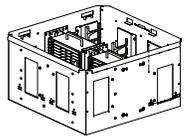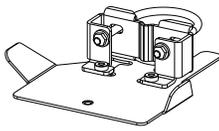© Panduit Corp. 2020

The following items are included with FLEX-ZRFEG.

(1) Enclosure

(4) Support Brackets, with Washers and Nuts

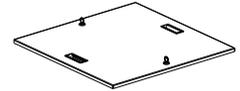**(4) 4RU Cable Managers**

(1) Magnetic Ruler

(4) Bonding Bolts

| Required Tools | *10mm Socket |
| | *7/16" Socket |

Optional Component 1: FLEX-ZRFECG

(1) Set of Keys

(1) Lockable Enclosure Cover

FLEX-ZRFEG

Figure 1

Mounting Depth Table
Distance from bottom of pedestal head plate to top of mounting brackets.

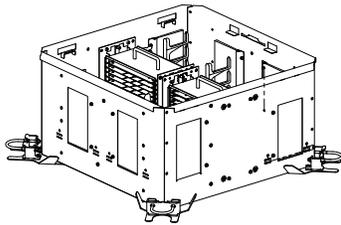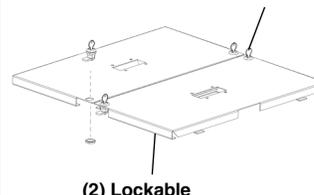| Part Number	FLEX-ZRFEG
Mounting Bracket Depth Below Floor	12"
With Optional Cover	14"
Enclosure Load Rating	54 lb

(+ .25" Tolerance)

Optional Component 2: FLEX-ZRFEDCG

(2) Sets of Keys

(2) Lockable Enclosure Covers

Optional Component 3: FLEX-ZRFEWPG

(8) Screws

(2) Partiton Walls

1.0 Enclosure Installation:

1. Select the installation location ensuring there are no obstacles to interfere with the installation.

2. Mount the four support brackets under the enclosure by placing one on each pedestal mount bracket by attaching the U-bolt and nut around the pedestal (See Figure 2.1). Refer to Figures 3.1 through 3.3 for adjustment to various pedestal sizes. Use the magnetic ruler to measure the correct mounting location for each support bracket. Point them towards the center making a cross from the corners (See Figure 2.2). Ensure that the plate is allowed to pivot from side-to-side. **NOTE:** If Grid Runner is placed above pedestal plate, then the mounting assembly must be removed from plate and reconnected with the mounting assembly under the pedestal plate (See Figure 2.3).
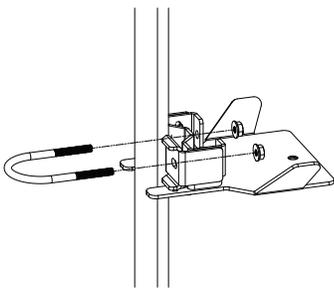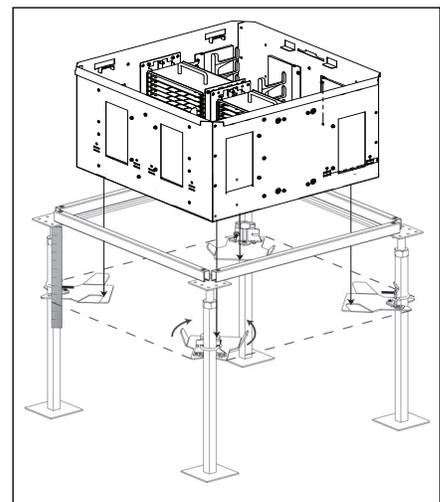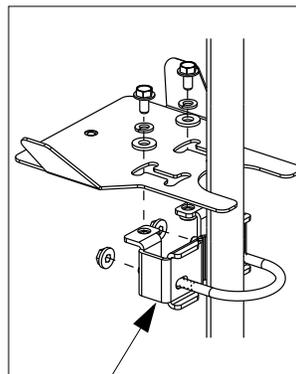
Figure 2.1

Figure 2.3

Figure 2.4

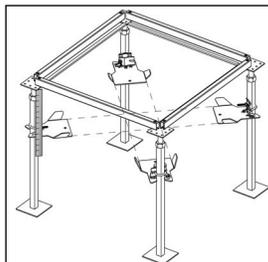**Figure 2.2**

Mounting assembly connected under pedestal mount plate.

Installation of Pedestal Mount Assembly to Various Pedestal Sizes:

3. The FLEX-ZRFEG may be mounted to 7/8" square or up to 2" diameter round pedestals by adjusting the engagement of the U-Bolt.
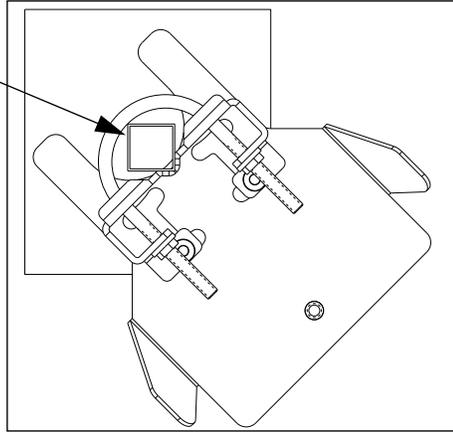
7/8" square pedestal

Figure 3.1

1 1/2" diameter pedestal

Figure 3.2

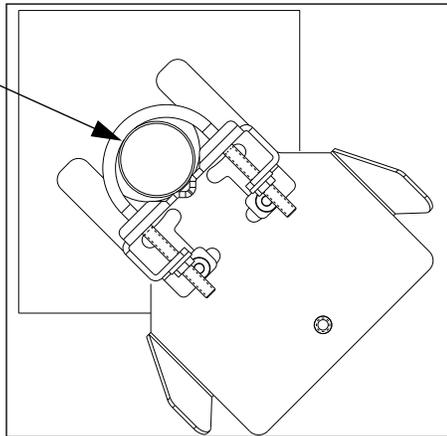**2" diameter pedestal**
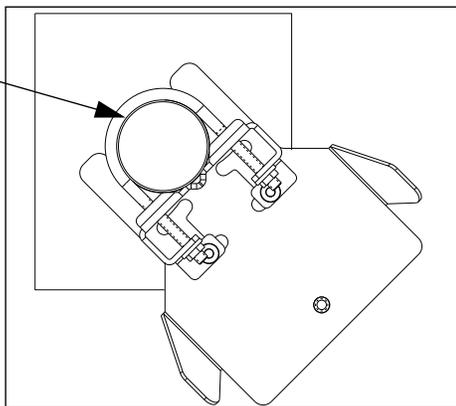
Figure 3.3

Installation continued:

4. Angle one side of the enclosure lower than the other to engage two pedestal mounting brackets. Then rock the enclosure clockwise and counter clockwise while lowering the opposite side on the pedestal mounting brackets to manually align the four corners and mounting hole locations (See Figure 4.1 and 4.2).

5. Once all four corners and mounting holes are aligned in the correct orientation (See Figure 5.1), fasten the enclosure to the pedestal mounting brackets using the supplied M6 X 12mm bonding bolts (See Figure 5.2).

Figure 4.1

Figure 4.2

Figure 5.1

Top View

Figure 5.2

M6 X 12mm Bonding Bolts (4) Places

2.0 SAFETY PRECAUTIONS

1. SAFETY GLASSES
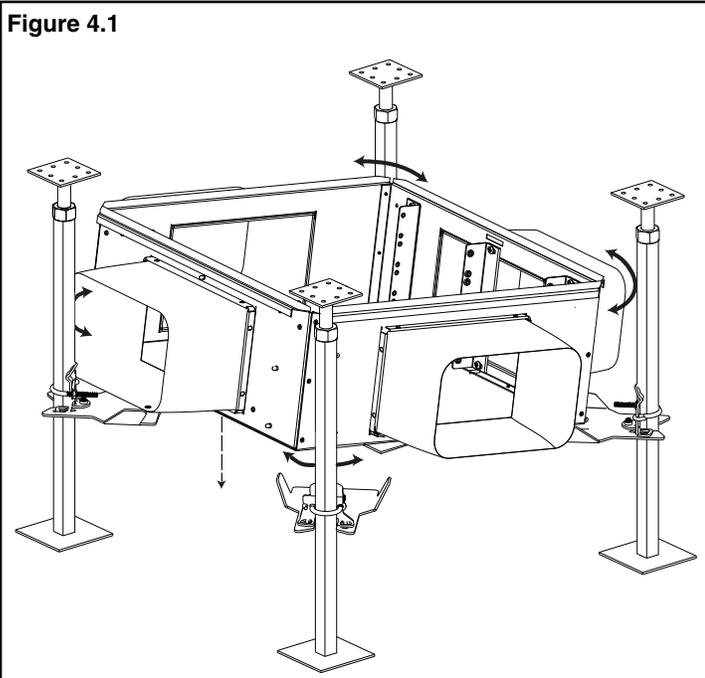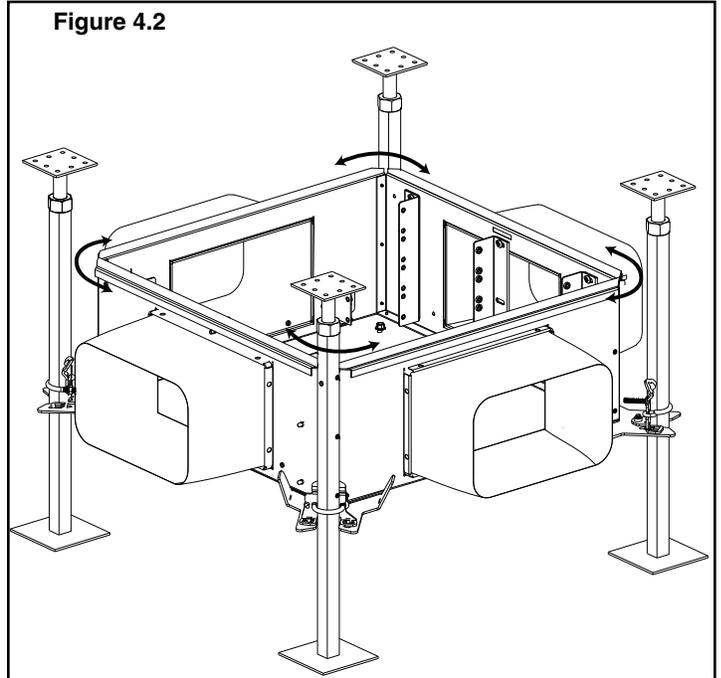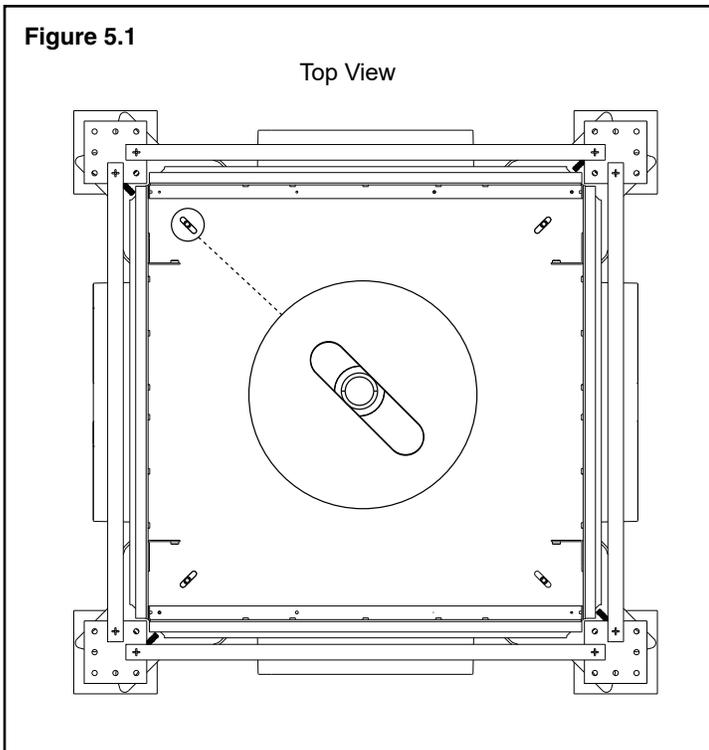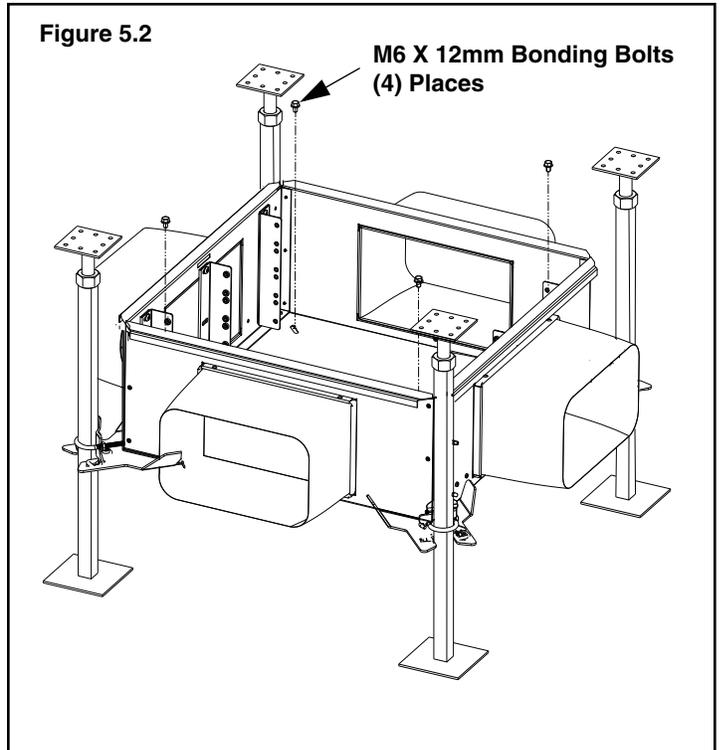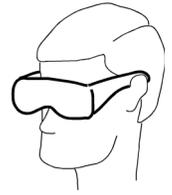WARNING: IT IS STRONGLY RECOMMENDED THAT SAFETY GLASSES BE WORN WHEN HANDLING BARE OPTICAL FIBER. THE BARE FIBER IS VERY SHARP AND CAN EASILY DAMAGE THE EYE.

2. ISOPROPYL ALCOHOL
WARNING: ISOPROPYL ALCOHOL IS FLAMMABLE. CONTACT WITH THE ALCOHOL CAN CAUSE IRRITATION TO THE EYES. IN CASE OF CONTACT WITH THE EYES, FLUSH WITH WATER FOR AT LEAST 15 MINUTES. ALWAYS USE ISOPROPYL ALCOHOL WITH PROPER LEVELS OF VENTILATION. IN CASE OF INGESTION, CONSULT A PHYSICIAN IMMEDIATELY.
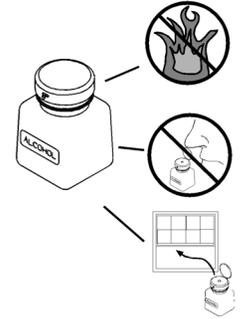
3. DISPOSAL OF BARE FIBERS
WARNING: PICK UP AND DISCARD ALL PIECES OF BARE FIBER WITH STICKY TABS. DO NOT LET CUT PIECES OF FIBER STICK TO CLOTHING OR DROP IN THE WORK AREA WHERE THEY ARE HARD TO SEE AND CAN CAUSE INJURY.

4. LASER LIGHT PROTECTION
USE OF CONTROLS OR PERFORMANCE OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. THE POWER OF EMISSION OF THE LASER BEAM EXCEEDS 1MW IN CLASS II AND IS LESS THAN 5MW IN CLASS IIIA/3R, SO THE FOLLOWING WARNINGS MUST BE FOLLOWED TO AVOID INJURY:
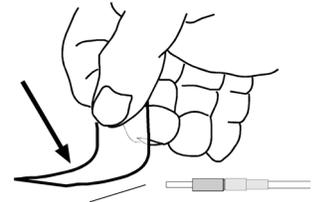
- NEVER POINT THE LASER INTO THE EYES OF OTHERS.
- DO NOT STARE DIRECTLY AT THE LASER BEAM.
- DO NOT SET UP TOOL TO WORK AT EYE LEVEL OR OPERATE THE TOOL ON A REFLECTIVE SURFACE AS THE LASER COULD BE PROJECTED INTO YOUR EYES OR THE EYES OF OTHERS.

ALWAYS TURN THE LASER OFF WHEN IT IS NOT IN USE OR IS LEFT UNATTENDED FOR A PERIOD OF TIME. REMOVE THE BATTERIES WHEN STORING FOR AN EXTENDED PERIOD OF TIME TO AVOID DAMAGE TO THE TOOL SHOULD THE BATTERIES DETERIORATE.
NEVER LOOK INTO THE PATH OF THE VISUAL FAULT LOCATOR OR ANY OTHER LASER BEAM.
NEVER LOOK INTO THE END OF A FIBER WHICH MAY HAVE ANY VISUAL FAULT LOCATOR, OR ANY OTHER LASER, COUPLED TO IT.
NEVER LAUNCH ANY VISUAL FAULT LOCATOR INTO ACTIVE EQUIPMENT OR MICROSCOPE. MAKE SURE THAT THE END OPPOSITE THE VISUAL FAULT LOCATOR IS NOT CONNECTED TO ANY ELECTRONICS OR ACTIVE EQUIPMENT DURING TERMINATION.

5. CABLE HANDLING
WARNING: FIBER OPTIC CABLE CAN BE DAMAGED BY EXCESSIVE PULLING, TWISTING, CRUSHING OR BENDING STRESSES. CONSULT THE APPROPRIATE SPECIFICATION SHEETS AS PROVIDED BY YOUR CABLE VENDOR. ANY DAMAGE MAY DECREASE OPTICAL PERFORMANCE.

6. SHEATH REMOVAL
CONSULT CABLE MANUFACTURER'S INSTRUCTIONS FOR PROPER SHEATH REMOVAL METHOD FOR THE CABLE IN USE. CONSULT SPLICE MANUFACTURER'S INSTRUCTIONS FOR RECOMMENDED PRECAUTIONS,

LASER LIGHT
AVOID DIRECT EYE EXPOSURE
<5mW @ 635nm
CLASS IIIa/3R LASER PRODUCT
Complies with:
IEC/EN 60825-1:2001;
and also with 21 CFR 1040.10 and 1040.11 with Laser Notice No. 50.
AVOID EXPOSURE - Laser Light is emitted from the aperture below or the end of the patch cord.

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.

For Technical Support: www.panduit.com/resources/install_maintain.asp

3.0 Cassette/Cable Installation (without FLEX-ZRFEDCG Partition Walls):

1. Remove hook n loop from patch panels. Retain this as you will use it in the installation process.
2. Lift one patch panel upwards with handle and tilt forward. (See Figure 6).

Figure 6
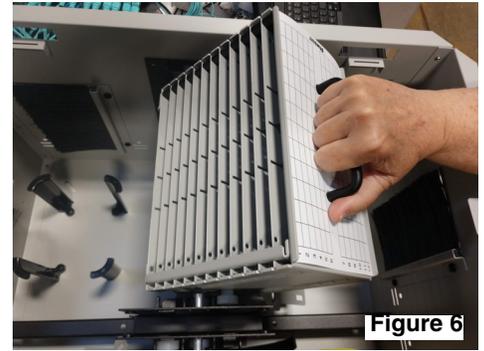
3. Install HD Flex 12-port cassettes into patch panel starting at the bottom-most slots and working upwards. To install cassettes, insert into the slots from the rear as shown and push forward until they snap into place. Note the polarity label of **EACH** cassette and orient properly as needed. (See Figure 7).
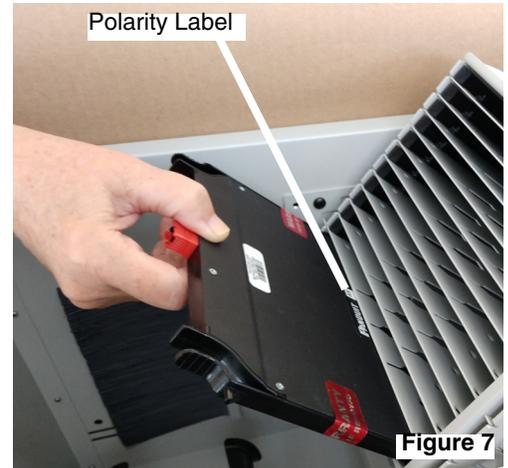
NOTE: The enclosure patch panels are set up by default for use with 12-port cassettes. (See Figures 37 through 39 for installation of 4-port and 6-port rails for use with 4-port and 6-port cassettes).

Polarity Label
Figure 7

4. Repeat the process until all desired slots are filled with cassettes.

NOTE: if installing 4-port or 6-port cassettes, populate the entire row from right to left before moving to the next row above.

NOTE: If installing an MPO Fiber Adapter (FAP), first attach cabling to the rear of the FAP. This will make for an easier installation. (See Figures 31 though 33 for wiring FAPs).

Figure 8
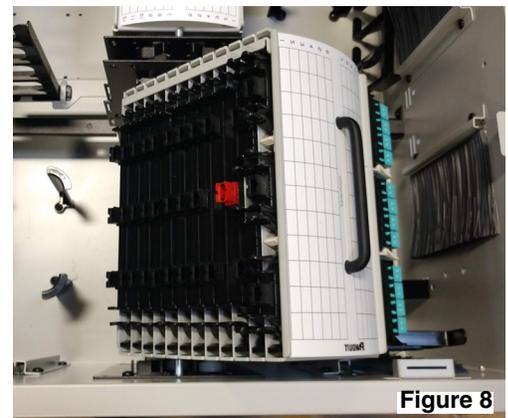
Table 1: MAXIMUM MODULE POPULATION PER ENCLOSURE

	4-PORT MODULES	6-PORT MODULES	12-PORT MODULES
FLEX-ZRFEG	72	48	24

5. **Patch Panel *REAR* Connector Installation**:
   a. Route fiber bundle of 72 fibers cable through brushes in adjacent opening. Loop fiber bundle of 72 fiber cables around 4 cable managers and secure with hook-n-loop. (See Figure 9).

cable managers
Figure 9

© Panduit Corp. 2020

b. Mate MPO connectors from fiber cable to rear of cassettes
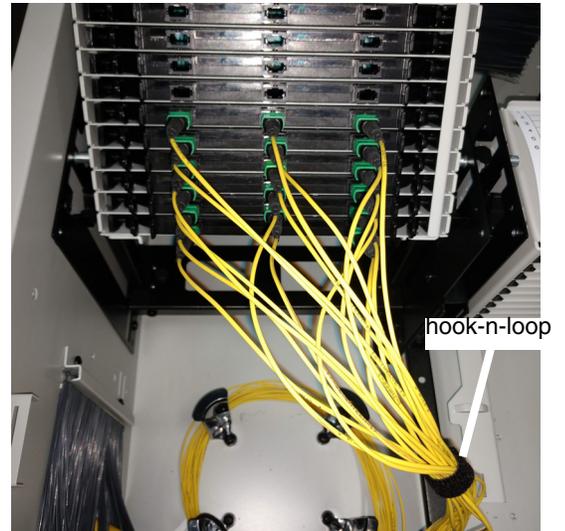starting from the bottom. Bundle strands together with
hook-n-loop. (See Figure 10).

hook-n-loop

Figure 10

c. Install remaining MPO connectors into rear of cassettes,
working from the bottom upwards.(See Figures 11
through 12).

Figure 12

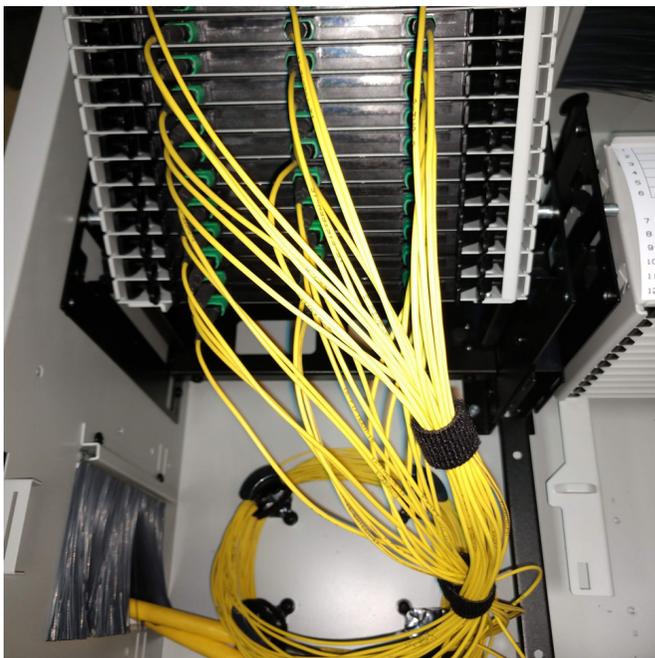**Figure 11**

6. **Patch Panel *FRONT* Connector Installation**:
   a. Install 4RU cable manager to the leg as shown. (See Figure 13).
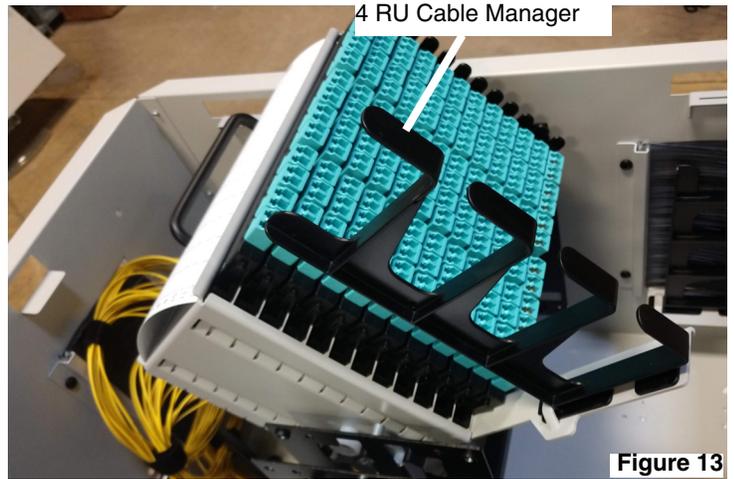

4 RU Cable Manager

Figure 13

   b. Route 1st fiber bundle of 72 fibers cable through brushes in opening as shown. Bring fiber cable up toward patch panel. Route cables through 1st bottom position in 4RU cable canager. Secure cables to 4RU manager 1st position with hook-n-loop. (See Figures 14 through 15).

Figure 14

Figure 15

   c. Route 2nd fiber bundle of 72 fiber cables through brushes in opening as shown. Bring fiber bundle up towards the patch panel. Route bundle through 2nd bottom position in 4RU cable manager. Secure bundle to 4RU 2nd position with hook-n-loop. (See Figures 16 through 17).
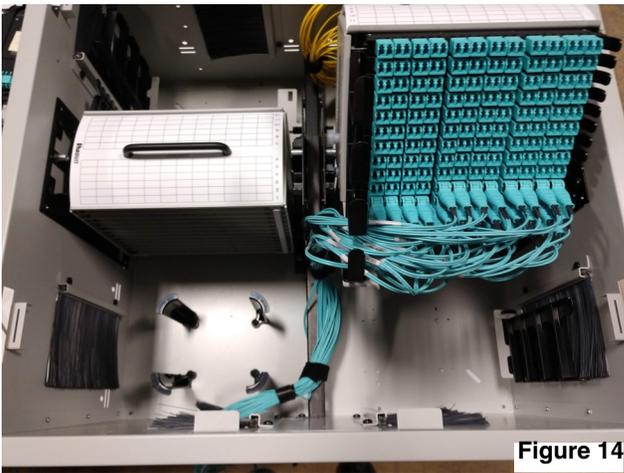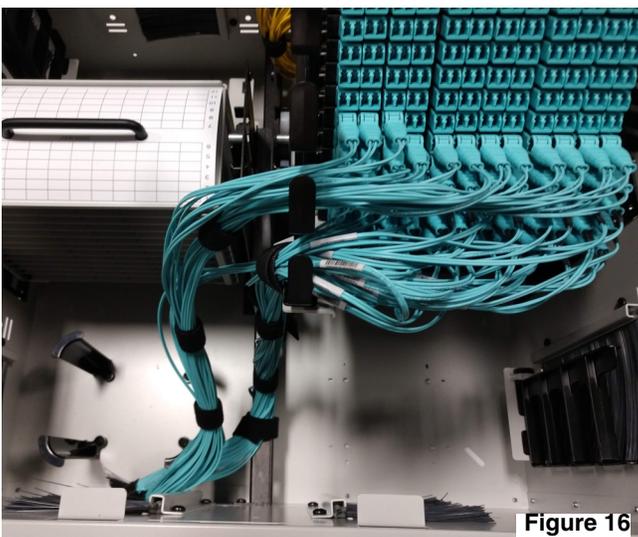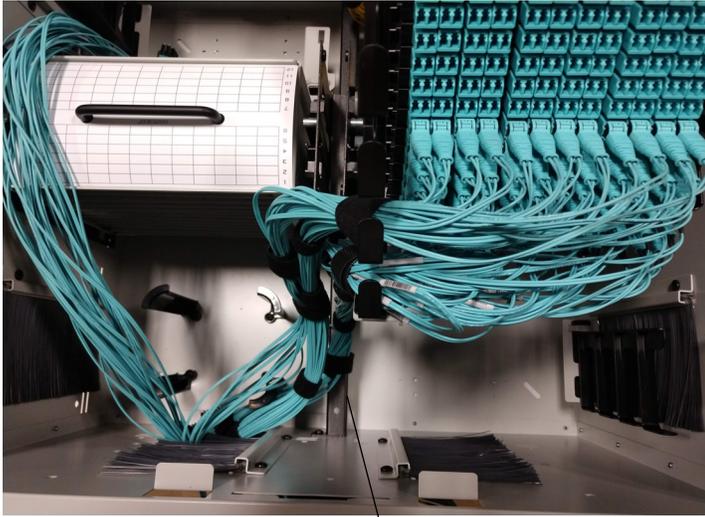

Figure 16

4th bundle of 72 fiber cables

3rd bundle of 72 fiber cables

2nd bundle of 72 fiber cables

1st bundle of 72 fiber cables

Figure 17

d. Route the remaining fiber bundles of 72 cables through brushes in opening as shown. Bring fiber cable up by bundles towards patch panel. Route bundle 3 through 4RU cable manager position 3. Route bundle 4 through top position 4 in 4RU cable manager. Secure fiber cable bundles with hook-n-loop. (See Figures 17 through 19).

middle rail

Figure 18

4th bundle of 72 fiber cables

3rd bundle of 72 fiber cables

2nd bundle of 72 fiber cables

1st bundle of 72 fiber cables

Figure 19

e. Secure bundle 4 to slots on the middle rail (see Figure 20) using hook-n-loop.

f. Attach all of the fiber cables to each other with one large hook-n-loop. (as shown in Figures 21 through 24).
The intent is to bundle all fiber cables together so that the patch panel does not touch the fiber cables when the patch panel is rotated and set back into place after it is populated.

slots on both sides of the middle rail
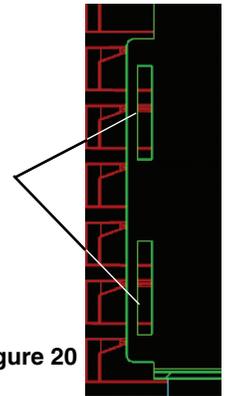
Figure 20
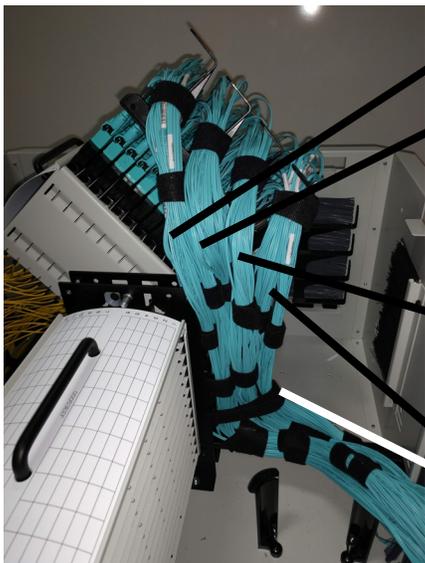
bundle 4

bundle 3

bundle 2

bundle 1

Attach all bundles together with (1) hook-n-loop

Figure 21
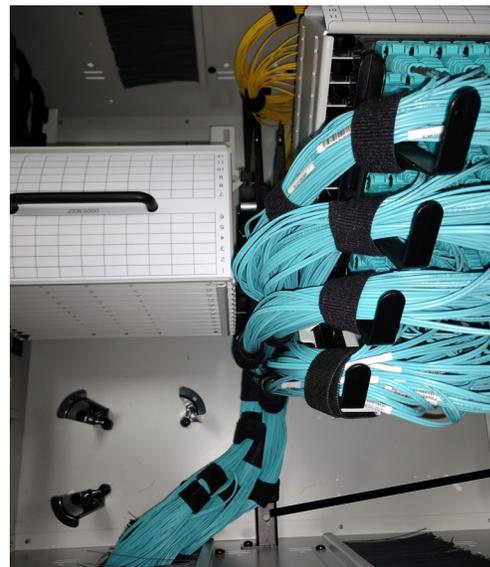
middle rail

FIgure 22

Fasten all fiber cable bundles together with one hook-n-loop
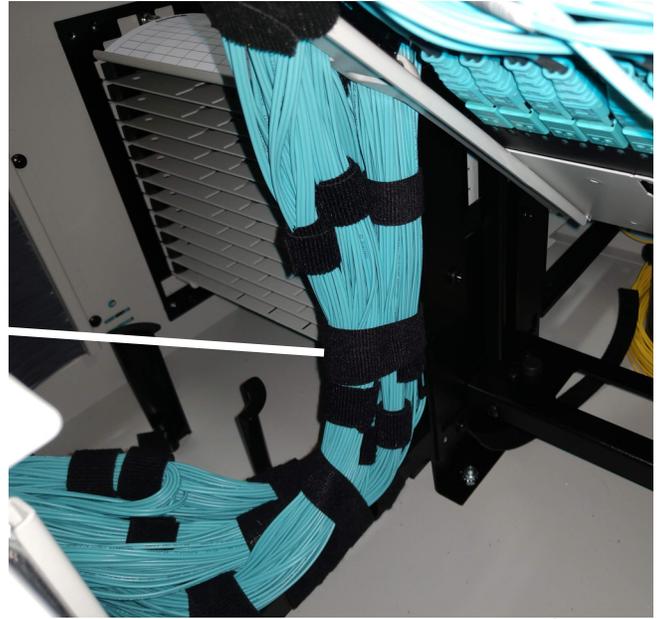
Figure 23

Figure 24

g. Grab handle and rotate patch panel downward, ensuring that no fiber cables are pinched. (See Figure 25).
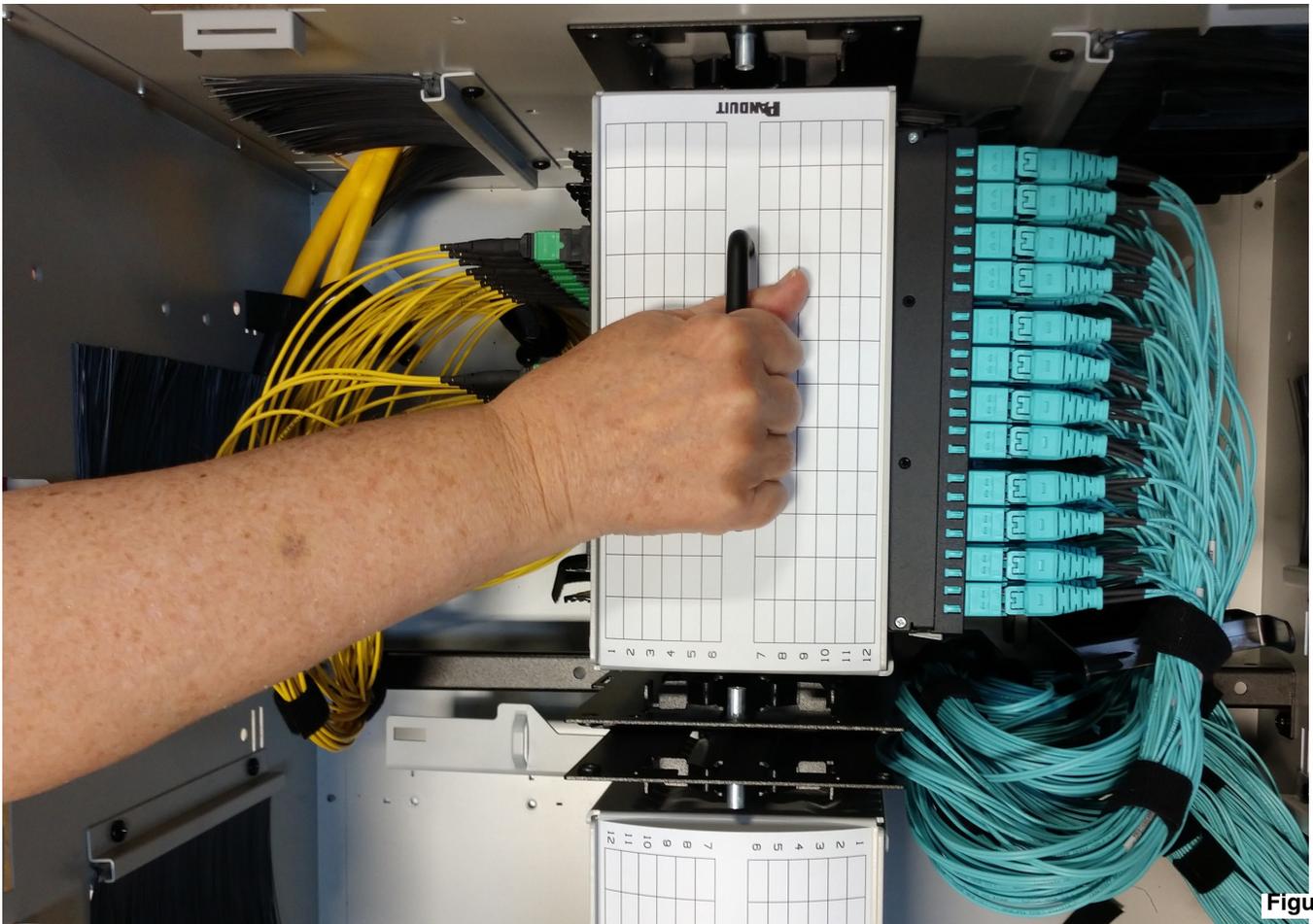

Figure 25

h. Populate patch panel on the opposite side in the same manner described in steps 5.a through 5.g

Labeling

Labeling options for the Zone Raised Floor Enclosure allows 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 on top is *PANDUIT* Part # 00053EEF (which is removable).

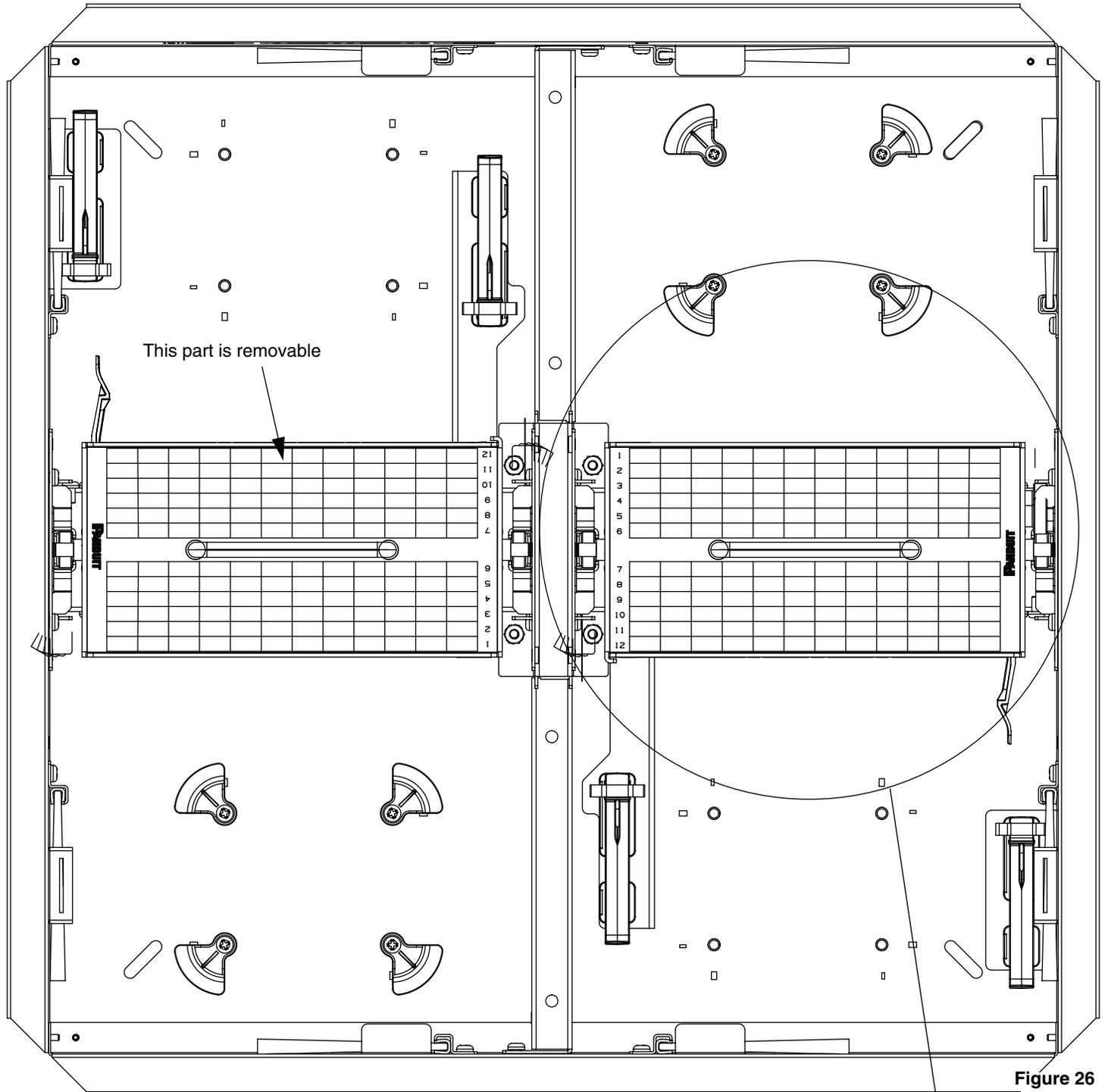This part is removable

Figure 26

See Figure 27

The labeling layout for the patch panel (see Figure 27 below) for typical application *PANDUIT* label part # C061X030FJJ can be used for single port identification. *PANDUIT* label part # C125X030FJJ for 2-port applications. *PANDUIT* label part # C252X030FJJ for 4-port applications. *PANDUIT* label part # C379X030FJJ for 6-port applications.
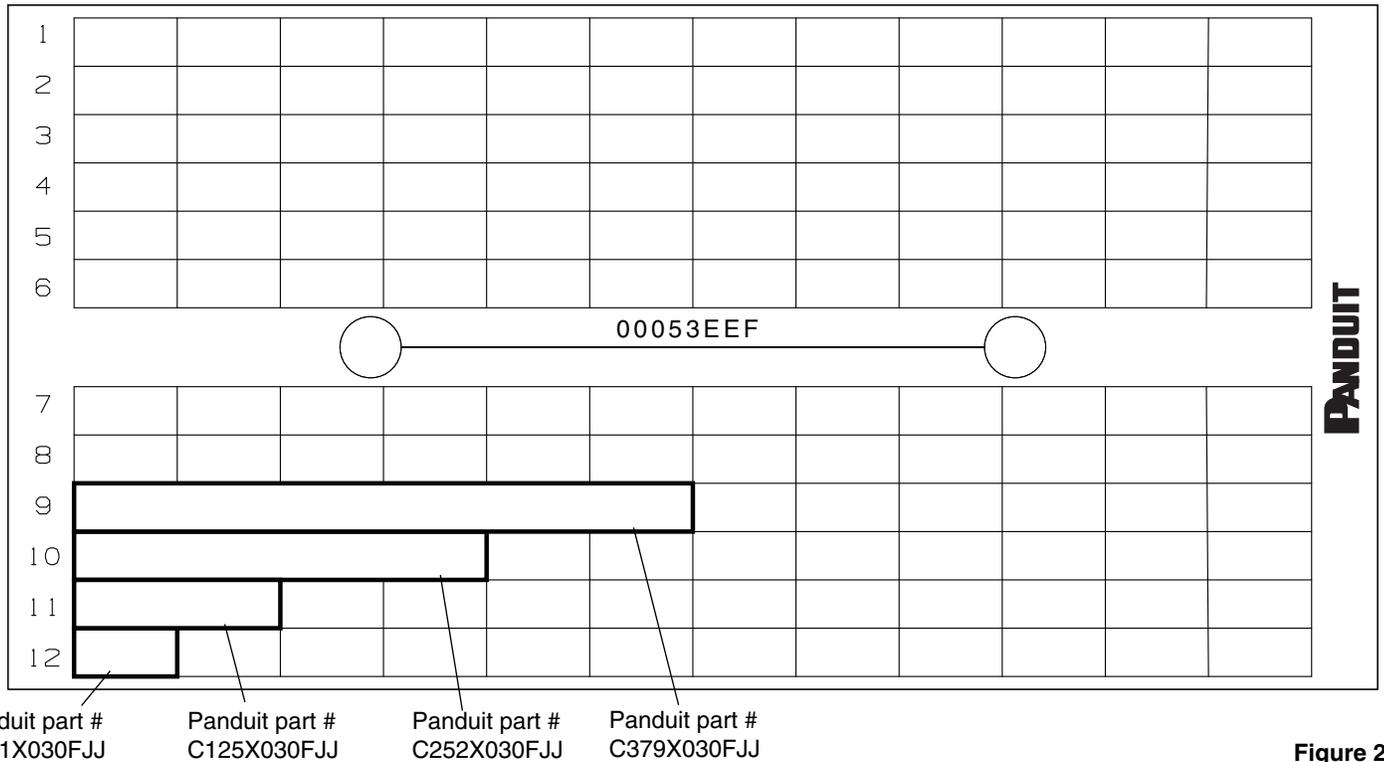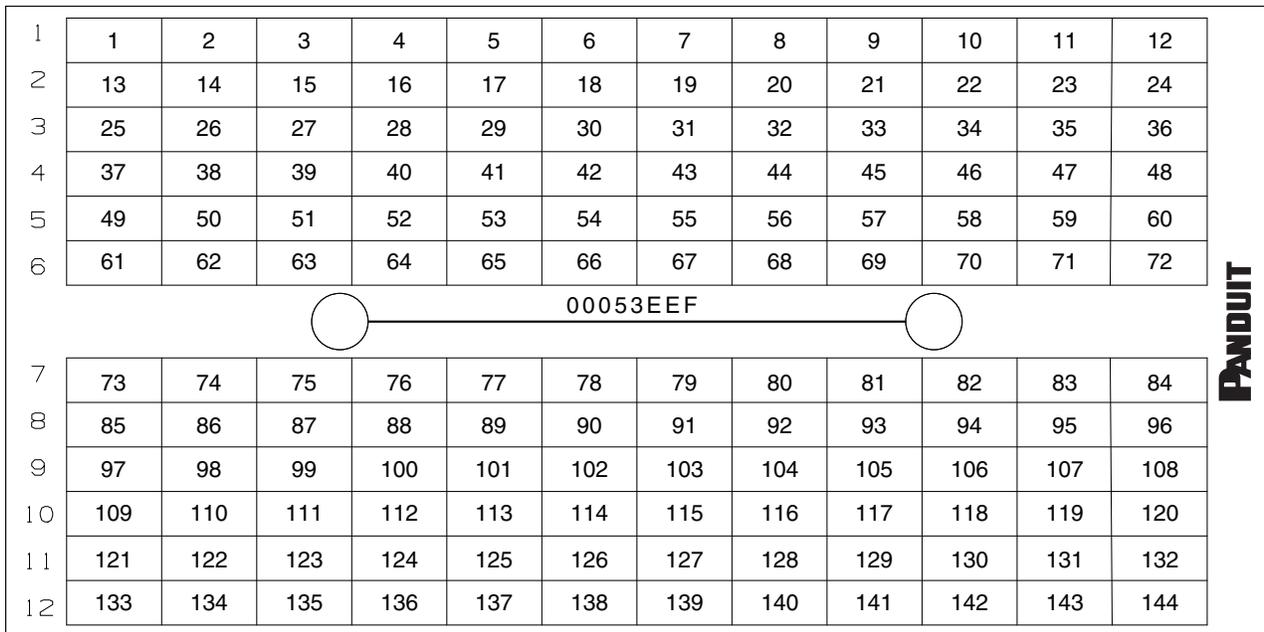
Panduit part #
C061X030FJJ

Panduit part #
C125X030FJJ

Panduit part #
C252X030FJJ

Panduit part #
C379X030FJJ

Figure 27

1	1	2	3	4	5	6	7	8	9	10	11	12
2	13	14	15	16	17	18	19	20	21	22	23	24
3	25	26	27	28	29	30	31	32	33	34	35	36
4	37	38	39	40	41	42	43	44	45	46	47	48
5	49	50	51	52	53	54	55	56	57	58	59	60
6	61	62	63	64	65	66	67	68	69	70	71	72

00053EEF

7	73	74	75	76	77	78	79	80	81	82	83	84
8	85	86	87	88	89	90	91	92	93	94	95	96
9	97	98	99	100	101	102	103	104	105	106	107	108
10	109	110	111	112	113	114	115	116	117	118	119	120
11	121	122	123	124	125	126	127	128	129	130	131	132
12	133	134	135	136	137	138	139	140	141	142	143	144

Figure 28

See Figure 28 above for an example of port numbering.

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
PROG-EMCCD3	Easy-Mark Labeling Software (CD-ROM)
PROG-EM2GO	Easy-Mark Labeling Software (USB Flash Drive)

4-Port / 6-Port Cassette Rail Removal Installation
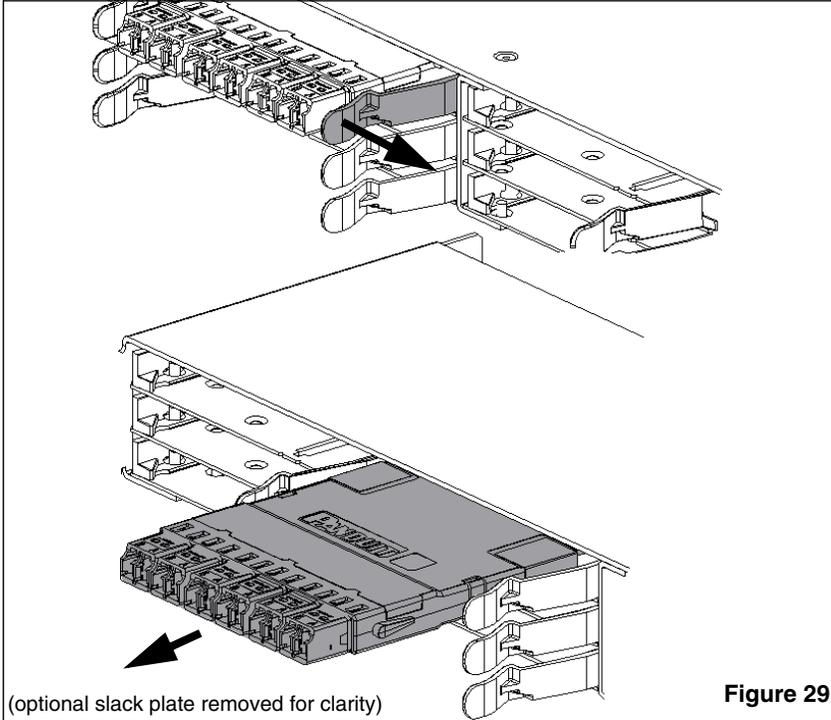
Cassettes can be removed from the front of the patch panel as needed for replacement or migration. Disconnect patch cords from the front of the cassette. Press the latch away from the module and pull the module forward. Once the module is pulled past the latch, the module can be completely removed. (See Figure 29).
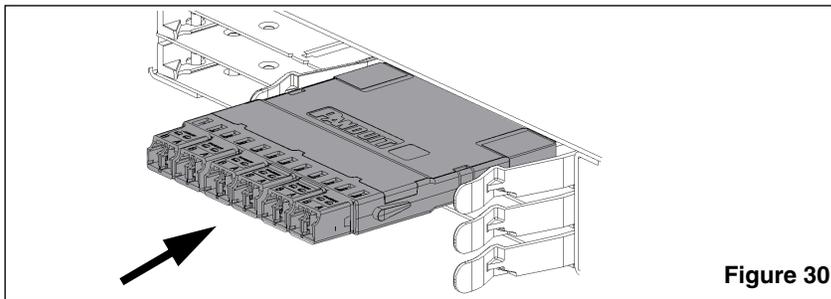
(optional slack plate removed for clarity)

Figure 29

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 position near the front/center, until it clicks into place. Re-attach patch cords (for cassette changes). (See Figure 30).
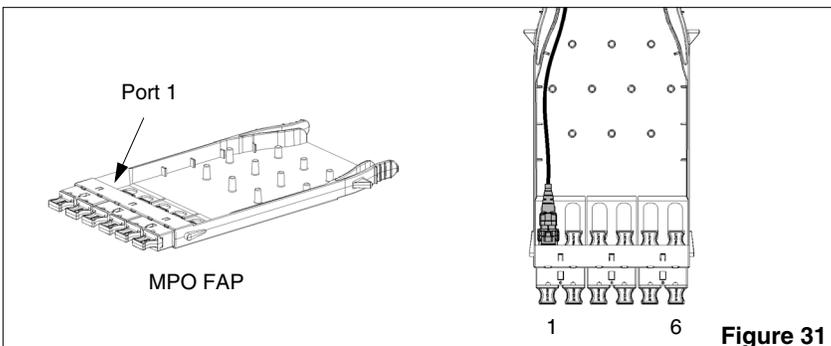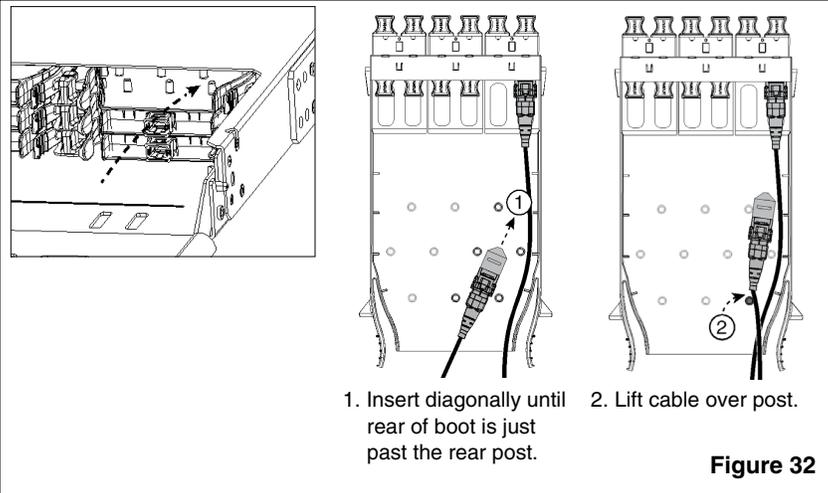
Figure 30

HD Flex MPO Fiber Adapter Panel (FAP) Usage

If migrating to an MPO FAP, connect the MPO trunk cable to the left most position, port 1 (as shown in Figure 31).

Port 1
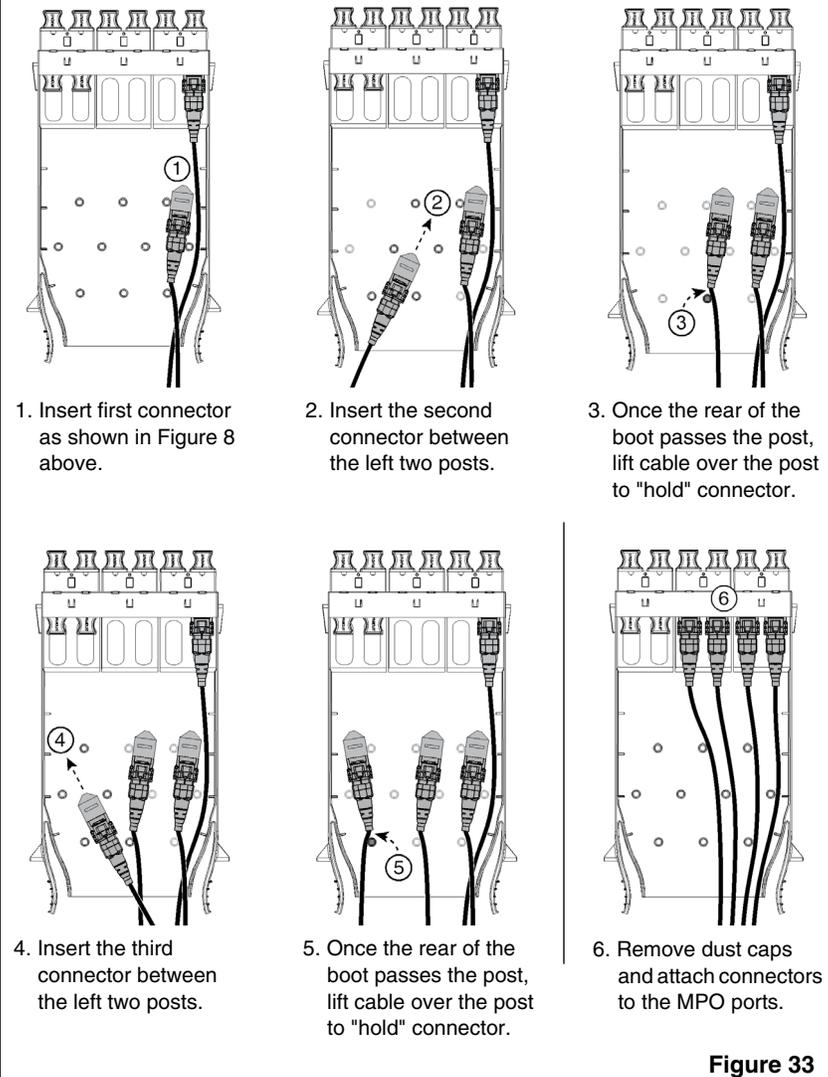
MPO FAP

1   6

Figure 31

Installing Additional MPO Trunks

1. Insert diagonally until rear of boot is just past the rear post.

2. Lift cable over post.

Figure 32

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 32). 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 32).

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.

FAP can accommodate "holding" up to 3 MPO connectors at a time. (Follow the steps in Figure 33.)

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 33).

(images shown in top view for clarity)

1. Insert first connector as shown in Figure 8 above.

2. Insert the second connector between the left two posts.

3. Once the rear of the boot passes the post, lift cable over the post to "hold" connector.

4. Insert the third connector between the left two posts.

5. Once the rear of the boot passes the post, lift cable over the post to "hold" connector.

6. Remove dust caps and attach connectors to the MPO ports.

Figure 33

Reconfiguring patch panel to accept 6-Port or 4-Port Modules
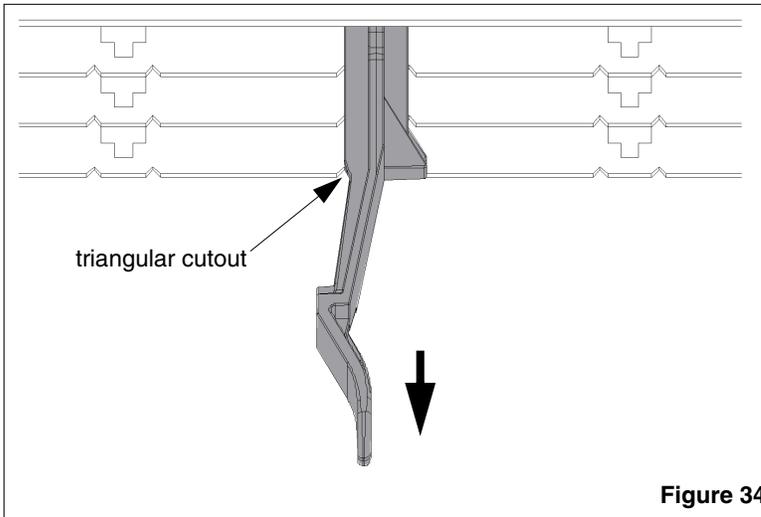

triangular cutout

Figure 34

To install rail onto tray, align rail between triangular cutouts (shown in Figure 34). 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.
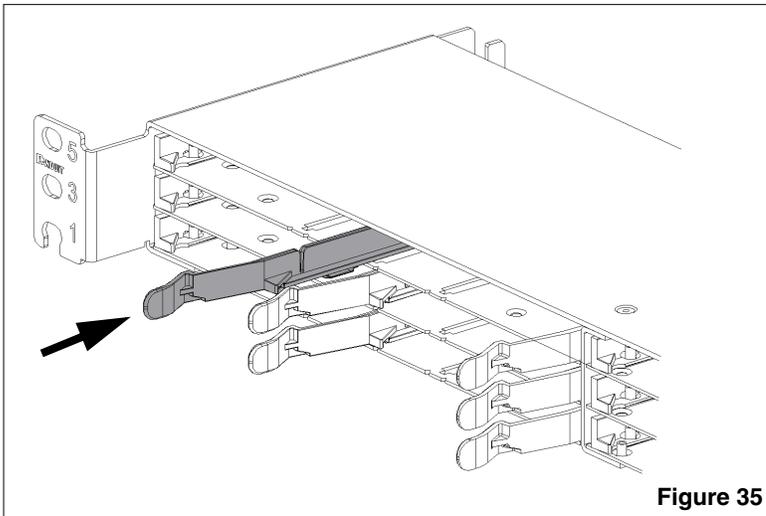

Figure 35

While continuing to apply downward pressure on the rail being installed, push the rail backward (shown in Figure 35). As the rail begins to move it will engage with the tray.
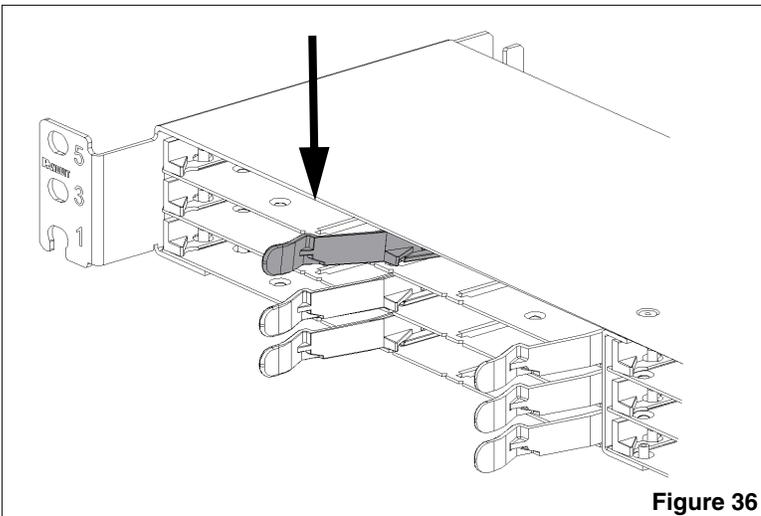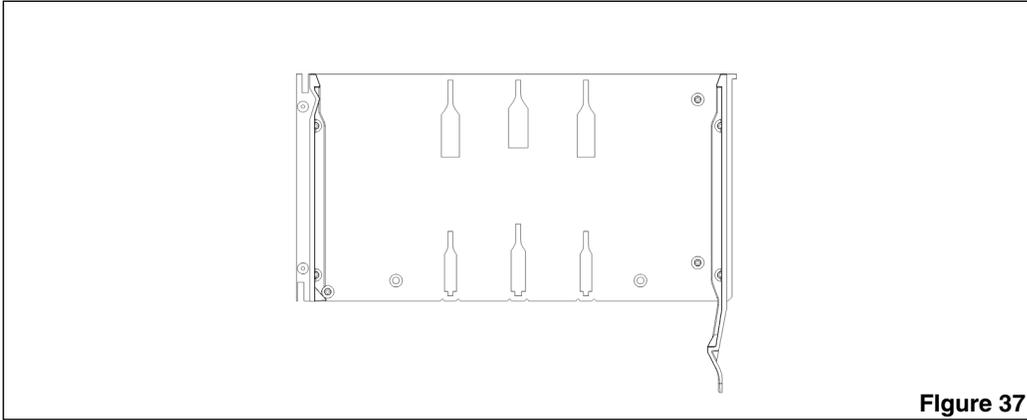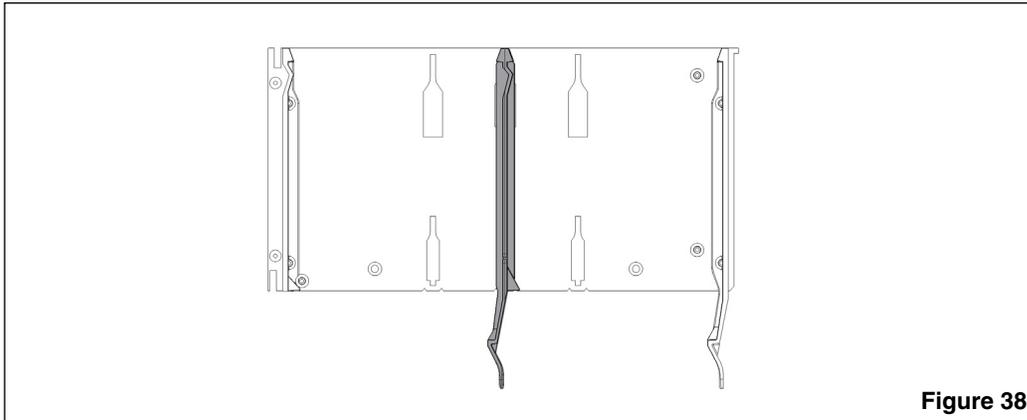

Figure 36

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. Apply pressure downward, (shown in Figure 36) to make posts engage with tray. Once the rail is fully inserted the front of the rail will snap into position.

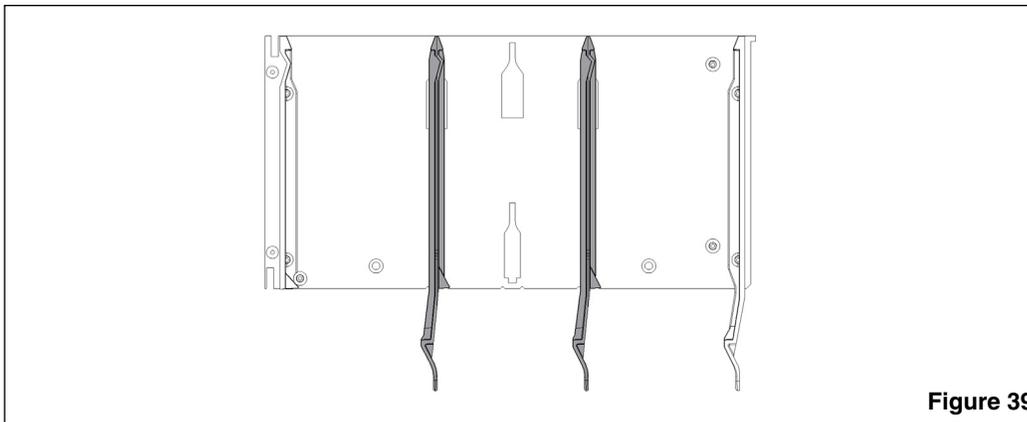## Optional Tray Configurations (Only patch panel trays are shown for clarity)

12-Port Configuration: no removable rails installed on tray (See Figure 37).

Figure 37

6-Port Configuration: 1 black removable rail per tray. (See Figure 38).

Figure 38

4-Port Configuration: 2 white removable rails per on tray (See Figure 39).
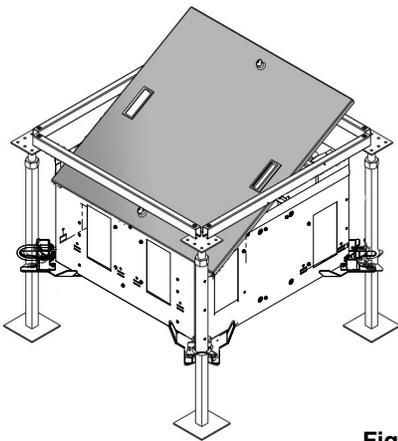
Figure 39

ADDITIONAL PRODUCTS SOLD SEPARATELY:

Option 1: HD Flex Zone Raised Floor Enclosure Cover FLEX-ZRFECG

Enclosure's Cover Installation:

Attach Adhesive Foam Seal to the top of the enclosure (shown in Figure 40)**.**
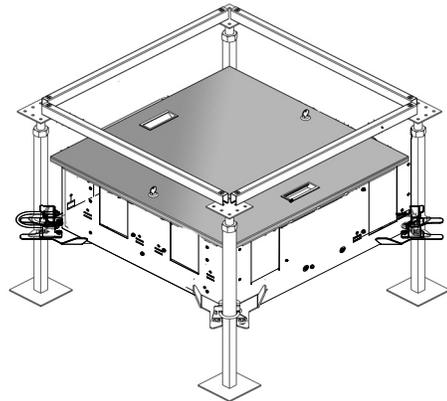
Foam Seal
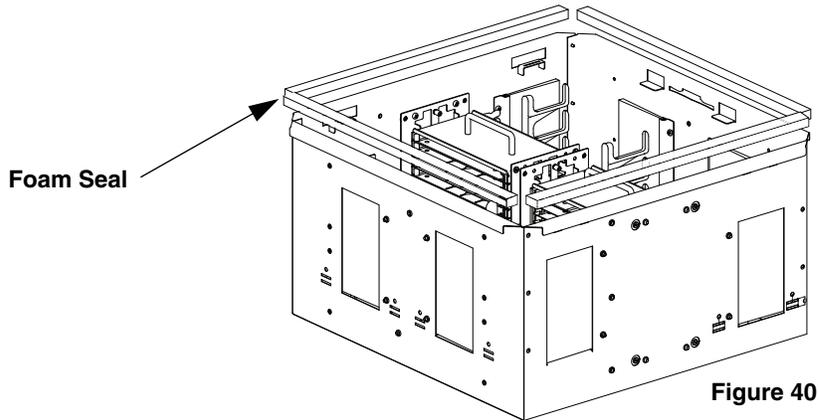
Figure 40

Once the seal has been successfully attached, drop the cover into the enclosure as shown. (See Figures 41 through 42).

Figure 41

Figure 42

Option 2: HD Flex Zone Raised Floor Enclosure Dual Cover FLEX-ZRFEDCG

No seal needed. Drop each cover into the enclosure (See Figures 43 through 44). Engage both locks to lock each cover.
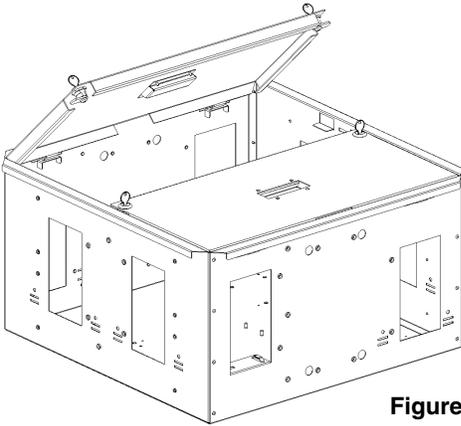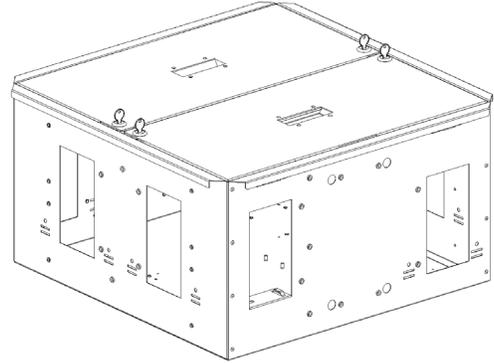
Figure 43

Figure 44

Option 3: Enclosure Wall Partition FLEX-ZRFEWPG

3.A Partition Wall Installation

Lift up and remove both patch panels. Secure partition walls with a total of 8 screws provided in the circled locations shown below (in Figure 45), Install 4RU cable managers into sides of enclosure. Re-install patch panels (per FIgure 46). Ensure patch panels are in the proper orientation shown.
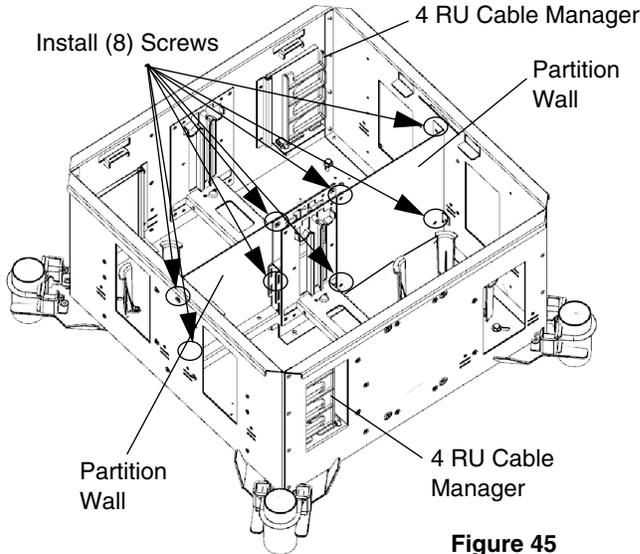
Install (8) Screws

4 RU Cable Manager

Partition Wall

Front of Patch Panel 1

Partition Wall

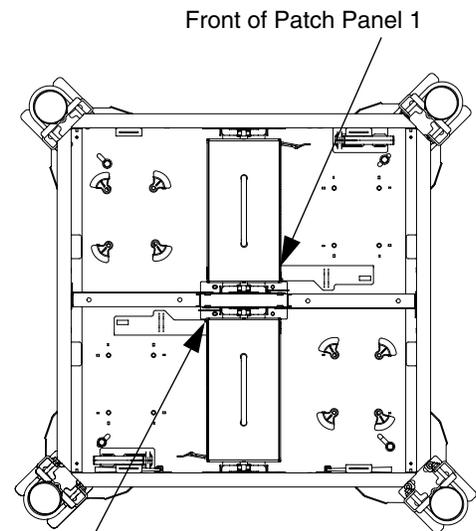4 RU Cable Manager

Figure 45

Front of Patch Panel 2

Figure 46

3.B Cassette and Cassette Rear Cable Installation

Install cassettes and cables at rear of cassette (as depicted in Figures 7 through 8).
Then route cassettes and fiber cable following directions 3 through 5.C from Section 3.0

Secure cables at rear of cassette through mounting holes in side of wall (shown in Figure 47) with hook-n-loop.

Fasten Hook-n-Loop through mounting hole in side of partition wall to cable at rear of cassette

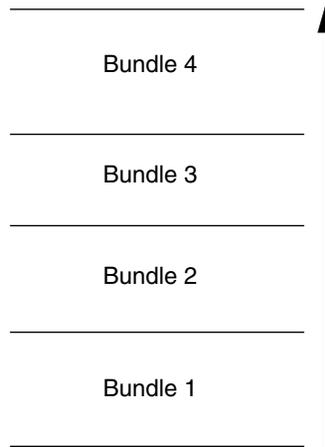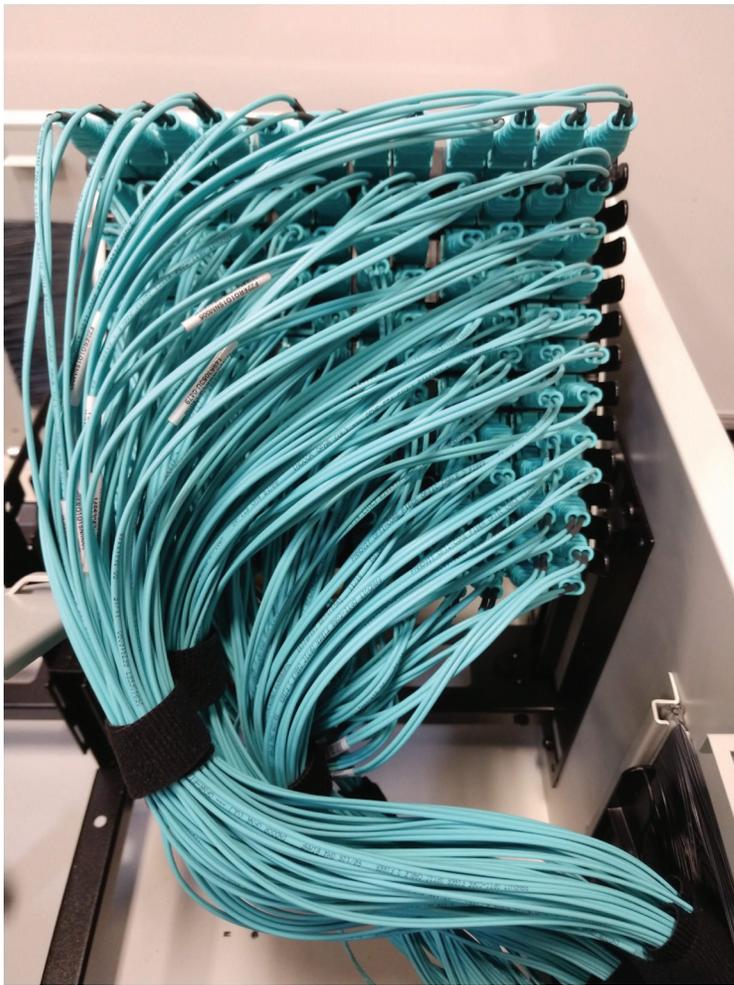**Figure 47**

3.C Cable Installation at Front of Cassette

Bundle 4

Bundle 3

Bundle 2

Bundle 1

BUNDLE INSTALLATION SEQUENCE OF CABLES AT FRONT OF CASSETTE

Figure 48

Install and route cables though 4RU cable manager at each side of enclosure toward the front of each cassette, starting with the lowest cable bundle 1 and working upward to cable bundle 4. Secure each bundle to the 4RU cable manager with hook-n-loop (as shown in Figure 48).

Route cables and install connectors first from the bottom row of cassettes and work upward toward the top row of the cassette (as depicted in Figure 49).

Ensure that cables exit from the front of each cassette routed to the left, down, and then to the right through the 4RU cable manager (as shown in Figure 49).

Rotate the patch panel, making sure that the fiber cables do not interfere with/hit the enclosure.

Bundle 4

Bundle 3

Bundle 2

Bundle 1
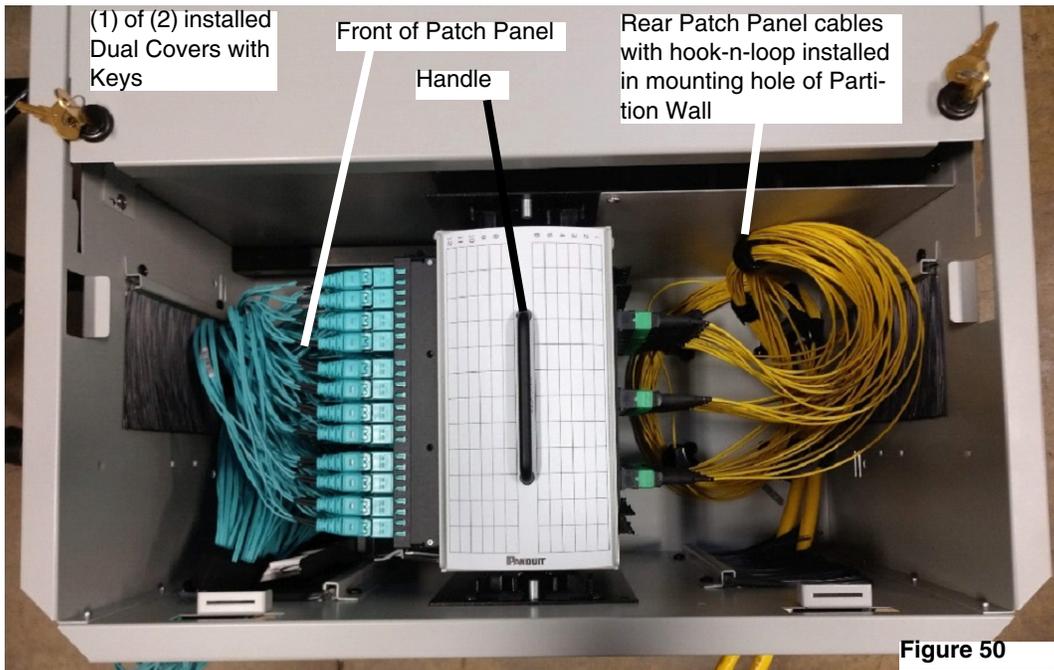
Figure 49

Grab patch panel handle and rotate patch panel downward, ensuring that no fiber cables are pinched.

Final Assembly shown with partition walls and one dual cover installed. (See Figure 50).

(1) of (2) installed Dual Covers with Keys

Front of Patch Panel Handle

Rear Patch Panel cables with hook-n-loop installed in mounting hole of Partition Wall

Figure 50