SC 42U/45U/47U-Type Server Cabinet Assembly Instructions

General

CommScope® Server Cabinets (SC) are designed to house and protect computer servers and other mission-critical active equipment. The cabinets are available in either an 800mm or 1000mm depth and also in a 600mm or 800mm width. The cabinets are available in a wide variety of front and rear door materials and configurations as well as with over nineteen optional accessories to further customize each cabinet for specific applications.

Assembly of the 600mm x 1000mm SC 42U-Type Server Cabinet is illustrated in this document, although the instructions cover other depths, widths and heights as well as single and double door assembly. Instructions for assembly/installation of optional equipment are provided with that equipment.


600mm x1000mm SC 42U-Type Server Cabinet

⚠️ **WARNING**

It is highly recommended that installation of this product be performed by a qualified and experienced installer. Improper installation of this product could result in damage to the product, other equipment, or personal injury. **CommScope cannot be held responsible for damage to equipment or personal injury resulting from improper fastening or misuse of information presented in this document. Cabinets must be wired per applicable sections of the National Electrical Code (NEC). If grounding is required, appropriate grounding hardware approved by the NEC must be used.**

---

at work

CE

For RoHS Inquiries:
CommScope Inc.
Corke Abbey, Bray
Co. Dublin, Ireland
Attn: Legal Department

How to Contact Us

- To find out more about **CommScope**® products, visit us on the web at http://www.commscope.com/
- For technical assistance:
    - Within the United States, contact your local account representative or technical support at 1-800-344-0223. Outside the United States, contact your local account representative or Authorized Business Partner.
    - Within the United States, report any missing/damaged parts or any other issues to **CommScope** Customer Claims at 1-866-539-2795. Outside the United States, contact your local account representative or Authorized Business Partner.

Tools Required

Nylon
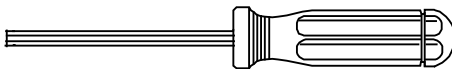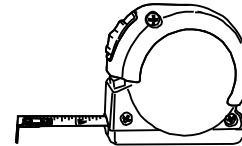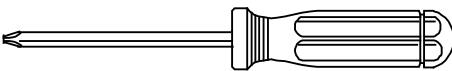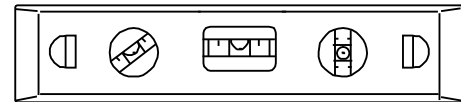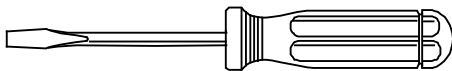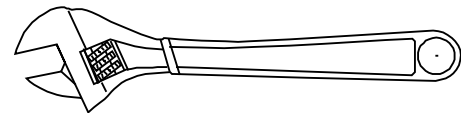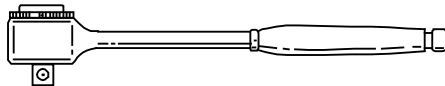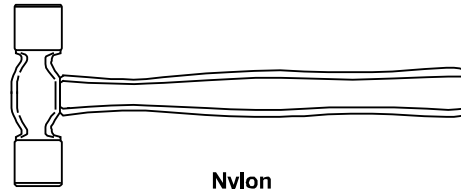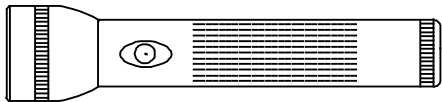
Posi-drive Screwdriver
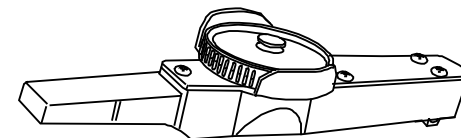
6mm Hex Wrench
5mm Hex Wrench

Torque Wrench

10mm

6mm

Hex Socket **Hex-Bit Socket**

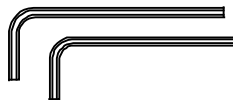# ⚠️ WARNING – Important Safety Instructions

- When removing the cabinet from the pallet; a clean, flat, level floor area should be provided. Remove all (4) bolt down brackets that secure the cabinet to the pallet.

- Ensure that sufficient personnel are available to safely remove the cabinet from the pallet and/or move/relocate the cabinet. Side panels and doors can be removed to reduce the overall weight of the cabinet.

- Once the cabinet is in place, leveling feet (and bolt-down brackets) should be deployed. Adjust feet as necessary to be sure each foot is making solid contact with the floor. After final leveling and installation, hold each foot in place using the hex nut on top of the foot, then tighten the locking hex nut against the bottom of frame.

- Always load and install the heaviest equipment at the lowest point in the cabinet. Install lighter equipment at the higher rack units. This serves to reduce the potential risk of the cabinets tipping over. Additional care should be taken when and if shelving is deployed, especially sliding shelves. Sliding shelves with equipment and their total weight, in particular, can destabilize a cabinet when extended. Never extend more than one sliding unit at a time.

- Many equipment configurations are possible in the **CommScope** cabinet. The amount of force required to tip or destabilize a cabinet will differ with each configuration. Read and follow all equipment manufacturer's specifications and instructions for assembly, installation, and safety.

- All NC-Network Cabinets and SC-Server Cabinets should be connected to the common building ground. Each cabinet comes equipped with a grounding stud. Locate the ground stud and remove the protective cover. Connect a common building ground wire to the cabinet stud. Follow all applicable electrical codes when making the ground connection.

- Side panels, doors and other cabinet parts come with a grounding connection. Remove grounding stud protective covers prior to connecting wires.

- For all bonding and grounding requirements, the local authority having jurisdiction has the final approval for what is compliant for that region and specific installation.

- When removing side panels, due to their size, care should be taken to avoid personal injury or damage to the panel. Prior to removing side panels, the sliding retaining latches; positioned inside the cabinet, on the lower section of the panels at front and rear of the cabinet, must be released. On the 800mm deep cabinet, both side panels are identical. On the 1000mm deep cabinet, the two side panels are right side and left-side specific.

- When reinstalling side panels, install and ensure that the panels are positioned on the frame by hanging them over the top of the vertical members. The sliding latches; positioned inside the cabinet, on the lower section of the panels at front and rear of the cabinet, must be re-engaged to the locked position.

- When reinstalling doors, install and position the door so that hinge pins (upper and lower) fit into the openings in the corners of the door and then lower to engage the hinge pins. Pull door handle out and rotate counter-clockwise 90° to release the latch and then close the door. Then, turn door handle clockwise 90° to engage door latch and then push door handle back into door.

- The door, when opened, will only swing open 120°. Attempting to open it further will cause damage.
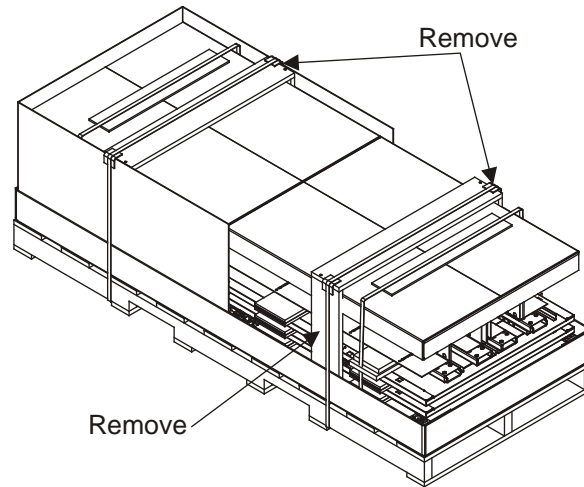
Assembly Instructions

⚠️ **IMPORTANT:**

A clean, flat, level, protected floor area should be provided for cabinet assembly to prevent damage to parts.

Note: The assembly process may require two persons at certain stages to lift, position and hold cabinet components in place.

Step 1 – Unpack Crate

The SC Flat Packaged server cabinet packaging consists of several sub-assemblies and packaging groups.

1. Use philips head screwdriver to loosen screws and then remove two top wood pieces.
2. Loosen and detach two side wood pieces.
3. Remove one end and side cardboard pieces to expose components.
4. Remove components as needed for assembly and carefully place on protected floor.
5. Remove protective packaging from components and locate hardware packs as needed.

Step 2 – Identify Cabinet Components and Verify Parts

Verify components and package contents arrived undamaged per the descriptions below. All kits may not be included with all cabinets.

Miscellaneous Hardware Pack H for Single Door Cabinets

Quantity	Description
4	Adjustable feet with locking hex nuts
16	M8 x 65 Counter-sunk bolts
4	Hinge pins
1 kit	Package of 40 screws, cage nuts, and washers for mounting equipment

Miscellaneous Hardware Pack H for Double Door Cabinets

Quantity	Description
4	Adjustable feet with locking hex nuts
16	M8 x 65 Counter-sunk bolts
6	Hinge pins
1 kit	Package of 40 screws, cage nuts, and washers for mounting equipment

Side Brace Member Pack I

Quantity	Description
4	Side brace members
4 pair	Locking inserts

Side Extension Pack J (Provided with 1000mm deep cabinets only)

Quantity	Description
8	M8 x 35 cap head screws

Earthing Pack R

Quantity	Description
4	Clamp plates with earthing wire harness

One of the following kits will be provided only if cabinet has been designated to be used in a bayed configuration.

The Baying Kit instruction sheet (860421049) provides information on assembling the baying kit components and is included in the packs below.

**Door Latch Pack 1 – For 600 and 800mm deep cabinets**

| Quantity	Description
8	Baying brackets
4	M6 x 12 screws
4	M6 hex nuts
2	Door lock extension brackets (2 short)
4	Locking inserts (2 right and 2 left)
1	Baying kit instruction sheet
1	Door latch bracket instruction sheet

Door Latch Pack 2 – For 1000mm deep cabinets

| Quantity	Description
8	Baying brackets
4	M6 x 12 screws
4	M6 hex nuts
2	Door lock extension brackets (1 short and 1 long)
4	Locking inserts (2 right and 2 left)
1	Baying kit instruction sheet
1	Door latch bracket instruction sheet

Assembly Hardware and Fasteners

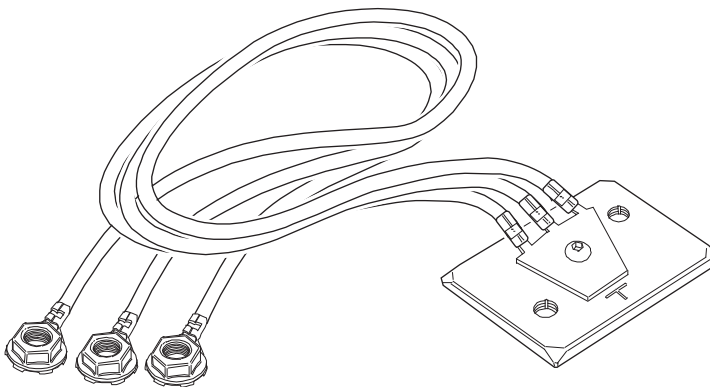Identify fasteners and assembly hardware from the illustrations below.
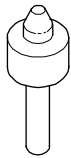
Door Hinge Pin
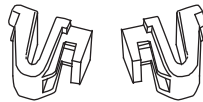
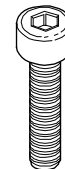**Locking Insert (Pair)**
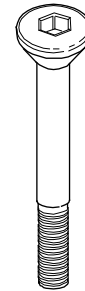
M8 x 65mm Counter-Sunk Bolt

Clamp Plate with Earthing Wire Harness
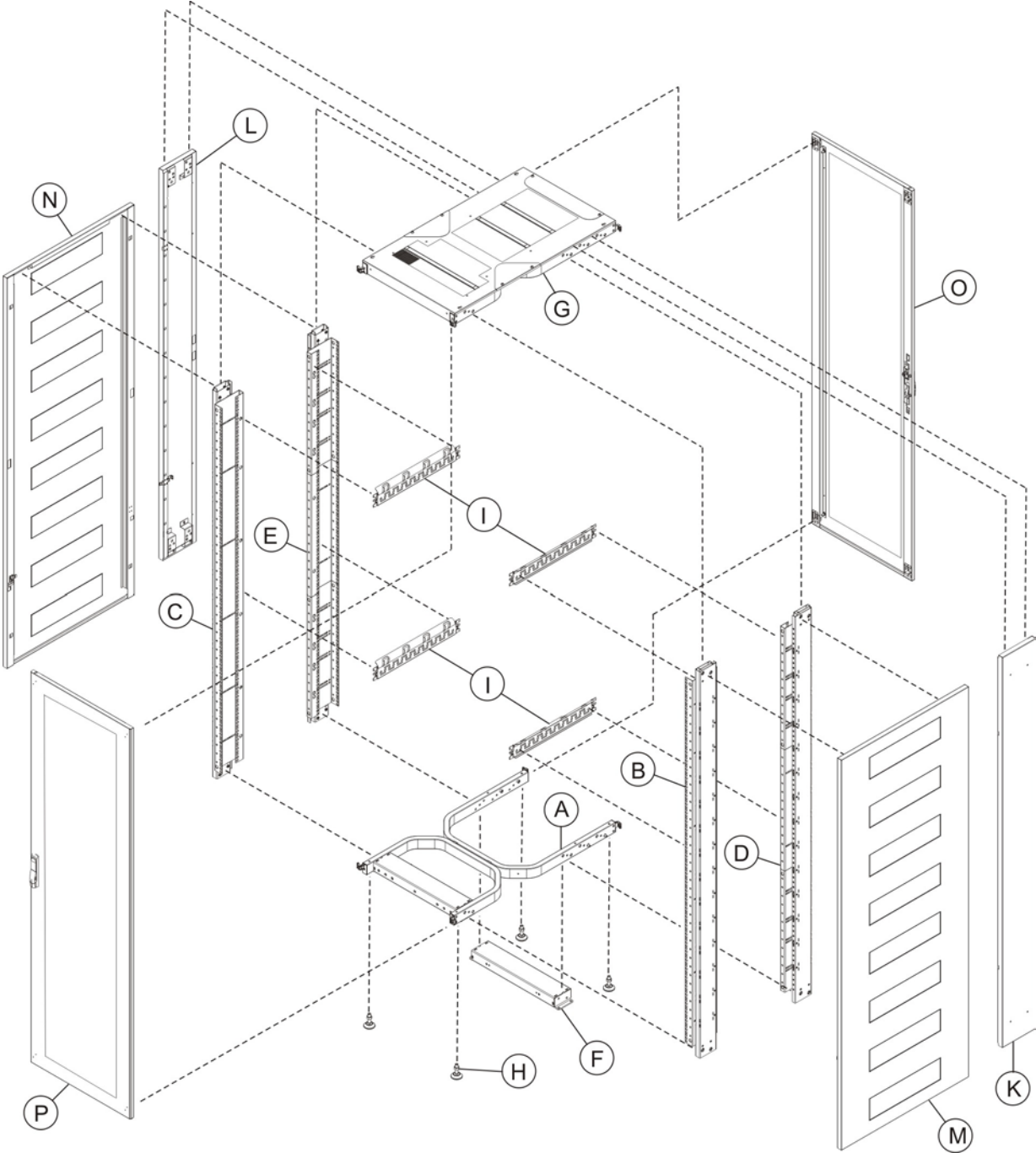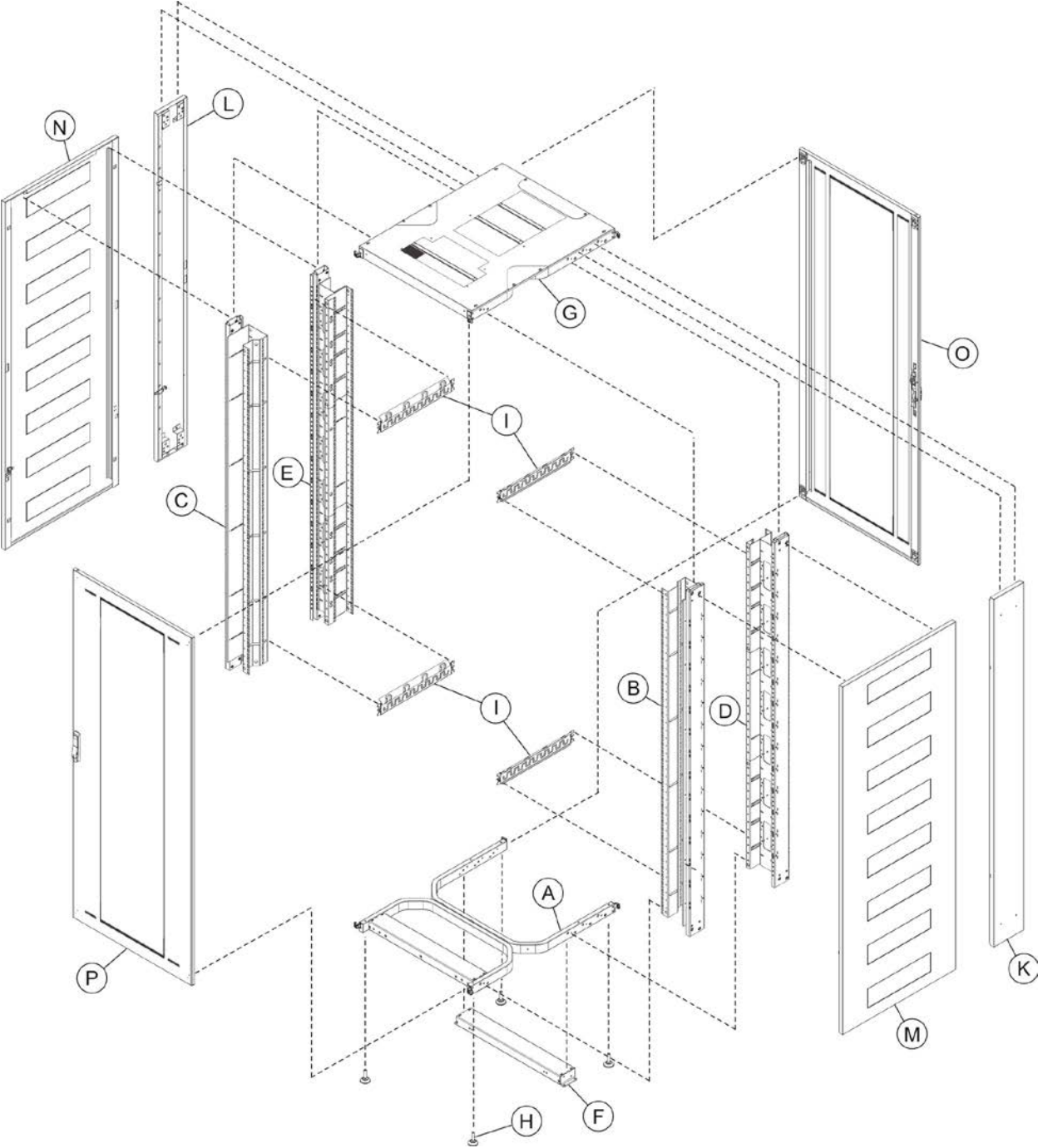
Fasteners Used on 1000 Deep Cabinets Only

M6 Hex Nut

M8 x 35mm Cap Head Screw

600mm x 1000mm Cabinet

Note: If a double rear door is ordered on cabinet, a top cross-brace member and a bottom cross-brace member (not shown above) will be provided preassembled.

800mm x 1000mm Cabinet

Note: If a double rear door is ordered on cabinet, a top cross-brace member and a bottom cross-brace member (not shown above) will be provided preassembled.

Cabinet Main Component Part Identification

Part Designation	Quantity	Description
Frame **A**	1	Bottom X-frame
Vertical **B**	1	Right-front vertical member with mounting rail
Vertical **C**	1	Left-front vertical member with mounting rail
Vertical **D**	1	Right-rear vertical member with mounting rail
Vertical **E**	1	Left-rear vertical member with mounting rail
Brace **F**	1	Cross brace for bottom X-frame
Frame **G**	1	Top X-frame with top cover
Foot **H**	4	Adjustable feet
Brace **I**	4	Side brace members (packaged separately and includes 8 locking inserts [4 right and 4 left])
Extension **K**	1	Right side extension panel (FURNISHED WITH 1000 DEEP CABINET ONLY)
Extension **L**	1	Left side extension panel (FURNISHED WITH 1000 CABINET ONLY)
Panel **M***	1	Right side panel
Panel **N***	1	Left side panel
Door **O**	1	Rear door (see note below)
Door **P**	1	Front door

Note: Components will be referred to in instructions as listed under Part Designation column above.

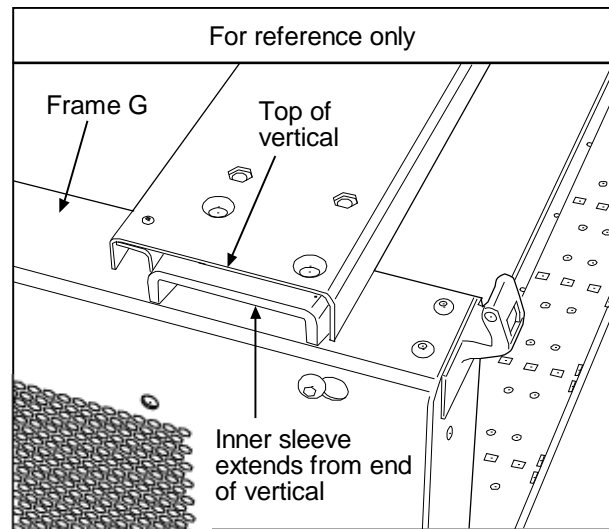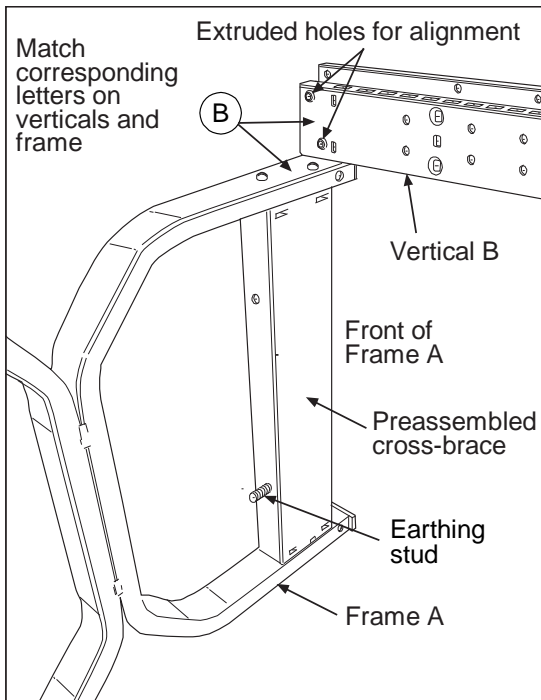*Side panels are identical for the **800mm** deep cabinet.

 Side panels for the **1000mm** deep cabinet are right-left specific. The retaining latch on the lower section of the panel should face the front of the cabinet.

Note: If a double rear door is ordered on cabinet, a top cross-brace member and a bottom cross-brace member will be provided preassembled.

Step 3 - Assemble Vertical Members to Bottom X-Frame

Parts required for this step:

- Frame **A**
- Verticals **B**, **C**, **D**, and **E**
- Brace **F**
- (8) M8 x 65 counter-sunk bolts

Match corresponding letters on verticals and frame

Extruded holes for alignment

B

Vertical B

Front of Frame A

Preassembled cross-brace

Earthing stud

Frame A

For reference only

Frame G

Top of vertical
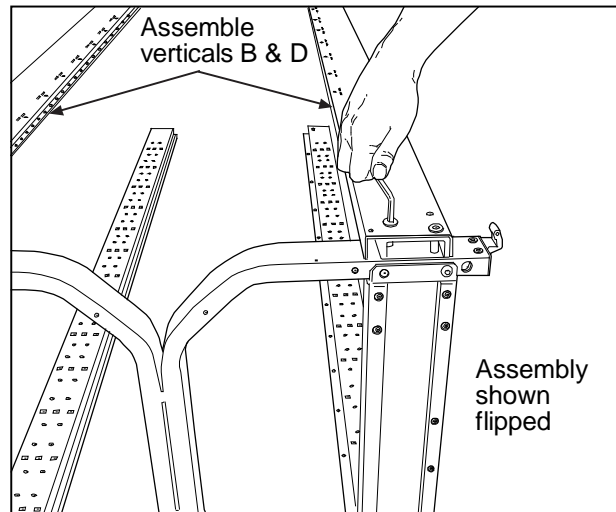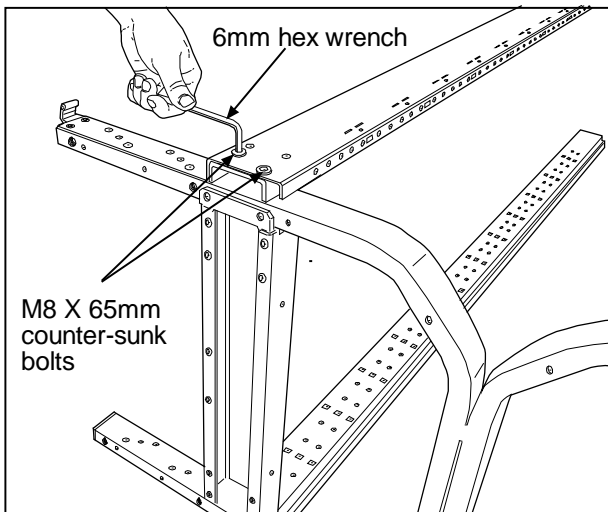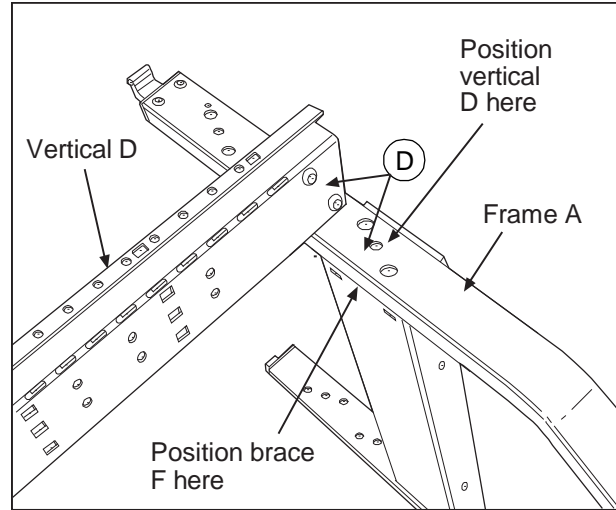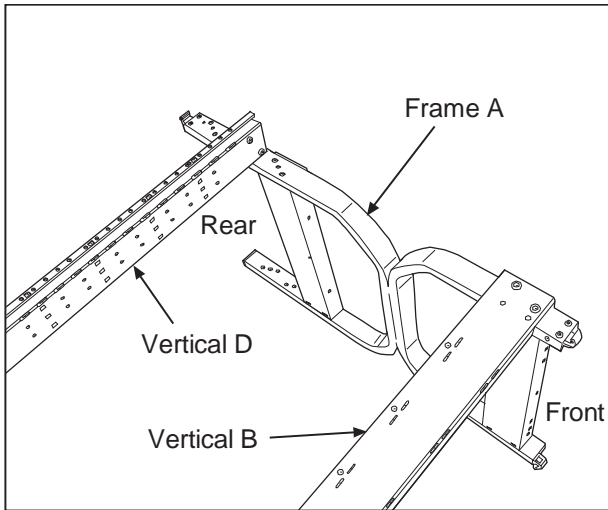
Inner sleeve extends from end of vertical

Front of Frame

1. Position frame **A** on it's side (as shown above) with pre-assembled cross brace to the front.

2. Locate vertical **B** and position as shown so that bottom edge aligns with side of frame **A**.

   Note: Match corresponding letter on frame **A** to letter on vertical to ensure proper installation. Top of verticals **B**, **C**, **D**, and **E** can be distinguished by inner sleeve extending from the end.

3. Tilt vertical **B** down on frame **A** so that two extruded holes seat into holes in frame and the surfaces with **B** labels meet.

4. Insert two M8 x 65mm counter-sunk bolts into holes on bottom of vertical **B** and through bottom of frame **A**. Using 6mm hex wrench, tighten bolts to a snug fit only (bolts will be tightened to correct torque later).

6mm hex wrench

M8 X 65mm counter-sunk bolts

Frame A

Rear

Vertical D

Vertical B

Front

Position vertical D here

Vertical D

D

Frame A

Position brace F here

6mm hex wrench

M8 X 65mm counter-sunk bolts

Assemble verticals B & D

Assembly shown flipped
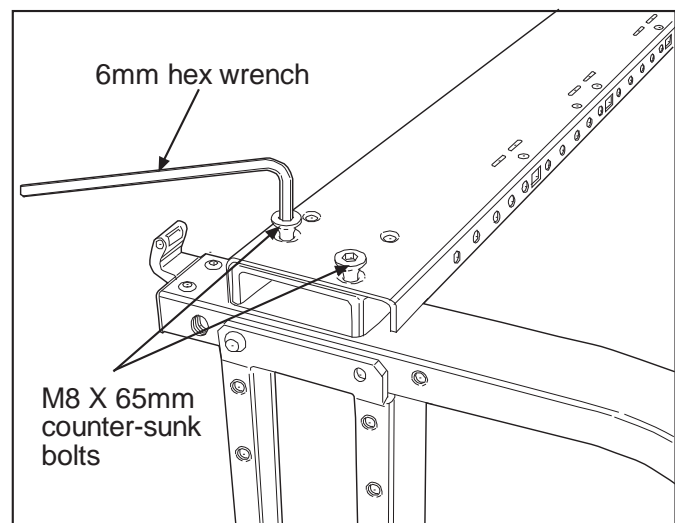
Rear of Frame

5A. For 1000mm deep cabinet, position vertical **D** at set of holes closest to middle of frame **A**.

Position brace **F** in between sides of frame **A** as shown (flanged side facing bottom) over same holes as vertical **D**.

5B. For 800mm cabinet, position vertical **D** at only set of holes in frame **A** (brace **F** is not pre-assembled to frame **A**).

6. Insert two M8 x 65mm counter-sunk bolts into holes on vertical **D** through frame **A** and into brace **F**. Tighten bolts to a snug fit only using 6mm hex wrench (bolts will be tightened to correct torque later).

7. Flip assembly over and repeat items 1-6 to assemble verticals **C** and **E** to opposite side of frame **A**. Match corresponding letters on frame **A** to verticals to ensure proper installation.
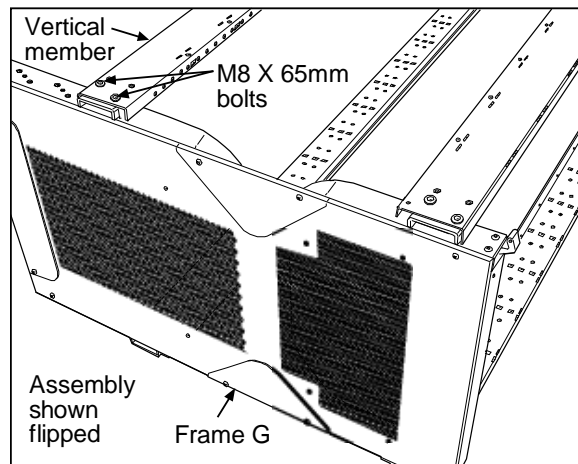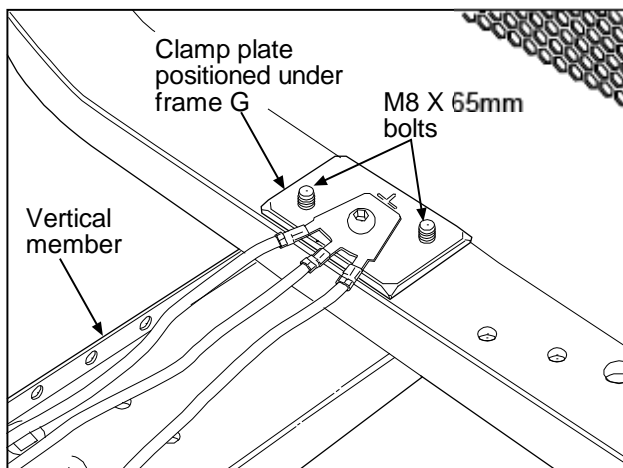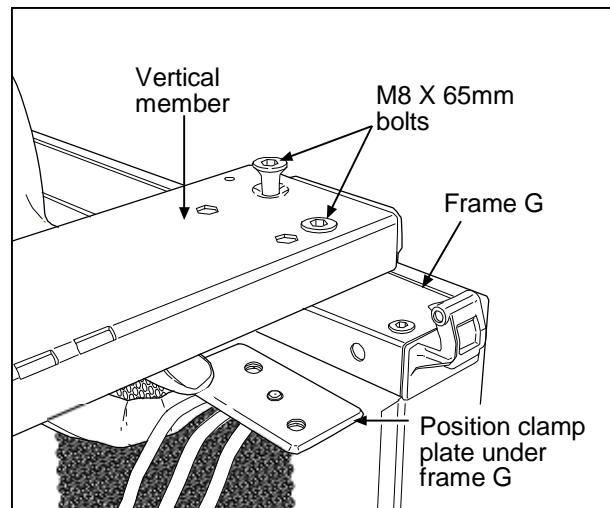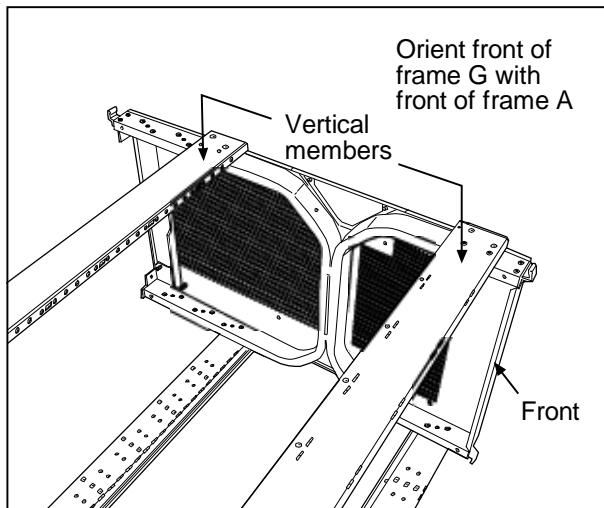
⚠️ IMPORTANT

It is highly recommended for a second person to hold the tops of the two vertical members parallel to the floor until frame **G** is positioned in next step.

Step 4 - Assemble Top X-Frame to Vertical Members

Parts required for this step:

- Frame **G**
- (4) Clamp plates with earthing wire harness
- (8) M8 x 65 counter-sunk bolts

1. Orient front of frame **G** with front of frame **A** and position between four verticals as shown.

2. Insert two M8 x 65mm counter sunk bolts into a vertical.

3. Position a clamp plate on underside of frame **G** aligning holes on clamp plate with ends of M8 x 65 bolts.

4. Tighten two bolts with the 6mm hex wrench to a snug fit only, which also tightens clamp plate to underside of frame **G** (bolts will be tightened to correct torque later).

5. Repeat procedure for other vertical on this side.

6. Carefully flip assembly and repeat items 1-5 to assemble other two verticals to opposite side of frame **G**.

Step 5 – Install Adjustable Feet on Bottom X-Frame

Parts required for this step:

- (4) Adjustable feet with locking hex nuts
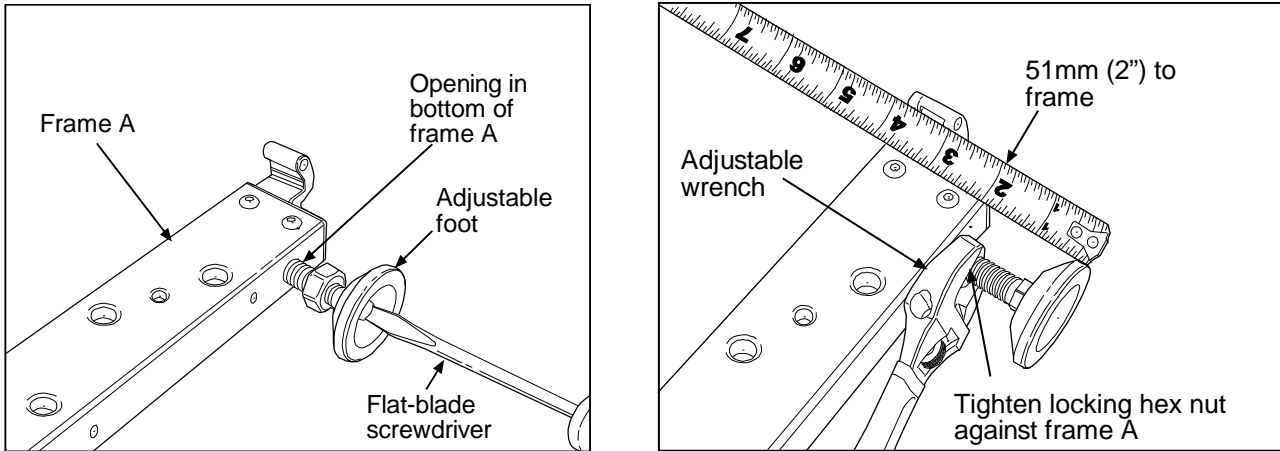
1. With cabinet still on its side, thread adjustable feet into openings in frame **A**. Use flat-blade screwdriver (as shown) or use adjustable wrench on bottom hex nut to screw feet into frame A.

2. Screw each foot to within 51mm (2 inches) from bottom of frame and tighten locking hex nuts against frame to a snug fit. Do not fully tighten feet locking nuts until cabinet has been correctly positioned in its final point of installation.
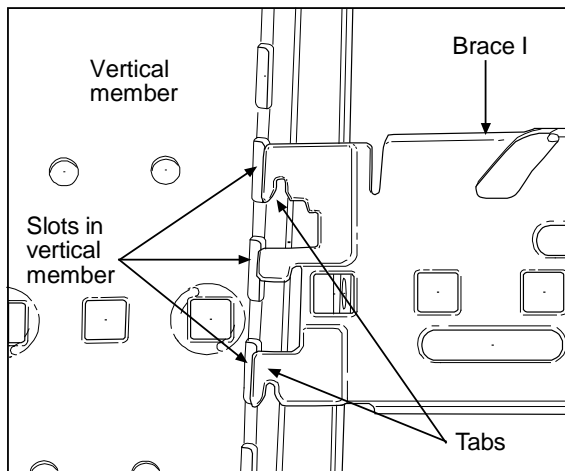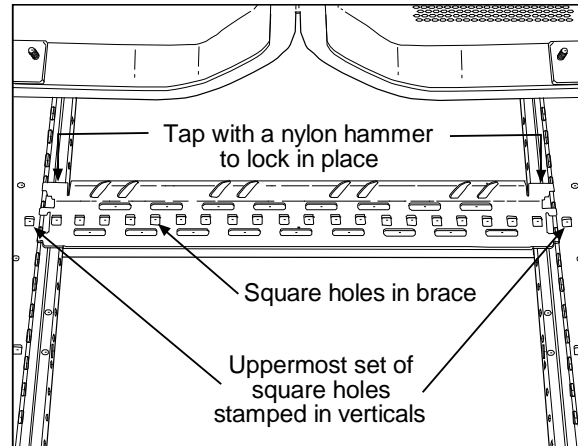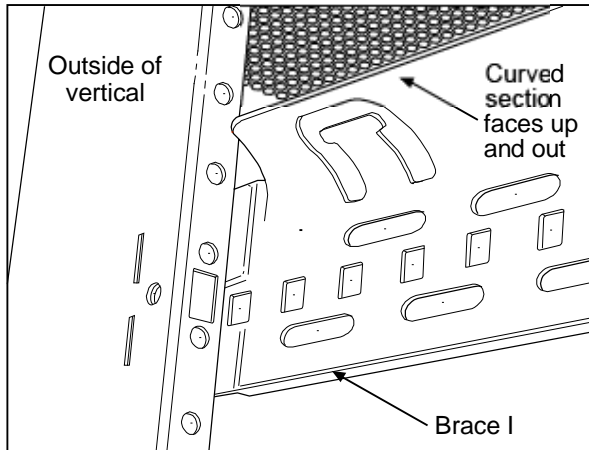
Step 6 – Secure/Torque Bolts in Vertical Members and Level Adjustable Feet

No Parts required
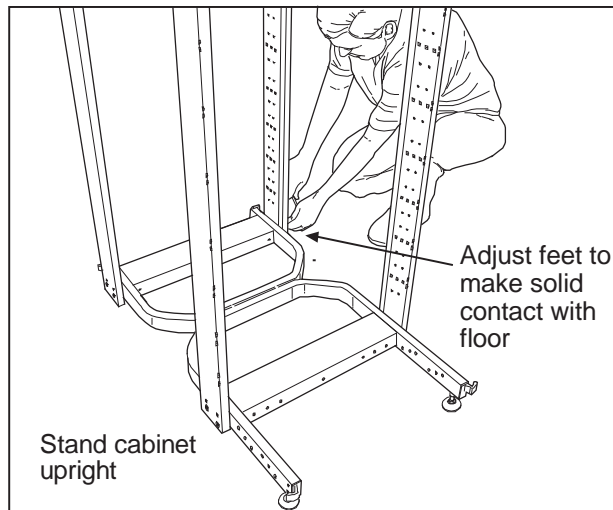
1. With the cabinet still on it's side, use a torque wrench to tighten (16) counter-sunk bolts in four vertical members to 45n/m (33 ft/lbs).

2. Stand cabinet upright and adjust feet as necessary to be sure each is making solid contact with floor.

3. After final installation, hold each foot in place using hex nut on top of foot, then tighten locking hex nut against bottom of frame **A** with adjustable or open-end wrench.

Step 7 – Install Side Brace Members

Parts required for this step:

- (4) Brace **I** members
- (8) Brace member locking inserts

Note: Tabs on brace **I** members will slide into slots in verticals and are installed in upper and lower positions on both sides of the cabinet.

⚠️ IMPORTANT

Front mounting rails on verticals **B** and **C** should be loosened and slid to the front as far as possible to allow installation of the locking inserts in the side brace members. Rear mounting rails do not require any adjustments to install locking inserts.

Section Through 1000mm Deep Cabinet
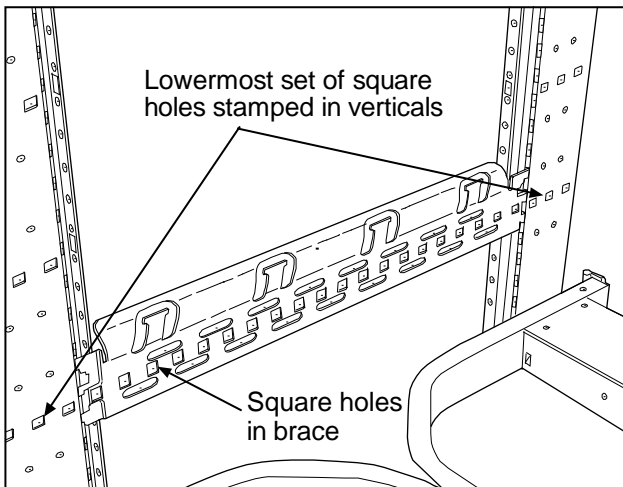
Upper Side Brace Members

Do not strike curved edge with nylon hammer.

Strike only flat end near tabs.

1. Select a brace **I** and orient it between front and rear verticals so that curved side faces up and outward.

2. Position upper brace **I** so that the row of square holes stamped into brace **I** align with uppermost set of square holes stamped into front and rear verticals.

3. Insert tabs on ends of brace **I** into corresponding slots in front and rear verticals.

4. Tap top of side member with a nylon hammer to seat tabs into slots. **Do not strike curved edge with nylon hammer. Strike only flat end near tabs.**

5. Repeat for upper brace **I** member on opposite side.

Lower Side Brace Members

1. Repeat items 1 through 5 under **Upper Side Brace Members** to install lower side braces**.**

Install Locking Inserts
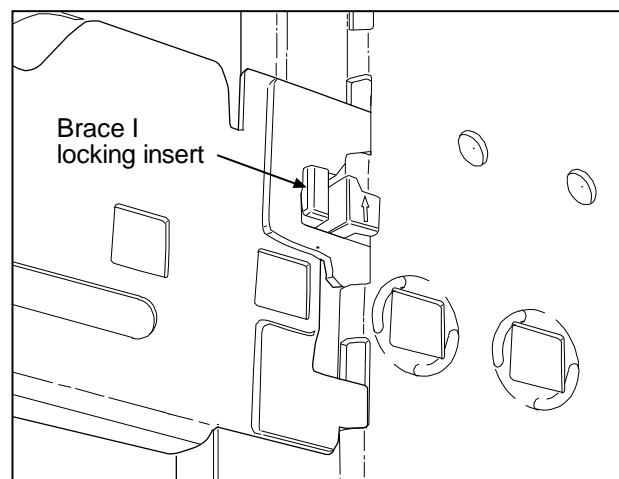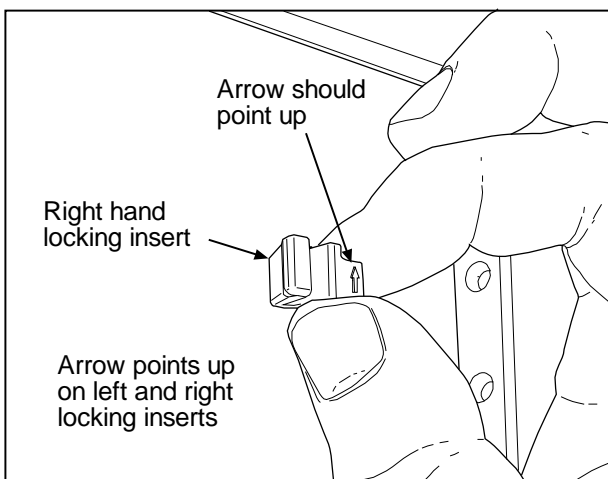
1. Secure each brace **I** member by inserting one locking insert into the opening on each end of brace **I (**2 per brace).

    Note: Locking inserts are left-hand and right-hand and have an arrow on the side that points up for correct insertion. The side of locking inserts with the arrow faces the inside of the frame.

Step 8 – Install Side Extension Panels with Mounting Brackets (1000 mm Deep Cabinet Only)

For assembly of 800 mm deep cabinets, proceed to Step 9.

Parts required for this step:

- (8) M8 x 35 cap-head screws
- Extension **K** with brackets (right side)
- Extension **L** with brackets (left side)
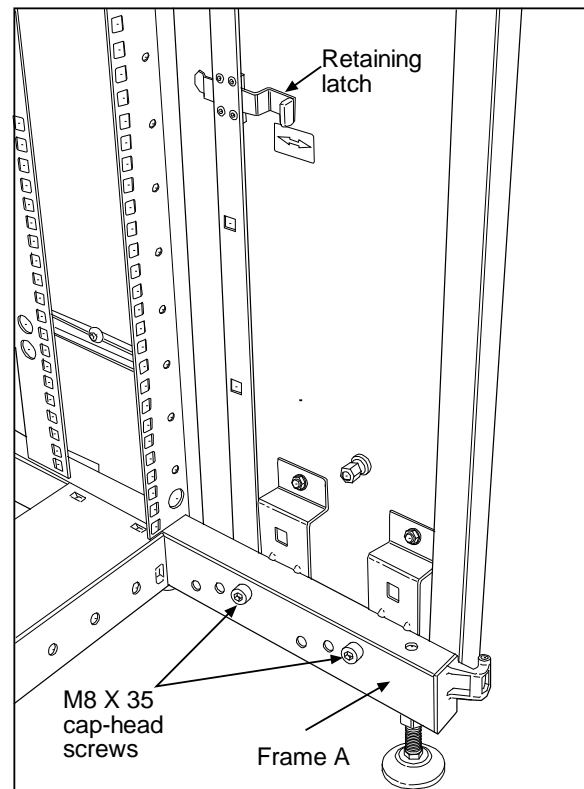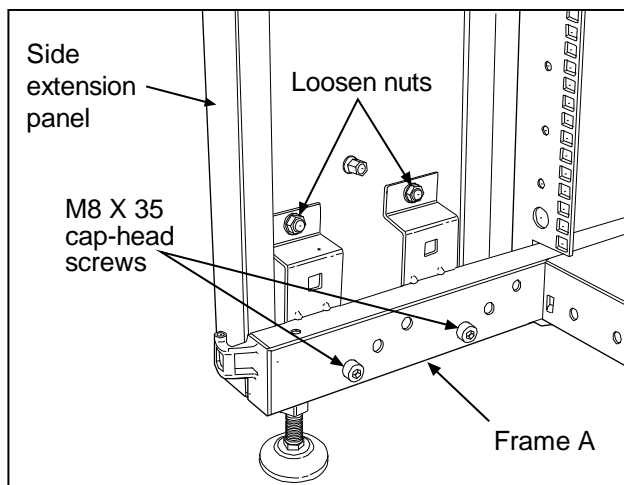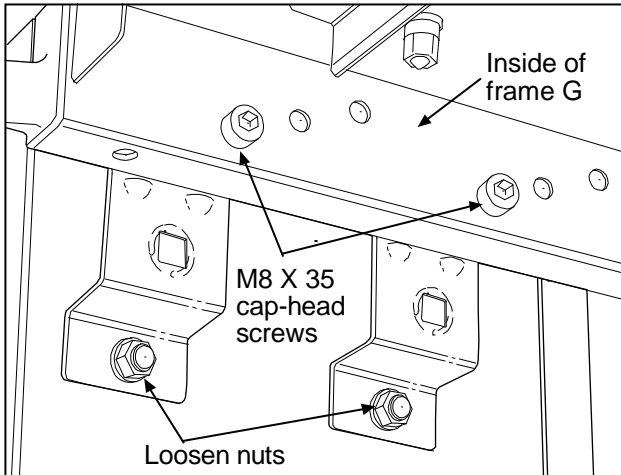
1. Loosen four M6 nuts securing four brackets to extension panel (two top and two bottom).
2. Position one side extension panel so that holes in brackets align with holes in side of frame **G**.
3. Insert two M8 x 35 cap head screws through holes in frame **G** and tighten into brackets attached to extension panel.
   Note: The mounting brackets **J** have notches that fit against the bottom of frame **G** and the top of frame **A**.
4. Insert two cap head screws through holes in frame **A** and tighten into bracket attached to extension panel.
5. Tighten M6 nuts securing brackets to extension panel.
6. Repeat procedure for other extension panel.

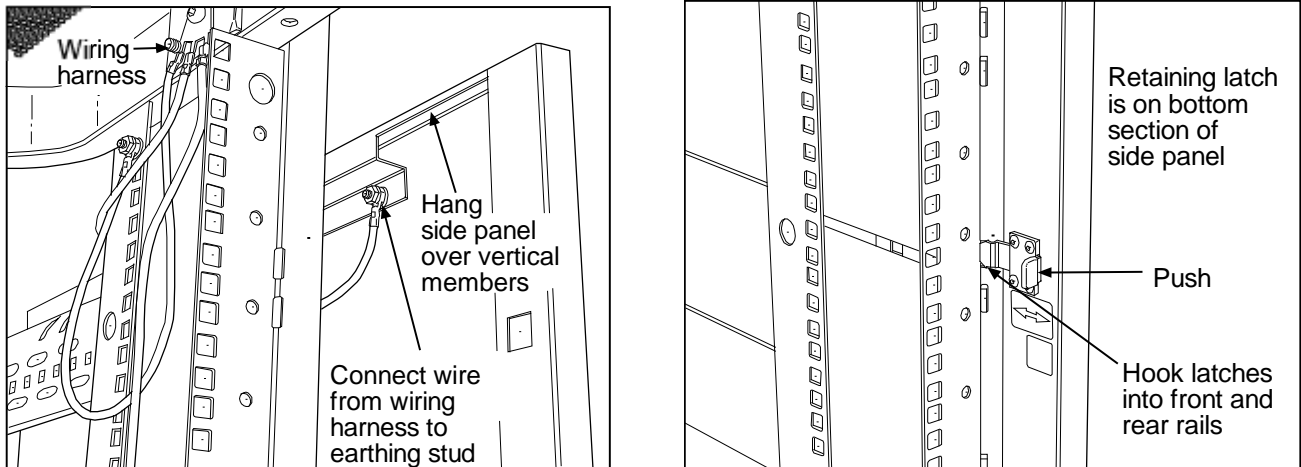## Step 9 – Connect Earthing Wire Harnesses and Install Side Panels

Parts required for this step:

- For 800 mm deep cabinet:
  - Side panels are identical and can be installed on right side or left side
- For 1000 mm deep cabinet (latch on lower section at front of cabinet):
  - Panel **M** (right side)
  - Panel **N** (left side)
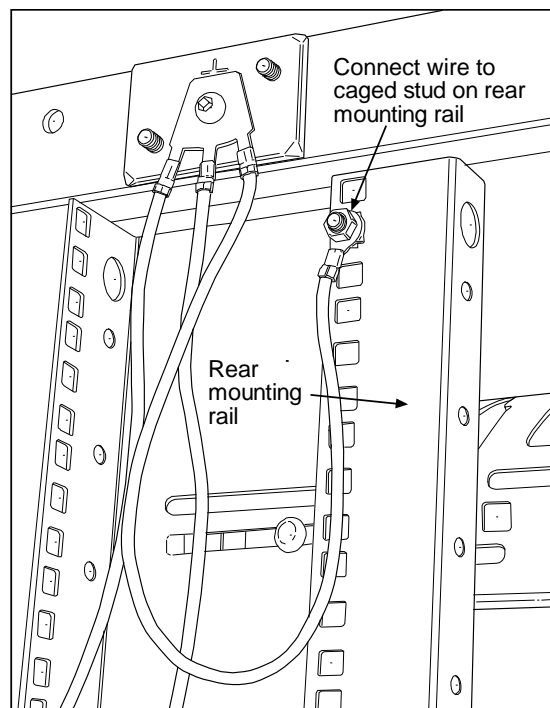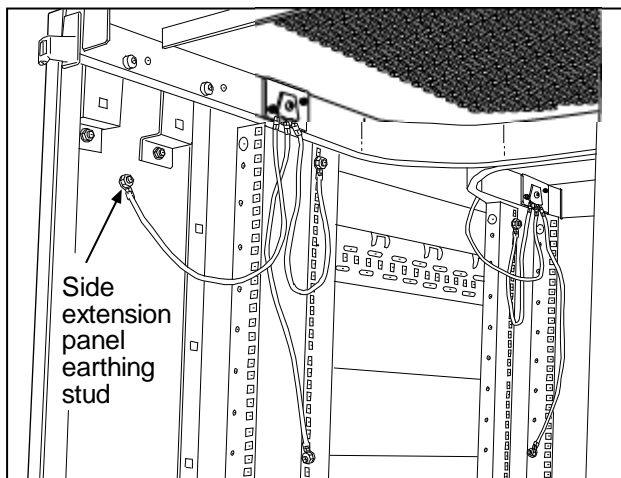
1. Connect one leg of the
2. two rear earthing wire harnesses at the following locations:

    - Caged stud in upper section of each rear mounting rail
    - Earthing stud in upper section of each side extension panel
    - Rear door on hinged side (connect this leg after door installation in step 10). If double doors are installed, a earthing connection should be made to both doors.

    Note: Remove earthing stud protective covers prior to connecting wires.

3. Connect one leg of the two front earthing wire harnesses at the following locations:

   - Earthing stud in upper corner of each side panel per item 3 below

   - Caged earthing stud in upper section of each front mounting rail

   - Earthing stud in top cover (on opposite side of door hinge)

   - Front door on hinged side (connect this leg after door installation in step 10).

   Note: Remove earthing stud protective covers prior to connecting wires.

4. Before completely installing side panel, position panel within a few inches from cabinet and connect one leg from front wire harness to earthing stud located in upper corner of side panel.

   Notes:

   - On the 800 mm deep cabinet, both side panels are identical and may be installed on left or right side.

   - On the 1000 mm deep cabinet, the two side panels are right side and left-side specific (panel **M** and panel **N**). Latch should be positioned on lower section at front of cabinet.

4. Install side panel on frame by hanging it over top of vertical members, and sliding retaining latch(s) located on lower section of panel to locked position as shown.

5. Repeat procedure to install other side panel.

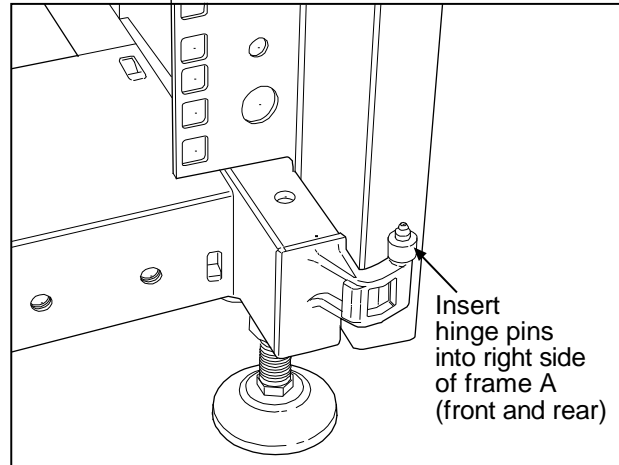## Step 10 – Install Cabinet Doors and Complete Earthing Wire Connections
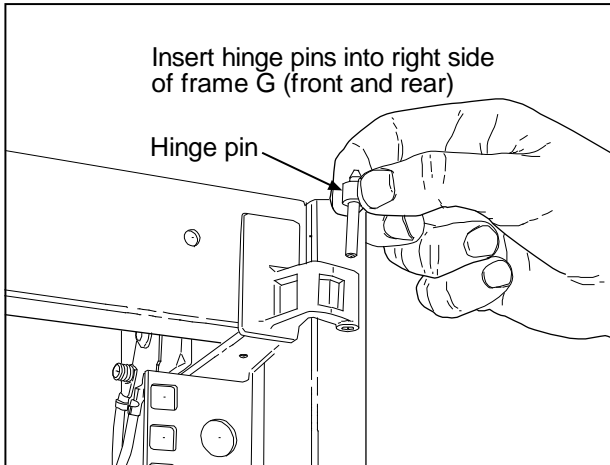
Parts required for this step:

For single rear door assembly:

- Door **P** (front)
- Door **O** (rear)
- (4) Hinge pins

For double rear door assembly:

- Door **P** (front)
- (2) Door **O** (rear)
- (6) Hinge pins

Insert hinge pins into right side of frame G (front and rear)

Hinge pin

Insert hinge pins into right side of frame A (front and rear)

1. For single rear door assembly, insert four hinge pins into holes on right side of frame **G** and frame **A** ends, on front and rear of cabinet as shown.

2. For double rear door assembly, insert six hinge pins into holes on right side of frame **G** and frame **A** on front and on both sides of frame **G** and frame **A** on rear.

Hinge pins fit into openings in corners of door

Hinge pin

Wiring harness
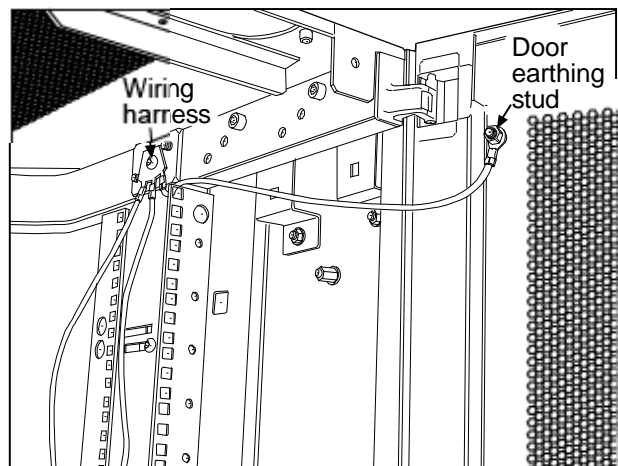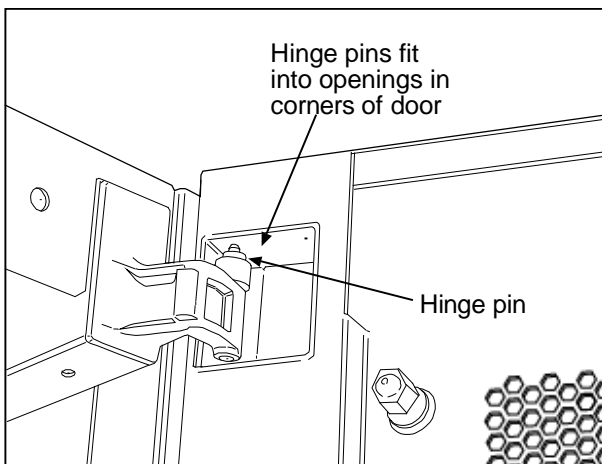
Door earthing stud

3. Position door so that hinge pins (upper and lower) fit into openings in corners of door and lower the door to engage hinge pins.

4. Once door is hung, connect one leg of earthing wire harness to earthing stud provided in upper corner of door. Remove earthing stud protective cover prior to connecting. If double doors are installed, a earthing connection should be made to both doors.

Rotate handle 90° clockwise to close door
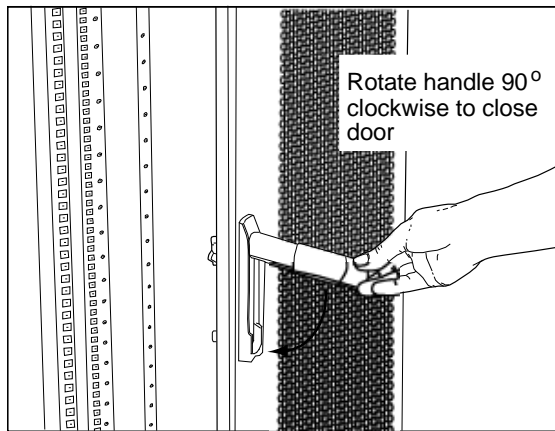
5. Pull door handle out and rotate counter-clockwise 90° to release latch and then close door. Turn door handle clockwise 90° to engage door latch and then push door handle back into door.

6. Repeat the procedure for the other door(s).

⚠️ **IMPORTANT**:

The door will only swing open 120°. Attempting to open it further will cause damage.

Step 11 – Connect Cabinet to Common Building Earthing

The SC Server Cabinet should be connected to the common building earthing.

Front cross brace

Attach building earthing wire to cabinet stud
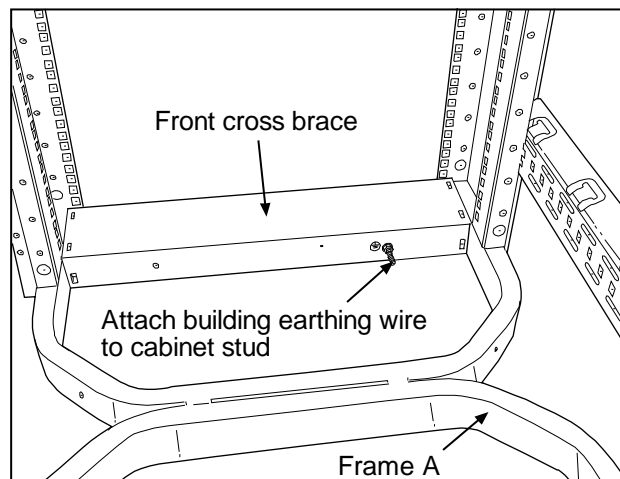
Frame A

1. Remove protective cover from earthing stud located on pre-assembled cross brace on frame **A**.

2. Connect a common building earthing wire to cabinet stud. Follow all applicable electrical codes when making earthing connection.