4PBT
Bottom Width Brackets	2	
Rack Assembly Hardware & Grounding Lug	-	
Top Depth Brackets	2	Box #3, Item GL4PFB24XX (XX=24, 29, 32 or 36)
Bottom Depth Brackets	2	

SPECIFICATIONS
Dimensions:
4PM6-24: 84"H x 20.31"W x 24"D
4PM6-29: 84"H x 20.31"W x 29"D
4PM6-32: 84"H x 20.31"W x 32"D
4PM6-36: 84"H x 20.31"W x 36"D

SPECIFICATIONS (CONTINUED)

Rack Spaces: 45 RMU
Certifications: UL Listed 2416
Construction: Vertical Uprights, Top and Bottom Depth Brackets,
Top and Bottom Width Brackets: 12 ga. steel
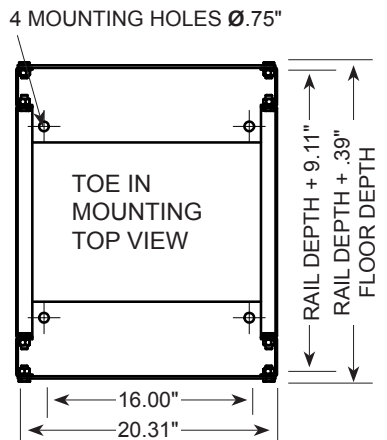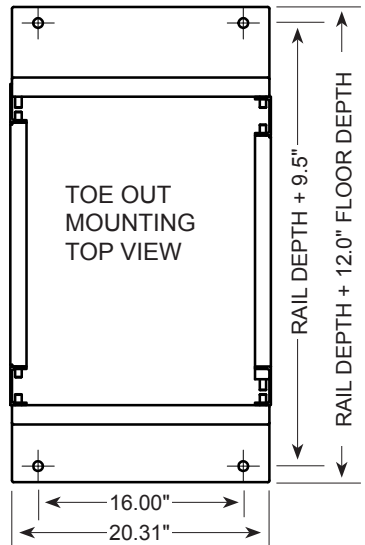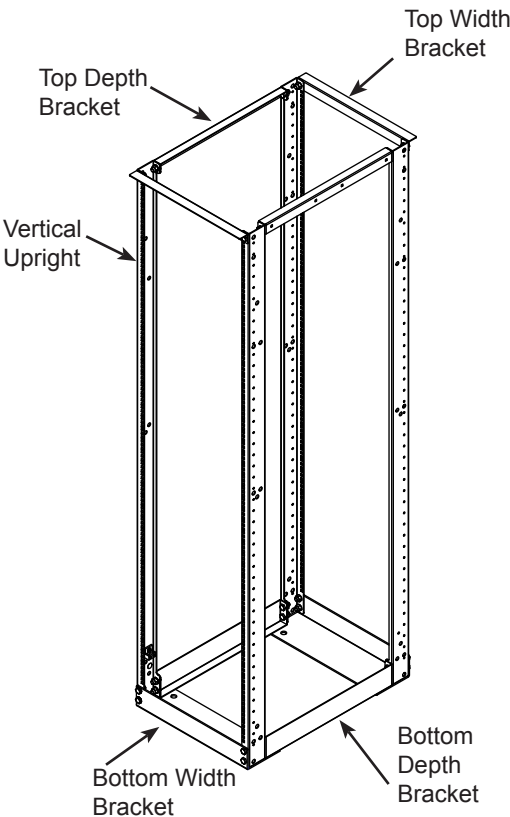**Finish:** Steel - Black Powder Coat
Grounding: Ground lug installed on Vertical Uprights
Rail Type: 3/8" sq. (M6) Cage Nuts
Total Max. Load Capacity: 1500 lbs.

4PM6 ASSEMBLY INSTRUCTIONS

Tools Required: 3/4" x 7/16" sockets and 3/4" wrench

Top Width Bracket

Top Depth Bracket

Vertical Upright

Bottom Width Bracket

Bottom Depth Bracket

TOE OUT MOUNTING TOP VIEW

RAIL DEPTH + 9.5"

RAIL DEPTH + 12.0" FLOOR DEPTH

16.00"
20.31"

4 MOUNTING HOLES Ø.75"

TOE IN MOUNTING TOP VIEW

RAIL DEPTH + 9.11"

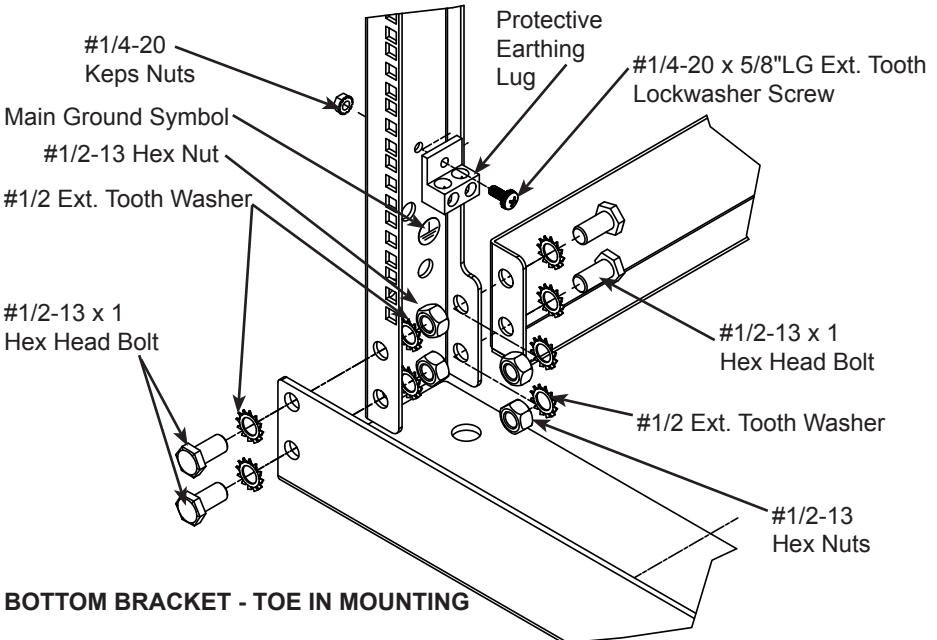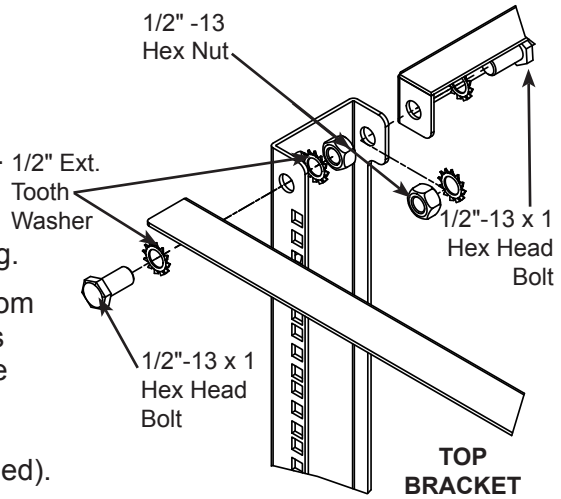RAIL DEPTH + .39" FLOOR DEPTH

16.00"
20.31"

ASSEMBLY

1. Assemble top and bottom width brackets to uprights (place the bracket with the Great Lakes label on the top). Do not tighten. Bottom width brackets can be assembled with toe out or toe in mounting.

2. Assemble the top and bottom depth brackets to the uprights and stand assembly up, Make sure rack is square and then tighten all hardware.
(54 ft-lb torque is recommended).

1/2" -13 Hex Nut

1/2" Ext. Tooth Washer

1/2"-13 x 1 Hex Head Bolt

1/2"-13 x 1 Hex Head Bolt

TOP BRACKET

3. Secure rack to floor. All racks should be bolted to a masonry floor, or to an equally stabilizing and secure surface, after desired location is determined. Hardware is not provided for bolting rack to the floor, Great Lakes' AK101 Seismic Anchor Kit is recommended for masonry floors.

4. Locate the hole near the IEC 60417 earthing symbol on the upright and attach the main protective earthing lug. *Note: The same hardware pack for grounding is supplied with 4PM6 and 4P1224 racks. #12-24 screw and #12 Ext. Tooth Washer will not be used when installing the protective earthing lug on the 4PM6.*

#1/4-20 Keps Nuts

Main Ground Symbol

#1/2-13 Hex Nut

#1/2 Ext. Tooth Washer

Protective Earthing Lug

#1/4-20 x 5/8"LG Ext. Tooth Lockwasher Screw

#1/2-13 x 1 Hex Head Bolt

#1/2-13 x 1 Hex Head Bolt

#1/2 Ext. Tooth Washer

#1/2-13 Hex Nuts

BOTTOM BRACKET - TOE IN MOUNTING

4P1224 FOUR POST RACK

OVERVIEW

4P1224 Racks are designed to securely hold 19" rack mount equipment, networking equipment, etc.

Components of the 4 Post Rack will ship in three separate boxes. Boxes will be marked with the box number and an item number.

What's Included:

Component	Qty.	Component will ship in:
Vertical Uprights (2 left/2 right)	4	Box #1, Item GL4P1224V
Rack Mounting Hardware	50	
Top Width Brackets	2	Box #2, Item GL4PBT
Bottom Width Brackets	2	
Rack Assembly Hardware & Grounding Lug	-	
Top Depth Brackets	2	Box #3, Item GL4PFB24XX (XX=24, 29, 32 or 36)
Bottom Depth Brackets	2	

SPECIFICATIONS

Dimensions:
4P1224-24: 84" x 20.31" x 24", 45 RMU
4P1224-29: 84" x 20.31" x 29", 45 RMU
4P1224-32: 84" x 20.31" x 32", 45 RMU
4P1224-36: 84" x 20.31" x 36", 45 RMU
4P36-1224-29: 36" x 20.31" x 29", 17 RMU
4P48-1224-29: 48" x 20.31" x 29", 24 RMU
4P60-1224-29: 60" x 20.31" x 29", 31 RMU
4P66-1224-29: 66" x 20.31" x 29", 35 RMU
4P72-1224-29: 72" x 20.31" x 29", 38 RMU
4P96-1224-29: 96" x 20.31" x 29", 52 RMU

Certifications: UL Listed 2416
Construction: Vertical Uprights, extruded aluminum; Top and Bottom Depth Brackets and Top and Bottom Width Brackets, 12 ga.steel
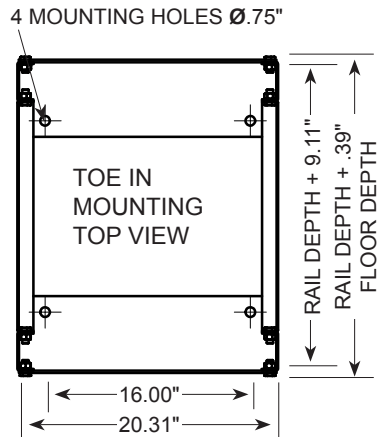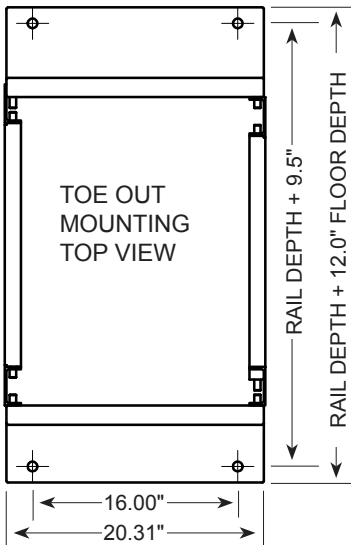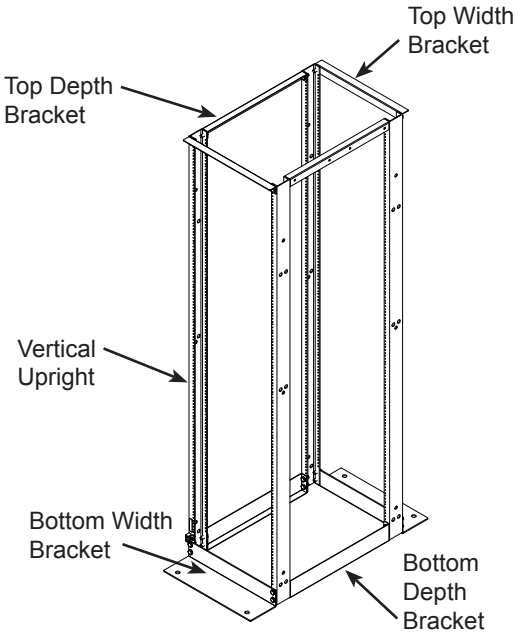**Finish:** Black Powder Coat
Grounding: Ground lug installed on Vertical Uprights
Rail Type: 1#12-24 tapped
Total Max. Load Capacity: 1500 lbs.

4P1224 ASSEMBLY INSTRUCTIONS

Tools Required: 3/4" x 7/16" sockets and 3/4" wrench

Top Width Bracket

Top Depth Bracket

Vertical Upright

Bottom Width Bracket

Bottom Depth Bracket

TOE OUT MOUNTING TOP VIEW

RAIL DEPTH + 9.5"

RAIL DEPTH + 12.0" FLOOR DEPTH

16.00"

20.31"

4 MOUNTING HOLES Ø.75"

TOE IN MOUNTING TOP VIEW

RAIL DEPTH + 9.11"

RAIL DEPTH + .39" FLOOR DEPTH
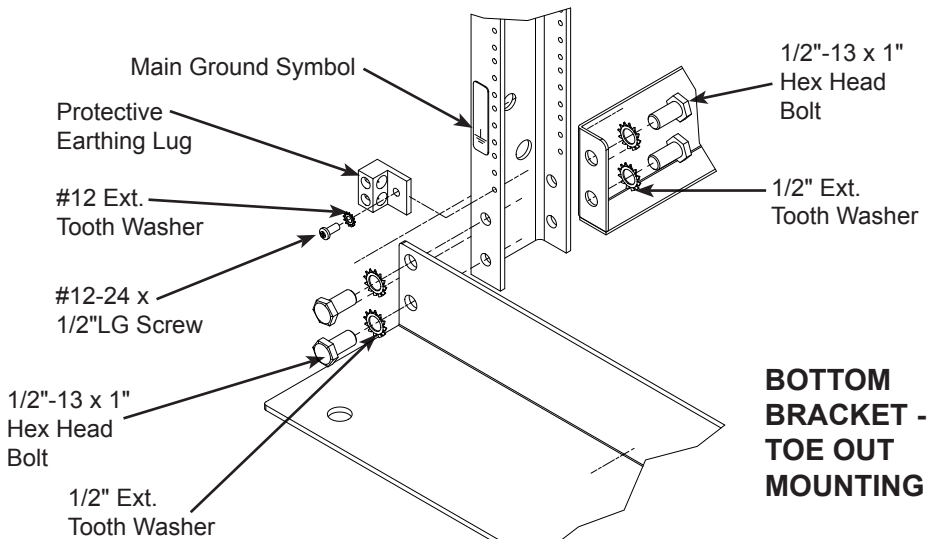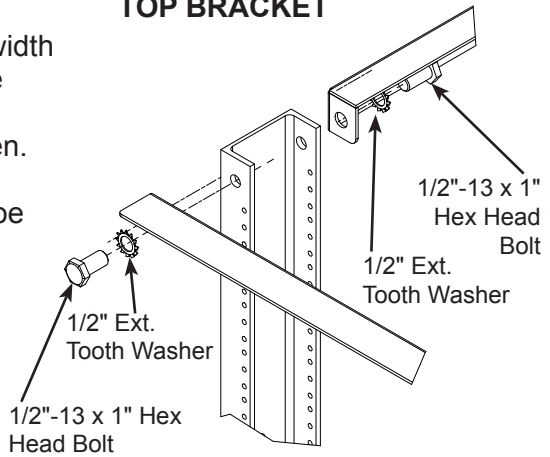
16.00"

20.31"

ASSEMBLY

TOP BRACKET

1. Assemble top and bottom width brackets to uprights (place the bracket with the Great Lakes label on the top). Do not tighten. Bottom width brackets can be assembled with in toe out or toe in mounting.

2. Assemble the top and bottom depth brackets to the uprights and stand assembly up. Make sure rack is square and then tighten all hardware (54 ft-lb torque is recommended).

1/2"-13 x 1" Hex Head Bolt

1/2" Ext. Tooth Washer

1/2" Ext. Tooth Washer

1/2"-13 x 1" Hex Head Bolt

3. Secure rack to floor. All racks should be bolted to a masonry floor, or to an equally stabilizing and secure surface, after desired location is determined. Hardware is not provided for bolting rack to the floor, but Great Lakes' AK101 Seismic Anchor Kit is recommended for masonry floors.

4. Install main protective earthing lug with #12-24 x 1/2" screw at main ground symbol located at the base of the upright on the #12-24 tapped hole.

Main Ground Symbol

Protective Earthing Lug

#12 Ext. Tooth Washer

#12-24 x 1/2"LG Screw

1/2"-13 x 1" Hex Head Bolt

1/2" Ext. Tooth Washer

1/2"-13 x 1" Hex Head Bolt

1/2" Ext. Tooth Washer

BOTTOM BRACKET - TOE OUT MOUNTING

8

4PHD29 HEAVY DUTY 4 POST RACK
OVERVIEW

4PHD29 Racks are designed to securely hold 19" rack mount equipment, networking equipment, etc.

Components of the 4PHD29 Rack will ship in one box.

What's Included:

Component	Qty.
Vertical Uprights	4
Rack Mounting Hardware	50
Width Brackets	4
Depth Brackets	4
Rack Assembly Hardware & Ground Lug	-

SPECIFICATIONS

Dimensions: 80.50"H x 20.563"W x 29"D
Rack Spaces: 42 RMU
Certifications: UL Listed 2416
Construction: Vertical Uprights, Width and Depth Brackets: 12 ga. Steel
Finish: Steel - Black Powder Coat
Grounding: Ground lug installed on Vertical Uprights
Rail Type: 3/8" sq. (M6) Cage Nuts
Total Max. Load Capacity: 2000 lbs.

4PHD29 ASSEMBLY INSTRUCTIONS

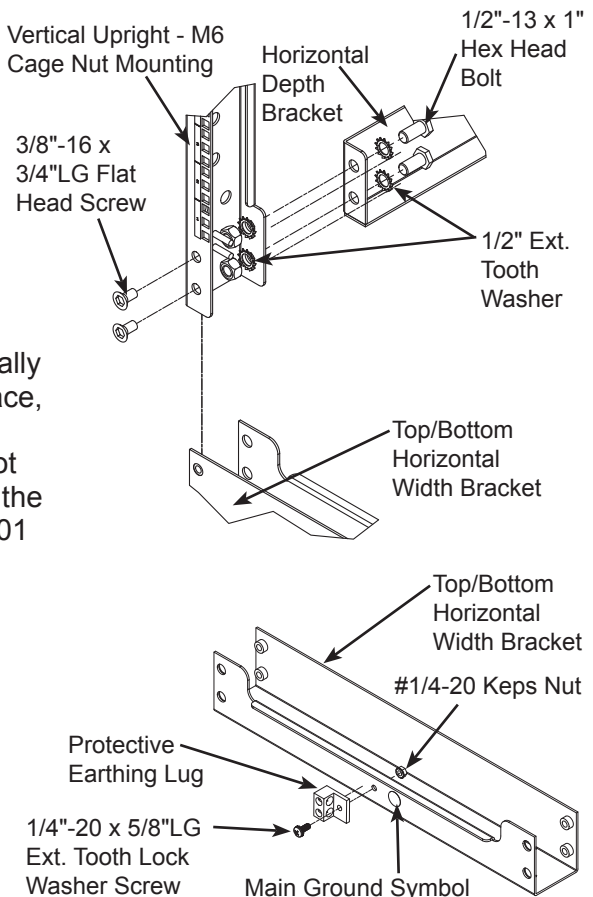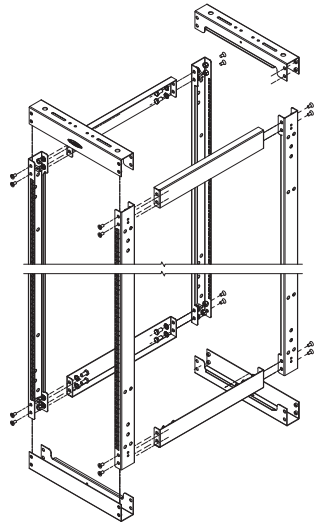Tools Required: 3/4" socket, 3/4" wrench and 7/32" hex drive

ASSEMBLY

1. Assemble top and bottom width brackets to uprights (place the bracket with the Great Lakes label on the top). Align the uprights so the #1 on the RMU labels is towards the bottom. Do not tighten.

2. Assemble the top horizontal depth brackets to the uprights, stand assembly up and then assembly bottom horizontal depth brackets to uprights. Make sure rack is square and then tighten all hardware (54 ft-lb torque is recommended when tightening 1/2" bolts; 24 ft-lb torque is recommended when tightening 3/8" screws).

3. Secure rack to floor. All racks should be bolted to a masonry floor, or to an equally stabilizing and secure surface, after desired location is determined. Hardware is not provided for bolting rack to the floor, but Great Lakes' AK101 Seismic Anchor Kit is recommended for masonry floors.

4. Locate the hole near the IEC 60417 earthing symbol on the horizontal width bracket and attach the main protective earthing lug.

Vertical Upright - M6 Cage Nut Mounting

3/8"-16 x 3/4"LG Flat Head Screw

Horizontal Depth Bracket

1/2"-13 x 1" Hex Head Bolt

1/2" Ext. Tooth Washer

Top/Bottom Horizontal Width Bracket

Top/Bottom Horizontal Width Bracket

#1/4-20 Keps Nut

Protective Earthing Lug

1/4"-20 x 5/8"LG Ext. Tooth Lock Washer Screw

Main Ground Symbol

POWER AND GROUNDING OF ALL RACKS

When using PDUs, each PDU should be connected to a committed branch circuit that is rated for the continuous load of all the equipment connected. When not using a PDU, each piece of equipment should be connected to a dedicated branch circuit.

PROTECTIVE EARTHING/GROUNDING

A main protective earthing lug is provided.

⚠ WARNING: To avoid injury to persons or loss of life, ground rack individually to the dedicated branch circuit earthing ground.

CONNECTING MAIN PROTECTIVE EARTHING LUG TO THE DEDICATED BRANCH CIRCUIT EARTHING GROUND CONDUCTOR

Connect the dedicated branch circuit earthing ground conductor to the main protective earthing stud located on the support frame using a listed ring or closed-loop terminal.

Although equipment may physically fit into a Great Lakes rack, with or without brackets, customers must also review and comply with the equipment manufacturer's installation and other requirements. For more information, please contact your Great Lakes representative or call 1-866-TRY-GLCC.

When any equipment or accessory is installed in a Great Lakes product, the installation procedures, recommendations and product warranty requirements of the equipment manufacturer must be followed. Great Lakes will not be responsible for any losses or claims arising from a customer's installation of electrical, electronic or other third party products in any Great Lakes racks, unless caused solely by a written configuration prepared by Great Lakes for that customer or by a configuration provided by Great Lakes' website, any configuration relies on complete and accurate information from the customer.

Product specifications are subject to change without prior notice.

GREAT LAKES
CASE & CABINET

Invest in Solid Engineering

Thank you for your business!

WeRack your World! ™

Bicsi CORPORATE MEMBER

Certified WBENC Women's Business Enterprise

REGISTERED ISO 9001 : 2008

MGMT SYS RvA C 074

SRI Quality System Registrar

ANAB

AFCEA Corporate Sponsor

ETSI Associate Member