

Compaq StorageWorks

Universal Rack-Mounting Kit

Open Card Completely Before Beginning Installation Procedures

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Printed in the U.S.A.

Universal Rack-Mounting Kit
Third Edition (September 2001)
EK-URM1C-IM. C02
Compaq Computer Corporation

About This Card

This installation card identifies the rack-mounting kit contents and provides procedures for installing the kit. This rack-mounting kit can be used with Compaq Rack Series-9000 and Series-7000 racks for both 3U drive enclosures and 4U controller enclosures.

Kit Contents

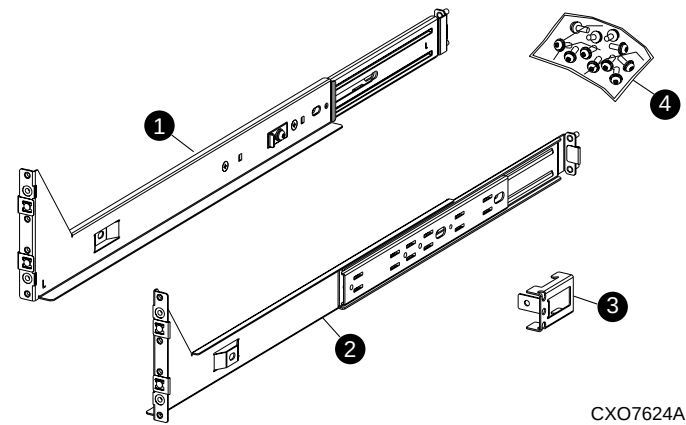


Figure 1: Universal rack-mounting kit contents

The following lists this rack-mounting kit’s contents.

Item	Description	Quantity
❶	Left mounting bracket	(1)
❷	Right mounting bracket	(1)
❸	Side flange bracket	(4)
❹	Miscellaneous hardware:	
	Pan head SEMS screws, 10-32 x 3/4 in	(2)
	Pan head SEMS screws, 10-32 x 5/8 in	(14)
	Pan head SEMS screws, 10-32 x 1/2 in	(4)
	KEP nuts	(6)
	Square washers	(6)
	U-nuts	(6)
	Hex head self-tapping screws, 10-32 x 3/8 in	(6)

The enclosure also shipped with a Universal Rack-Mounting Template for configuring the location of the rack mounting kit and accompanying enclosure assembly.

NOTE: This kit contains parts for various cabinet rail types as well as extra hardware. Not all kit parts are essential to all rack installations.

Tools Required

To assemble this rack-mounting kit, you will need the following tools.

- No. 2 Phillips screwdriver
- Nut driver, 3/8 in
- Nut driver, 5/16 in
- Torque wrench capable of a torque value of 68.58 cm/kg±10% (27 in/lb±10%)

Configuring Rack Position on Rails

1. Locate the Universal Rack-Mounting Template ❶ (see Figure 2).
2. Determine where the mounting rack is to be installed on the cabinet rail-front.
3. Position template against the cabinet rail-front at the desired location, matching the template hole pattern with the cabinet rail-front hole pattern (see Figure 2). Be sure the template’s front side faces you when determining front location.

NOTE: To suspend the template by itself on the rails, push out the left and right perforated tabs designated by a star (see Figure 2) and insert the perforated tabs through the desired rail hole locations.

4. To the left and right of the template-front where indicated, pencil mark cabinet rail-front (right and left) with an F (front) at each of the upper two u-spaces and an R (rear) at each of the lower two u-spaces. See Figure 2.
5. Using the template-rear side, repeat steps 3 and 4 for each cabinet rail-rear. Align the template with where it was located on the rail-front.
6. Discard the template and proceed to the next section.

Attaching the Mounting Brackets

Locate the left and right mounting brackets (labelled “L” and “R”) and follow the instructions below for the rail type used.

Square Hole Rail Installation

1. Locate the four side flange brackets.
2. Install a U-nut on each side flange bracket (see Figure 3).
3. Using 10-32 x 3/8 in hex head self-tapping screws, secure side flange brackets to each inner rail (see Figure 4). Align side flange brackets with rail-rear holes pencil marked “R.”

CAUTION: All kit screws and fasteners must be tightened to a torque value of 68.58 cm/kg±10% (27 in/lb±10%) to ensure a secure attachment of all components.

4. Position the left mounting bracket on the front and rear side flange brackets. See Figure 5. Align the middle two holes of the mounting bracket-front with the rail-front holes pencil-marked “F” and insert mounting bracket’s rear studs completely through the rail-rear holes pencil marked “R.”

NOTE: Make sure that the protruding flange on each alignment clip of each mounting bracket-front (left and right) is completely seated inside the correct square rail hole.

5. Secure the left mounting bracket stud to the rail-rear using two square washers ❶ and two KEP nuts ❷. See Figure 5.

IMPORTANT: Each square washer installed must be secured on rear studs so that the square washer’s two corner posts are seated inside rail square holes.

NOTE: For Model 2000 family enclosures, remove pre-installed stop bracket ❸, and install the additional stop bracket that shipped with the enclosure.

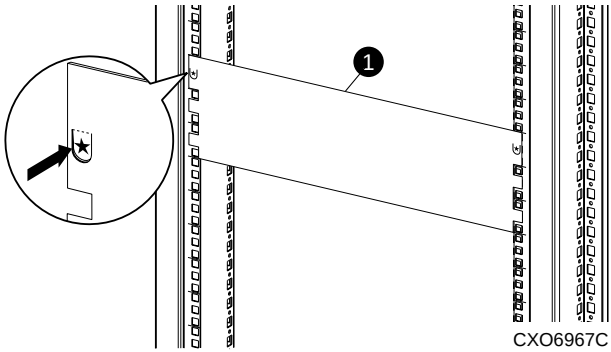


Figure 2: Rack-mounting template positioning

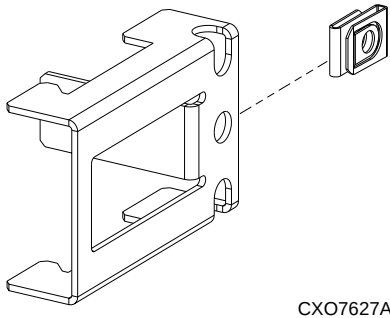


Figure 3: U-Nut installation on side flange bracket

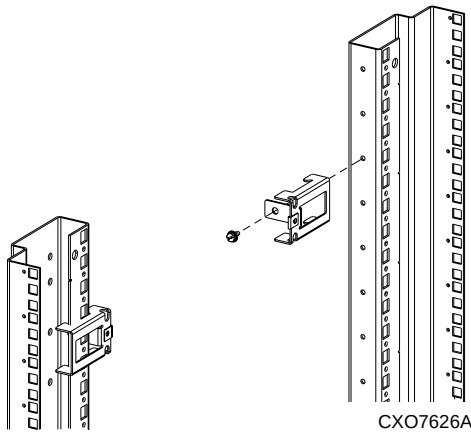


Figure 4: Side flange bracket installation

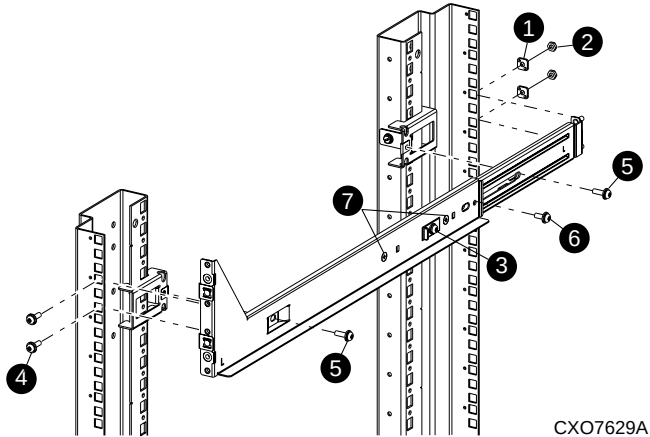


Figure 5: Mounting bracket installation

See other side

- Secure the left mounting bracket to the rail-front using two pan head SEMS screws ❹ (10-32 x 5/8 in). See Figure 5.
- Secure the left mounting bracket to the two side flange brackets using two pan head SEMS screws ❺ (10-32 x 5/8 in). See Figure 5.
- Install a pan head SEMS screw ❻ (10-32 x 1/2 in) at the rear of the left mounting bracket. See Figure 5.
- Fully tighten two outer screws ❼ located on each side of mounting bracket’s stop bracket. See Figure 5.
- Repeat steps 5 through 9 for the right mounting bracket and then proceed to the “Removing Enclosure Elements” section.

Round Hole Rail Installation

- For each mounting bracket, remove two alignment clips from each bracket-front ❶ and one alignment clip from the bracket-rear ❷. See Figure 6.
- Attach U-nut ❶ to each of the four inner rails of cabinet (see Figure 7).
- Extend the mounting bracket so that the rear studs are completely inserted through the two rail-rear holes pencil marked “R.” Swing the left mounting bracket-front directly behind the left rail-front, aligning the middle two mounting bracket-front holes with the rail holes pencil-marked “F.” See Figure 7.

NOTE: For Model 2000 series enclosures, remove pre-installed stop bracket ❷, and install the additional stop bracket that shipped with the enclosure. Be sure the two round, embossed imprints at the top and bottom of the mounting bracket-front are completely seated inside the correct round rail-front hole.

- Secure the mounting bracket-front with two pan head SEMS screws ❸ (10-32 x 5/8 in) and each mounting bracket-rear stud with a KEP nut ❹.
- Secure the inner side of the mounting bracket using two pan head SEMS screw ❺ (10-32 x 3/4 in). See Figure 7.
- Fully tighten two screws located on each of the mounting bracket’s stop bracket ❷ (see Figure 7).
- Repeat steps 3 through 6 for the right mounting bracket and then proceed to the next section.

Removing Enclosure Elements

Reducing the overall enclosure weight can make installation easier and safer. Before installing entire enclosure, consider removing the enclosure’s elements. Refer to the enclosure user guide for element removal procedures.

NOTE: If enclosure elements are removed, do not stack them. Place each element on its side, and on a flat, stable, static-free surface, until they are ready for reinstallation.

**WARNING:** The enclosure weight with all elements installed, exceeds 39.5 kg (65 lb). To prevent personal injury, at least two people are required to install an enclosure safely.

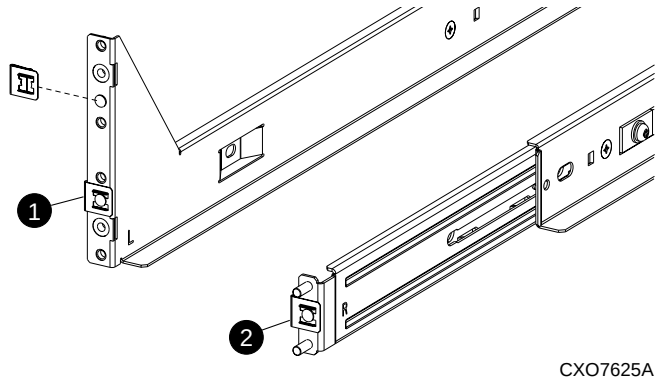


Figure 6: Alignment clip removal

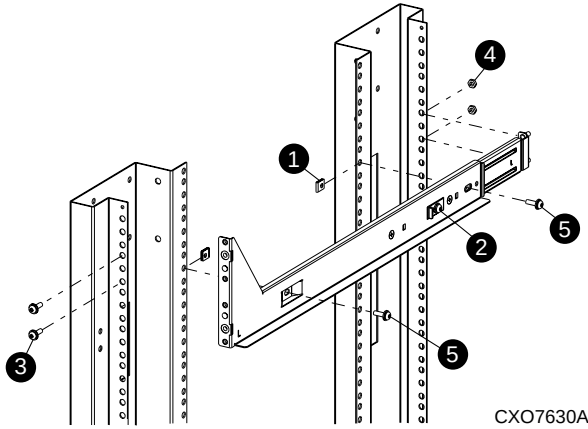


Figure 7: Mounting bracket installation

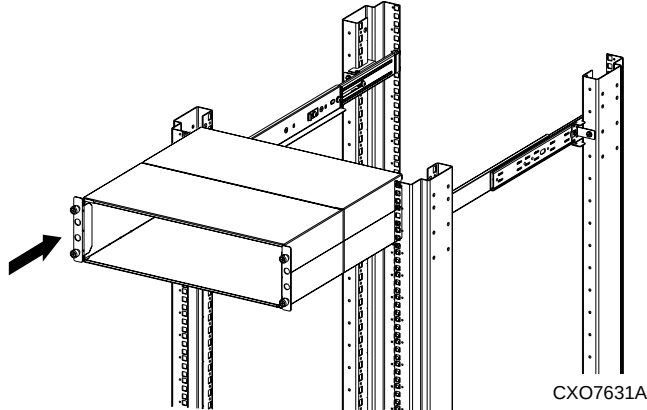


Figure 8: Enclosure installation

Installing Enclosure

- Position the enclosure on the mounting brackets (see Figure 8) and slide it in until the enclosure flanges are flush against each rail-front.

**CAUTION:** Hold and slide enclosure in at a 90° angle to prevent enclosure damage and ease insertion.

IMPORTANT: Once the enclosure is fully inserted, verify that both enclosure front flanges contact the rack vertical rail.

- Tighten the captive panel fasteners on each side of the enclosure-front. See Figure 9.
- Locate the left side notch ❶ on the enclosure at the rear. See Figure 10.
- Fully slide left stop bracket on the left mounting bracket into the enclosure left notch so that the stop bracket fits snugly inside and against the enclosure.
- Tighten the stop bracket screw after stop bracket is secured tightly against enclosure.
- Repeat steps 3 and 4 for the right stop bracket and notch.

NOTE: The enclosure should not shift forward or backward inside the mounting brackets after seating it and securing the stop brackets. If the enclosure shifts significantly, readjust the stop brackets as necessary.

Installing Filler Panels (Select Models Only)

For enclosures shipped with a solid filler panel ❶ installed (see Figure 11), facilitate cable routing to the enclosure-front by replacing the solid filler panel with the slotted filler panel ❷ shipped with the enclosure:

- Insert the straight-slot screwdriver in one of the slots (see Figure 11 inset) and pry the solid filler panel outward until that end becomes loose.
- Repeat step 1 for the opposite side.
- Align and snap in the slotted filler panel.

Installing Enclosure Elements

Refer to enclosure documentation for element installation procedures. Install all enclosure elements removed in the “Removing Enclosure Elements” section.

Connecting Data Bus and Power Cables

All data bus and power cables are connected at the rear of the enclosure. Refer to enclosure documentation for information on connecting data and power cables.

**CAUTION:** Circuitry operations for enclosures without a power ON/OFF switch will begin once power cable is connected. For these enclosures, connect power cables after all data bus cables are connected. Failure to connect all cabling properly prior to power activation may damage the enclosure.

NOTE: Route cabling in a way that allows easy removal of enclosure elements.

This completes the hardware installation.

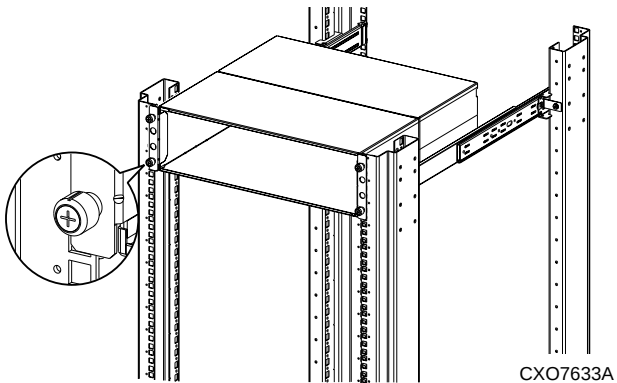


Figure 9: Captive screw fasteners

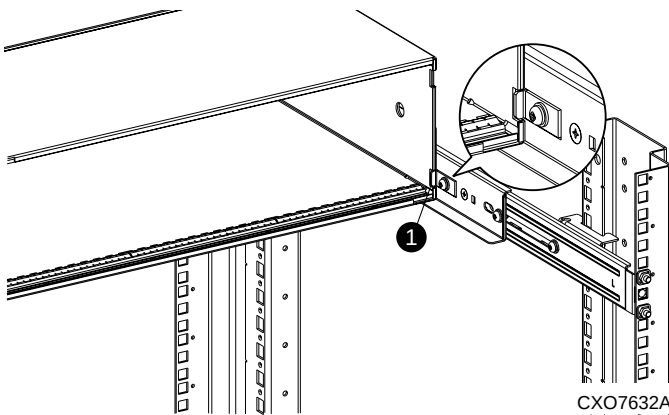


Figure 10: Enclosure notch and stop bracket

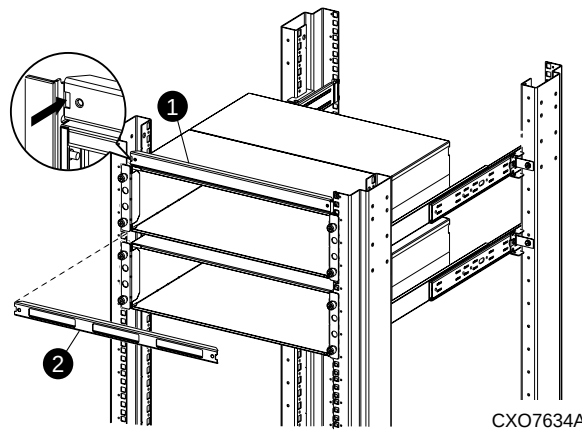


Figure 11: Filler panel replacement

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