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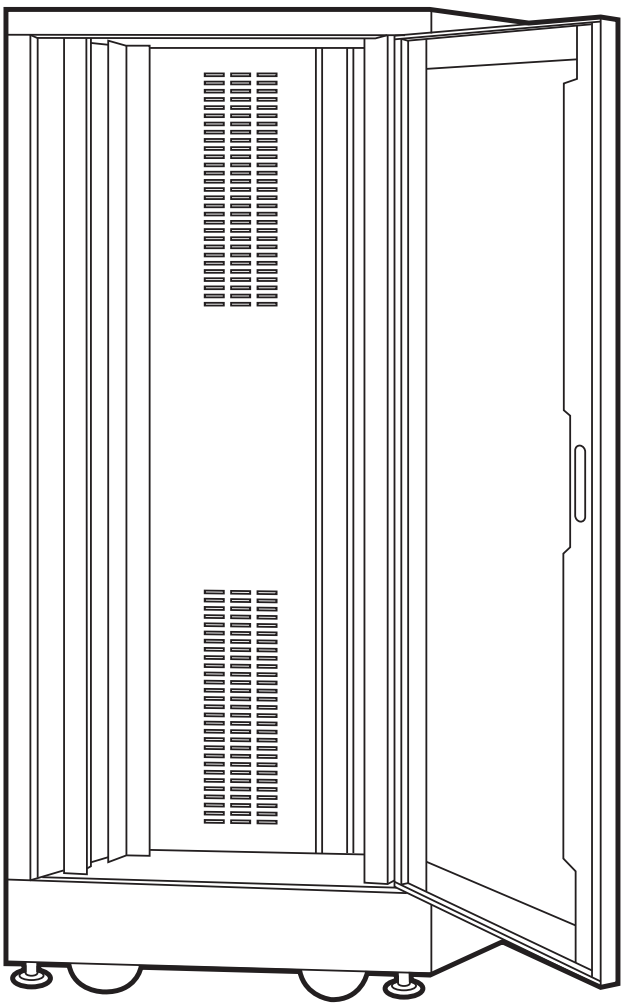
BLACK BOX®
NETWORK SERVICES

FEBRUARY 2008

| | | | | |
|---|---|---|---|---|
| 525056-R2 | 525068-R2 | 525078-R2 | 525099-R2 | 39966 |
| 525057-R2 | 525069-R2 | 525079-R2 | 525100-R2 | 39967 |
| 525058-R2 | 525070-R2 | 525080-R2 | 525101-R2 | 39970 |
| 525059-R2 | 525071-R2 | 525081-R2 | 536000-R2 | 40169 |
| 525060-R2 | 525072-R2 | 525094-R2 | 536001-R2 | RM400 |
| 525061-R2 | 525073-R2 | 525095-R2 | 536002-R2 | RM404 |
| 525062-R2 | 525074-R2 | 525096-R2 | 536003-R2 | RM405 |
| 525063-R2 | 525075-R2 | 525097-R2 | 39964 | RM406 |
| 525066-R2 | 525076-R2 | 525098-R2 | 39965 | RM407 |
| 525067-R2 | 525077-R2 | | | |

# Elite Series Data Cabinets

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# 1. Specifications

**External Height:** 525056-R2–525059-R2: 30" (76.2 cm);
525060-R2–525063-R2: 48" (121.9 cm);
525066-R2–525069-R2: 60" (152.4 cm);
525070-R2–525073-R2: 72" (182.9 cm);
525074-R2–525077-R2: 78" (198.1 cm);
525078-R2–525081-R2, 536000-R2–536003-R2: 84" (213.4 cm)

**Usable Height:** 525056-R2–525059-R2: 12U;
525060-R2–525063-R2: 23U;
525066-R2–525069-R2: 30U;
525070-R2–525073-R2: 37U;
525074-R2–525077-R2: 40U;
525078-R2–525081-R2, 536000-R2–536003-R2: 43U

**Hole-to-Hole Distance:** Rails adjustable for 19", 23", or 24" (48.3, 58.4, or 61 cm) rackmounting

**External Width:** Each data cabinet: 29" (73.7 cm)

**External Depth:** 525056-R2–525063-R2, 525066-R2–525081-R2: 30" (76.2 cm);
536000-R2–536003-R2: 36" (91.4 cm)

**Power Strip Weight:** 525056-R2–525059-R2: 100 lb. (45.4 kg), 6-outlet;
525060-R2–525063-R2: 125 lb. (56.7 kg), 8-outlet;
525066-R2–525069-R2: 150 lb. (68 kg), 16-outlet;
525070-R2–525073-R2: 200 lb. (90.7 kg), 16-outlet;
525074-R2–525077-R2: 250 lb. (113.4 kg), 16-outlet;
525078-R2–525081-R2: 300 lb. (136.1 kg), 16-outlet;
536000-R2–536003-R2: 400 lb. (181.4 kg), 16-outlet

**Total Weight Capacity:** 1000 lb. (455 kg)

# 2. After Receiving Your Cabinet

Great care has been taken in packaging your cabinet to ensure that it arrives safely. If upon receipt any damage is noted, the carrier should be notified immediately to file a damaged freight claim.

Please make sure that you received the cabinet you ordered. Listed below are all the Elite™ Series Data Cabinets offered.

| | Blue | Black | Ivory | Gray |
|---|---|---|---|---|
| 30" Cabinet w/6-Outlet Power Strip | 525056-R2 | 525057-R2 | 525059-R2 | 525058-R2 |
| 48" Cabinet w/8-Outlet Power Strip | 525060-R2 | 525061-R2 | 525062-R2 | 525063-R2 |
| 60" Cabinet w/8-Outlet Power Strip | 525066-R2 | 525067-R2 | 525068-R2 | 525069-R2 |
| 72" Cabinet w/16-Outlet Power Strip | 525070-R2 | 525071-R2 | 525072-R2 | 525073-R2 |
| 78" Cabinet w/16-Outlet Power Strip | 525074-R2 | 525075-R2 | 525076-R2 | 525077-R2 |
| 84" Cabinet w/16-Outlet Power Strip | 525078-R2 | 525079-R2 | 525080-R2 | 525081-R2 |
| 84"H x 36"D Cabinet w/16-Outlet Power Strip | 536000-R2 | 536001-R2 | 536002-R2 | 536003-R2 |

## NOTE

**When ordering an Elite Series Data Cabinet, add -ST onto the end of the product code for a solid (non-vented) top panel, -3F for a top panel with three built-in exhaust fans, or -6F for a top panel with six built-in exhaust fans. (Vented top is standard.)**

For a customized cabinet, these options are also available. (The top panel options are available when you order your cabinet, or they can be added later.)

| | Blue | Black | Ivory | Gray |
|---|---|---|---|---|
| Top Panel, Solid | 39964 | 39965 | 39966 | 39967 |
| Top Panel w/3 Exhaust Fans | 525094-R2 | 525097-R2 | 525096-R2 | 525095-R2 |
| Top Panel w/6 Exhaust Fans | 525098-R2 | 525101-R2 | 525100-R2 | 525099-R2 |

| | |
|---|---|
| Elite Series Multi-Cabinet Joining Kit | 40169 |
| Sliding Server Shelf (weight capacity of up to 100 lb. [45 kg]) | 39970 |
| Elite Series Fixed Server Vented Shelf (0.9"H x 17.5"W x 22.25"D, weight capacity of up to 200 lb. [91 kg]) | RM399 (see separate manual) |
| Elite Series Sliding Server Shelf with Fins (17.5"W x 26"D, weight capacity of up to 110 lb. [50 kg]) | RM400 |
| Elite Series Adjustable, Heavy-Duty Fixed Shelf, 27¼"D (69.2 cm); holds 150 lb. (68 kg) | RM403 (see separate manual) |
| Additional Set of 19" Mounting Rails | RM404 |

| | Blue | Black | Ivory | Gray |
|---|---|---|---|---|
| M6 Mounting Rails (Set of 2) for 72"H cabinet | | RM405 | | |
| M6 Mounting Rails (Set of 2) for 78"H cabinet | | RM406 | | |
| M6 Mounting Rails (Set of 2) for 84"H cabinet | | RM407 | | |

The cabinet is shipped with both front and rear doors unlocked and both side panels locked. You will find an accessory kit strapped to the inside-front mounting rail. This kit contains two pairs of side-panel keys and two pairs of door keys. In addition, you will find 60 inches (152.4 cm) of edge guard (see **Section 7.4**) and eighty 10-32 panhead Phillips screws provided for your panel and equipment mounting.

# 3. Leveling the Cabinet

Elite Series Data Cabinets are shipped with both casters and leveling legs for your convenience. The leveling legs can be lowered by loosening the jam nut (see Figure 3-1) under the cabinet (using a ¾" open-end wrench) and turning the adjusting nut (using a 9/16" open-end wrench) to the desired leg height. After the leg is adjusted to the proper height, retighten the jam nut (see Figure 3-1).

## CAUTION

**After wheeling the cabinet into place, leveling legs must be lowered for maximum cabinet stability. This is extremely important before loading sliding shelves to minimize the potential of accidental cabinet tipping.**

**Some applications where cabinets are top heavy or heavy loads are extended on sliding shelves may require bolting the cabinet directly to the floor or using other supports to prevent tipping.**

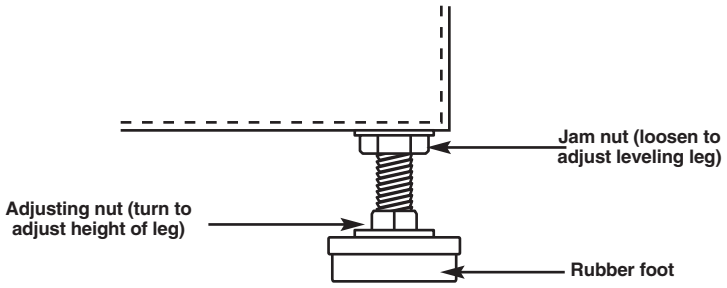


**Figure 3-1. The jam nut and adjusting nut.**

# 4. Operating the Door Latch

The front and rear doors incorporate a unique flush-locking handle. To open the latch, use your thumb to press the bottom portion of the handle where indicated (Figure 4-1). Catch the top of the lever with your index finger; pull outward to unlatch and open the door. To close and latch the door, simply push the door shut. *It will be latched whether the latch is locked or unlocked.*

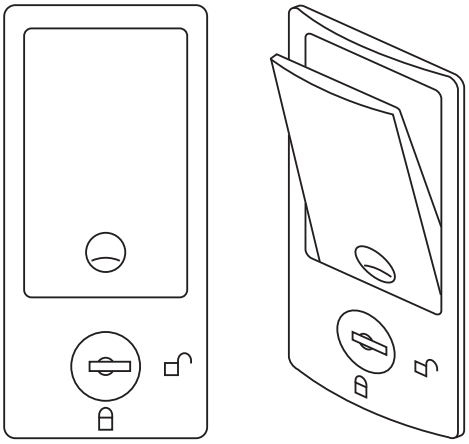

**Figure 4-1. Opening the latch.**

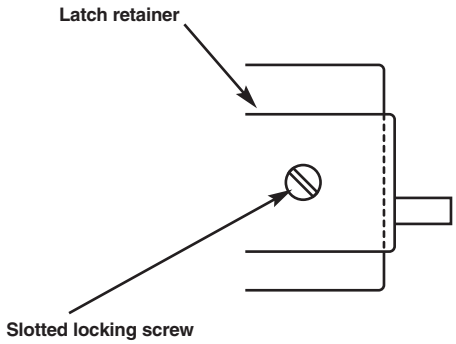


**Figure 4-2. Rear (right) view of the latch.**

# 5. Removing or Changing the Doors

Both the front and rear doors are removable and reversible. (We recommend that two people support the weight of the door when removing it from the cabinet.)

## 5.1 Removing a Door

To remove a door, it's only necessary to disengage the top hinge. The spring-loaded door hinges are supplied with safety brackets bolted in place to prevent accidental disengagement of the door.

Open the door and remove the top hinge safety plate using a ⅜" hex socket or wrench, taking off two 10-32 lock nuts (Figure 5-1). The hinge will remain in place on the door with a second set of nuts located under the safety plate. With the safety plate removed *and the door supported by another person*, disengage the hinge by pulling down on the hinge receptacle. Use care not to tilt the door excessively with the bottom pin engaged.

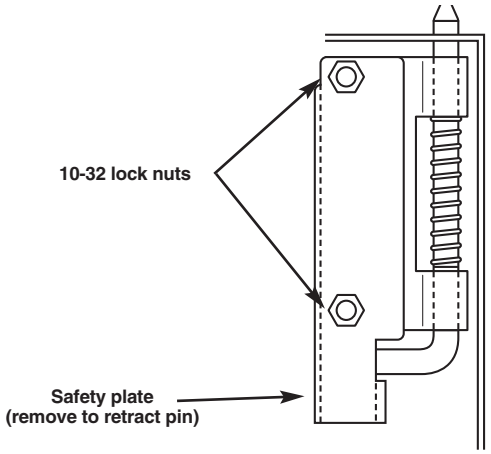


**Figure 5-1. Remove the lock nuts.**

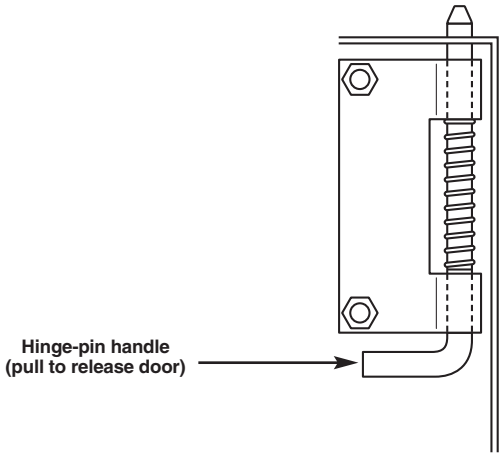


**Figure 5-2. The hinge-pin handle.**

## 5.2 Installing a Door

Pull down on the top hinge-pin handle (Figure 5-2, on the previous page) while inserting the bottom hinge pin into the lower hinge receptacle. Align the top hinge pin with the top hinge receptacle and release the spring-loaded pin handle. *Make sure that both pins are fully engaged into the hinge receptacles while the door is being supported by another person.* The safety bracket should now be installed using the two 10-32 lock nuts furnished.

## 5.3 Reversing the Door Swing

1. If the doors require reverse hinging, remove the door you would like to reverse following the instructions in **Section 5.1**.

2. Relocate the collar hinge spacer on the opposite side of the cabinet/frame.

3. The latch catch on both door frames can now be relocated to the opposite side of the door opening by removing one Phillips 6-32 flat-head screw from the center of the catch, pulling the catch out through the frame slot, and reinstalling it on the opposite side (Figure 5-3, on the next page).

6. The door can now be turned upside down and mounted with the hinges on the opposite side using the instructions in **Section 5.2**.

The latch is designed to reverse in case you only reverse one door. If both doors have been reversed, you may want to switch the door latch from the front door to the rear door as the latch will be upside down in the reversed position. This step is optional because the latch will function properly in either position. To switch front and rear latches, remove one slotted locking screw on the back side of each latch assembly, releasing the latch retainer (see Figure 4-2). The latch will now push out through the opening in the door. Insert latch into the opening of the opposite door with the latch pawl facing away from the hinge side of the door. Replace the latch retainer.

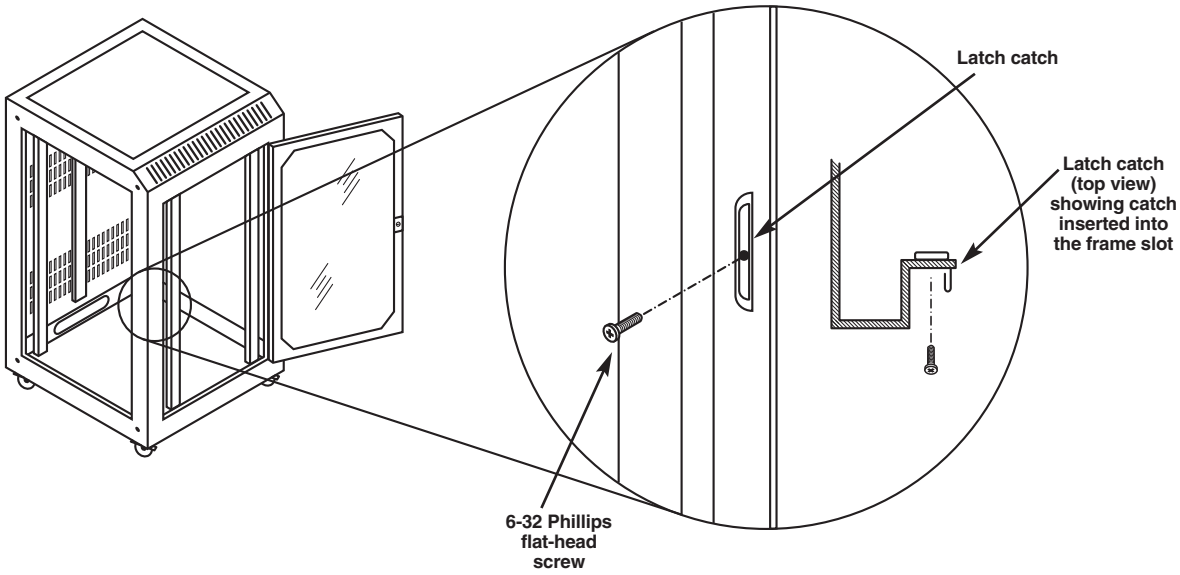


**Figure 5-3. Relocating the latch catch.**

# 6. Side Panels

## 6.1 Removing a Side Panel

The side panels can easily be removed by unlocking the center cam lock. The panel can now be tilted out to where you can grasp it from the sides and lift it off the bottom panel retainers.

## 6.2 Installing a Side Panel

Center the bottom of the panel into the frame opening, engaging the bottom panel retainers into the slots located in the bottom lip of the panel.

*For the 48", 60", 72", 78", and 84" models*, push the top of the panel into the frame opening while pulling the two side latches toward the center of the panel. With the panel pushed into place, release the latches, engaging the latch brackets on the frame. The cam lock in the top center of the panel can now be locked for security.

*For the 30" model*, the cam lock in the top center of the panel can now be locked to hold the panel in place as well as for security.

# 7. Adjusting the Mounting Rails

Your Elite Series Data Cabinet is shipped ready to use in the 19" rackmount position.

## NOTE

**The same rails can also be used in the 23" or 24" rackmount position.**

Mounting rails are provided with a standard ⅝" ⅝" ½" EIA hole pattern and the holes are tapped for 10-32 hardware (Figure 7-1). M6 rails (with square holes) are also available (RM405–RM407). They mount in the same way as the regular rails.

For ease of panel and equipment alignment from rail to rail, arrows are stamped every 5.25" or every three 1.75" rack units on the face of each rail (Figure 7-1).

10-32 equipment mounting hardware is provided in the standard accessory kit that is packaged inside your cabinet.

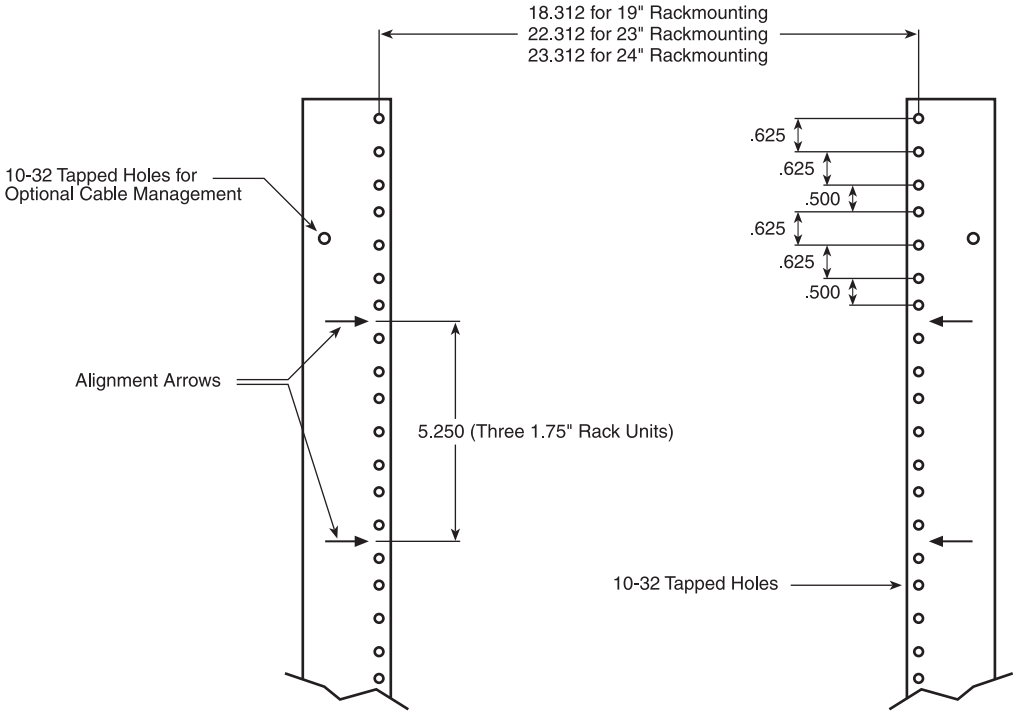


**Figure 7-1. The mounting rails.**

## 7.1 Switching from 19" to 23" Rack Spacing

Remove the 5/16-18 hex-head bolts (Figure 7-2) that secure the rail to the adjustable brackets (one at the top and one at the bottom of each rail). Reposition the rail so that the bolt enters the middle position (Figure 7-3) on the bracket and tighten. Repeat this procedure on all the rails. Your rails will now accept 23" rackmount components.

## 7.2 Switching from 19" to 24" Rack Spacing

Remove the 5/16-18 hex-head bolts (Figure 7-2) that secure the rail to the adjustable brackets (one at the top and one at the bottom of each rail). Reposition the rail so that the bolt enters the far outside position (Figure 7-3) on the bracket and tighten. Repeat this procedure on all the rails. Your rails will now accept 24" rackmount components.

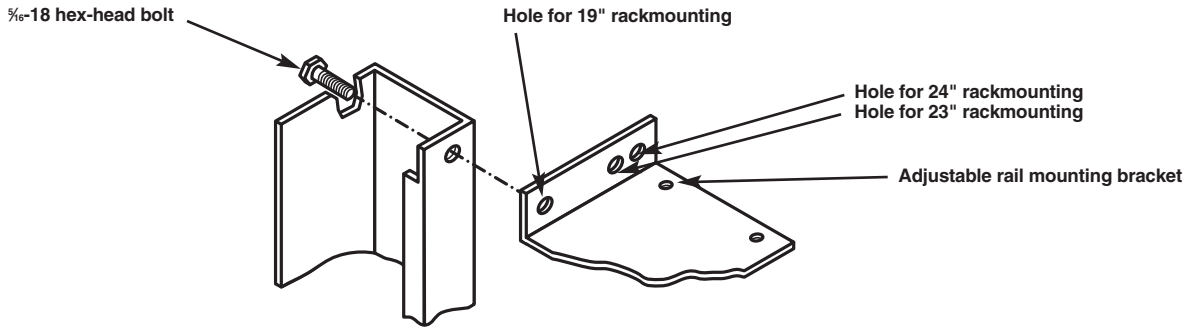


**Figure 7-2. Removing the bolts.**

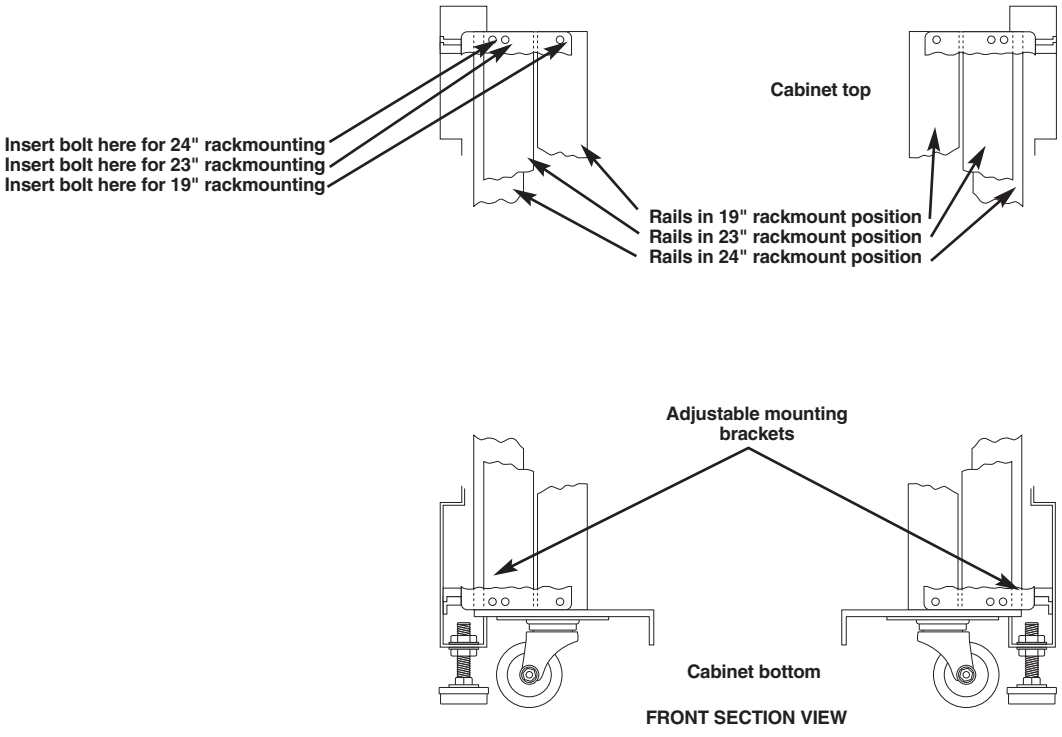


**Figure 7-3. Repositioning the bolt.**

## 7.3 Adjusting Rails Front to Back

The rails can be adjusted easily from front to rear in one-inch increments by removing the two ¼-20 hex head bolts (Figure 7-4) from the top and bottom support brackets and repositioning as desired.

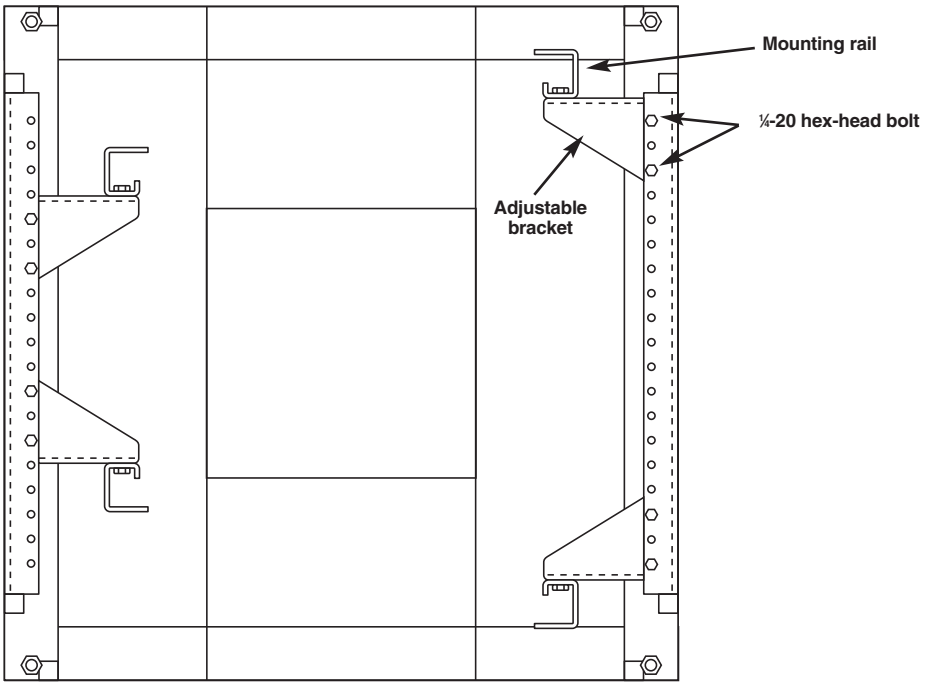


**Figure 7-4. Adjusting the rails.**

## 7.4 Cable Access

The Elite Series Data Cabinet is furnished with a variety of cable entrance/exit ports. The top and bottom of the cabinet are removable for cable access. Two (for the 48", 60", 72", 78", and 84" models) or four (for the 30" models) 1.75" diameter ports are located on the top rear frame member and two are located on the rear bottom frame member. These ports can be used for conduit, power cord exit, etc. The rear of the cabinet also features two large cable access cutouts below the rear door that can be used by removing the two 6-32 panhead locking screws that secure the cover plates. The standard accessory kit provided inside the enclosure contains 60 inches (152.4 cm) of rubber edge guard that can be applied to the metal edges on any of the cable access ports to protect your cables.

## 7.5 Power Strip

A power strip is provided and mounted in the rear mounting rails. The power strip for the 30" model has 6 outlets and must be mounted horizontally. The power strips for the 48" and 60" cabinets have 8 outlets and can be positioned horizontally or vertically. The power strips for the 72", 78", and 84" have 16 outlets and can be positioned vertically in the cabinets.

The power strip is equipped with an on/off indicator on the front face and a 15-amp circuit breaker located in the end cap on the same end as the indicator.

# 8. Installing the Elite Series Sliding Server Shelf (RM400)

## 8.1 What's Included

- (4) mounting brackets
- (1) shelf assembly
- (8) 10-32 screws
- (12) wing nuts

## 8.2 Installation

1. There is a slide release tab on each side. Push the tabs in and pull the shelf tray from the assembly by holding the cable support bar and pulling out the shelf.

2. Mount the server fins on the shelf tray. The studs on the bottom of the fins should be placed in the long slots on the top of the shelf tray; use wing nuts to secure them underneath the shelf tray. Use four fins for two servers or two fins for one large server.

3. Mount the remaining part of the shelf assembly to the mounting rails (at the desired height) using two 10-32 screws per bracket. Do not tighten the screws.

4. Slide the shelf tray back onto the mounted portion of the assembly so that the slide locks to the shelf. Tighten the screws on the mounting brackets once the shelf tray is secured back in the assembly.

5. Attach the cable bridges to the rear slot on the shelf tray using two wing nuts (included) and two lockwashers (not included) per bridge.

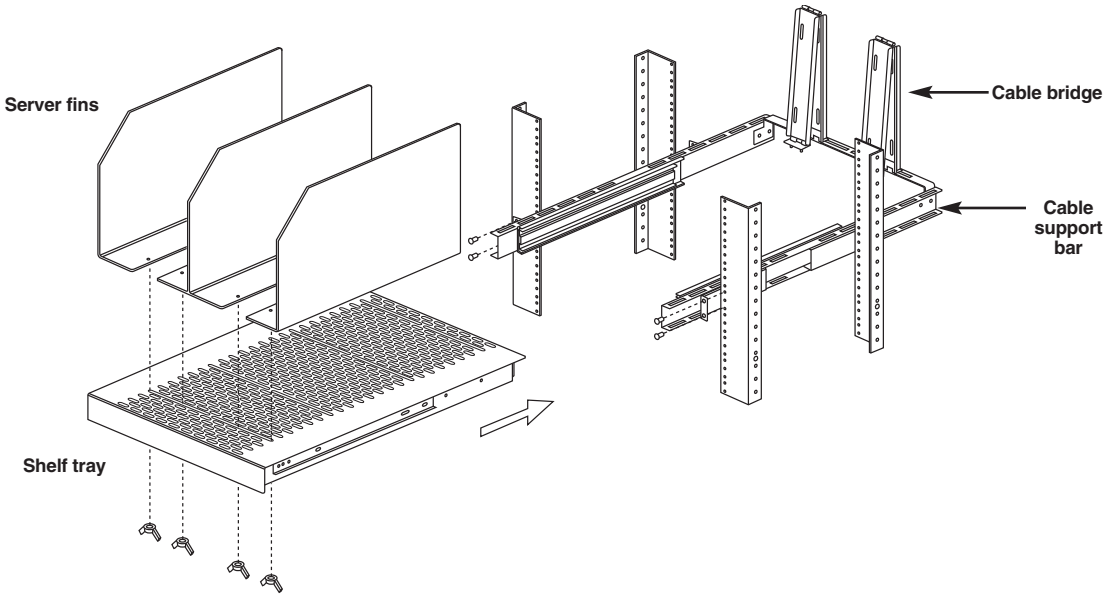


**Figure 8-1. Sliding server shelf.**

# 9. Top Panel

The top panel is available as a solid top, or with three or six fans. Colors include blue, black, ivory, or gray. The panel measures 23.3"W x 24.3"H (59.2 x 61.7 cm). The airflow for each fan is 75 CFM. Figure 9-1 illustrates the six-fan top panel.

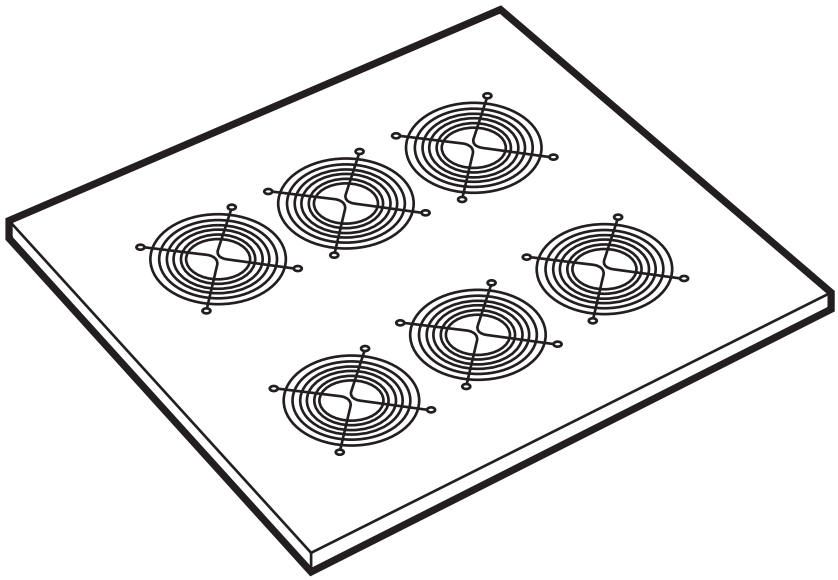

**Figure 9-1. Top panel with six fans.**

# 10. Multi-Bay Joining Kit

## 10.1 What's Included

- (4) hex bolts
- (4) nuts
- (4) washers
- (4) lockwashers

## 10.2 Description

The Multi-Bay Joining Kit consists of the above hardware, which is used to join together two Elite Series Data Cabinets (see Figure 10-1). Use the kit when you need to install more equipment than will fit in just one cabinet.

1. From the inside of the first cabinet, install the hex bolts in the holes on the four corners of the cabinet.
2. Line up the holes on the second cabinet with the installed hex bolts on the first cabinet.
3. Push the hex bolts through the holes on the second cabinet.
4. Attach the washers and nuts or lockwashers to the bolts connecting the two cabinets.
5. Tighten the bolts.

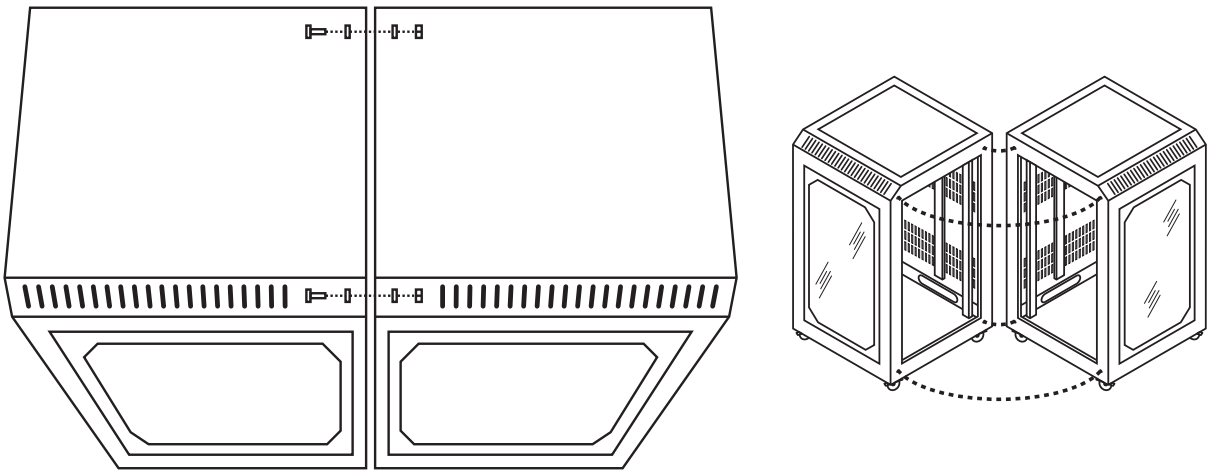

**Figure 10-1. Two cabinets attached via the Multi-Bay Joining Kit.**

# 11. Troubleshooting

## 11.1 Calling Black Box

If you determine that your Elite Series Data Cabinet is malfunctioning, do not attempt to alter or repair the unit. It contains no user-serviceable parts. Contact Black Box at 724-746-5500.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description, including:

- the nature and duration of the problem.
- when the problem occurs.
- the components involved in the problem.
- any particular application that, when used, appears to create the problem or make it worse.

## 11.2 Shipping and Packaging

If you need to transport or ship your Elite Series Data Cabinet:

- Package it carefully. We recommend that you use the original container.
- If you are shipping the cabinet for repair, make sure you include everything that came in the original package. Before you ship, contact Black Box to get a Return Authorization (RA) number.