ELEVATE
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ELEVATE INSTALLATION GUIDE

Fibre Duct

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General

The Elevate Fibre Duct System is a modular, scalable ducting solution engineered to protect and manage fibre optic cables in data centres and telecommunications environments. Designed for high-density, mission-critical applications, the system supports seamless routing between active equipment, patch panels, and fibre distribution frames. All ducting components, including straight sections, elbows, tees and drop-offs, are fabricated from LSZH flame-retardant materials suitable for internal use, ensuring superior safety and performance in critical environments.

Before beginning installation, ensure all components are compatible and correctly dimensioned for the intended route and capacity. Modular snap-fit joints and adjustable mounting brackets support rapid deployment while maintaining fibre cable bend-radius protection throughout the path.

Safety Information

Eye Protection: Always wear safety glasses when handling and cutting duct sections or when working at elevated positions in overhead cable routes.

Working at Height: When installing in overhead trays or ladder racking, ensure proper fall protection and platform access are used according to site safety regulations.

Sharp Edges: Use gloves when cutting ducting to avoid injury from sharp plastic edges. Deburr any cut surfaces before assembly.

Secure Supports: Ensure all duct support brackets, ceiling hangers, and wall mounts are correctly anchored before placing fibre. Do not exceed specified load ratings.

Laser Hazard: Never look directly into fibre ends. Disconnect any active optical sources before routing or relocating fibres within the duct.

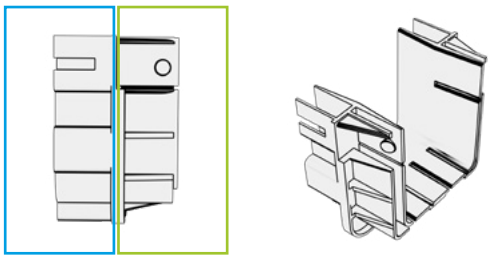
Waste Management: Dispose of all offcuts, packaging, and cable tie remnants in accordance with site waste protocols. Never leave fibre shards or plastic fragments in open cable routes.

FIBRE DUCT ASSEMBLY

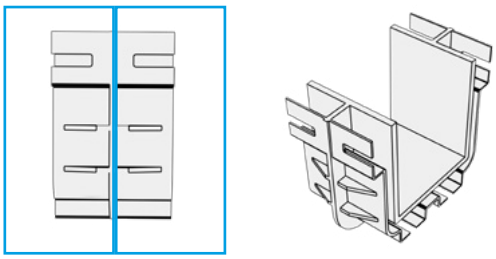
1. Sections Assembly

1.1: Connectors Compatibility

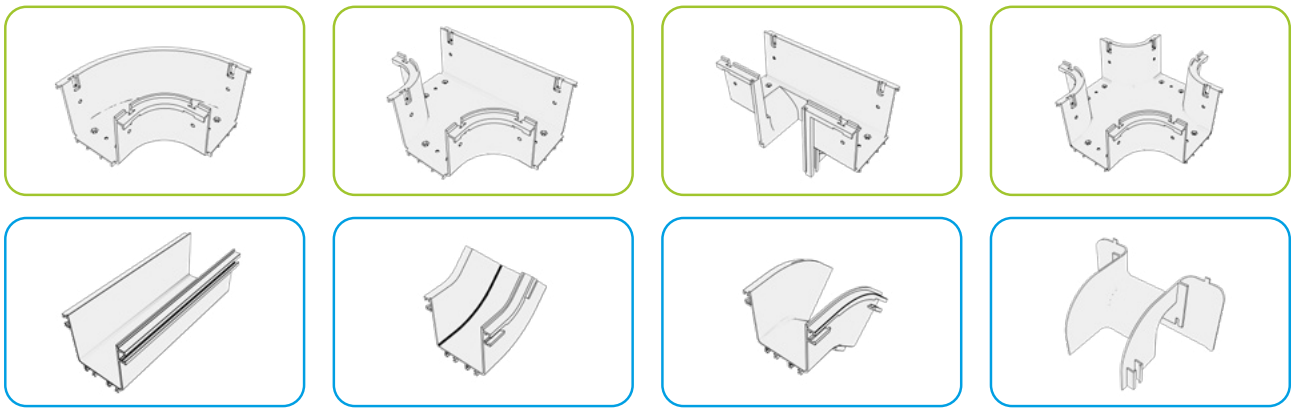
The following diagrams illustrate how Elevate Fibre Duct connectors are compatible across clip-on and X-Bolt mounting types, including how each type can be joined securely to the other.



Connectors supplied with junctions such as bends, tees and cross sections come with X-Bolts included.



Connectors ordered separately for joining straight lengths are supplied with X-Bolts.

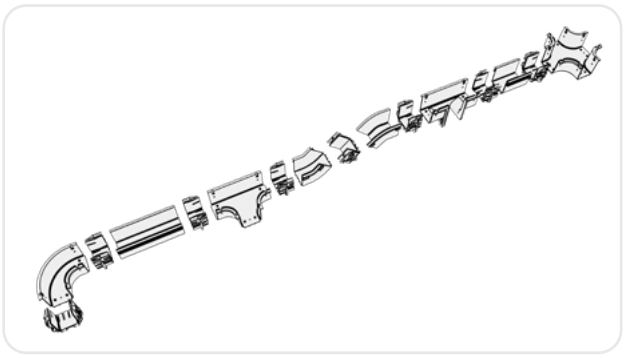


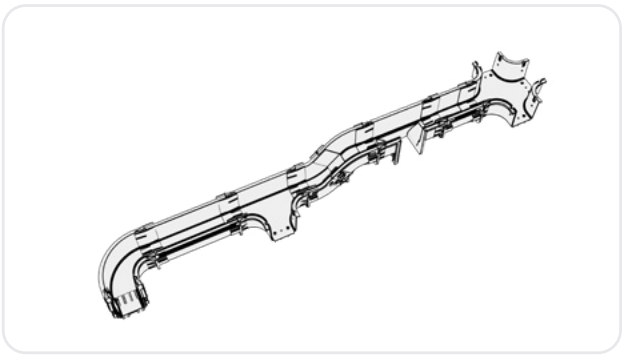
mount type: **Clip on**

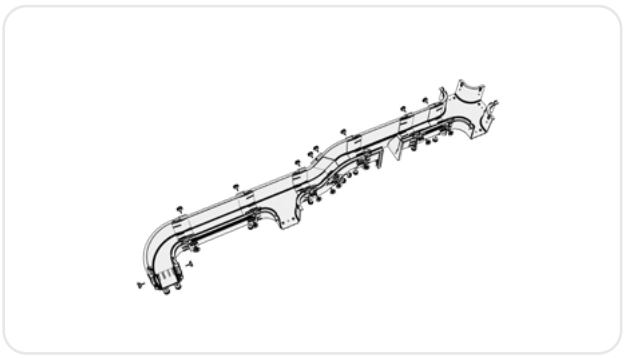
mount type: **X-Bolt**

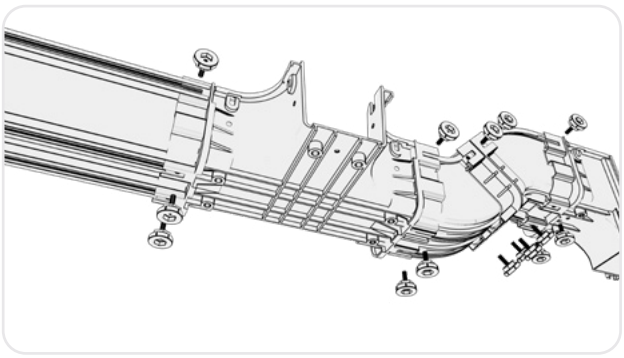
1.2: Parts Assembly

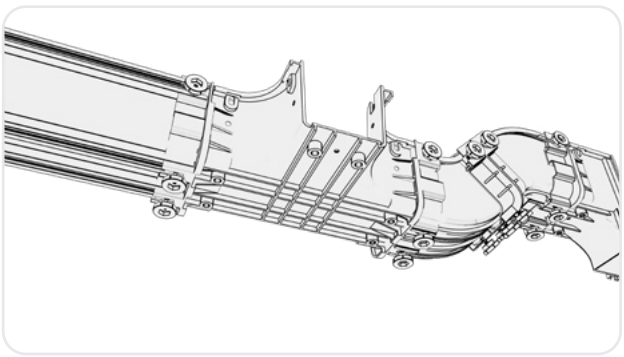
Connect duct sections using the appropriate connectors. Secure each connection with X-Bolts where required, ensuring all fittings are fully tightened and properly aligned.







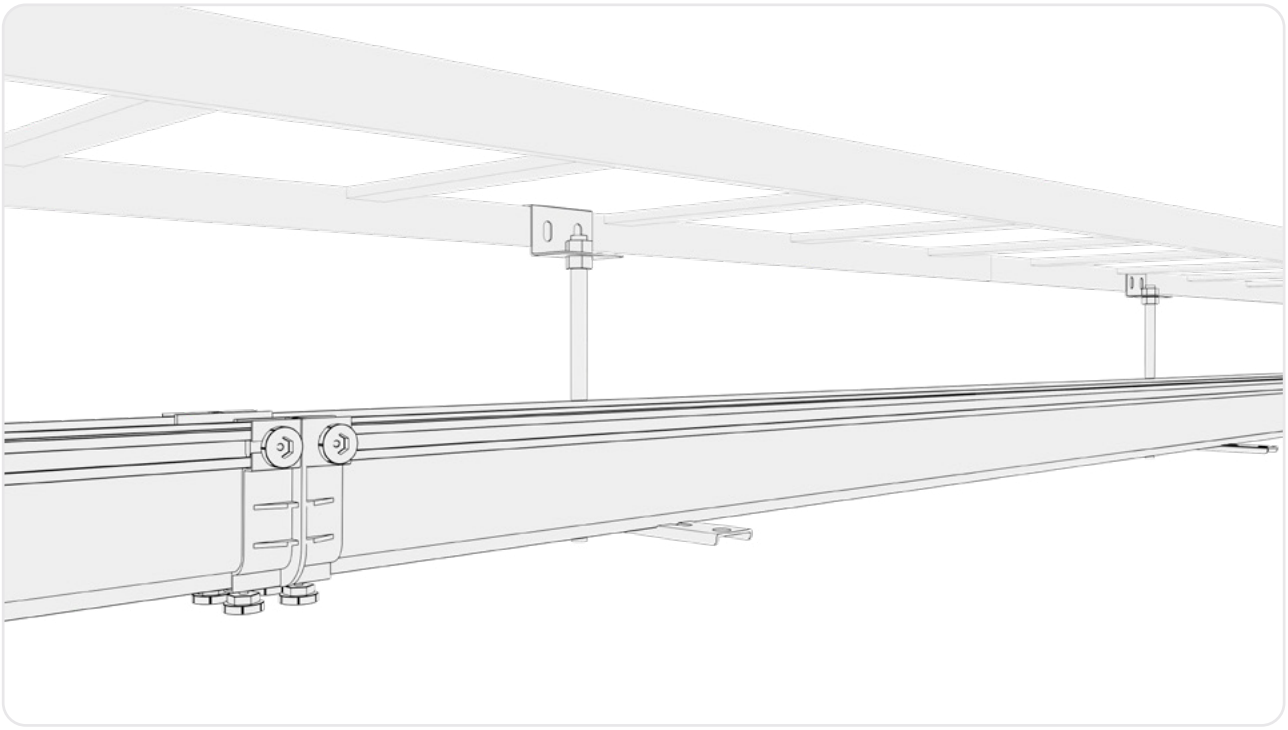


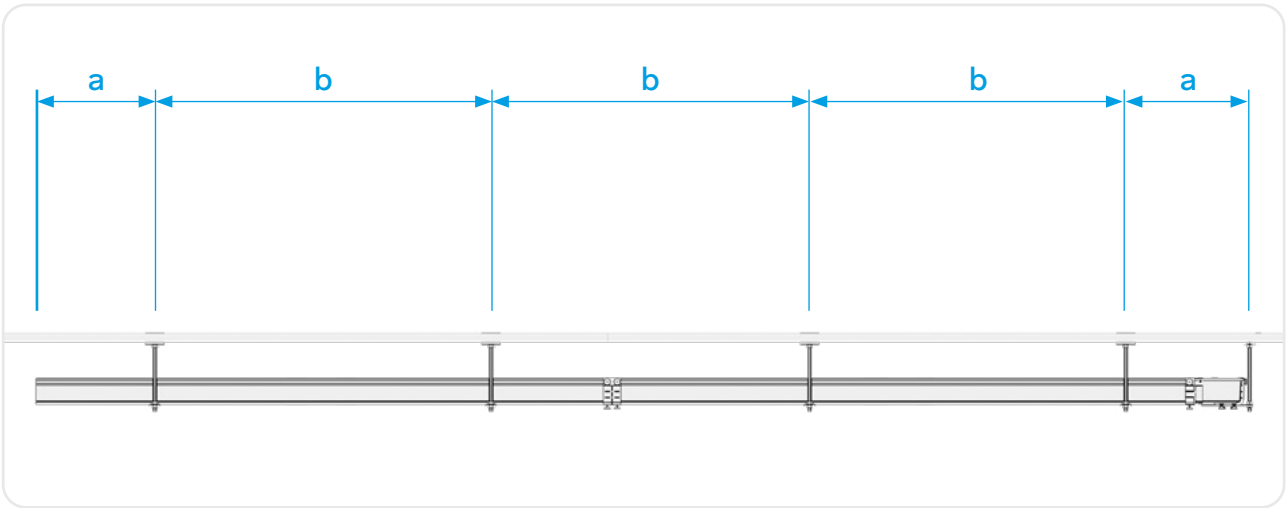


2. Setup Methods

2.1: Overhead (Suspended)

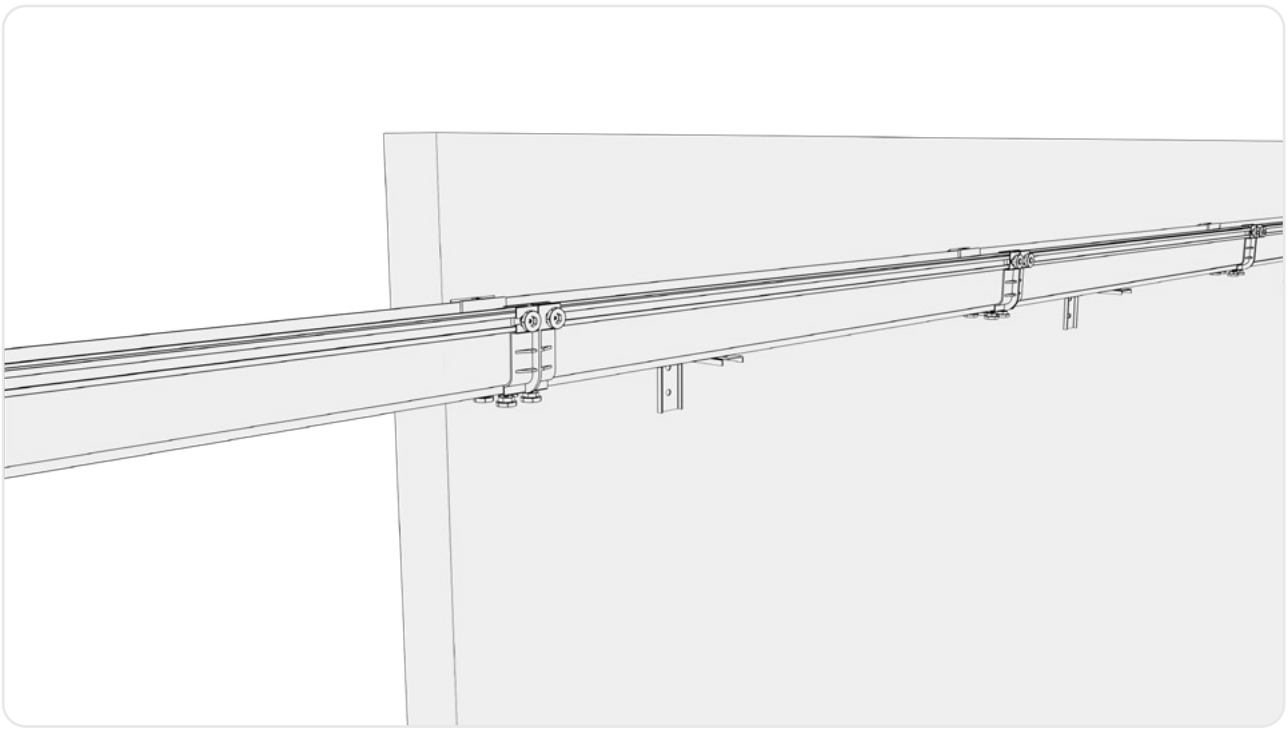
While planning the path of the fibre duct, mounting brackets or hanging bars should be positioned 500mm (**a**) from each end of a 2000mm straight duct section, creating a 1000mm (**b**) span between supports. This ensures structural integrity and prevents sagging, in line with standard installation practice.

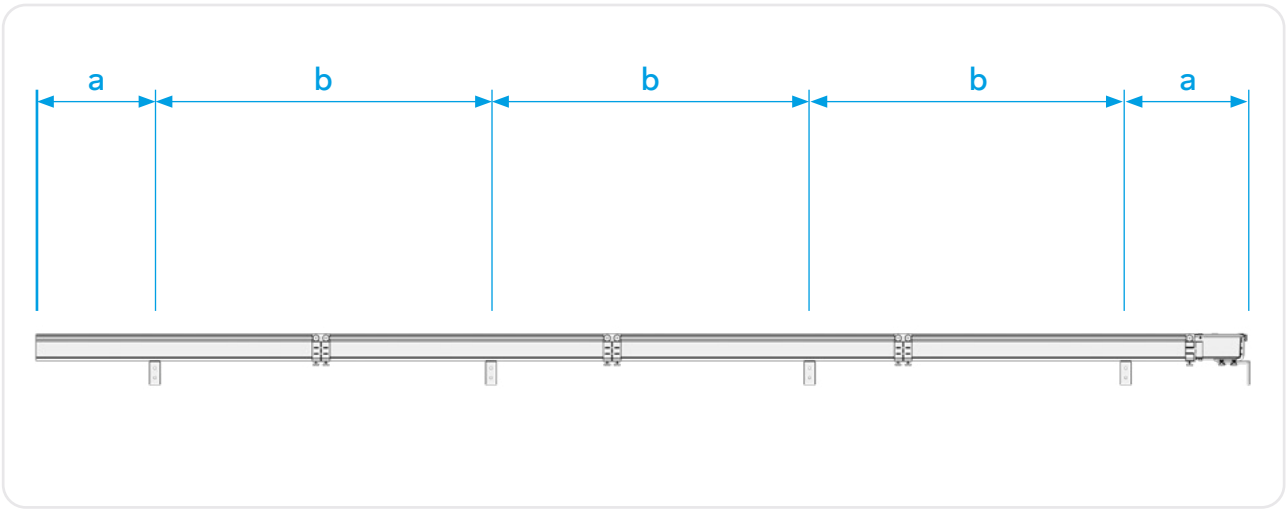




2.2: On-Wall

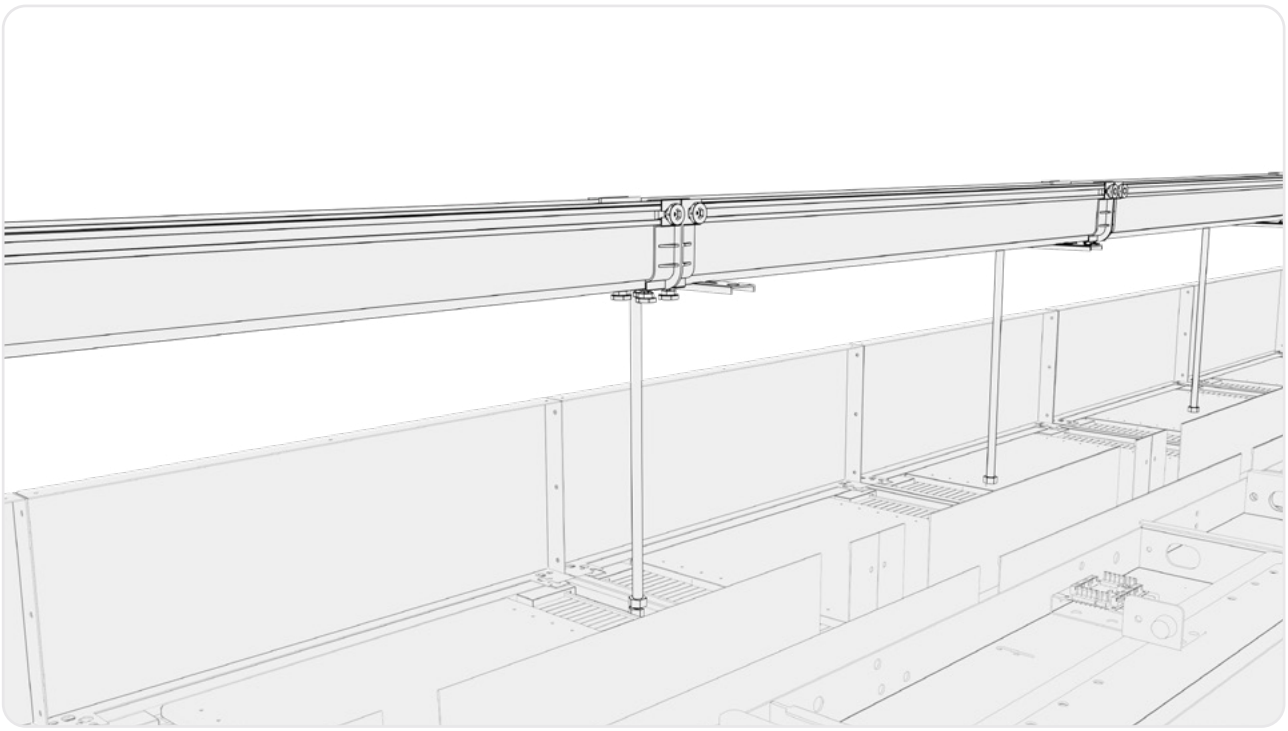
While planning the path of the fibre duct, spacing of the L-brackets should be typically every 1000mm (**b**). This ensures even support and prevents sagging. The first and last stands should be positioned 500mm (**a**) from each end of the duct section.

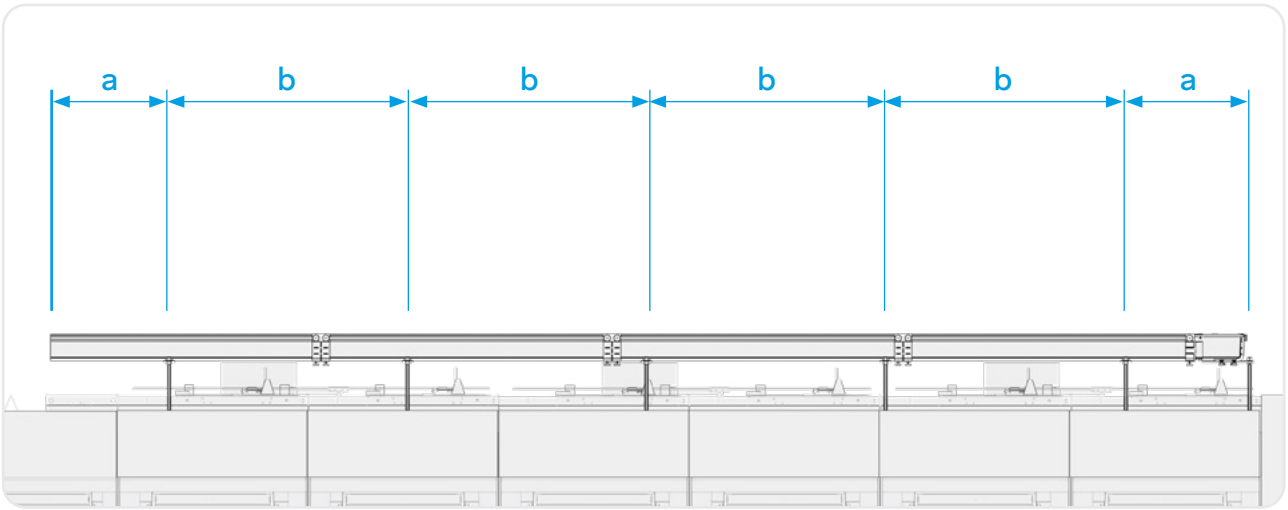




2.3: Rack-Top

While planning the path of the fibre duct, spacing of the brackets should be typically every 1000mm (**b**).This ensures even support and prevents sagging. The first and last stands should be positioned 500mm (**a**) from each end of the duct section.



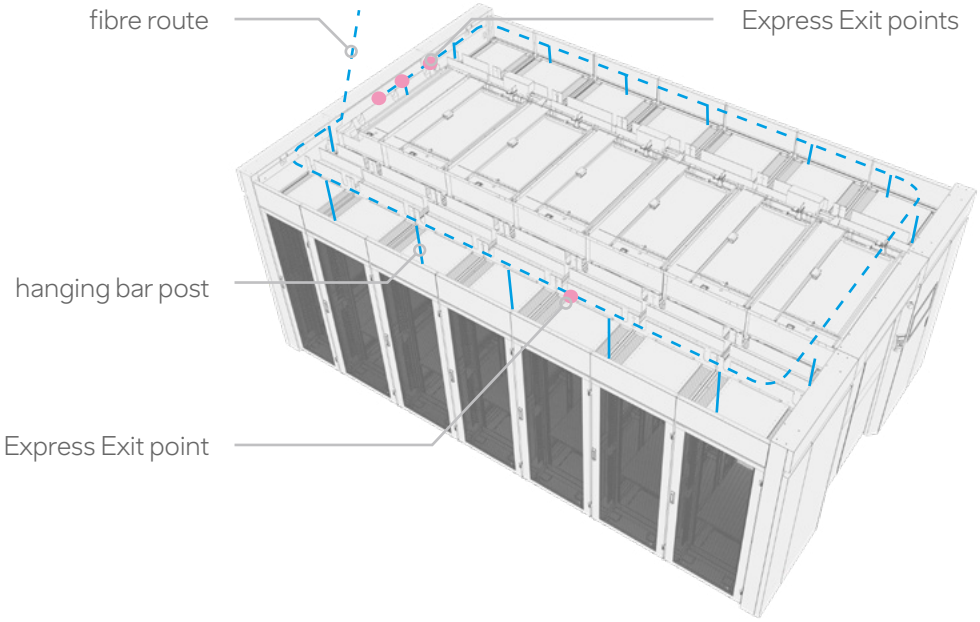


3. Installation Steps

The installation steps are demonstrated using the rack-top setup method; however, the same procedures apply across all installation types, with only minor differences in how the duct is mounted to L-brackets, hanging bars, or stand-off supports.

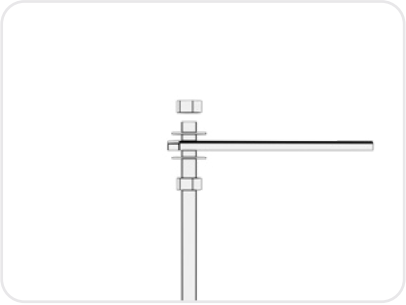
3.1: Layout Planning

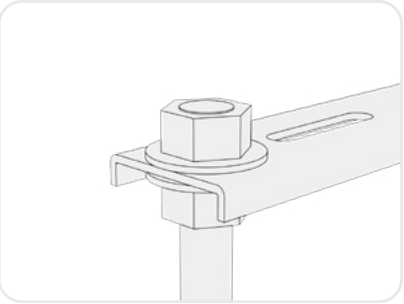
Determine the route across the top of the racks. Ensure the duct will be level and aligned with adjacent sections. Identify the positions of the elevated rack top stands.



3.3: Hanging Bar Assembly

Slide a washer and nut onto each threaded rod. Place the hanging bar onto the rods, then add another washer and nut on top. Adjust the height and level the bar using a spirit level. Tighten the nuts to lock the bar in place.

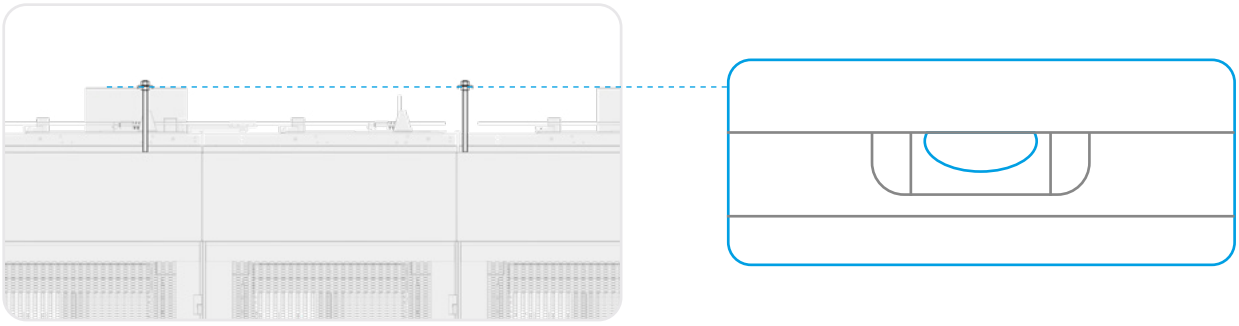




3.3: Hanging Bars Installation

Place the stands as advice in Setup Methods (p7-p9 accordingly).

Attach the stands to the top of the racks using appropriate hardware. Ensure they are level and firmly fixed.



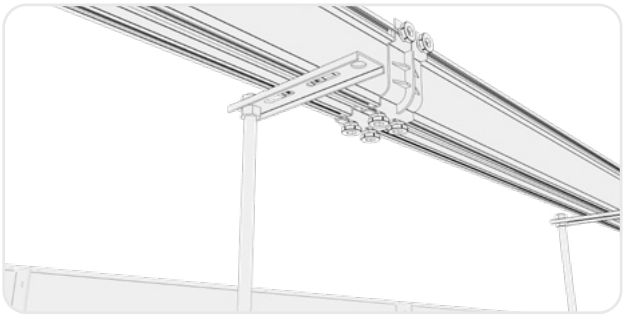
3.4: Prepare the Fibre Duct

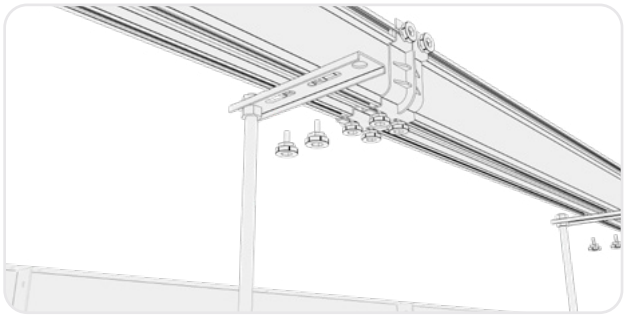
Clean the ends and ensure the duct section is the correct length. If needed, connect multiple duct sections using couplers before mounting (see Chapter: Fibre Duct Assembly - p4, for details).

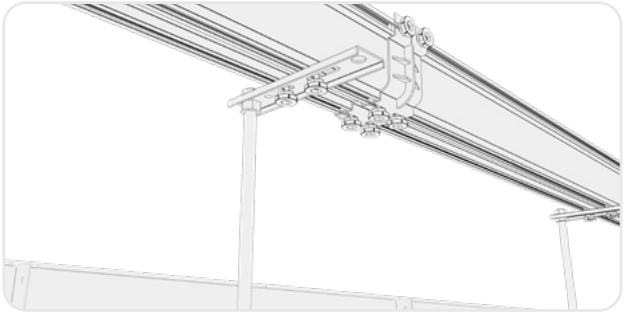
3.5: Fibre Duct Sections Mounting

Use X-Bolts to fasten the duct to the hanging bar through pre-drilled slots or holes. Tighten by hand until secure.

(advice: don't tighten the X-Bolt too hard so sections can be still aligned if small adjustments are needed).







4. Installation Finish

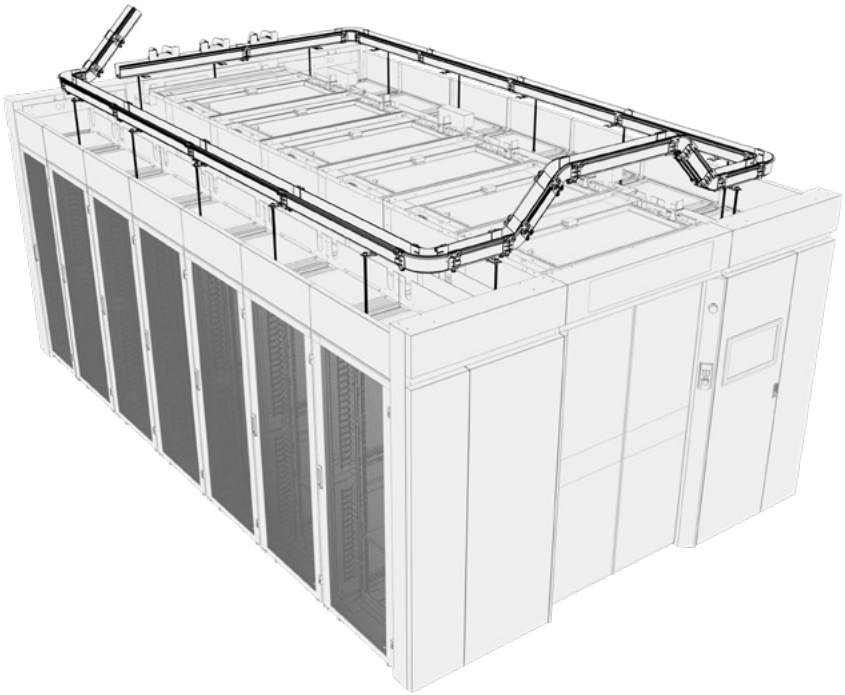
4.1: Final Inspection

4.1.1: Verify that all fasteners are fully tightened and the duct is securely fixed.

4.1.2: Ensure the duct is level and aligned with adjacent sections.

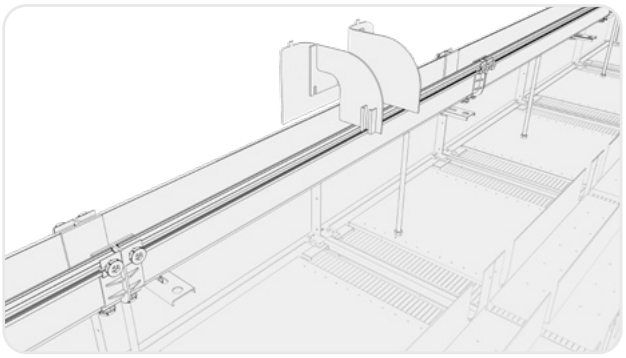
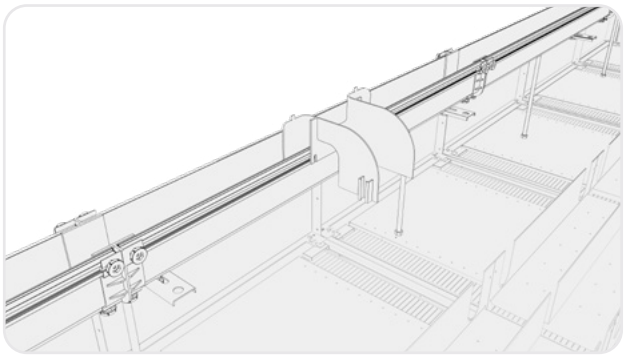
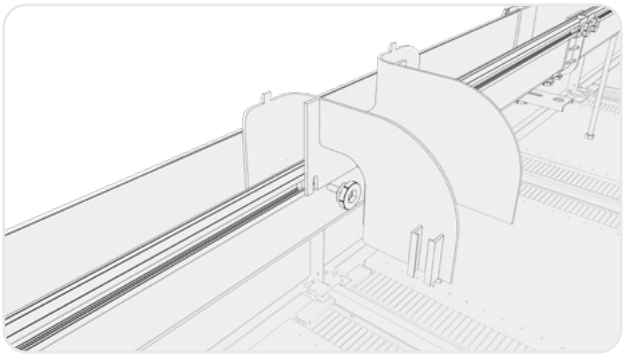
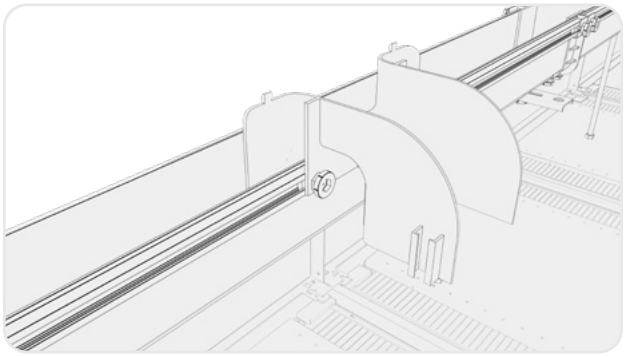
4.1.3: Confirm that all X-Bolts are fully tightened to secure the fibre duct to the hanging bars.

4.1.4: Confirm that the cable path is clear and compliant with bend radius requirements.



4.2: Express Exit

4.2.1: Choose a straight section of the fibre duct where you want to route cables down to equipment racks or cabinets. Ensure the location allows for proper bend radius and does not interfere with airflow or other infrastructure.

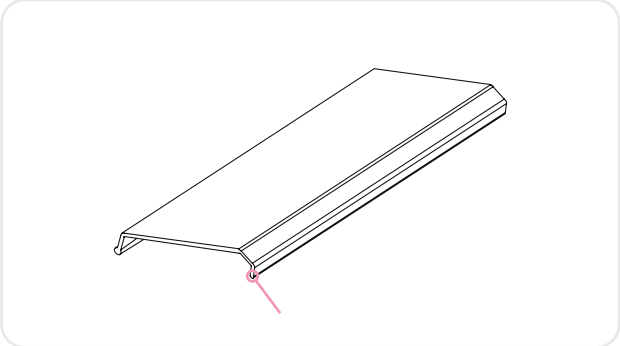
Select the correct size fitting (e.g.55 or 100mm) to match your duct. Elevate Fibre Duct Express Exits are tool-less, however can be secured with X-Bolts if required.

4.3: Cover

4.3.1: Before proceeding, verify that the fibre duct is firmly secured to the designated support structures (e.g., brackets, cable trays, or wall mounts). The duct should be level, properly aligned, and free from any obstructions or debris that may interfere with cover installation.

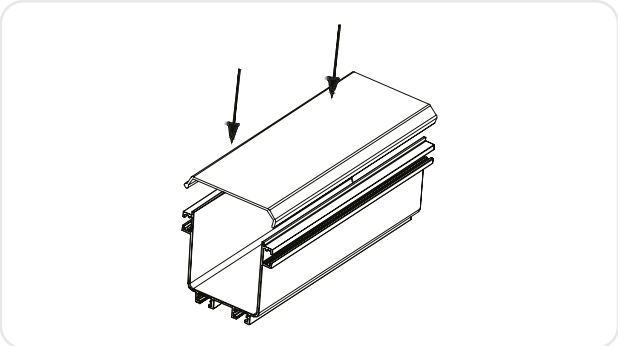
4.3.2: Inspect the Duct Cover

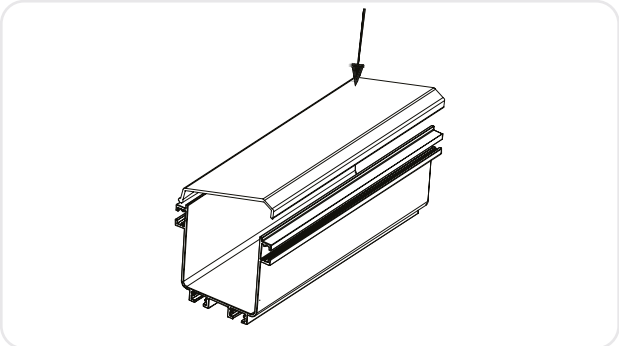
Check the duct cover for any visible damage or deformities. Ensure that the snap-fit edges are intact and free from cracks or warping. Ensure any cuts are square if the cover needs to be cut to size.



4.3.3: Align the Cover

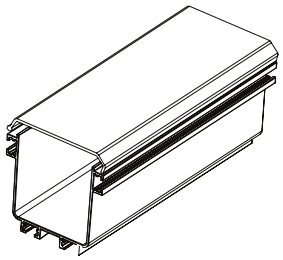
Starting at one end of the duct, position the cover so that its edges are aligned with the corresponding grooves or lips along the top of the duct. Make sure the cover is oriented correctly, with any directional markings or labels facing outward or upward as specified by the manufacturer.





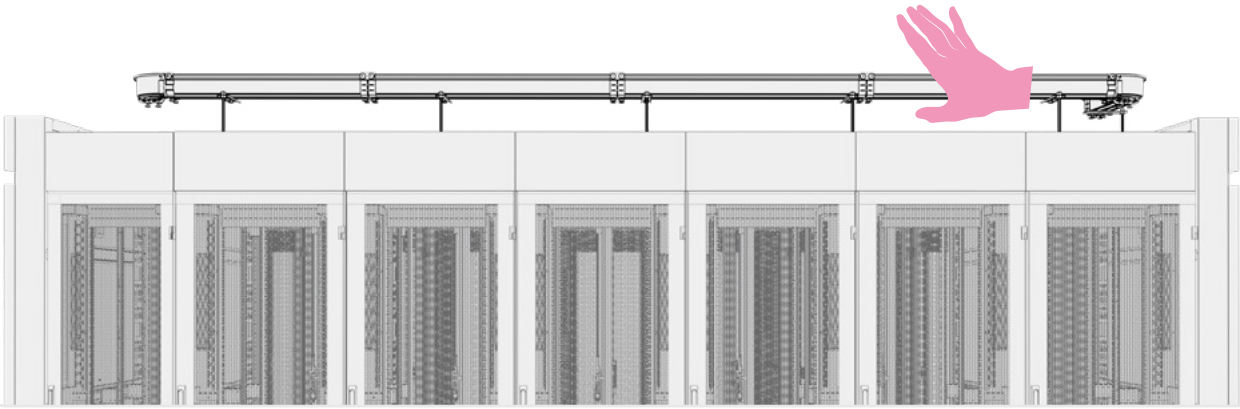
4.3.4: Snap the Cover into Place

Apply even, downward pressure along the length of the cover, working from one end to the other. You should hear or feel a series of clicks as the cover securely snaps into place over the duct. Avoid using excessive force, which could damage the cover or duct.



4.3.5: Verify Secure Fit

Once installed, run your hand along the length of the cover to ensure it is fully seated and flush with the duct. There should be no gaps or loose sections. If any part of the cover is not properly engaged, gently lift and re-align before snapping it back into place.



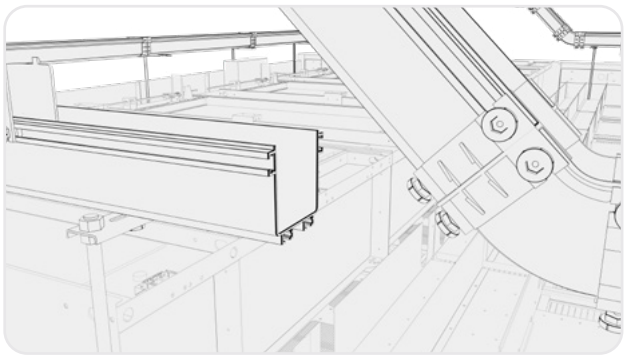
4.3.6: Final Inspection

Conduct a final visual inspection to confirm that the entire assembly is secure, aligned, and free from any installation defects. Ensure that the cover does not obstruct access points or interfere with other components in the installation area.

4.4: End Cap

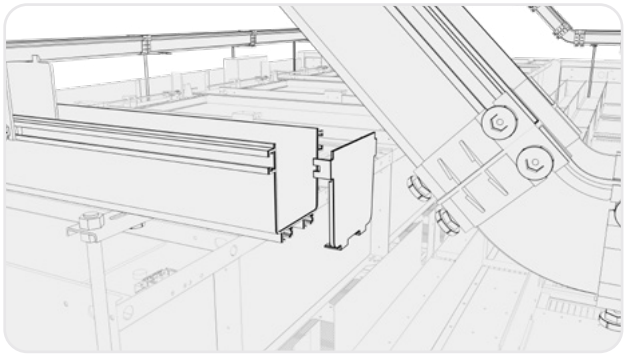
4.4.1: Identify the End of the Duct

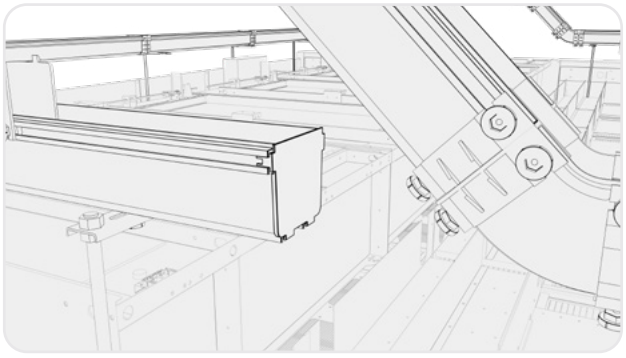
Locate the open end of the fibre runner duct where you want to install the End Cap. If the duct has been cut to size, ensure that the end face is square and free of debris to allow a secure fit.



4.4.2: Align the End Cap

Position the End Cap over the open end of the duct. Align it so that it sits flush with the duct edges.



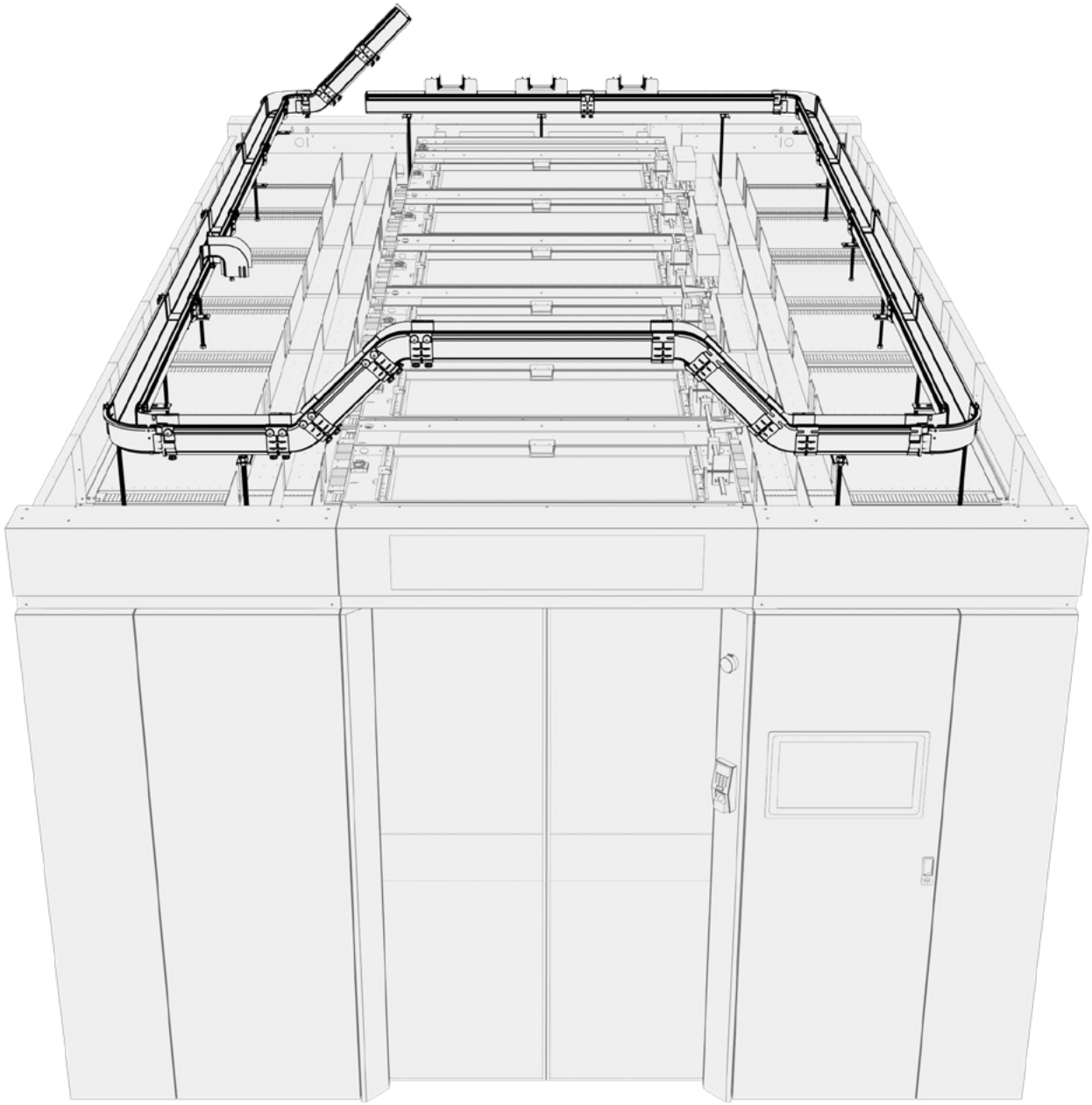


4.4.3: Secure the End Cap

Position the End Cap so that its profile aligns precisely with the open ends of the fibre duct. The End Cap should sit flush against the duct, with no gaps or misalignment.

4.4.4: Inspect the Fit

Check that the end cap is firmly attached and there are no gaps. Ensure it doesn't interfere with any adjacent components or cable paths.



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