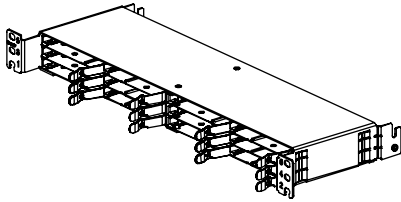
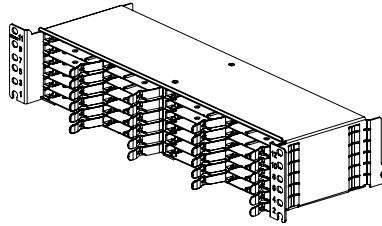


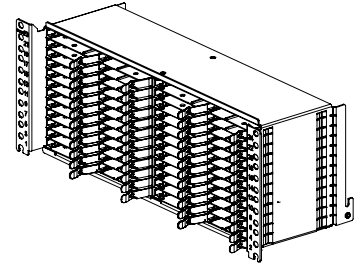
Note: HD Flex Patch Panels are compatible with HD Flex Fiber System Components. HD Flex may not be compatible with other systems and is not recommended.



FLEX1UPN\*\*



FLEX2UPN\*\*



FLEX4UPN\*\*

\*\* denotes 04, 06, or 12

#### CONTENTS: (#) indicates FLEX4UPN\*\* quantity

- |                 |                               |
|-----------------|-------------------------------|
| 1 - Patch Panel | 4 (8) - #12-24 x 1/2" screws  |
|                 | 4 (8) - M x 1.0 x 15mm screws |

**WARNING: UNMATED CONNECTORS MAY EMIT INVISIBLE LASER RADIATION. DO NOT LOOK DIRECTLY INTO THE END OF THE CONNECTOR. DO NOT INSPECT WITH MAGNIFYING DEVICES. MAINTAIN DUST CAPS ON UNMATED CONNECTORS.**

#### CAUTION:

Fiber optic cable is sensitive to excessive pulling, bending, and crushing forces. Consult the manufacturer's cable specification sheet for the specific cable in use.

Follow TIA/EIA-568-A, 569, 606, and 607 installation guidelines where applicable.

Care should be taken when opening or closing a fully loaded drawer in order to protect the fiber components.

#### ASSEMBLY VIEW (FLEX1UPN\*\* shown)

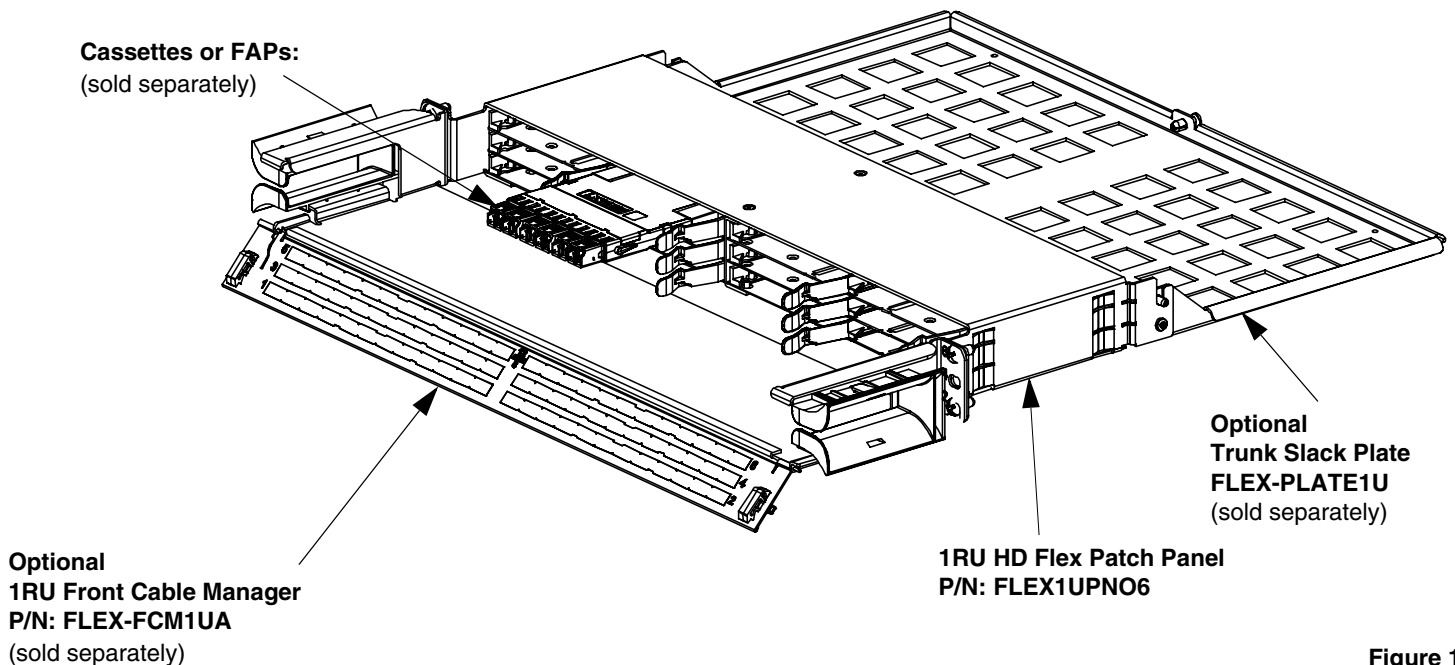
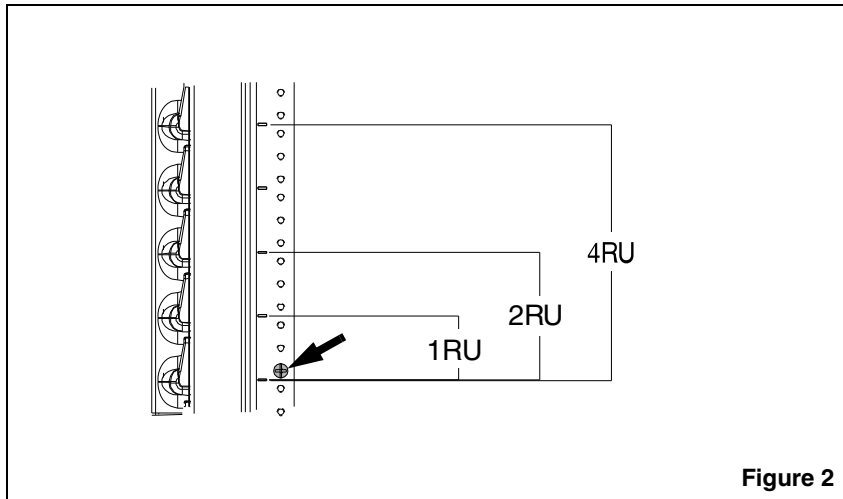


Figure 1

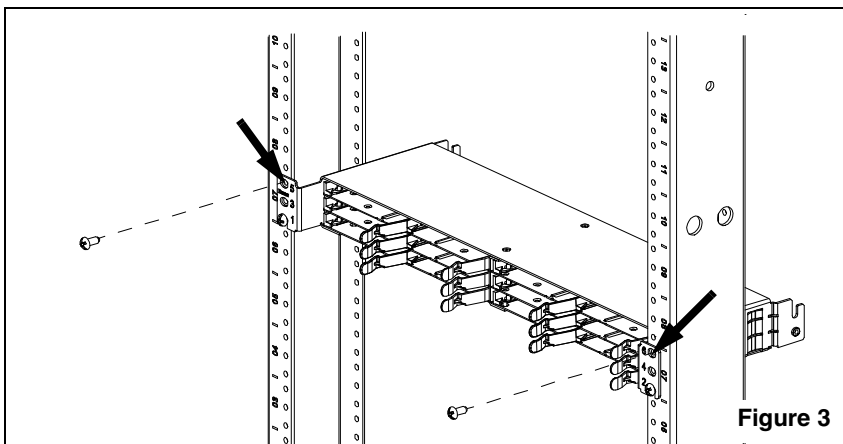
## Rack Mounting



If RU space is open above patch panel location, partially install two screws, one on each side of the rack. These partially installed screws will assist in mounting the patch panel to the rack.

- For all patch panels pre-install two screws in the bottom hole location of the rack position desired.

If RU space is not open above patch panel location, do not pre-install screws. Place patch panel into position and secure with a minimum of four screws.



For the pre-installed screws mounting method, place patch panel into rack and allow patch panel mounting brackets to rest on the partially installed screws.

Install the remaining screws and tighten all to secure the enclosure. Use a minimum of four screws.

**Cassette Assembly** (sold separately)

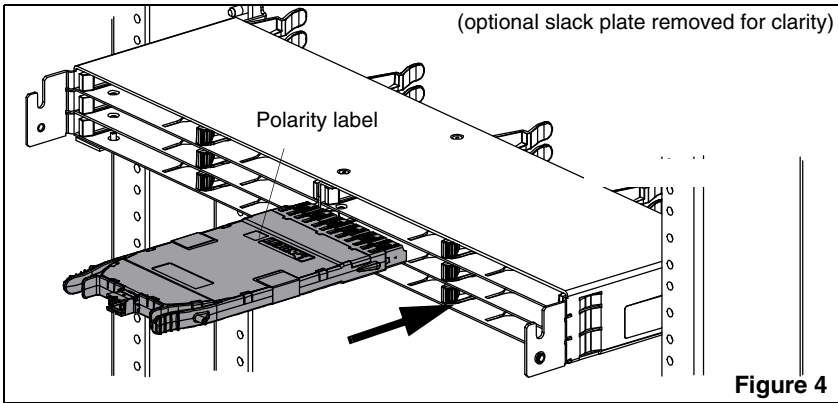


Figure 4

First, attach trunk cabling to the rear port of the cassette or FAP to be installed. Note the polarity label on the cassette and orient properly as needed. Cassettes should be installed one at a time starting with the bottom most slot on the right, as shown. To install cassettes, insert into slot and push forward until it snaps into place.

Populate the entire row across from right to left before moving to the next row above. Repeat process until all desired slots are filled.

MAXIMUM MODULE POPULATION

	4-Port Modules	6-Port Modules	12-Port Modules
FLEX1UPN04	18	--	--
FLEX1UPN06	--	12	--
FLEX1UPN12	--	--	6
FLEX2UPN04	36	--	--
FLEX2UPN06	--	24	--
FLEX2UPN12	--	--	12
FLEX4UPN04	72	--	--
FLEX4UPN06	--	48	--
FLEX4UPN12	--	--	24

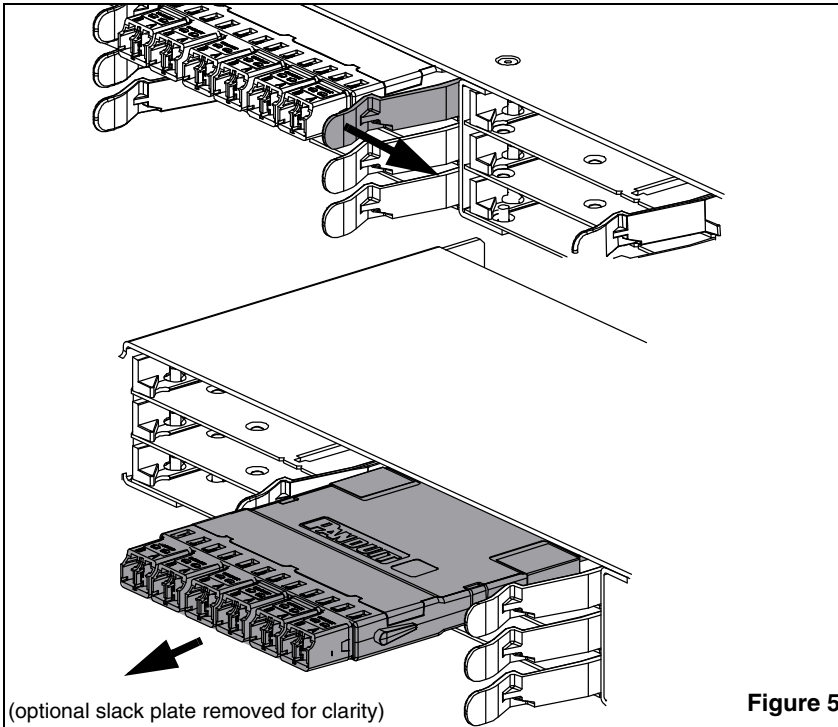


Figure 5

Cassettes can be removed from the front of the patch panel as needed for replacement or migration. Disconnect patch cords from the front of the cassette. Press latch away from the module and pull the module forward. Once the module is pulled past the latch the module can be completely removed.

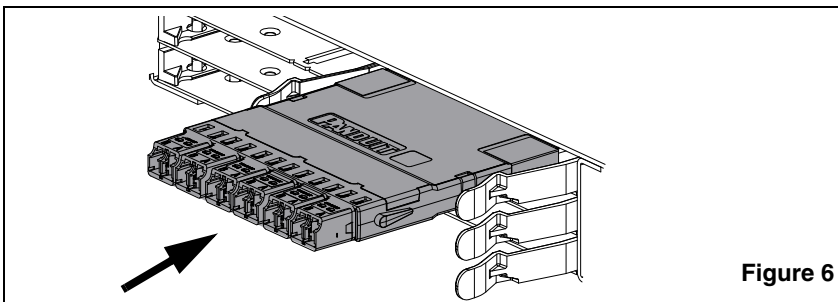


Figure 6

Disconnect trunk cable from the rear of the cassette and connect it to the rear of the replacement cassette. Re-install cassette or MPO FAP opposite the way it was removed. Align the rear of the cassette or MPO FAP in the opening and push inward until the cassette snaps into place. Re-attach patch cords (for cassette changes).

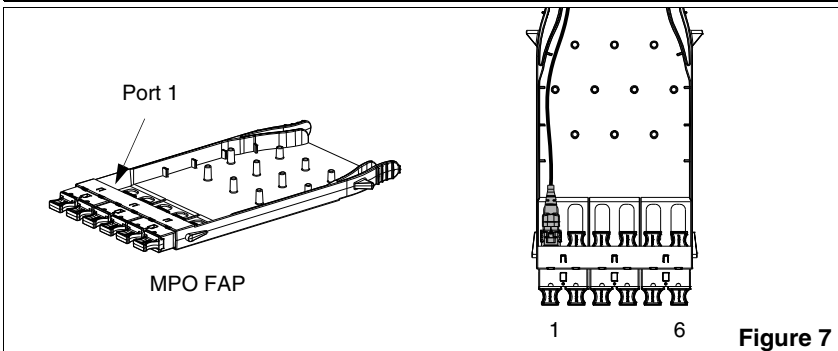
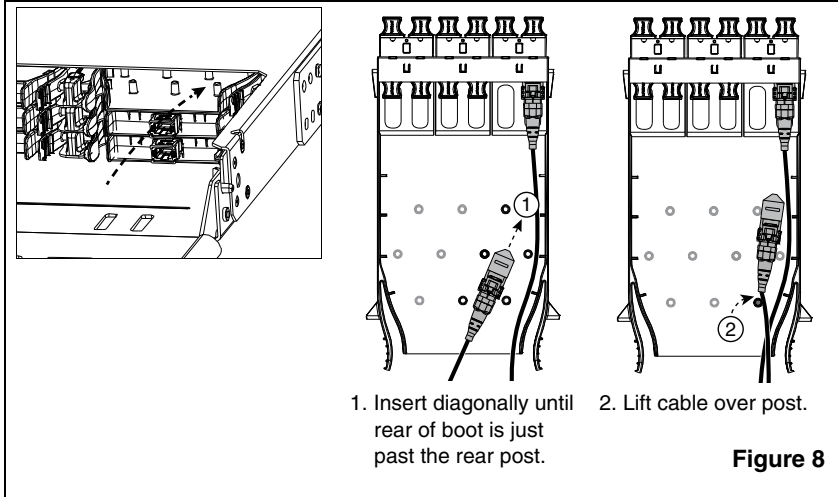


Figure 7

If migrating to an MPO FAP, connect the MPO trunk cable to the left most position, port 1.

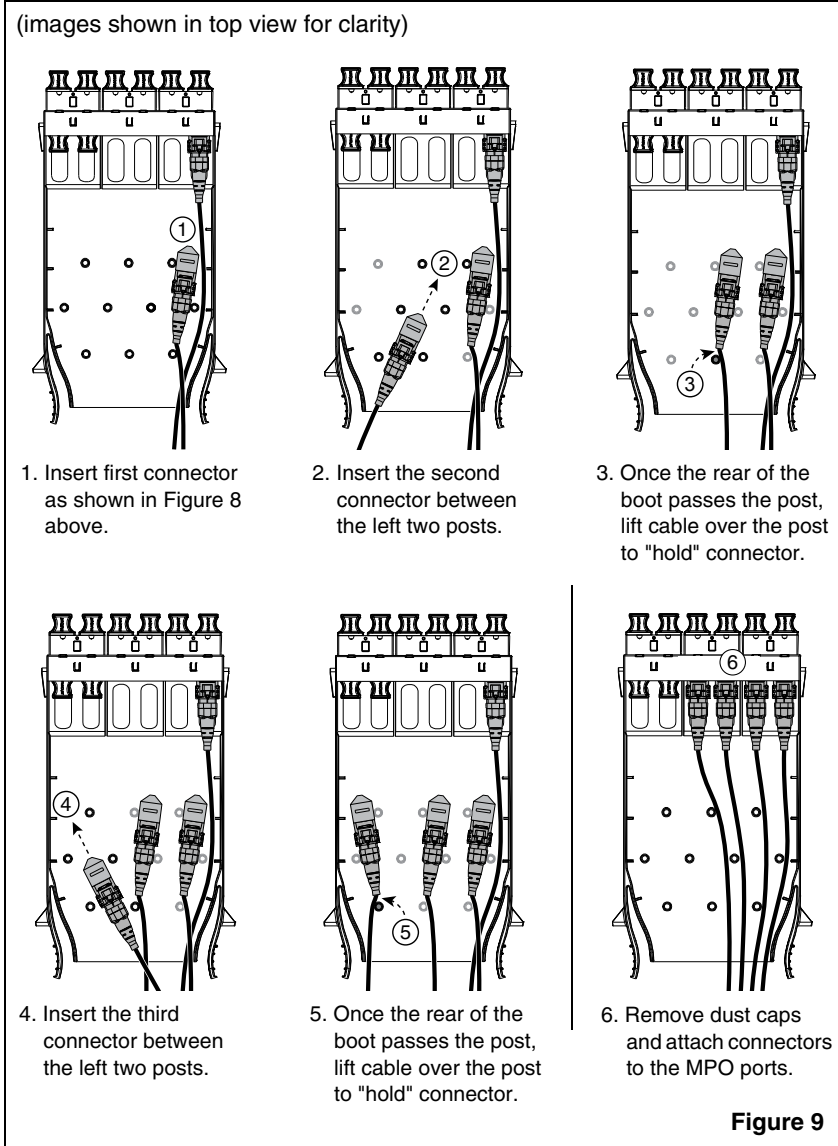
**Installing Additional MPO Trunks**



**Figure 8**

From the rear of the patch panel, select the FAP to add additional MPO trunk cables to. Insert the MPO connector into the rear of the FAP diagonally between the posts (Step 1 in Figure 8). Push connector in until the rear of the boot just passes the rear post and lift the cable over the post to “hold” the connector in place (Step 2 in Figure 8).

Move to the front of the patch panel and pull out the FAP with the “held” MPO trunk cable. Remove the dust cap and connect the MPO to the appropriate port on the FAP.

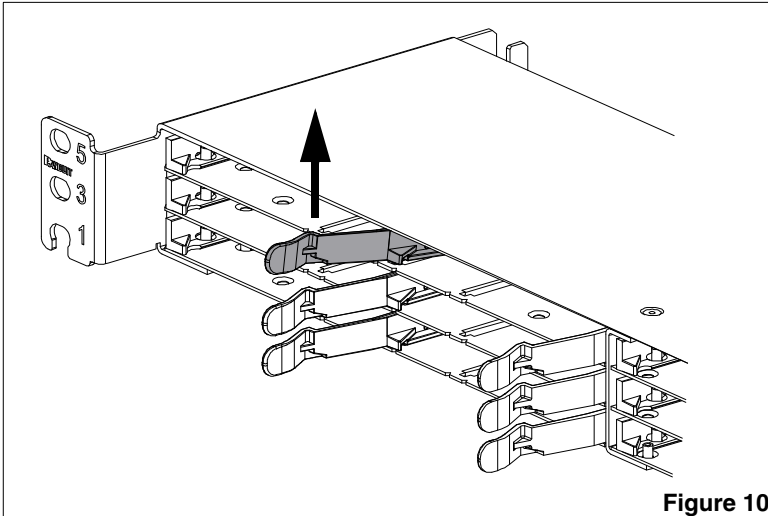


**Figure 9**

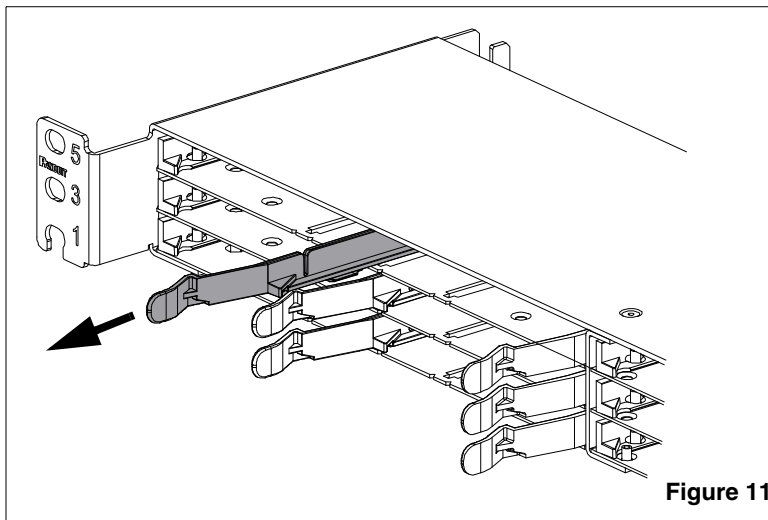
FAP can accommodate “holding” up to 3 MPO connectors at a time. Follow the steps in Figure 9.

Once all connectors are held in place, move to the front of the patch panel and pull out the FAP. Remove dust caps and attach the MPO connectors to the appropriate ports (Step 6 in figure 9).

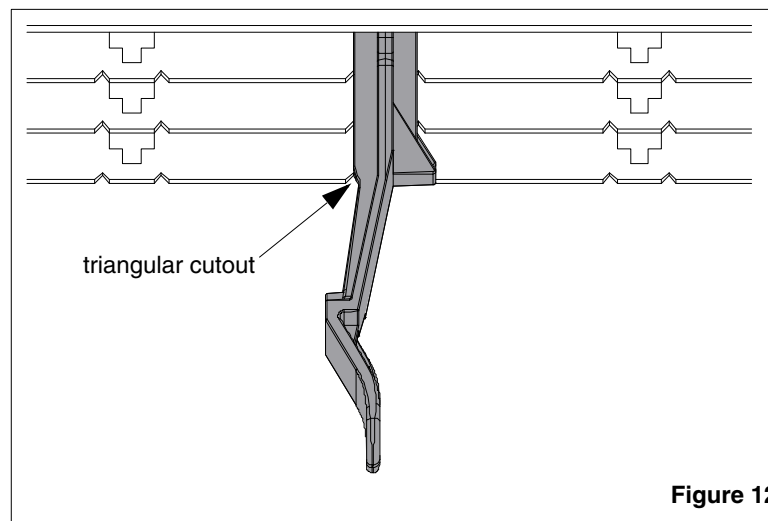
## Reconfiguring patch panel to accept 12-Port or 4-Port Modules

**Figure 10**

Select the rail to be removed. Pull up on the rail to be removed by gripping the end of the latch.

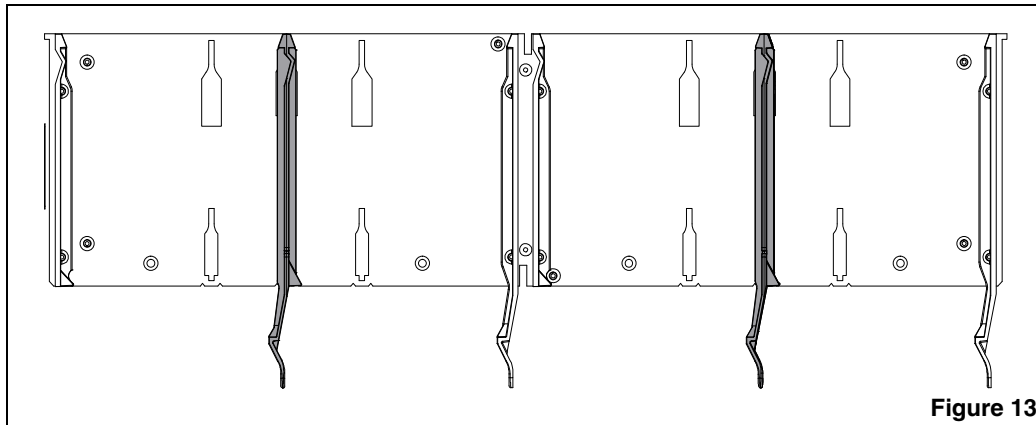
**Figure 11**

While continuing to apply upward pressure on the rail being removed, pull the rail forward. As the rail begins to move it will disengage from the tray and be free to remove completely.

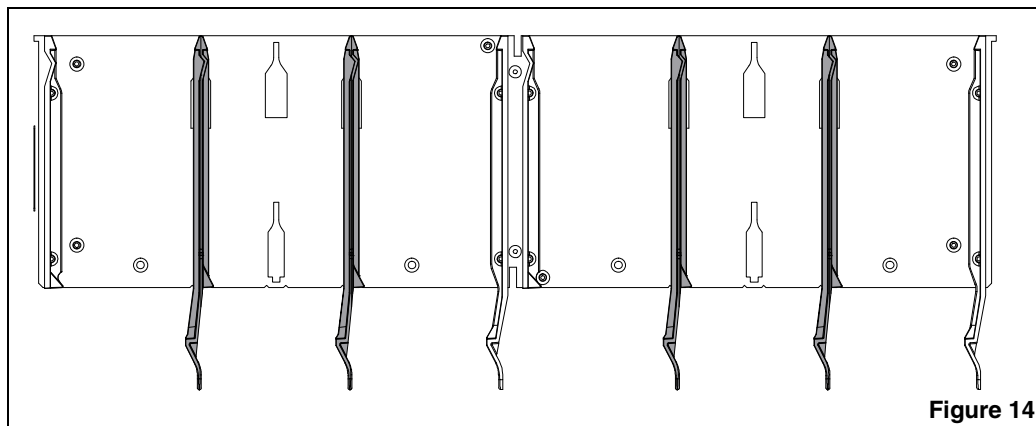
**Figure 12**

To install rail onto tray, align rail between triangular cutouts and reverse the removal process. The posts on the bottom of the rail will drop into the cutouts in the tray. As the rail is pushed toward the back of the tray, the posts will engage the tray. Once the rail is fully re-inserted the front of the rail will snap into position. Pull forward on the rail to ensure it is properly installed.

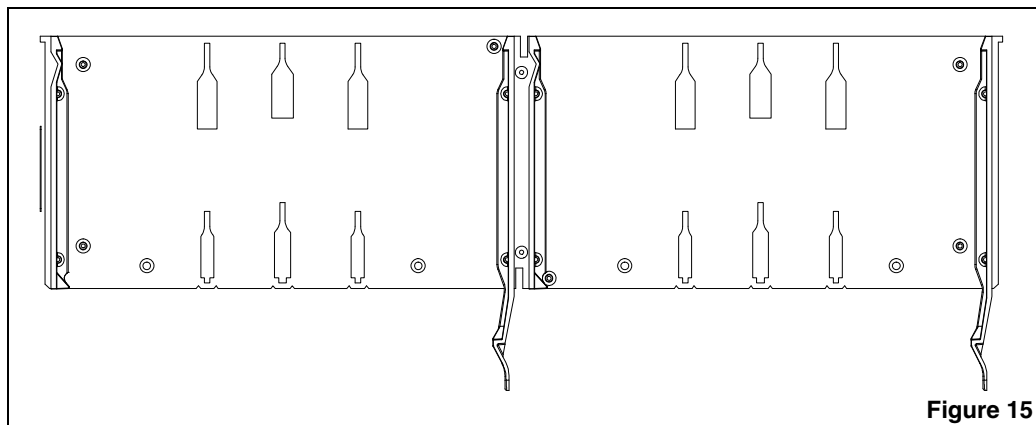
Tray Configurations (Only patch panel trays are shown for clarity)



6-Port Configuration: 2 black removable rails per tray

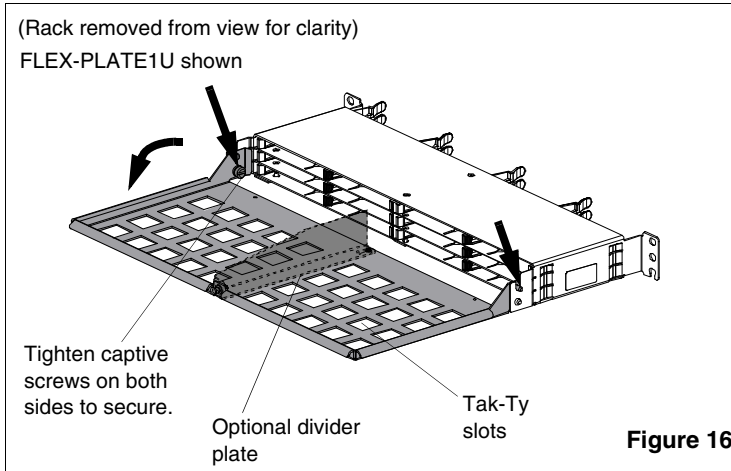


4-Port Configuration: 4 white removable rails per tray



12-Port Configuration: No removable rails installed on tray

**Optional Trunk Slack Plate Installation (sold separately)**



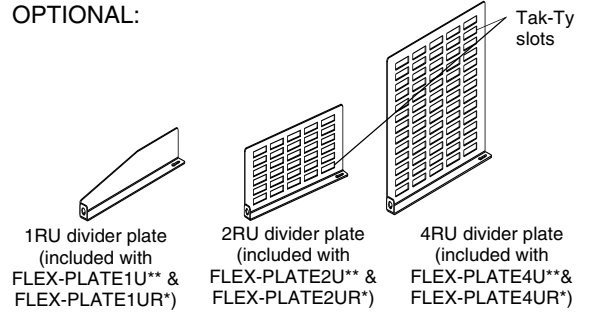
**Figure 16**

\*\* denotes 04, 06, or 12  
 \* =W for white offering, no suffix for black offering

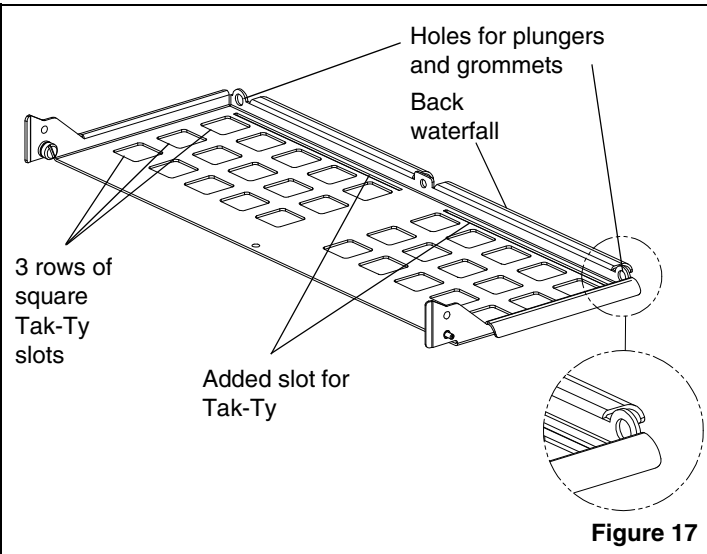
The trunk slack plate and short rear cable manager (sold separately as Panduit part no. FLEX-PLATE1U, FLEX-PLATE2U; FLEX-PLATE4U, FLEX-RCM1U, FLEX-RCM2U & FLEX-RCM4U) installs to the rear of the patch panel. Engage the pins on the plate into the slots on the patch panel and tilt down into place. Tighten captive screws to secure.

The trunk slack plate includes an optional vertical divider to aid in organizing and managing the cables. Divider plates are recommended for split routing. Do not use the divider if routing all rear cables to one side of the rack.

**OPTIONAL:**



**Optional Patch Panel Rear Cover Installation (FLEX-PLATE1UPR\*, FLEX-PLATE2UPR\*, FLEX-PLATE4UPR\*)**



**Figure 17**

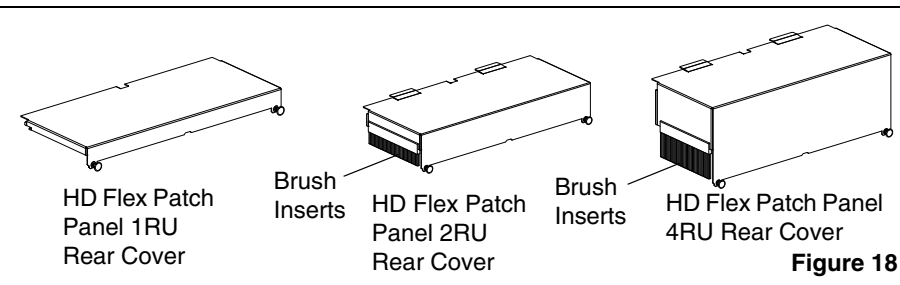
The patch panel rear cover kits (FLEX-PLATE\*UPR\* will include 3 pieces:

1. Patch Panel Trunk Plate Compatible with Rear Covers

The patch panel trunk plate compatible with rear covers have multiple features which differentiate it from the trunk slack management sold in FLEX-PLATE\*U and are explained below:

- Overall length is shorter (3 rows of square Tak-Ty slots, rather than 4)
- Holes located on flanges to accept grommets and fasten rear cover to trunk slack plate
- Slot added to trunk Plate to be used as an extra Tak-Ty slot for holding down cable exiting the patch panel.

The rear cover will sit on the back waterfall feature on the trunk slack management plate when properly installed. Instead of using a tie down point with the Tak-Ty wrapped around the back waterfall of the trunk slack plate, use the extra slot to create a tie down point and properly route the cables off the slack management plate.

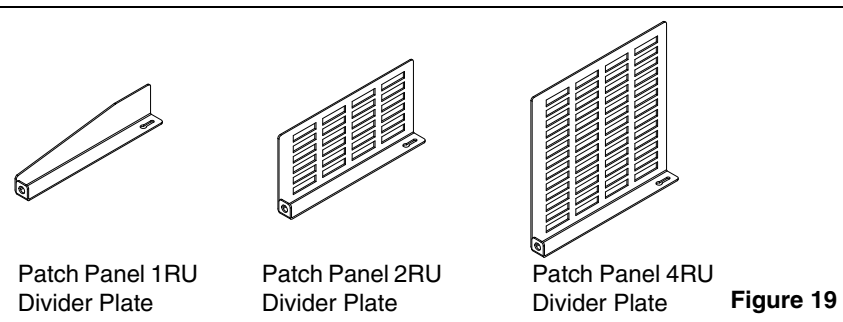


**Figure 18**

2. Rear Cover (1RU, 2RU, and 4RU options for FLEX-PLATE1UPR\*, FLEX-PLATE2UPR\*, and FLEX-PLATE4UPR\*

The 2RU and 4RU rear cover options will have brushes installed to protect the opening where cable exits the cover.

\*=W for white option; no suffix for black option



**Figure 19**

3. Shortened vertical divider (1RU, 2RU, and 4 RU options)  
 The vertical divider is approximately 1.5" shorter than the vertical divider included in FLEX-PLATE\*U. One column of Tak-Ty slots were removed for the patch panel versions of the divider.

\* denotes 1, 2, or 4



The patch panel trunk plate compatible with rear covers can be installed in the same fashion as the enclosure trunk slack plate explained previously. Engage the pins on the plate into the slots on the enclosure and tilt down into place. Tighten the captive screws to secure.

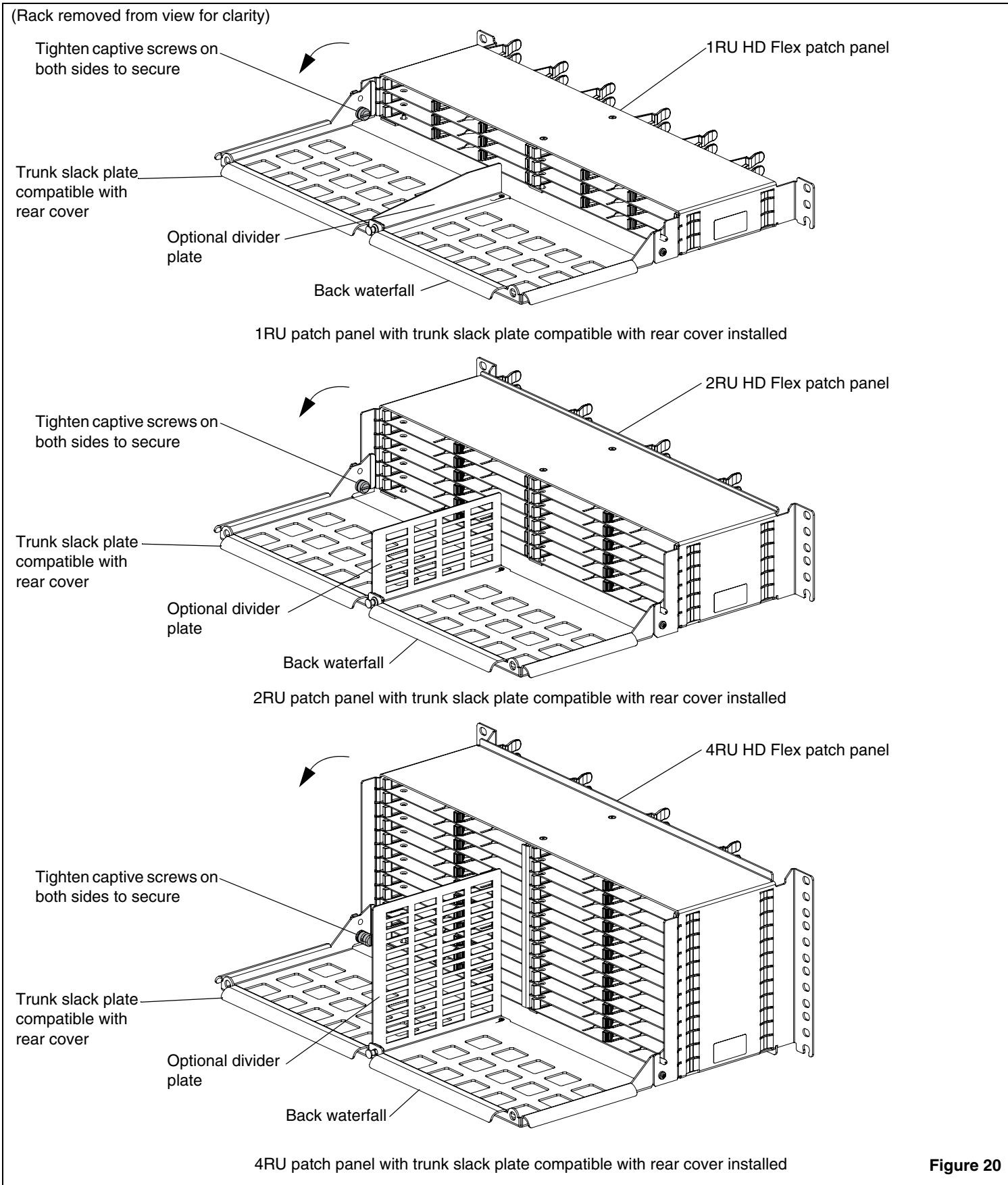


Figure 20



To install respective rear cover, slide the rear cover over the slack plate by depressing the plungers after they have been inserted into the holes on the slack plate. The vertical middle tongue flange needs to be situated in the space between the middle bracket on the patch panel and the rail on the top row of the patch panel for proper positioning.

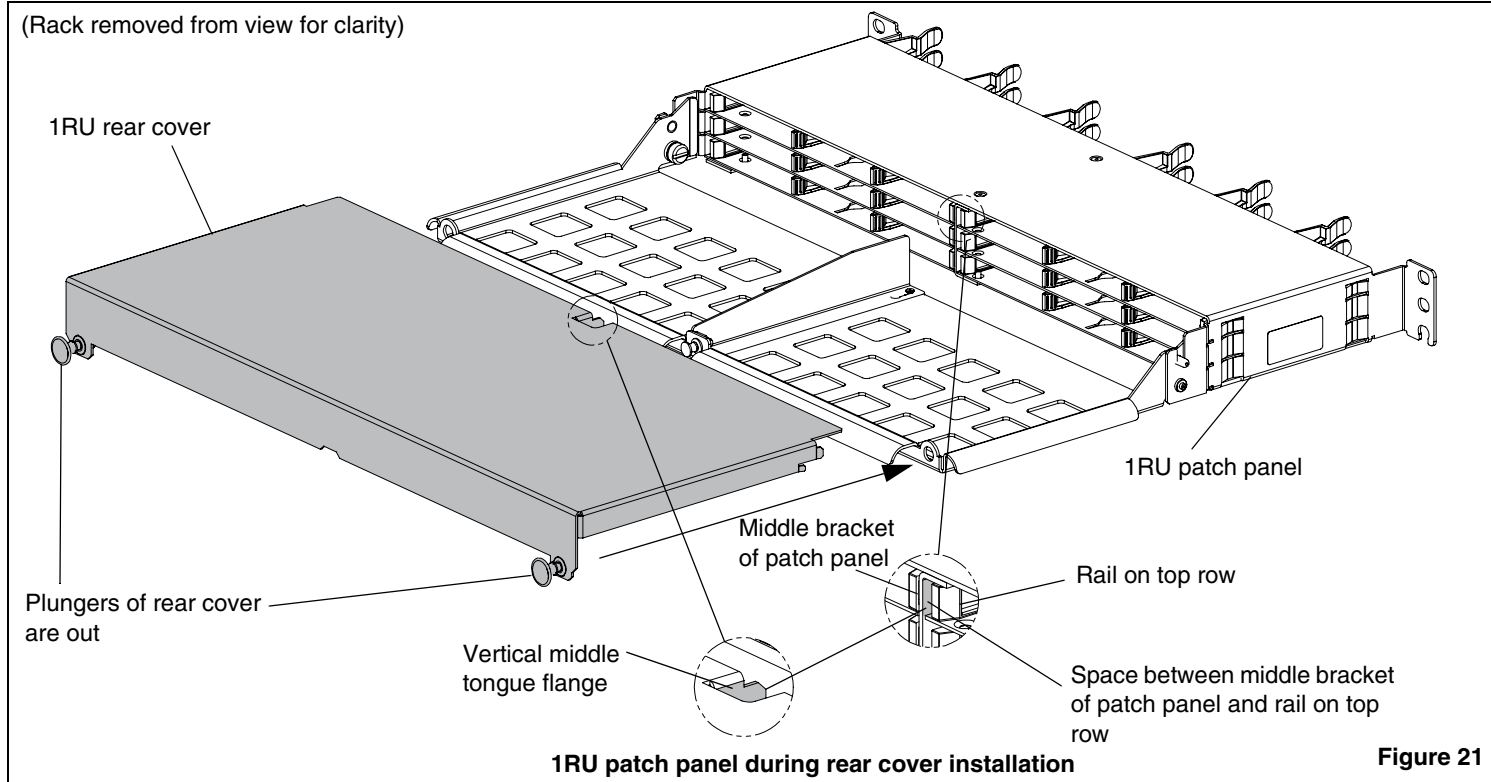


Figure 21

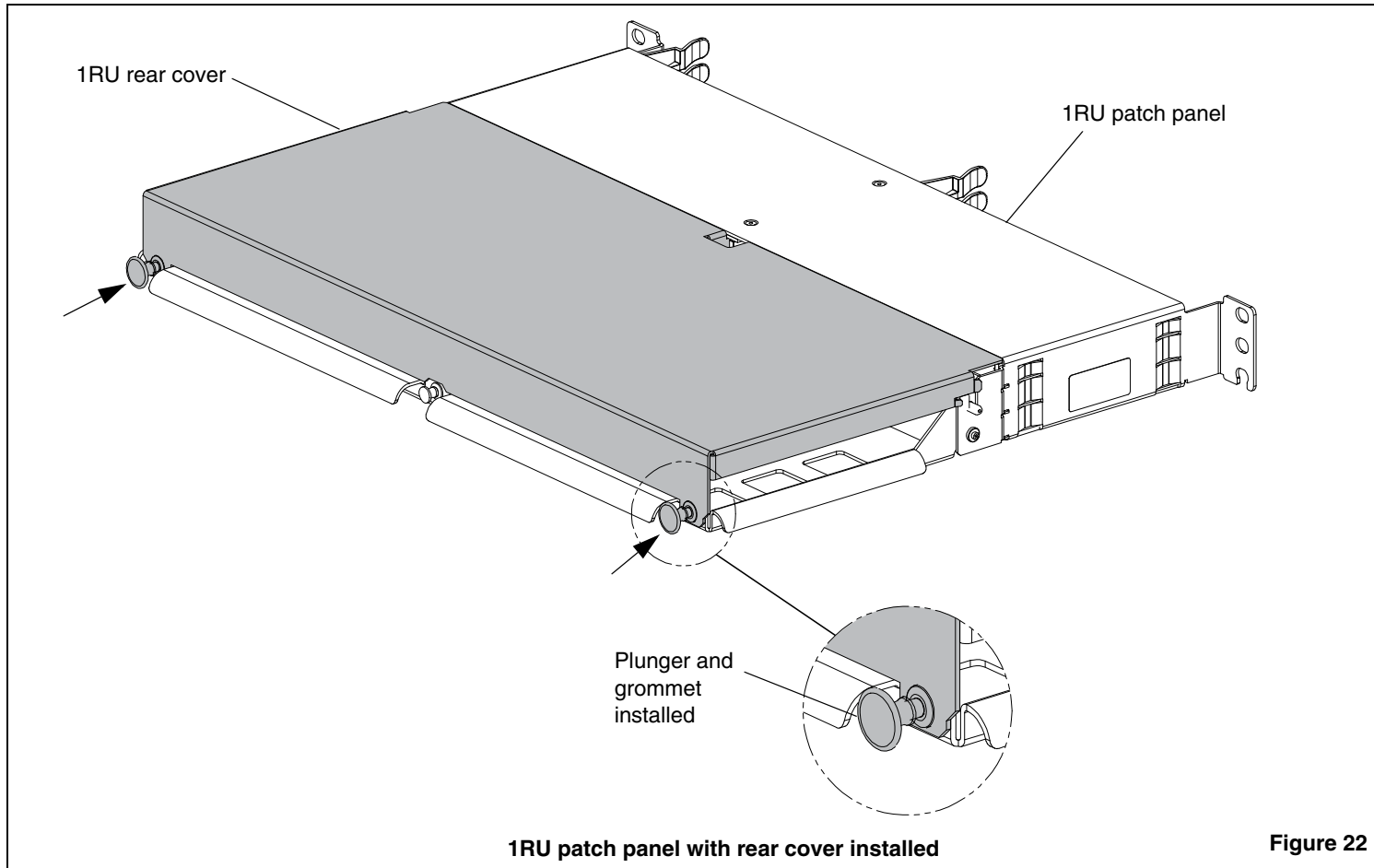


Figure 22

For the 2RU and 4RU options, top flanges rest on top of the patch panel when properly installed.

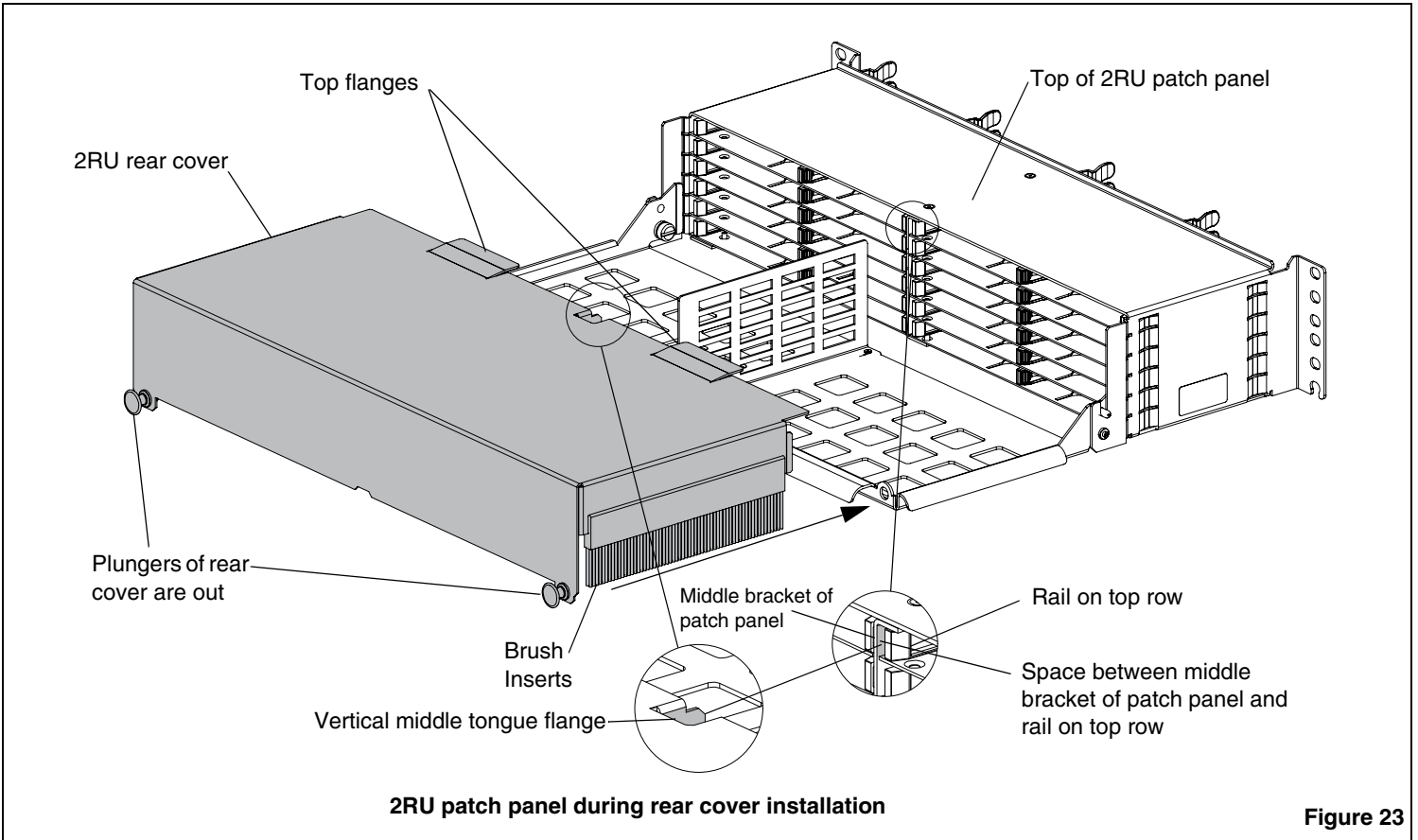


Figure 23

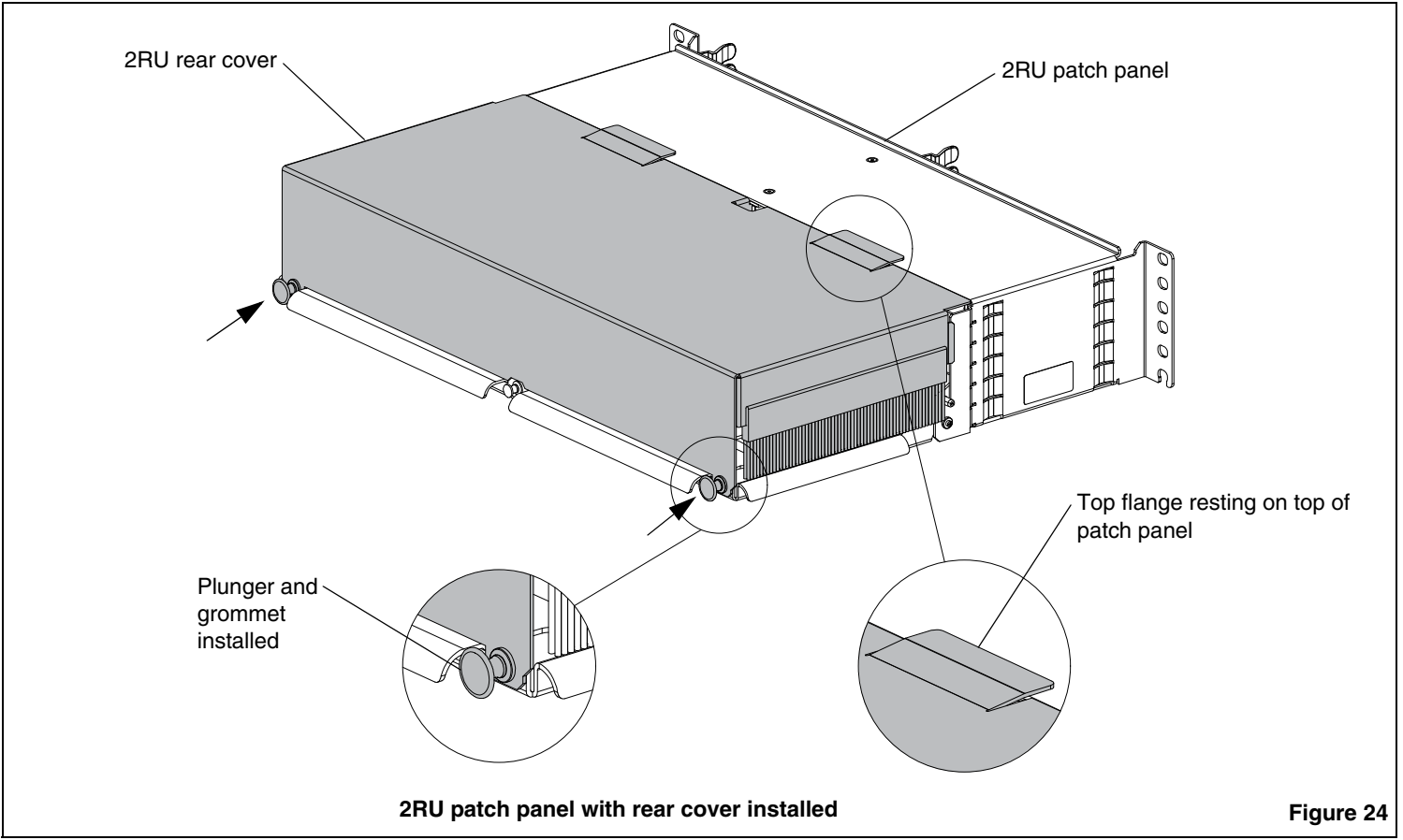
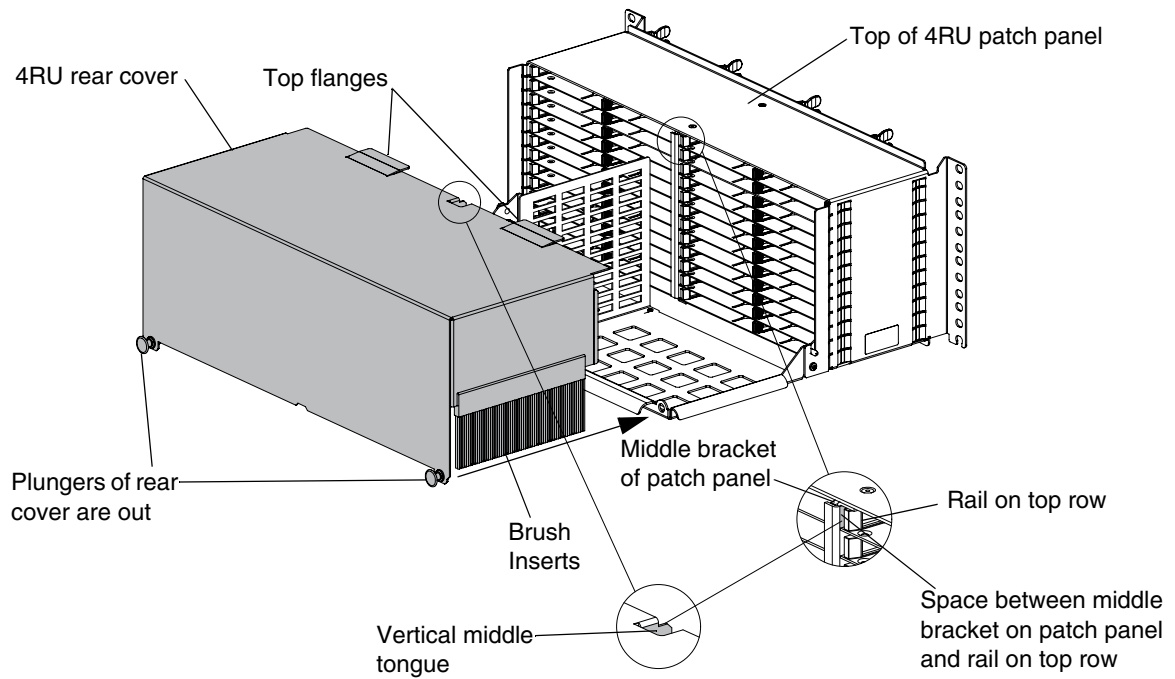


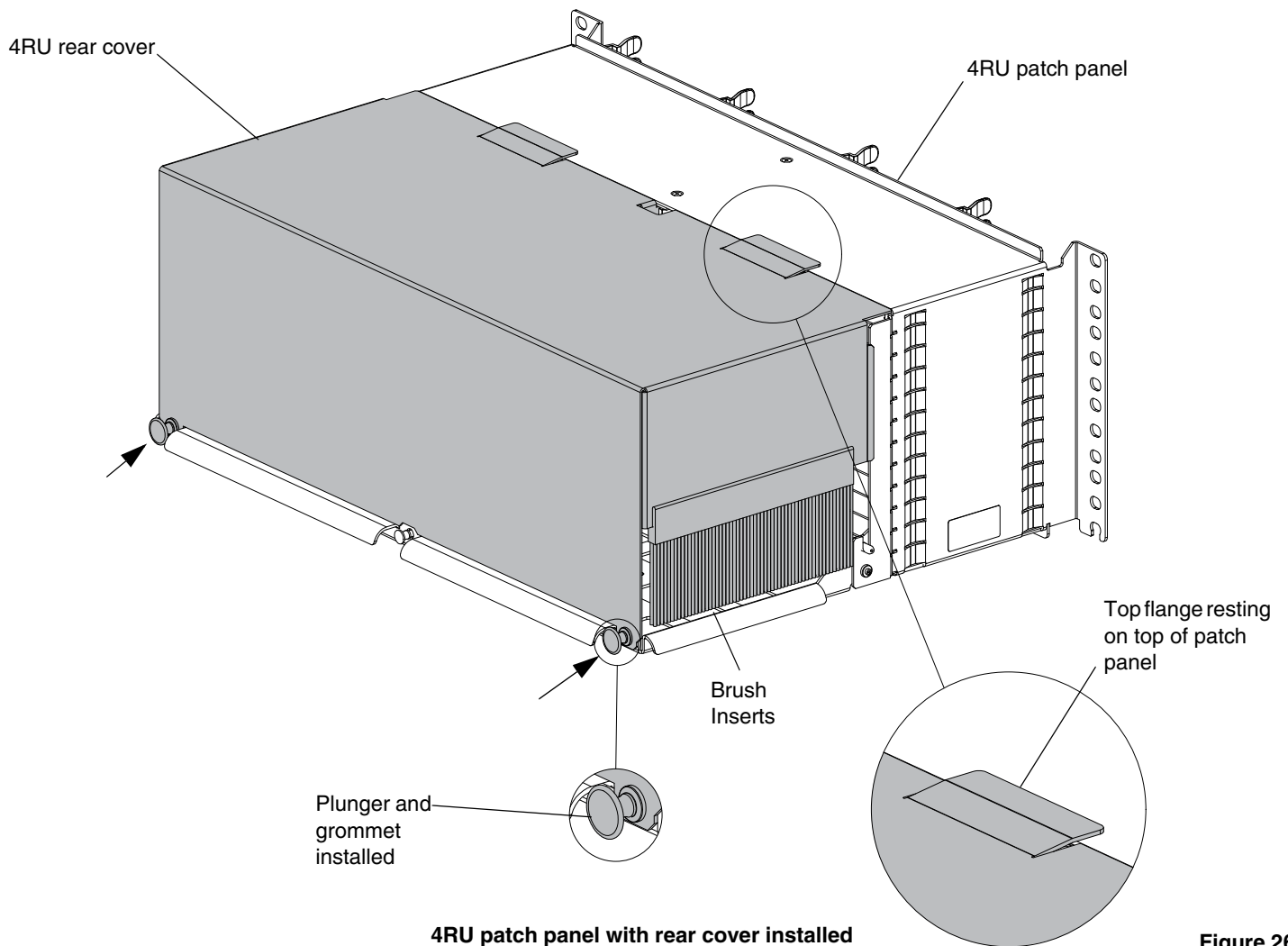
Figure 24

For Technical Support: [www.panduit.com/resources/install\\_maintain.asp](http://www.panduit.com/resources/install_maintain.asp)



4RU patch panel during rear cover installation

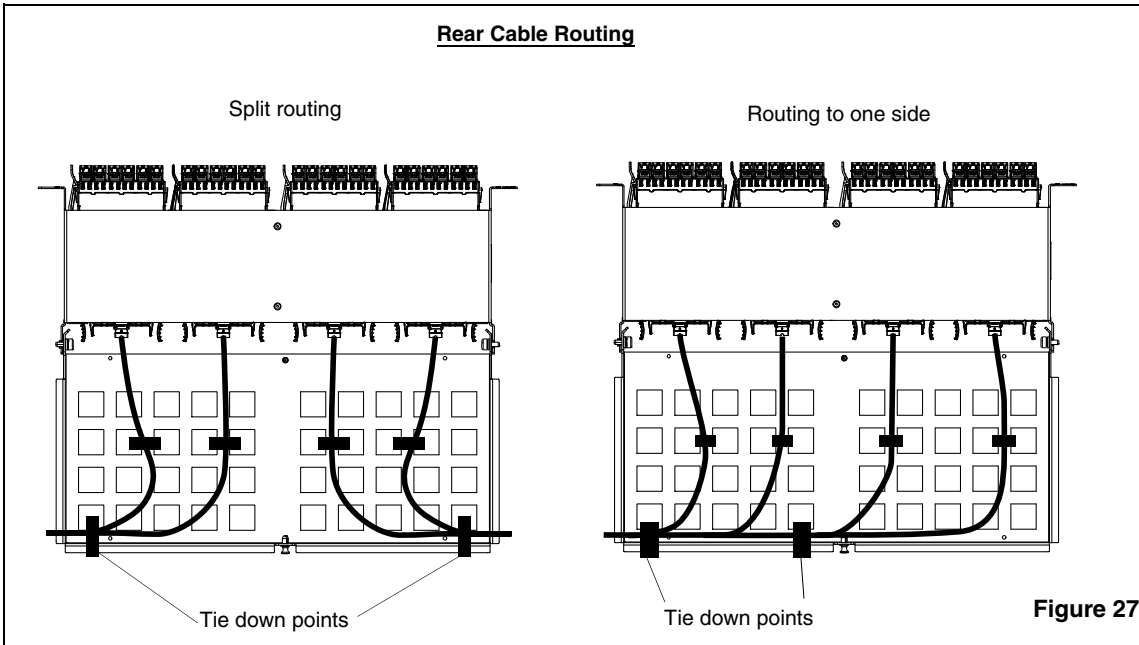
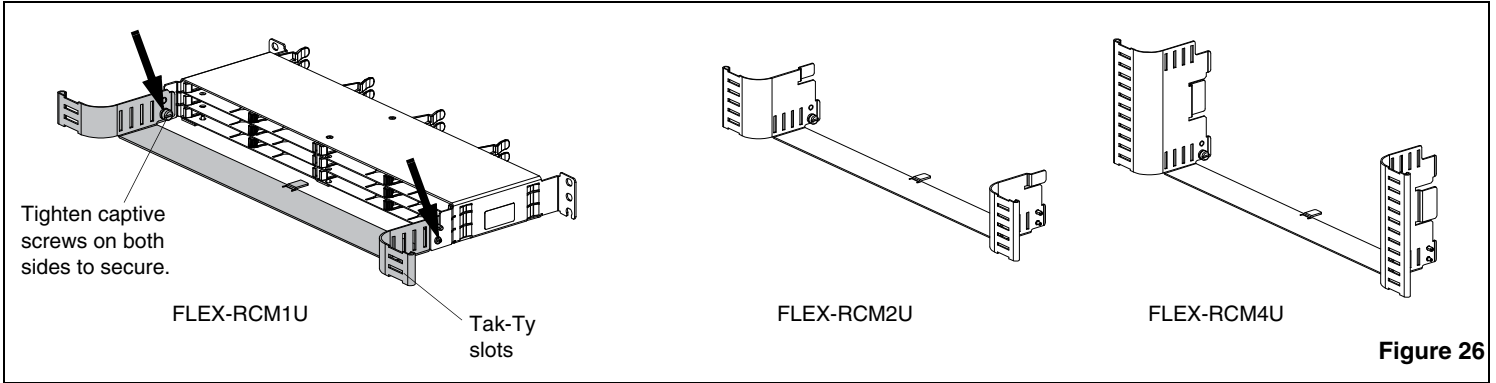
Figure 25



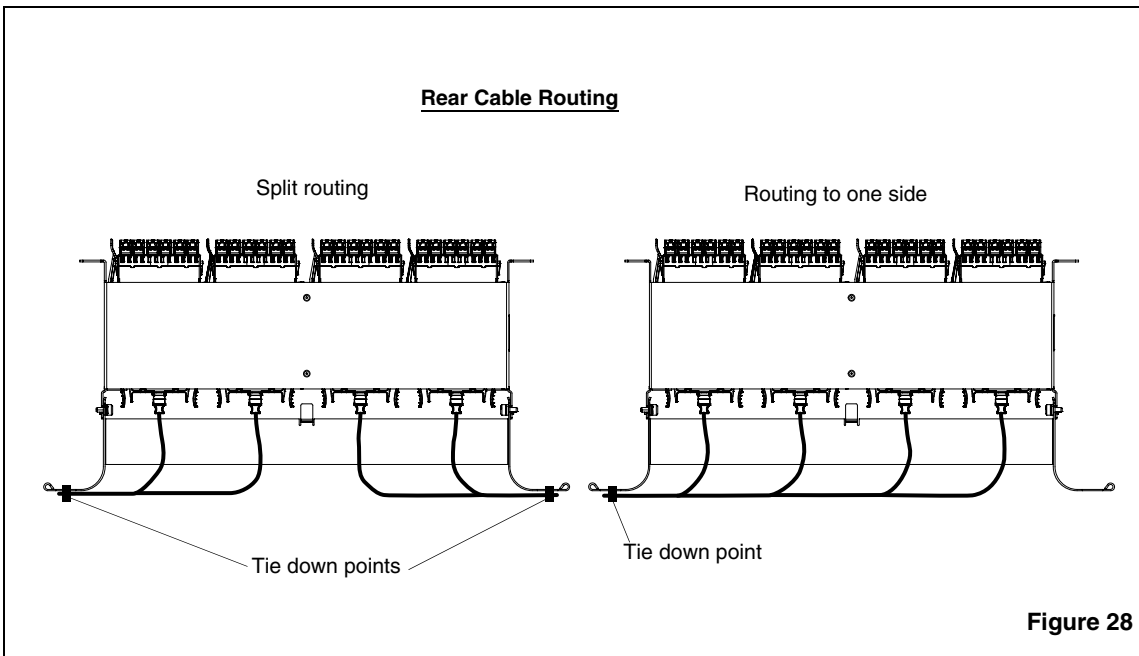
4RU patch panel with rear cover installed

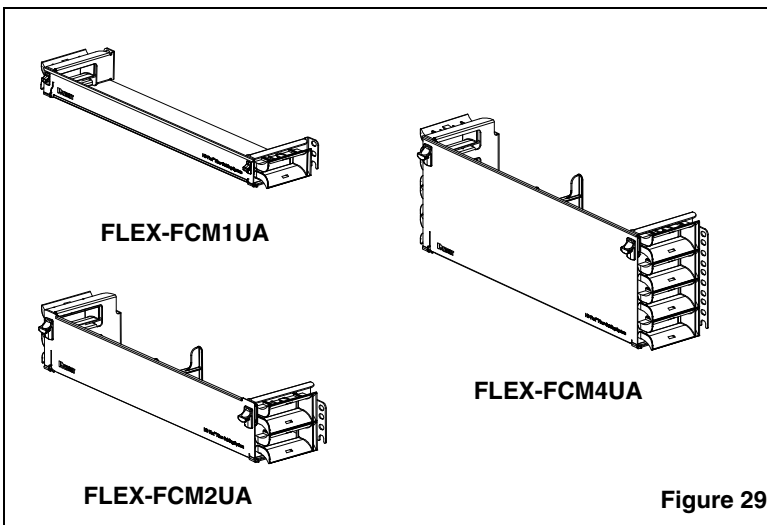
Figure 26

### Installing HD Flex Front Patch Panel Cable Managers



When using the cable managers, dress the cable coming out of the installed modules and secure with Tak-Ty to tie down points shown in Figures 27 & 28. No slack loops required since all modules are fixed in the HD FLEX Patch Panels.





The HD Flex Front Cable Manager is an optional accessory for use with the HD Flex Patch Panel. The front managers include:

- #12-24 x 1/2" screws (quantity 4)
- M6 x 1.0 x 15mm screws (quantity 4)
- Bend Radius Clips (quantity varies by model):  
4RU - 8 clips, 2RU - 4 clips, 1 RU - 2 clips
- 1 Roll of Tak-Ty
- Laser warning labels

Figure 29

### Installation on equipment rail:

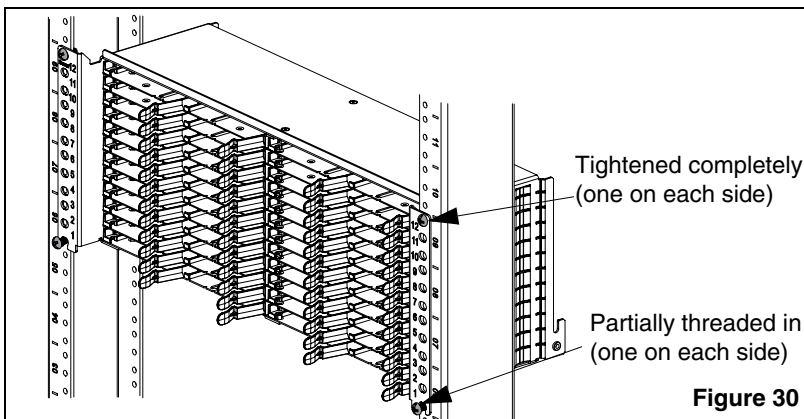


Figure 30

After installing the HD Flex Patch Panel to the equipment rails (*using four screws for 2RU and 4RU variants and two screws for the 1RU variant*), the two screws in the very bottom openings need to be partially threaded in and the two screws in top holes are to be tightened completely (see Figure 30, 4RU variant shown). Only the partially threaded bottom screws are to be used for the 1RU variety.

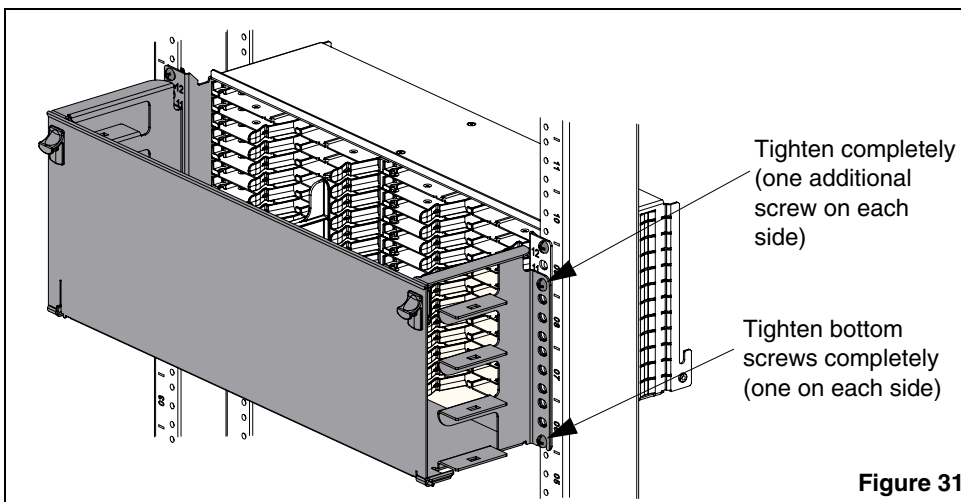
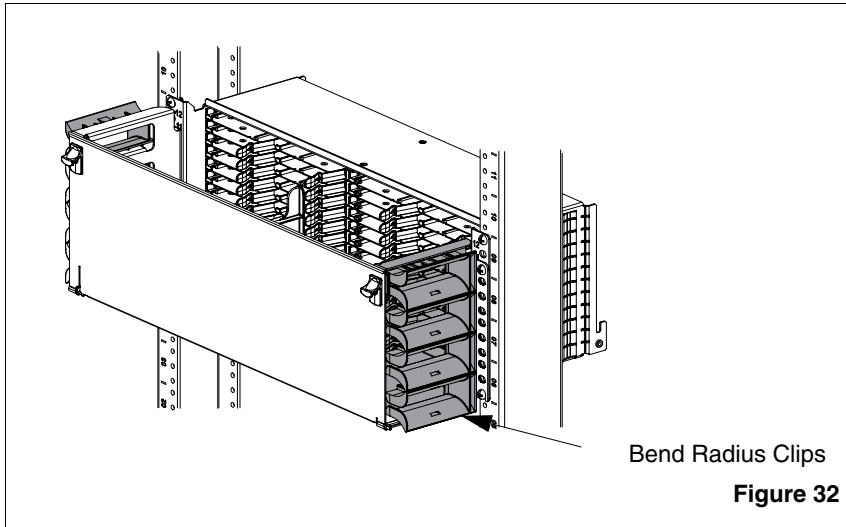


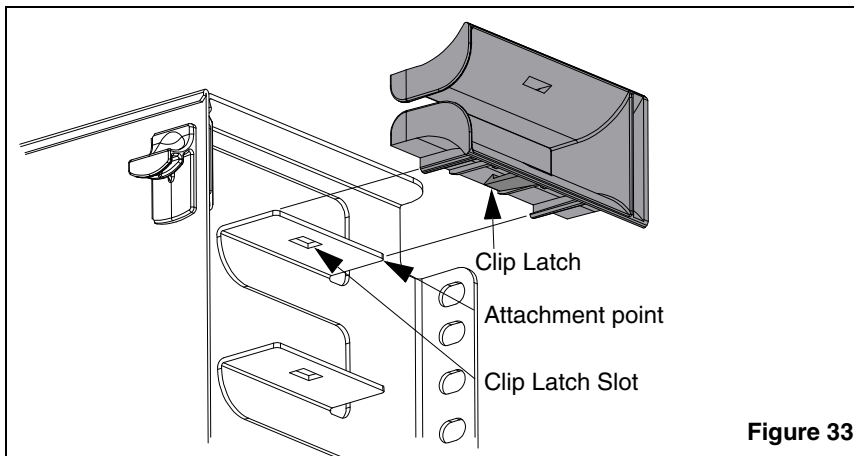
Figure 31

Rest the HD Flex Front Manager on the two bottom screws, then secure with two more screws (as illustrated in Figure 31). The two bottom screws can then be tightened.

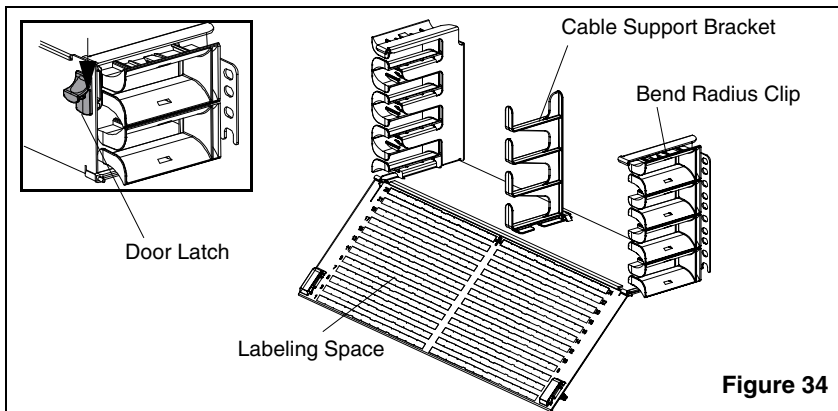
## Mounting bend radius clips:



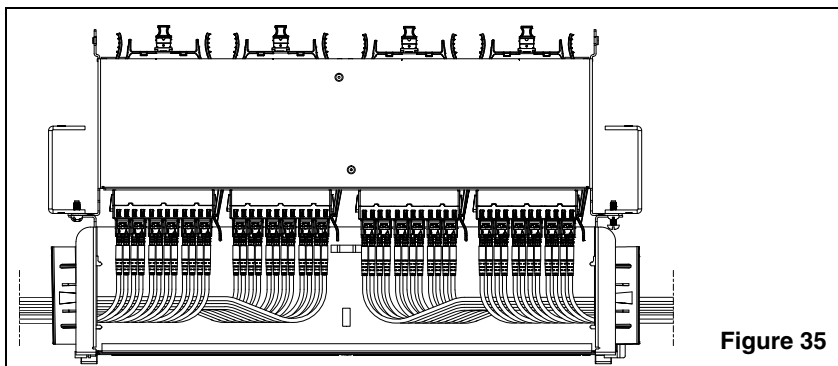
Mount the bend radius clips to the attachment points on each side of the cable manager. The bend radius clips must be installed with the cable slot facing forward. Verify that the clip latch snaps into the mating slot. If required, the bend radius clips can be removed by prying the latch out of the slot.



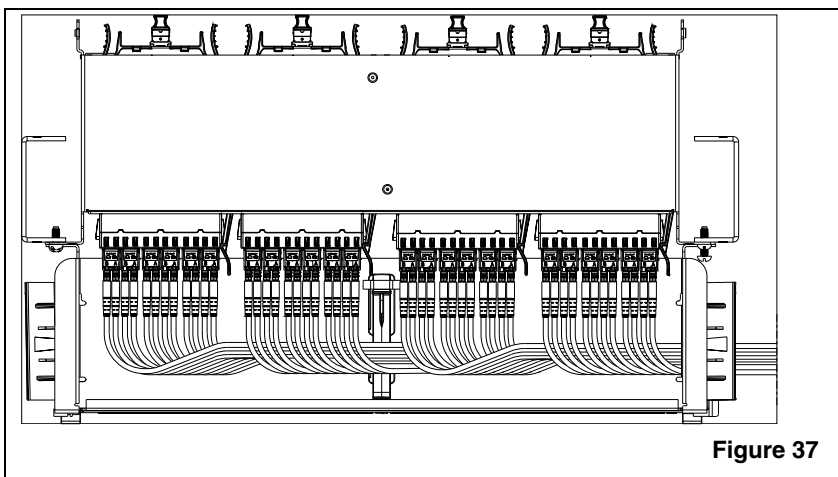
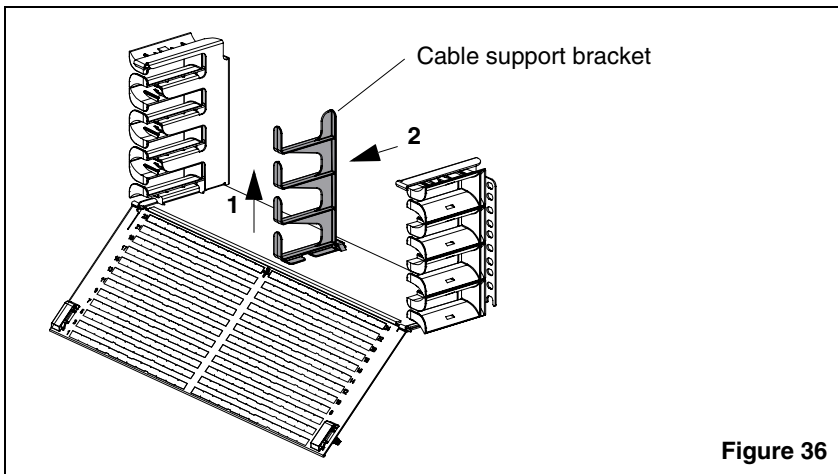
## Optional HD FLEx Front Manager Cable Routing



To open the door, hold down the door latches and swing door open.



The patch cords may be routed, through the bend radius clips, to both sides (recommended) and secured with Tak-Ty. (See Figure 35.) The cable support bracket may be removed to improve access. To remove the cable support bracket, pull up on the front of the bracket (1), then slide the bracket out, toward the front of the unit (2). (See Figure 36.)



The patch cord may also be routed, through the bend clip radius clips on one side only. (See Figure 37.) The patch cords, on the far side of the bend clip radius should rest on the cable support bracket. Cables should be secured with Tak-Ty.



### Labeling

Labeling options for the HD Flex Front Cable Managers allow for identification to follow the EIA 606-B labeling standards. Panduit labels, used in conjunction with Panduit Easy-Mark Labeling Software, simplifies label creation and allows for ease of editing and label replacement when necessary. The labeling location in the upper right corner of the front cable manager door, as shown in Figure 38, is used for identifying the front cable manager within the cabinet or rack. Panduit label part #C125X030FJJ fits in this area.

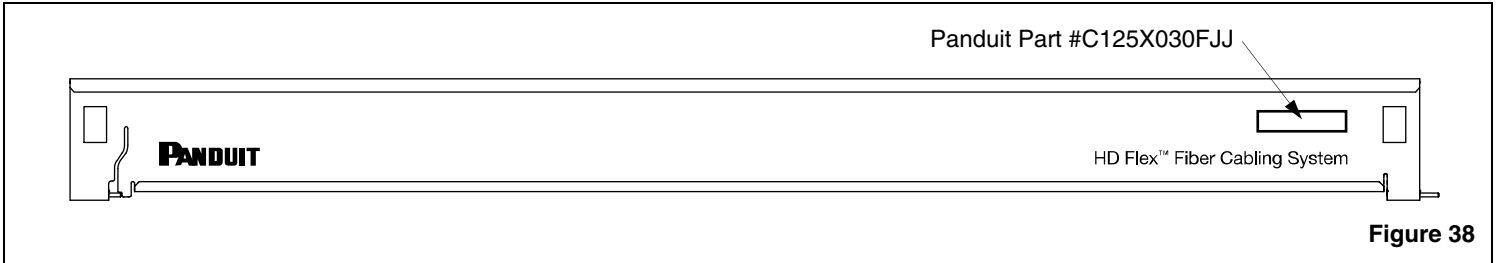


Figure 38

The labeling layout for the 1U front cable manager is shown in Figure 39 below. The layout for the 4RU is identical but contains twelve (12) trays instead of three (3). Panduit label part# C061X030FJJ can be used for single port identification, Panduit label part# C379X030FJJ for 6-port identification, or Panduit label part# C252X030FJJ can be used for 4-port identification.

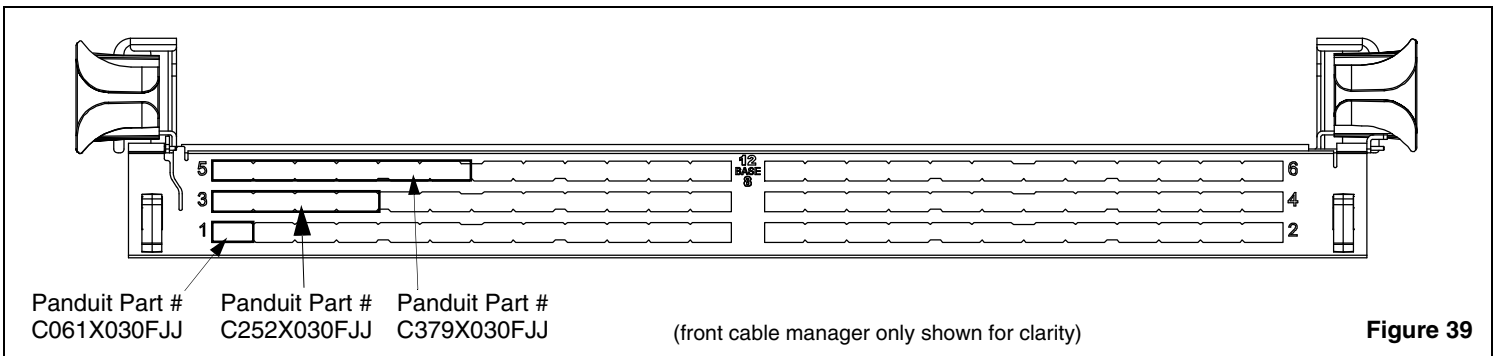


Figure 39

The label on the inside of the front cover coincides with the port and tray labeling as shown below in Figure 40. Tray 1 is the lower most tray and is identified with Row 1 on the label (the layout shows ports 1 - 24 on the first tray).

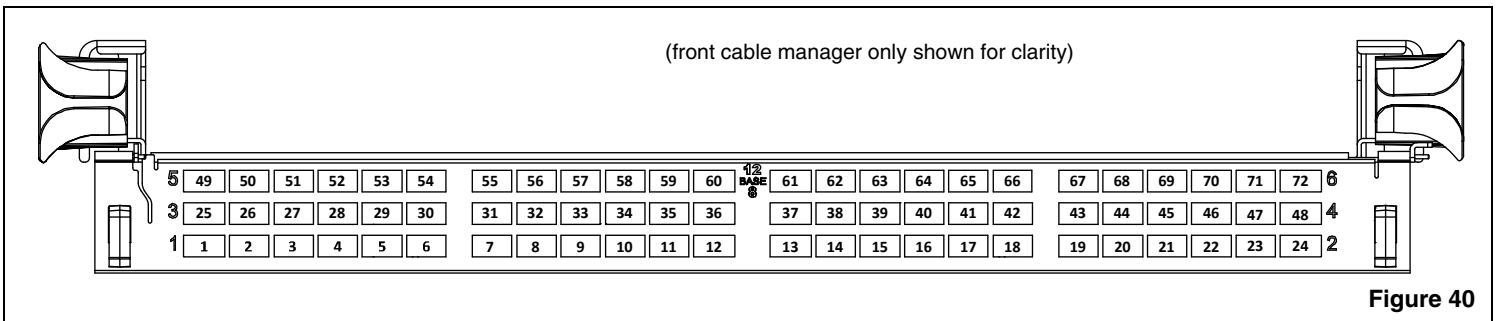


Figure 40

### Panduit Label Part Numbers

Part Number	Description
C061X030FJJ	White, adhesive polyolefin label, 1-port identifier
C125X030FJJ	White, adhesive polyolefin label, 2-port identifier
C252X030FJJ	White, adhesive polyolefin label, 4-port identifier
C379X030FJJ	White, adhesive polyolefin label, 6-port identifier

<p>For Instructions in Local Languages and Technical Support:  <a href="http://www.panduit.com/resources/install_maintain.asp">www.panduit.com/resources/install_maintain.asp</a></p>	<p><a href="http://www.panduit.com">www.panduit.com</a></p>	<p>E-mail:  <a href="mailto:techsupport@panduit.com">techsupport@panduit.com</a></p> <p>Phone:              866-405-6654</p>
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