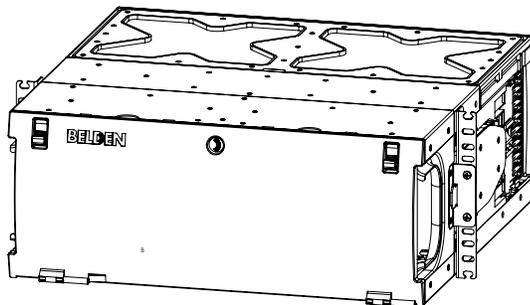


ECX - 4U INSTALLATION GUIDE



ES: Visite nuestra pagina web www.belden.com para obtener el guía de instalación en español.
FR: Veuillez visiter notre site web au www.belden.com pour obtenir le guide d'installation en français.

Front view



Rear view

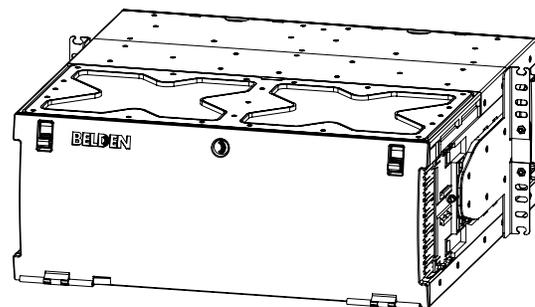


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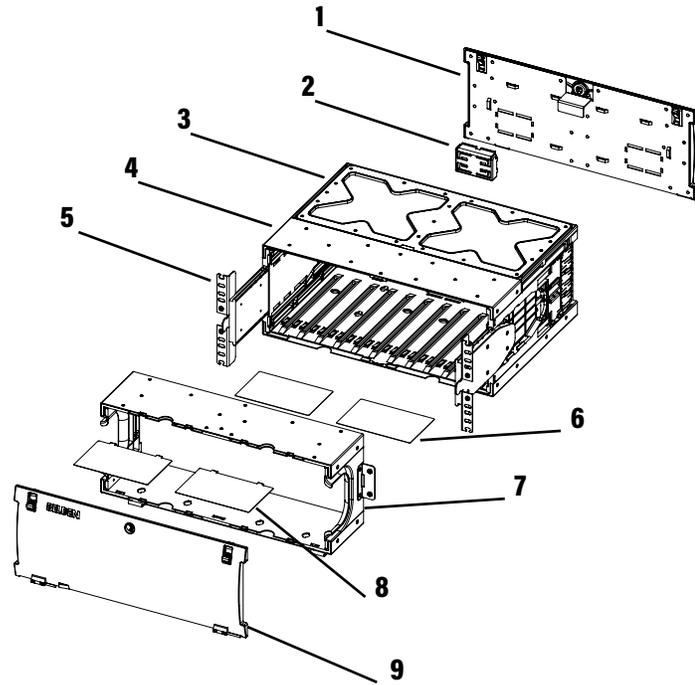
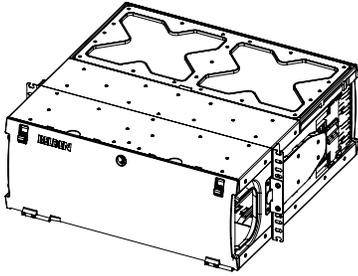
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1. Precautions

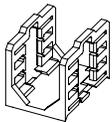
-  **WARNING:** Never look at the end of a fiber that may be carrying laser light.
-  **CAUTION:** Wearing safety glasses can prevent possible injuries (or accidents) related to handling chemicals, cables, or working with sharp pieces of glass fibers.
-  **CAUTION:** Avoid contact between broken glass fiber. These glass fiber fragments are sharp and can penetrate the skin easily. The use of safety gloves is highly recommended.
-  **CAUTION:** Maintain a clean work area by sweeping all the fiber scrap and disposing of them appropriately.

2. Carton contents



- 1. Rear door
- 2. Internal strain relief
- 3. Removable top cover
- 4. Rear housing
- 5. Standard rack mounting brackets (2x)
- 6. Rear label cards (2x)
- 7. Front housing
- 8. Label cards (2x)
- 9. Front door
- 10. Hardware kit [not shown]
- 11. Installation guide (2x) [not shown]

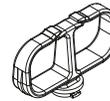
2.1. Hardware kit contents



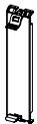
Intermediate strain relief (2x)



Cable tie - 4" (4x)



Management clips (16x)



Blank frames (12x)



Cable tie - 7 1/2" (4x)



Door lock opening caps (2x)



90° External strain relief (2x)



Velcro cable tie 8" (8x)



I.D labels [8/16] (2x)



#12-24 machine screw Phillips (4x)



I.D labels [3/6/12] (2x)

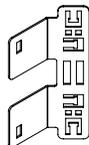


#10-32 machine screw Phillips (4x)

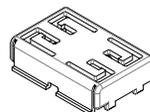
3. Available FX ECX accessories and tools required

Please take note that the following products may be required depending on your application. These components are ordered separately. For further information regarding ECX accessories, please visit our website at www.belden.com

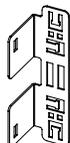
3.1. Available FX ECX accessories



45° external strain relief
ECX-4U-EXSTRA



FX-ECX 4U internal strain relief
ECX-4U-INSTR



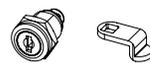
90° external strain relief
ECX-4U-EXSTR



FX ECX management clips (8x)
ECX-MGTCLIPS



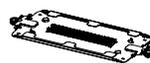
FX ECX 4U rack mounting bracket 3" (2x)
ECX-BRKMNT-3



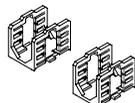
Mini lock-kit
ECX-LOCKKIT



FX ECX 4U rack mounting flush bracket (2x)
ECX-BRKMNT-0



FX ECX splice tray kit assembly
ECX-SPLICEKIT



FX ECX intermediate strain relief (2x)
ECX-INTERSTR



I.D Labels / ECX ports 4U (3/6/12) and (8/16)
ECX-LBL-4U

3.2. Tools required

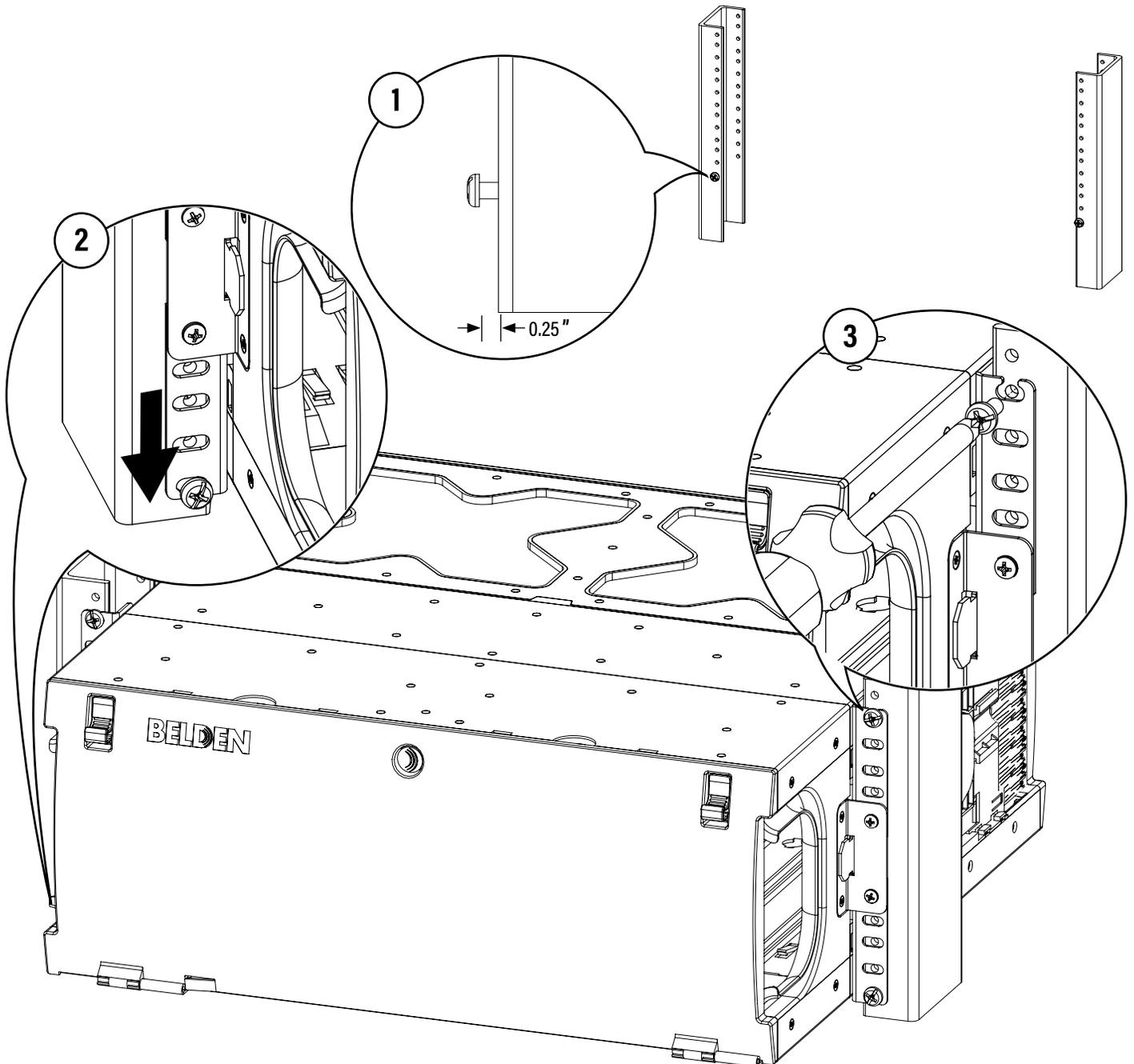
- Phillips screwdriver
- Flat screwdriver
- Cutting pliers

4. Mounting the ECX housing

This section shows how to install the ECX 4U to a 19" rack.

NOTE: These installation steps also apply to an ECX 4U that is assembled with flush (ECX-BRKTMT-0) or 3" mounting brackets (ECX-BRKTMT-3). For further information regarding the installation of those accessories, please refer to section 11.1. (installing ECX 4U flush mounting brackets) at page 29.

- 1 Insert the bottom screws into the rack as shown (use #12-24 or #10-32 screws provided in the hardware kit). Let ¼" of the screw exposed.
- 2 Install the assembled housing into the rack and position the bottom slots of the mounting bracket onto the installed screws. These screws will carry the weight of the housing during the installation.
- 3 Install and tighten the top screws as shown. Tighten the bottom screws firmly.

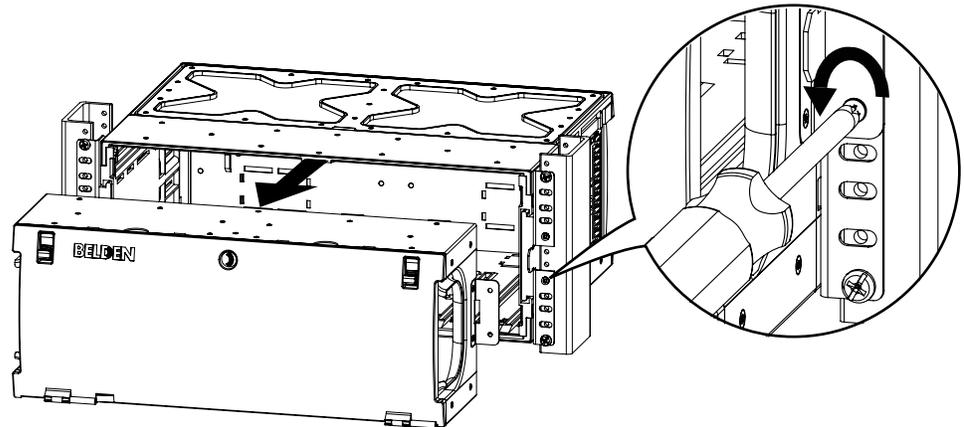


5. Housing features and manipulation

This section explains accessibility features of the ECX housing.

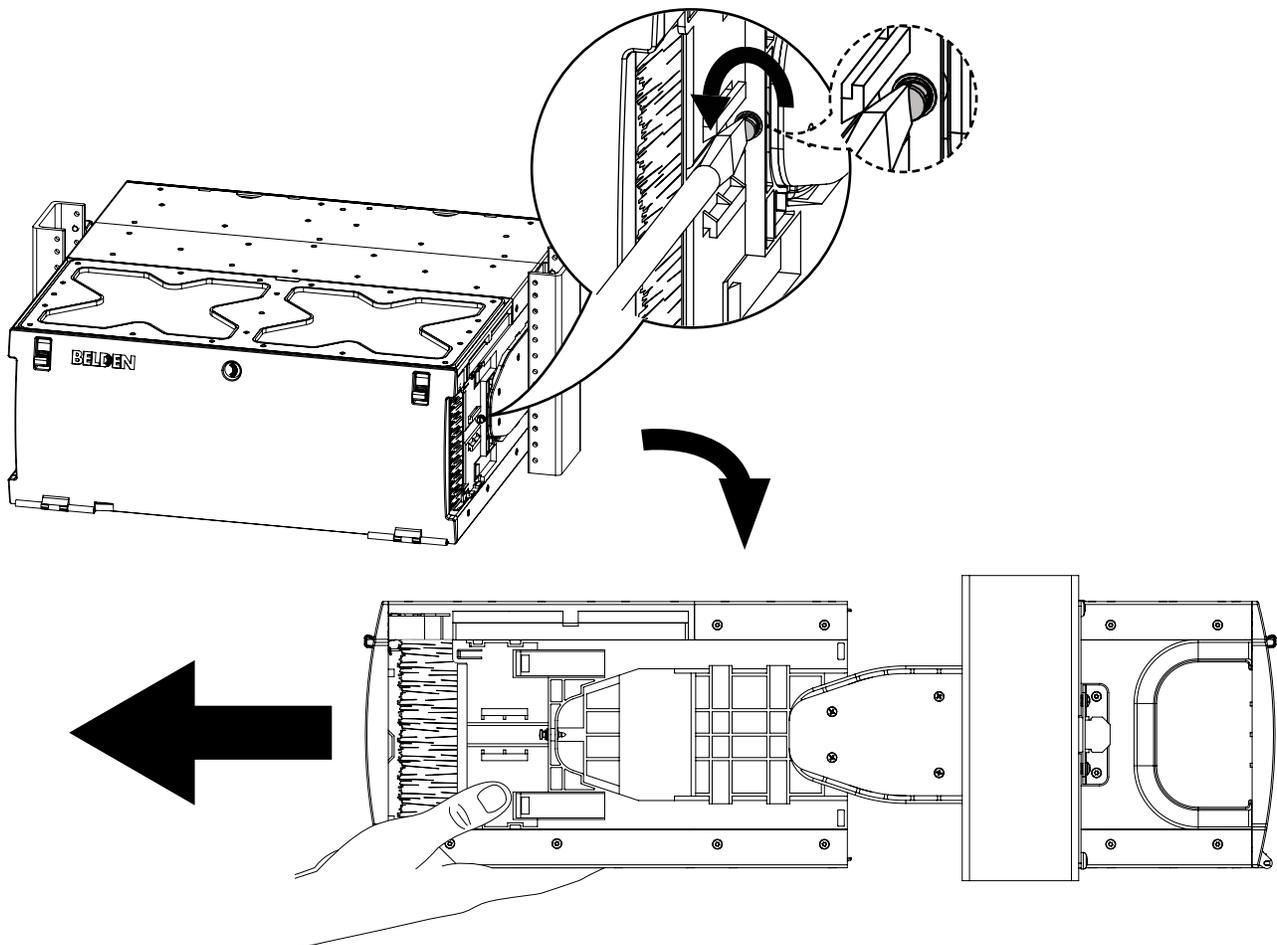
5.1. Removal of the front housing

- 1 Remove the screws located on the standard rack mounting brackets.



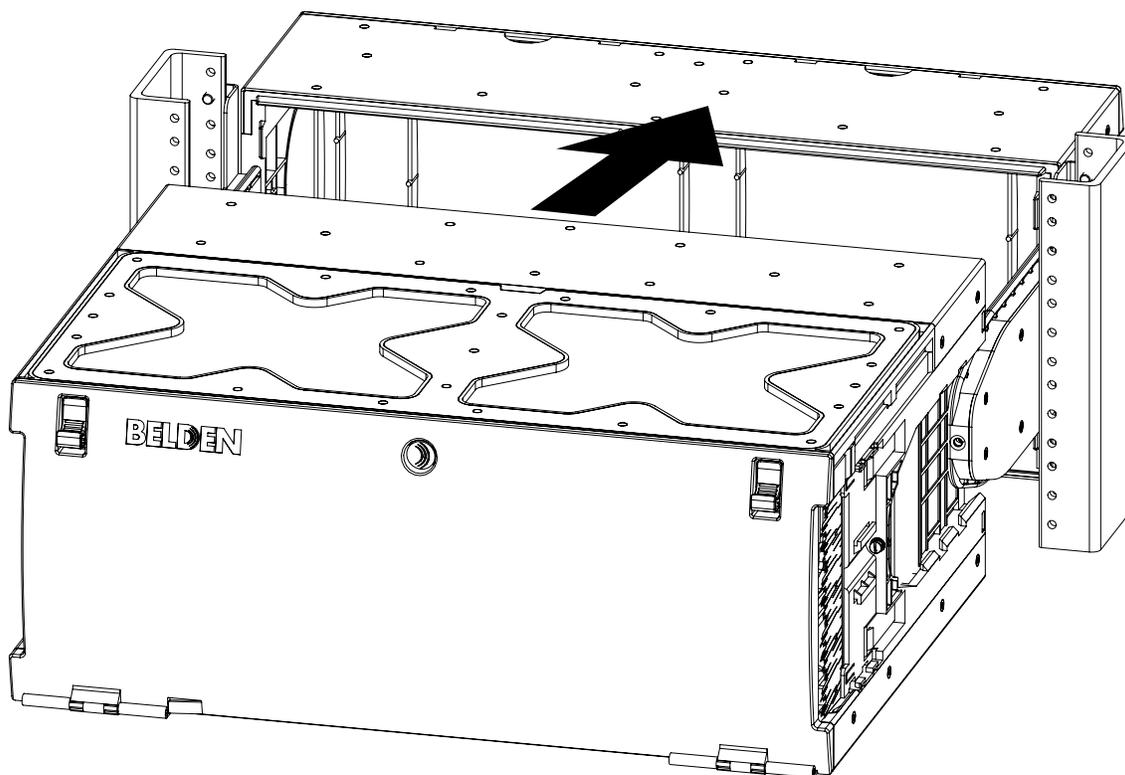
5.2. Installation and removal of the rear housing

- 1 Unscrew the quarter-turn fastener on both sides and remove the rear housing.



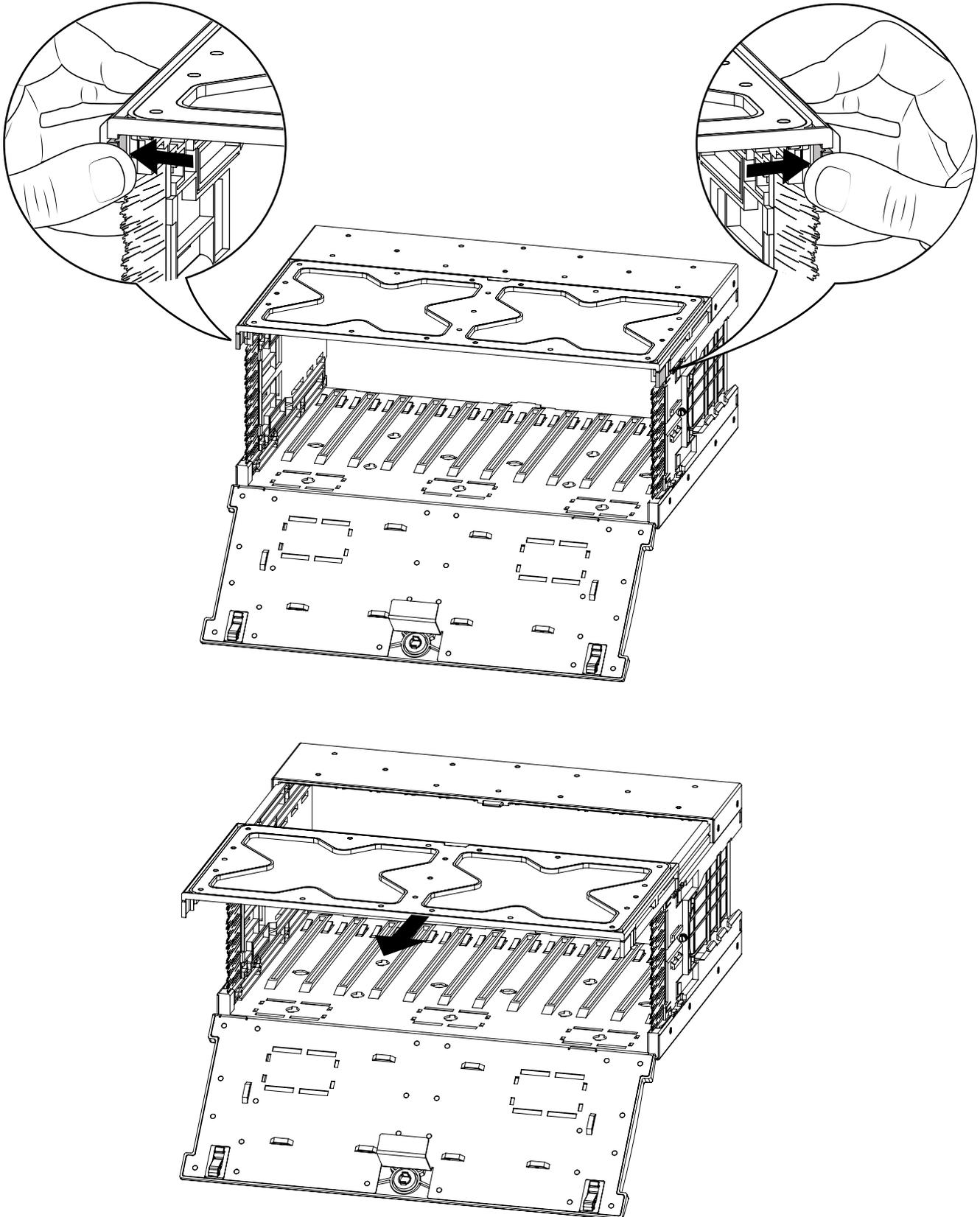
NOTE: This step is useful when the rear patch panel is loaded with cables and management components.

- 2** For the housing installation, slide the patch panel into the mounting brackets and tighten both quarter-turn fasteners.
NOTE: Make sure the rear housing is properly pushed in.



5.3. Removal of the rear top cover

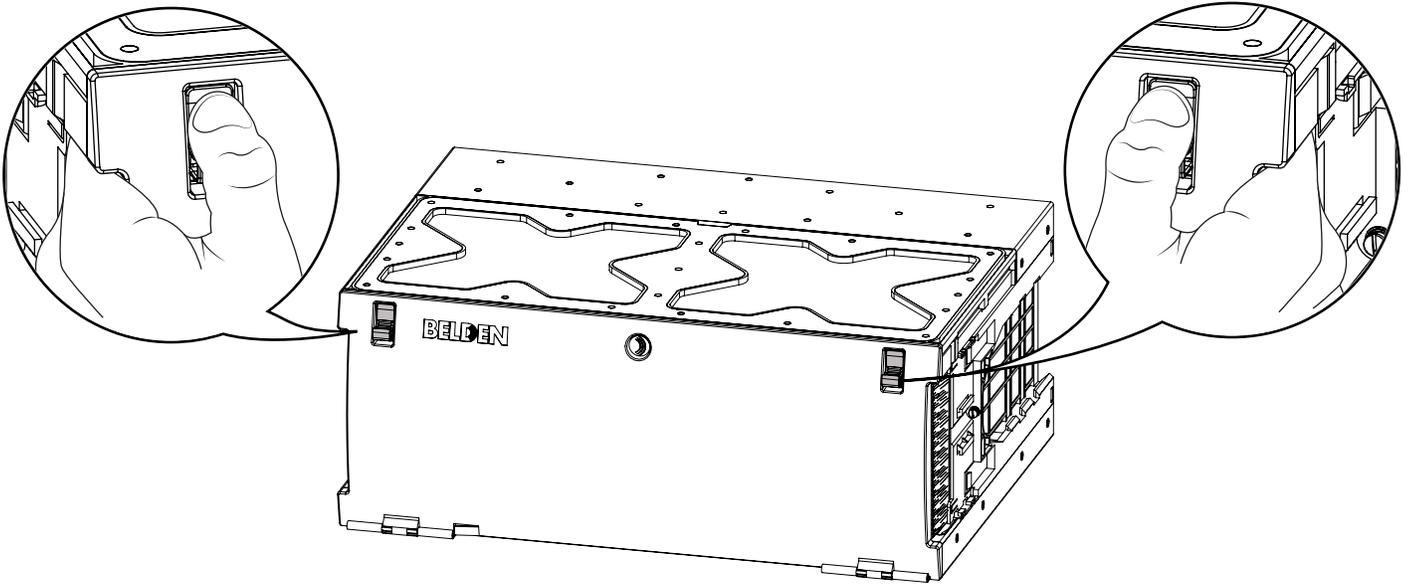
- 1 Release the top cover by pressing both tabs outwards simultaneously as shown. Remove the cover by pulling out slightly.



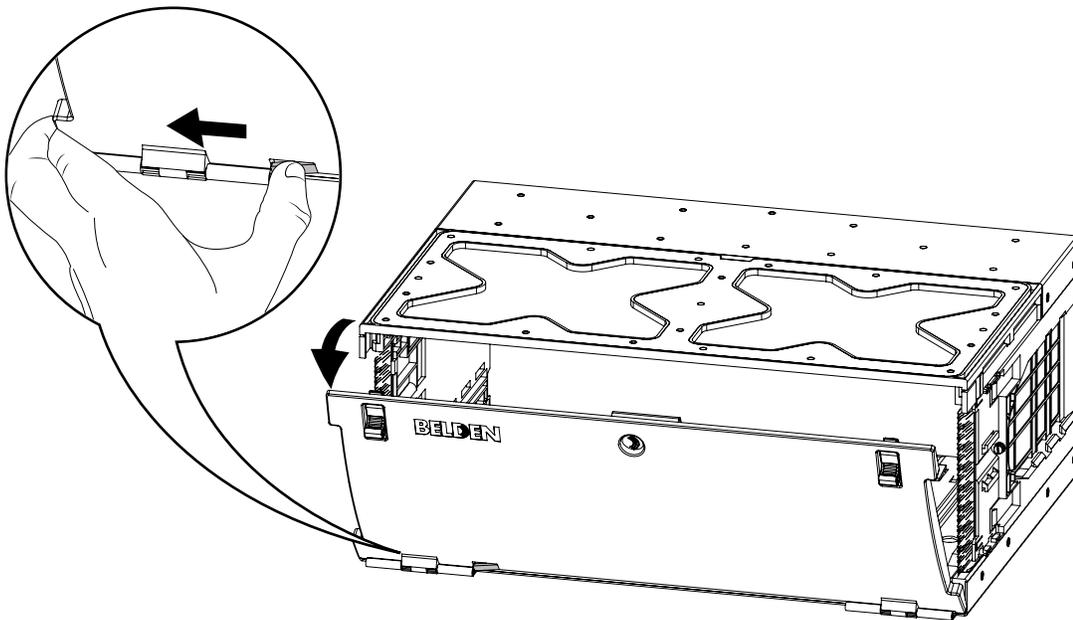
5.4. Opening and removing the ECX (rear or front) doors (optional)

NOTE: The front door removal is identical.

- 1 Press both latches simultaneously to open the door.



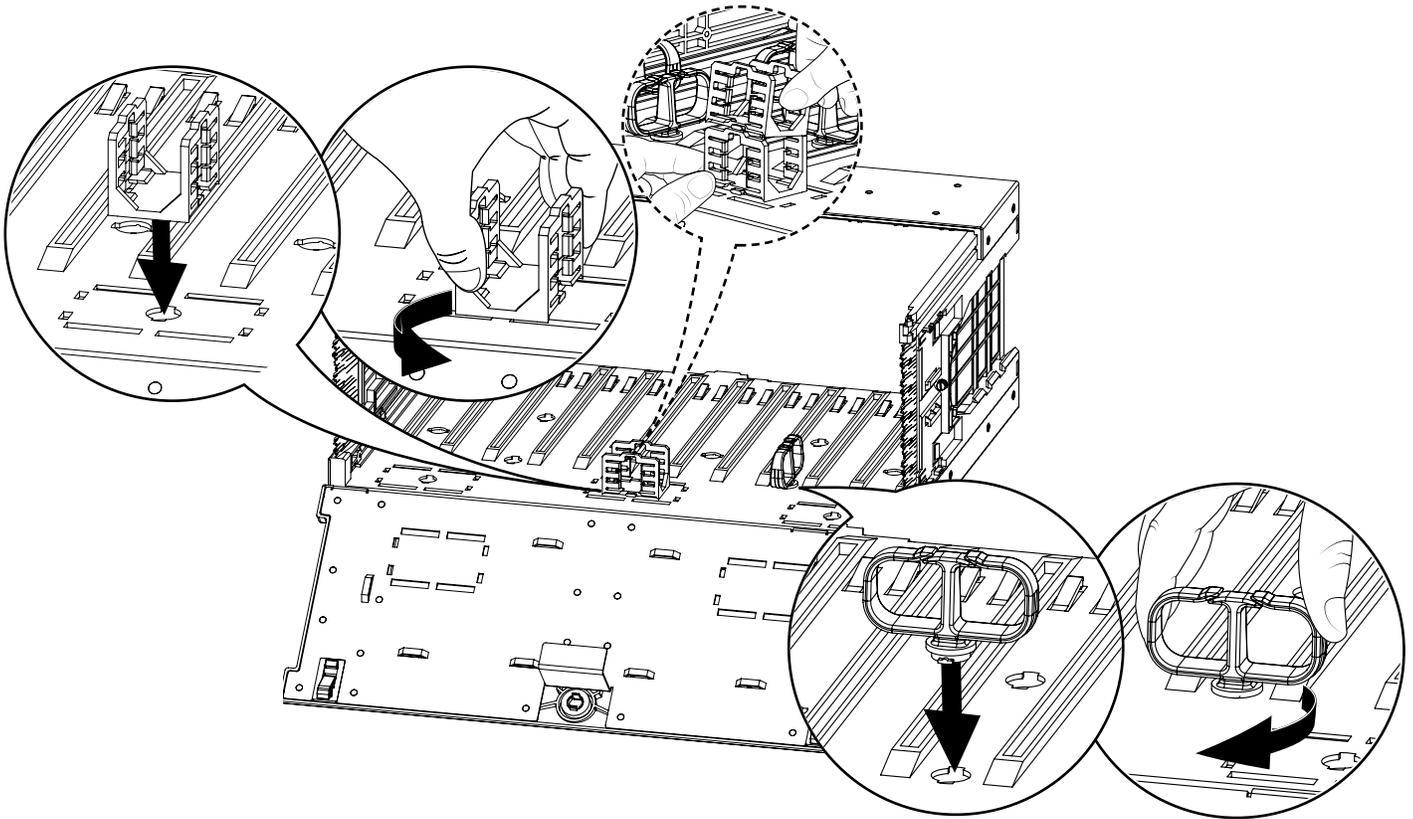
- 2 To remove the door, press the bottom tab and slide the door to the left as shown.



5.5. Installation and removal of cable routing components

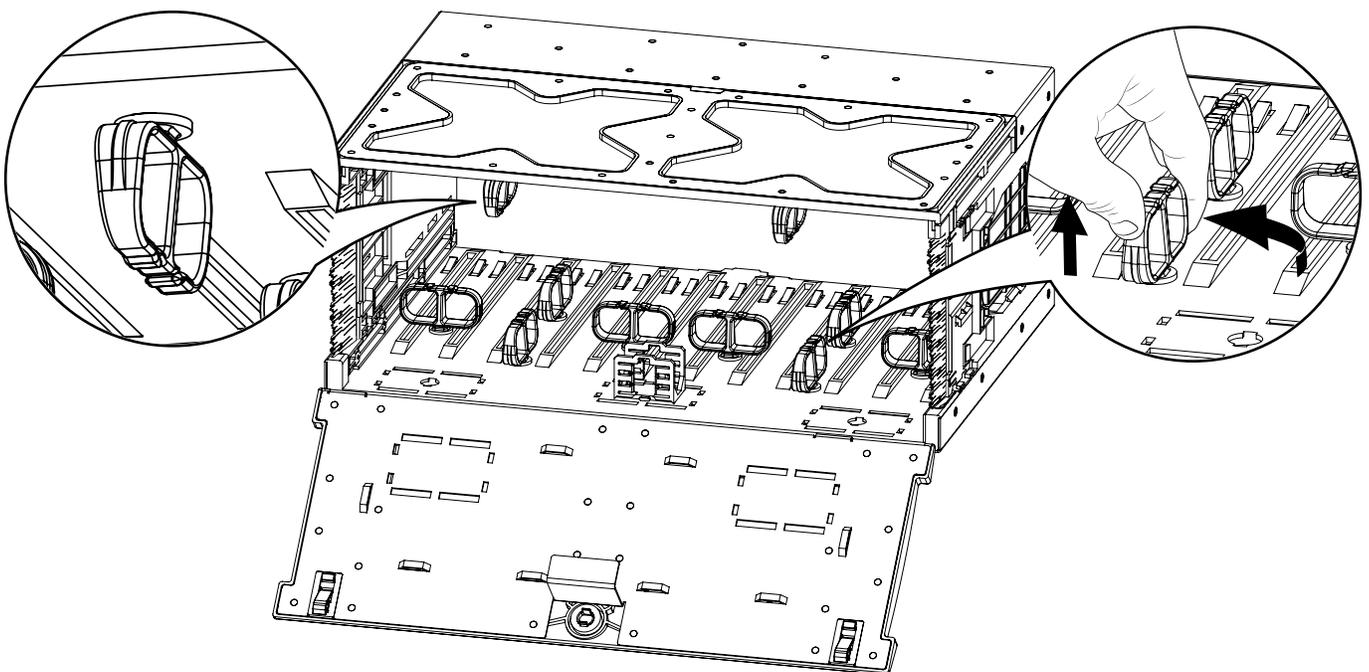
- 1 Align the intermediate strain relief and management clips with their respective holes. Install the parts by pushing and turning them 90 degrees.

NOTE: The intermediate strain relief can also be stacked as shown.



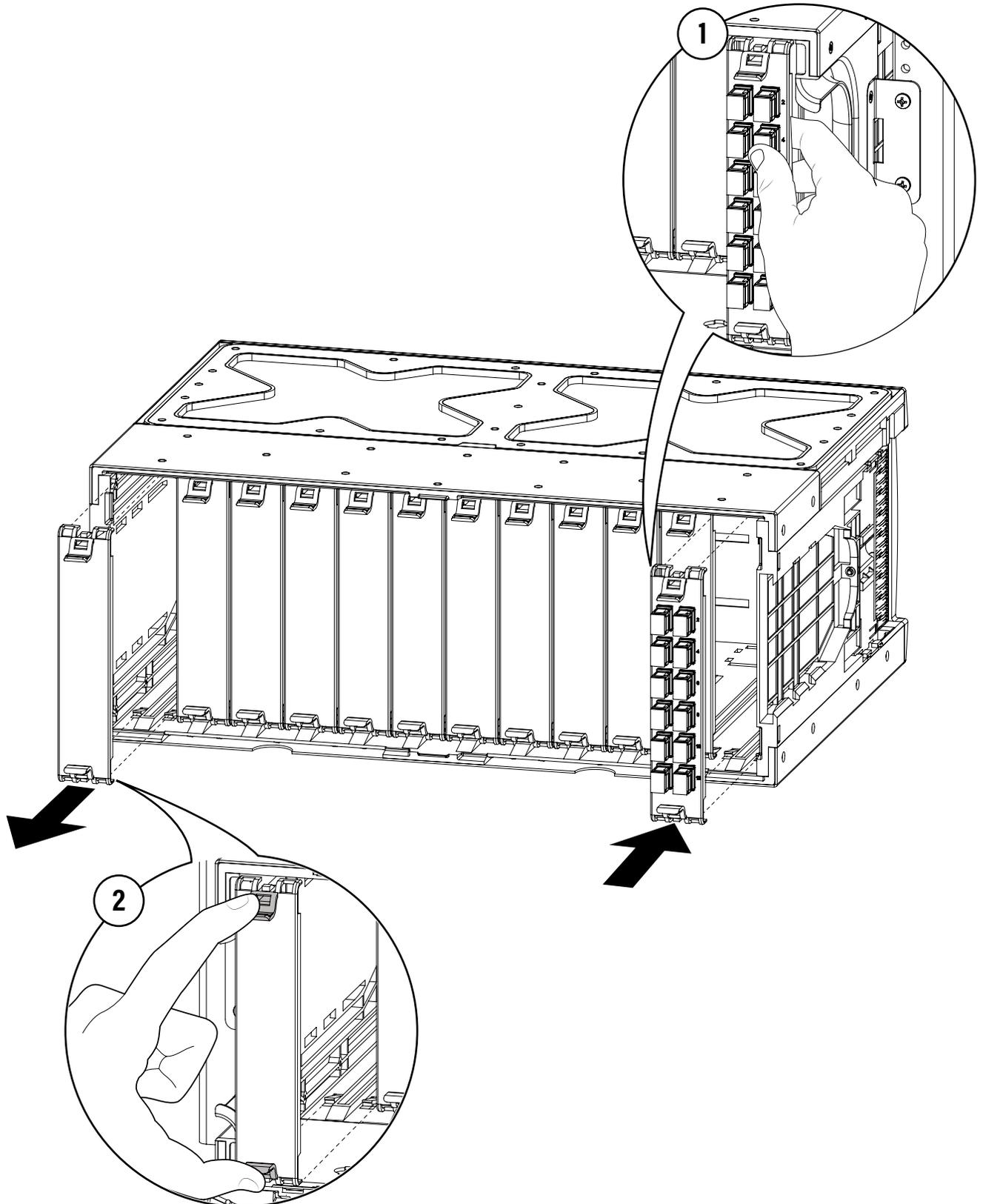
- 2 (If needed) repeat the previous step to remove the parts.

NOTE: Management clips can also be installed to the removable top cover as shown.



5.6. Installation and removal of FX ECX frames

- 1 Install the desired frame as shown.
- 2 Remove the frame by pressing both tabs simultaneously (if needed).

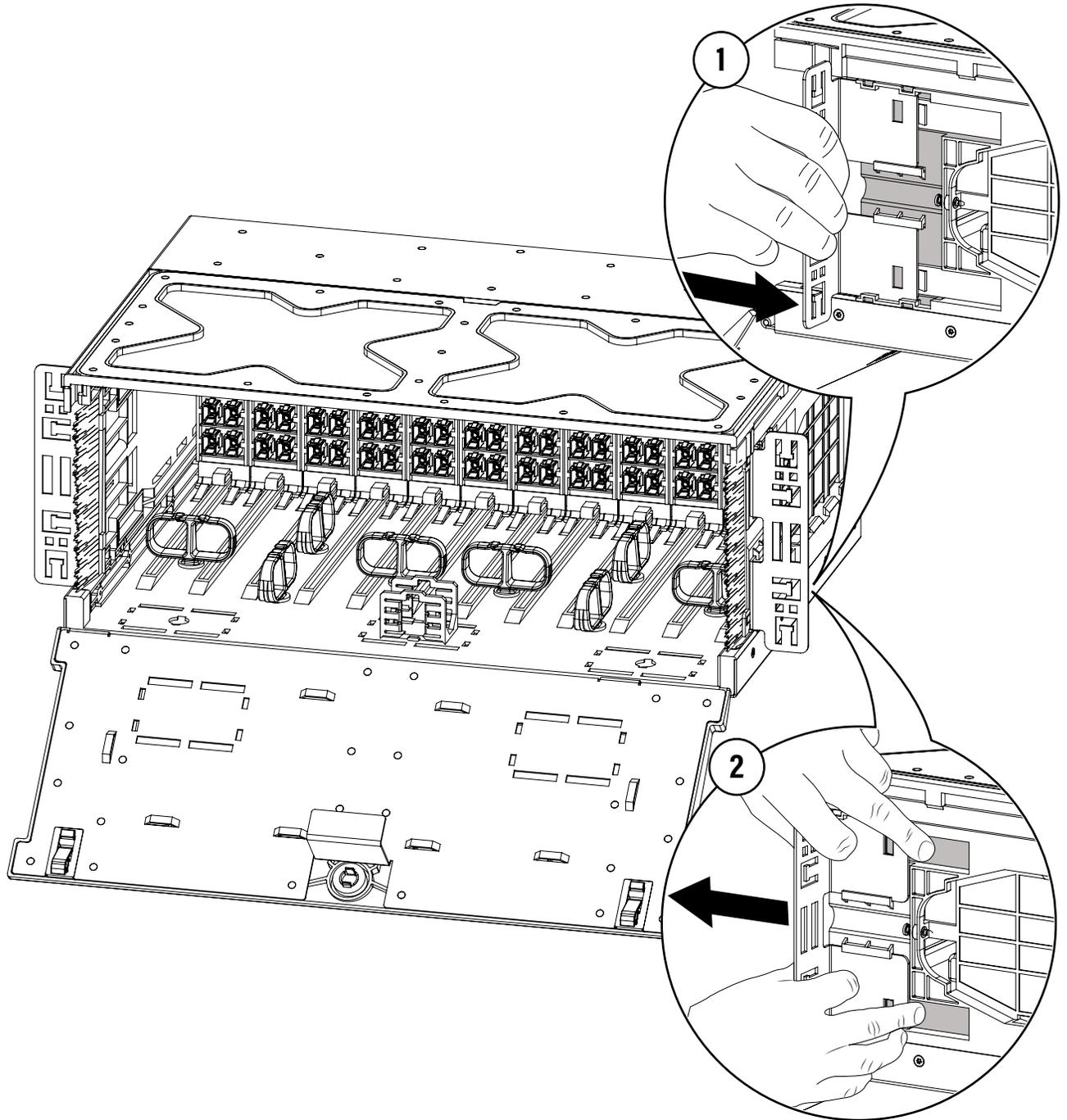


5.7. Installation and removal of the external strain relief

NOTE: The external strain relief can be installed on the right or left sides.

The 45° external strain relief installation steps are the same as below.

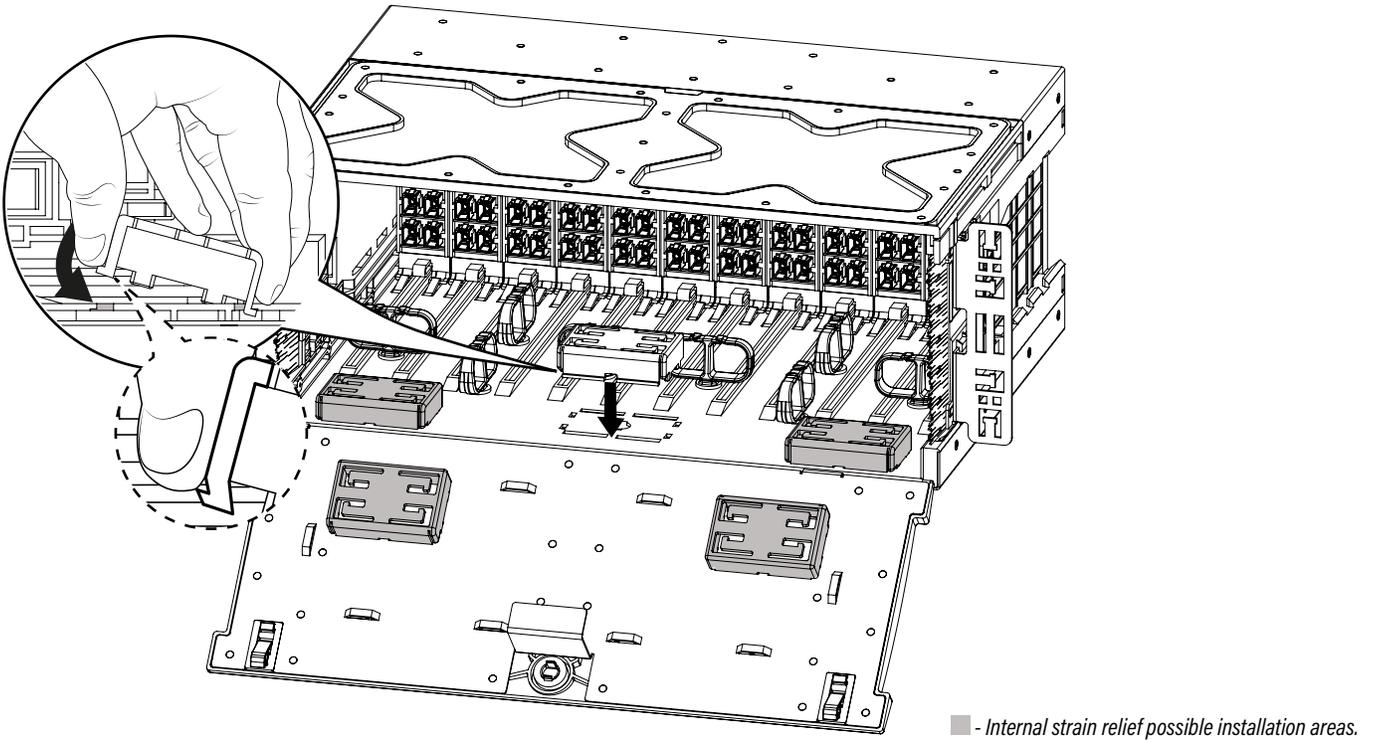
- 1 Slide the external strain relief into the appropriate slot.
- 2 To remove the external strain relief, press on the 2 flanges simultaneously.



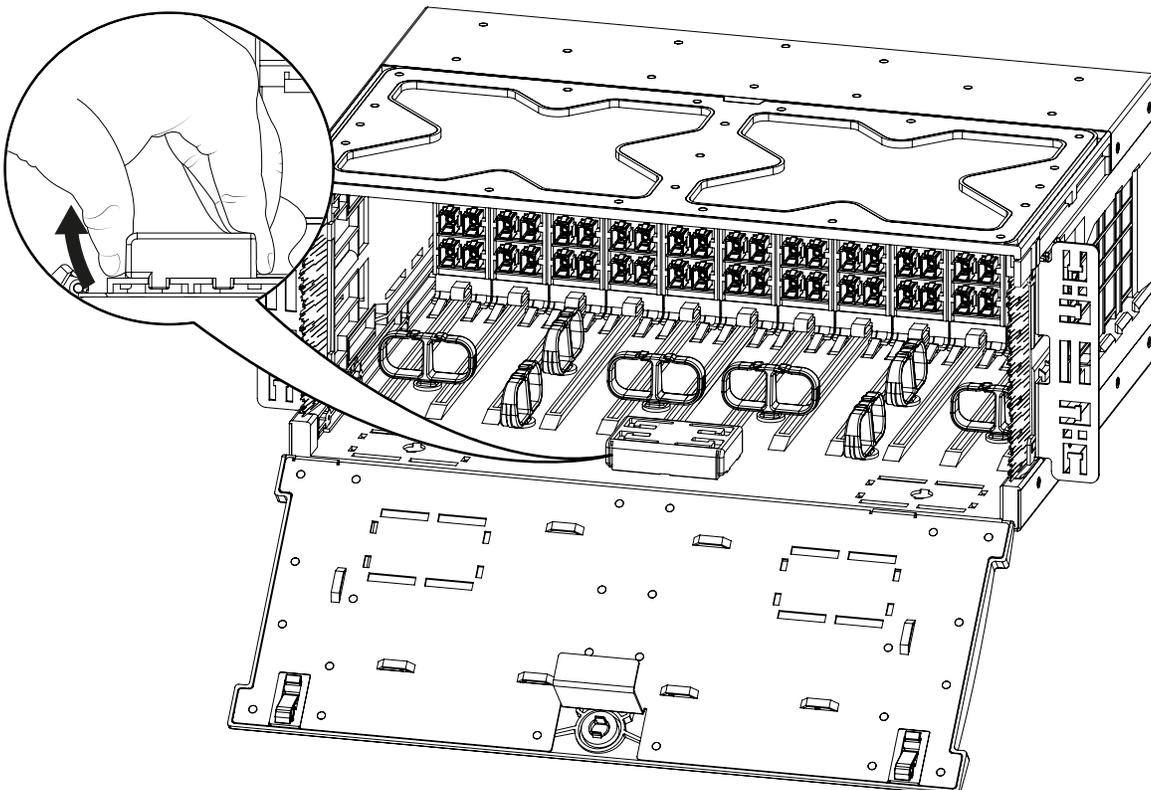
5.8. Installation and removal of the internal strain relief

This section shows how to install and remove the internal strain relief.

- 1 Choose the right location for your application and secure the internal strain relief by applying pressure on the side wall as shown.



- 2 Remove the internal strain relief by reversing the previous step (if needed).



6. Installing distribution cable for field termination

This section explains the different cable routing methods for the ECX 4U.

6.1. Standard recommended procedure

1. Prepare the cable as follows: leave 40" of sub-units and another 40" of 900 micron fiber.
2. Secure the distribution cable to the external strain relief with the provided cable tie (7 ½").
3. Loop and secure the sub-units to the door by using the attachment points and the provided Velcro cable ties.
4. Secure the end of the sub-units to the intermediate strain relief by using the provided cable tie (4").

 **CAUTION: Do not over tighten the cable tie.**

5. Route the 900 micron fiber in the housing by utilizing the already installed management clips.
6. Install the connectors to the desired frame.

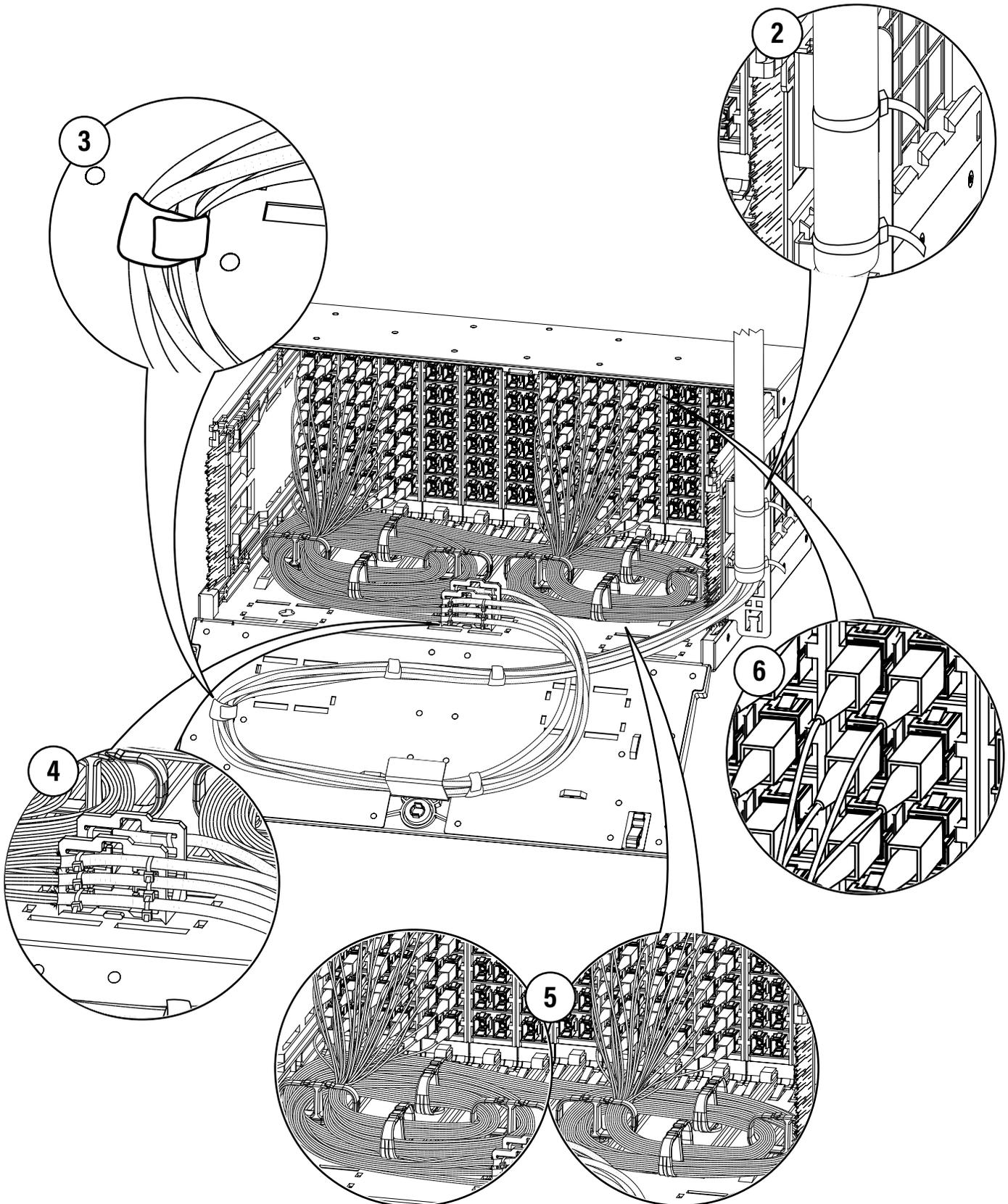
NOTE: Refer to following pages for detailed images

1

Distribution cable

Sub-unit: 40" (1.02 m)

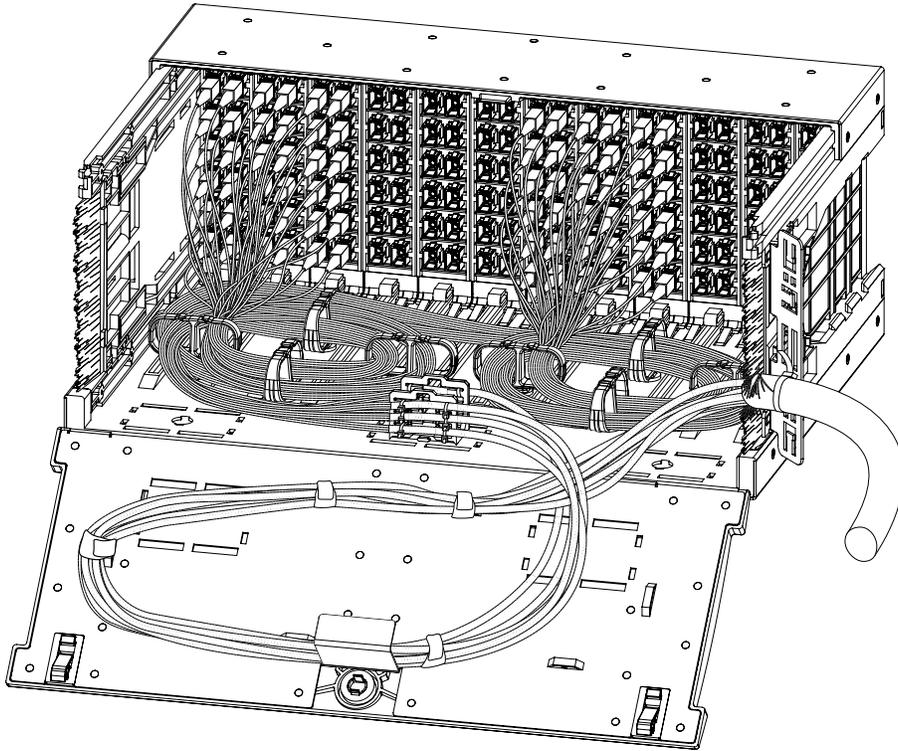
900 micron fiber: 40" (1.02 m)



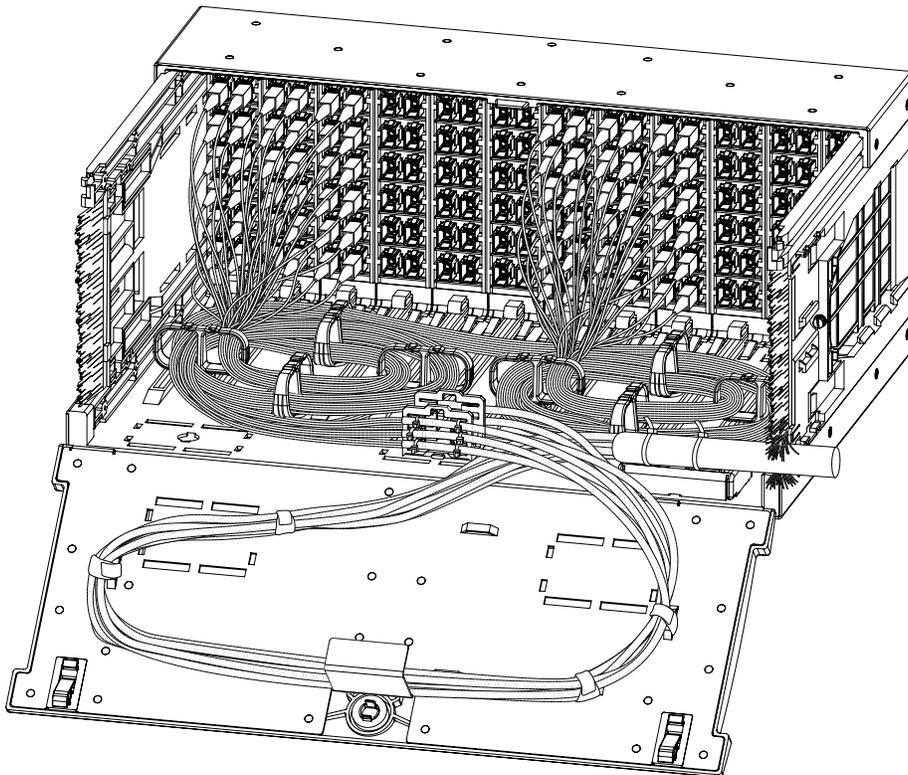
6.2. Optional recommended procedures

The methods that are presented below have the same installation steps mentioned as section 6.1.

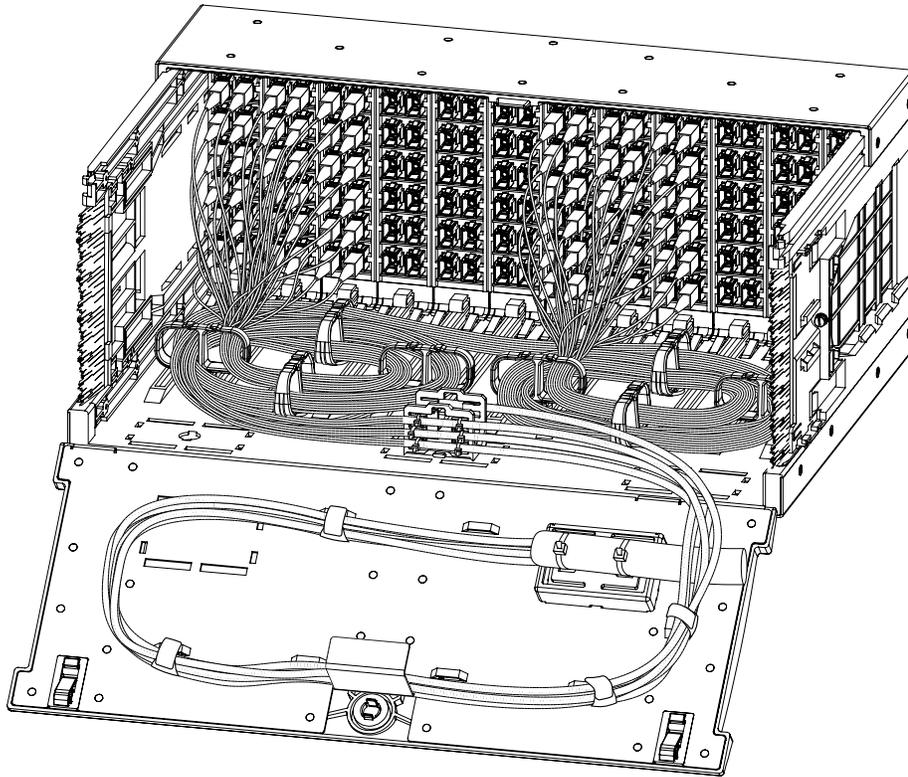
A. Distribution cable installed to the 45° external strain relief



B. Distribution cable installed inside the housing



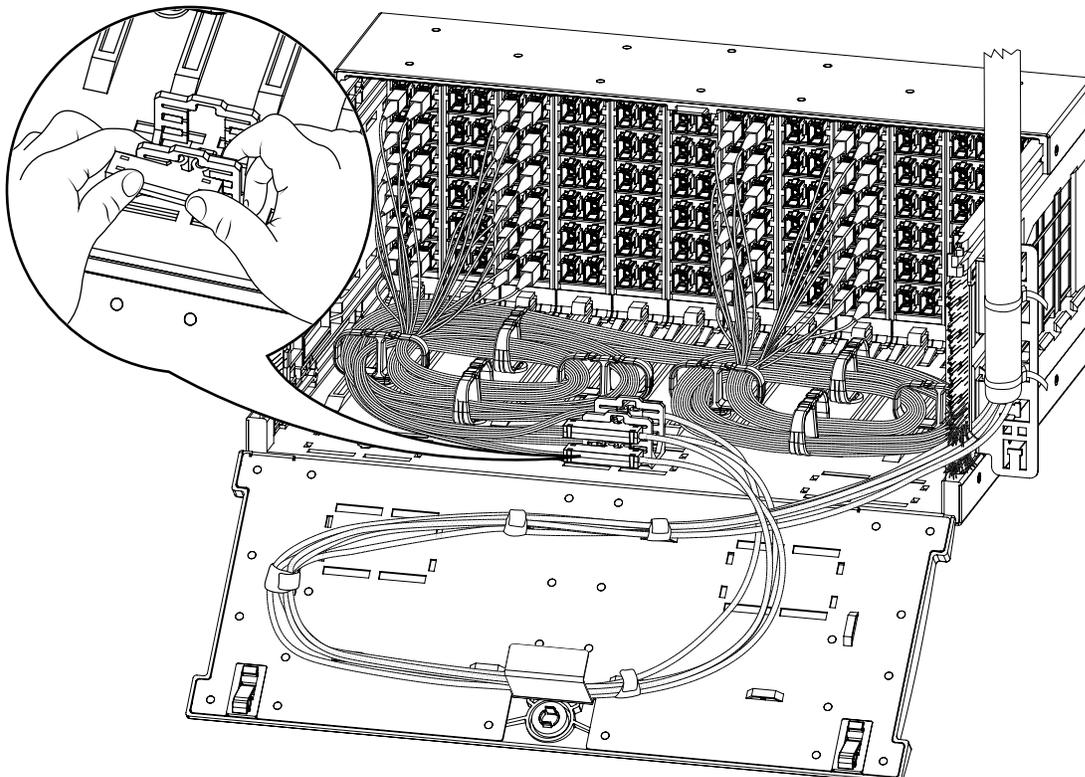
C. Distribution cable installed on the rear door



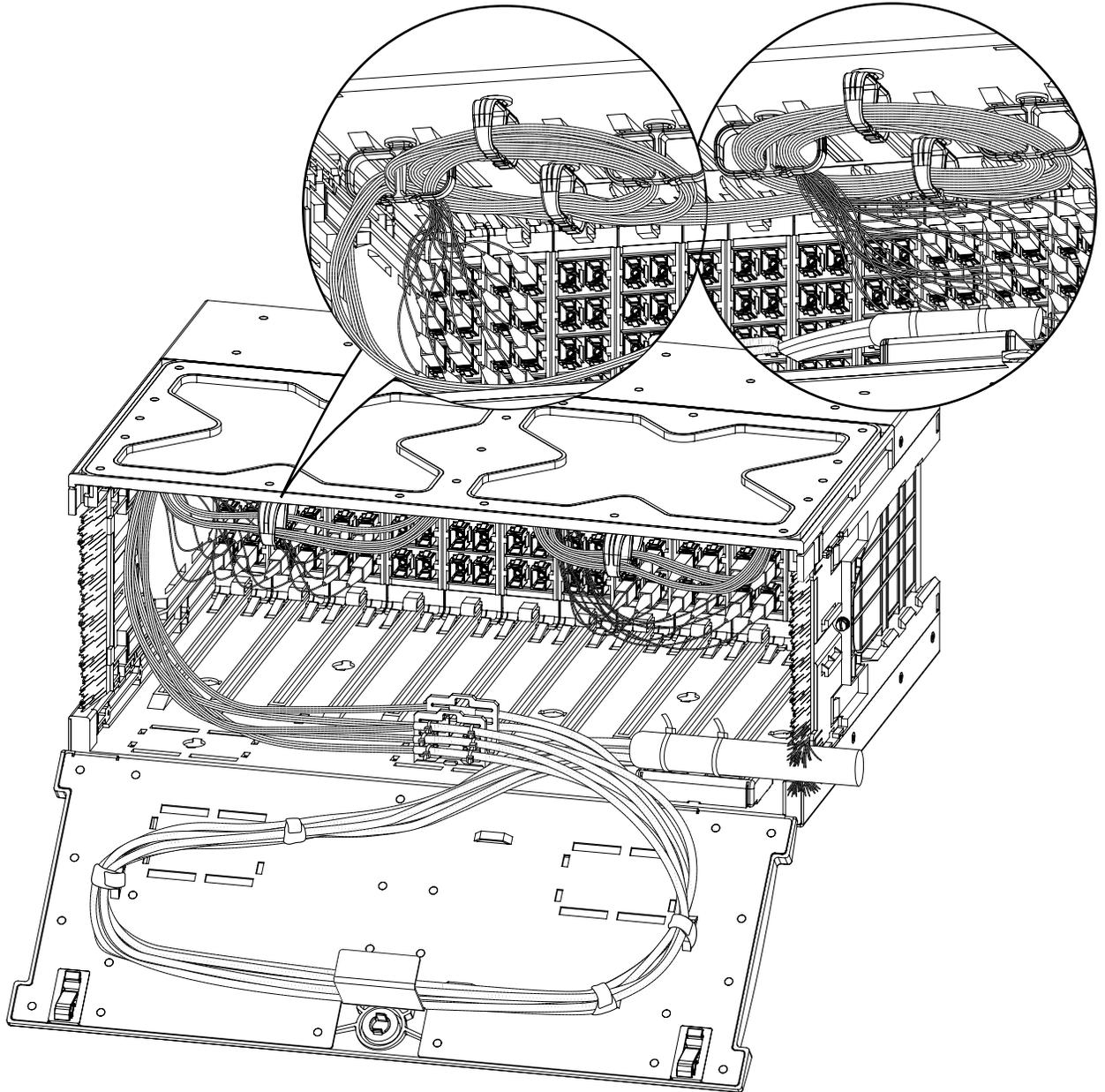
D. Break-out kit cable routing

IMPORTANT: This installation guide does not include how to install the optical fiber cables into the break-out kit components. For further information, please refer to the break-out kit installation guide or visit our website at www.belden.com.

- 1 Secure the break-out kit by leaning it against the intermediate strain relief and pushing inwards. Once the break-out kit is installed, route the fiber cables by following the same steps as mentioned at page 15 (section 6.1).



E. Optical fiber cables routed on the top cover

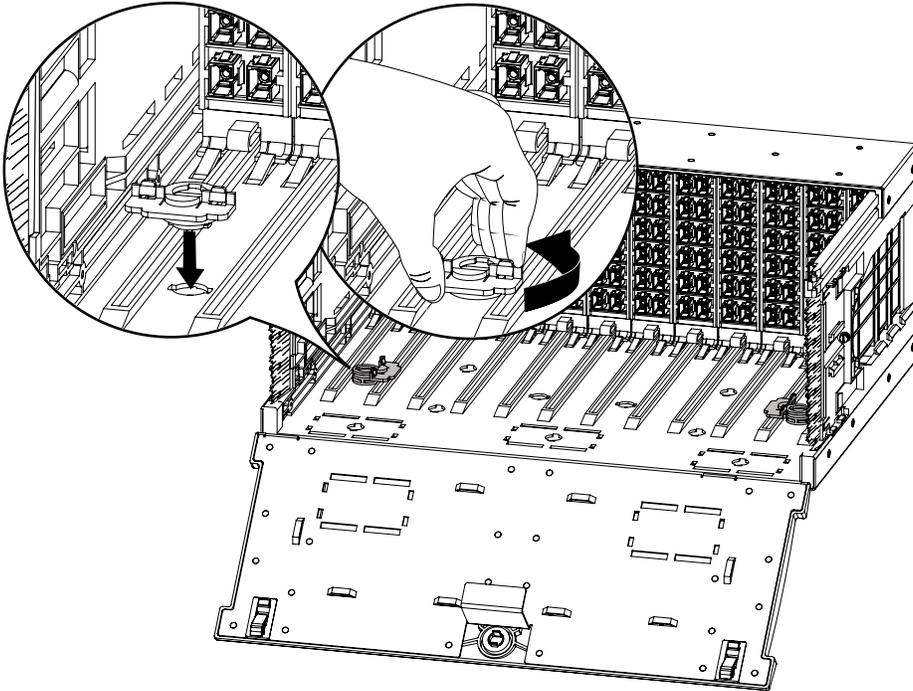


7. Installation and manipulation of the splice tray kit

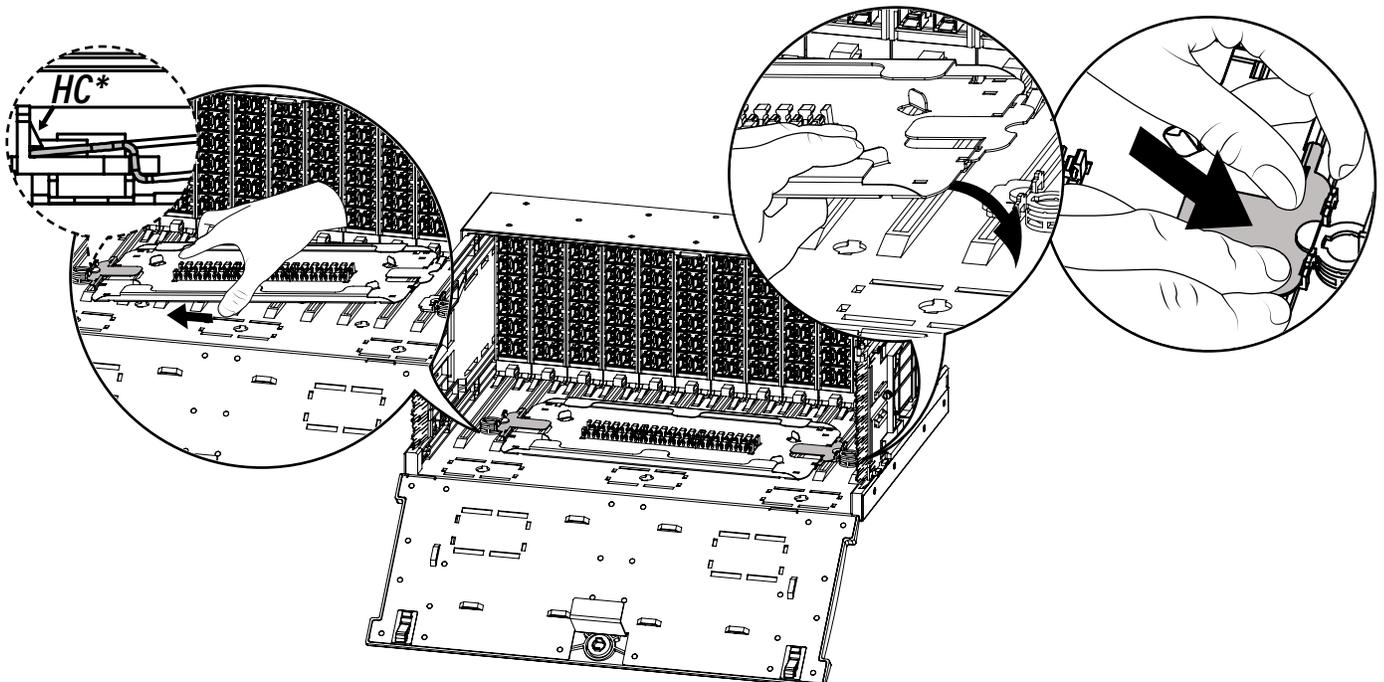
This section shows how to install a splice tray on the ECX 4U and how to secure a distribution cable to the tray.

7.1. Installing the splice tray kit

- 1 Align the holders with their respective holes and turn them 90 degrees.



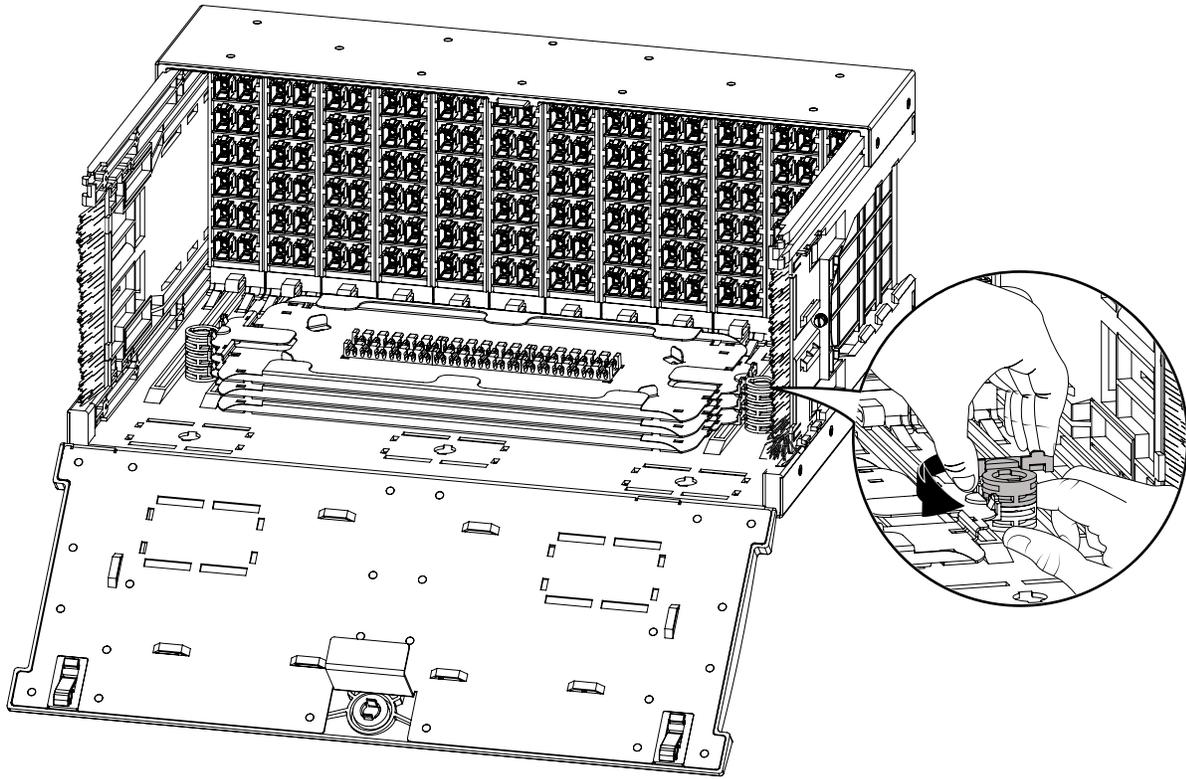
- 2 For the splice tray installation, tilt and insert the end of the tray to the holder clips. Move the splice tray downwards and secure it by pushing the top surface to the holder clips as shown.



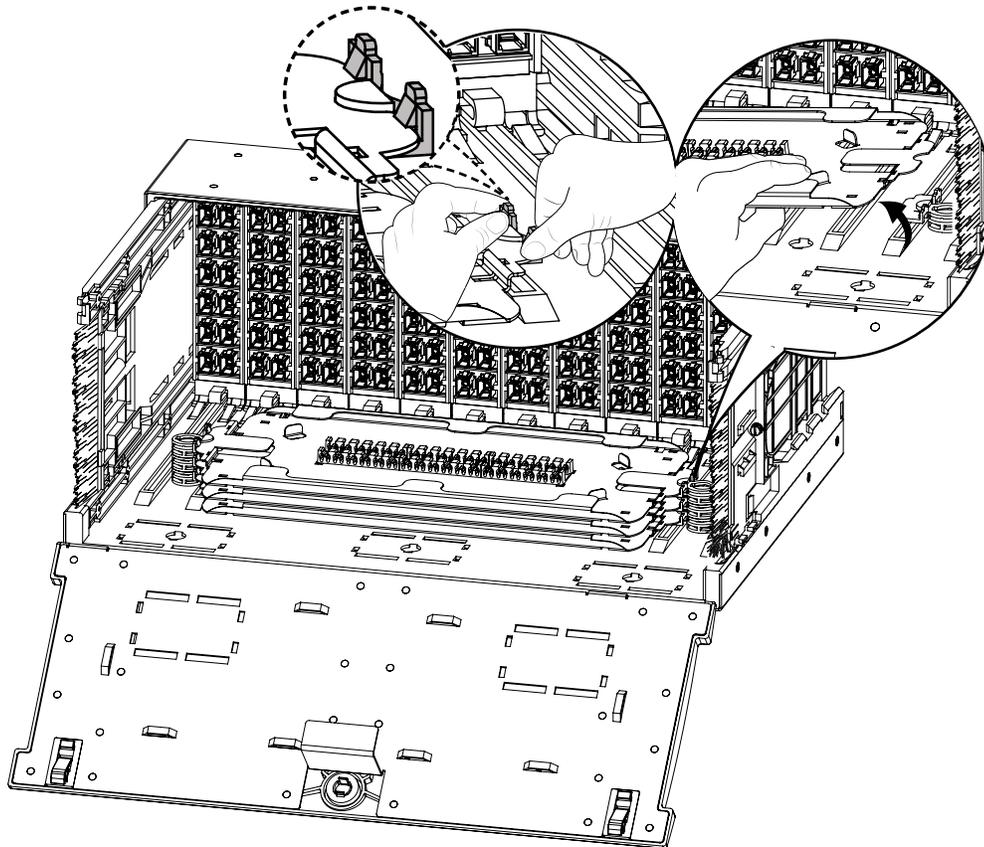
HC*= Holder clips

3 To install multiple splice trays, repeat the previous steps (if needed).

NOTE: When adding more holders, support the first holder as shown.



4 To release the splice tray, press the holder side clips as shown.



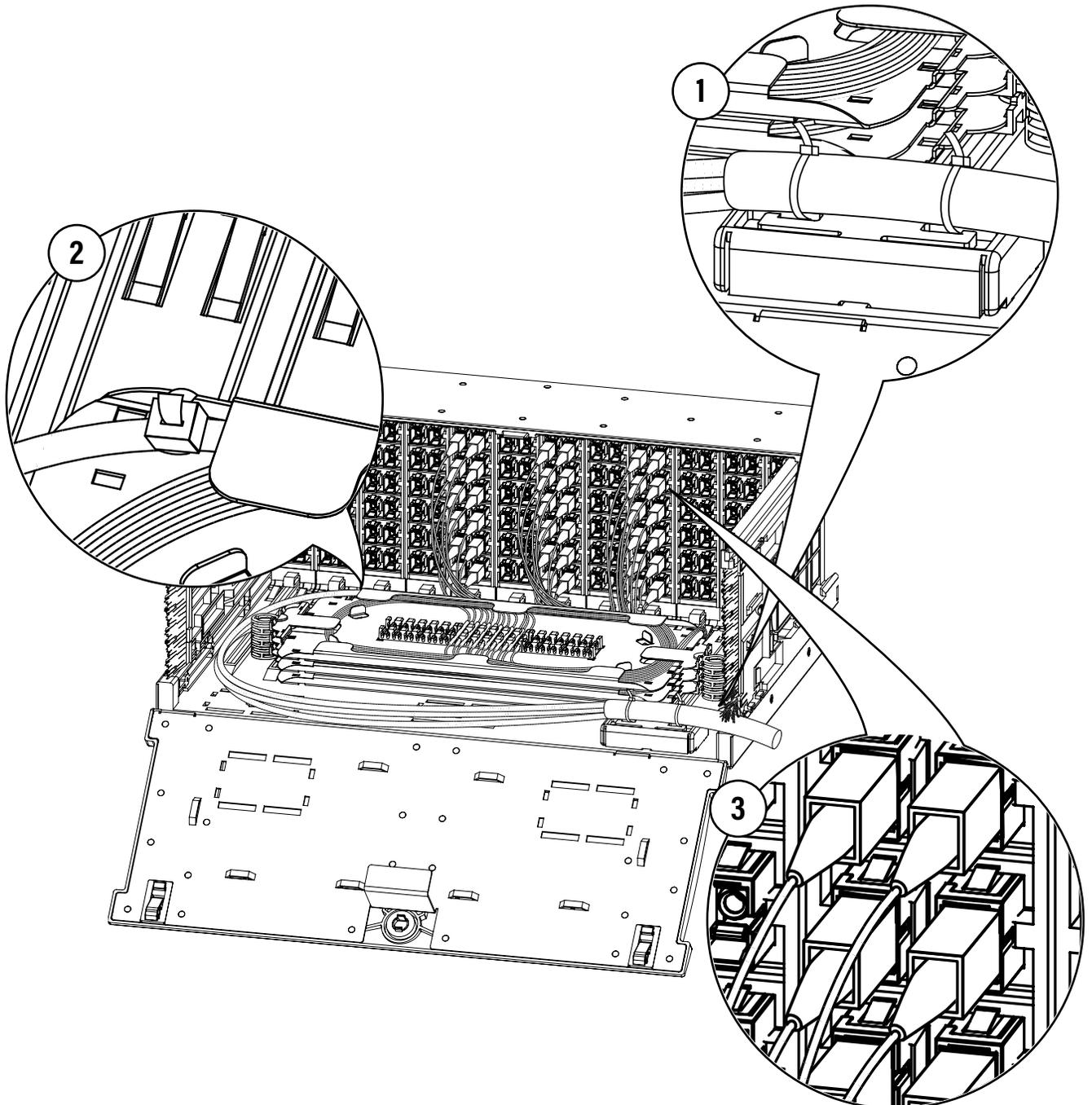
7.2. Installing a distribution cable on a splice tray kit

IMPORTANT: This installation guide does not include how to route fiber cables inside the splice tray. For further information concerning the splice tray routing, please visit our website at www.belden.com.

- 1 Install the internal strain relief to the desired position and secure the distribution cable by using the provided cable tie (7 ½").
- 2 Secure the end of the sub-unit cables to the splice tray with the provided cable tie (4").

⚠ CAUTION: Do not over-tighten the cable tie.

- 3 Route the fiber inside the splice tray.
Install the connectors to the frames.



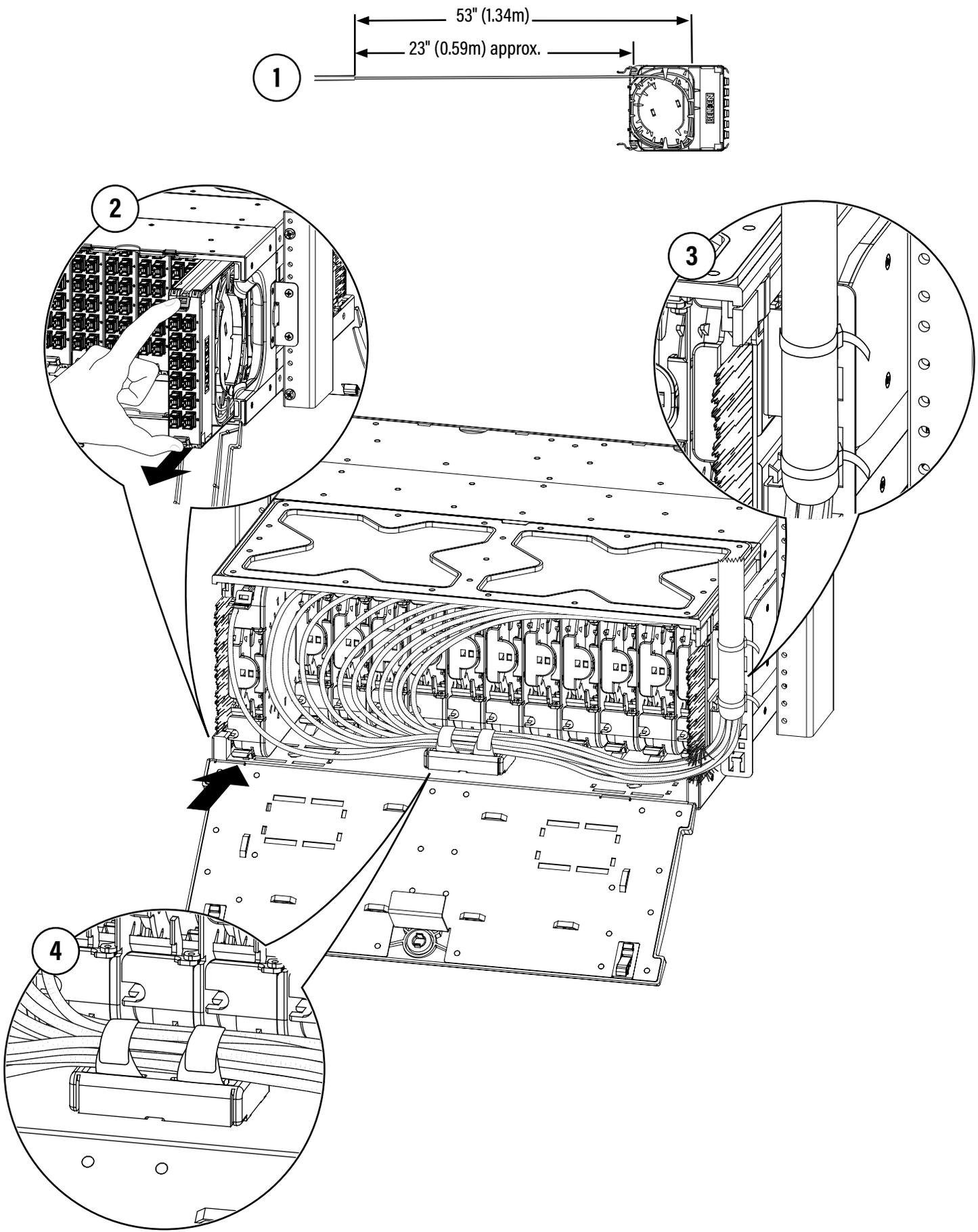
8. Installing distribution cable for ECX splice cassettes

This section shows the recommended procedure for securing the distribution cable to the ECX splice cassettes. This installation guide does not include the ECX cassette routing details. For further information concerning the cassette routing, please refer to the ECX cassette installation guide or visit our website at www.belden.com.

- 1 Leave 53" (1.34m) of sub-unit cable and secure it to the end of the cassette.
- 2 Slide the cassette until the latches are clipped.
(If needed), remove the cassettes by pressing on the front or rear tabs as shown.
- 3 Secure the distribution cable to the external strain relief with the provided cable tie (7½").
- 4 Install the internal strain relief at the desired position and secure the sub-units with the provided Velcro cable tie.

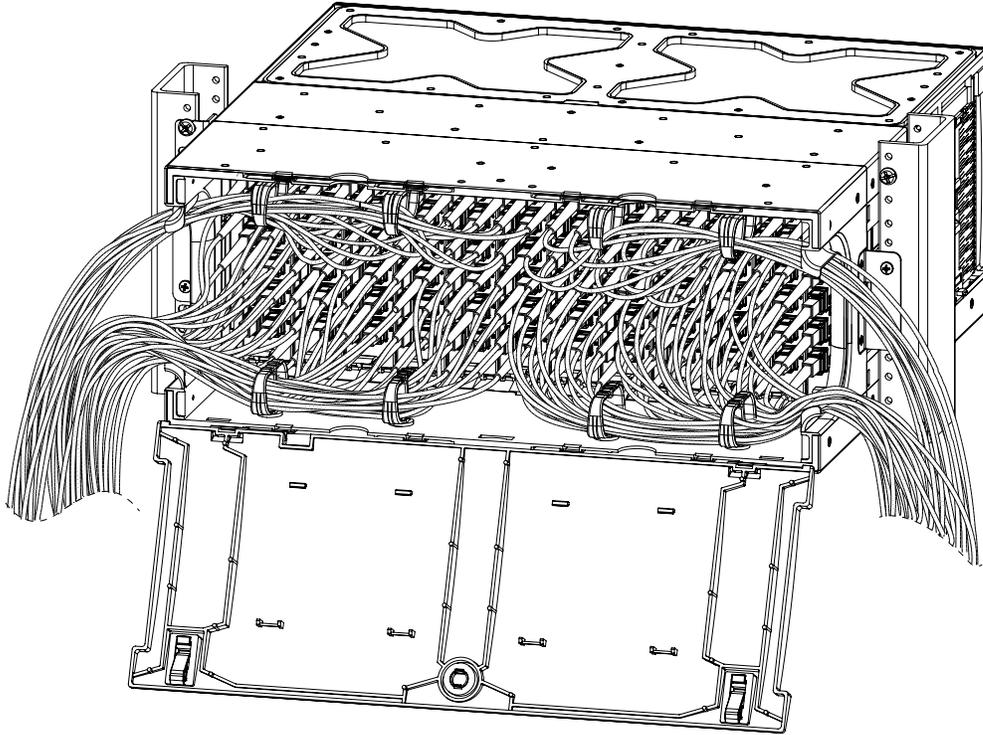
 **CAUTION: Do not over-tighten the cable tie.**

NOTE: Refer at next page for detailed images.

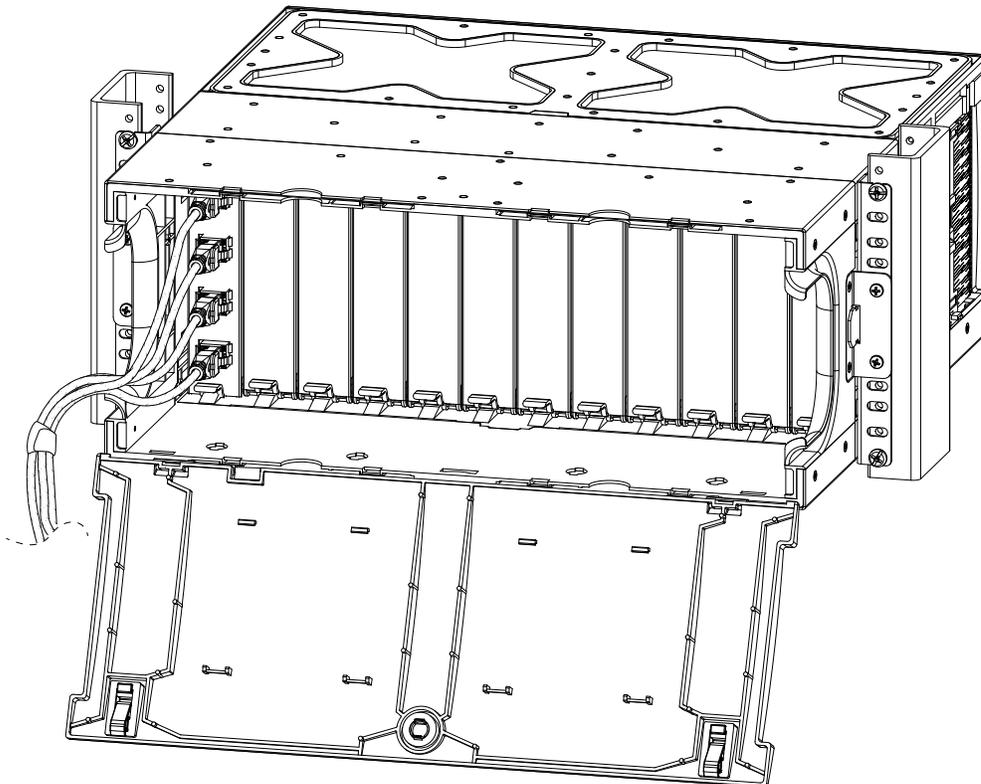


9. Recommended front housing patch cord management

9.1. Fiber patch cord management



9.2. Copper front connectivity (optional)



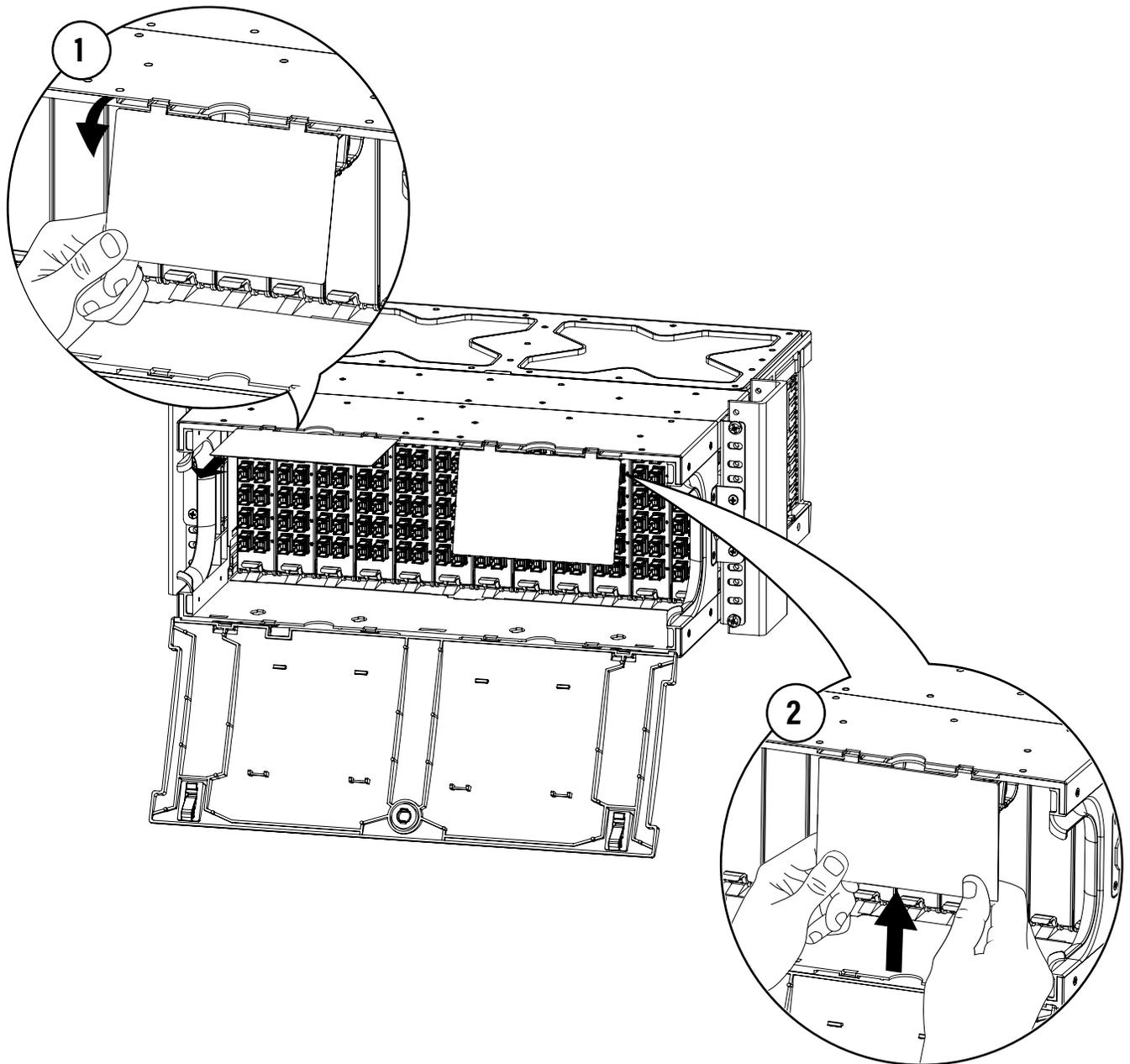
10. ECX Labelling

10.1. I.D. Label card positions

This section shows different options regarding label card location and installation.

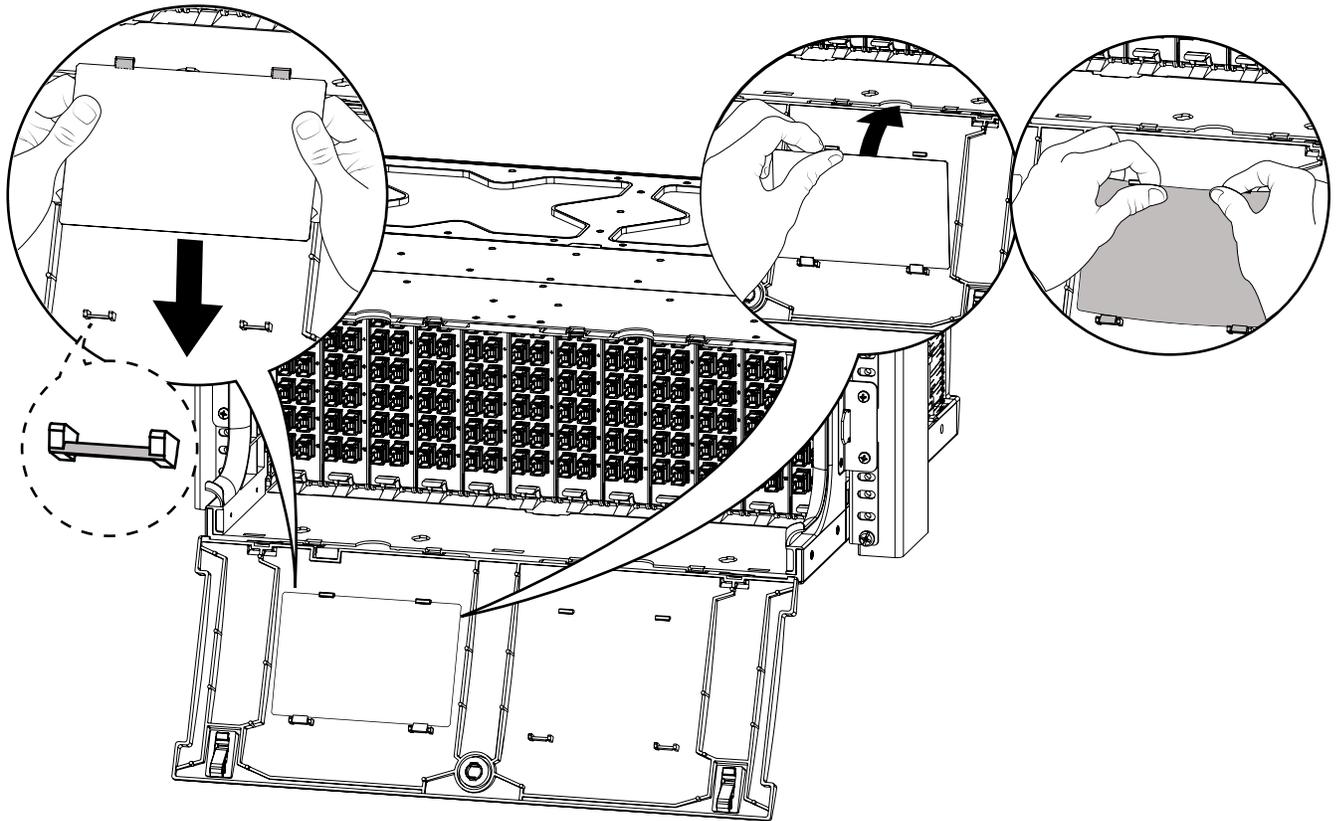
A. Front housing

- 1 Pull out the label cards and tilt them downwards.
- 2 (If needed) remove the label card by pushing upwards.

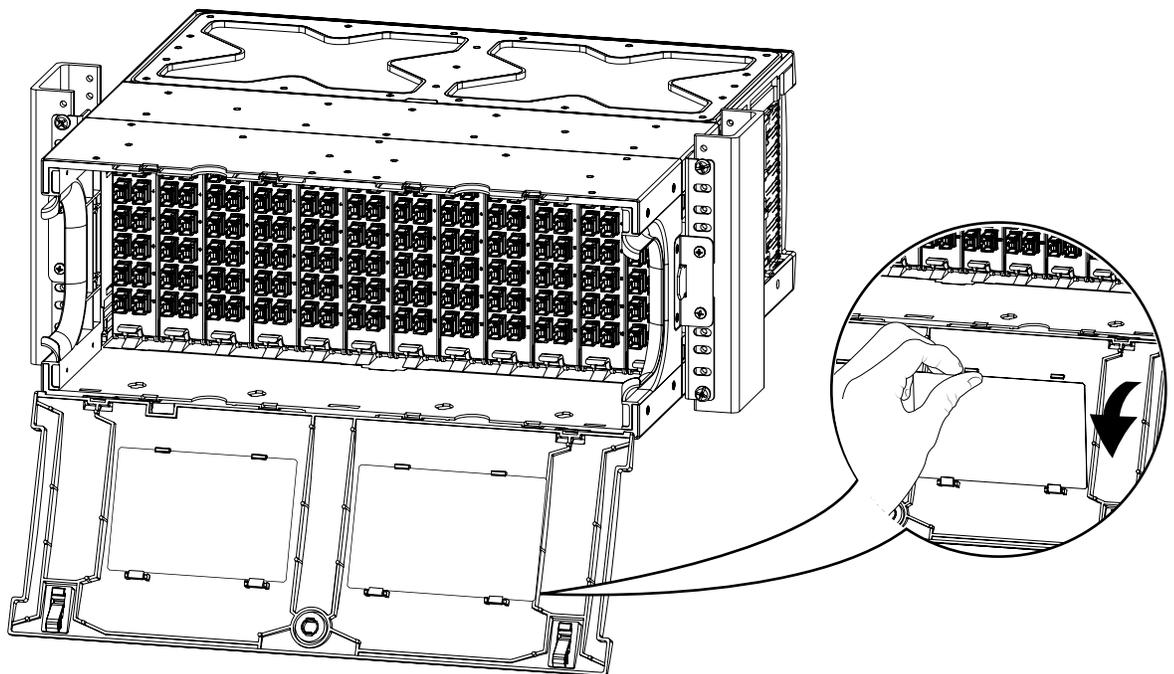


B. Front door

- 1 Open the door and align the door hooks to the card tabs.
Tilt the label card upwards and secure it by applying a slight pressure.



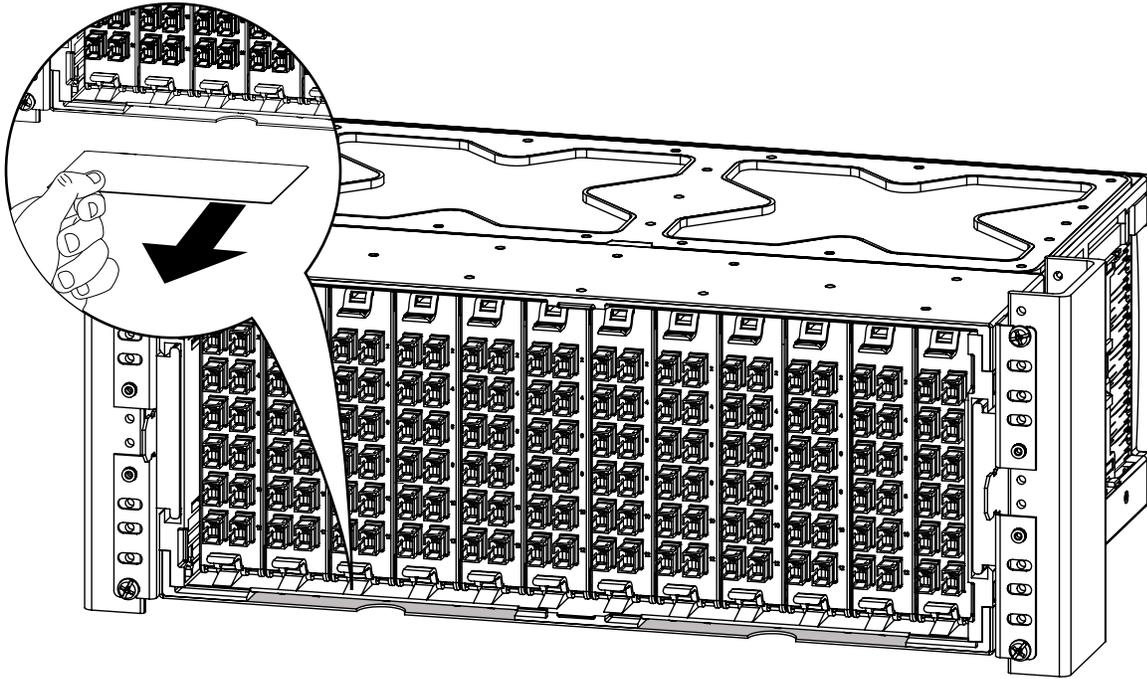
- 2 To access or remove label cards, invert the previous step.



C. Rear housing

- 1 Pull out the label cards from the bottom slots.

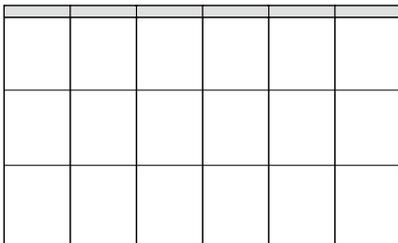
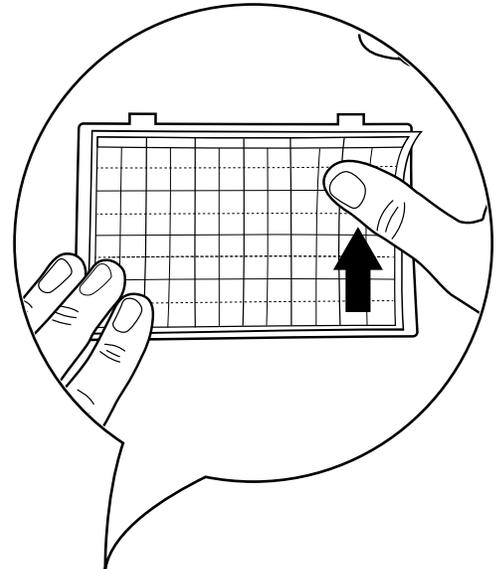
NOTE: These label cards doesn't have tabs and cannot be tilted.



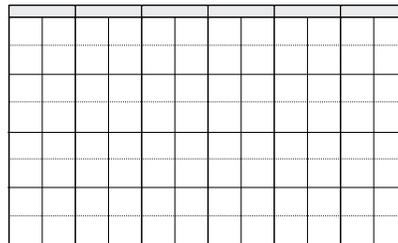
10.2. Applying I.D. label

NOTE: Surface should be cleaned properly before applying label.

- 1 Select the desired I.D. label.
Apply the provided sticker on the label card from bottom to top as shown.



(8/16) I.D. label ports



(3/6/12) I.D. label ports

11. ECX accessories features and installation

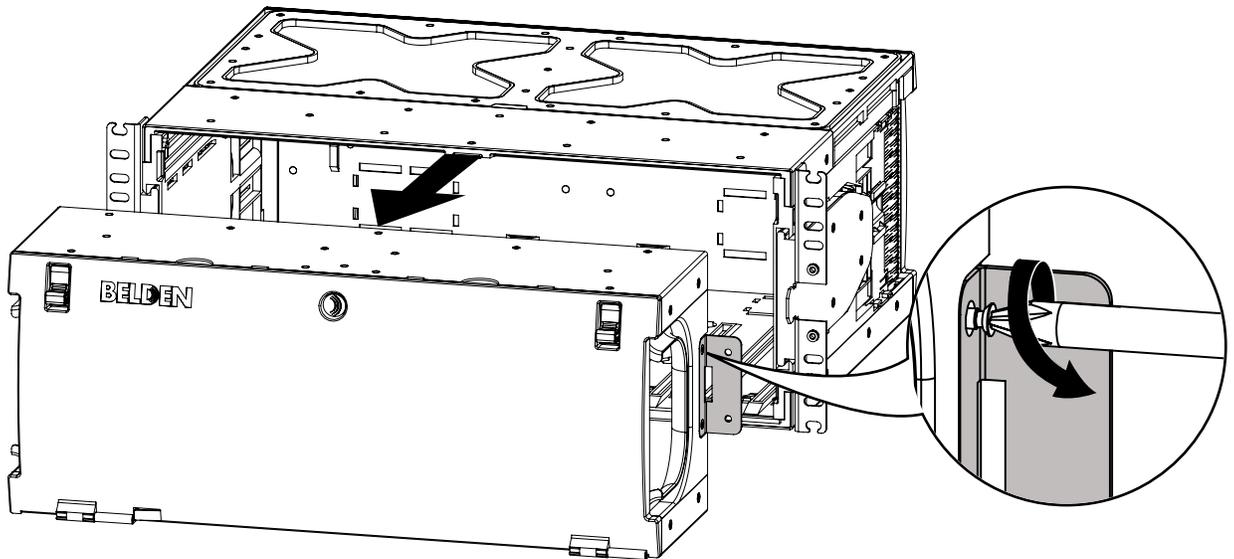
This section shows the installation of some ECX accessories.

11.1. Installing ECX 4U flush rack mounting brackets

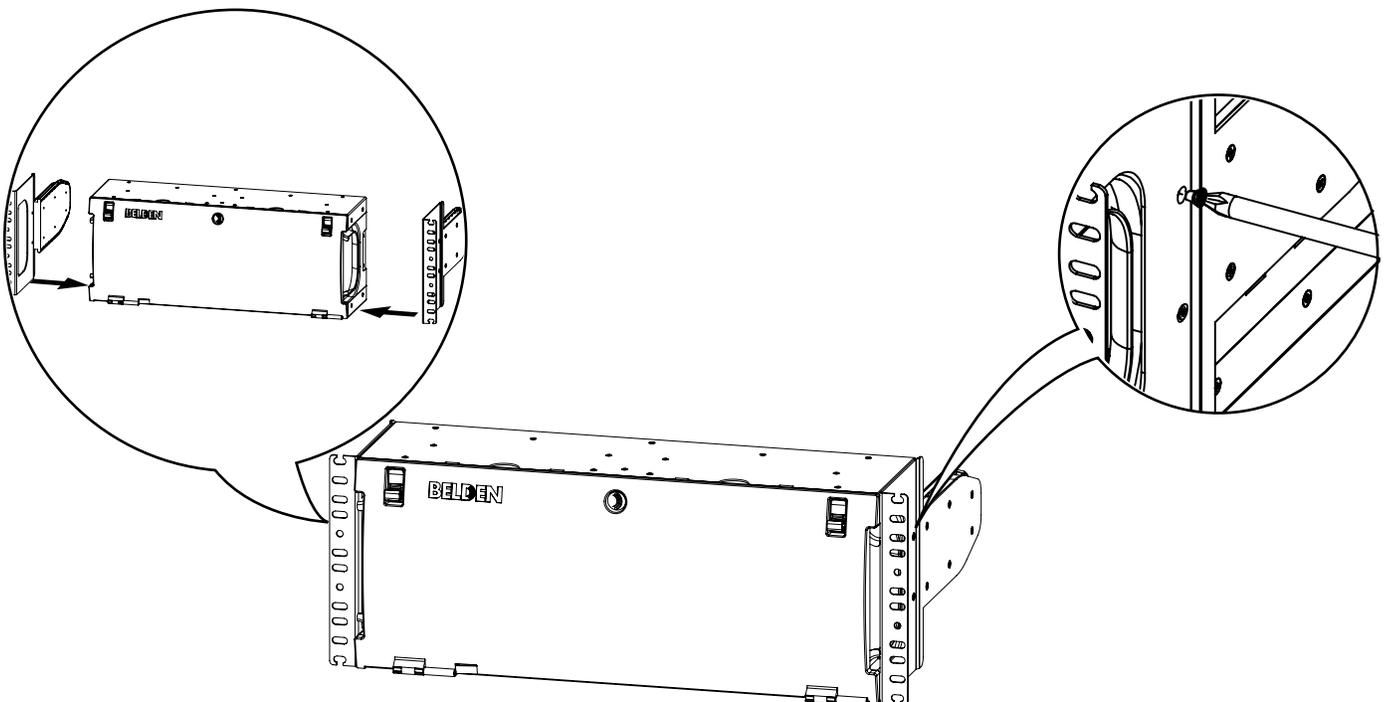
This section shows how to mount the flush rack brackets on the ECX housing.

NOTE: For further information about the housing removal, please refer to section 5.1. and section 5.2.

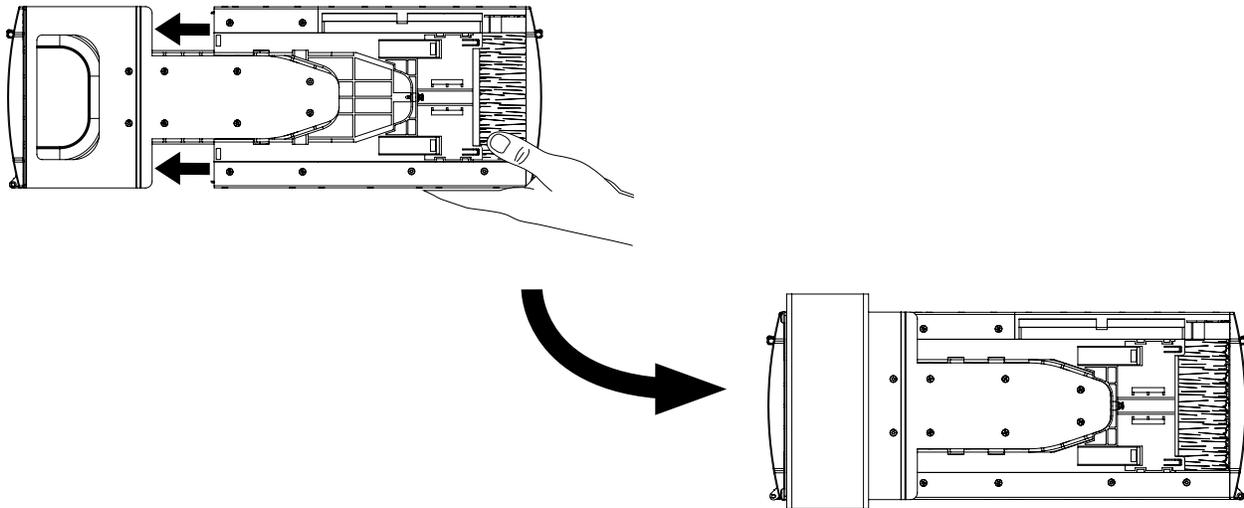
- 1 Detach the front housing and remove the 2 L-shaped brackets.



- 2 Align and secure the flush mounting brackets to the front housing by inserting the appropriate screws from both sides.

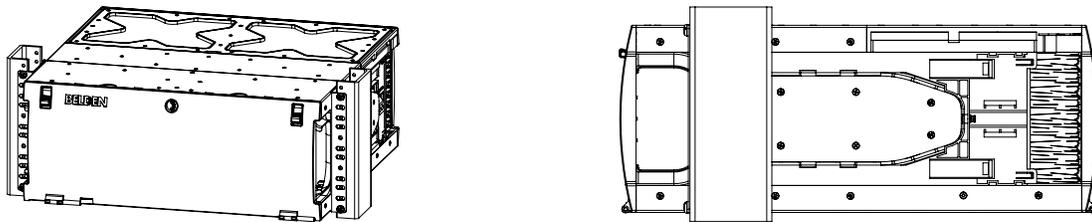


-
- 4** Slide and secure the rear housing to the assembled front housing.
Install the assembled housing to the 19" rack.



11.2. ECX 4U 3" rack mounting brackets overview

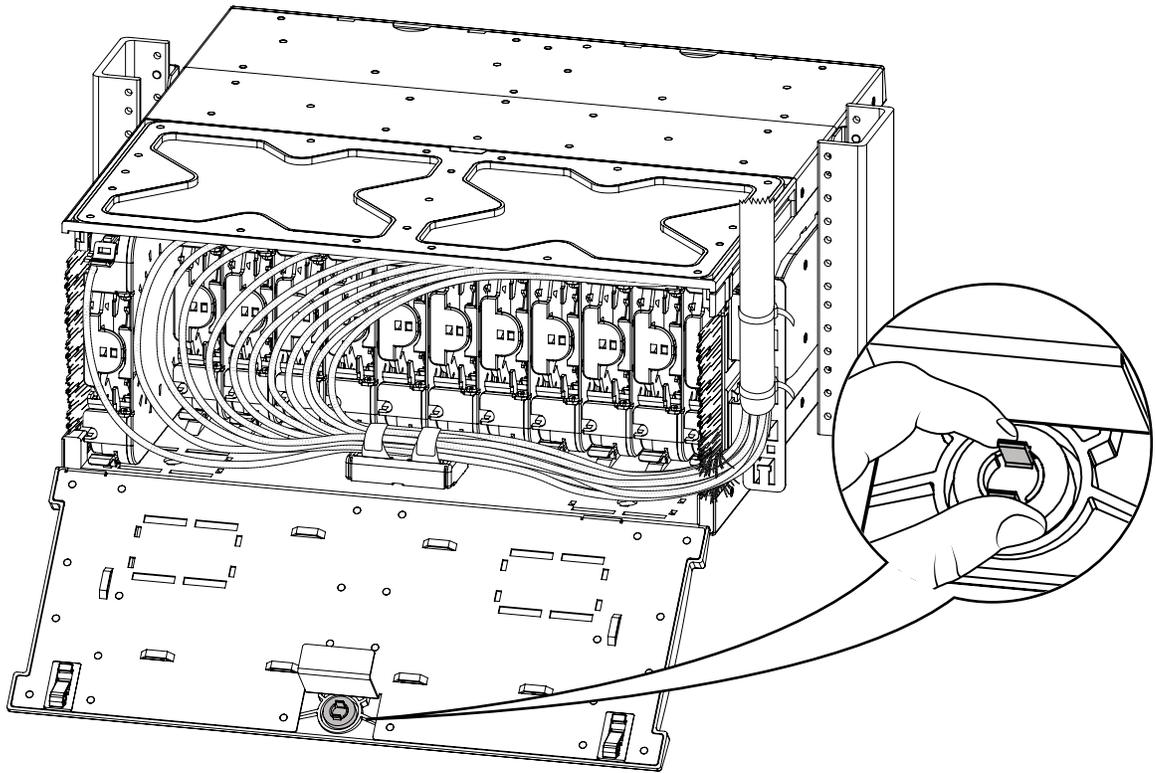
NOTE: The installation of this accessory is the same as the flush rack brackets.



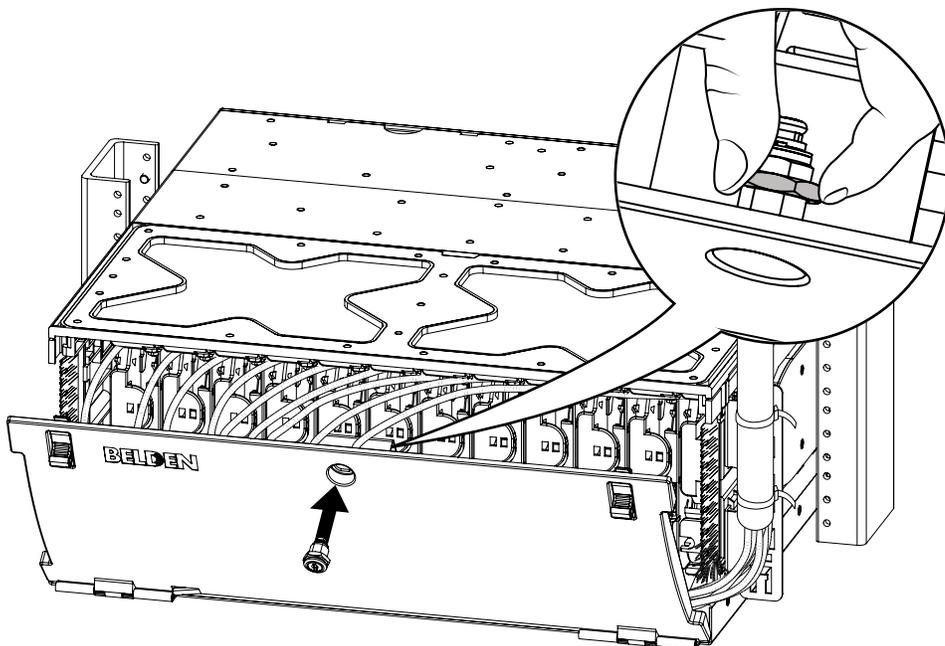
11.3. Lock-kit installation

ECX locks can be installed in rear and front doors to prevent unauthorized access. The use of this accessory is optional.

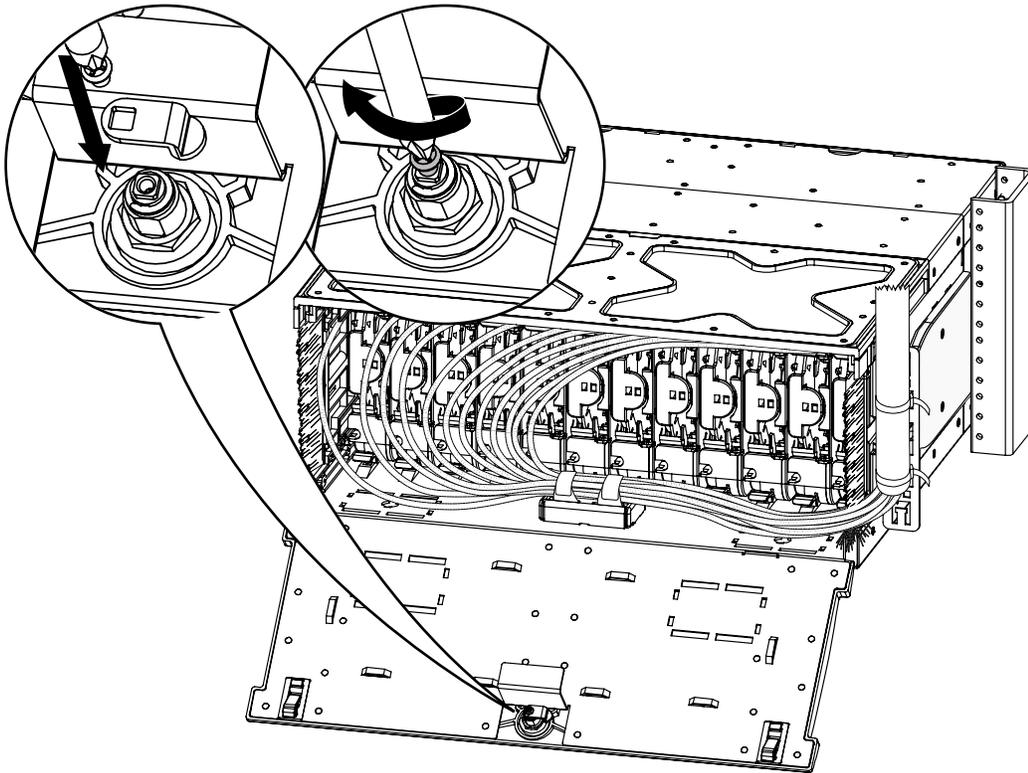
- 1 Open the (front or rear) door and remove the cap by pinching the rear tabs as shown.



- 2 Open the door to install the lock to its respective location. Secure the lock by tightening the flat nut as shown.



- 3** Remove the already installed screw and position the clamp.
Secure the clamp by tightening the screw.



- 4** Once the lock kit is installed, close the rear (or front) door and secure it with the provided key.

