

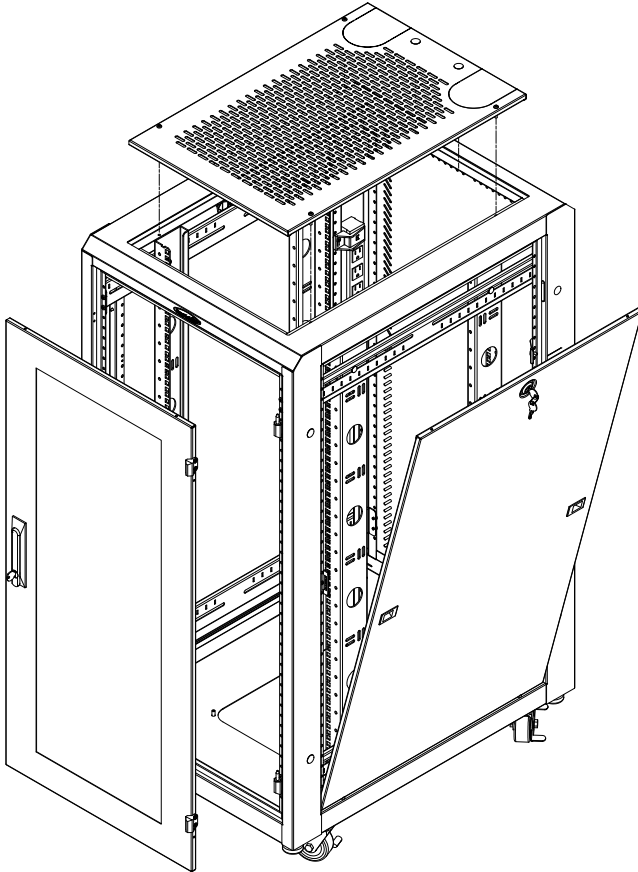


**GREAT LAKES**  
DATA RACKS & CABINETS

GL300E, GL480E and GL600E  
E Cabinets

## **Installation Instructions**

(UL60950-1/UL2416 E Series Equipment Cabinet/Rack)



Instructions for the following Great Lakes cabinets:  
GL300E-2432 • GL480E-2432 • GL600E-2432

[GreatCabinets.com](http://GreatCabinets.com)

**1.866.879.4522**

## 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 E cabinets. In addition, only trained service personnel should install equipment in Cabinets.

### SAFETY SYMBOLS USED IN THIS MANUAL

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



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



**CAUTION:** Failure to follow directions in the caution could result in damage to equipment or storage data.

### SAFETY CONSIDERATIONS



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

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

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

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 cabinet 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 E cabinet and accessories is +50 to +95° F (+10 to +35° C).

The non-operating temperature is -4 to +140° F (-20 to +60° C).

## SERVICE

E cabinets 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 GreatCabinets.com

## WHAT'S INCLUDED

- E unit (assembled)
- Keys as needed (depending on configuration)
- (30) M6 cage nuts (3/8" square) and M6 screws
- This user's manual

**This user's manual applies to the following GL cabinets:**

Part No.	H"	W"	D"	RMU	Weight Cap.
GL300E-2432	30	24	32	13	300 lbs.
GL480E-2432	48	24	32	24	600 lbs.
GL600E-2432	60	24	32	31	600 lbs.

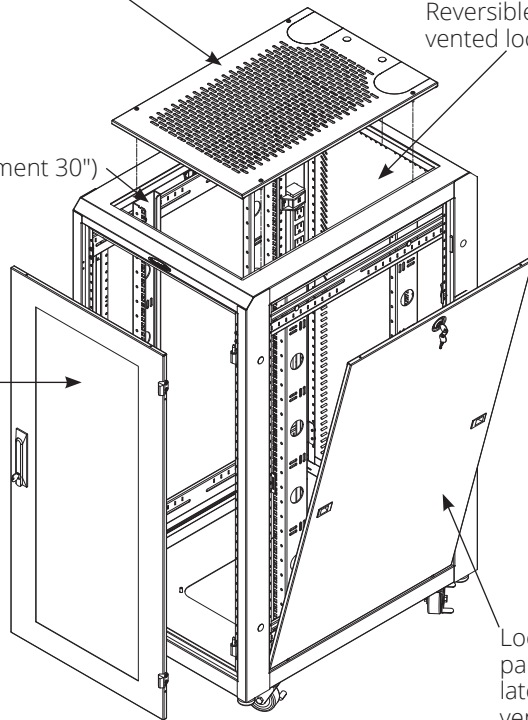
Removable perforated top  
(optional fan & solid tops  
available)

Reversible perimeter  
vented lockable rear door

Universal (M6) rails  
(maximum rail placement 30")

Reversible plexiglas  
lockable front door  
(optional mesh  
door available)

Lockable side  
panels with slam  
latches (optional  
vented side panels  
available)



# INSTALLATION

## Receiving, Unpacking, and Removing the E cabinet from the Pallet

Inspect and report any damage before receiving. Unpack the cabinet by carefully removing the corrugated carton and corners. Avoid damaging the cabinet when removing packaging.



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



**WARNING:** Be careful when moving cabinets before installation. Sudden stops and starts, excessive force, obstructed routes, and uneven floor surfaces may cause the cabinet to topple over.

## Loading Equipment



**WARNING:** Only install equipment after the E cabinet has been properly secured. Do not move the E cabinet assembly while loaded.

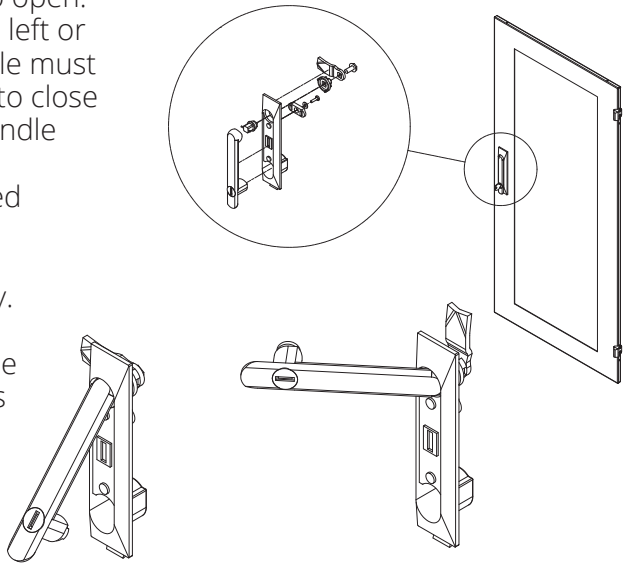
Once in place at the desired/intended location, deploy the leveling feet for maximum stability.

Rated or maximum load capacity for the GL300E is 300 lbs. and the maximum load capacity for the GL480E and GL600E is 600 lbs.

To maintain a uniform distribution of the mechanical load in the E cabinet, load the heaviest equipment first, at the bottom of the E cabinet and load the lighter units at the top.

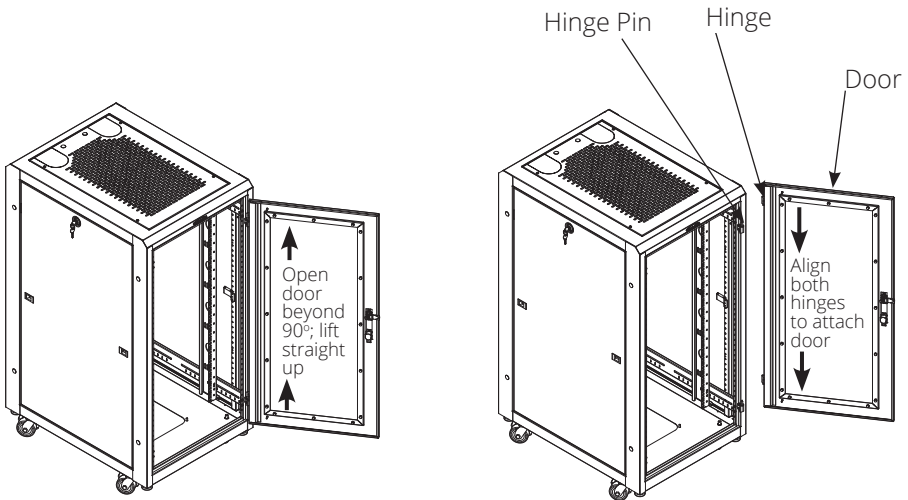
## OPERATING DOOR HANDLE

The door swing handles have been installed and no additional assembly is required. To operate the swing handle, lift up at the bottom of the handle to open. Swing the handle to the left or right to open. The handle must be kept in this position to close the door. Return the handle to the initial position and use the key provided to lock the handle. The lock on the side panels will accept the same key. The swing handles and doors are reversible. The exploded view shows its construction.



## DOOR REMOVAL AND ATTACHMENT

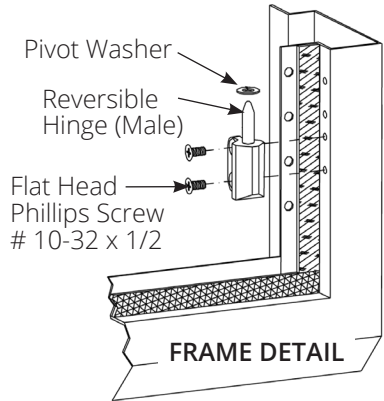
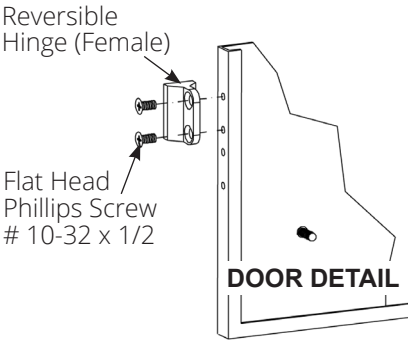
Open the door beyond 90°, grasp the door with both hands and carefully lift upward. When the door is free of both hinge pins, pull the door away from the cabinet. To attach the door, align both hinges of the door to their respective hinge pins on the cabinet and slowly slide the door down until seated.



## FIELD REVERSIBLE FRONT & REAR DOORS

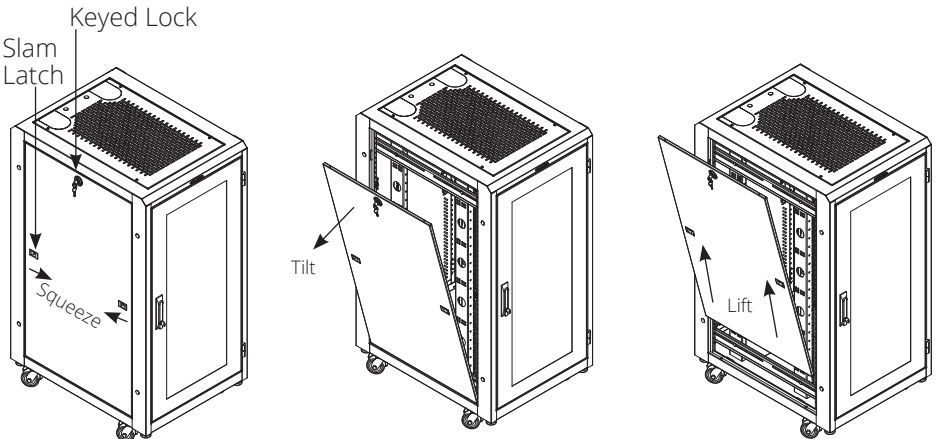
The front and rear doors are installed right hand hinge as standard from the manufacturer. Removing the hinges allows you to reverse the door by flipping them over and reinstalling the hinges using the universal mounting holes. Begin both screws, then tighten while maintaining perfect vertical alignment. See detail below. All cabinet frames and doors have provisions to be hinged right or left hand. The handle can be reversed along with the hinging. See Operating Handle.

### HINGE MOUNTING



### SIDE PANEL REMOVAL

The side panels are secured to the cabinet frame with two quick release latches and a keyed lock. Be sure to unlock the side panel. To remove the side panel, squeeze the quick release latches towards each other. Then tilt the top of the side panel out slightly and lift the side panel up a couple of inches until it is free. To install the side panel, reverse the process. Make sure the slots on the side panel engage with the two tabs at the bottom of the frame.



# CASTER AND LEVELER MOUNTING

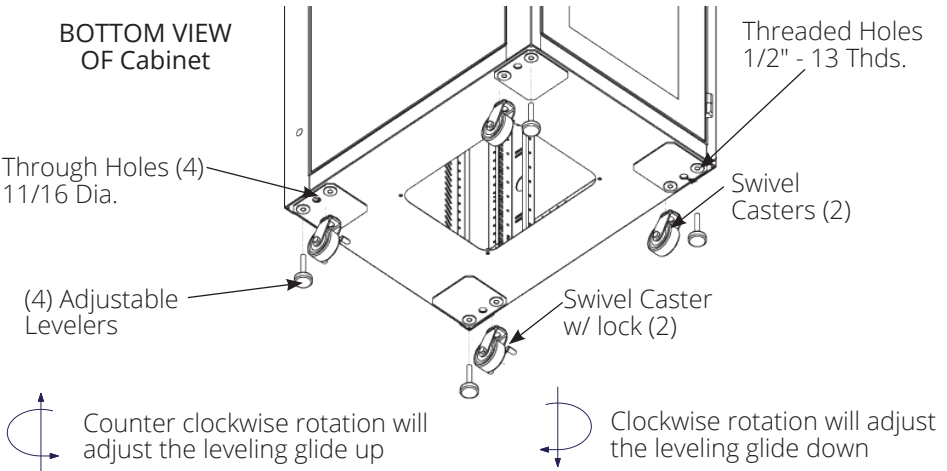


## CAUTION

- To install casters or levelers the cabinet must be tipped onto its side. The cabinet can be very heavy, several people will be required in this process. Please practice safe lifting techniques.
- **DO NOT** lay the cabinet on its front or back, this may damage the door hinges.
- Removing doors and sides will help reduce the weight of the cabinet.
- Before tipping, remove the side panels to prevent damage to the locks and latches.

## CASTER MOUNTING

On the bottom of the cabinet there are eight threaded holes, two in each corner. The holes are threaded 1/2"-13 thds. and will accept the levelers provided. Once the levelers are installed, the cabinet level can be adjusted with the use of a 3/4" open-end wrench. If ordered with casters, two will have brakes that can be actuated by turning the brake lever on the side of the wheel. The four inside holes in each corner are meant to accept the casters. Be sure to thread the caster all the way into the bottom of the cabinet until it is firmly seated.



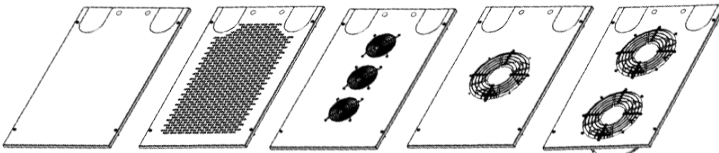
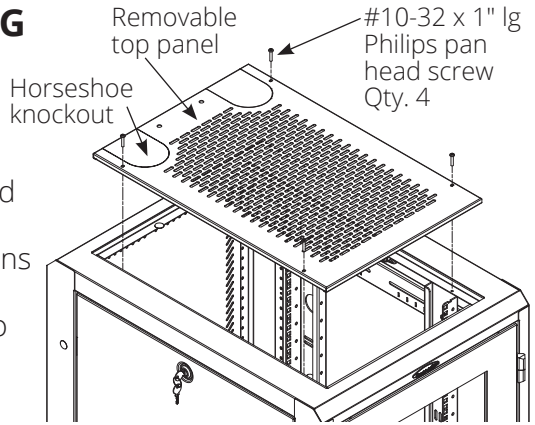
*Note: If you want to use casters AND leveling glides you will need 4" levelers.*

## ANCHOR MOUNTING THRU HOLE

The middle .687 dia. thru holes are for securing the cabinet to the floor. These holes will accept a standard concrete anchor if desired; the Seismic Anchor Kit (AK101) is suggested.

## TOP PANEL MOUNTING

The top panel of the cabinet is installed at the manufacturer. Removing the top panel can be done by removing the four #10-32 x 1" lg. Phillips pan head screws. Then simply lift the top panel out. There are five versions of top panels (perforated is shown). All top panels have two cable access horseshoe knockouts at one end.



TPE-24S  
solid

TPE-24P  
perforated

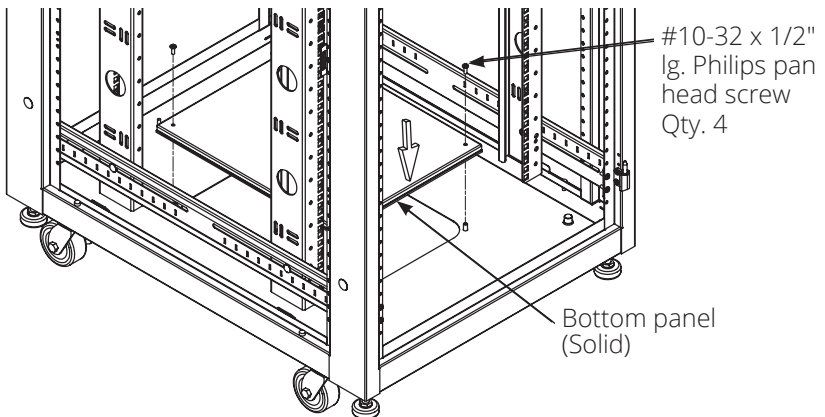
TPE-24F  
Three 75  
CFM fans

TPE-24F10  
One 10"  
CFM fan

TPE-242F10  
Two 10" 550  
CFM fans

## BOTTOM PANELS

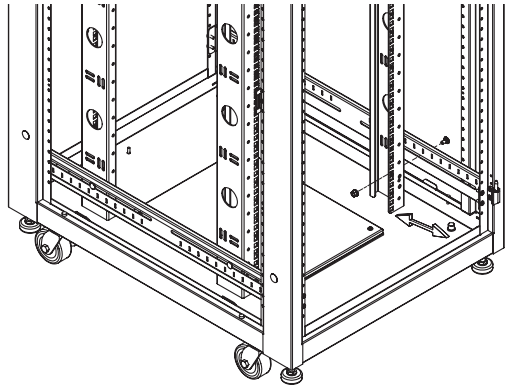
There are several styles of bottom panels available, solid is shown. Styles must be ordered separately. All styles mount to all cabinets. The bottom panels have a foam gasket to ensure a positive seal. The panels mount to four internally threaded studs in the bottom of the cabinet with four #10-32 x 1/2" lg. Phillips pan Head Screws. See detail.





## MOUNTING RAILS

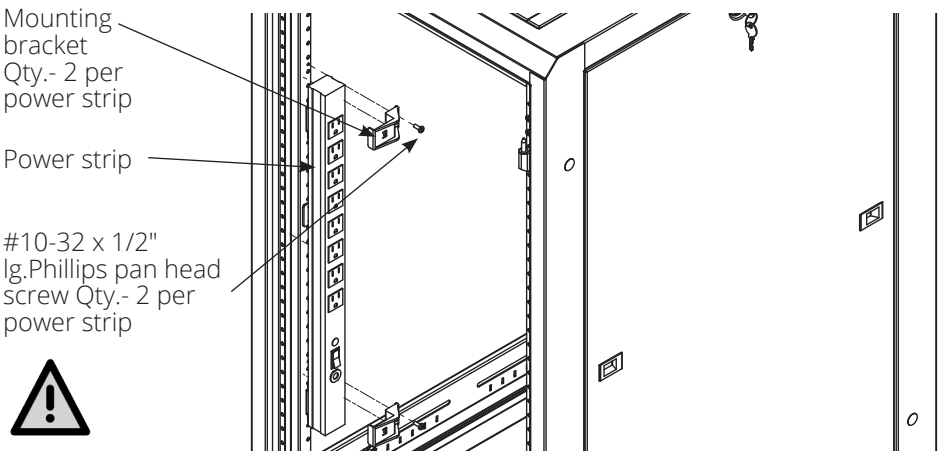
The vertical mounting rails (2 pair - 12 Ga. steel) come installed with all standard Great Lakes cabinets at 19" EIA spacing; universal mounting (3/8" sq. hole); 310-E compliant. The rails can be adjusted front to rear by loosening the 1/4"-20 hex nut and sliding to desired location then retighten the hex nut (7/16" wrench or socket).



## VERTICAL POWER STRIP MOUNTING

For your convenience, we have provided mounting brackets in the left rear and right rear corners of the GL480E and GL600E cabinets for mounting the 7218-24 power strips vertically. Typically any power strip shipped with a cabinet will be installed at the manufacturer. To install a power strip in the field, remove the top power strip bracket by loosening the #10-32 x 1/2" lg. screw that secures the bracket to the frame. Slide the power strip into the lower power strip bracket. Re-attach the top power strip bracket to secure the power strip.

*Note: GL300E cabinet comes with 7219 powerstrip for 19" mounting.*



## POWER

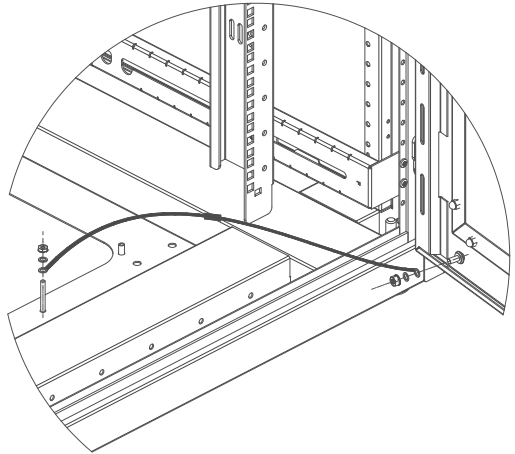
When using power distribution units (PDUs), each PDU should be connected to a committed branch circuit that is rated for the continuous load of all the equipment connected. When not using a PDU, each piece of equipment should be connected to a dedicated branch circuit.

## GROUNDING

### GROUNDING KIT, GR101

Protective grounding studs are provided along with grounding jumperwires that electrically bond the cabinet doors and sides to the cabinet frame.

If a ground wire needs to be disconnected (e.g. when the cabinet door needs to be removed but is attached to the cabinet with the ground wire), simply pull apart the ground wires.



## PROTECTIVE GROUNDING

Protective grounding studs are provided along with grounding jumper wires that electrically bond the cabinet doors to the cabinet frame.



**WARNING:** To avoid injury to persons or loss of life, ground each cabinet individually to the dedicated branch circuit ground.

### Connecting Main Protective Grounding Stud to the Dedicated Branch Circuit Ground

Connect the dedicated branch circuit ground connector to the main protective grounding stud located inside at the bottom rear of the cabinet frame using a listed ring or closed-loop terminal.

### Connecting Main Protective Grounding Stud to the Protective Bonding Conductors

Connect the rear doors to the main protective grounding studs located inside at the bottom and top rear of the cabinet chassis using a listed ring or closed-loop terminal. Connect the front door to the grounding stud located inside at the bottom front of the cabinet frame using a listed ring or closed-loop terminal.

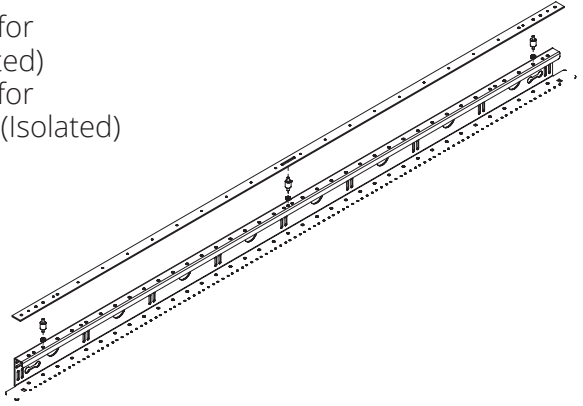
### Parts Not Bonded to Protective Earthing Terminal

The following parts are not effectively bonded to the protective earthing terminal: rails and front to back rail horizontals. If these parts need to be bonded to the protective earthing terminal, do so in accordance with Article 250 of the National Electric Code.

## COPPER BUS BARS

It is important to note that grounding the cabinet does not ground the equipment mounted within it. In order for any individual devices and components mounted within an cabinet to be grounded, they must be connected to a copper bus bar. Available copper bus bars include:

- CBB-19 Copper Bus Bar for 19" rack mounting (Isolated)
- CBB-48 Copper Bus Bar for 48"H and 60"H Cabinets (Isolated)



## ACCESSORIES

### REMOVABLE TOP PANELS

Part No.	Description
TPE-24F	Top panel and fan assembly
TPE-24F10	Top panel & fan assembly w/550 CFM 10" fan
TPE-24S	Solid top panel with (2) 4" horseshoe knockouts
TPE-24P	Perforated top panel with (2) 4" horseshoe knockouts

### STATIONARY SHELVES FOR 19" MOUNTING

Part No.	Description
7206-FR-AHD	Front & rear mount, adjustable - 17.50"W x 22.25"D
7206-FR-ADHD	Front & rear mount, adjustable - 17.50"W x 27.25"D
7206-FR-A28HD	Front & rear mount, adjustable - 17.50"W x 28.00"D

### SLIDING SHELF FOR 19" MOUNTING

Part No.	Description
7206-FRSL-AHD	Front & rear mount sliding adjustable - 17.50"W x 22.00"D
7206-FRSL-ADHD	Front & rear mount sliding adjustable - 17.50"W x 26.00"D

### COOLING EQUIPMENT & NETWORKING HARDWARE

Part No.	Description
7217FT	Fan tray with three 75 CFM fans
7217FT-3	Front & rear mount, adjustable fan tray w/3, 75 CFM fans
G101	Networking hardware

Visit our web site at [GreatCabinets.com](http://GreatCabinets.com) for a complete list of available accessories.



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for your  
business!



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