CORNING

Pretium™ Rack-mountable 1U Housing Hardware

revision history |

Issue	Date	Reason for Change
5	01/2009	Added sections on installing pigtail modules and preconnectorized cable into connector modules
4	05/2007	Added RoHS logo
3	11/2004	Update drawings with addition of removable bracket
2	03/2004	Corrected drawings in Figure 5
1	07/2003	Initial release

related literature |

LAN-538-EN   Pretium Rack-mountable 1U Housing Hardware Product Specifications

LAN 539-EN   Pretium Rack-mountable 1U Housing Hardware Ordering Guide

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The precautionary terms used by Corning Cable Systems in its standard recommended procedures conform to the guidelines expressed in the American National Standards Institute document (ANSI Z535) for hazard alert messages. Alerts are included in this instruction based on the following:

⚠ **DANGER:** *indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.*

⚠ **WARNING:** *indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.*

⚠ **CAUTION:** *indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.*
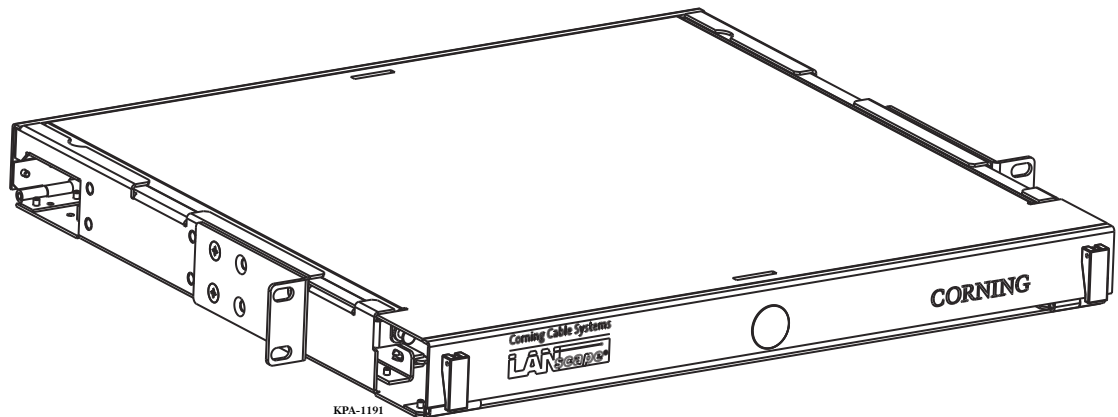
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Figure 1 — PCH-01U Housing

1.   General

This document describes the installation of Pretium™-01U (Figure 1) Closet Connector Housing Hardware. The unit fits into 19-inch utility racks and occupies one rack space. Factory stubbed units are also available. Contact your customer service representative to order other mounting configurations or to purchase accessories that are sold separately.

Part Number	Dimensions (H x W x D)	Weight
PCH-01U	**1.75 x 17 x 12 in.** **(4.5 x 43 x 28.5 cm)**	**5 lb (2.3 kg)**

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2. Components

The main components of the Pretium 1U hardware unit are illustrated in Figure 2. Cable and patch cords can enter from either side of the housing.
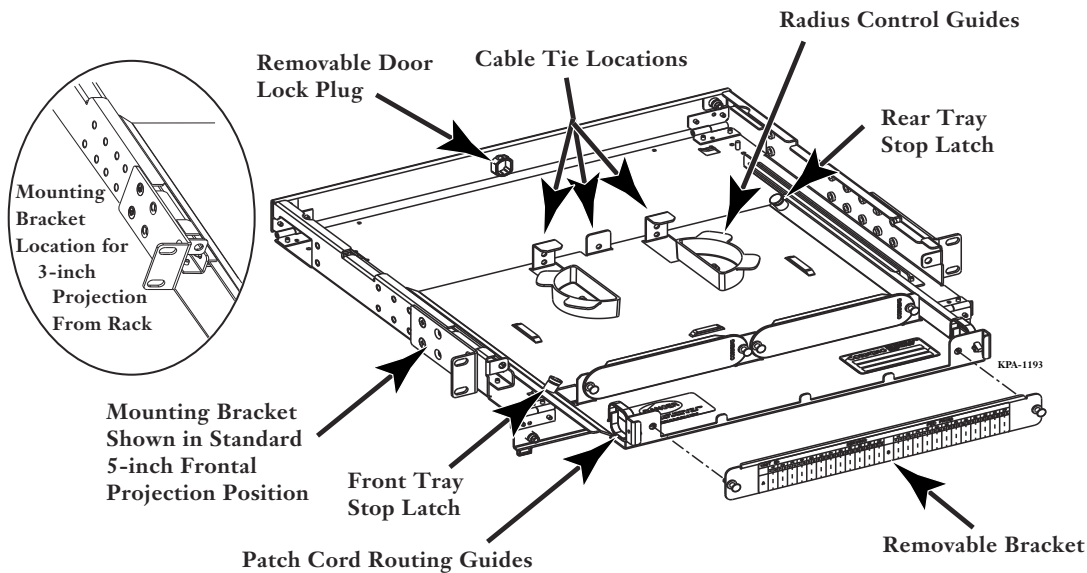

Figure 2 — Components (Cover Removed for Clarity)

3. Product Installation

3.1 Unpacking Stubbed Units

If you are installing a stubbed unit, follow the directions provided with the shipping container to remove the stubbed unit from its packaging. Place the unit on a work surface to perform the preliminary work before mounting the unit into a rack.

3.2 Removing the Cover

Removing the cover is optional but is recommended to ease installation

Step 1: Open front and rear doors.

Step 2: Locate the plunger fasteners at the front of the unit under the housing cover and pull out to release the plungers (Figure 3).

Step 3: Lift stop latches and slide the cover toward the front until it is clear of the base. Set the cover aside.
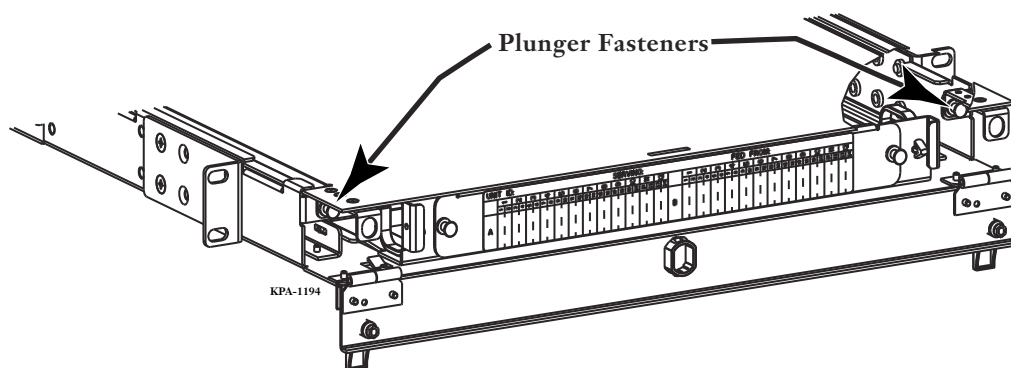

Figure 3 — Remove Cover

3.3 Mounting the Housing into a Rack

Attach the unit to the equipment rack using the four screws provided. Two screw are required per side of the housing.

3.4 Installing Cable Entry Plate

Step 1: Determine location for cable entry into housing.

Step 2: Slide drawer back completely. The drawer must be in this position to prevent fiber damage during drawer actuation.

Step 3: Install cable entry plate using the provided wing nut (Figure 4) at the location where the cable will enter the housing.

Step 4: Install the strain-relief bracket to the side of the housing (Figure 4) at the location where the cable will enter the housing.
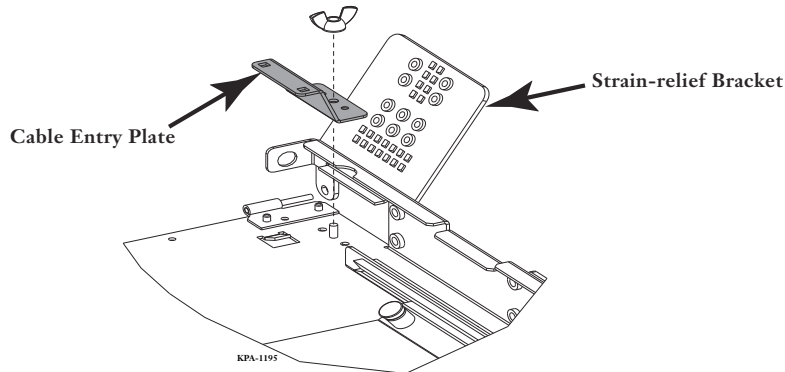

Figure 4 — Install Cable Entry Plate

3.5 Securing the Cable

NOTE: *Fiber optic cable is sensitive to excessive pulling, bending, and crushing forces. Consult the cable specification sheet for the cable you are installing.* ***Do not bend the cable more sharply than the minimum recommended bend radius. Do not apply more pulling force to the cable than specified. Do not crush the cable or allow it to kink.*** *Doing so may cause damage than can alter the transmission characteristics of the cable; the cable may have to be replaced.*

The cable may be strain-relieved using the Universal Cable Clamp (UCC) or cable ties.

3.5.1 Using the UCC

Step 1: Attach the UCC clampshell to the strain-relief bracket as shown in Figure 5 to allow installation of a second UCC if necessary.

Step 2: Follow installation instructions provided with the UCC kit to secure the cable. Allow room on the bracket to strain-relieve the strength member, if necessary. Do not tighten yet to allow for cable adjustment if necessary.

Step 3: Secure cable to cable entry plate using a cable tie. Do not tighten cable tie.

Bracket Orientation for Top Cable Entry
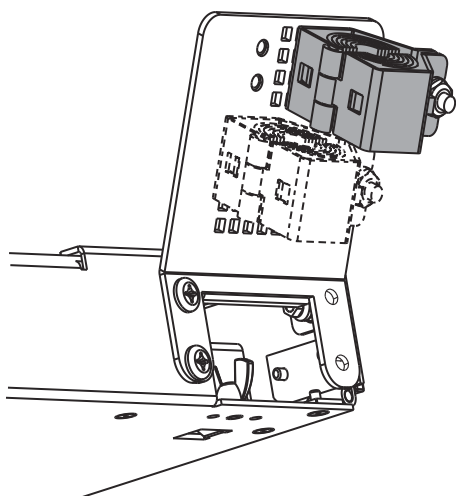
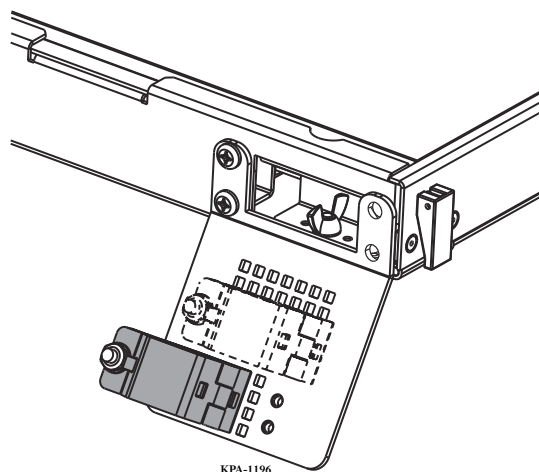**Bracket Orientation for Bottom Cable Entry**

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Figure 5 — Strain-relieve Using UCC

3.5.2 Using Cable Ties

If at least 10 m (33 ft) of outside plant cable is routed within an environmentally controlled building where temperature fluctuation is minimal, securing the cable sheath is adequate strain-relief.

⚠ **CAUTION:** *Wear safety glasses to protect your eyes from accidental injury when handling chemicals and cutting fiber. Pieces of glass fiber are very sharp and can damage the eye easily.*

⚠ **CAUTION:** *Wear safety gloves o protect hands from accidental injury when using sharp instruments.*

Step 1: Attach the cable to the strain-relief bracket with cable ties in two places as shown in Figure 6.

Step 2: Allow room on the bracket to strain-relieve the cable strength member, if present.
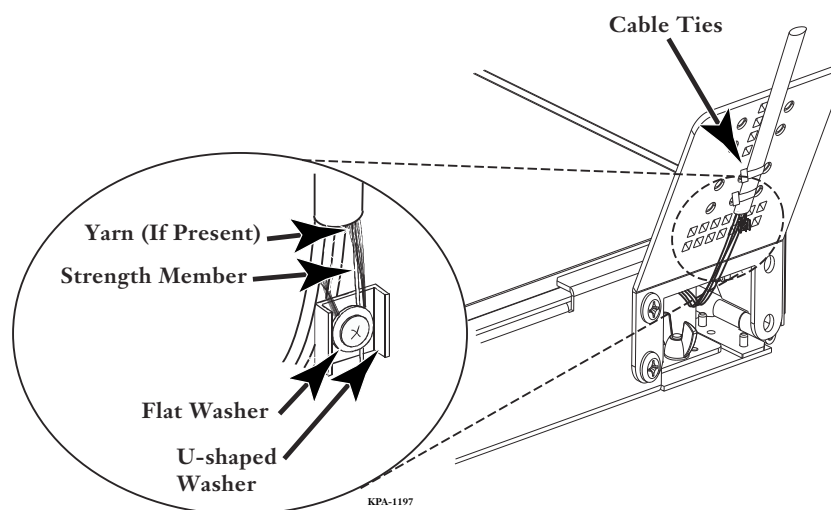

Cable Ties

Yarn (If Present)

Strength Member

Flat Washer

U-shaped Washer

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Figure 6 — Strain-relieve Strength Member

3.6 Strain-relieving the Cable Strength Member

Step 1: Install the U-shaped washer and the flat washer on the strain-relief bracket using the supplied Phillips-head machine screw (Figure 6).

Step 2: Place the yarn, if present, and the central member between the U-shaped washer and the flat washer.

Step 3: Wrap yarn around the screw in a clockwise direction and under the U-shaped washer.

Step 4: Tighten the nut.

Step 5: Trim off the excess yarn and central member.

3.7 Grounding Armored Cable

- One grounding kit (p/n FDC-CABLE-GRND, purchased separately) is required to ground each armored cable. Follow instructions provided with the grounding kit.
- Attach the other end of the ground wire to the equipment rack. The equipment rack must be grounded to the primary building ground.
- Remove the paint from the frame at the grounding location to ensure metal-to-metal contact. It is recommended to use an antioxidant on the bare metal to prevent corrosion.
- Or, attach the other end of the ground wire to a rack-mounted grounding bus bar, which is grounded to the primary building ground.

3.8 Installing Preconnectorized Cable into Connector Panels

⚠ **WARNING:** *Never look directly into the end of a fiber that may be carrying laser light. Laser light is invisible and can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.*

⚠ **WARNING:** *DO NOT use magnifiers in the presence of laser radiation. Diffused laser light can cause eye damage if focused with optical instruments. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.*

⚠ **CAUTION:** *Isopropyl alcohol is flammable with a flashpoint at 54°F. It can cause irritation to eyes on contact. In case of eye contact, flush eyes with water for at least 15 minutes. Inhaling fumes may cause mild dizziness. In case of ingestion, consult a physician.*

Step 1: Remove the blank panels from the unit and replace with connector panels (purchased separately).

Step 2: Install connectors into the adapters at the rear of the connector panels (Figure 7).

Step 3: Route cable slack around radius control guides.

IMPORTANT: *Lift the tray stop latches and slide the drawer to the forward and back positions to verify that the drawer slides in the grooves of the guides and that there is enough fiber slack to prevent violating the minimum fiber bend radius of the cable.*
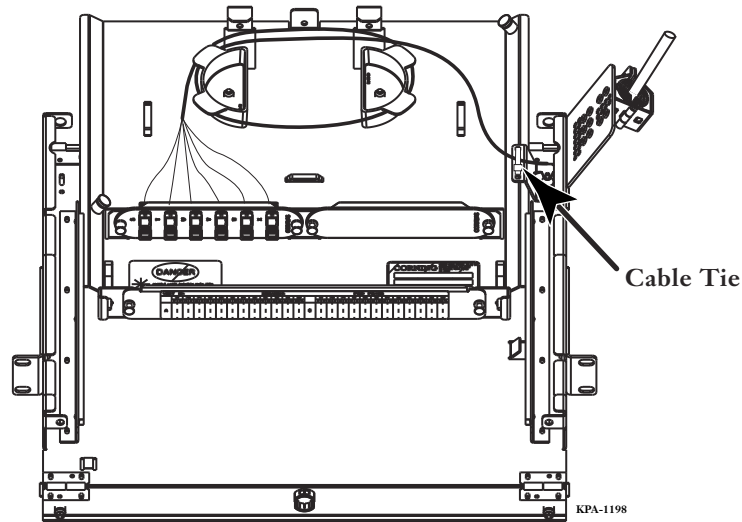
Cable Tie

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Figure 7 — Cable Slack Routing and Connector Installation

3.9 Installing Closet Connector Housing Pigtail Modules

Step 1: Remove the blank panels from the unit and replace with pigtail modules (purchased separately).

Step 2: If you intend to splice inside the PCH-01U unit using the Splice Tray Kit (p/n PC1-SPLC-04R), remove the radius control guides and install the splice tray kit per the instructions provided with it. Route cable slack around kit and into the splice trays. Splice per the instructions provided with the splice tray (Figure 8).
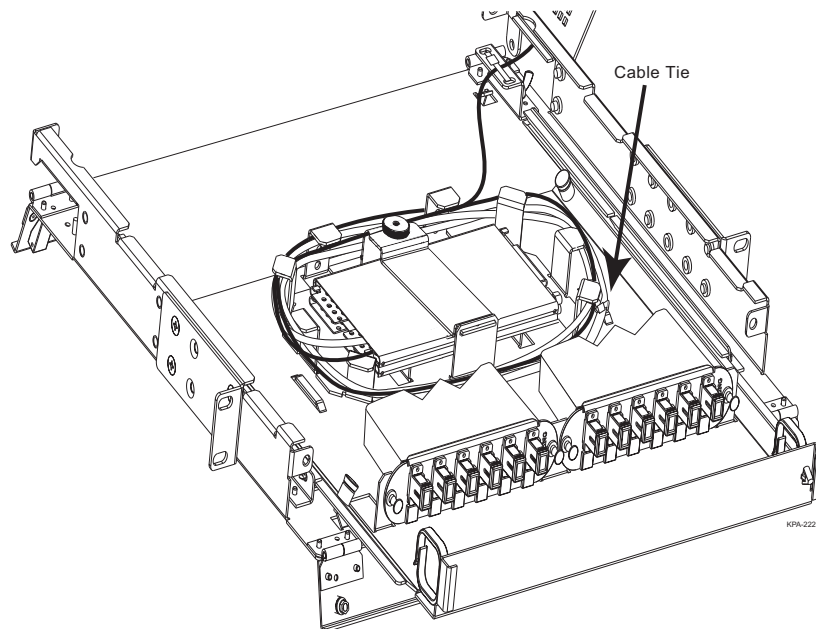

Cable Tie

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Figure 8 — Install Splice Tray Kit

Step 3: If you intend to splice using an external splice housing, route slack around the radius control guides and through the rear entry openings to the applicable splice housing above or below the PCH-01U unit (Figure 9).

IMPORTANT: *Lift the tray stop latches and slide the drawer to the forward and back positions to verify that the drawer slides in the grooves of the guides and that there is enough fiber slack to prevent violating the minimum fiber bend radius of the cable.*
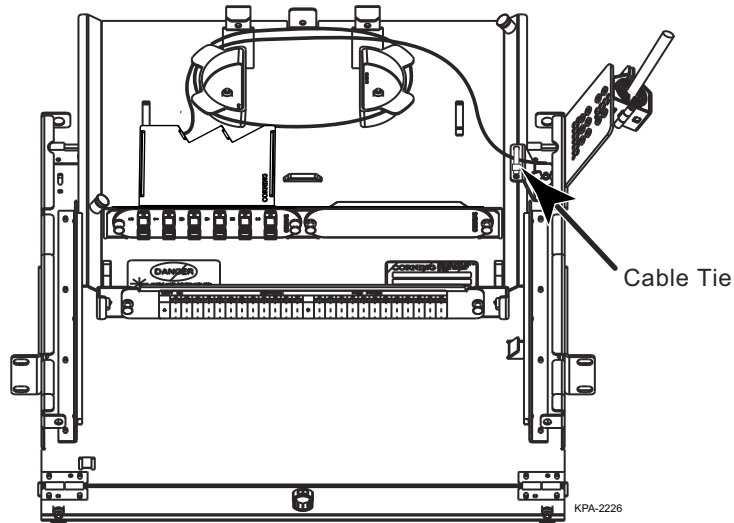
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Figure 9 — Fiber Routing to External Splice Housing

3.10 Installing Preconnectorized Cable into Connector Modules (Plug & Play™)

Step 1: Using a 6-32 hex nut driver, remove the radius control guides. (This is recommended when cables enter from the right side of the housing.)

Step 2: Reinstall the nuts onto the radius guide studs to prevent fiber snags.

Step 3: Remove the blank panels from the unit and replace with connector modules (purchased separately).

Step 4: Install MTP connectors into the MTP adapters at the rear of the connector modules (Figure 10). Route fiber as shown and loosely secure with cable ties.

IMPORTANT: *Lift the tray stop latches and slide the drawer to the forward and back positions to verify that the drawer slides in the grooves of the guides and that there is enough fiber slack to prevent violating the minimum fiber bend radius of the cable.*
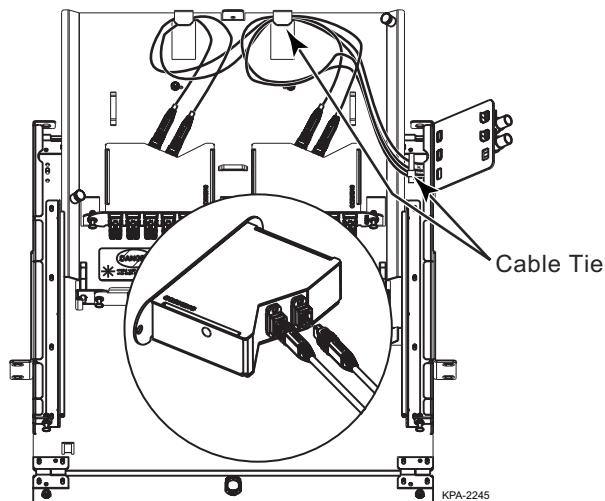

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Figure 10 — Install Plug & Play Modules

3.11 Installing a Buffer Tube Fan-out Kit

Loose-tube fiber optic cable can be connectorized using Buffer Tube Fan-out (BTF) kits (purchased separately).

Step 1: Terminate the fibers according to the instruction provided with the BTF kit.

Step 2: Slide drawer back completely and route buffer tube behind the flanges on the drawer and secure with cable ties. Do not tighten cable ties. Route buffer tube around the radius control guides.

Step 3: Secure the BTF body to the tray using a cable tie (Figure 11).

Step 4: Continue routing the fiber and install connectors into the adapters at the rear of the connector panels.
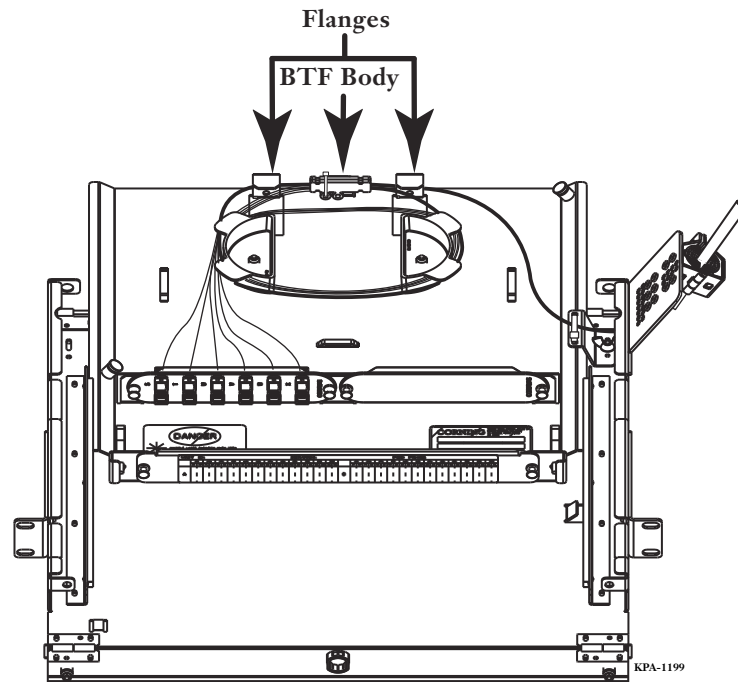

Figure 11 — Fan-out Fiber Routing

3.12 Closing the Housing

Step 1: Lift up on stop latches and **slide drawer toward the front of the housing** to make sure cable is not stressed. If necessary, readjust cable strain-relief to prevent stress on fibers.

Step 2: Slide drawer back to original position.

Step 3: If previously removed, slide the cover back in the retaining flanges on top of the housing. Push the plunger fasteners to secure.

Step 4: Close the front and rear doors.

3.13 Routing Patch Cords

Install patch cords as specified on planning diagrams. Route patch cords through the routing clips on either side at the front of the housing (Figure 12).

Provide enough patch cord slack to allow the connector panel tray to slide to the back and forward positions without violating the minimum bend radius of the patch cord.

Record patch cord routing information on the identification (ID) label provided.
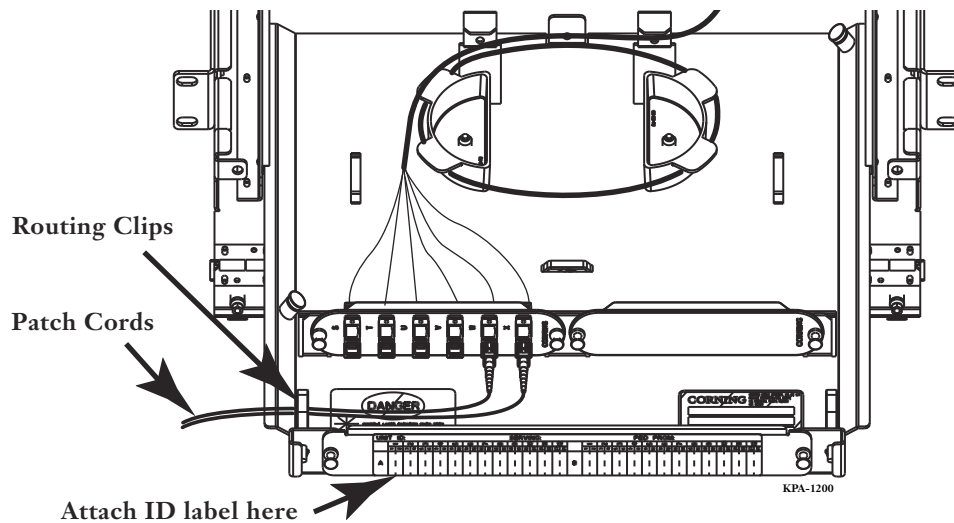
Figure 12 — Patch Cord Routing

4.   Maintenance

- Clean external components occasionally with a damp, nonabrasive cloth.
- Check internal components periodically for the following:
    - **Loose Parts:** Check nuts, bolts and screws for looseness and tighten.
    - **Fiber Bends:** Check fiber optic cable to make sure bends do not exceed the minimum bend radius. Check cable for unnecessary strain. Check cable entries and exits for crimping or crushing.
    - **Documentation:** Check ID label to make sure it is clear and accurate.