



# Vertiv™ Aisle Containment System (VACS)

**User Manual**

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### **Technical Support Site**

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures.

Visit <https://www.vertiv.com/en-us/support/> for additional assistance.

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# 1 Important Safety Instructions

## SAVE THESE INSTRUCTIONS

This manual contains important instructions that may be closely during installation of this unit to maintain compliance with agency listings. Read all safety and operating instructions. Adhere to all warnings on the unit and in this manual. Follow all operating and user instructions.



**WARNING! Risk of handling heavy unit. Can cause equipment damage, injury or death. Read all instruction before beginning.**



**WARNING! Risk of top-heavy unit falling over. Improper handling can cause equipment damage, injury or death. Only properly trained and qualified personnel wearing appropriate OSHA-approved personal protection equipment (PPE) should attempt to move, lift, remove packaging from or prepare unit for installation. Read all instructions before attempting to move, lift, remove packaging from or prepare the unit for installation.**

This product is designed for commercial/industrial use only. This product is not intended for use with life support or other U.S. FDA designated “critical” devices. Maximum loads must not exceed those specified in this manual.

Install and operate in a clean environment, free from moisture, flammable liquids, gases and corrosive substances. Vertiv™ Aisle Containment System must be installed on a flat, level surface for proper assembly and operation.

Ensure that the rack has proper ventilation. Never block or insert objects into the ventilation holes or other openings. Maintain minimum clearances as specified in this manual.

Provide the minimum space between the accessories/components and the housing. This spacing shall be maintained for safe operation of the equipment when installed in accordance with

the National Electric Code, ANSI/NFPA 70. As appropriate, all wiring and equipment should be installed in accordance with NFPA 70, “National Electrical Code,” and the applicable sections of ANSI C2, “National Electrical Safety Code.”

We recommend that casters only be used to move empty racks.

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## 2 Product Overview

### 2.1 Product Features

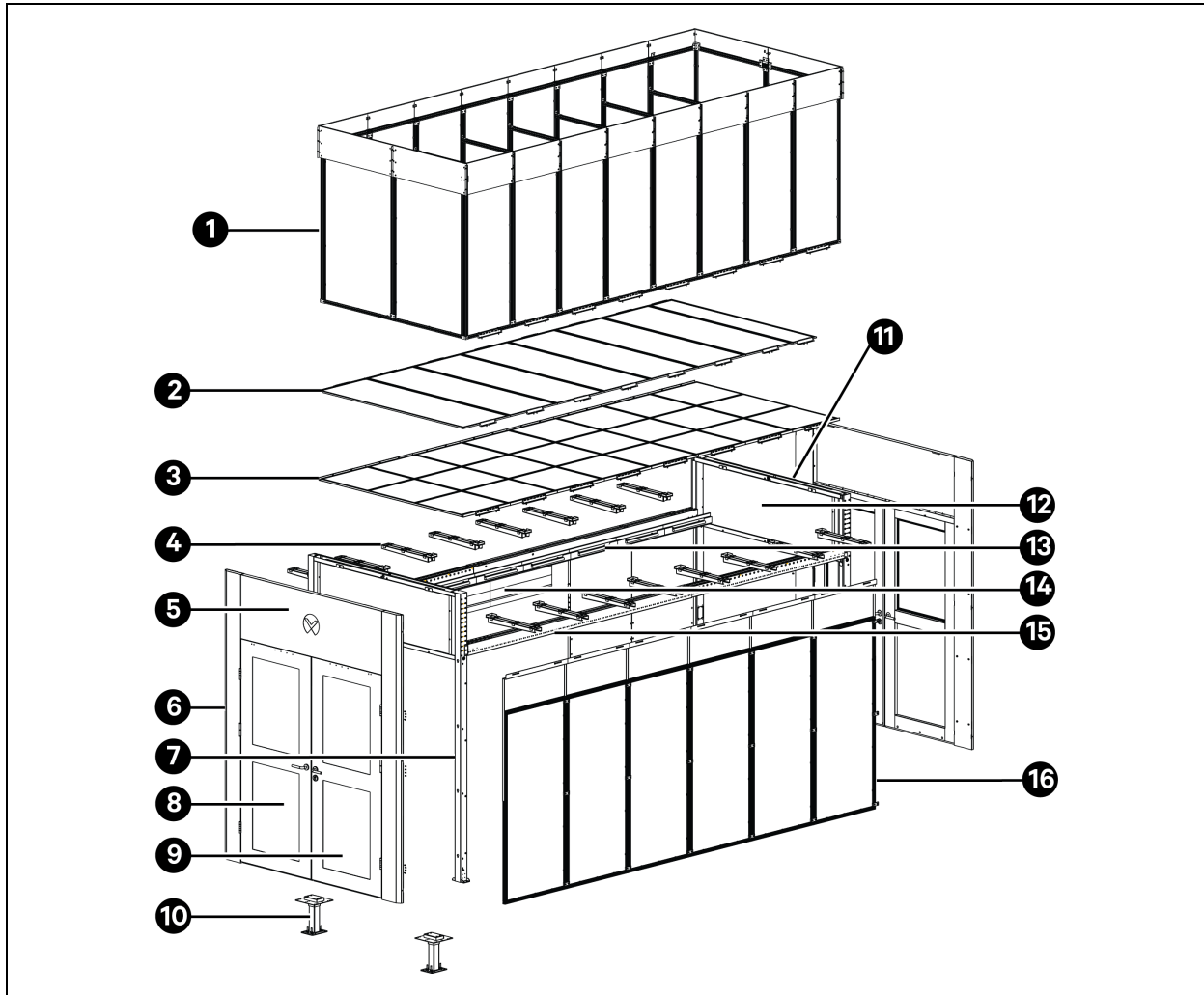
Vertiv™ Aisle Containment System is a rack-independent data center aisle product manufactured by Vertiv™. It is deployed in indoor environments such as edge locations and medium and large data centers, blocking the mixing of hot and cold air and increasing the efficiency of data centers. The system is fully compatible with Vertiv™ cabinets and other 42-52U cabinets that meet the requirement of the EIA-310-D standard. The system has the following characteristics:

- The length of the closed aisle can be adjusted between 3048 mm (10 ft) and 4876.8 mm (16 ft) and the aisle length increment is 50.8 mm (2 in.).
- The aisle length can span across multiple sections.
- Aisle width is available in three sizes: 914.4 mm (3 ft), 1219.2 mm (4 ft), and 1828.8 mm (6 ft).
- Aisles can be configured in cabinets of different heights, widths, and depths.
- Flexible installation supports raised floor and concrete floor installation.

## 2.2 Appearance and Components

The appearance and components of the Vertiv™ Aisle Containment System is depicted in the figure below.

Figure 1.1 Appearance and Components of Vertiv™ Aisle Containment System



Item	Description	Item	Description
1	Vertical duct (optional)	9	Right door
2	Fixed roof (optional)	10	Floor stand (optional)
3	Shrink roof (optional)	11	Width beam
4	Cantilever arm	12	Width panel
5	Door header	13	Lighting kits
6	Door frame	14	Height adapter
7	Vertical post	15	Extendable beam
8	Left door	16	Blanking panel

**NOTE:** This figure is used only as a reference of component identification, not as a reference for configuration.

## 2.3 Weight Bearing Capacity

- The weight-bearing capacity of the system is 907.2 kg (2000 lb).
- The weight-bearing capacity on a single vertical post is 249.4 kg ( 550 lb).
- The weight-bearing capacity of the unilateral extendable beam is 226.8 kg (500 lb) (including cantilever arm).
- The weight-bearing capacity on a single cantilever arm is 17 kg (37.5 lb).

## 2.4 SKU List

**Table 1.1** SKU List

Item	Model No.	Description
Swing door	VC-DR-0001	Right swing door
	VC-DR-0002	Left swing door
	VC-DR-0003	Swing door header, 914.4 mm (3 ft) and 1219.2 mm (4 ft)
	VC-DR-0004	Swing door header, 1828.8 mm (6 ft)
	VC-DR-0005	Swing door frame
Sliding door	VC-DR-0015	Sliding door (including left door and right door), 1828.8 mm (6 ft)
	VC-DR-0016	Sliding door (including left door and right door), 1219.2 mm (4 ft)
	VC-DR-0017	Right opening sliding door (reusing the 1828.8 mm (6 ft) right sliding door), 914.4 mm (3 ft)
	VC-DR-0018	Left opening sliding door, 914.4 mm (3 ft)
	VC-DR-0019	Sliding rail cover component, 1828.8 mm (6 ft)
	VC-DR-0020	Sliding rail cover component, 1219.2 mm (4 ft)
	VC-DR-0021	Left opening door sliding rail cover component, 914.4 mm (3 ft)
	VC-DR-0022	Right opening door sliding rail cover component, 914.4 mm (3 ft)
	VC-DR-0023	Sliding door header, 1828.8 mm (6 ft)
	VC-DR-0024	Sliding door header, 914.4 mm (3 ft) and 1219.2 mm (4 ft)
Extendable beam	VC-FM-0005	Extendable beam
Vertical post	VC-FM-0001	Vertical post
Width connector	VC-FM-0002	Width connector, 914.4 mm (3 ft)
	VC-FM-0003	Width connector, 1219.2 mm (4 ft)
	VC-FM-0004	Width connector, 1828.8 mm (6 ft)
Floor stand	VC-FM-0006	Floor stand, 305 mm (12 in.)
	VC-FM-0007	Floor stand, 406 mm (16 in.)
	VC-FM-0008	Floor stand, 455 mm (17.9 in.)
	VC-FM-0009	Floor stand, 610 mm (24 in.)
	VC-FM-0010	Floor stand, 914 mm (36 in.)

**Table 1.1 SKU List (continued)**

Item	Model No.	Description
Shrink roof	VC-RF-0001	Shrink roof, 304.8 mm (1 ft) x 914.4 (3 ft)
	VC-RF-0002	Shrink roof, 304.8 mm (1 ft) x 1219.2 mm (4 ft)
	VC-RF-0003	Shrink roof, 304.8 mm (1 ft) x 1828.8 mm (6 ft)
	VC-RF-0004	Shrink roof, 609.6 mm (2 ft) x 914.4 (3 ft)
	VC-RF-0005	Shrink roof, 609.6 mm (2 ft) x 1219.2 mm (4 ft)
	VC-RF-0006	Shrink roof, 609.6 mm (2 ft) x 1828.8 mm (6 ft)
Fixed roof	VC-RF-0007	Fixed roof, 304.8 mm (1 ft) x 914.4 (3 ft)
	VC-RF-0008	Fixed roof, 304.8 mm (1 ft) x 1219.2 mm (4 ft)
	VC-RF-0009	Fixed roof, 304.8 mm (1 ft) x 1828.8 mm (6 ft)
	VC-RF-0010	Fixed roof, 609.6 mm (2 ft) x 914.4 mm (3 ft)
	VC-RF-0011	Fixed roof, 609.6 mm (2 ft) x 1219.2 mm (4 ft)
	VC-RF-0012	Fixed roof, 609.6 mm (2 ft) x 1828.8 mm (6 ft)
Vertical duct	VC-RF-0013	Vertical duct, 304.8 mm (1 ft) x 304.8 mm (1 ft)
	VC-RF-0014	Vertical duct, 304.8 mm (1 ft) x 609.6 mm (2 ft)
	VC-RF-0015	Vertical duct, 304.8 mm (1 ft) x 914.4 mm (3 ft)
	VC-RF-0016	Vertical duct, 304.8 mm (1 ft) x 1219.2 mm (4 ft)
	VC-RF-0017	Vertical duct, 304.8 mm (1 ft) x 1524 mm (5 ft)
	VC-RF-0018	Vertical duct, 609.6 mm (2 ft) x 304.8 mm (1 ft)
	VC-RF-0019	Vertical duct, 609.6 mm (2 ft) x 609.6 mm (2 ft)
	VC-RF-0020	Vertical duct, 609.6 mm (2 ft) x 914.4 mm (3 ft)
	VC-RF-0021	Vertical duct, 609.6 mm (2 ft) x 1219.2 mm (4 ft)
	VC-RF-0022	Vertical duct, 609.6 mm (2 ft) x 1524 mm (5 ft)
	VC-RF-0023	Vertical duct, 914.4 mm (3 ft) x 1524 mm (5 ft)
	VC-RF-0024	Vertical duct, 1219.2 mm (4 ft) x 1524 mm (5 ft)
Fixed beam	VC-RF-0025	Fixed beam, 914.4 mm (3 ft)
	VC-RF-0026	Fixed beam, 1219.2 mm (4 ft)
	VC-RF-0027	Fixed beam, 1828.8 mm (6 ft)
Vertical duct attachment	VC-RF-0028	Vertical duct attachment
Vertical duct sliding	VC-RF-0029	Vertical duct sliding, 304.8 mm (1 ft)
	VC-RF-0030	Vertical duct sliding, 609.6 mm (2 ft)
	VC-RF-0031	Vertical duct sliding, 914.4 mm (3 ft)
	VC-RF-0032	Vertical duct sliding, 1219.2 mm (4 ft)
Cantilever arm	VC-AC-0001	Cantilever arm

**Table 1.1 SKU List (continued)**

Item	Model No.	Description
Blanking panel	VC-AC-0002	Blanking panel, 300 mm (11.81 in.)
	VC-AC-0003	Blanking panel, 600 mm (23.62 in.)
	VC-AC-0004	Blanking panel, 800 mm (31.49 in.)
Height adapter	VC-AC-0005	Height adapter, 1 U x 300 mm (11.81 in.)
	VC-AC-0006	Height adapter, 2 U x 300 mm (11.81 in.)
	VC-AC-0007	Height adapter, 1 U x 600 mm (23.62 in.)
	VC-AC-0008	Height adapter, 2 U x 600 mm (23.62 in.)
	VC-AC-0009	Height adapter, 1 U x 800 mm (31.49 in.)
Height adapter brush	VC-AC-0011	Height adapter brush, 300 mm (11.81 in.)
	VC-AC-0012	Height adapter brush, 600 mm (23.62 in.)
	VC-AC-0013	Height adapter brush, 800 mm (31.49 in.)
Solid roof filler	VC-AC-0014	Solid roof filler, 914.4 mm (3 ft)
	VC-AC-0015	Solid roof filler, 1219.2 mm (4 ft)
	VC-AC-0016	Solid roof filler, 1828.8 mm (6 ft)
Lighting sub-assembly	VC-AC-0017	Lighting sub-assembly, 304.8 mm (1 ft)
	VC-AC-0018	Lighting sub-assembly, 609.6 mm (2 ft)
Cable packaging	VC-AC-0019	Cable packaging
Alignment tool	VC-AC-0020	Alignment tool
Extend pod brush	VC-AC-0021	Extend pod brush, 304.8 mm (1 ft)
	VC-AC-0022	Extend pod brush, 609.6 mm (2 ft)
	VC-AC-0023	Extend pod brush, 1524 mm (5 ft)

## 2.5 Environmental Requirements

### 2.5.1 Operating Conditions

The installation site of the Vertiv™ Aisle Containment System should be such that the product is away from heat, easy-to-produce sparks, direct sunlight, corrosive gases, and organic solvents.

Operating conditions are shown in **Table 1.2** below .

**Table 1.2 Operating Conditions**

Item	Description
Floor	Level ground. Maximum deviation is 0.6 mm/m (0.072 in. per 10 ft)
Room	Large data centers, mid-size data centers, and equipment & IT rooms
Ambient temperature	Indoor: 0 °C to 40 °C (32 °F to 104 °F)
Ambient humidity	5% RH to 90 % RH, 30 °C (86 °F)(no condensation)

### 2.5.2 Storage Conditions

The product storage environment is shown in **Table 1.3** below

**Table 1.3 Storage Environment**

Parameters	Values
Environment	Clean and clear of dust and debris
Ambient temperature	-33 °C (-27.4°F) to + 70 °C (158 °F)
Ambient humidity	5 % RH to 95 % RH (no condensation)

**NOTE: The shrink roof storage temperature must be lower than 50°C (122°F).**

### 2.5.3 Clearance Requirements

Leave enough space for installation, maintenance, repair and cooling. The space required to open the door is shown in Figure 1.2 below.

Figure 1.2 Vertiv™ Aisle Containment System Spacing (Swing Door)

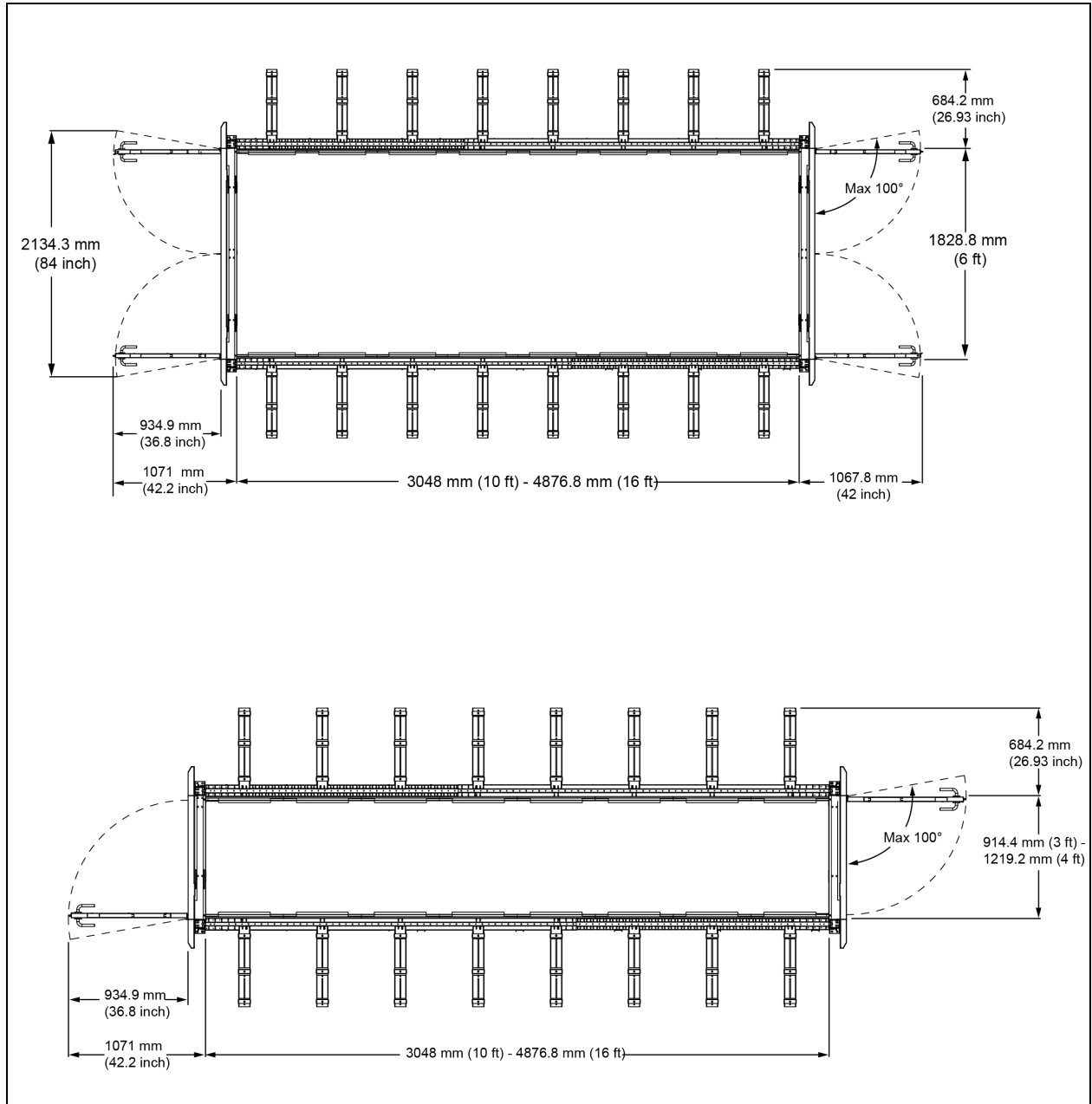
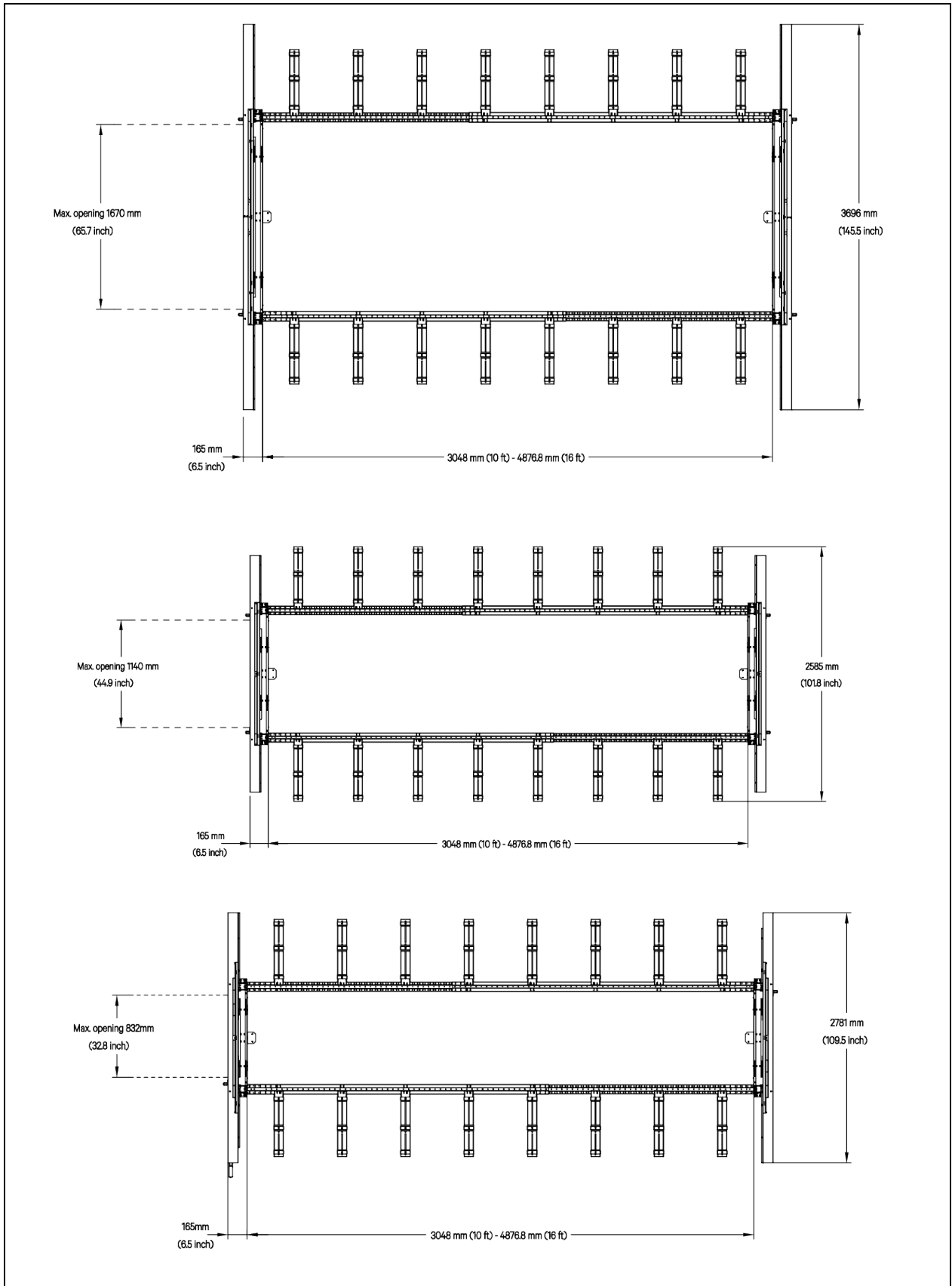


Figure 1.3 Vertiv™ Aisle Containment System Spacing (Sliding Door)





**NOTE:** For a ceiling return air scheme, ensure that the space between the passage and the ceiling is not blocked.

**NOTE:** Enough space should be left between the rear cabinet door and the wall to ensure easy access to equipment shelves for the maintenance personnel.

## **2.5.4 Floor Loading**

The floor loading should be greater than 1000 kg/m<sup>2</sup> (204 lb/ft<sup>2</sup>). You can also consult the nearest Vertiv local office or service center for detailed information.

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### 3 Pre-Installation

**!** CAUTION: Some components of Vertiv™ Aisle Containment System are heavy and there is a risk of severe injury if not handled properly.

**!** CAUTION: Read all the instructions carefully prior to unpacking, shifting, or installing the unit.

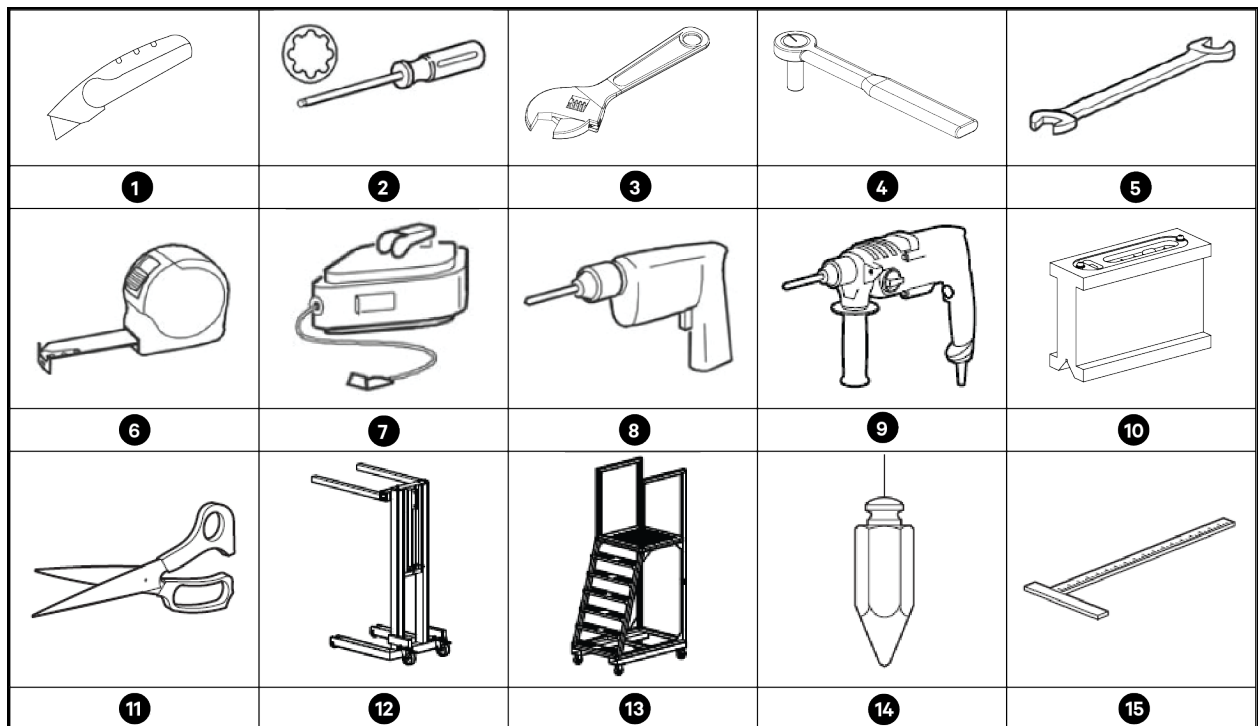
**!** CAUTION: Wear sturdy safety helmets, gloves, shoes, and glasses while handling the equipment to avoid injury due to sharp edges, objects, and buckles.

#### 3.1 Installation Tools

Figure 2.1 below shows the depiction of some installation tools and Table 2.1 on the next page describes the use of these tools.

NOTE: All installation tools must be supplied by customers.

Figure 2.1 Installation Tools



**Table 2.1 Installation Tools**

Item	Name	Function
1	Razor knife	Cut through packaging materials
2	Torx screwdriver	Tighten or loosen Torx screws
3	Adjustable wrench	Tighten or loosen different sizes of bolts and nuts
4	Socket wrench	Insert into a socket to tighten or loosen bolts and nuts
5	Wrench	Tighten or loosen bolts and nuts
6	Tape measure	Measure sizes or distances
7	Chalk line	Lay out straight lines between two points
8	Electrical drill/driver	Make round holes or drive fasteners
9	Impact drill	Drill into concrete floor or metal
10	Level	Establish a horizontal plane
11	Scissors	Cut sealing foam
12	Lifting equipment	Lift heavy devices
13	Ascending ladder	Install equipment at a certain height
14	Plumb bob	Establish a vertical line
15	T-shaped ruler	Make parallel lines and right angles

## 3.2 Equipment Handling, Unpacking, and Inspection

Rail or sea shipment is recommended for transporting the product. If road is the only option, choose less bumpy roads to prevent equipment damage.

The size and weight of the package of each component is depicted in the table below.

**Table 2.2 Size and Weight of Component Package**

Model No.	Component	Size mm (in.)			Weight kg (lb)
		L	W	H	
VC-DR-0001	Right swing door	2410 (94.9)	1030 (40.6)	110 (4.3)	55 (121)
VC-DR-0002	Left swing door	2410 (94.9)	1030 (40.6)	110 (4.3)	55 (121)
VC-DR-0003	Swing door header, 914.4 mm (3 ft) and 1219.2 mm (4 ft)	1000 (39.4)	758 (29.8)	89 (3.5)	8.87 (17.74)
VC-DR-0004	Swing door header, 1828.8 mm (6 ft)	1915 (75.4)	758 (29.8)	89 (3.5)	16.41 (36.1)
VC-DR-0005	Swing door frame	2859 (112.6)	324 (12.8)	179 (7.0)	45.8 (100.76)
VC-DR-0015	Sliding door (including left door and right door), 1828.8 mm (6 ft)	2410 (94.9)	1080 (42.5)	245 (9.6)	66 (145.5)
VC-DR-0016	Sliding door (including left door and right door), 1219.2 mm (4 ft)	2410 (94.9)	780 (30.7)	245 (9.6)	53.2 (117.3)
VC-DR-0017	Right opening sliding door (reusing the 1828.8 mm (6 ft) right sliding door), 914.4 mm (3 ft)	2410 (94.9)	1150 (45.3)	135 (5.3)	37.3 (82.2)
VC-DR-0018	Left opening sliding door, 914.4 mm (3 ft)	2410 (94.9)	1150 (45.3)	135 (5.3)	37.3 (82.2)
VC-DR-0019	Sliding rail cover component, 1828.8 mm (6 ft)	2070 (81.5)	345 (13.6)	270 (10.6)	26 (57.3)
VC-DR-0020	Sliding rail cover component, 1219.2 mm (4 ft)	1400 (55.1)	345 (13.6)	270 (10.6)	18.5 (40.8)

**Table 2.2 Size and Weight of Component Package (continued)**

Model No.	Component	Size mm (in.)			Weight kg (lb)
		L	W	H	
VC-DR-0021	Left opening door sliding rail cover component, 914.4 mm (3 ft)	1920 (75.6)	290 (11.4)	270 (10.6)	18 (39.7)
VC-DR-0022	Right opening door sliding rail cover component, 914.4 mm (3 ft)	1920 (75.6)	290 (11.4)	270 (10.6)	18 (39.7)
VC-DR-0023	Sliding door header, 1828.8 mm (6 ft)	2195 (86.4)	595 (23.4)	95 (3.7)	21 (46.3)
VC-DR-0024	Sliding door header, 914.4 mm (3 ft) and 1219.2 mm (4 ft)	1585 (62.4)	595 (23.4)	95 (3.7)	14.7 (32.4)
VC-FM-0005	Extendable beam	3292 (129.6)	324 (12.8)	179 (7.0)	89.68 (197.3)
VC-FM-0001	Vertical post	2851 (112.2)	428 (16.9)	164 (6.5)	37.04 (81.48)
VC-FM-0002	Width connector, 914.4 mm (3 ft)	1087 (42.8)	652 (25.7)	160 (6.3)	20 (44)
VC-FM-0003	Width connector, 1219.2 mm (4 ft)	1392 (54.8)	652 (25.7)	160 (6.3)	28.3 (62.26)
VC-FM-0004	Width connector, 1828.8 mm (6 ft)	2001 (78.8)	652 (25.7)	170 (6.7)	37.5 (82.5)
VC-FM-0006	Floor stand, 305 mm (12 in.)	482 (18.98)	362 (14.25)	300 (11.81)	23.5 (51.7)
VC-FM-0007	Floor stand, 406 mm (16 in.)	482 (18.98)	362 (14.25)	300 (11.81)	24.74 (54.42)
VC-FM-0008	Floor stand, 455 mm (17.9 in.)	482 (18.98)	362 (14.25)	300 (11.81)	25.36 (55.79)
VC-FM-0009	Floor stand, 610 mm (24 in.)	837 (32.95)	362 (14.25)	195 (7.68)	27.56 (60.63)
VC-FM-0010	Floor stand, 914 mm (36 in.)	942 (37.09)	362 (14.25)	195 (7.68)	31.66 (69.8)
VC-RF-0001	Shrink roof, 304.8 mm (1 ft) x 914.4 mm (3 ft)	1104 (43.46)	361 (14.21)	67 (2.64)	3.9 (8.58)
VC-RF-0002	Shrink roof, 304.8 mm (1 ft) x 1219.2 mm (4 ft)	1408 (55.43)	361 (14.21)	67 (2.64)	4.2 (9.24)
VC-RF-0003	Shrink roof, 304.8 mm (1 ft) x 1828.8 mm (6 ft)	2107 (82.95)	361 (14.21)	67 (2.64)	6 (13.2)
VC-RF-0004	Shrink roof, 609.6 mm (2 ft) x 914.4 mm (3 ft)	1104 (43.46)	666 (26.22)	67 (2.64)	7.4 (16.28)
VC-RF-0005	Shrink roof, 609.6 mm (2 ft) x 1219.2 mm (4 ft)	1408 (55.43)	666 (26.22)	67 (2.64)	8 (17.6)
VC-RF-0006	Shrink roof, 609.6 mm (2 ft) x 1828.8 mm (6 ft)	2107 (82.95)	666 (26.22)	67 (2.64)	11.6 (25.52)
VC-RF-0007	Fixed roof, 304.8 mm (1 ft) x 914.4 mm (3 ft)	1104 (43.46)	361 (14.21)	67 (2.64)	2.9 (6.38)
VC-RF-0008	Fixed roof, 304.8 mm (1 ft) x 1219.2 mm (4 ft)	1408 (55.43)	361 (14.21)	67 (2.64)	3.1 (6.82)
VC-RF-0009	Fixed roof, 304.8 mm (1 ft) x 1828.8 mm (6 ft)	2107 (82.95)	361 (14.21)	67 (2.64)	4 (8.8)
VC-RF-0010	Fixed roof, 609.6 mm (2 ft) x 914.4 mm (3 ft)	1104 (43.46)	666 (26.22)	67 (2.64)	5.4 (11.88)
VC-RF-0011	Fixed roof, 609.6 mm (2 ft) x 1219.2 mm (4 ft)	1408 (55.43)	666 (26.22)	67 (2.64)	5.8 (12.76)
VC-RF-0012	Fixed roof, 609.6 mm (2 ft) x 1828.8 mm (6 ft)	2107 (82.95)	666 (26.22)	67 (2.64)	8.1 (17.82)
VC-RF-0013	Vertical duct, 304.8 mm (1 ft) x 304.8 mm (1 ft)	467 (18.39)	347 (13.66)	125 (4.92)	4 (8.8)
VC-RF-0014	Vertical duct, 304.8 mm (1 ft) x 609.6 mm (2 ft)	772 (30.39)	147 (5.79)	125 (4.92)	5 (11)
VC-RF-0015	Vertical duct, 304.8 mm (1 ft) x 914.4 mm (3 ft)	1072 (42.2)	347 (13.66)	125 (4.92)	7.5 (16.5)
VC-RF-0016	Vertical duct, 304.8 mm (1 ft) x 1219.2 mm (4 ft)	1377 (54.21)	347 (13.66)	125 (4.92)	8.5 (18.7)
VC-RF-0017	Vertical duct, 304.8 mm (1 ft) x 1524 mm (5 ft)	1703 (67.05)	354 (13.94)	122 (4.8)	10 (22)
VC-RF-0018	Vertical duct, 609.6 mm (2 ft) x 304.8 mm (1 ft)	772 (30.39)	147 (5.79)	125 (4.92)	5.6 (12.32)
VC-RF-0019	Vertical duct, 609.6 mm (2 ft) x 609.6 mm (2 ft)	767 (30.2)	632 (24.88)	125 (4.92)	7.1 (15.62)

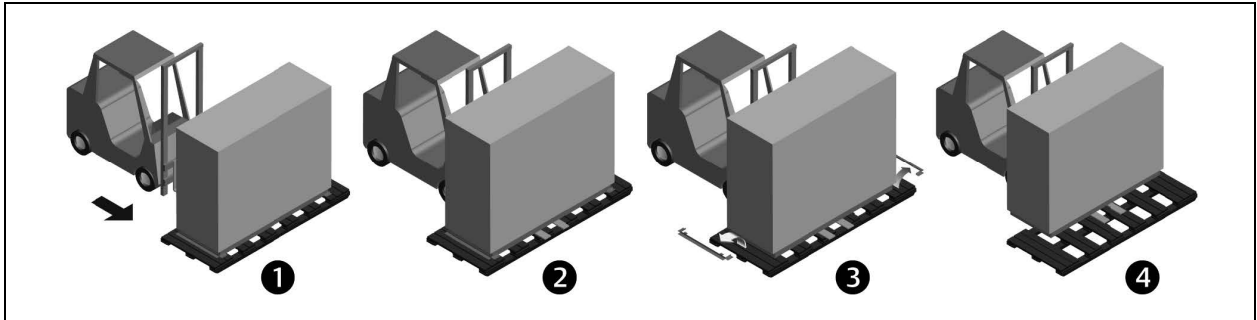
**Table 2.2 Size and Weight of Component Package (continued)**

Model No.	Component	Size mm (in.)			Weight kg (lb)
		L	W	H	
VC-RF-0020	Vertical duct, 609.6 mm (2 ft) x 914.4 mm (3 ft)	1088 (42.83)	664 (26.14)	122 (4.8)	8.5 (18.7)
VC-RF-0021	Vertical duct, 609.6 mm (2 ft) x 1219.2 mm (4 ft)	1393 (54.84)	664 (26.14)	122 (4.8)	10 (22)
VC-RF-0022	Vertical duct, 609.6 mm (2 ft) x 1524 mm (5 ft)	1703 (67.05)	664 (26.14)	122 (4.8)	12.5 (27.5)
VC-RF-0023	Vertical duct, 914.4 mm (3 ft) x 1524 mm (5 ft)	1703 (67.05)	969 (38.15)	122 (4.8)	15 (33)
VC-RF-0024	Vertical duct, 1219.2 mm (4 ft) x 1524 mm (5 ft)	1703 (67.05)	1274 (50.16)	122 (4.8)	16 (35.2)
VC-RF-0025	Fixed beam, 914.4 mm (3 ft)	1128 (44.4)	198 (7.8)	74 (2.9)	3.6 (7.9)
VC-RF-0026	Fixed beam, 1219.2 mm (4 ft)	1429 (56.3)	198 (7.8)	74 (2.9)	4.6 (10.1)
VC-RF-0027	Fixed beam, 1828.8 mm (6 ft)	2038 (80.2)	198 (7.8)	74 (2.9)	6.8 (15.0)
VC-RF-0028	Vertical duct attachment	367 (14.4)	317 (12.5)	130 (5.1)	3.8 (8.4)
VC-RF-0029	Vertical duct sliding, 304.8 mm (1 ft)	467 (18.4)	347 (13.7)	125 (4.9)	2.2 (4.9)
VC-RF-0030	Vertical duct sliding, 609.6 mm (2 ft)	772 (30.4)	347 (13.7)	125 (4.9)	4 (8.8)
VC-RF-0031	Vertical duct sliding, 914.4 mm (3 ft)	1072 (42.2)	347 (13.7)	125 (4.9)	6.1 (13.4)
VC-RF-0032	Vertical duct sliding, 1219.2 mm (4 ft)	1377 (54.2)	347 (13.7)	125 (4.9)	12 (26.5)
VC-AC-0001	Cantilever arm	687 (27.0)	512 (20.2)	210 (8.3)	22.5 (49.6)
VC-AC-0002	Blanking panel, 300 mm (11.81 in.)	1995 (78.54)	363 (14.3)	89 (3.5)	7.5 (16.6)
VC-AC-0003	Blanking panel, 600 mm (23.62 in.)	1995 (78.54)	663 (26.1)	89 (3.5)	12.2 (27.0)
VC-AC-0004	Blanking panel, 800 mm (31.49 in.)	1995 (78.54)	863 (33.98)	89 (3.5)	18.6 (41.1)
VC-AC-0005	Height adapter, 1U x 300 mm (11.81 in.)	372 (14.65)	147 (5.79)	130 (5.12)	2.2 (4.84)
VC-AC-0006	Height adapter, 2U x 300 mm (11.81 in.)	372 (14.65)	147 (5.79)	130 (5.12)	3.4 (7.48)
VC-AC-0007	Height adapter, 1U x 600 mm (23.62 in.)	872 (34.33)	147 (5.79)	130 (5.12)	4.2 (9.24)
VC-AC-0008	Height adapter, 2U x 600 mm (23.62 in.)	872 (34.33)	147 (5.79)	130 (5.12)	3 (6.6)
VC-AC-0009	Height adapter, 1U x 800 mm (31.49 in.)	872 (34.33)	147 (5.79)	130 (5.12)	5.5 (12.1)
VC-AC-0010	Height adapter, 2U x 800 mm (31.49 in.)	872 (34.33)	147 (5.79)	130 (5.12)	6.8 (14.96)
VC-AC-0011	Height adapter brush, 300 mm (11.81 in.)	372 (14.65)	147 (5.79)	130 (5.12)	10.2 (22.44)
VC-AC-0012	Height adapter brush, 600 mm (23.62 in.)	872 (34.33)	147 (5.79)	130 (5.12)	12.2 (26.84)
VC-AC-0013	Height adapter brush, 800 mm (31.49 in.)	872 (34.33)	147 (5.79)	130 (5.12)	13.7 (30.14)
VC-AC-0014	Solid roof filler, 914.4 mm (3 ft)	1012 (39.84)	207 (8.15)	165 (6.5)	12.72 (27.98)
VC-AC-0015	Solid roof filler, 1219.2 mm (4 ft)	1217 (47.91)	207 (8.15)	165 (6.5)	16.53 (36.36)
VC-AC-0016	Solid roof filler, 1828.8 mm (6 ft)	1927 (75.87)	207 (8.15)	165 (6.5)	24.9 (54.78)
VC-AC-0017	Lighting sub-assembly, 304.8 mm (1 ft)	437 (17.2)	367 (14.45)	156 (6.14)	8.3 (18.26)
VC-AC-0018	Lighting sub-assembly, 609.6 mm (2 ft)	672 (26.46)	652 (25.67)	100 (3.94)	13.22 (29.08)
VC-AC-0019	Cable packaging	300 (11.81)	200 (7.87)	100 (3.94)	2.5 (5.5)
VC-AC-0020	Alignment tool	2000 (78.74)	200 (7.87)	200 (7.87)	5.53 (12.16)

**Table 2.2 Size and Weight of Component Package (continued)**

Model No.	Component	Size mm (In.)			Weight kg (lb)
		L	W	H	
VC-AC-0021	Height extend pod brush, 304.8 mm (1 ft)	317 (12.48)	202 (7.95)	120 (4.72)	2.2 (4.84)
VC-AC-0022	Height extend pod brush, 609.6 mm (2 ft)	602 (23.7)	202 (7.95)	120 (4.72)	3.4 (7.48)
VC-AC-0023	Height extend pod brush, 1524 mm (5 ft)	1517 (59.72)	202 (7.95)	120 (4.72)	8 (17.6)

Transport the packaged unit with a fork lift or pallet jack. Place the unit as close as possible to the final installation location on a firm, level surface.



Item	Description
1	Align fork with the front or rear of the unit.
2	Insert tines completely under the base of the unit
3	Remove lag bolts and brackets
4	Lift the unit and remove the skid

**NOTE:** Make sure that the lift/jack has adjustable fork arms, and the arms are spread to the widest allowable distance to still fit under this pallet.

**NOTE:** When moving the packaged unit, align the fork arms with the unit center of gravity.

**NOTE:** The unit should remain upright. Do not place the unit outdoors.

**Packaging Material**

All the materials used in the packaging enclosures are recyclable. They can be retained for future use or they can be disposed of appropriately.

The following are the steps for unpacking the carton:

1. Disassemble the product package on an open, solid, and horizontal surface.
2. Open carton straps and packaging materials surrounding the product with a utility knife carefully.

After unpacking, confirm the identity and the quantity of parts or components by referring to the part checklist (see [Component Identification](#) on the facing page ). If any part is missing or damaged, inform the carrier immediately. For concealed damage, inform the local dealer or local Vertiv office immediately.



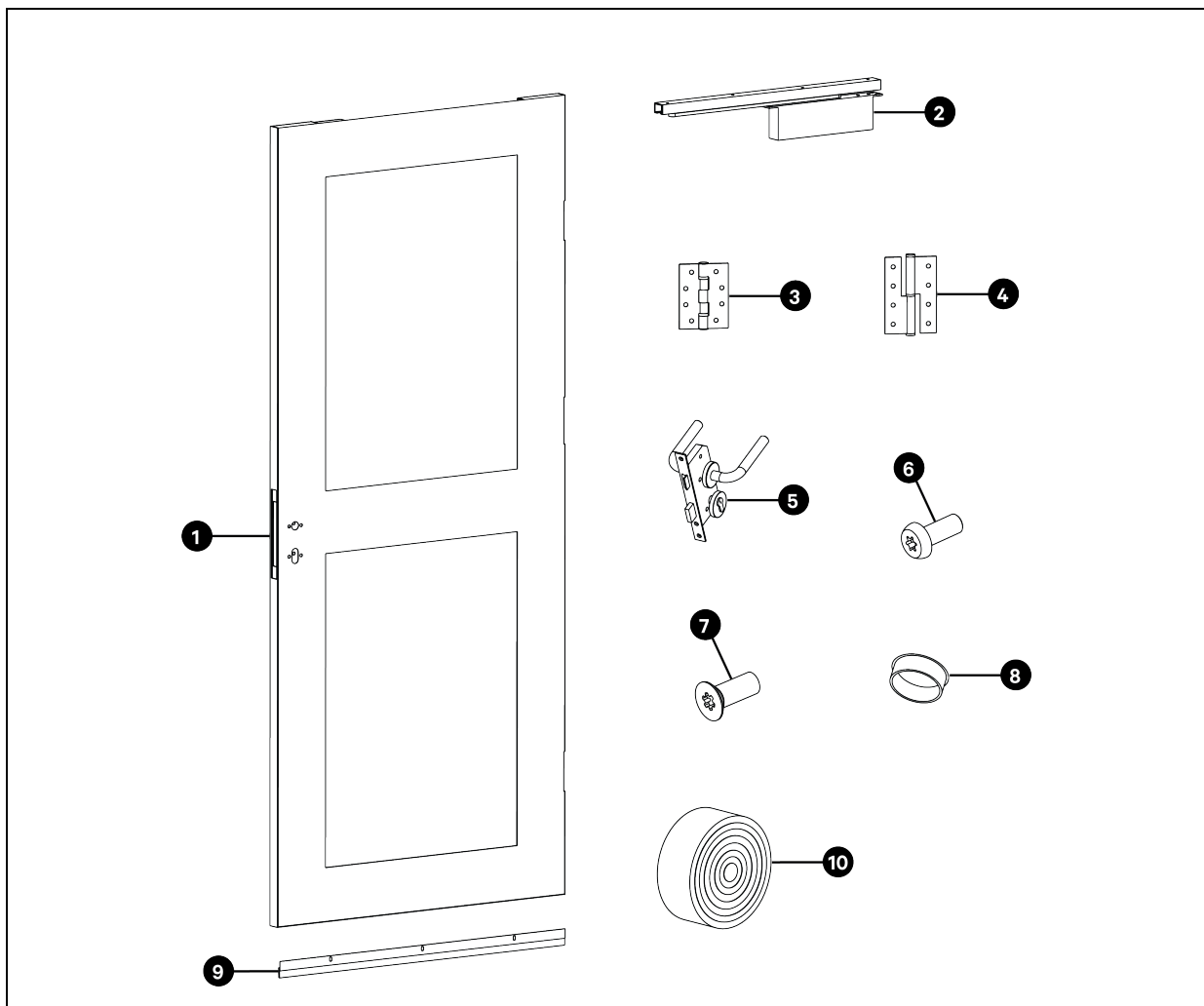
## 4 Installation

Before installation, ensure that the installation tools and accessories are in place.

### 4.1 Component Identification

#### 4.1.1 Right Swing Door

Model	Description
VC-DR-0001	Right swing door, 914.4 mm (3 ft) and 1219.2 mm (4 ft)



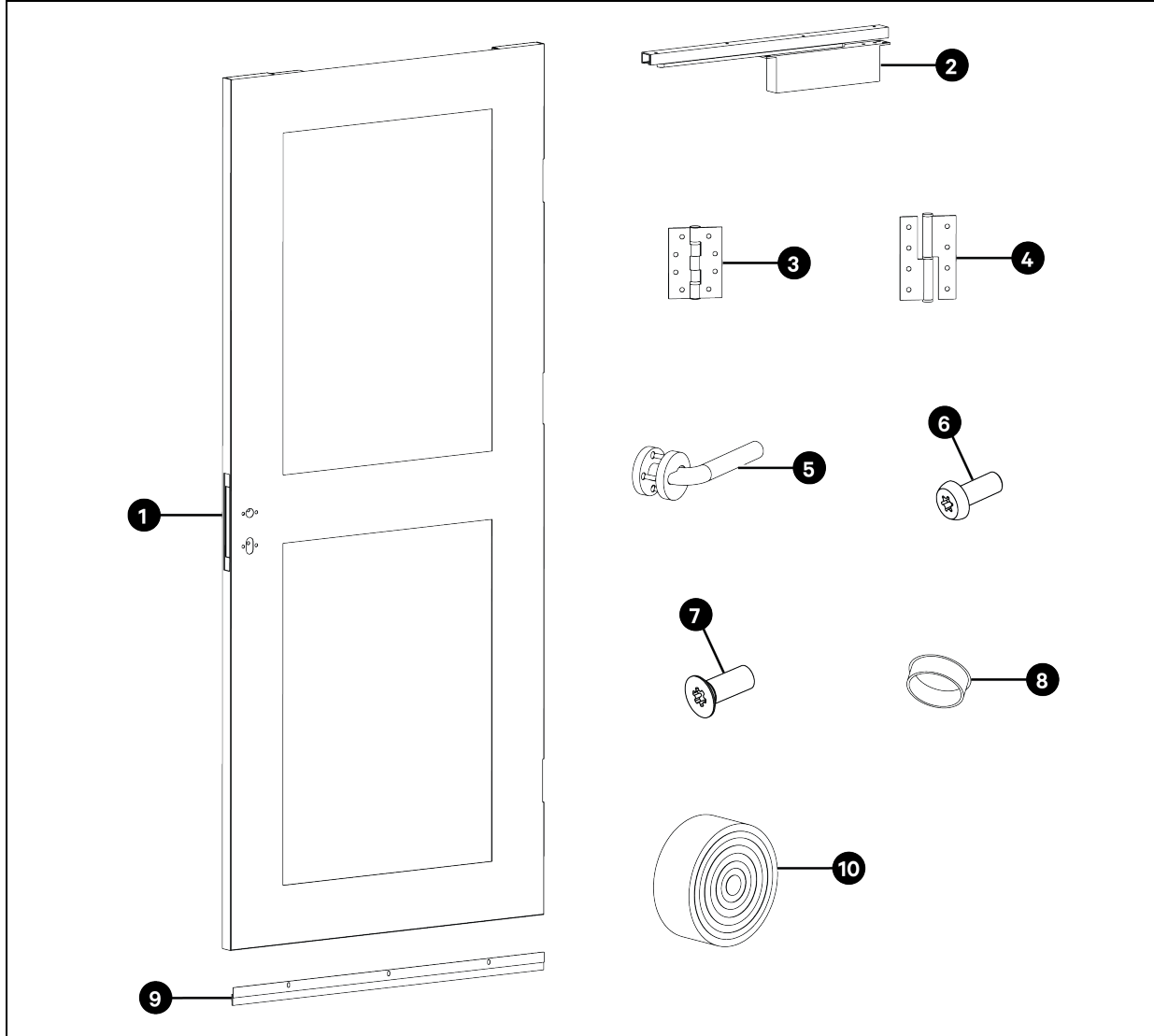
Item	Description	Quantity
1	Right door	1
2	Door closer*	1
3	Hinge 1*	2

Item	Description	Quantity
4	Hinge 2*	1
5	Door lock*	1
6	Torx pan head screw, M5 x 12	12
	Torx pan head screw, M4 x 12	12
7	Torx countersunk screw, M6 x 20	3
	Torx countersunk screw, M6 x 12	24
8	Hole plug	3
9	Brush	1
10	Sealing foam*	-
* indicates that the part is assembled in factory		

**NOTE:** Please refer to Appendix III Door Lock Installation Guide for the assembling of the door lock.

### 4.1.2 Left Swing Door

Model	Description
VC-DR-0002	Left swing door, 1828.8 mm (6 ft)

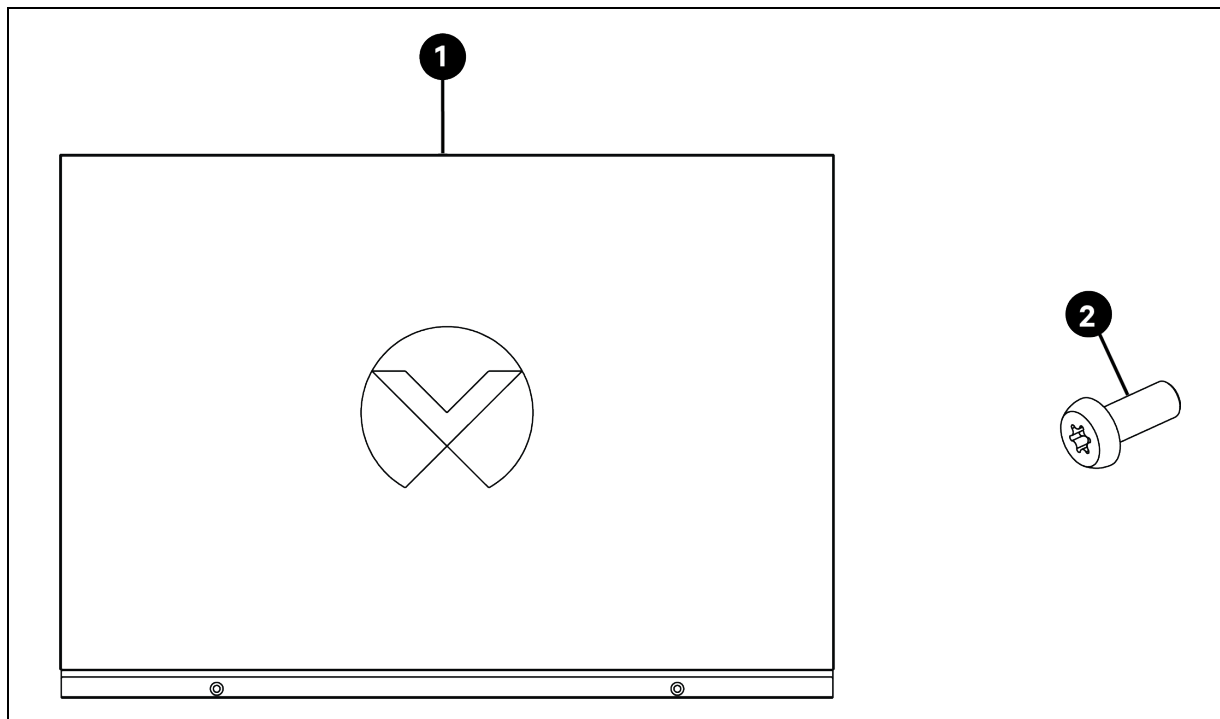


Item	Description	Quantity
1	Left door	1
2	Door closer*	1
3	Hinge 1*	2
4	Hinge 2*	1
5	Door handle	2
6	Torx pan head screw, M5 x 12	12
	Torx pan head screw, M4 x 12	12

Item	Description	Quantity
7	Torx countersunk screw, M6 x 20	3
	Torx countersunk screw, M6 x 12	24
8	Hole plug	3
9	Brush	1
10	Sealing foam*	-
* indicates that the part is assembled in factory		

### 4.1.3 Swing Door Header (914.4 mm (3 ft) and 1219.2 mm (4 ft))

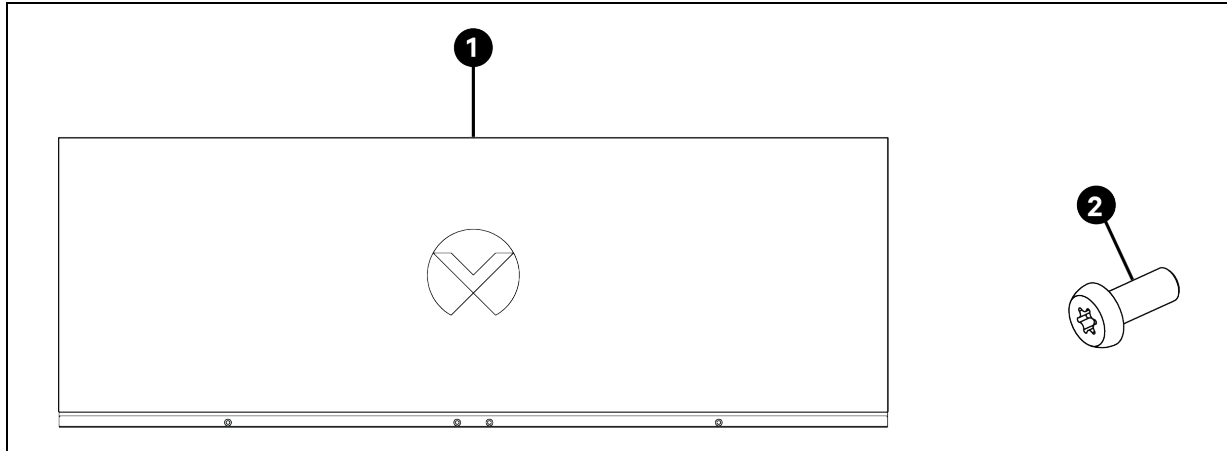
Model	Description
VC-DR-0003	Door header, 914.4 mm (3 ft) and 1219.2 mm (4 ft)



Item	Description	Quantity
1	Door header, 914.4 mm (3 ft) and 1219.2 mm (4 ft)	1
2	Torx pan head screw, M6 x 20	2

#### 4.1.4 Swing Door Header (1828.8 mm (6 ft))

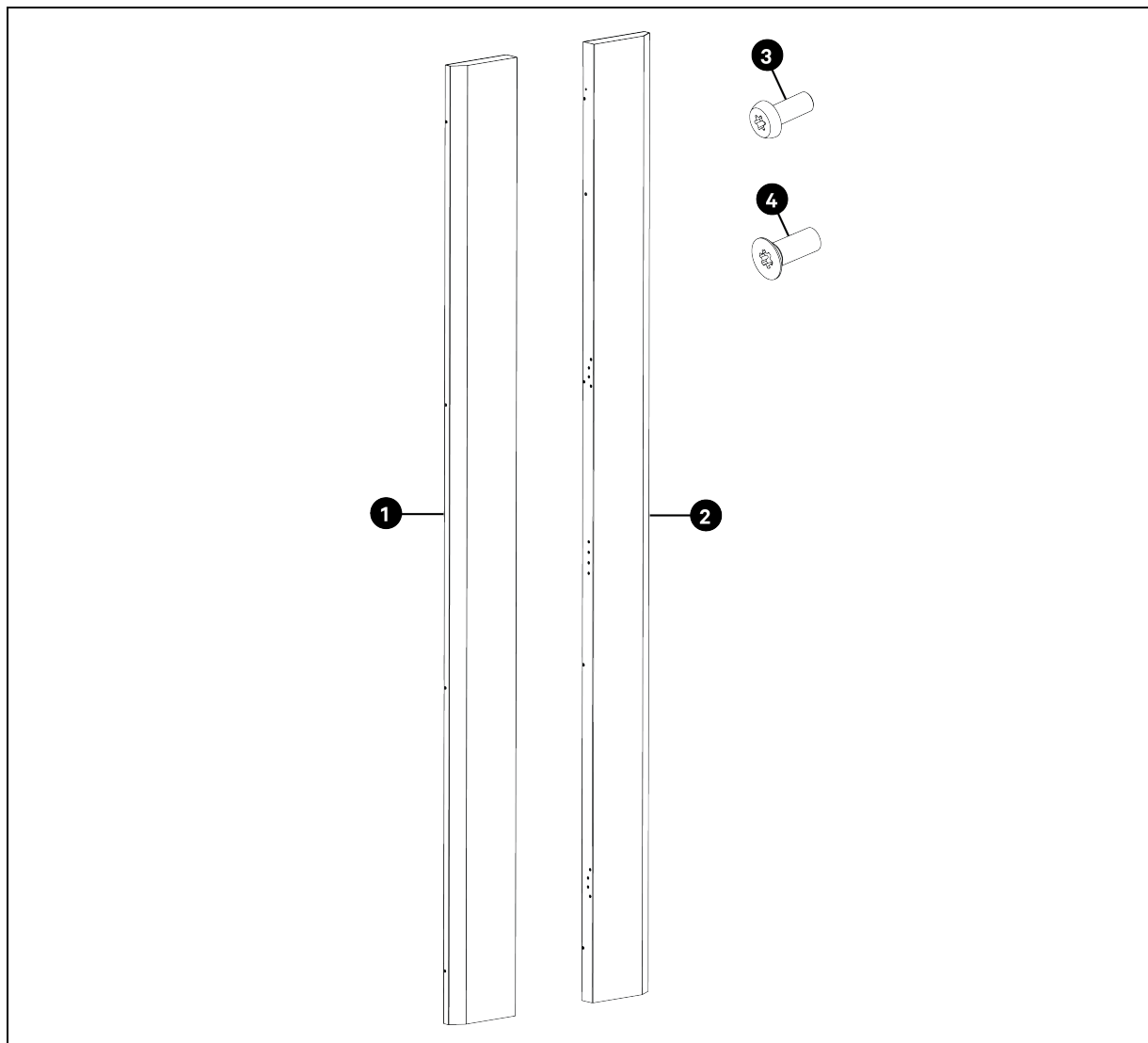
Model	Description
VC-DR-0004	Door header, 1828.8 mm (6 ft)



Item	Description	Quantity
1	Door header, 1828.8 mm (6 ft)	1
2	Torx pan head screw, M6 x 20	2

### 4.1.5 Swing Door Frame

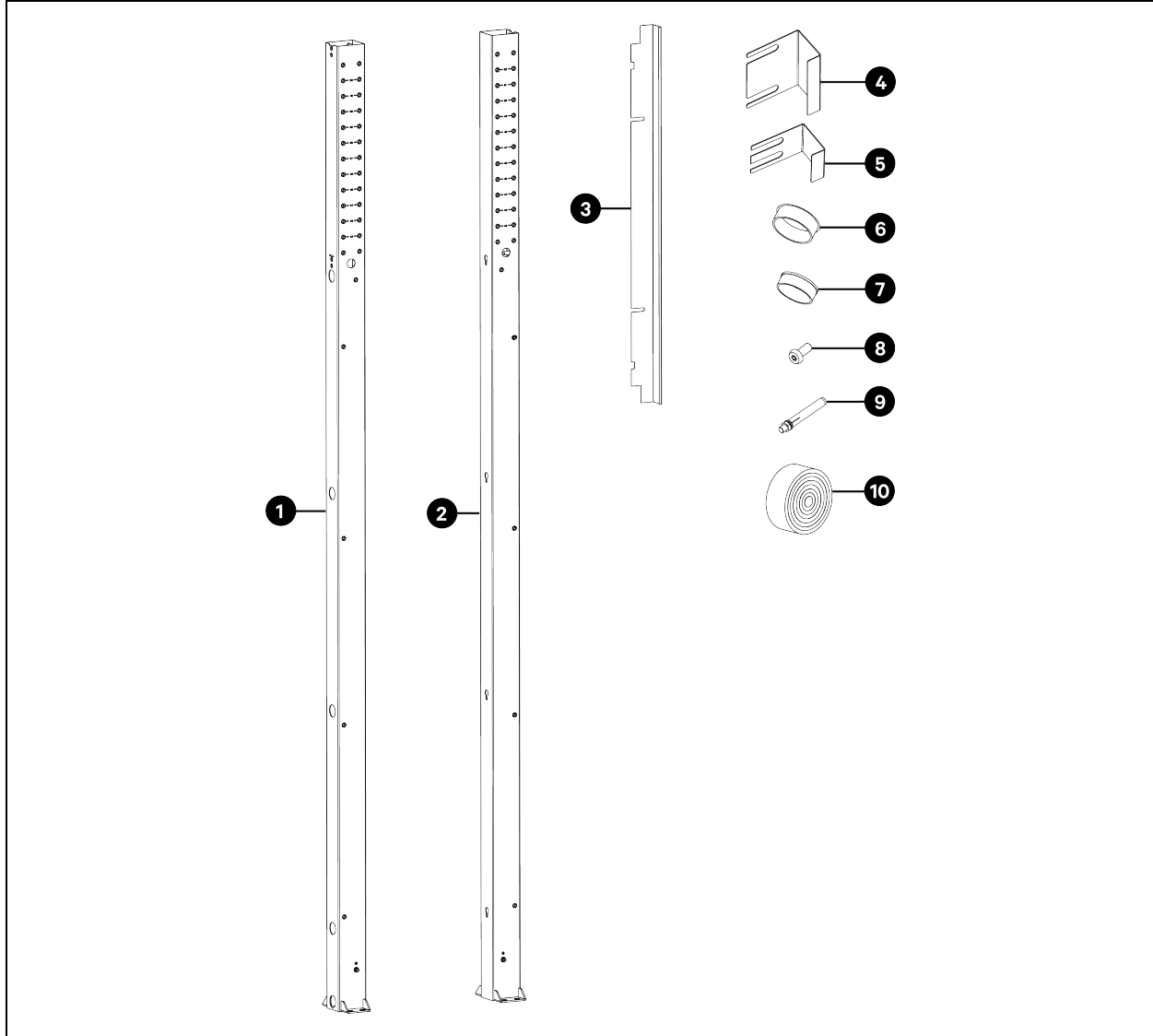
Model	Description
VC-DR-0005	Door frame



Item	Description	Quantity
1	Left door frame	1
2	Right door frame	1
3	Torx pan head screw, M8 x 20	8
4	Torx countersunk screw, M4 x 12	20

### 4.1.6 Vertical Post

Model	Description
VC-FM-0001	Vertical post

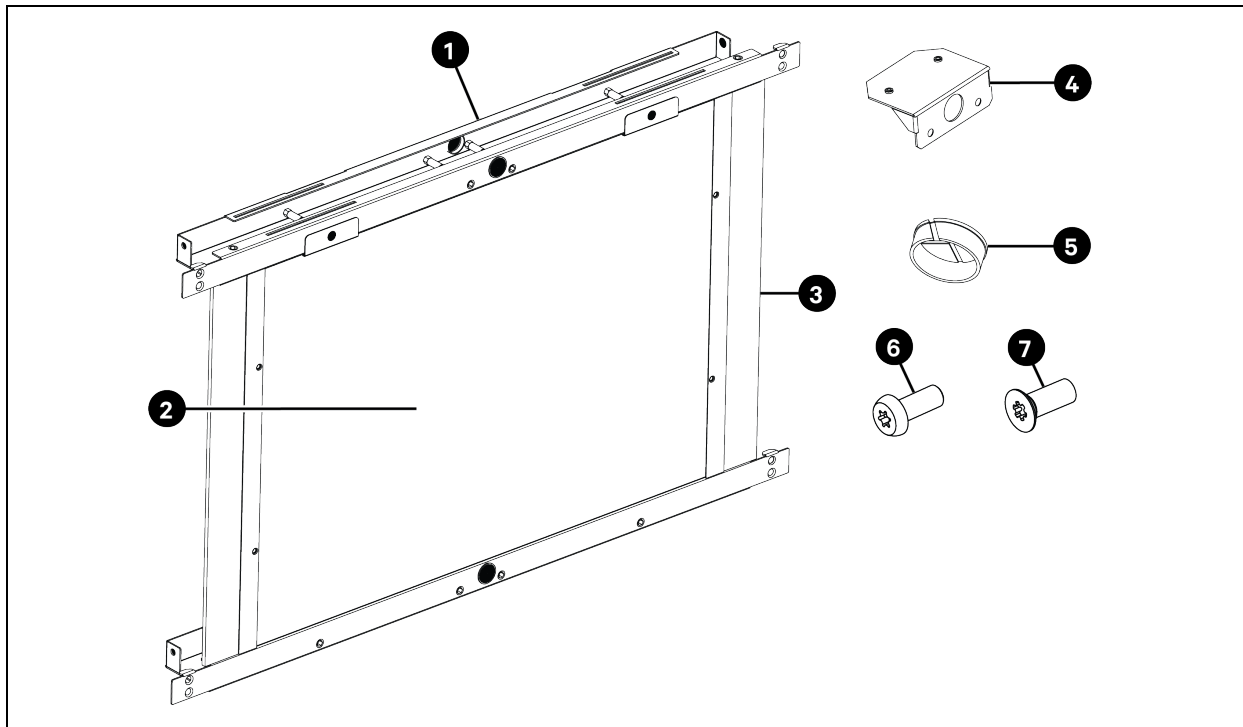


Item	Description	Quantity
1	Right vertical post	1
2	Left vertical post	1
3	End sealing bracket	1
4	2U end sealing bracket	5
5	1U end sealing bracket	1
6	Hole plug	20

Item	Description	Quantity
7	Cable ring	8
8	Torx pan head screw, M8 x 20	14
9	Expansion bolt, M12	8
10	Sealing foam	-

### 4.1.7 Width Connector

Model	Description
VC-FM-0002	Width connector, 914.4 mm (3 ft)
VC-FM-0003	Width connector, 1219.2 mm (4 ft)
VC-FM-0004	Width connector, 1828.8 mm (6 ft)

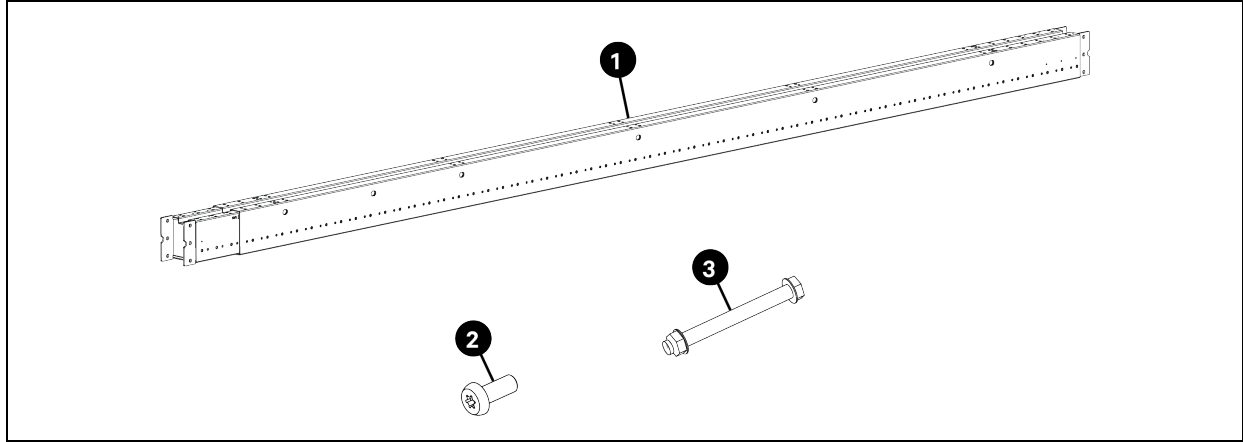


Item	Description	Quantity
1	Width beam	2
2	Width panel	2
3	Brush	4
4	Motion sensor bracket	1
5	Cable ring	2
6	Torx pan head screw, M8 x 20	4
7	Torx countersunk screw, M6 x 12	14



## 4.1.8 Extendable Beam

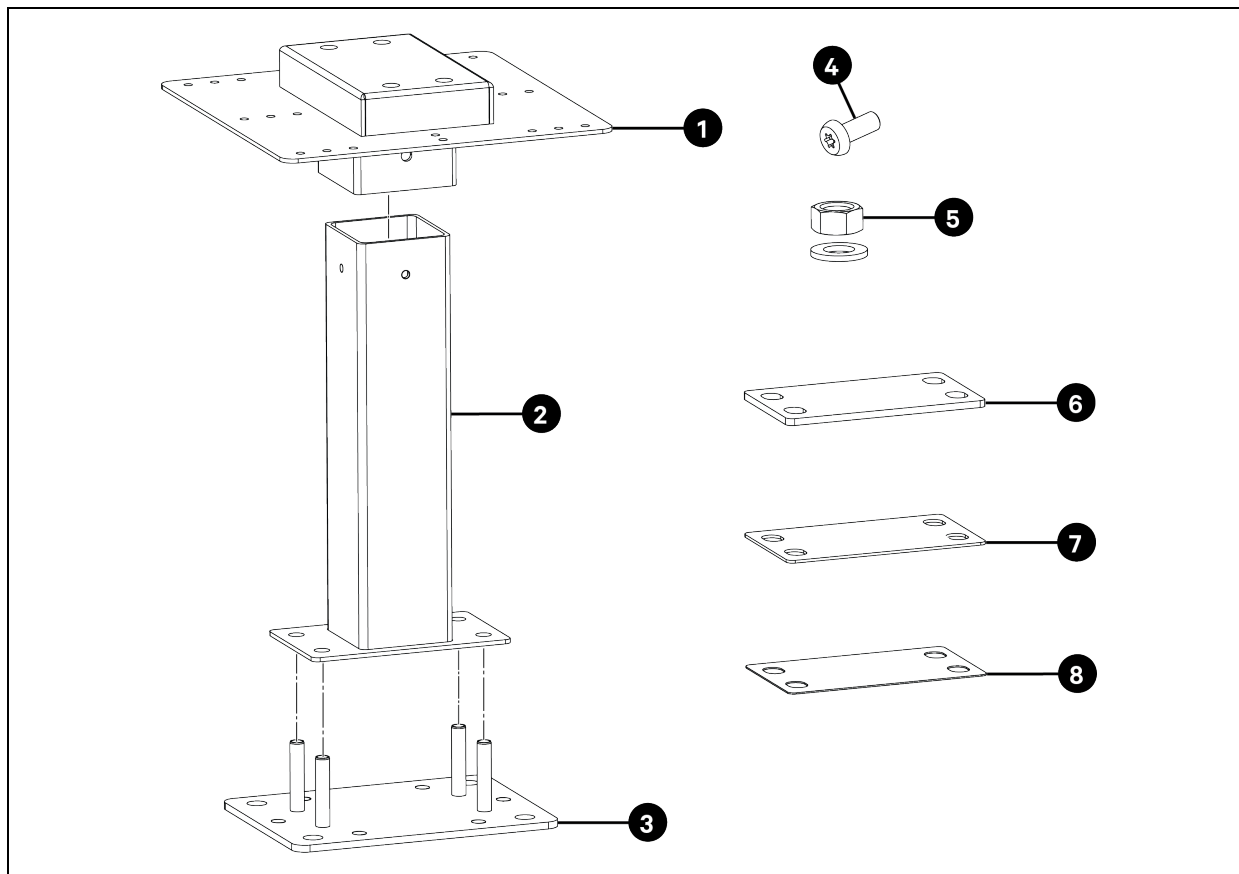
Model	Description
VC-FM-0005	Extendable beam



Item	Description	Quantity
1	Extendable beam	2
2	Torx pan head screw, M8 x 20	12
3	Bolt & nut, M12 x 120	9

### 4.1.9 Floor Stand

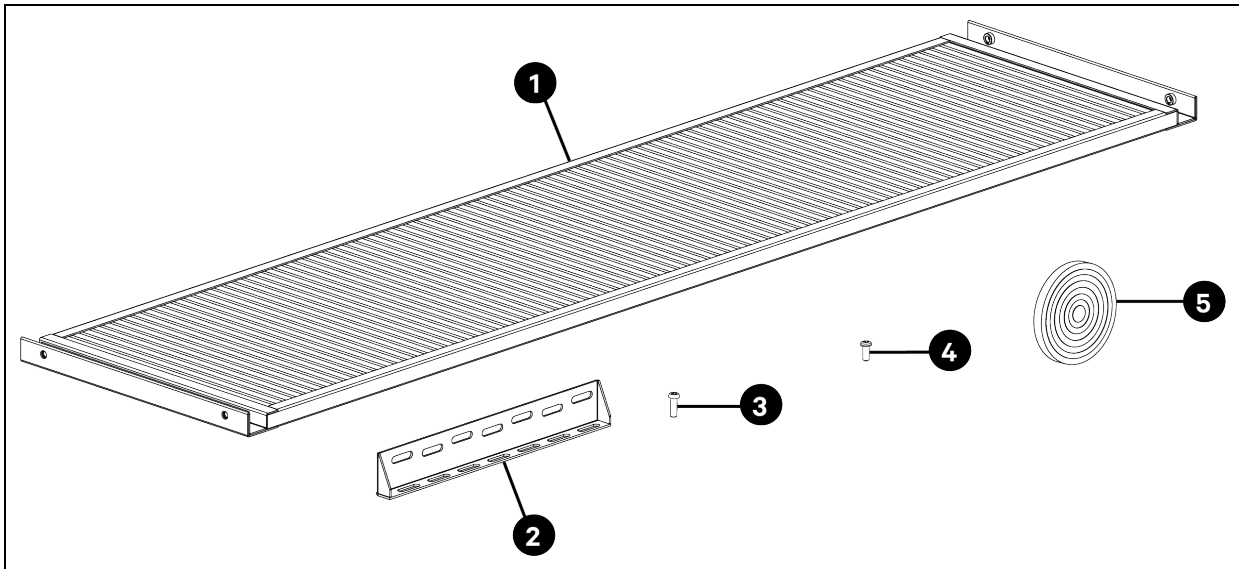
Model	Description
VC-FM-0006	Floor stand, 305 mm (12 in.)
VC-FM-0007	Floor stand, 406 mm (16 in.)
VC-FM-0008	Floor stand, 406 mm (16 in.)
VC-FM-0009	Floor stand, 406 mm (16 in.)
VC-FM-0010	Floor stand, 914 mm (36 in.)



Item	Description	Quantity
1	Top part	2
2	Middle tube	2
3	Bottom part	2
4	Hexagon head bolt, M8 x 30	6
5	Nut, M12	8
6	Leveling plate, 5.0 mm	18
7	Leveling plate, 2.0 mm	4
8	Leveling plate, 1.0 mm	2

## 4.1.10 Shrink Roof

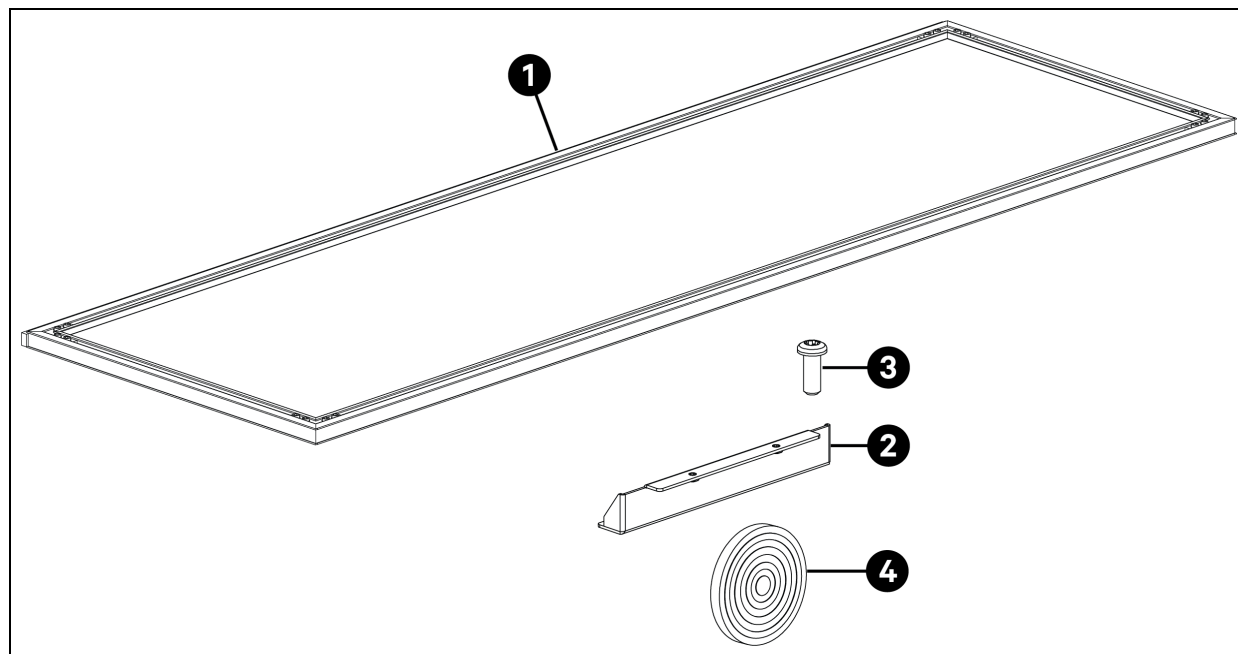
Model	Description
VC-RF-0001	Shrink roof, 304.8 mm x 914.4 mm (1 ft x 3 ft)
VC-RF-0002	Shrink roof, 304.8 mm x 1219.2 mm (1 ft x 4 ft)
VC-RF-0003	Shrink roof, 304.8 mm x 1828.8 mm (1 ft x 6 ft)
VC-RF-0004	Shrink roof, 609.6 mm x 914.4 mm (2 ft x 3 ft)
VC-RF-0005	Shrink roof, 609.6 mm x 1219.2 mm (2 ft x 4 ft)
VC-RF-0006	Shrink roof, 609.6 mm x 1828.8 mm (2 ft x 6 ft)



Item	Description	Quantity
1	Shrink roof	1
2	Shrink roof bracket (assembled in factory)	2
3	Torx pan head screw, M6 x 20	4
4	Torx self tapping screw, M6 x 12	4
5	Sealing foam (assembled in factory)	-

### 4.1.11 Fixed Roof

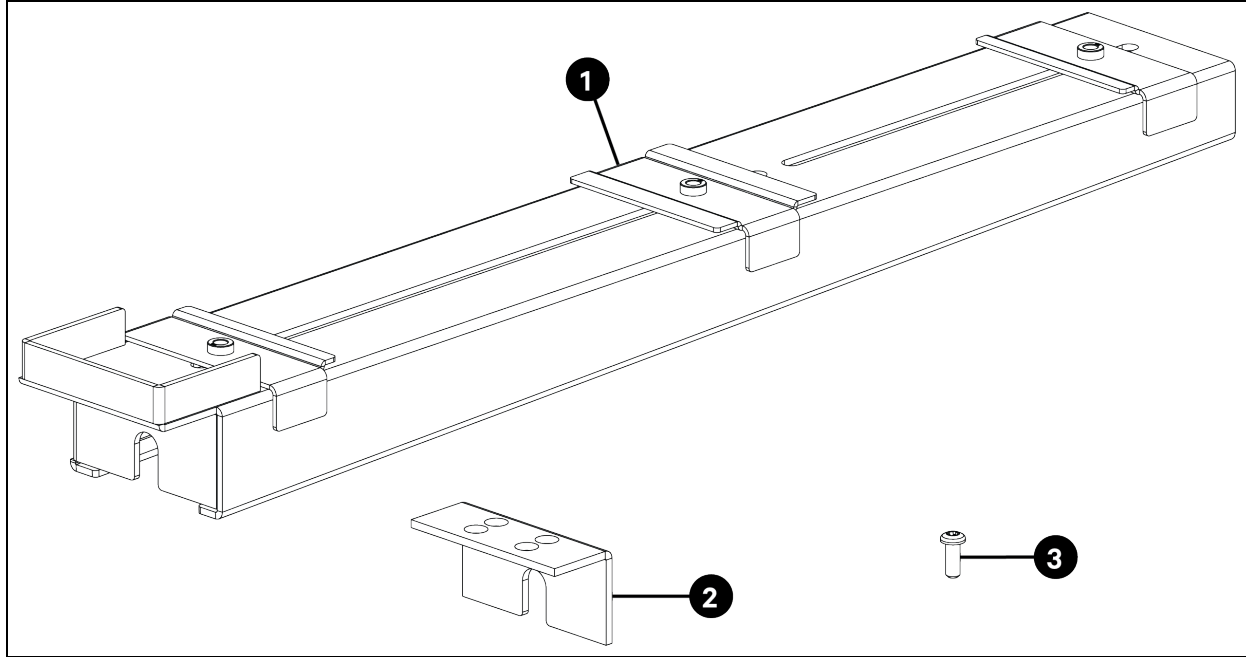
Model	Description
VC-RF-0007	Fixed roof, 304.8 mm x 914.4 mm (1 ft x 3 ft)
VC-RF-0008	Fixed roof, 304.8 mm x 1219.2 mm (1 ft x 4 ft)
VC-RF-0009	Fixed roof, 304.8 mm x 1828.8 mm (1 ft x 6 ft)
VC-RF-0010	Fixed roof, 609.6 mm x 914.4 mm (2 ft x 3 ft)
VC-RF-0011	Fixed roof, 609.6 mm x 1219.2 mm (2 ft x 4 ft)
VC-RF-0012	Fixed roof, 609.6 mm x 1828.8 mm (2 ft x 6 ft)



Item	Description	Quantity
1	Fixed roof	1
2	Bracket	2
3	Torx self-tapping screw, M6 x 16	4
4	Sealing foam (assembled in factory)	-

### 4.1.12 Cantilever Arm

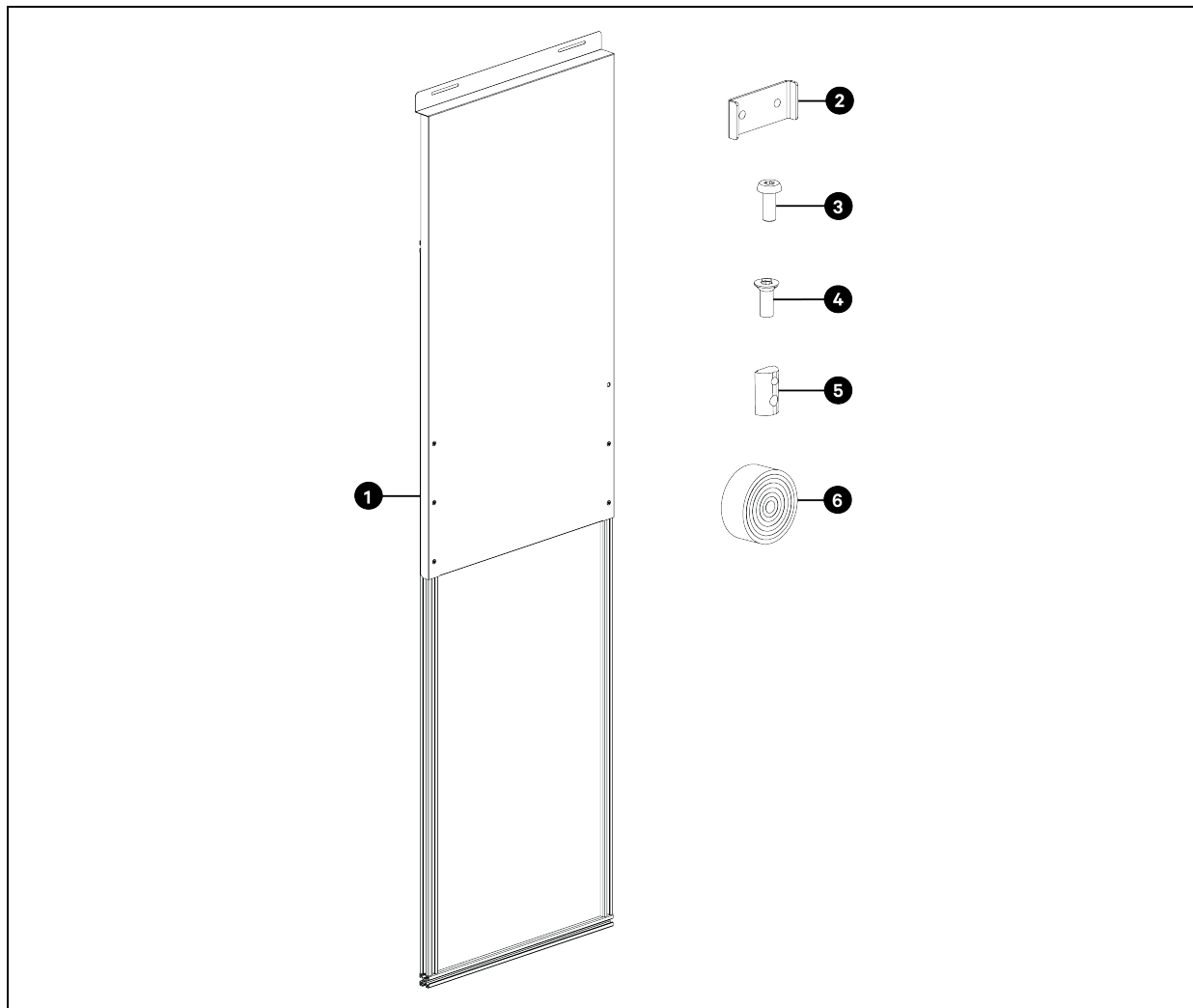
Model	Description
VC-AC-0001	Cantilever arm



Item	Description	Quantity
1	Arm	8
2	Leveling pad	8
3	Torx self-tapping screw, M6 x 16	40
	Torx pan head screw, M6 x 16	

### 4.1.13 Blanking Panel

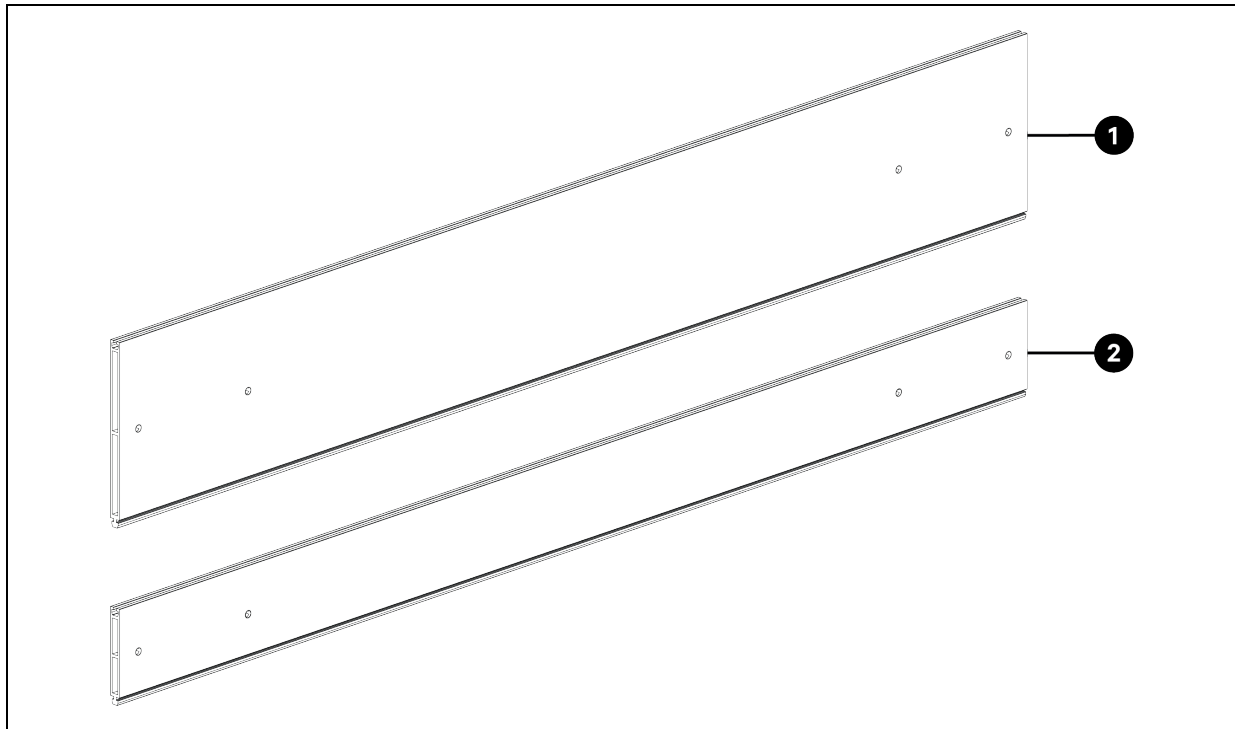
Model	Description
VC-AC-0002	Blanking panel, 300 mm (11.81 in.)
VC-AC-0003	Blanking panel, 600 mm (23.62 in.)
VC-AC-0004	Blanking panel, 800 mm (31.49 in.)



Item	Description	Quantity
1	Blanking panel	1
2	Bay kits	3
3	Torx self-tapping screw, M6 x 16	2
4	Torx countersunk screw, M6 x 12	12
5	Spring floating nut	12
6	Sealing foam	-

## 4.1.14 Height Adapter

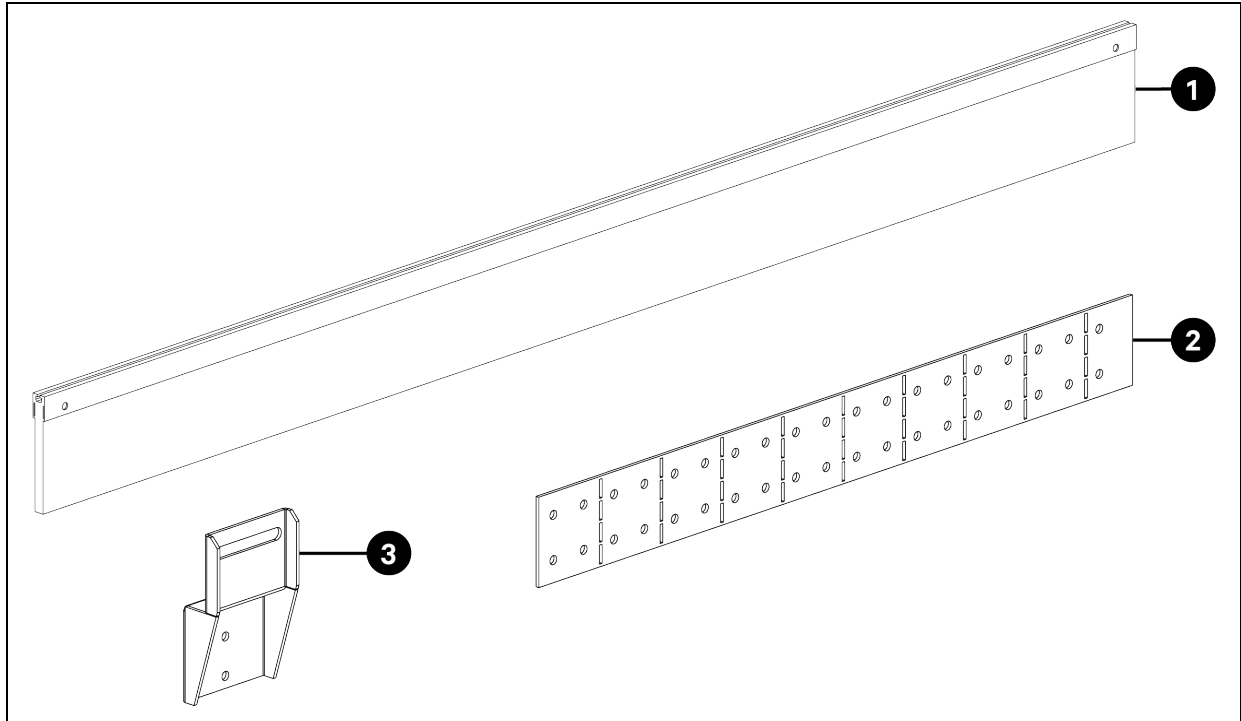
Model	Description
VC-AC-0005	Height adapter, 1U x 300 mm (11.81 in.)
VC-AC-0006	Height adapter, 2U x 300 mm (11.81 in.)
VC-AC-0007	Height adapter, 1U x 600 mm (23.62 in.)
VC-AC-0008	Height adapter, 2U x 600 mm (23.62 in.)
VC-AC-0009	Height adapter, 1U x 800 mm (31.49 in.)
VC-AC-0010	Height adapter, 2U x 800 mm (31.49 in.)



Item	Description	Quantity
1	2U height adapter	10
2	1U height adapter	10

### 4.1.15 Height Adapter Brush

Model	Description
VC-AC-0011	Height adapter brush, 300 mm (11.81 in.)
VC-AC-0012	height adapter brush, 600 mm (23.62 in.)
VC-AC-0013	height adapter brush, 800 mm (31.49 in.)

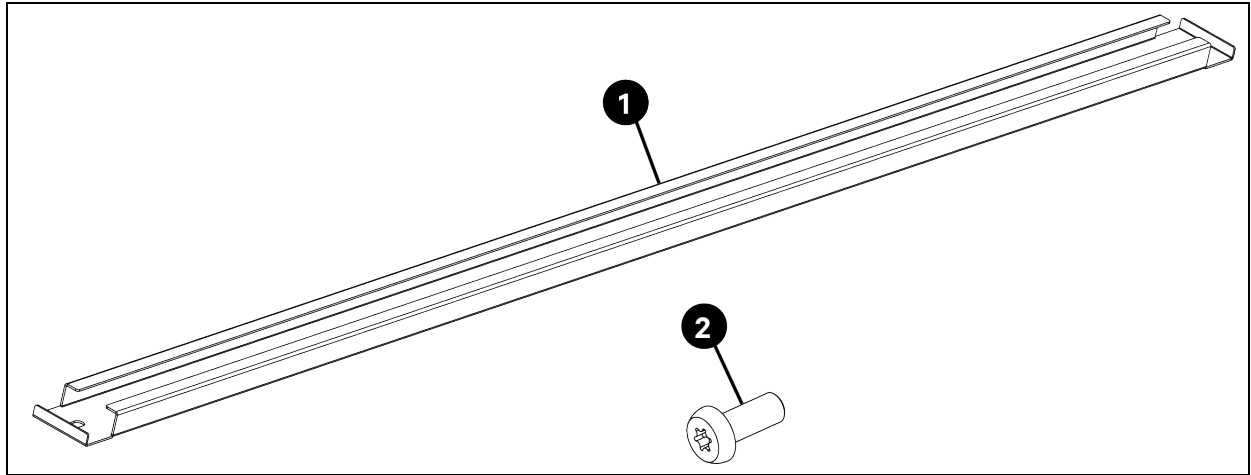


Item	Description	Quantity
1	Height adapter brush	10
2	Height adapter bracket	10
3	Height adapter rail	10



### 4.1.16 Solid Roof Filler

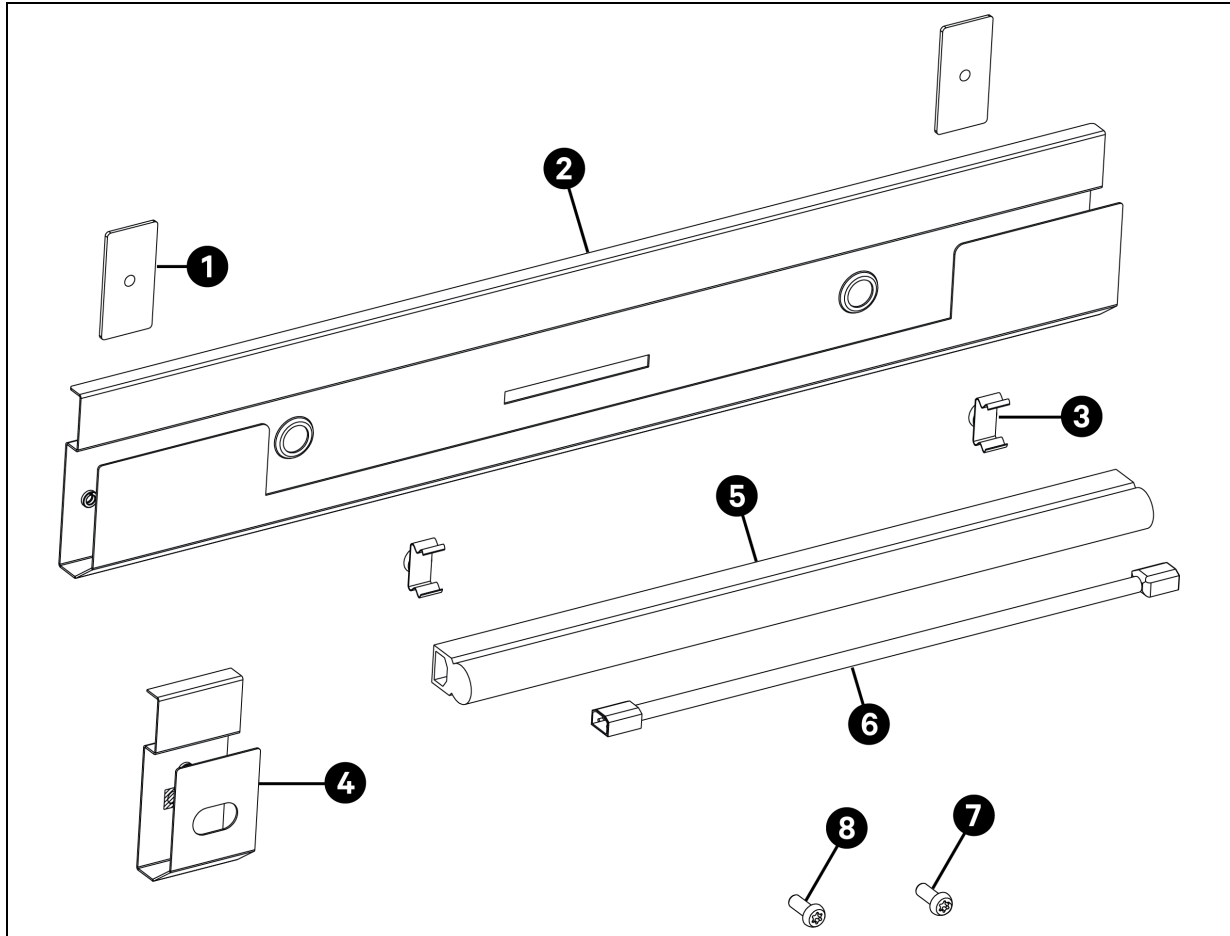
Model	Description
VC-AC-0014	Solid roof filler, 914.4 mm (3 ft)
VC-AC-0015	Solid roof filler, 1219.2 mm (4 ft)
VC-AC-0016	Solid roof filler, 1828.8 mm (6 ft)



Item	Description	Quantity
1	Solid roof filler	6
2	Self-tapping screw	12

### 4.1.17 Lighting Kits

Model	Description
VC-AC-0017	Lighting sub-assembly, 304.8 mm (1 ft)
VC-AC-0018	Lighting sub-assembly, 609.6 mm (2 ft)

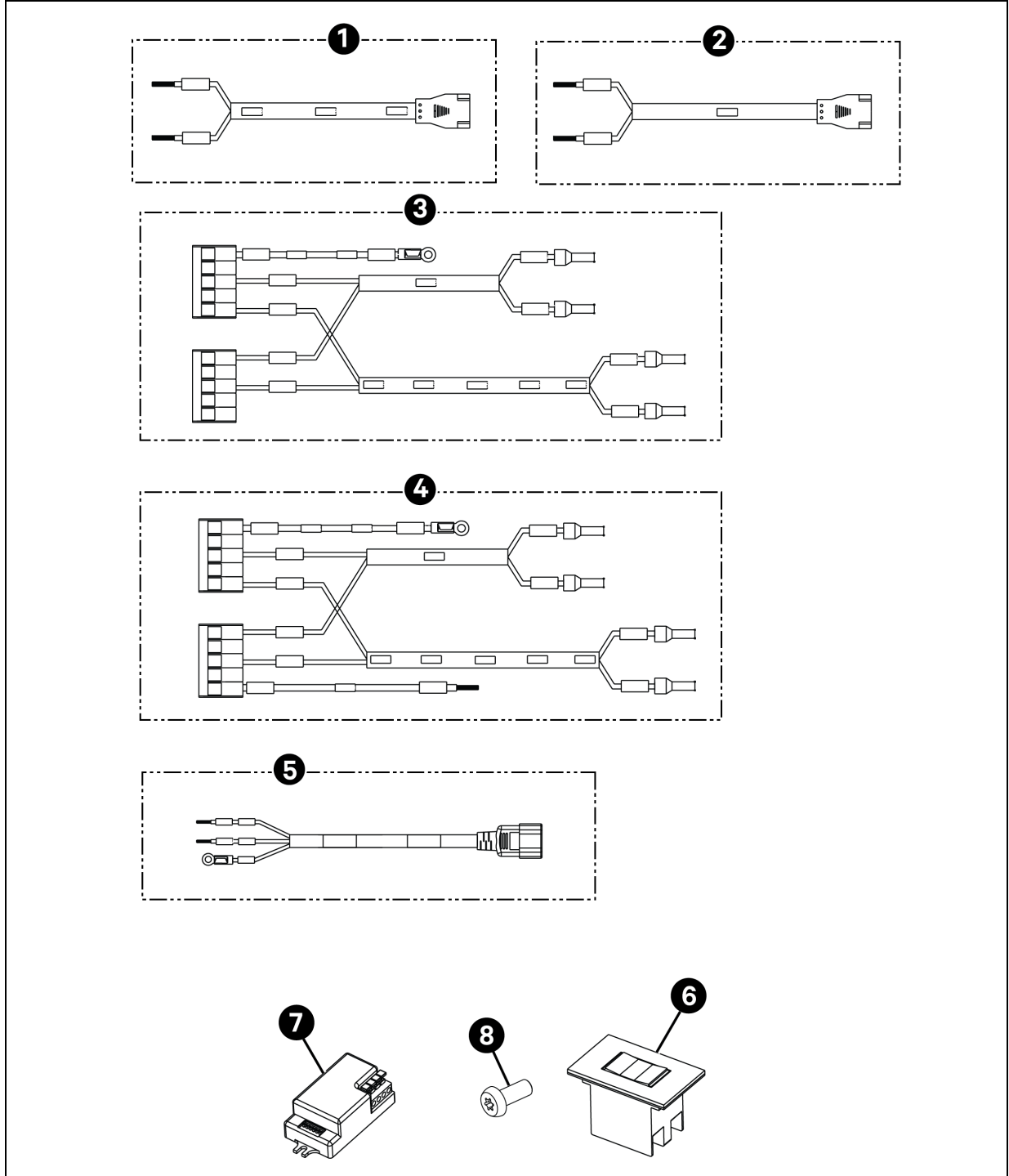


Item	Description	Quantity
1	Leveling pad*	16
2	Lighting bracket	8
3	LED mounting Kits	16
4	Lighting extender	6
5	LED lighting	8
6	Connecting cable	8
7	Torx self-tapping screw, M6 x 16	16
8	Torx countersunk screw, M5 x 12	16

\* indicates that the part is assembled in factory

### 4.1.18 Cable Package

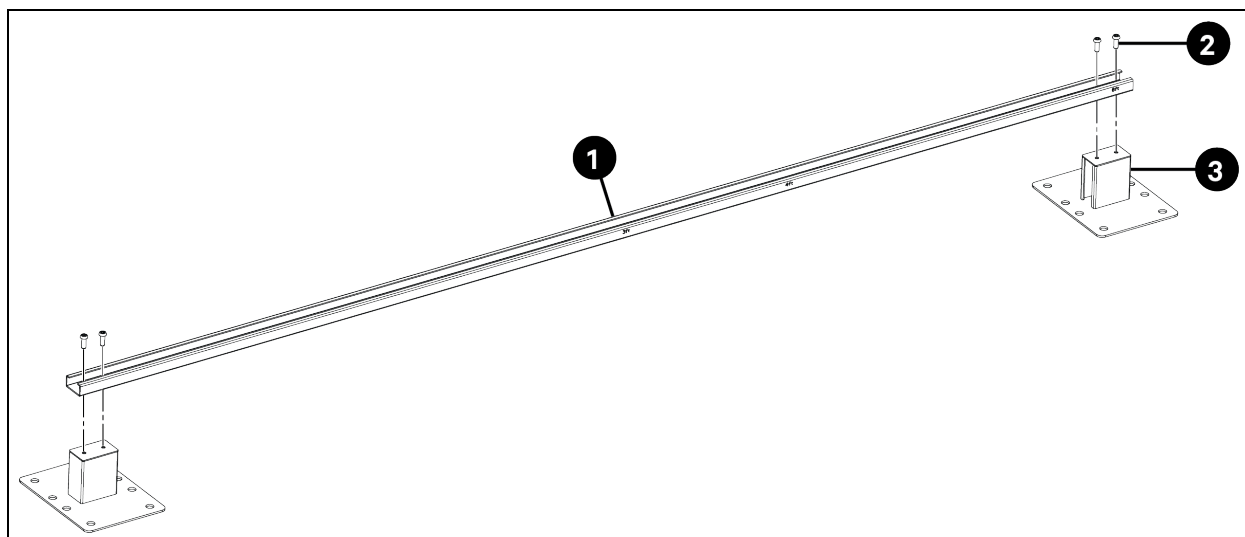
Model	Description
VC-AC-0019	Cable packaging



Item	Description	Quantity
1	Cable, W08	1
2	Cable, W11	1
3	Cable, W03, W07, and W05	1
4	Cable, W06, W02, W04, and W10	1
5	Cable, W01	1
6	Switch	1
7	Motion sensor	2
8	Torx pan head screw, M4 x 10	4

### 4.1.19 Alignment Tool

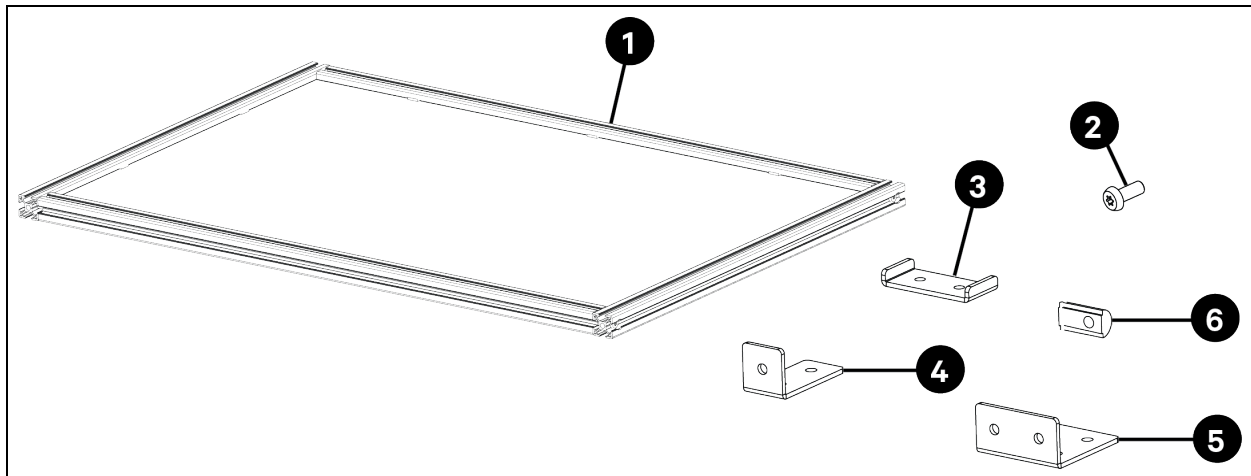
Model	Description
VC-AC-0020	Alignment tool



Item	Description	Quantity
1	Cross member	4
2	Torx pan head screw, M6 x 16	6
3	Foot	2

### 4.1.20 Vertical Duct

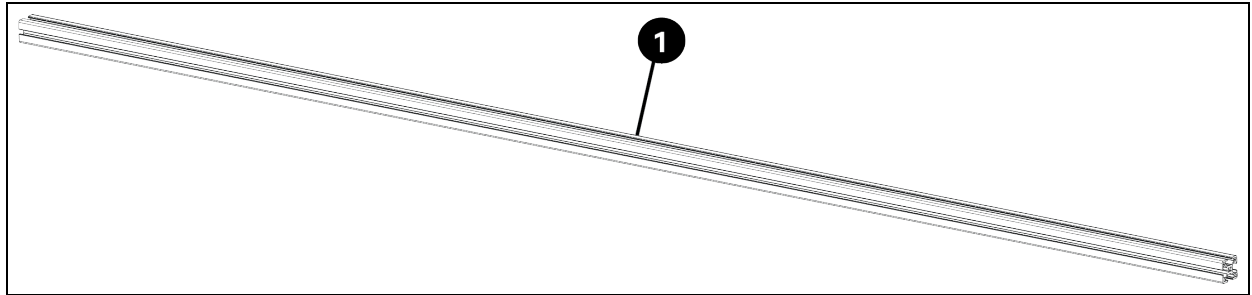
Model	Description
VC-RF-0013	Vertical duct, 304.8 mm x 304.8 mm (1 ft x 1 ft)
VC-RF-0014	Vertical duct, 304.8 mm x 609.6 mm (1 ft x 2 ft)
VC-RF-0015	Vertical duct, 304.8 mm x 914.4 mm (1 ft x 3 ft)
VC-RF-0016	Vertical duct, 304.8 mm x 1219.2 mm (1 ft x 4 ft)
VC-RF-0017	Vertical duct, 304.8 mm x 1524 mm (1 ft x 5 ft)
VC-RF-0018	Vertical duct, 609.6 mm x 304.8 mm (2 ft x 1 ft)
VC-RF-0019	Vertical duct, 609.6 mm x 609.6 mm (2 ft x 2 ft)
VC-RF-0020	Vertical duct, 609.6 mm x 914.4 mm (2 ft x 3 ft)
VC-RF-0021	Vertical duct, 609.6 mm x 1219.2 mm (2 ft x 4 ft)
VC-RF-0022	Vertical duct, 609.6 mm x 1524 mm (2 ft x 5 ft)
VC-RF-0023	Vertical duct, 914.4 mm x 1524 mm (3 ft x 5 ft)
VC-RF-0024	Vertical duct, 1219.2 mm x 1524 mm (4 ft x 5 ft)



Item	Description	Quantity
1	Vertical duct panel	2
2	Pan head screw	-
3	Baying kit 1	-
4	Baying kit 2	-
5	Baying kit 3	-
6	Floating nut	-

### 4.1.21 Fixed Beam

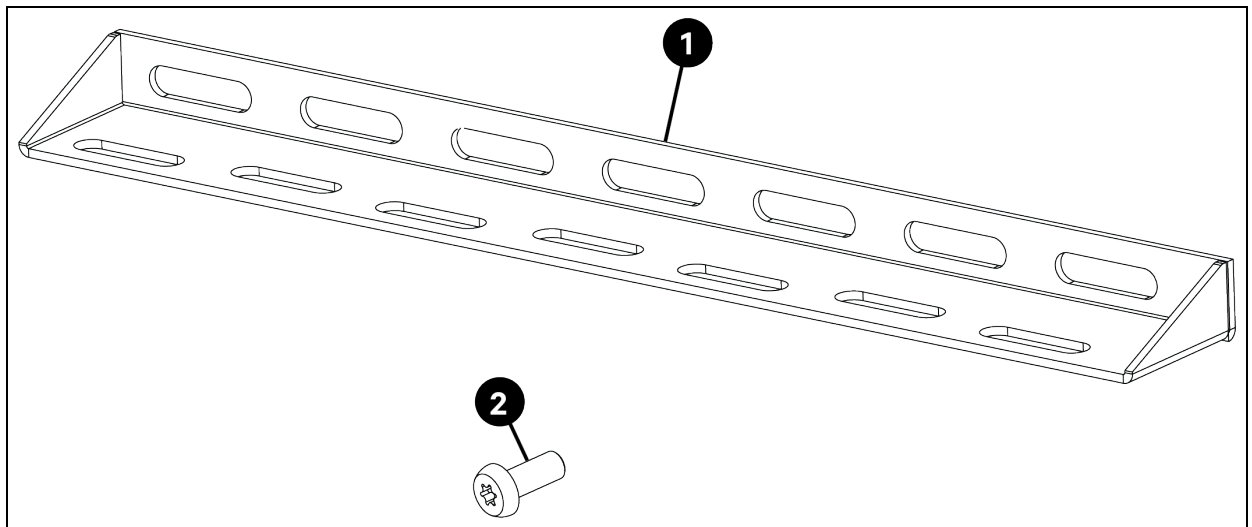
Model	Description
VC-RF-0025	Fixed beam, 914.4 mm (3 ft)
VC-RF-0026	Fixed beam, 1219.2 mm (4 ft)
VC-RF-0027	Fixed beam, 1828.8 mm (6 ft)



Item	Description	Quantity
1	Fixed beam	4

### 4.1.22 Vertical Duct Attachment

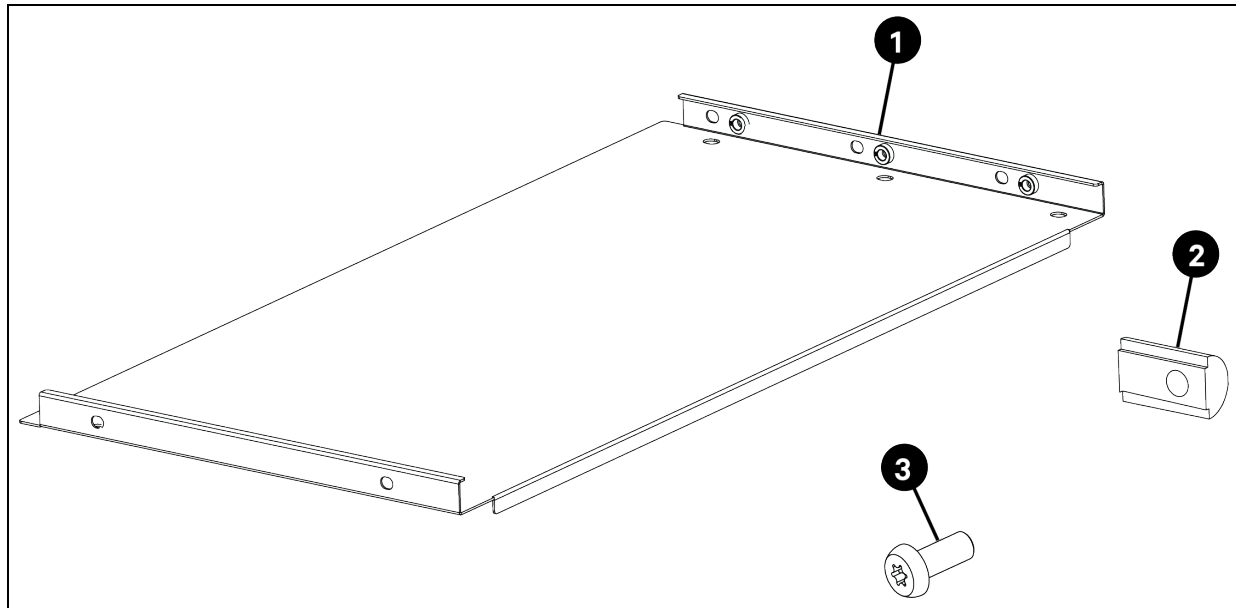
Model	Description
VC-RF-0028	Vertical duct attachment



Item	Description	Quantity
1	Vertical duct attachment	16
2	Torx self-tapping screw, M6 x 16	32

### 4.1.23 Vertical Duct Sliding

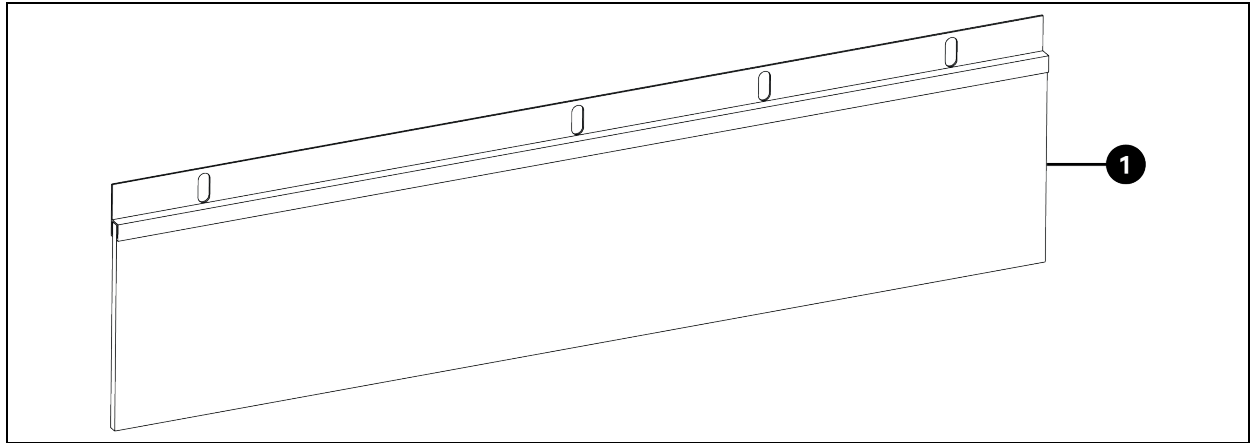
Model	Description
VC-RF-0029	Vertical duct sliding, 304.8 mm (1 ft)
VC-RF-0030	Vertical duct sliding, 609.6 mm (2 ft)
VC-RF-0031	Vertical duct sliding, 914.4 mm (3 ft)
VC-RF-0032	Vertical duct sliding, 1219.2 mm (4 ft)



Item	Description	Quantity
1	Vertical duct sliding	2
2	Floating nut	-
3	Torx pan head screw, M6 x 14	-

### 4.1.24 Extend Pod Brush

Model	Description
VC-AC-0021	Extend pod brush, 304.8 mm (1 ft)
VC-AC-0022	Extend pod brush, 609.6 mm (2 ft)
VC-AC-0023	Extend pod brush, 1524 mm (5 ft)

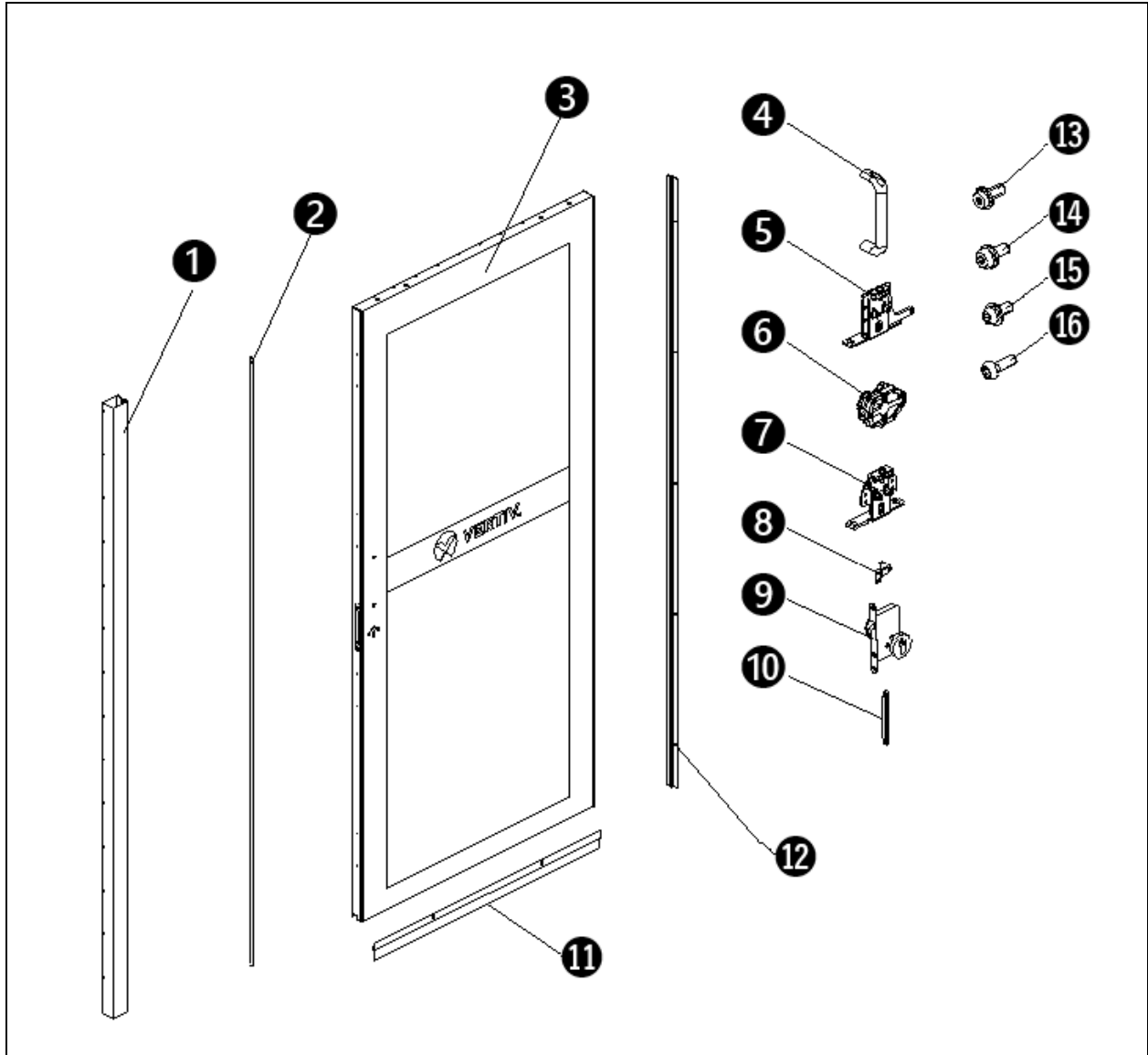


Item	Description	Quantity
1	Extend pod brush	4



### 4.1.25 Right Opening Sliding Door (914.4 mm (3 ft))

Model	Description
VC-DR-0017	Right opening sliding door (reusing the 1828.8 mm (6 ft) right sliding door), 914.4 mm (3 ft)

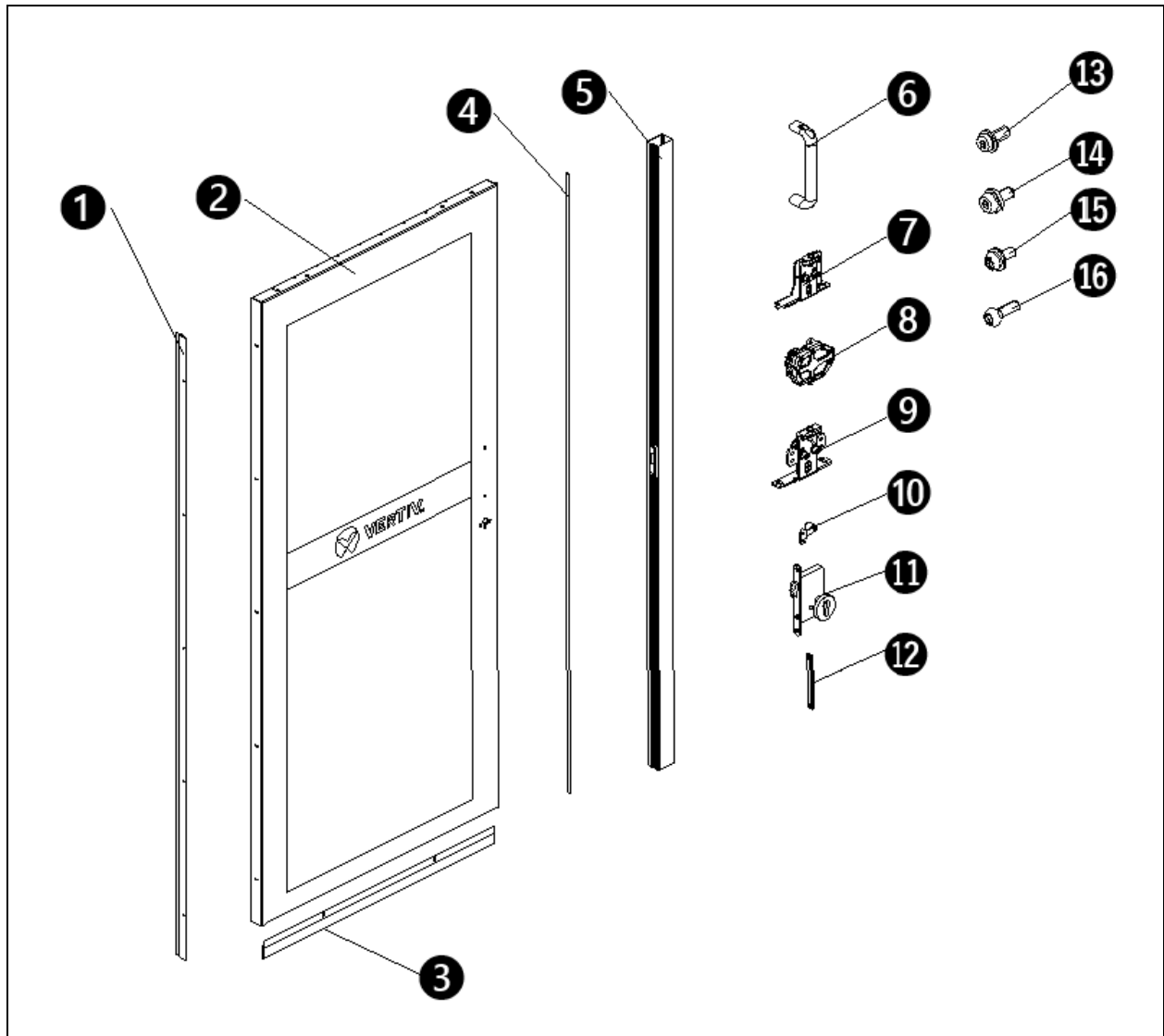


Item	Description	Quantity
1	Right sliding door adapter, 914.4 mm (3 ft)	1
2	Sealing strip*	2
3	Right sliding door, 914.4 mm (3 ft)	1
4	Door handle	1
5	Front hanger roller B*	1
6	Brake*	1

Item	Description	Quantity
7	Rear hanger roller*	1
8	End wheel	1
9	Mechanical lock	1
10	Limit block*	4
11	Bottom brush	1
12	Side brush*	1
13	Torx pan head screw, M8 x 20	8
14	Torx pan head screw, M5 x 14	5
15	Torx pan head screw, M4 x 10	7
16	Torx pan head screw, M3 x 10	8
* indicates that the part is assembled in factory		

### 4.1.26 Left Opening Sliding Door (914.4 mm (3 ft))

Model	Description
VC-DR-0018	Left opening sliding door, 914.4 mm (3 ft)

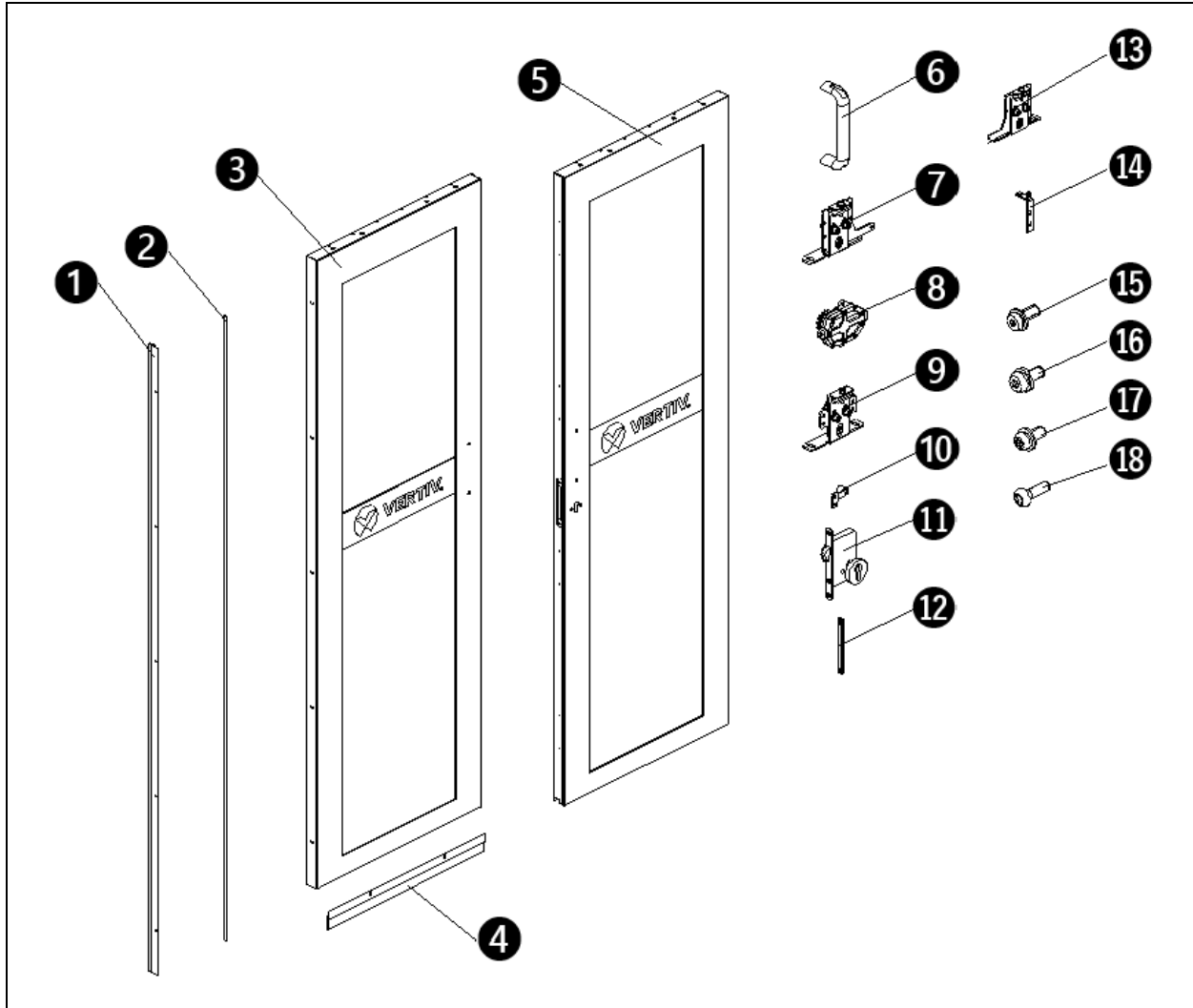


Item	Description	Quantity
1	Side brush*	1
2	Left sliding door , 914.4 mm (3 ft)	1
3	Bottom brush	1
4	Sealing strip*	2
5	Left sliding door adapter, 914.4 mm (3 ft)	1
6	Door handle	1
7	Front hanger roller A*	1

Item	Description	Quantity
8	Brake*	1
9	Rear hanger roller*	1
10	End wheel	1
11	Mechanical lock	1
12	Limit block*	4
13	Torx pan head screw, M8 x 20	8
14	Torx pan head screw, M5 x 14	5
15	Torx pan head screw, M4 x 10	7
16	Torx pan head screw, M3 x 10	8
* indicates that the part is assembled in factory		

### 4.1.27 Sliding Door (1219.2 mm (4 ft))

Model	Description
VC-DR-0016	Sliding door (including left door and right door), 1219.2 mm (4 ft)

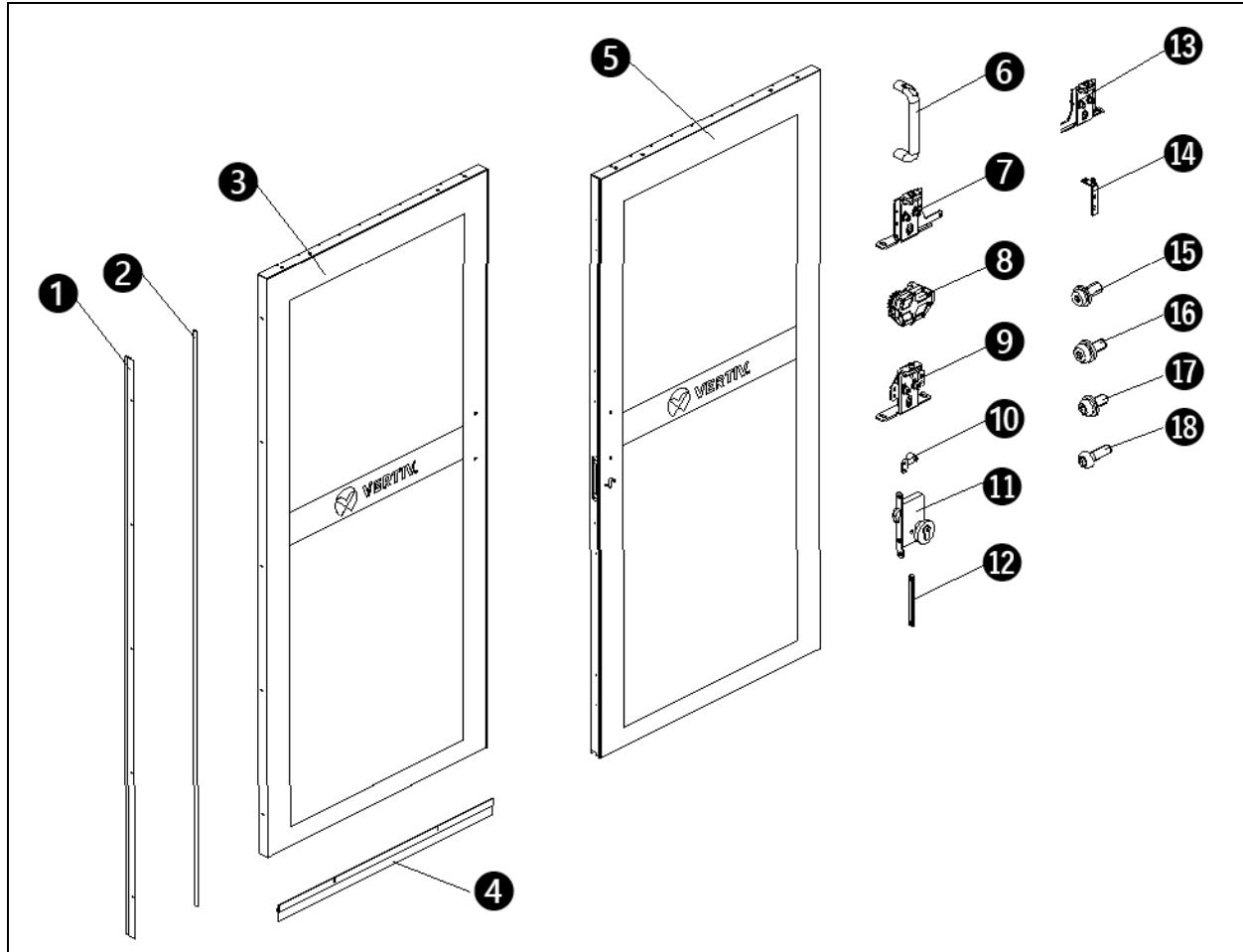


Item	Description	Quantity
1	Side brush*	2
2	Sealing strip*	2
3	Left sliding door, 1219.2 mm (4 ft)	1
4	Bottom brush	2
5	Right sliding door, 1219.2 mm (4 ft)	1
6	Door handle	2
7	Front hanger roller A*	1
8	Brake*	1

Item	Description	Quantity
9	Rear hanger roller*	2
10	End wheel	1
11	Mechanical lock	1
12	Limit block*	4
13	Front hanger roller B*	1
14	Threading support*	2
15	Torx pan head screw, M8 x 20	8
16	Torx pan head screw, M5 x 14	8
17	Torx pan head screw, M4 x 10	14
18	Torx pan head screw, M3 x 10	8
* indicates that the part is assembled in factory		

### 4.1.28 Sliding Door (1828.8 mm (6 ft))

Model	Description
VC-DR-0015	Sliding door (including left door and right door), 1828.8 mm (6 ft)



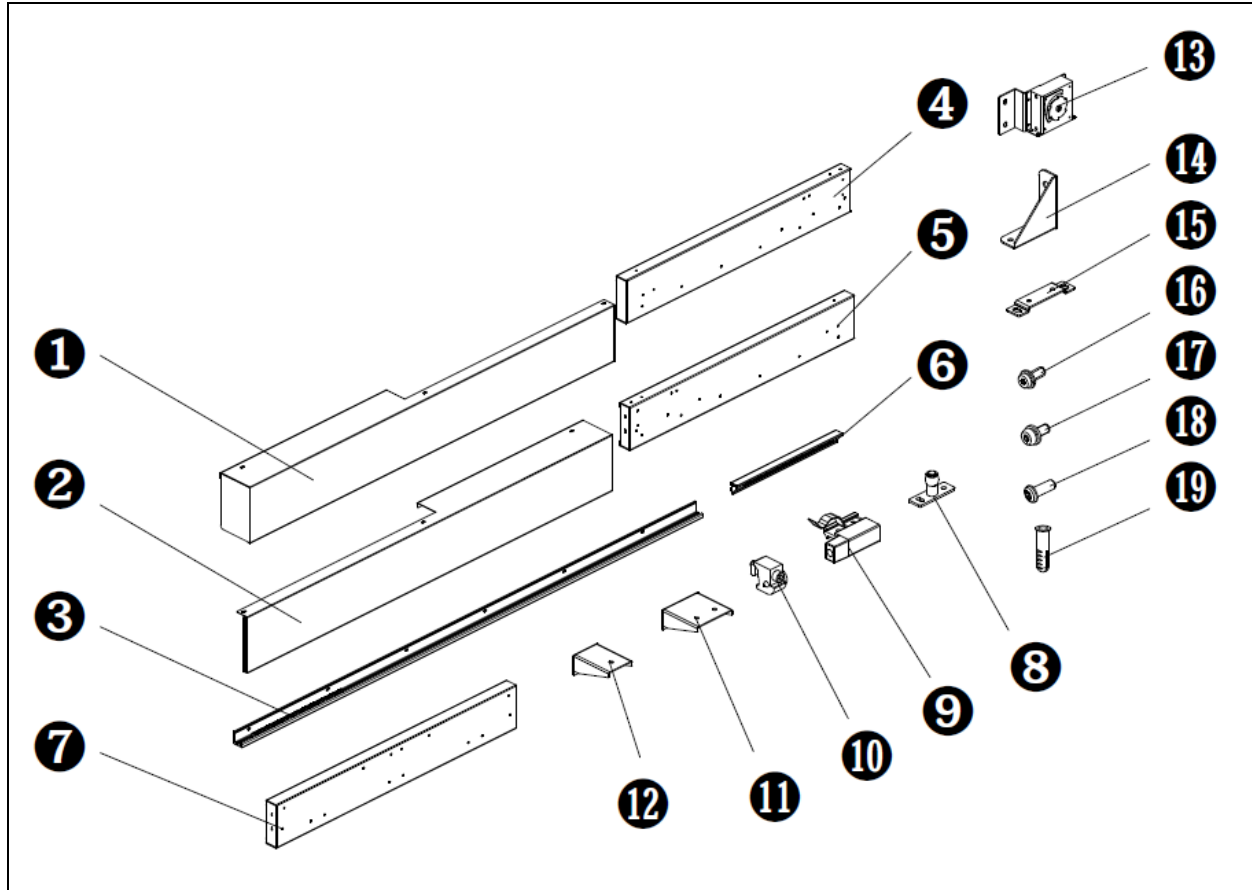
Item	Description	Quantity
1	Side brush*	2
2	Sealing strip*	2
3	Left sliding door, 1828.8 mm (6 ft)	1
4	Bottom brush	2
5	Right sliding door, 1828.8 mm (6 ft)	1
6	Door handle	2
7	Front hanger roller A*	1
8	Brake*	1
9	Rear hanger roller*	2
10	End wheel	1

Item	Description	Quantity
11	Mechanical lock	1
12	Limit block*	4
13	Front hanger roller B*	1
14	Threading support*	2
15	Torx pan head screw, M8 x 20	8
16	Torx pan head screw, M5 x 14	8
17	Torx pan head screw, M4 x 10	14
18	Torx pan head screw, M3 x 10	8
* indicates that the part is assembled in factory		



### 4.1.29 Right Opening Door Sliding Rail Cover Component (914.4 mm (3 ft))

Model	Description
VC-DR-0022	Right opening door sliding rail cover component, 914.4 mm (3 ft)

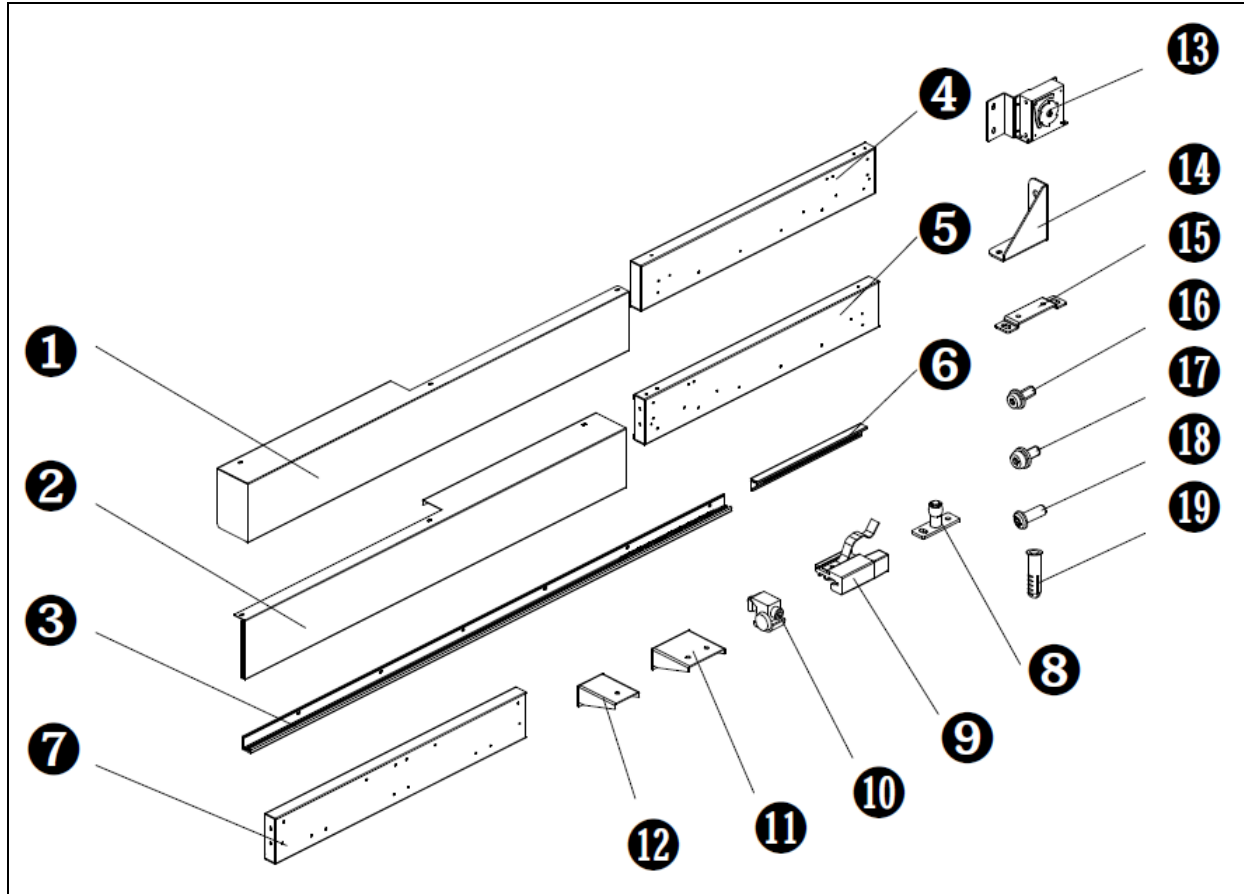


Item	Description	Quantity
1	Left sliding rail cover, 914.4 mm (3 ft)	1
2	Right sliding rail cover, 914.4 mm (3 ft)	1
3	Right sliding rail, 914.4 mm (3 ft)	1
4	Left extension beam, 914.4 mm (3 ft)	1
5	Right extension beam, 914.4 mm (3 ft)	1
6	Rail of plastic tooth belt	1
7	Sliding door width beam, 914.4 mm (3 ft)	1
8	Door guide	1
9	Full open device	1
10	Stopper	1
11	Cover bracket A	1
12	Cover bracket B	2

Item	Description	Quantity
13	Drive device	1
14	Extension beam bracket	2
15	Door guide bracket	1
16	Torx pan head screw, M8 x 20	10
17	Torx pan head screw, M5 x 14	30
18	Torx self tapping screw, M6 x 16	2
19	Plastic expansion tube	2

### 4.1.30 Left Opening Door Sliding Rail Cover Component (914.4 mm (3 ft))

Model	Description
VC-DR-0021	Left opening door sliding rail cover component, 914.4 mm (3 ft)

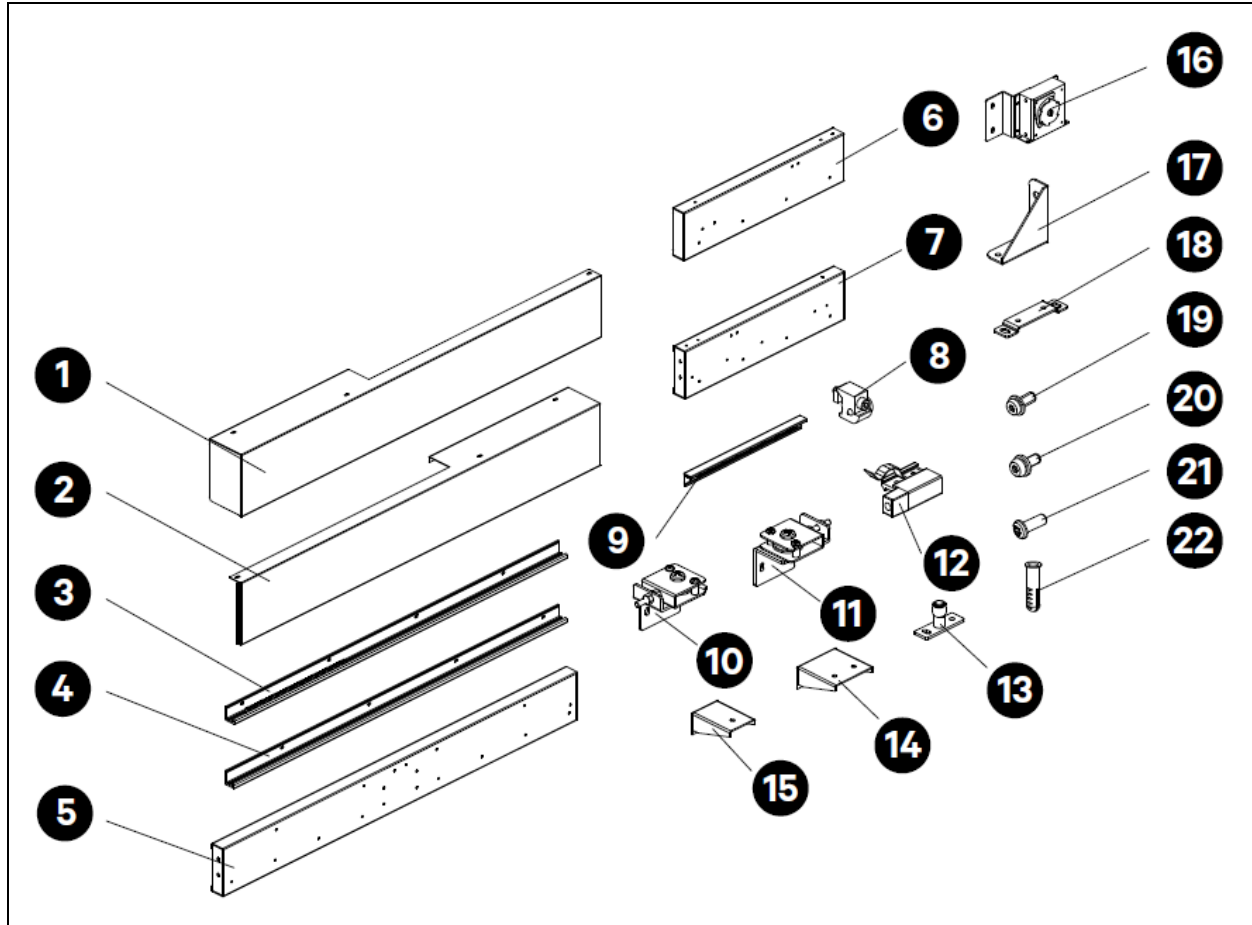


Item	Description	Quantity
1	Left sliding rail cover, 914.4 mm (3 ft)	1
2	Right sliding rail cover, 914.4 mm (3 ft)	1
3	Left sliding rail, 914.4 mm (3 ft)	1
4	Left extension beam, 914.4 mm (3 ft)	1
5	Right extension beam, 914.4 mm (3 ft)	1
6	Rail of plastic tooth belt	1
7	Sliding door width beam, 914.4 mm (3 ft)	1
8	Door guide	1
9	Full open device	1
10	Stopper	1
11	Cover bracket A	1
12	Cover bracket B	2

Item	Description	Quantity
13	Drive device	1
14	Extension beam bracket	2
15	Door guide bracket	1
16	Torx pan head screw, M8 x 20	10
17	Torx pan head screw, M5 x 14	30
18	Torx self tapping screw, M6 x 16	2
19	Plastic expansion tube	2

### 4.1.31 Sliding Rail Cover Component (1219.2 mm (4 ft))

Model	Description
VC-DR-0020	Sliding rail cover component, 1219.2 mm (4 ft)

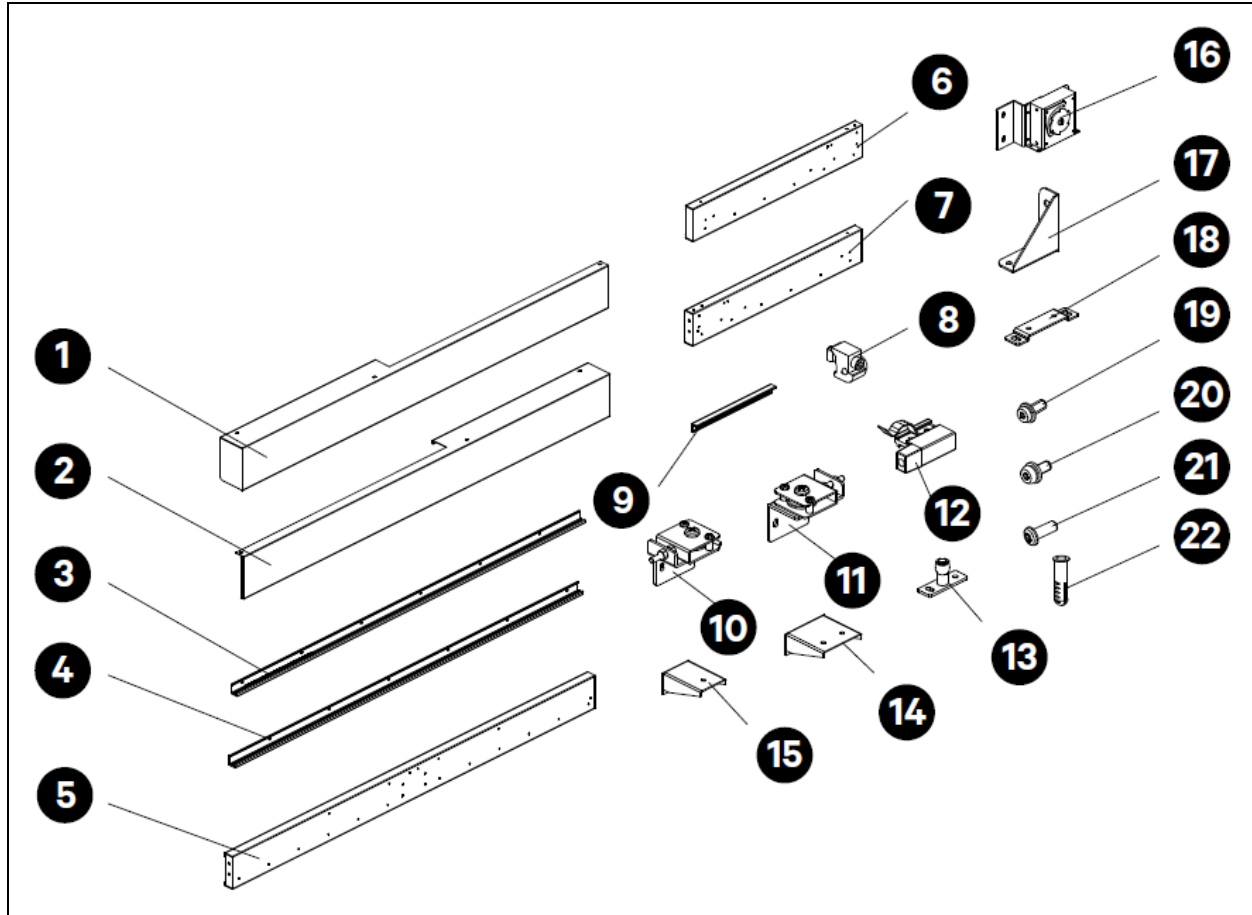


Item	Description	Quantity
1	Left sliding rail cover, 1219.2 mm (4 ft)	1
2	Right sliding rail cover, 1219.2 mm (4 ft)	1
3	Right sliding rail, 1219.2 mm (4 ft)	1
4	Left sliding rail, 1219.2 mm (4 ft)	1
5	Sliding door width beam, 1219.2 mm (4 ft)	1
6	Left extension beam, 1219.2 mm (4 ft)	1
7	Right extension beam, 1219.2 mm (4 ft)	1
8	Stopper	1
9	Rail of plastic tooth belt	1
10	Left steering wheel	1
11	Right steering wheel	1

Item	Description	Quantity
12	Full open device	1
13	Door guide	2
14	Cover bracket A	1
15	Cover bracket B	2
16	Drive device	1
17	Extension beam bracket	2
18	Door guide bracket	2
19	Torx pan head screw, M8 x 20	10
20	Torx pan head screw; M5 x 14	34
21	Torx self tapping screw, M6 x 16	4
22	Plastic expansion tube	4

### 4.1.32 Sliding Rail Cover Component (1828.8 mm (6 ft))

Model	Description
VC-DR-0019	Sliding rail cover component, 1828.8 mm (6 ft)



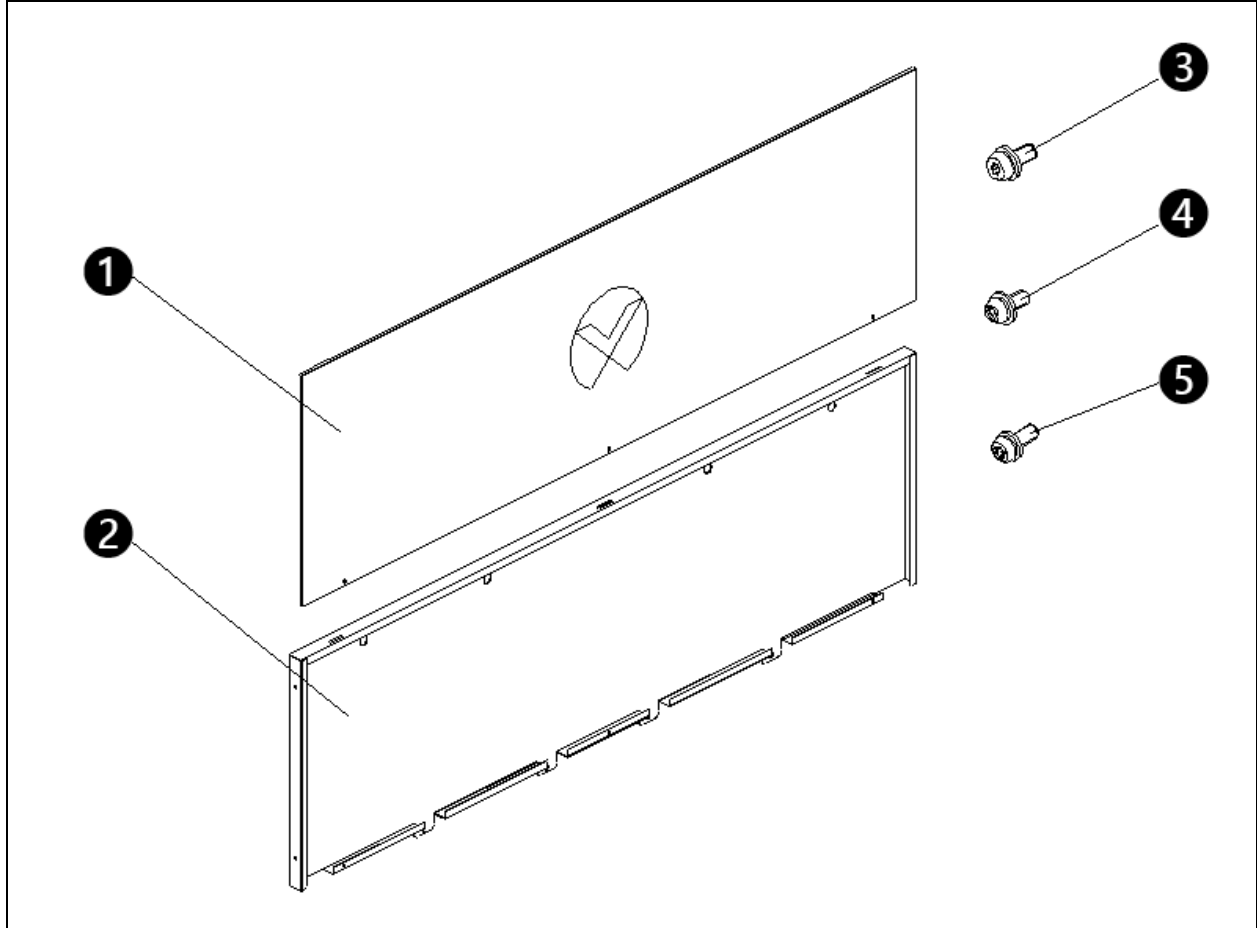
Item	Description	Quantity
1	Left sliding rail cover, 1828.8 mm (6 ft)	1
2	Right sliding rail cover, 1828.8 mm (6 ft)	1
3	Right sliding rail, 1828.8 mm (6 ft)	1
4	Left sliding rail, 1828.8 mm (6 ft)	1
5	Sliding door width beam, 1828.8 mm (6 ft)	1
6	Left extension beam, 1828.8 mm (6 ft)	1
7	Right extension beam, 1828.8 mm (6 ft)	1
8	Stopper	1
9	Rail of plastic tooth belt	1
10	Left steering wheel	1
11	Right steering wheel	1

Item	Description	Quantity
12	Full open device	1
13	Door guide	2
14	Cover bracket A	1
15	Cover bracket B	2
16	Drive device	1
17	Extension beam bracket	2
18	Door guide bracket	2
19	Torx pan head screw, M8 x 20	10
20	Torx pan head screw, M5 x 14	38
21	Torx self tapping screw, M6 x 16	4
22	Plastic expansion tube	4



### 4.1.33 Sliding Door Header (914.4 mm (3 ft) and 1219.2 mm (4 ft))

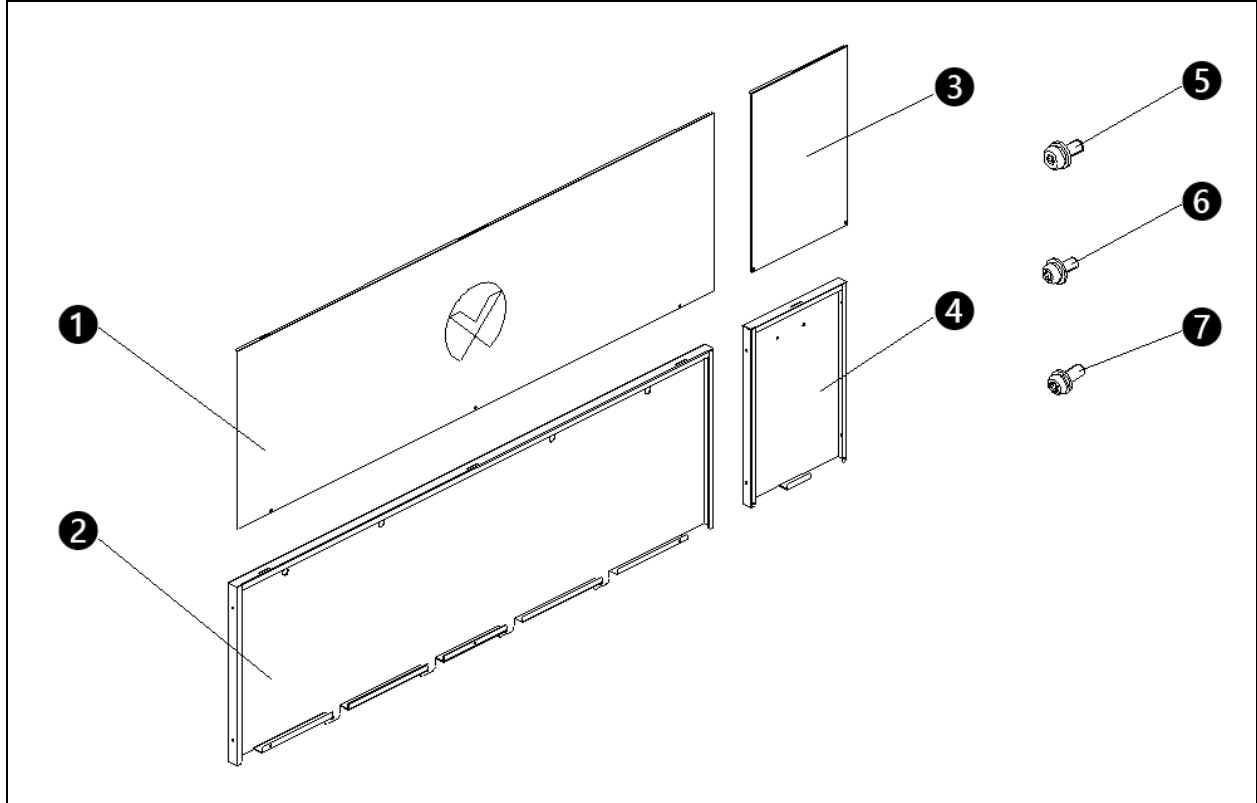
Model	Description
VC-DR-0024	Sliding door header, 914.4 mm (3 ft) and 1219.2 mm (4 ft)



Item	Description	Quantity
1	Sliding door header cover, 914.4 mm (3 ft) and 1219.2 mm (4 ft)	1
2	Sliding door header panel, 914.4 mm (3 ft) and 1219.2 mm (4 ft)	1
3	Torx pan head screw, M5 x 14	4
4	Torx pan head screw, M4 x 10	3
5	Torx pan head screw, M6 x 16	2

### 4.1.34 Sliding Door Header (1828.8 mm (6 ft))

Model	Description
VC-DR-0023	Sliding door header, 1828.8 mm (6 ft)



Item	Description	Quantity
1	Sliding door header cover, 1828.8 mm (6 ft)	1
2	Sliding door header panel, 1828.8 mm (6 ft)	1
3	Sliding door header adapter cover, 1828.8 mm (6 ft)	2
4	Sliding door header adapter panel, 1828.8 mm (6 ft)	2
5	Torx pan head screw, M5 x 14	4
6	Torx pan head screw, M4 x 10	11
7	Torx pan head screw, M6 x 16	4

## 4.2 Floor Preparation (Concrete or Raised Floor System)

The product mounting floor (concrete floor or raised floor) needs to be leveled and the allowable deviation is < 0.6 mm/m (0.07 in. per 10 ft).

## 4.3 Installation Guide

### 4.3.1 VACS Deployment Process

The VACS aisle width  $W$  (vertical post inner side spacing) can be configured as 914.4 mm (3 ft.), 1219.2 mm (4 ft.), and 1828.8 mm (6 ft.). The aisle length  $L$  (vertical post inner side spacing) can be configured as 3048 mm (10 ft) to 4876.8 mm (16 ft) and can be adjusted in [Extendable Beam](#) on page 71 to meet different lengths. Aisle height  $H$  (surface spacing between ground and extendable beam) can be configured as 42U to 52U.

Figure 2.2 Aisle Length, Width, and Height Diagram

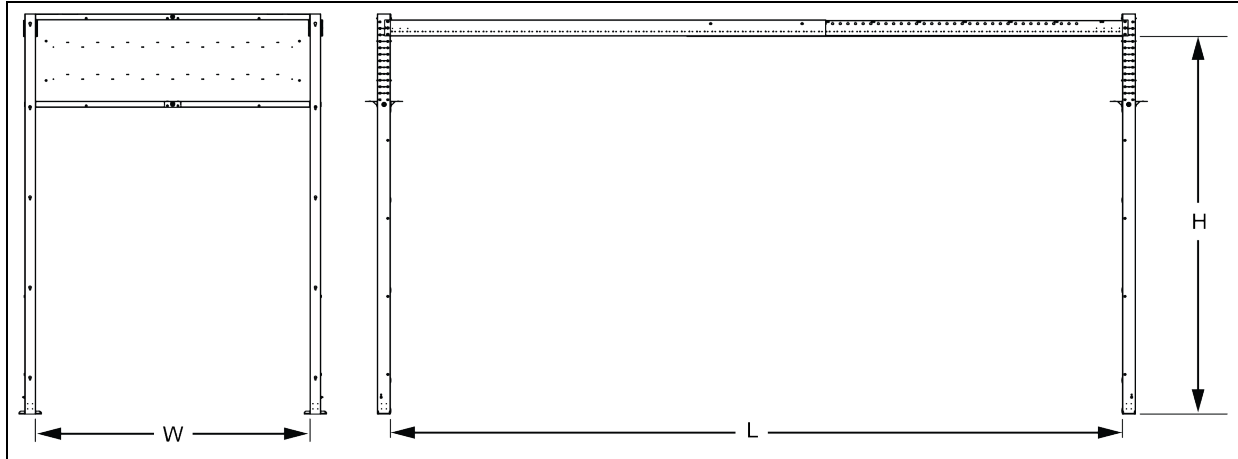
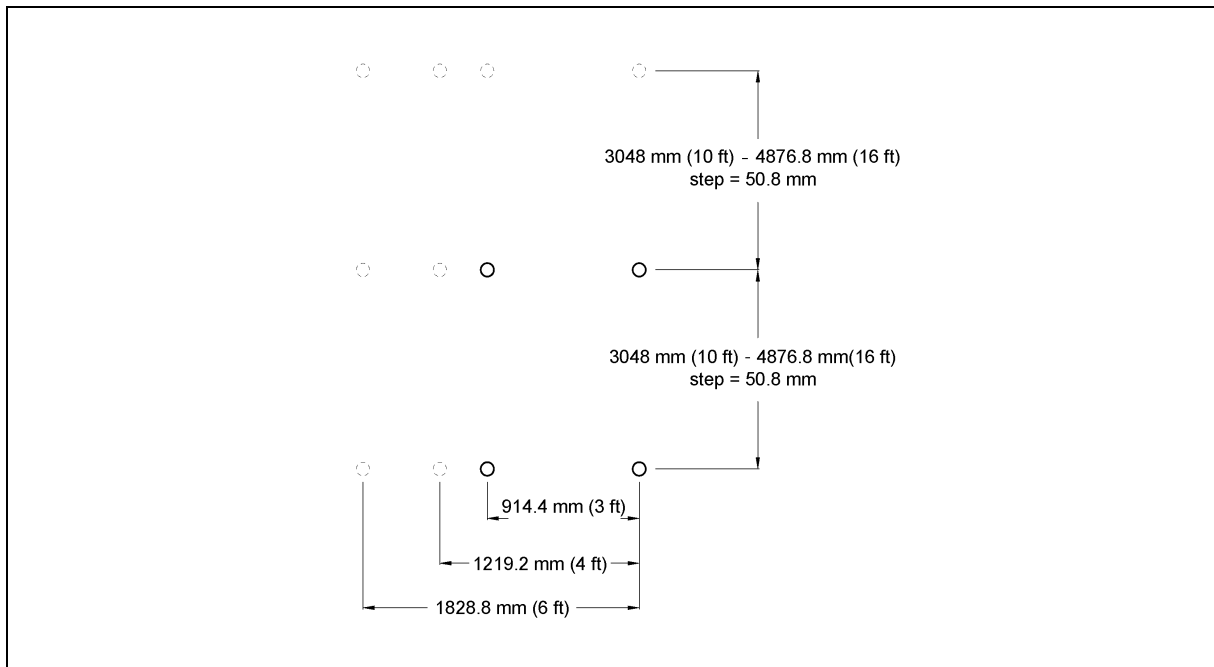


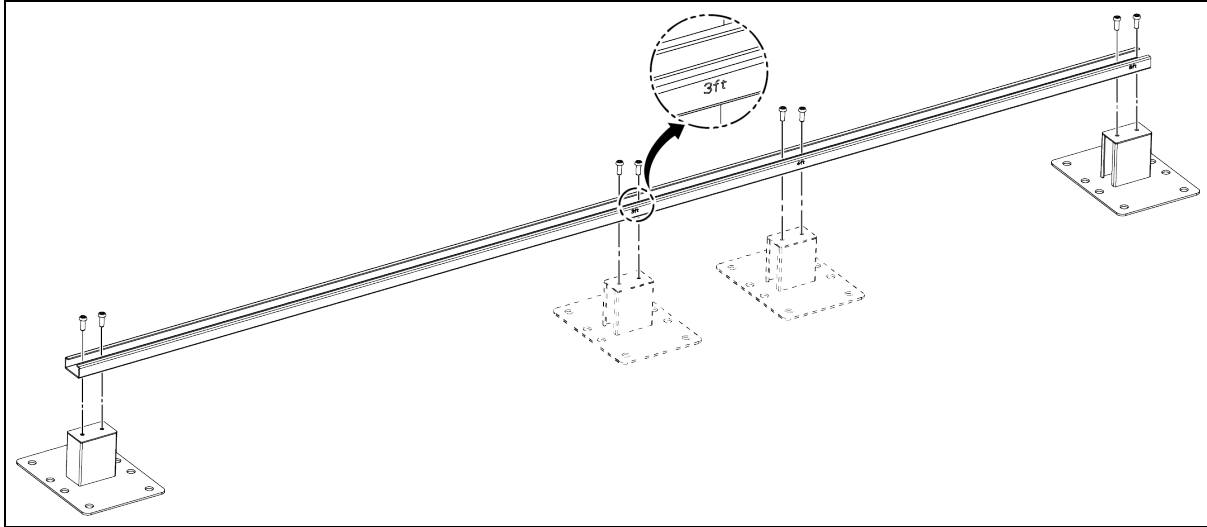
Figure 2.3 Aisle Length and Width Adjustment Range Diagram



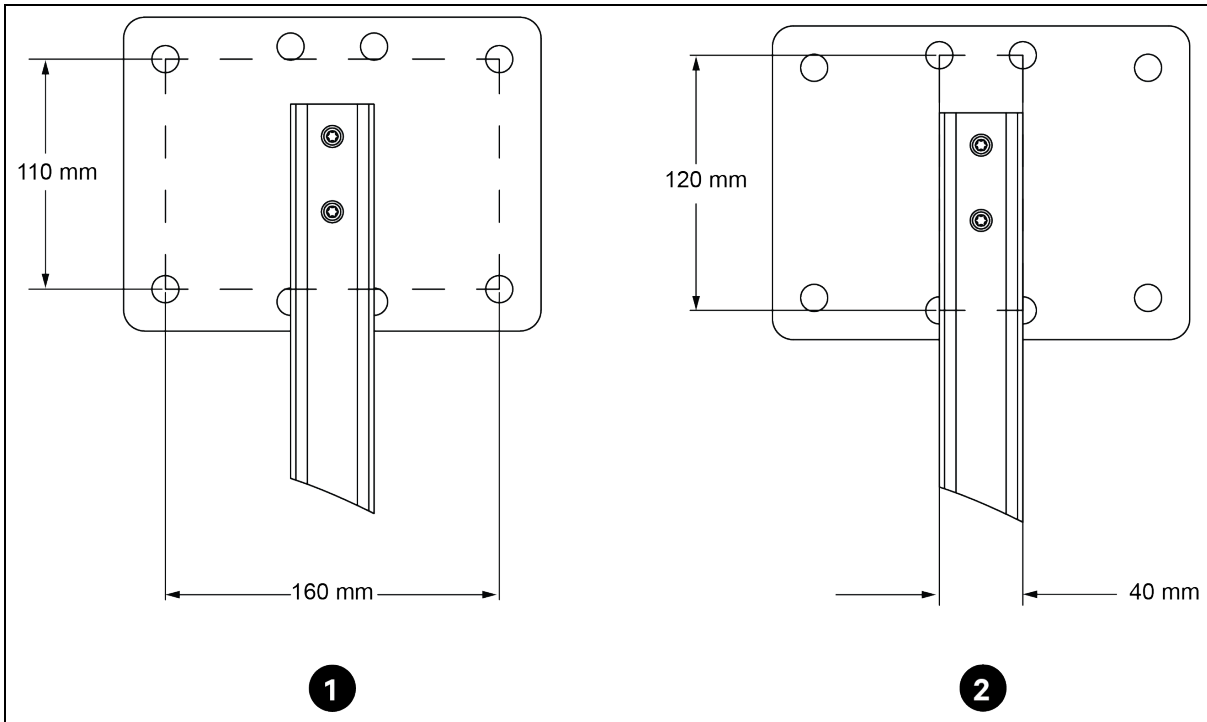
**NOTE:** The circle in the diagram indicates the position of posts.

### 4.3.2 Alignment Tool

Positioning the VACS aisle vertical posts is important for deploying the aisle. VACS offers an alignment tool to position the left and right vertical posts, for the aisle with a width of 914.4 mm (3 ft.), 1219.2 mm (4 ft.), or 1828.8 mm (6 ft.). The cross beam of the alignment tool is marked with three widths (3 ft, 4 ft, and 6 ft). Attach one base to one end of the cross beam, and attach another base to the cross beam at the marked position.



The four holes on the outer rectangular of the base determine the position of the floor stand, and the holes on the inner rectangular determine the position of the vertical post.



Item	Description
1	Use these holes to confirm the position of the floor stand
2	Use these holes to confirm the position of the vertical post

**NOTE: If you have not purchased the alignment tool, please refer to Appendix V Door Closer Installation Guide to determine the location of the vertical post.**

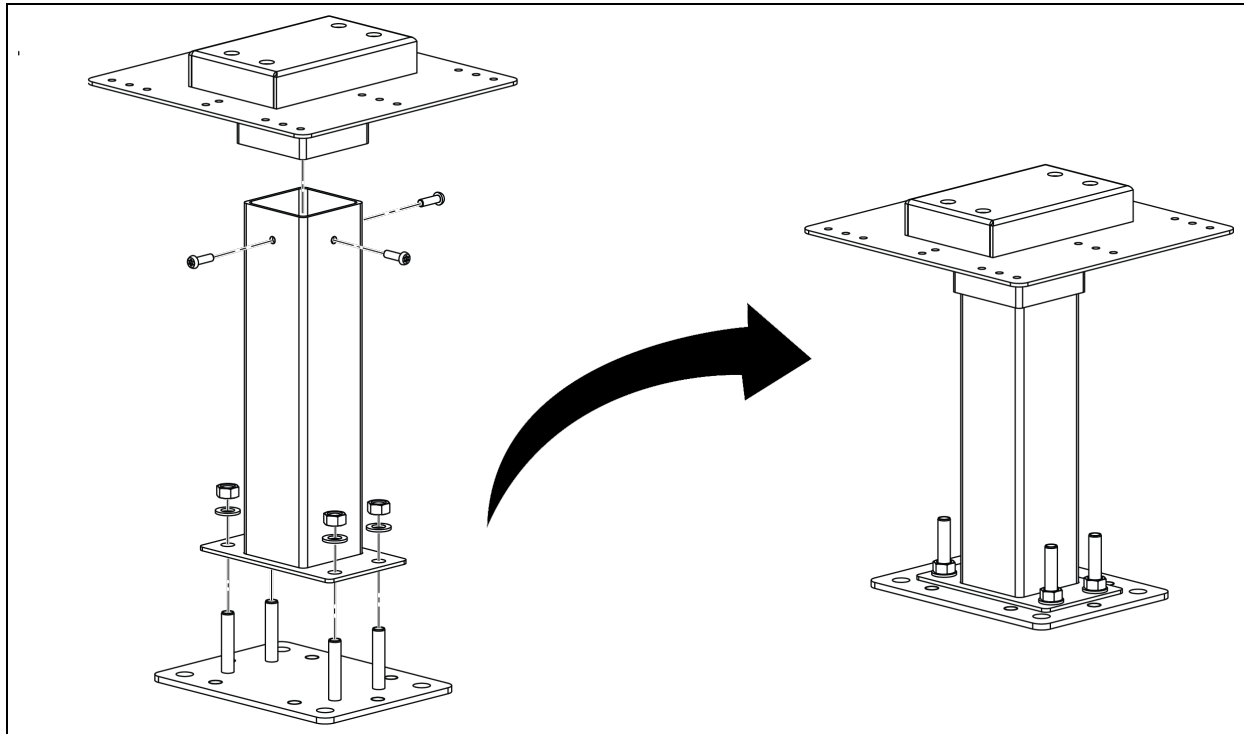
### 4.3.3 Vertical Post

Vertical posts can be mounted directly onto a concrete floor, or onto a raised floor system, supported by optional floor stands.

**NOTE:** The deviation of floor flatness should be < 0.6 mm per m (0.07 in. per 10 ft).

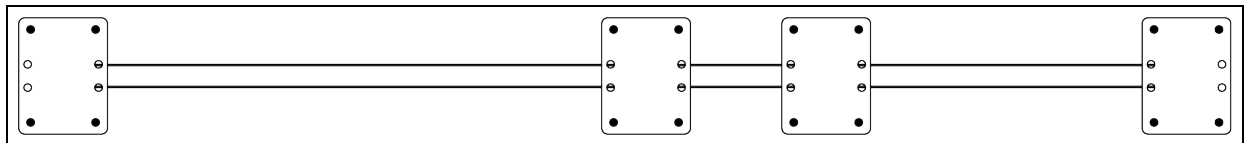
#### Raised Floor System Deployment

1. If the vertical post is deployed on a raised floor system, the floor stands need to be installed under the raised floor. Each floor stand comes with thick gaskets (1.0 mm, 2.0 mm, or 5.0 mm) to adjust the height of the floor stand and the vertical post. Before assembling the floor stand, calculate the height and use gaskets to raise the floor stand to the desired height.

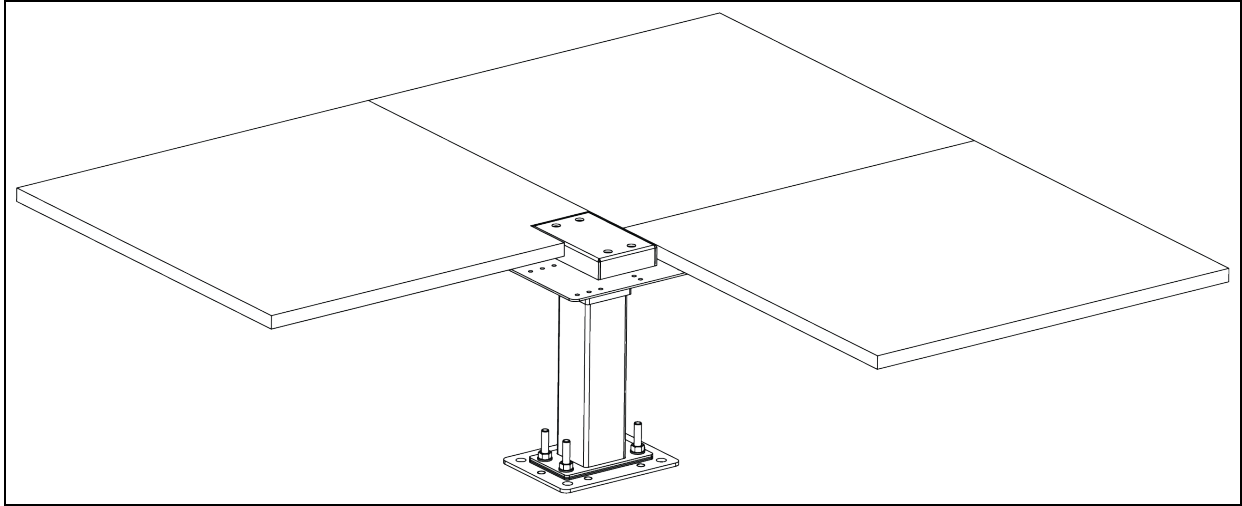


2. Use the alignment tool to position the floor stands in the width direction.

**NOTE:** Use straightening tools such as chalk lines and laser instruments to confirm the length direction of the floor stands.

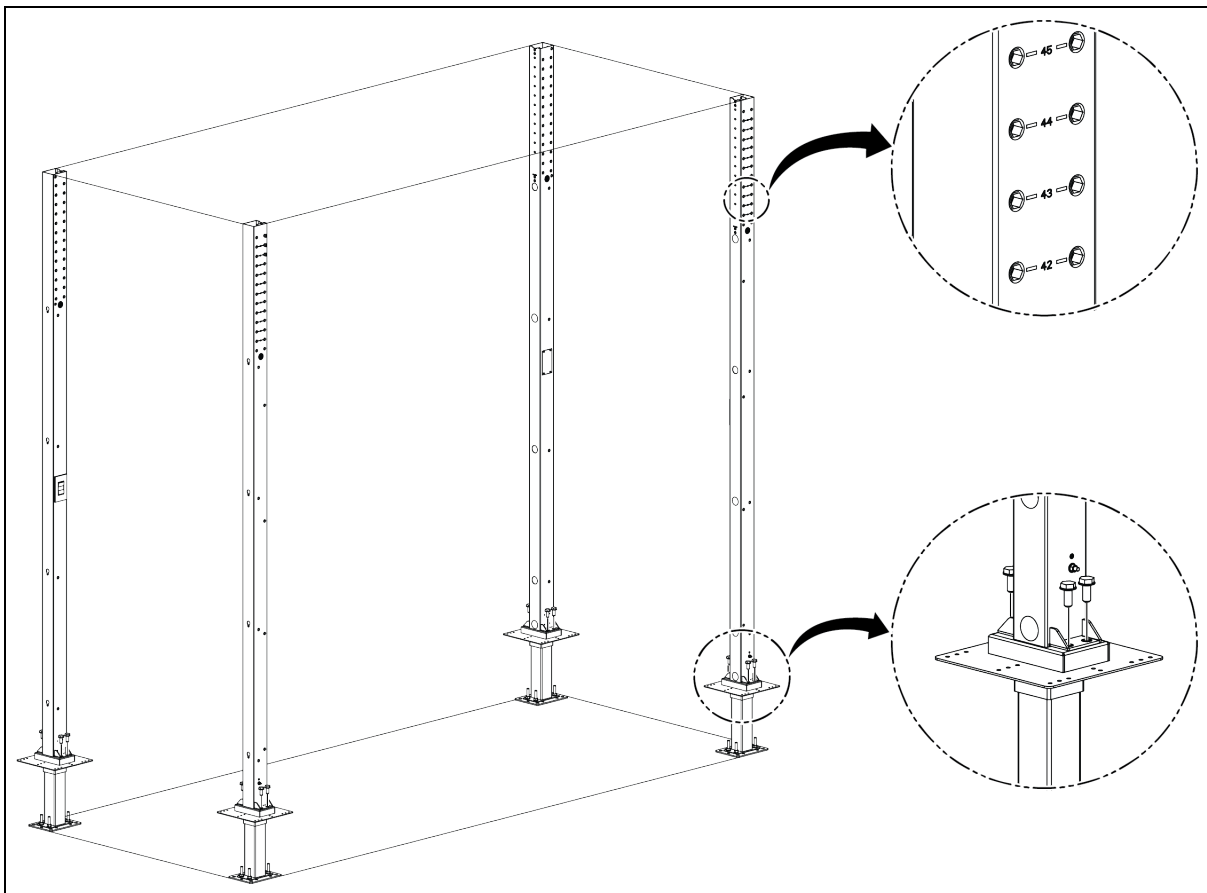


3. Once you have determined the position of the floor stand, trim the raised floor accordingly.



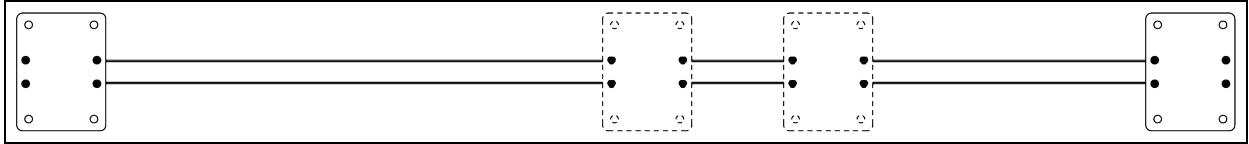
4. Use the M12 hexagonal head bolts to secure the vertical post on the floor stand. Each post requires four M12 bolts.

**NOTE:** When installing the vertical post, verify that its vertically meets the requirements ( $<0.6$  mm) and then lock the bolts.

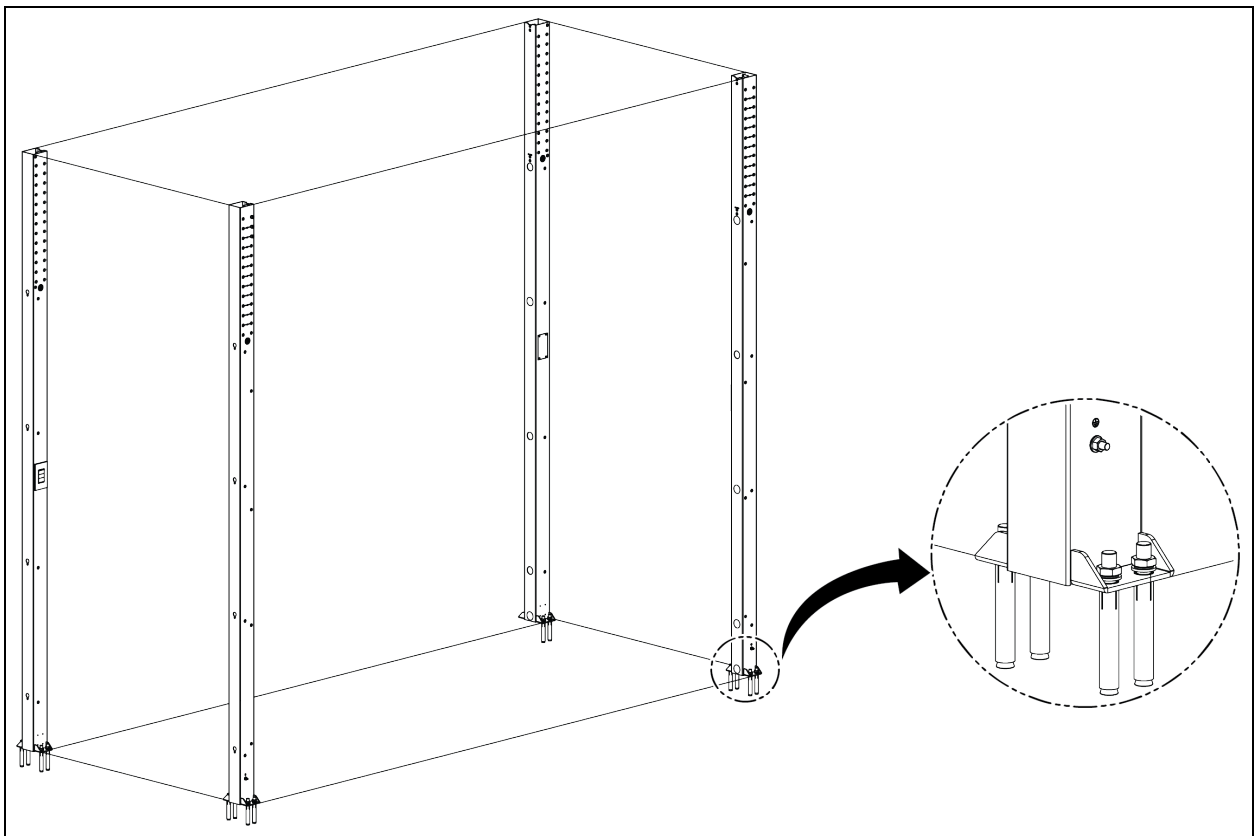


## Concrete Floor Deployment

1. Use the alignment tool to determine the position of the vertical posts at the width direction of the aisle, and mark the positions on the floor.



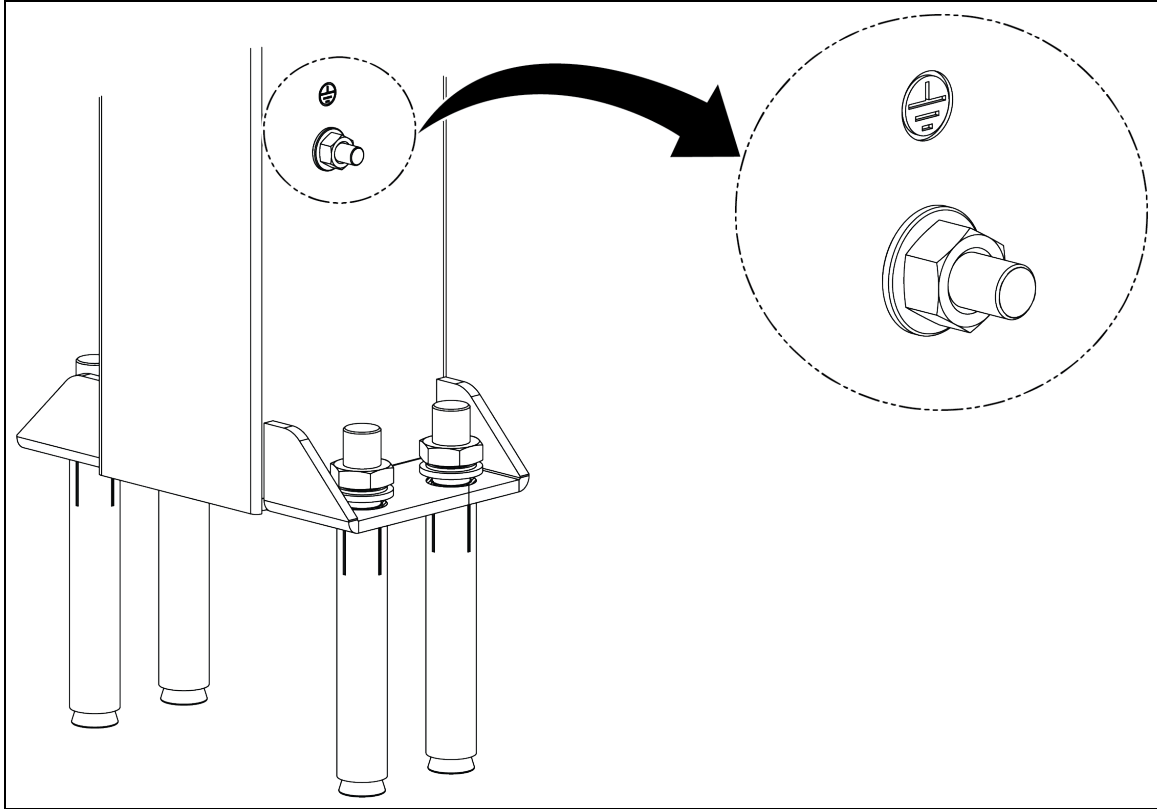
2. Drill the M14 holes according to the markings. Install the vertical post to the required position and secure it with the M12 expansion bolts.



**NOTE:** When installing the vertical post, make sure that the u-bit markings face outside the aisle. Make sure that the two vertical posts facing diagonally are the same.

**NOTE:** Each vertical post contains a grounding (M6) location and can be used as the main grounding point of the system. Use 6 mm<sup>2</sup> grounding cable.

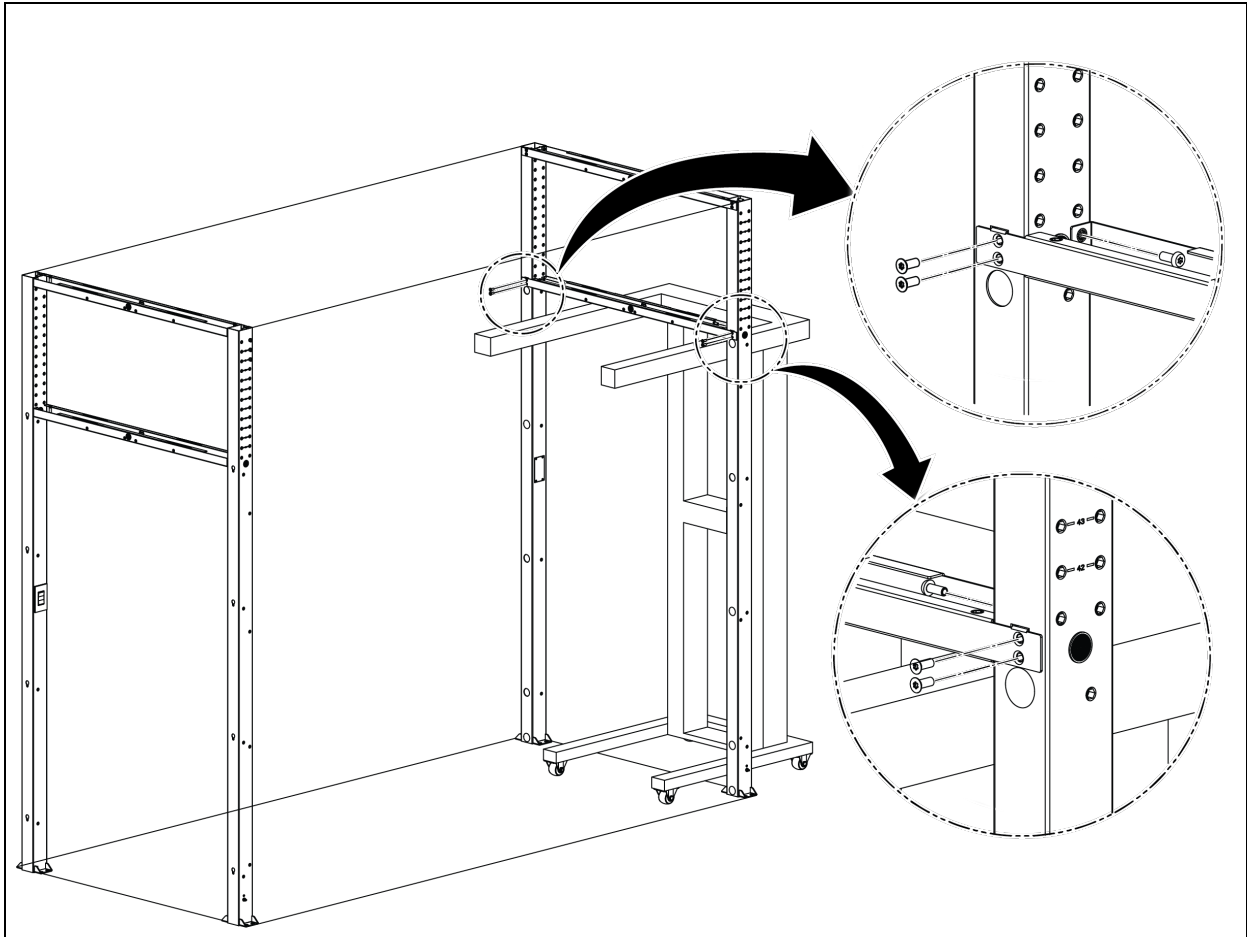




### 4.3.4 Width Connector

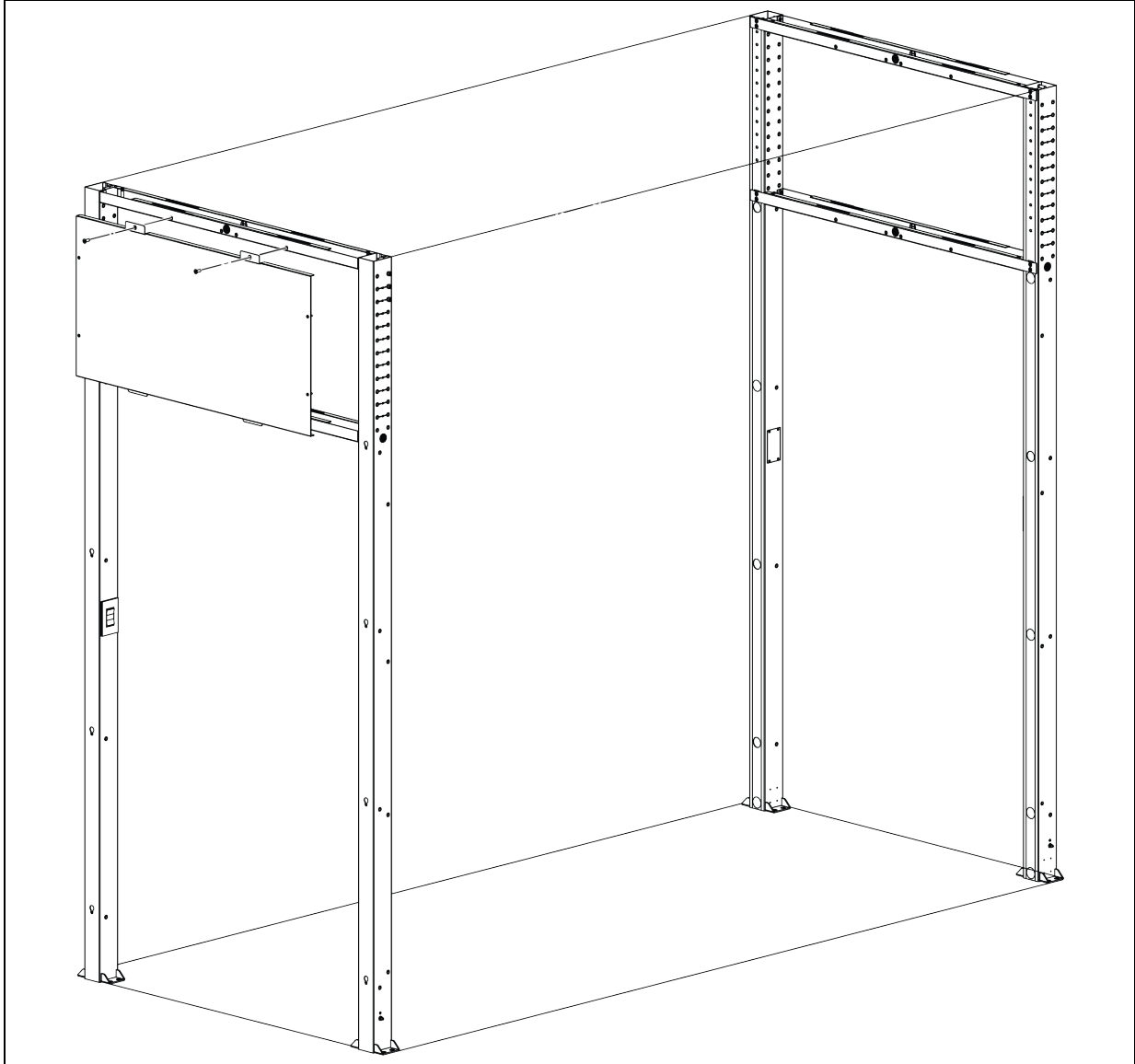
1. Two width connectors are installed at the front and back end of the aisle. Each width connector consists of two width beams and two width panels. Raise the width beams to the mounting height using lifting equipment and secure the beams using M6 countersunk screws and M6 pan head screws.

**NOTE:** Each end of the width beam is fixed by three screws (two M6 countersunk screws and one M6 pan head screw).



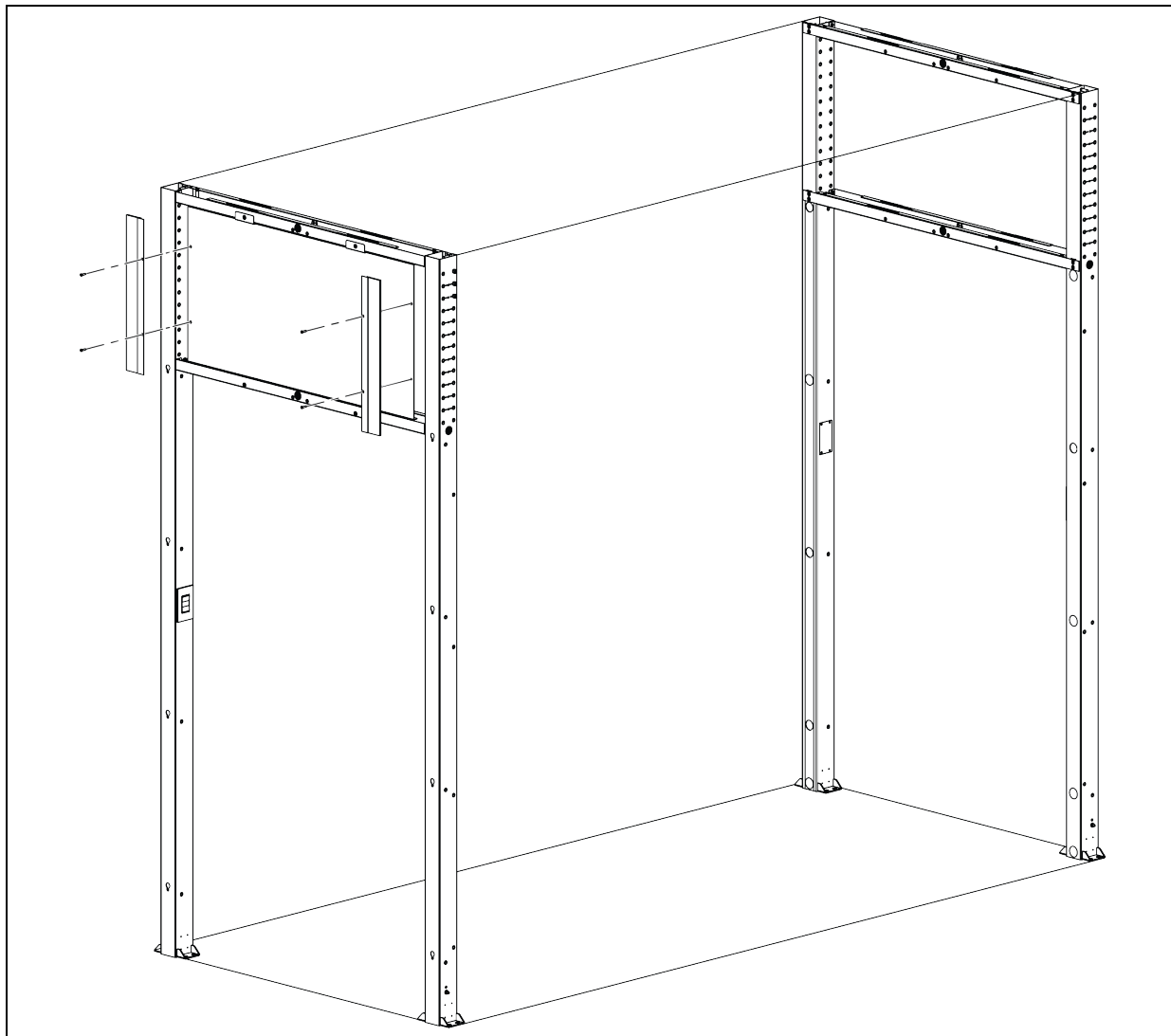
2. Install the width panel that faces the outside of the aisle. The width panel that faces inside will be installed after cables are laid out. Insert the width panel into the slots on the width beam and secure the panel using M6 countersunk screws.

**NOTE: Sliding door does not need width panel to be installed.**



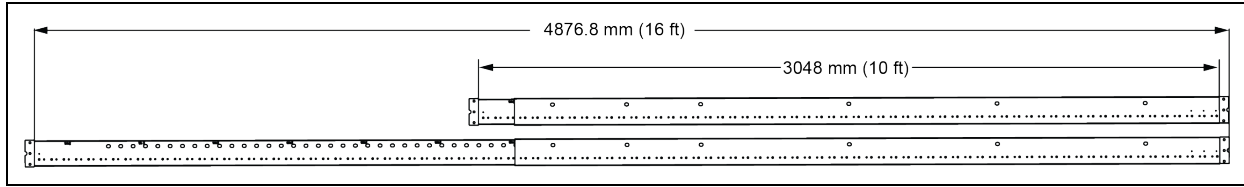
3. Install a brush strip on each side of the width panel to seal the gaps, using M6 countersunk screws. Similarly, install the width panel and brush strips on to the opposite end of aisle.

**NOTE: Sliding door does not need width panel to be installed.**



### 4.3.5 Extendable Beam

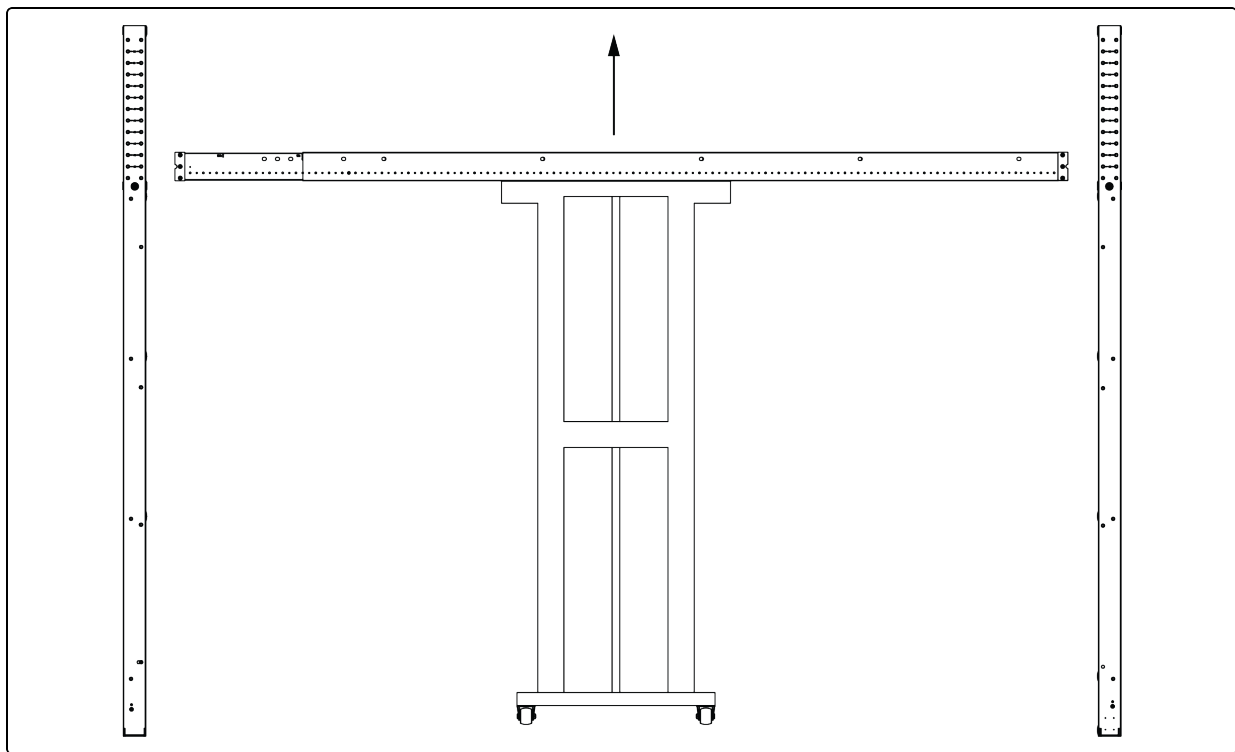
1. Determine the length of the aisle before installing the extendable beam. Remove the fixing screws from the extendable beam and extend the beam to the required length.



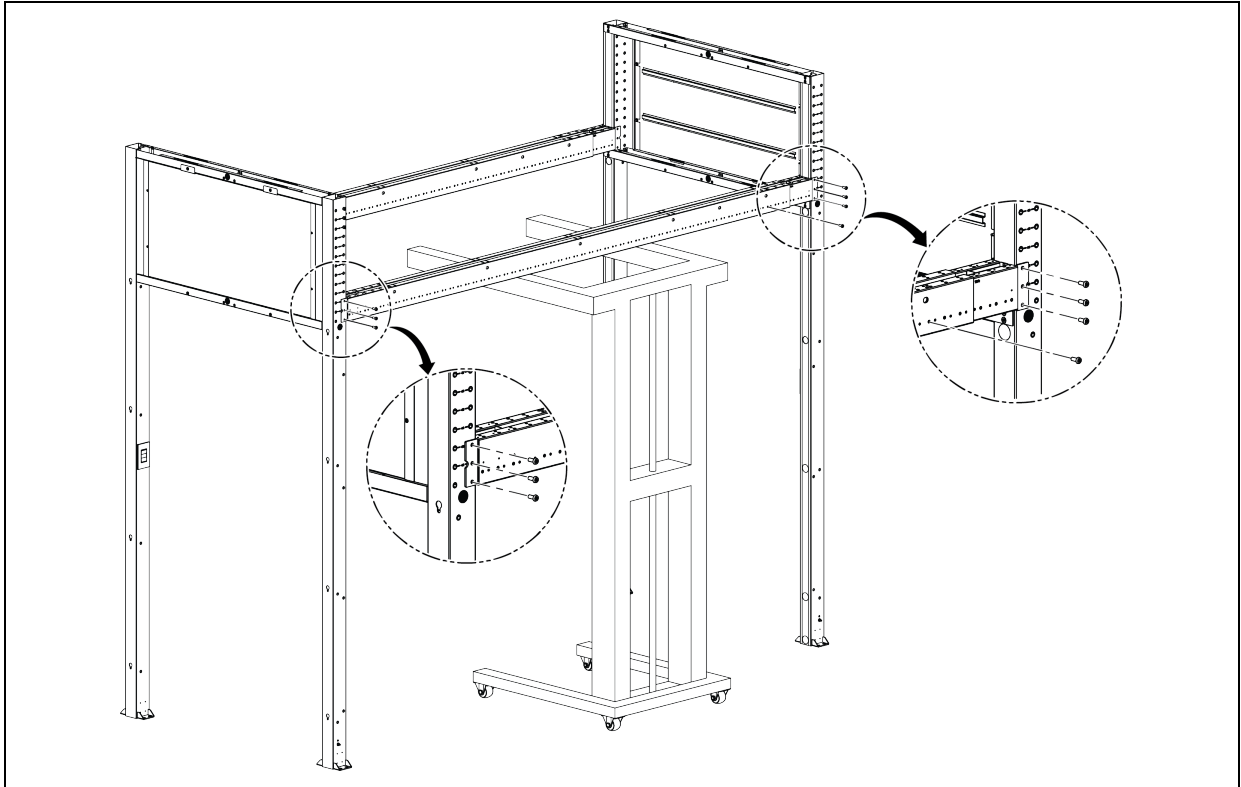
**NOTE:** The extendable beams installed at both sides of the aisle must be extended in the same direction.

2. Raise the extendable beam to the mounting height with the lifting equipment and secure it with M8 pan head screws. Use M6 self-tapping screws to secure the joints on the beam.

**NOTE:** The installation height of the extendable beam depends on the height of the highest cabinet in the aisle.

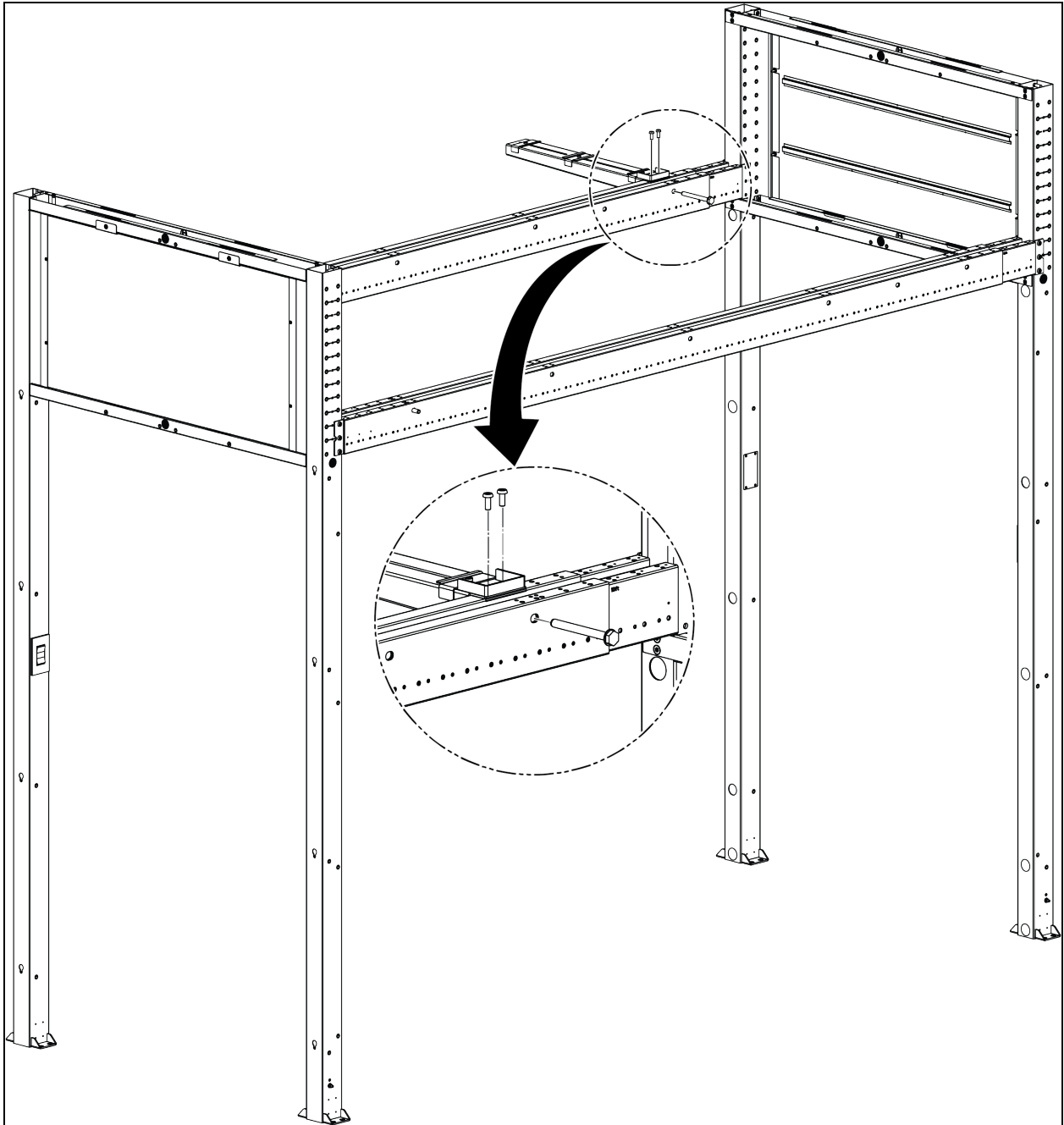


**NOTE:** When installing the extendable beam, make sure that it is level. Adjust the vertical posts and extendable beams when necessary.



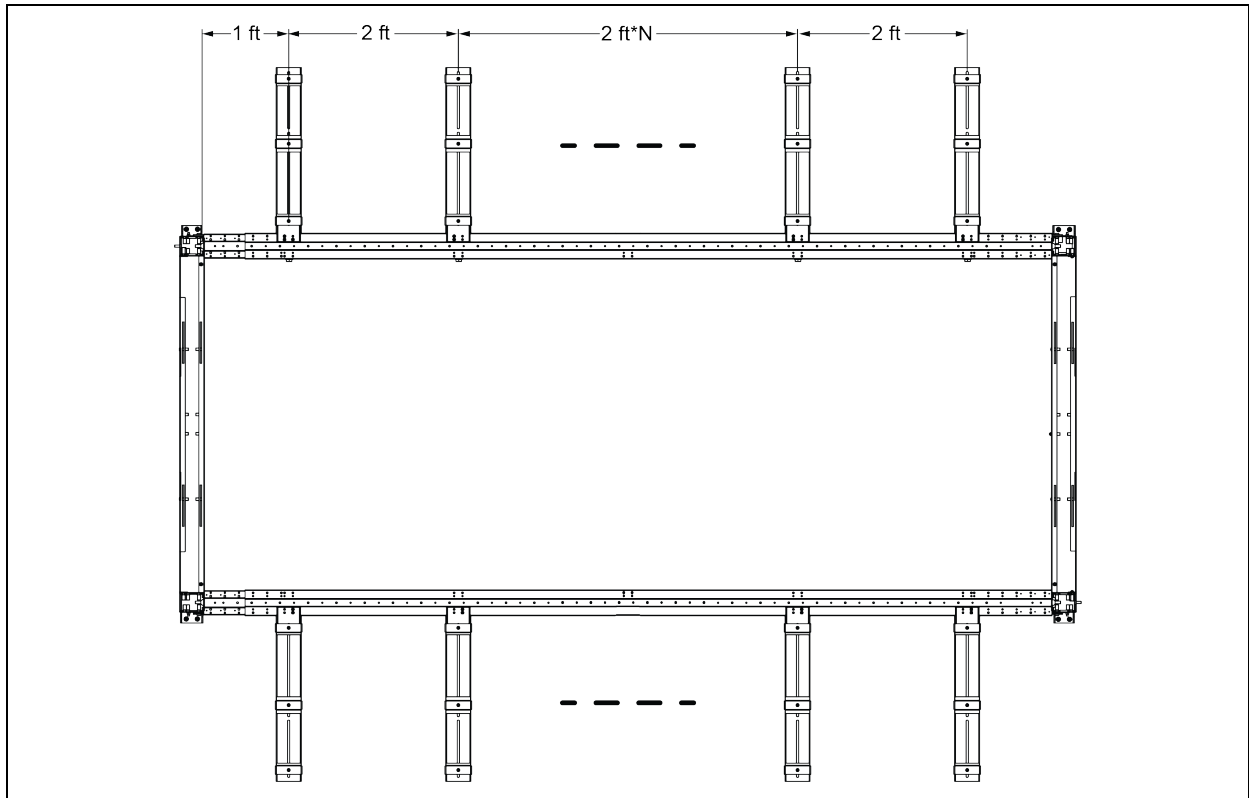
### 4.3.6 Cantilever Arm

1. Determine the positions of the cantilever arms, and install the M12 x 120 bolts in the holes on the extendable beam.



2. Place the cantilever arms in the required positions and secure them using M6 self-tapping screws.
3. Lock the M12 x 120 long bolts with M12 nuts.

- The cantilever arms on both sides of the aisle are symmetrical. Install the cantilever arms on each side of the aisle with 609.6 mm (2 ft) spacing between each two arms.



**NOTE:** If the cantilever arm is installed on the inner sleeve of the extendable beam, install a leveling pad behind the cantilever arm to ensure alignment.

**NOTE:** If the cantilever arm is not required, you need to install the long bolts in the reserved positions of the cantilever arms.



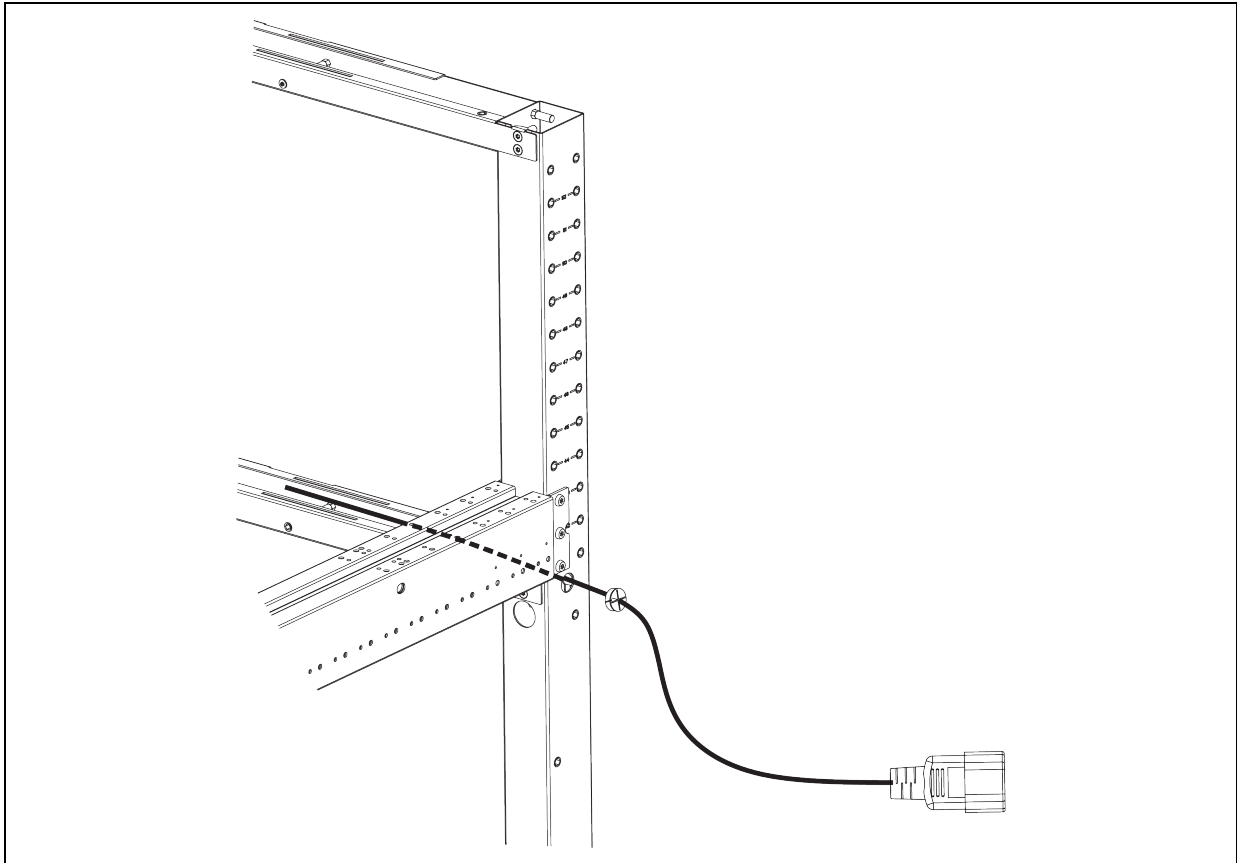
## 4.3.7 Lighting System

### Installing Lighting Kits

1. Determine the position where the lighting kits will be supplied power and lay out the main power supply cable through the vertical post. The main power supply cable is normally placed near the power distribution cabinet.

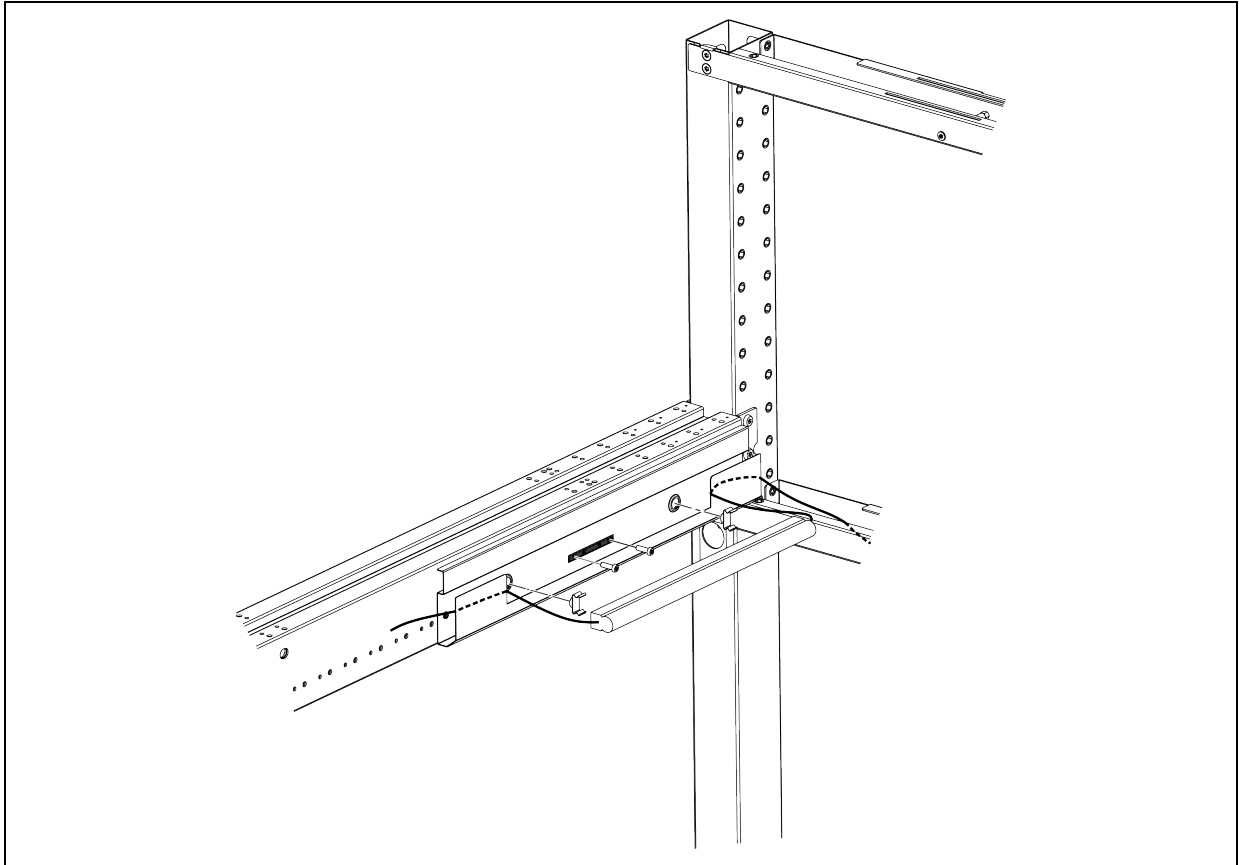
**NOTE:** Each vertical post has two rubber rings to protect the cables.

**NOTE:** Connect the cables strictly in accordance with the Schematic of Lighting System to avoid the risk of electric shock.



2. Use M6 self-tapping screws to attach the lighting bracket on the extendable beam.

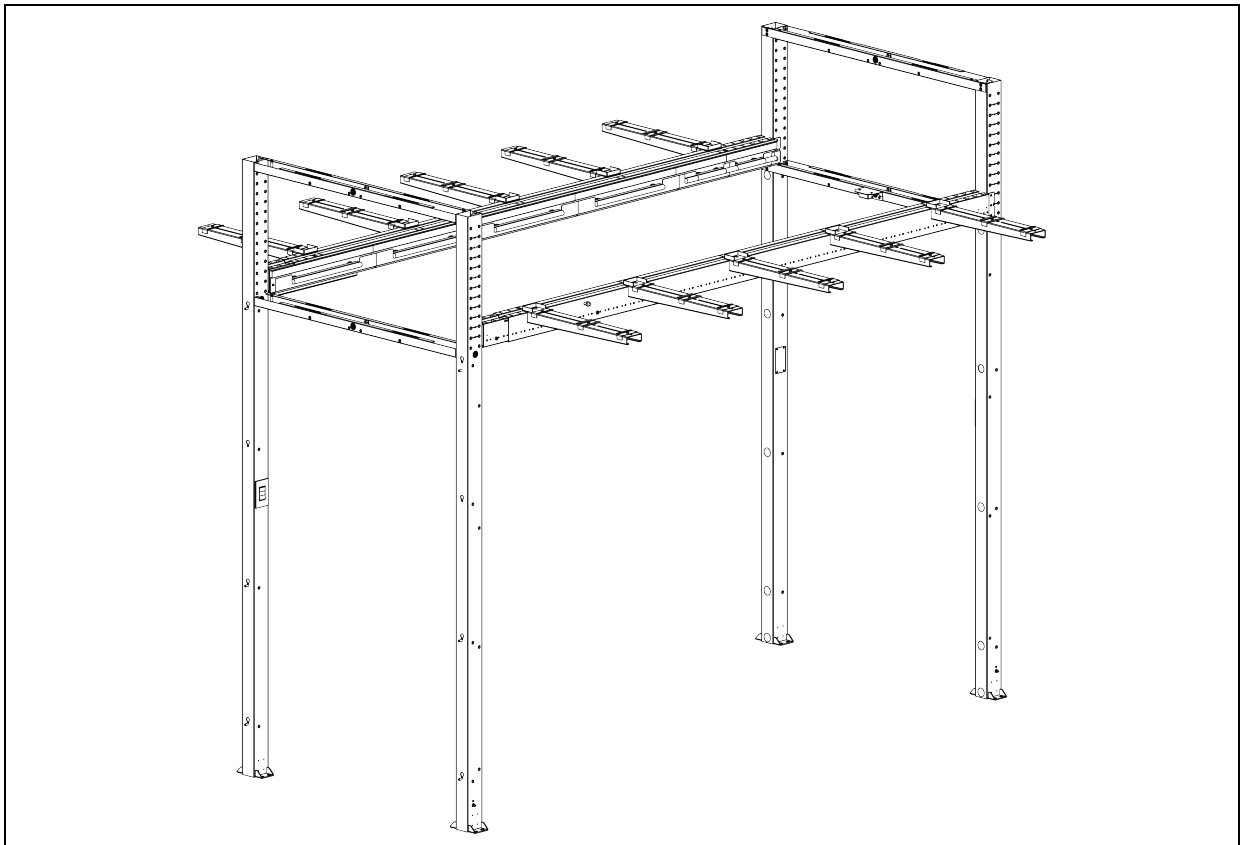
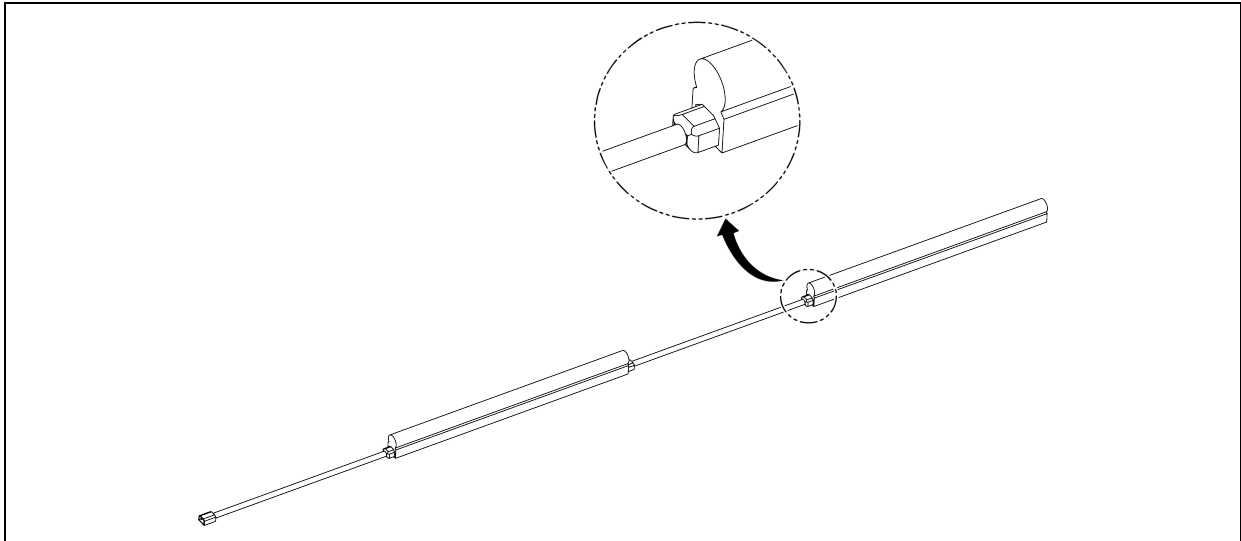
**NOTE:** The lighting kit is available in 304.8 mm (1 ft.) and 609.6 mm (2 ft.) lengths. Each kit consists of LED lights, lighting bracket, installation accessories, and connection cables.



3. Snap the magnet that comes with the LED light onto the lighting bracket and fix the LED light onto the bracket.

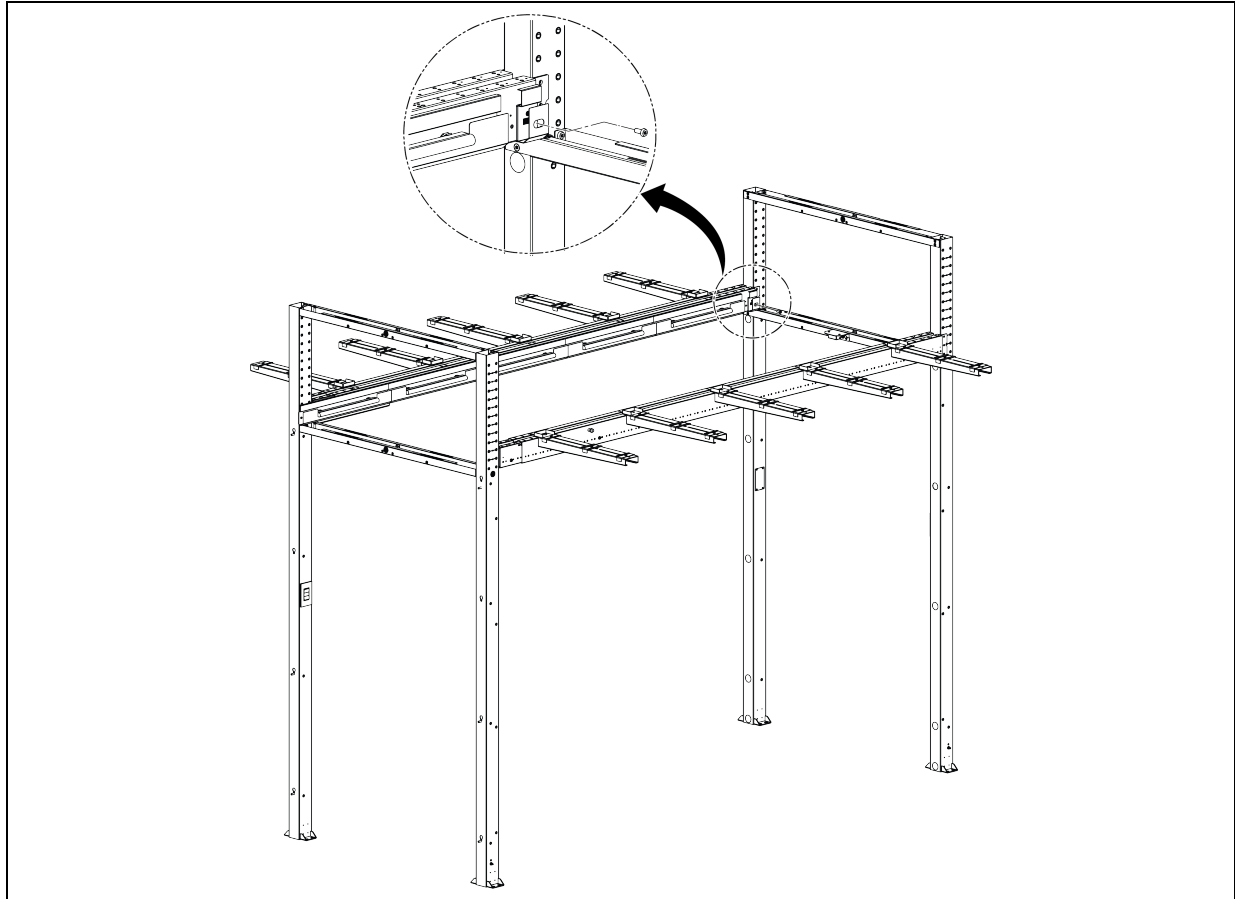
**NOTE:** The main power supply cable for the first light is in the cable package. The connection cables between LED lights are attached to the lights.

**NOTE:** The leveling pad of the lighting bracket helps align the lights.



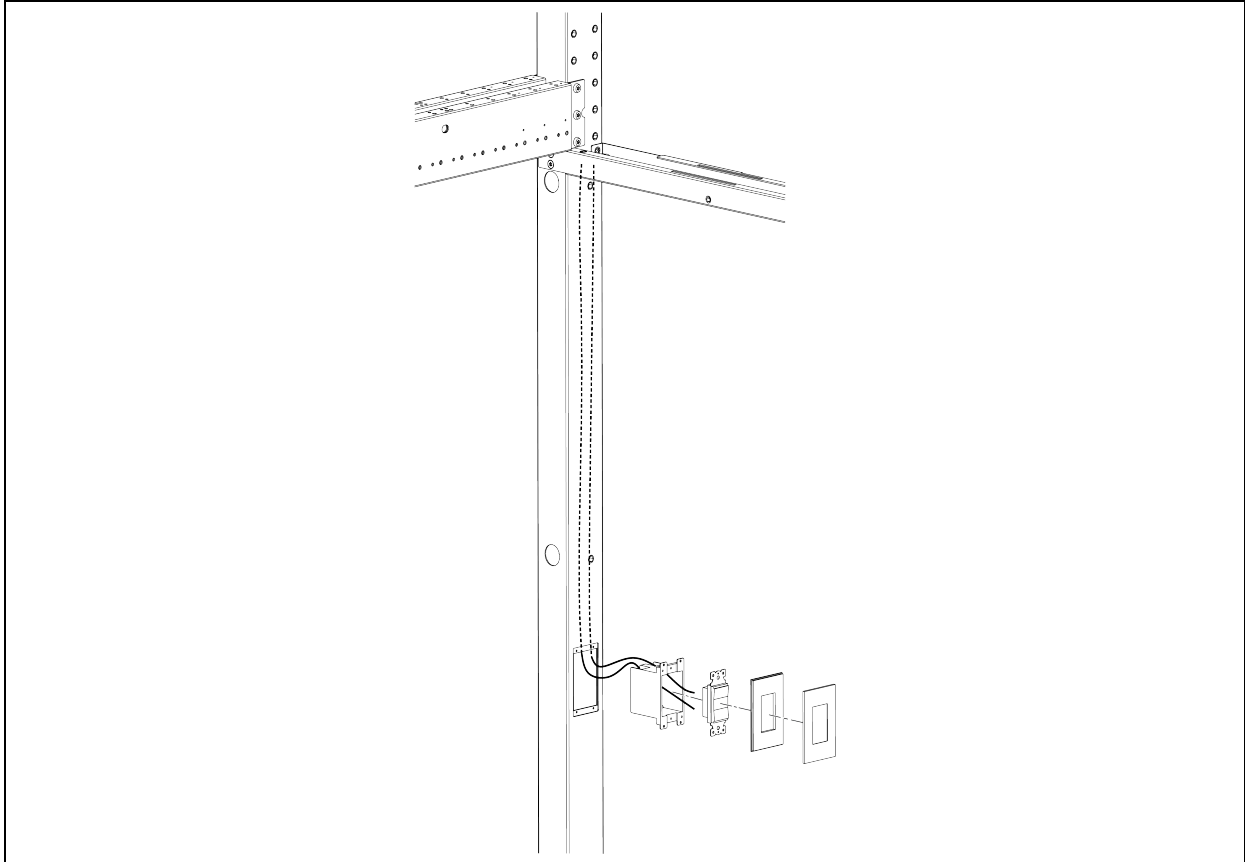
## Installing Lighting Extender

If the aisle length is 3048 mm (10 ft), 3657.6 mm (12 ft), 4267.2 mm (14 ft), or 1828.8 (16 ft), use 609.6 mm (2 ft) lighting and lighting bracket. If the aisle length is 3352.8 mm (11 ft), 3962.4 mm (13 ft), or 4572 mm (15 ft), use 609.6 mm (2 ft) + 304.8 mm (1 ft) lighting and lighting bracket. If the aisle length requirement still cannot be met, supplement with the lighting extender (2 in.). The lighting extender is similar to the lighting bracket with a leveling pad on its back to ensure alignment. Place the lighting extender, align with the lighting kits, and attach it using M6 self-tapping screws.



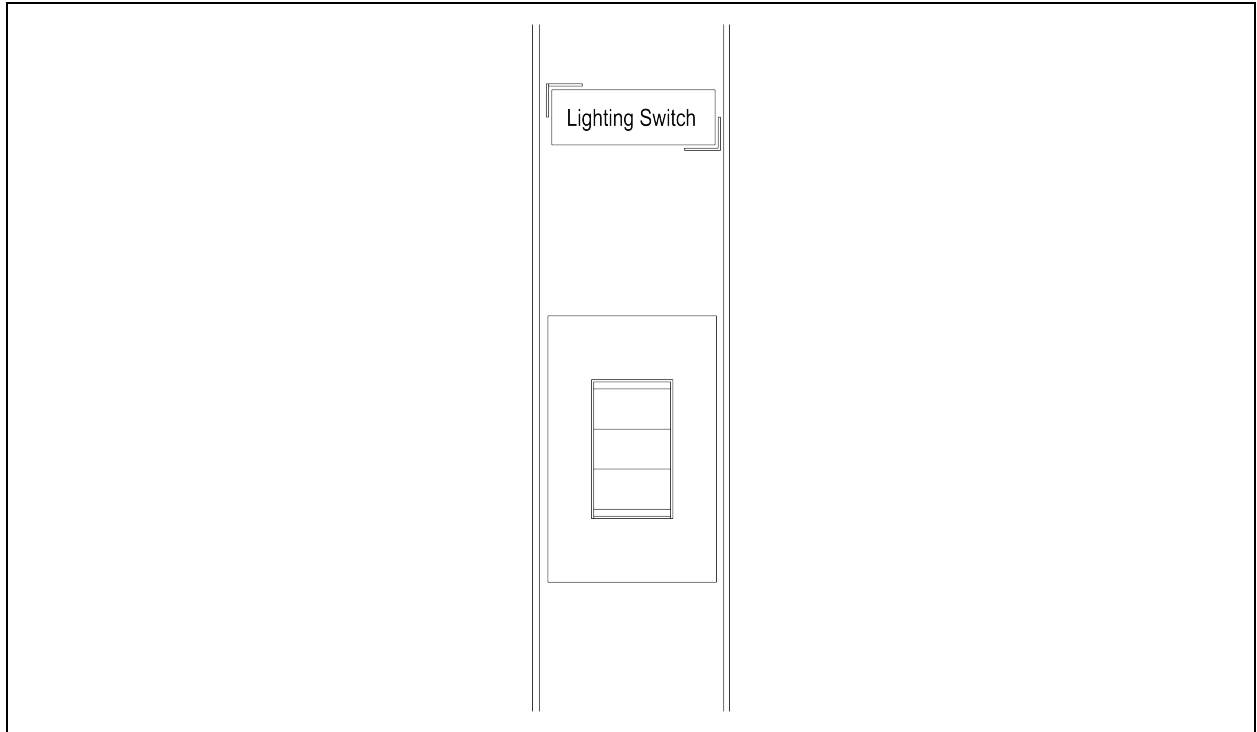
## Installing Switch

1. Remove the metal cover for the switch on the vertical post, route the switch cable from inside the vertical post until the cable connector is exposed, and pull the cable into the switch bottom shell.



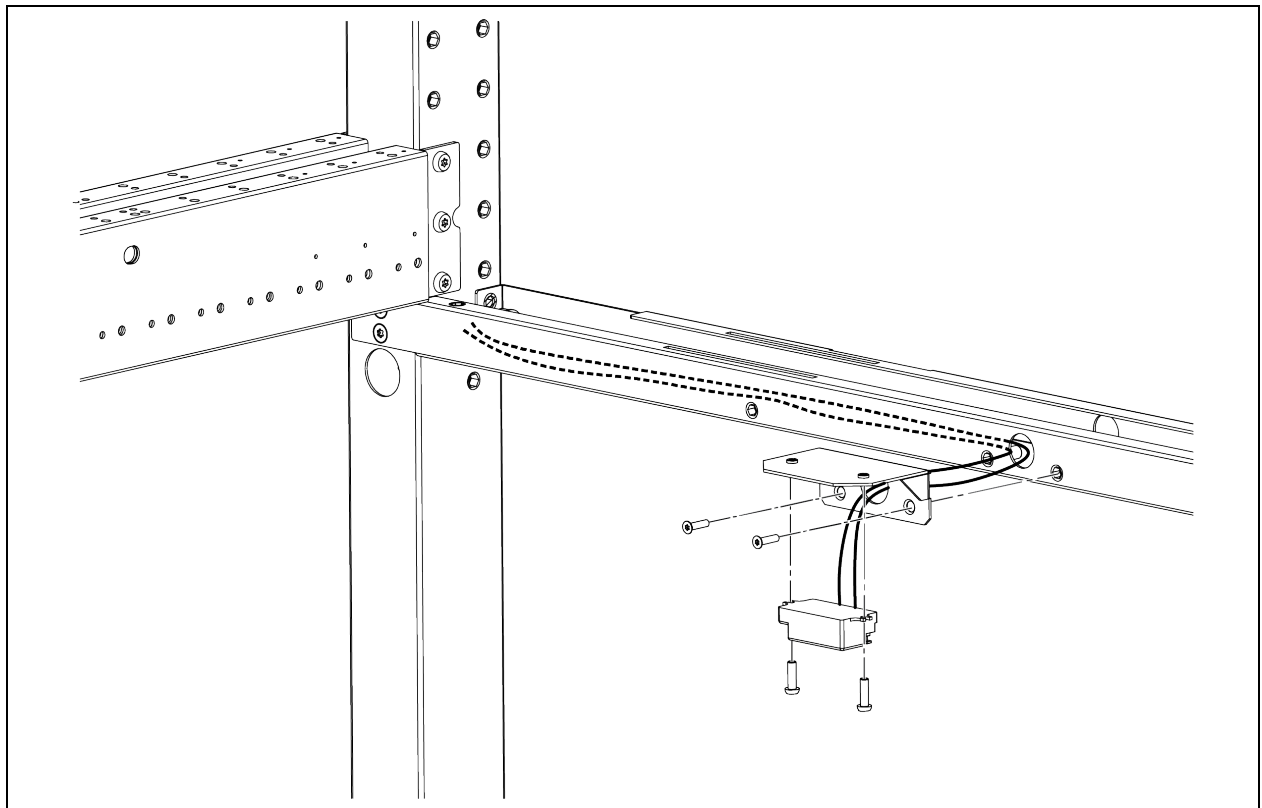
2. Secure the terminals of the cable on the switch using screws.
3. Secure the switch bottom shell on the vertical post and mount the switch panel.
4. After installing the switch, attach the "Lighting Switch" cable (provided in the attachment package) on the marked area above the switch.

**NOTE:** Follow the [Schematic of Lighting System](#) on page 244 to connect the cable to avoid the risk of electric shock.



### Installing Motion Sensor

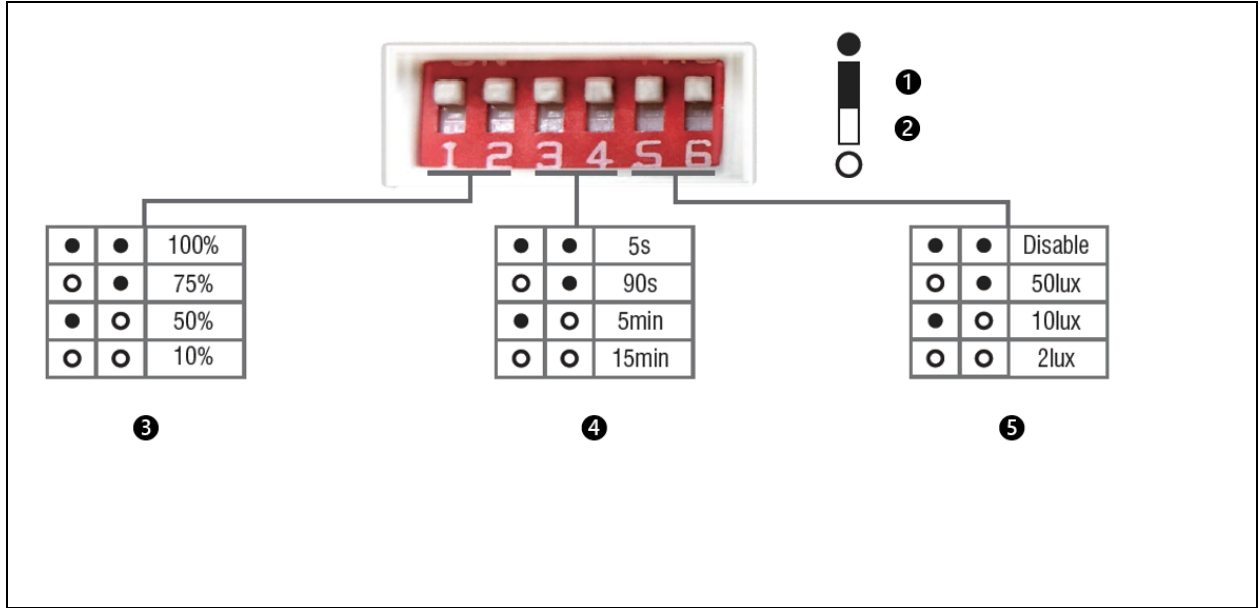
1. Install two motion sensors, one sensor at each end of the aisle. Install the motion sensor bracket on the width beam using M6 countersunk screws.



2. Route the motion sensor cable through the width beam and connect the cable.
3. Secure the motion sensor on the bracket using M4 pan head screws.

**NOTE: The width beam has a cable ring to prevent sharp metal edges from cutting the cable.**

4. Set the detective range, delay time, and sensitivity for sunlight.

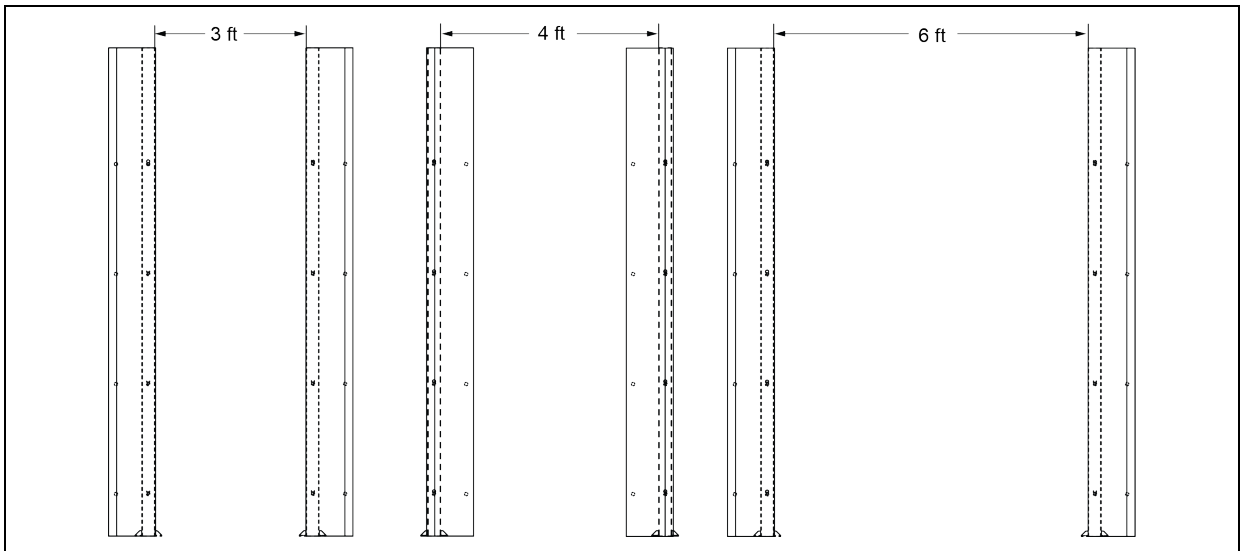
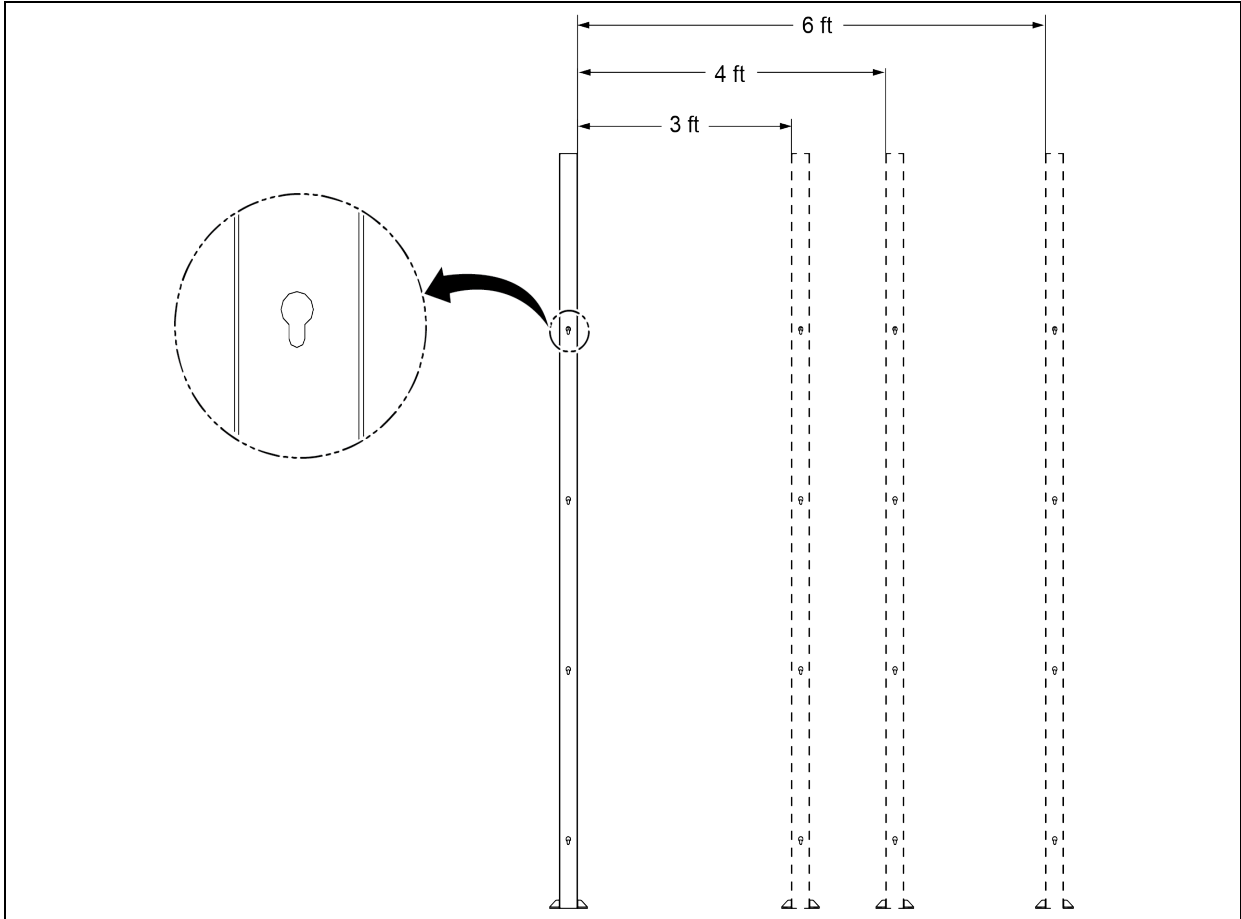


Item	Description
1	Up
2	Down
3	Set detective range
4	Set delay time
5	Set sensitivity for sunlight

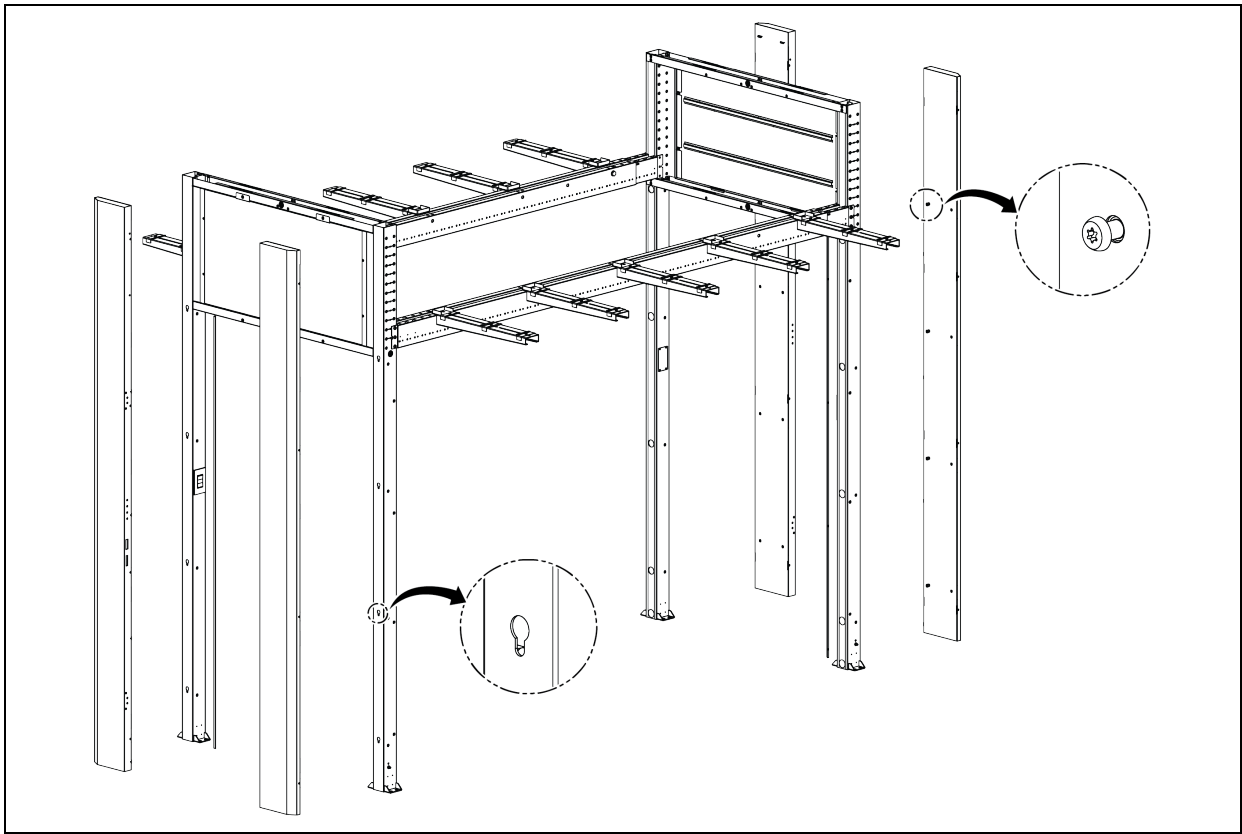
### 4.3.8 Swing Door Frame

1. Partially install the M8 pan head screws on the door frame, adjust the height of the screws to leave a clearance of 10 mm (0.4 in) between the screw and the door frame mounting surface.

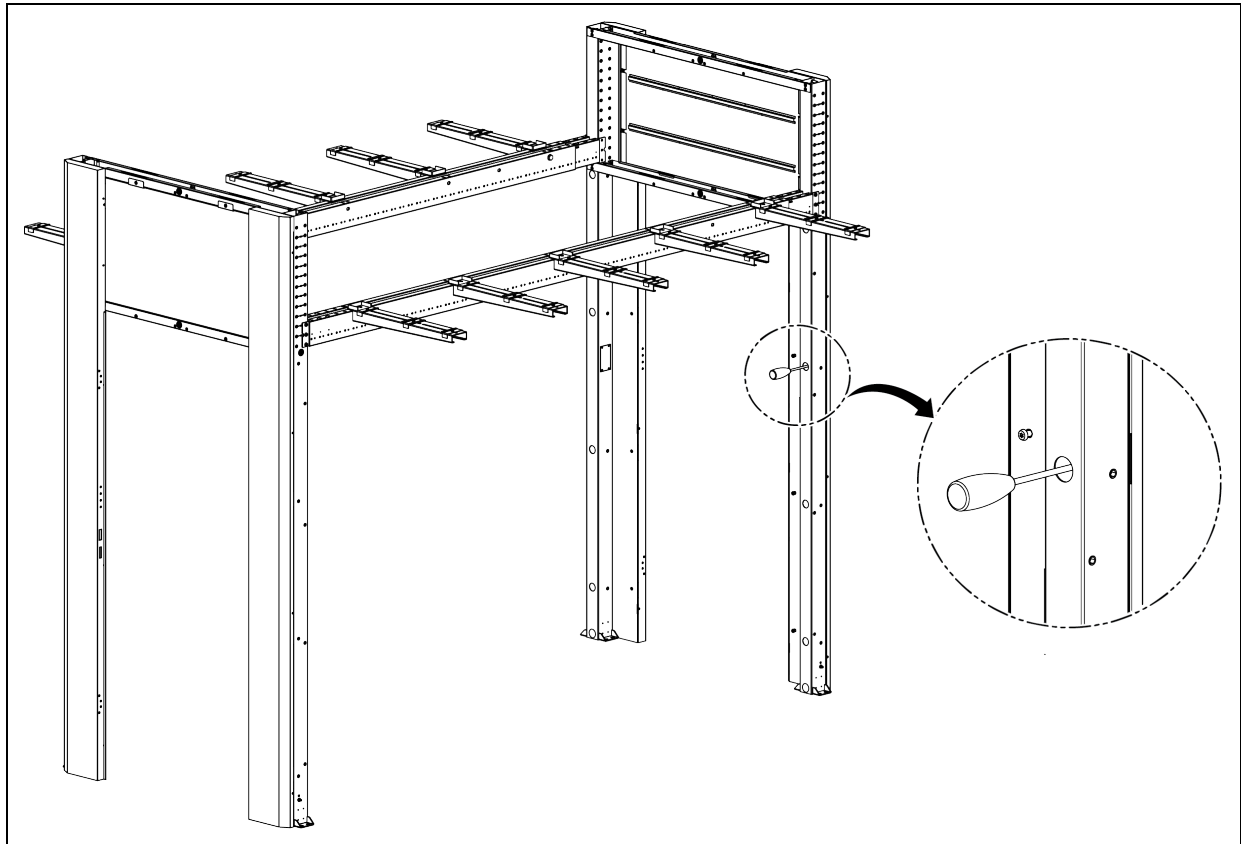
**NOTE:** The door frame provides two arrays of mounting holes. The inner side array is for 914.4 mm (3 ft) and 1828.8 mm (6 ft), and the outer side is for 1219.2 mm (4 ft).







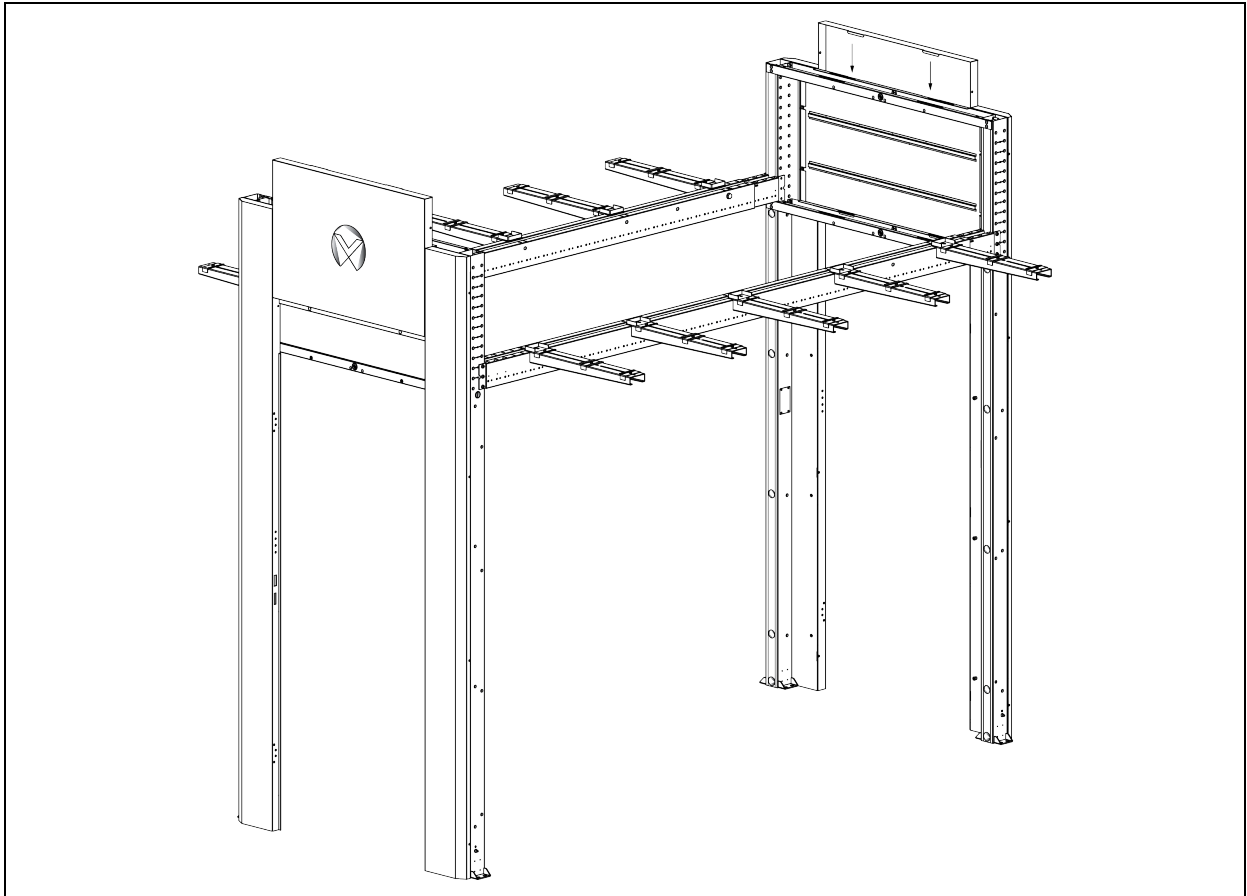
2. Hang the door frame on the vertical post onto the screws.
3. Tighten the screws through the round holes reserved on the other side of the vertical post.



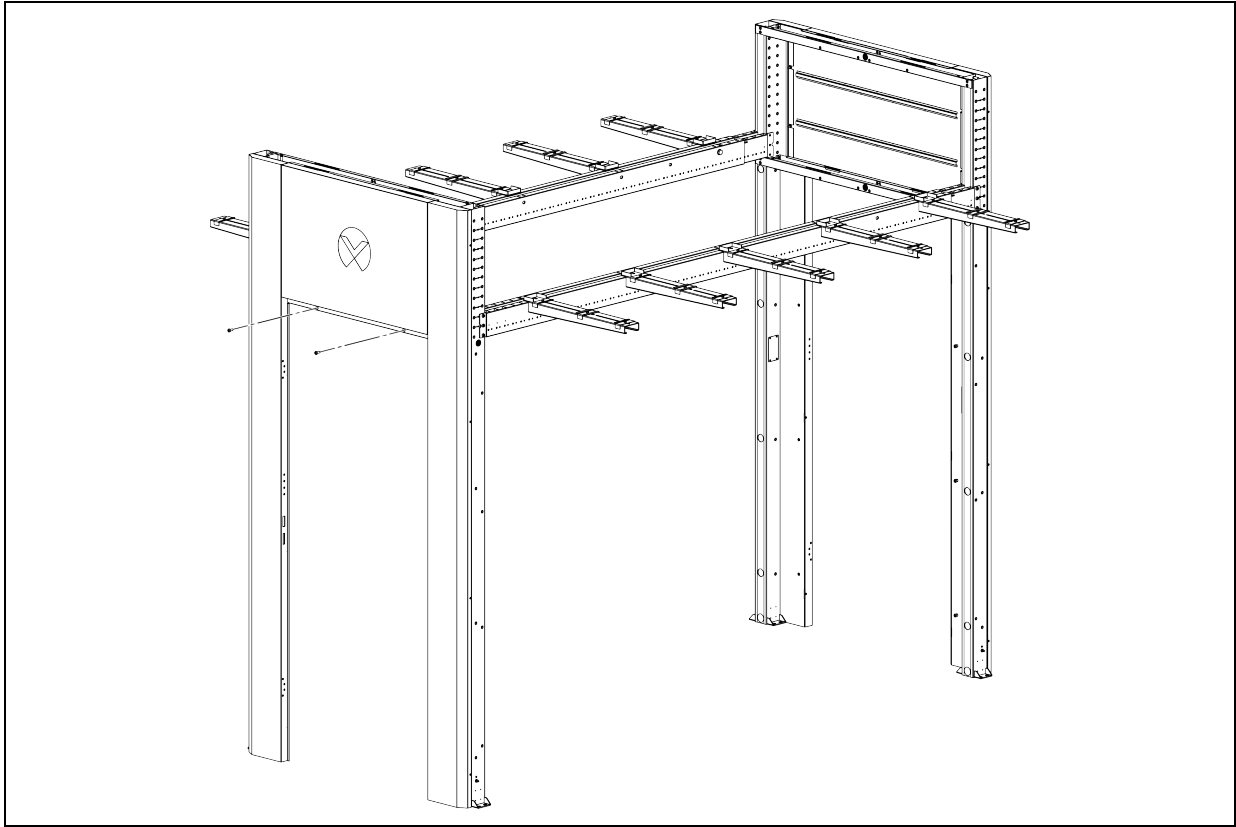
4. Plug the plastic snap (provided in the accessory bag) into the vertical post.

### 4.3.9 Swing Door Header

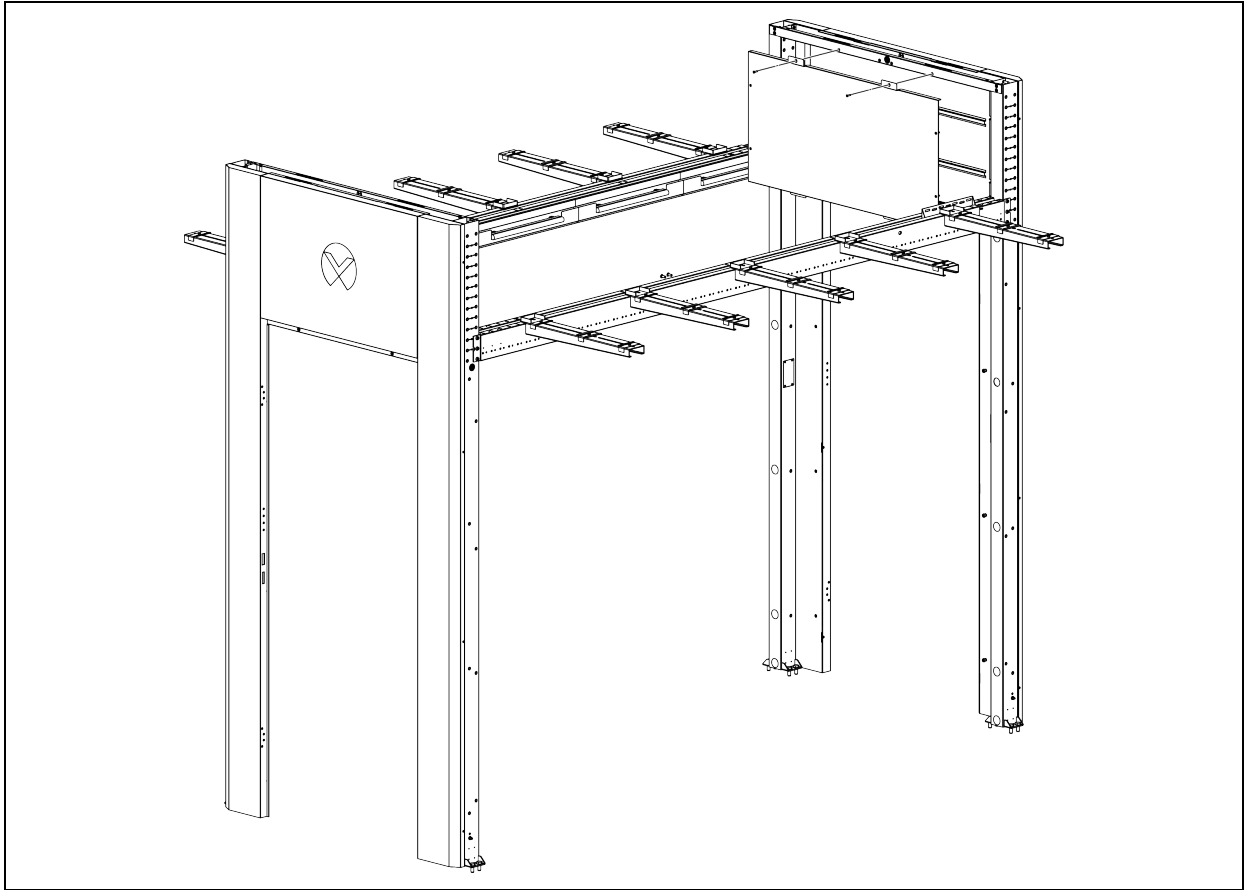
1. Hang the door header on the width beam.



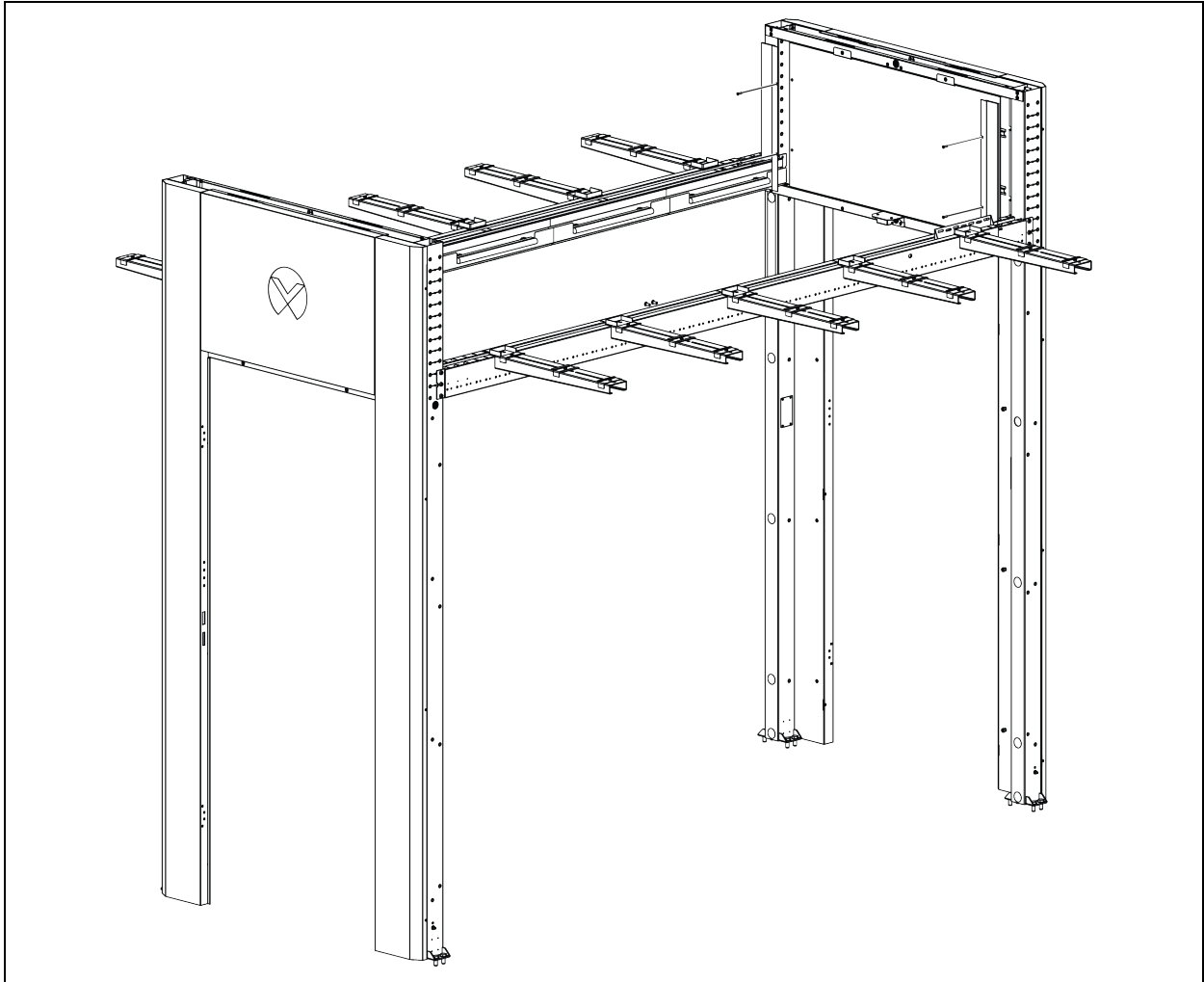
2. Secure the door header to the width beam using M6 countersunk screws.



3. Install the width panel that faces inside the aisle.

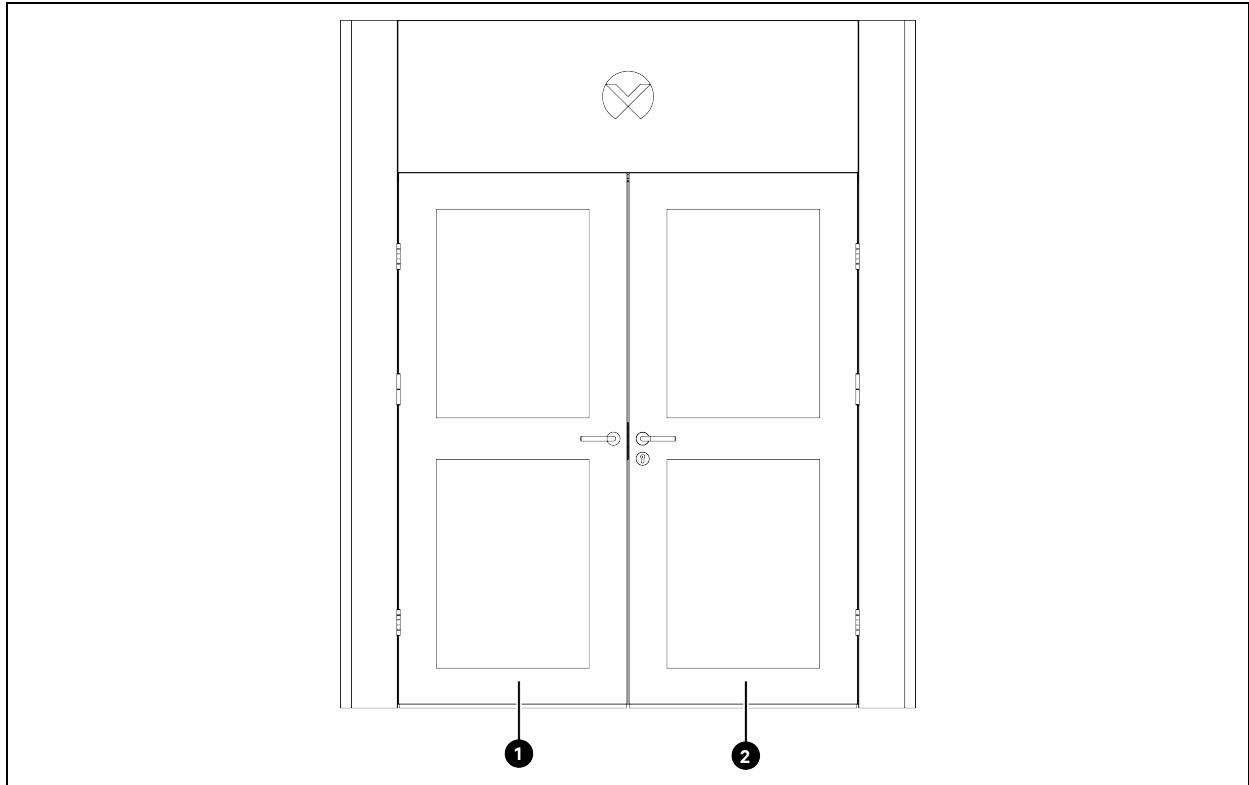


4. Install the brush included with the width panel.



### 4.3.10 Swing Door

The following figure shows the left door and the right door viewed from outside of the aisle.

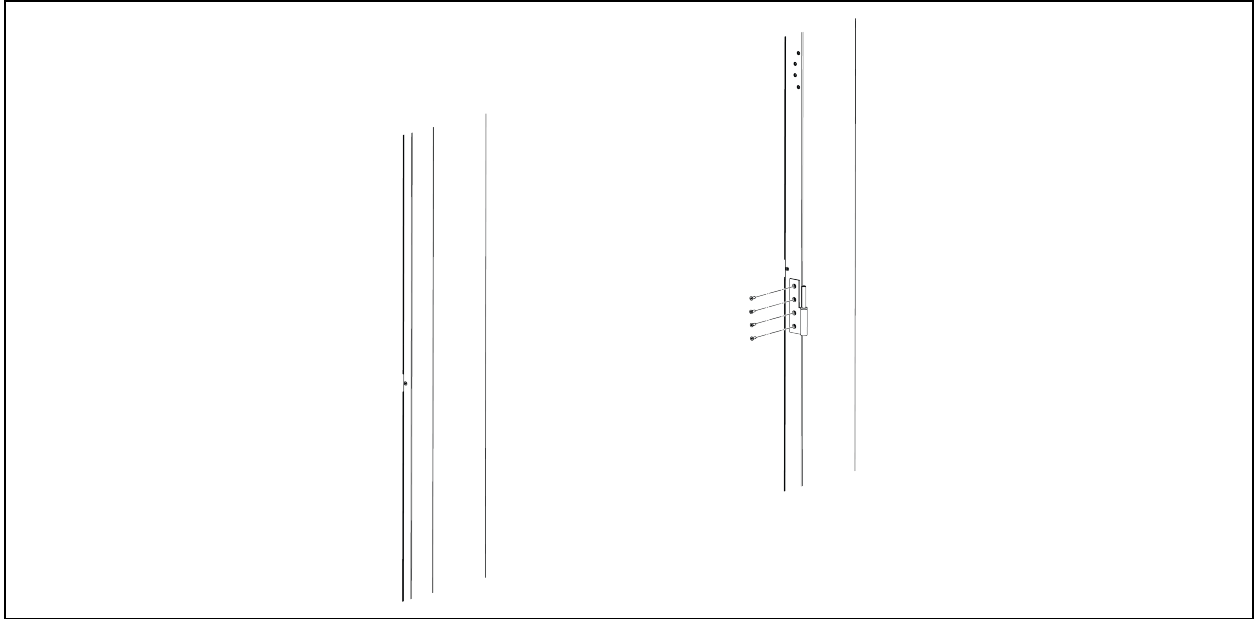


Item	Description
1	Left door
2	Right door

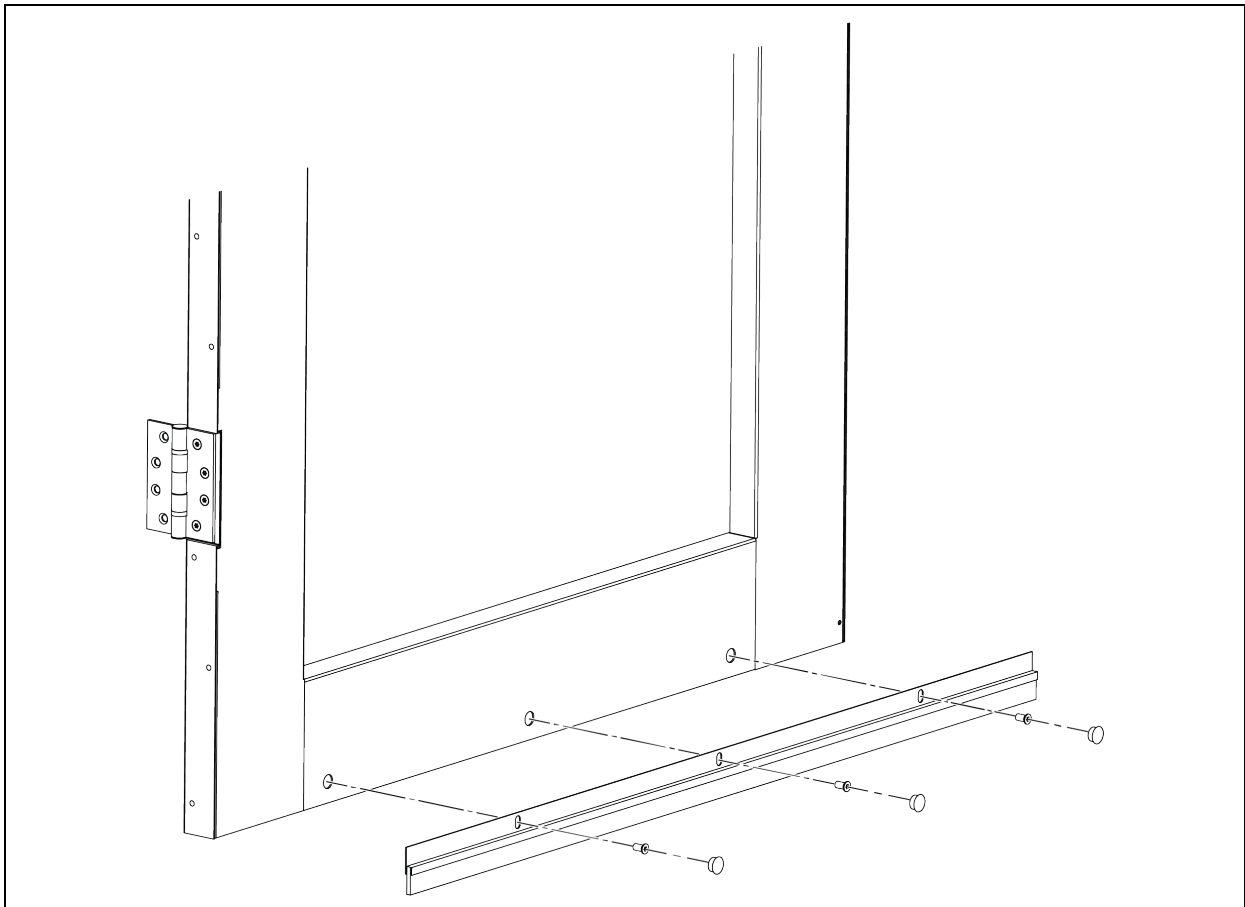
#### Single Swing Door: Right Door

Each door has been assembled with three hinges. Fixing the middle hinge to the door frame is different from fixing the upper and lower hinges.

1. The hinge in the middle consists of two separate leaves. Remove one leaf from the middle hinge and install it on the door frame using M6 countersunk screws.

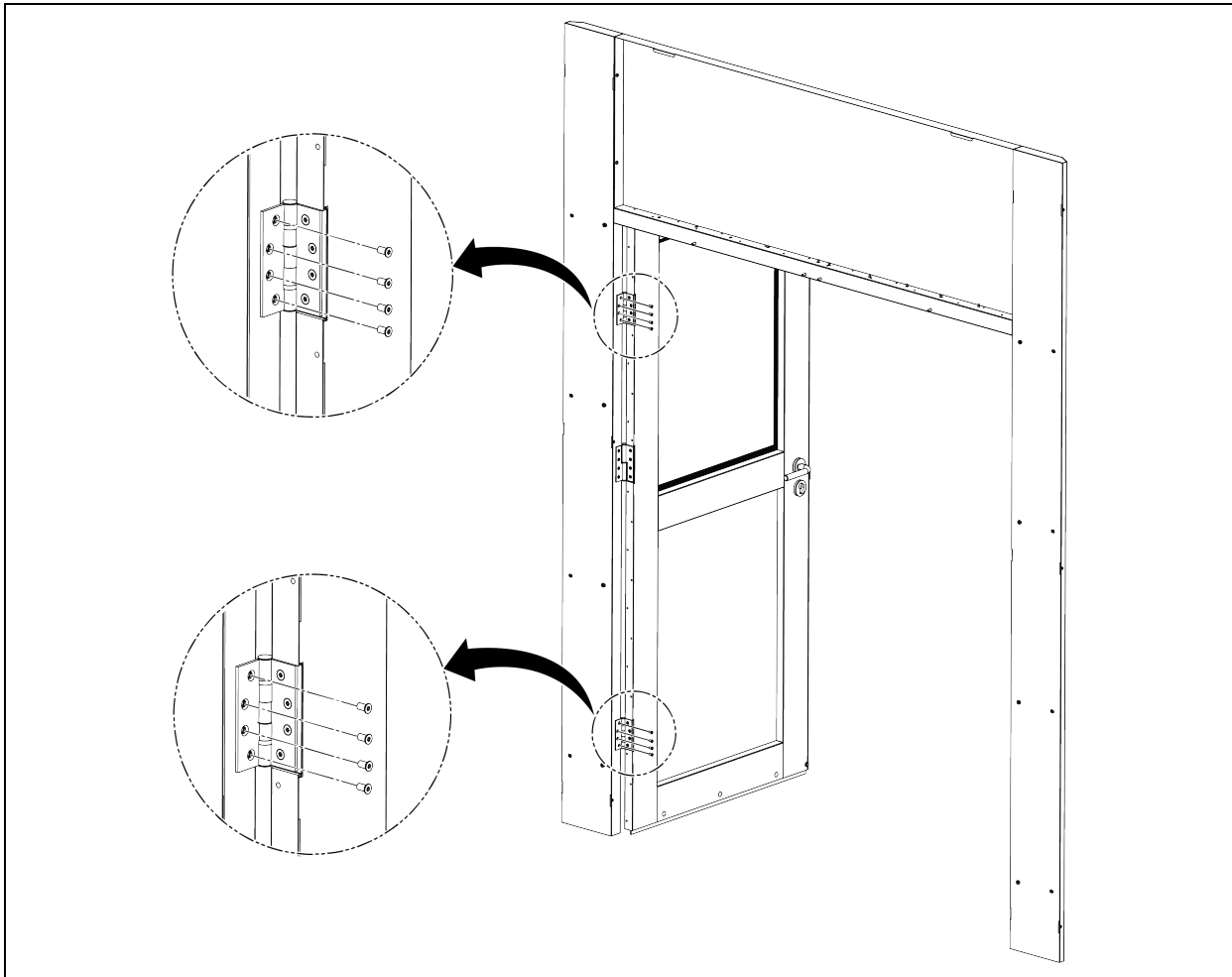


2. Install the brush strip under the door panel and secure it using M6 pan head screws from the inside of the door panel. Plug the plastic snap into the fixing hole.

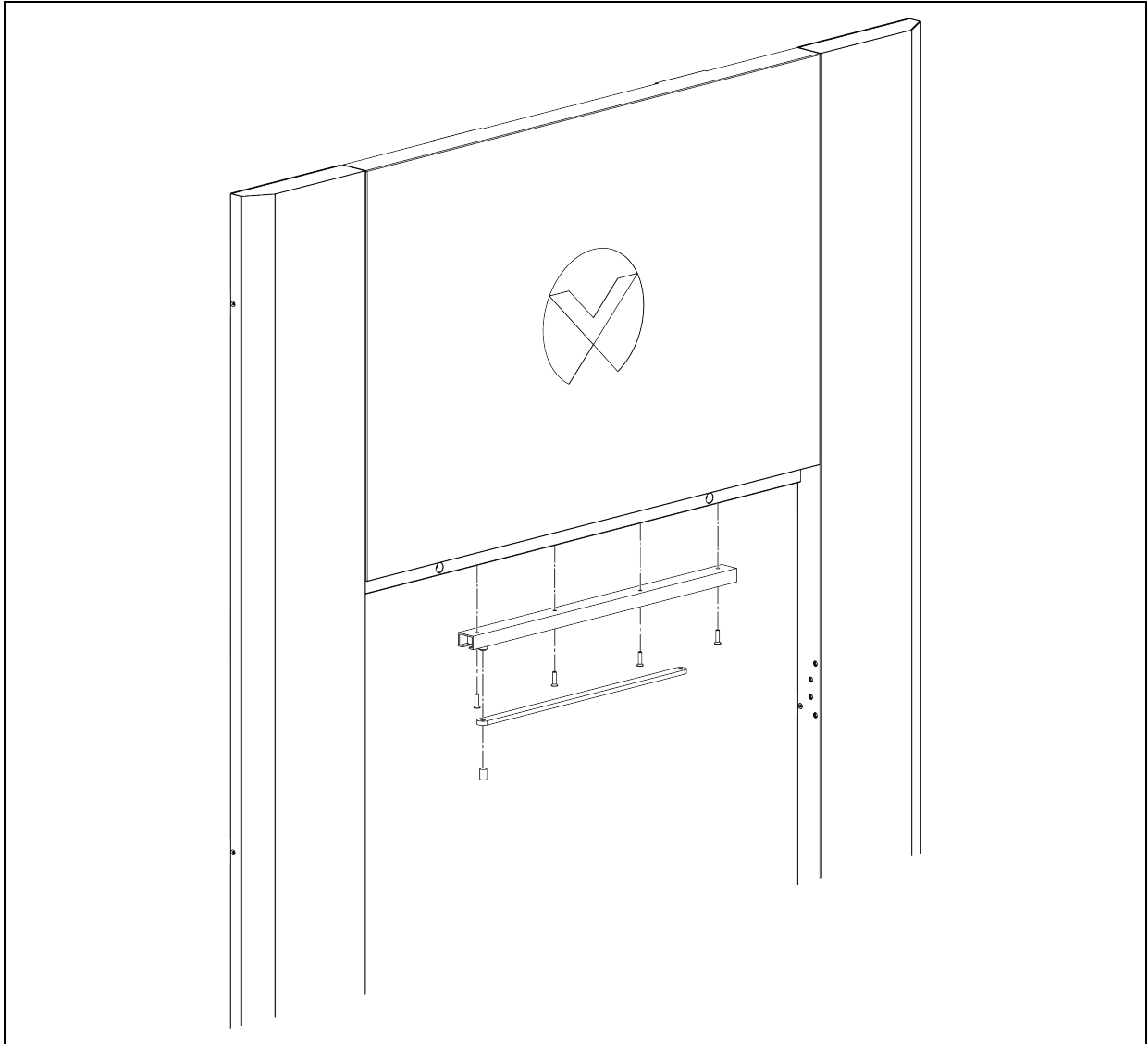




3. Lift the door panel and hang it on the door frame through the middle split hinge. Secure the upper and lower hinges to the door frame using M6 countersunk screws.



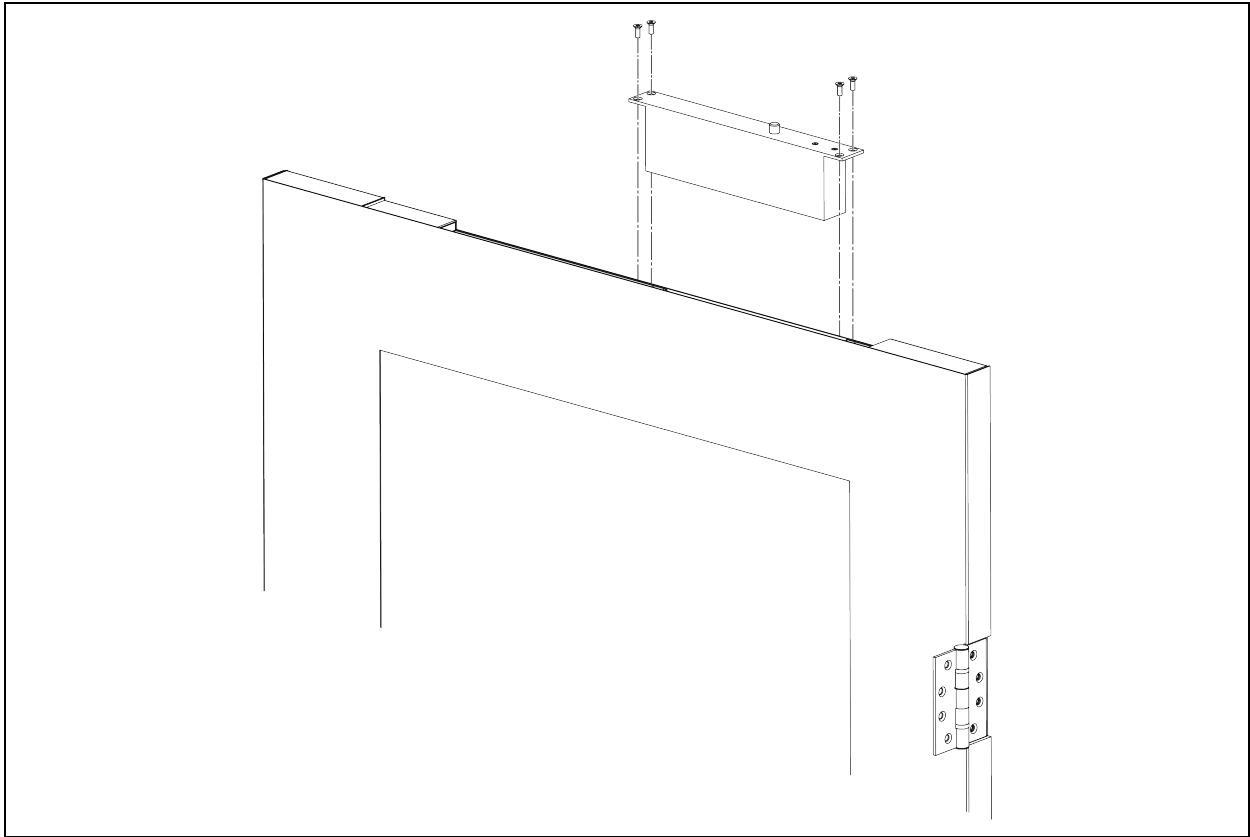
4. Secure the door closer chute on the door header using M4 countersunk screws. Secure the connecting rod on the chute.



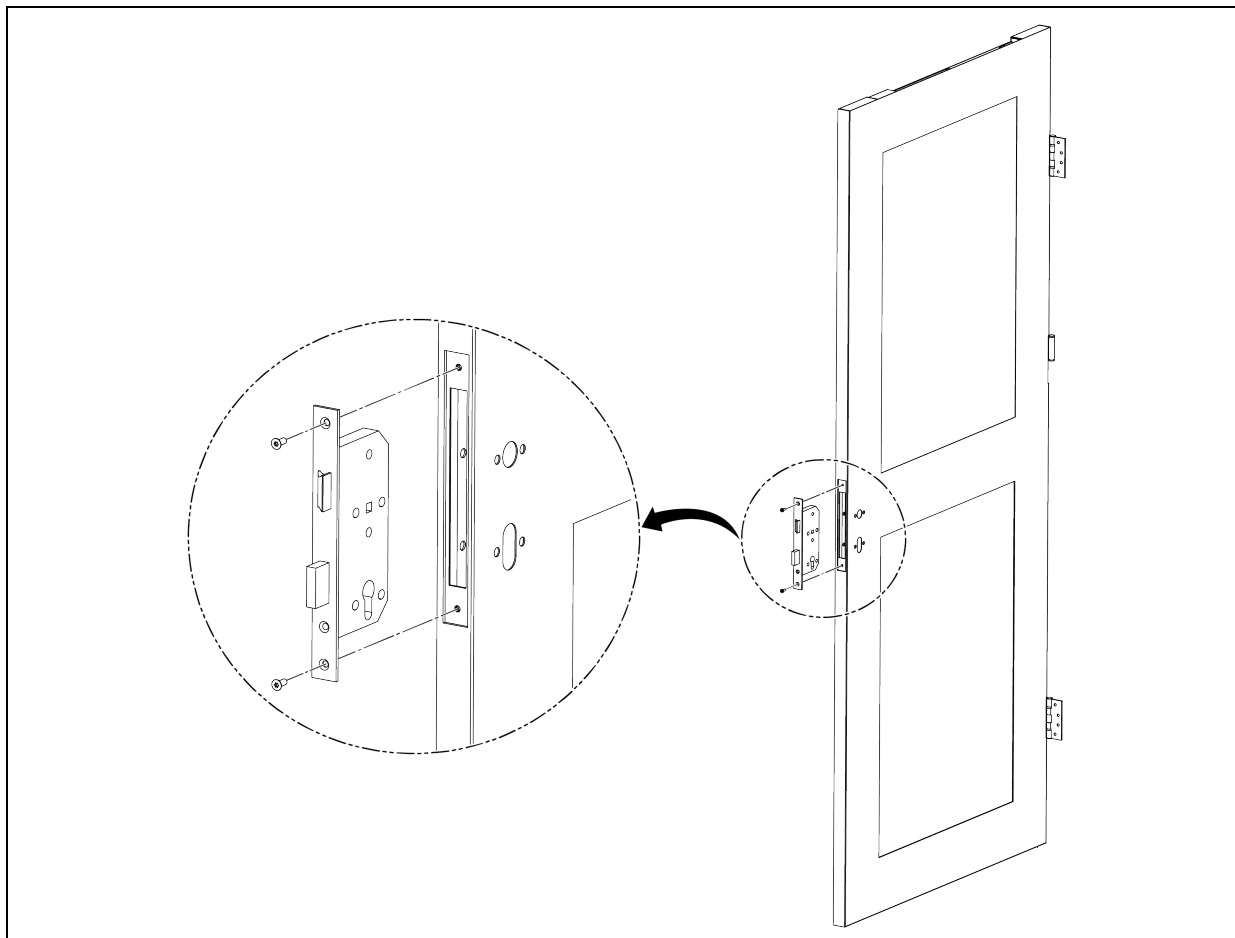
5. Install the frame of the door closer on the top side of the door.

**NOTE:** The installation of the left and right door closers are different. For details, see [Door Lock Installation Guide](#) on page 246 .

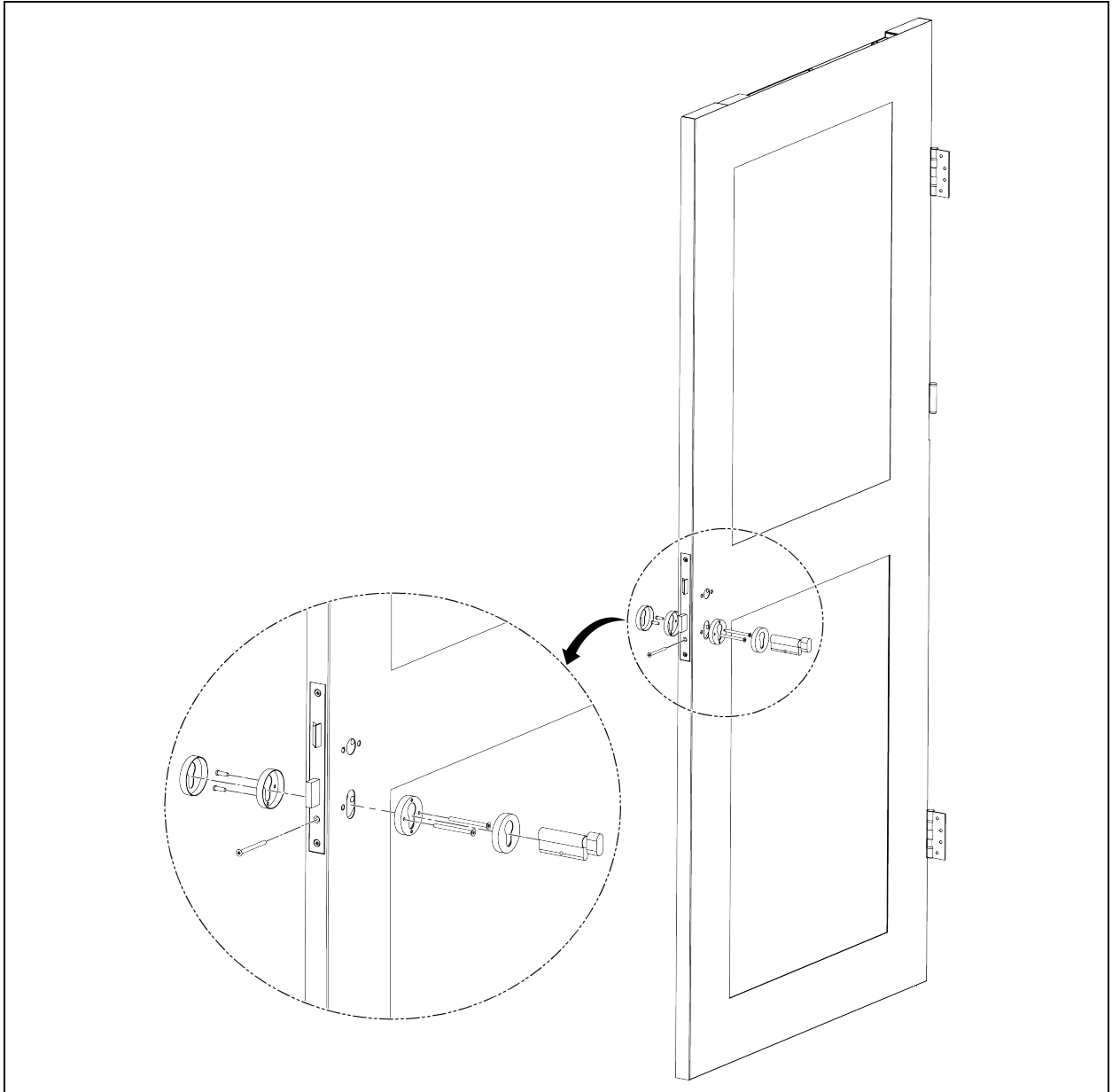
**NOTE:** The closing speed and the closing force of the door closer can be adjusted by the knob. For details, see [Door Lock Installation Guide](#) on page 246 .



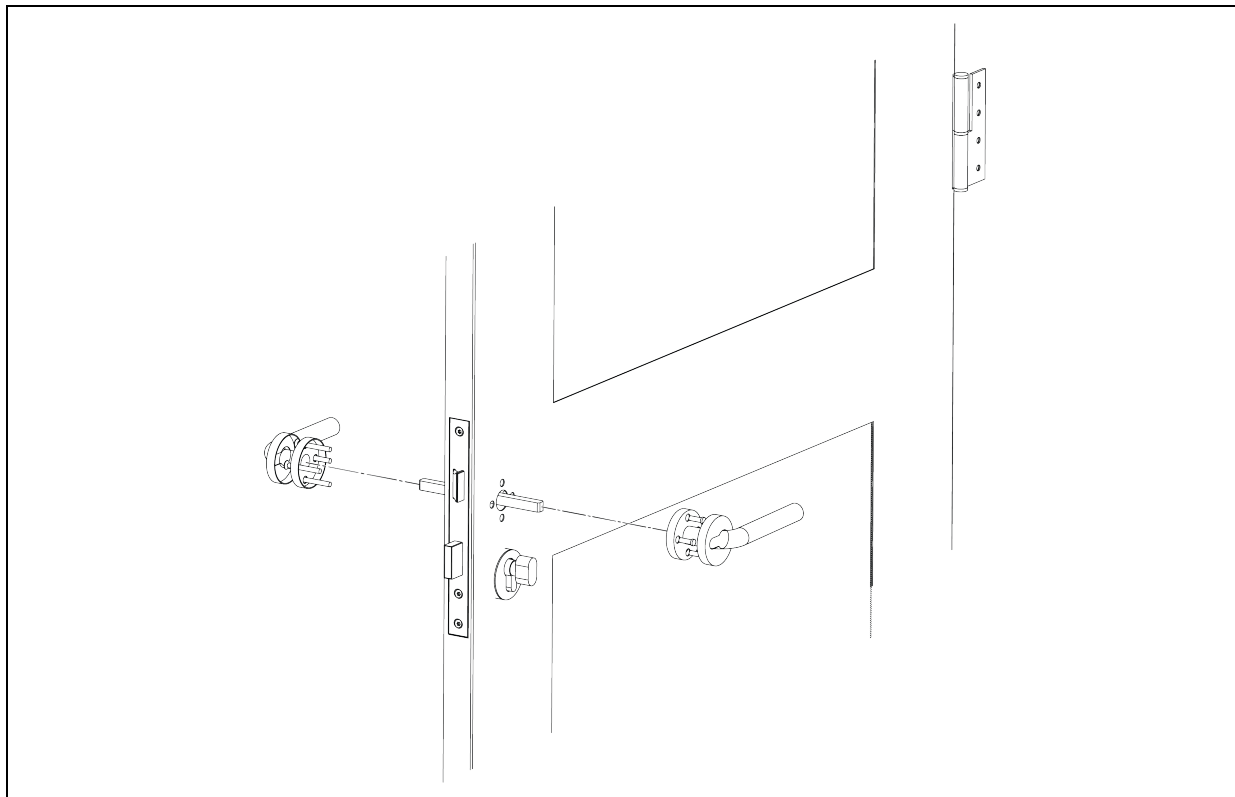
6. Install the door lock body (removable handle and lock core) into the mounting hole on the door panel. Lock the door lock body using M5 countersunk screws (for details, see [Door Lock Installation Guide](#) on page 246 ).



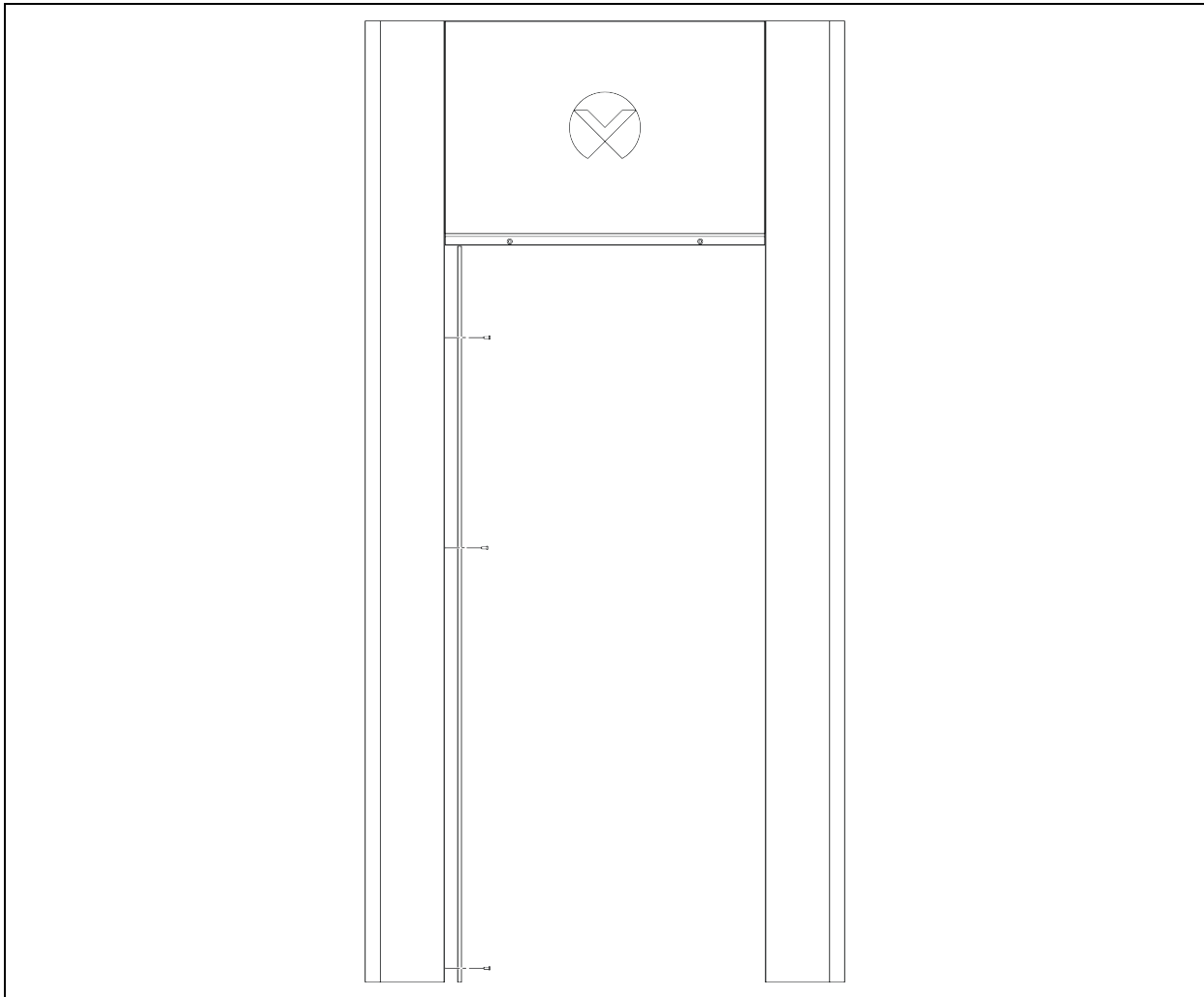
7. Fix the lock core cover on the door with its own long screw nut (a screw and a nut) and then snap the outer trim cap into the lock core cover. Insert the lock core into the door lock body, insert the lock core from the long screw that comes with the door lock from one side of the tab, and lock the lock core with a threaded hole that matches it (the lock core is in the correct position, and the long screw can be locked into the lock core).



8. Similar to the lock core installation, secure the handle's retaining cap using M4 countersunk screws and nuts on the door plate. Insert the handle shaft into the door lock body, snap the handle into the handle holder cover, and lock the small screw to secure the handle (for details, see [Door Lock Installation Guide](#) on page 246 ).

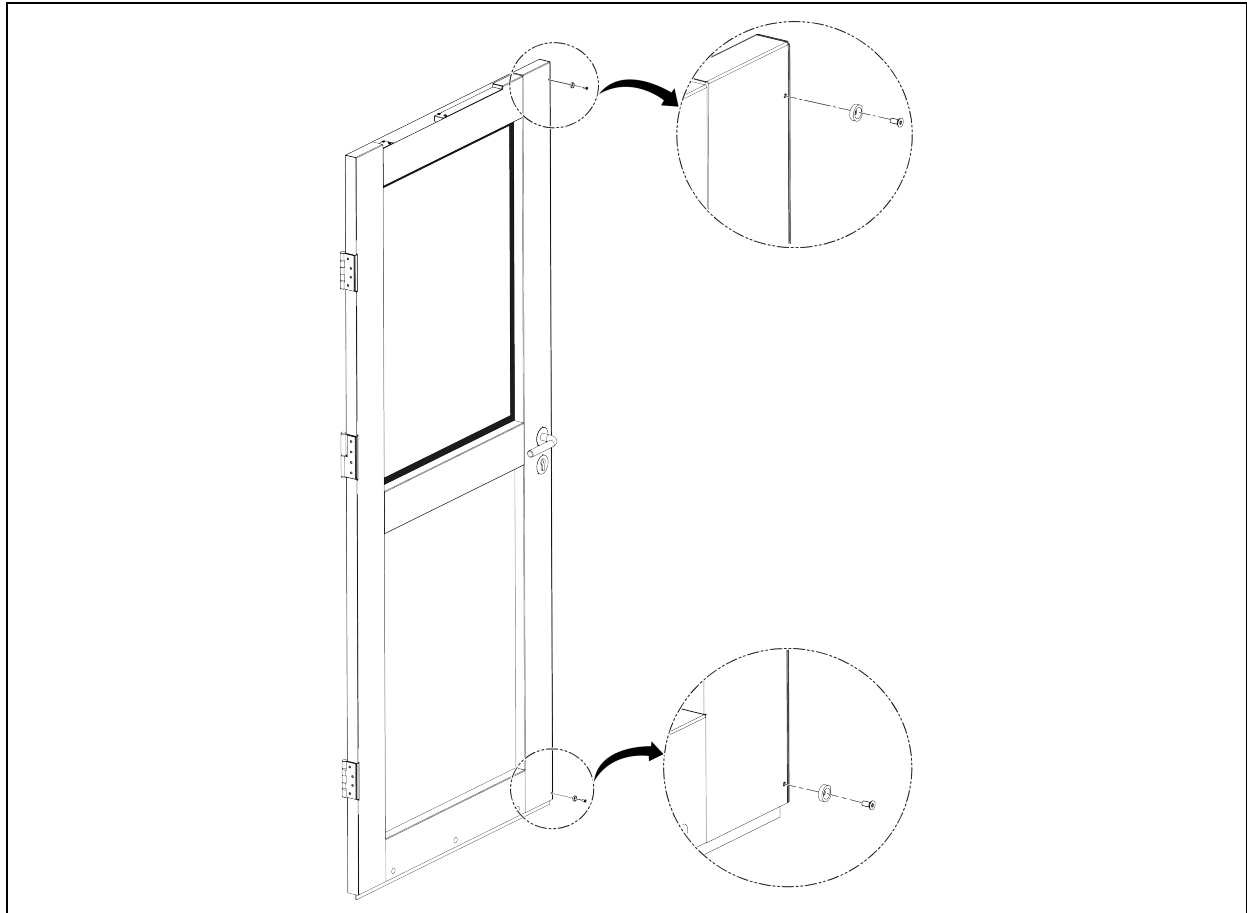


9. Install the swing door sealing bracket on the left door frame using M4 pan head screws.



### Installing Dual Swing Door - Right Door

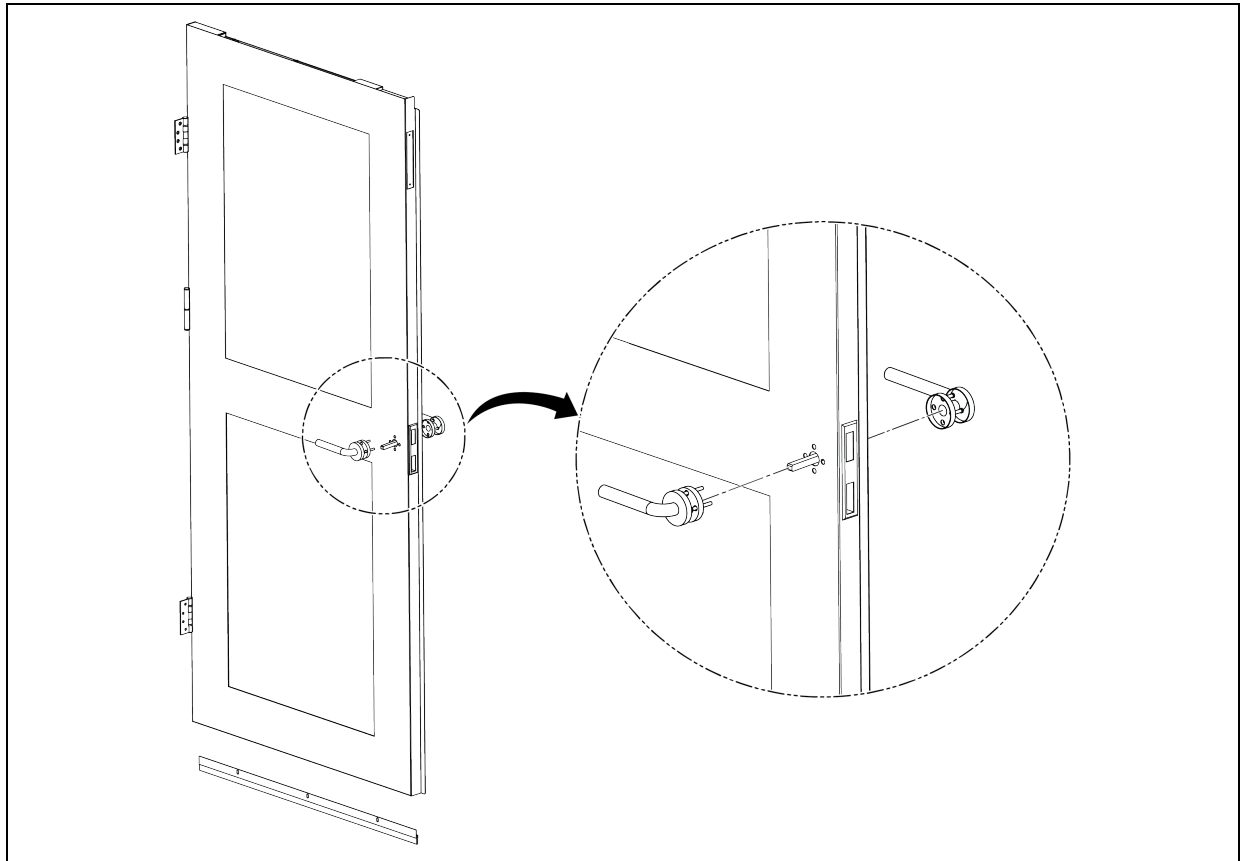
To install door lock and brush strip on the right door of the dual swing door, see single door installation. The right door of the dual swing door requires two magnets.





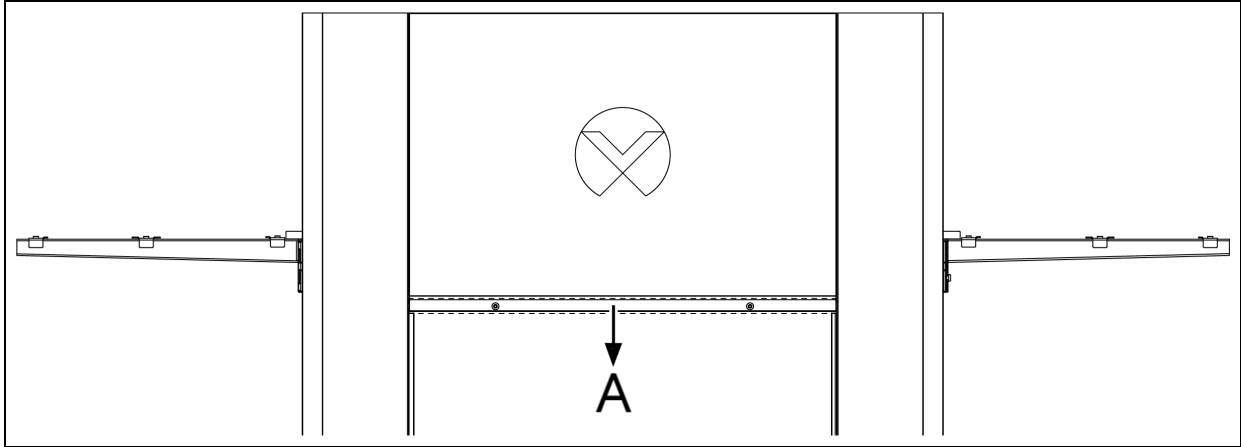
### Installing Dual Swing Door - Left Door

Install hinges, handles (left door without door lock), door closer, brushes, and rubber plugs on the door panel.

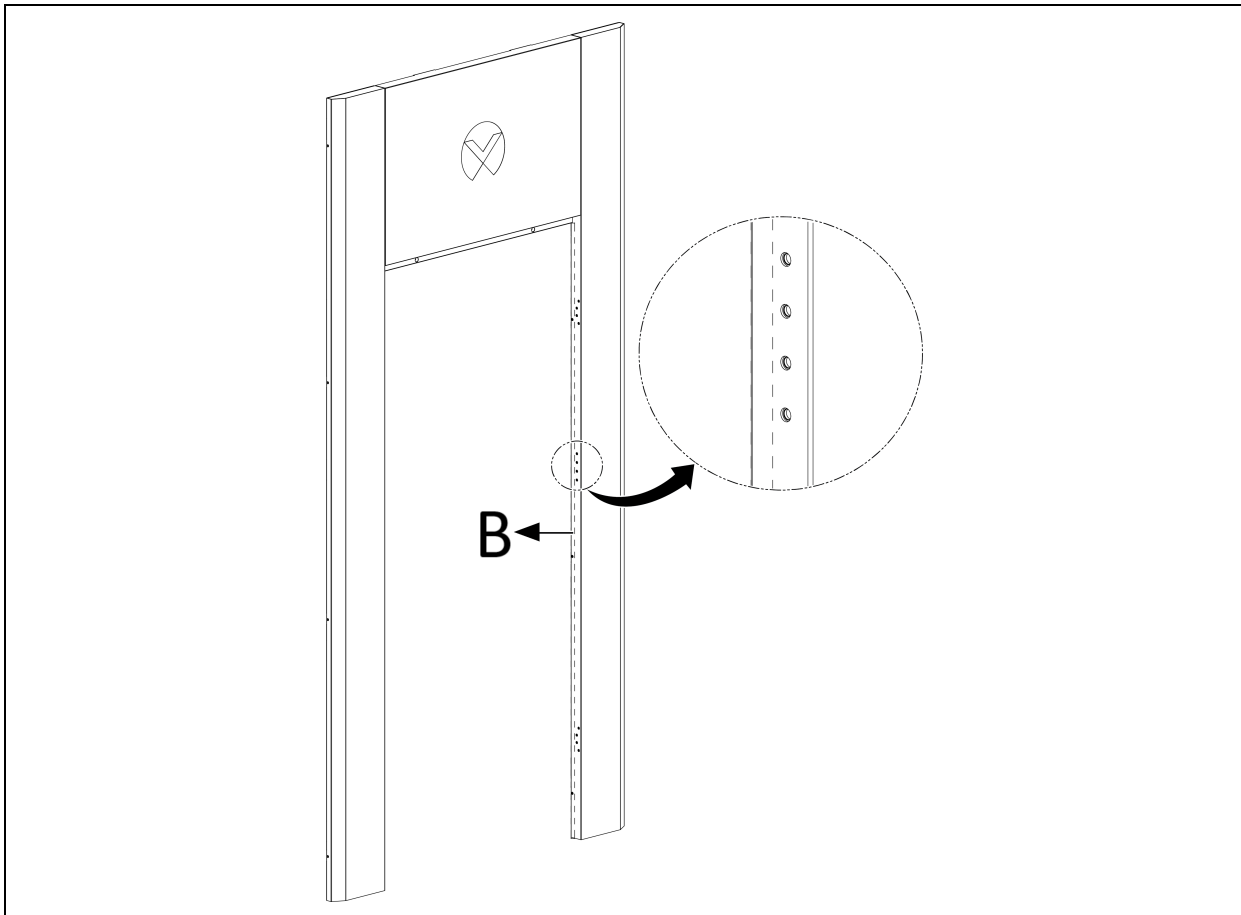


### 4.3.11 Sealing Foam

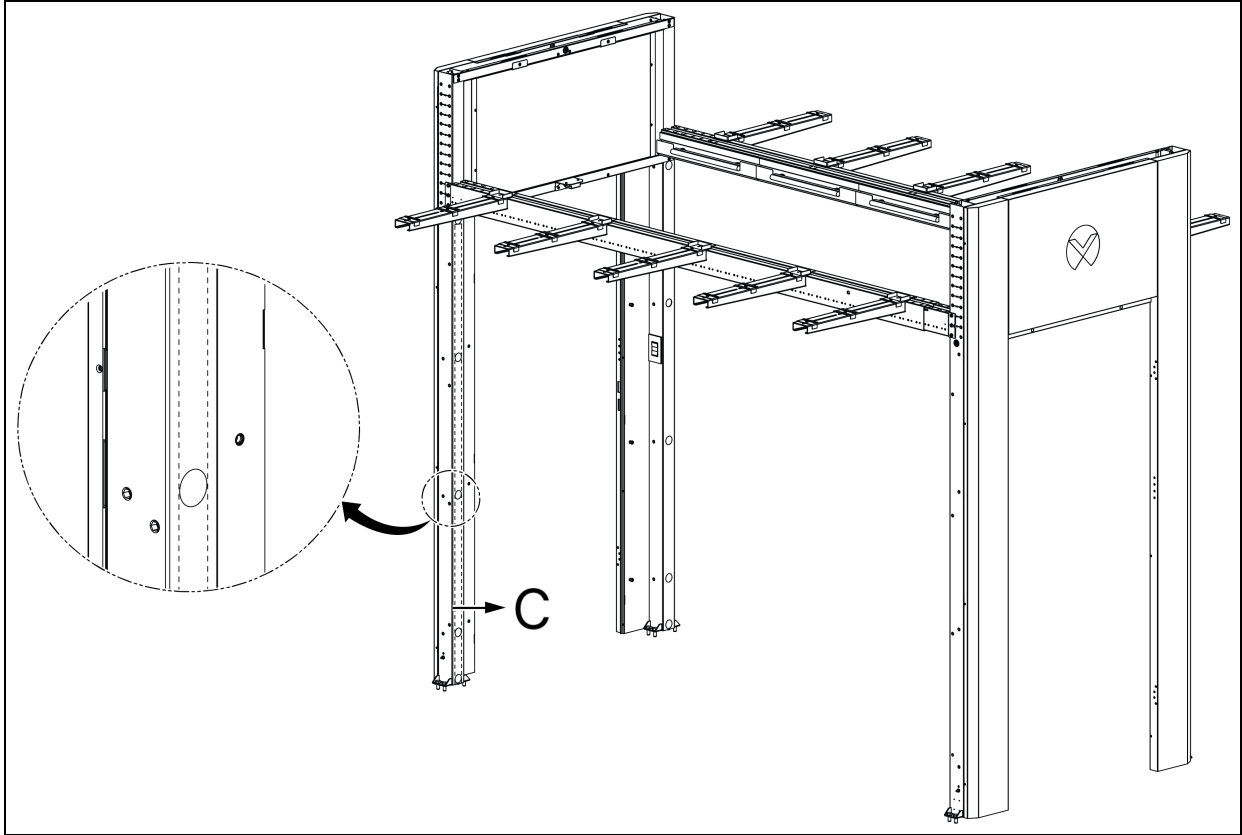
1. Attach the sealing foam onto the door header surface (A), for 914.4 mm (3 ft) or 1219.2 mm (4 ft), or 1828.8 mm (6 ft) door.



2. Attach the sealing foam onto the door frame surface (B). If there are two doors, attach the sealing foam for both door frames. If there is a single door, attach the sealing foam onto the right door frame. When attaching the sealing foam, do not cover the hinges.

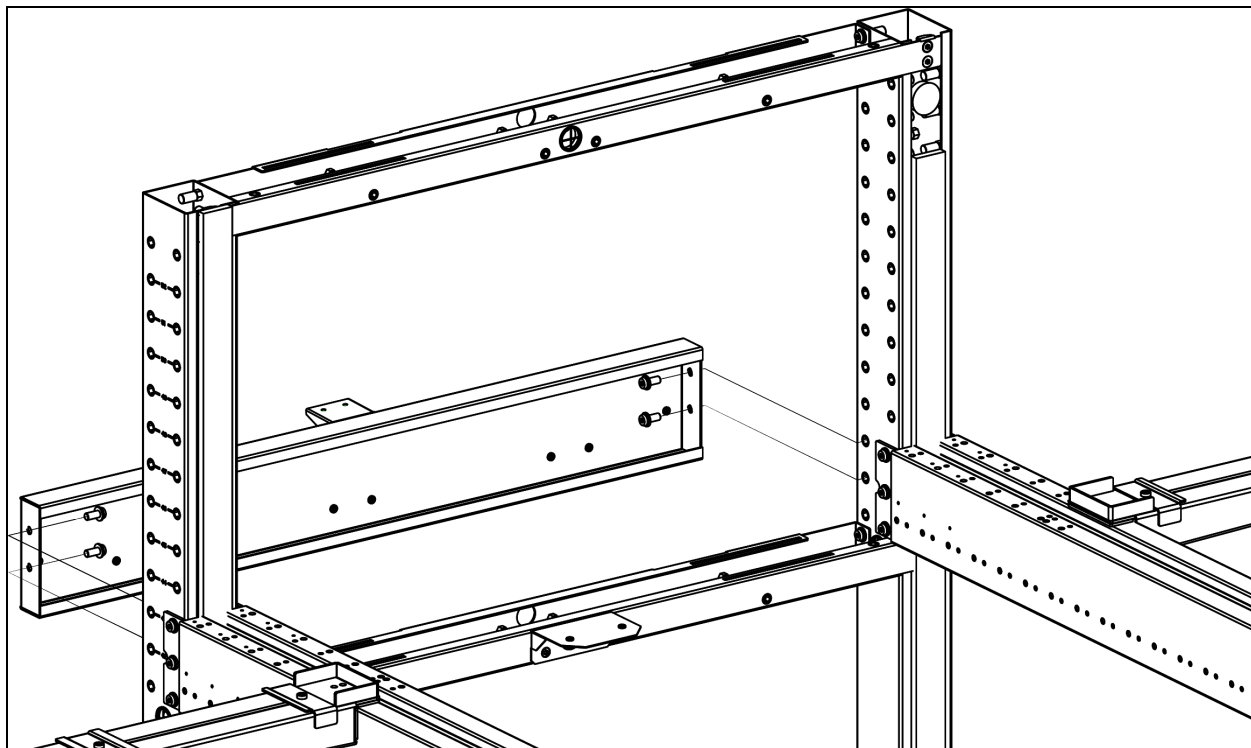
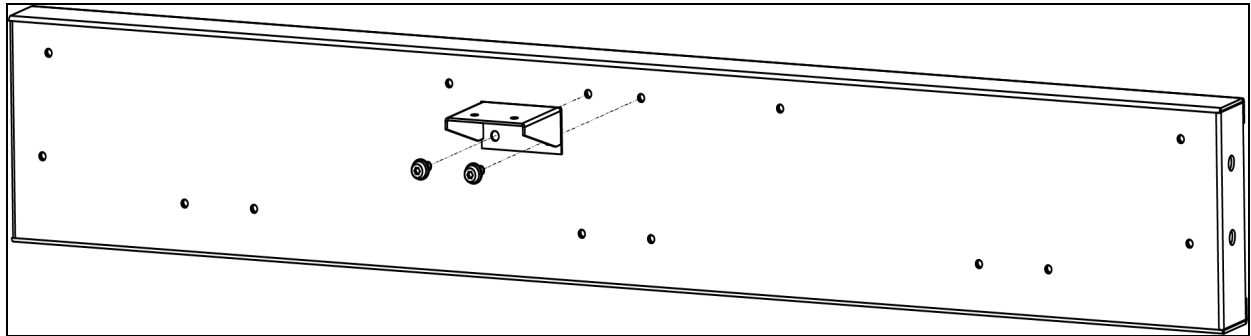


3. Attach the sealing foam onto the surface (C) of four vertical posts.

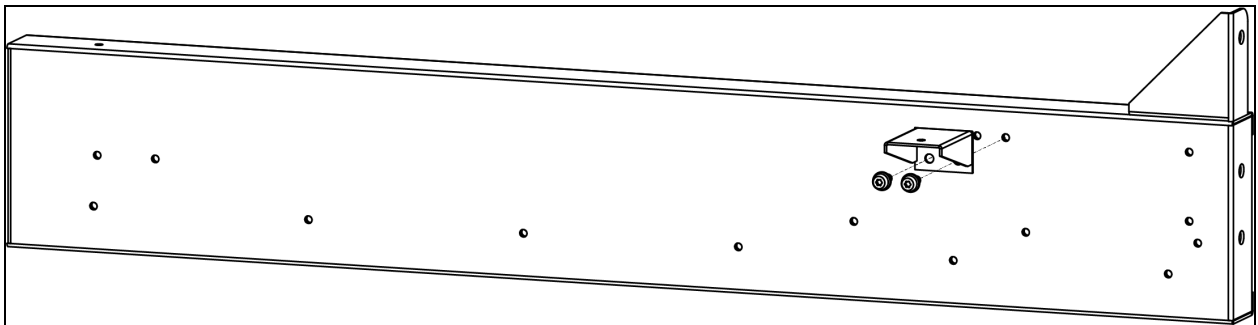
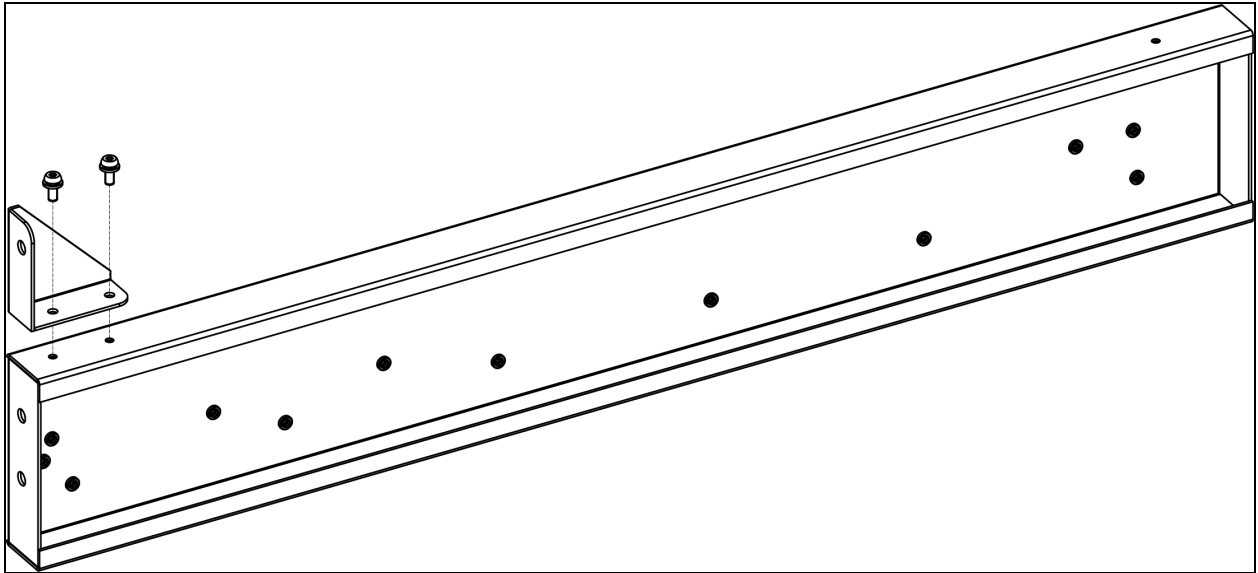


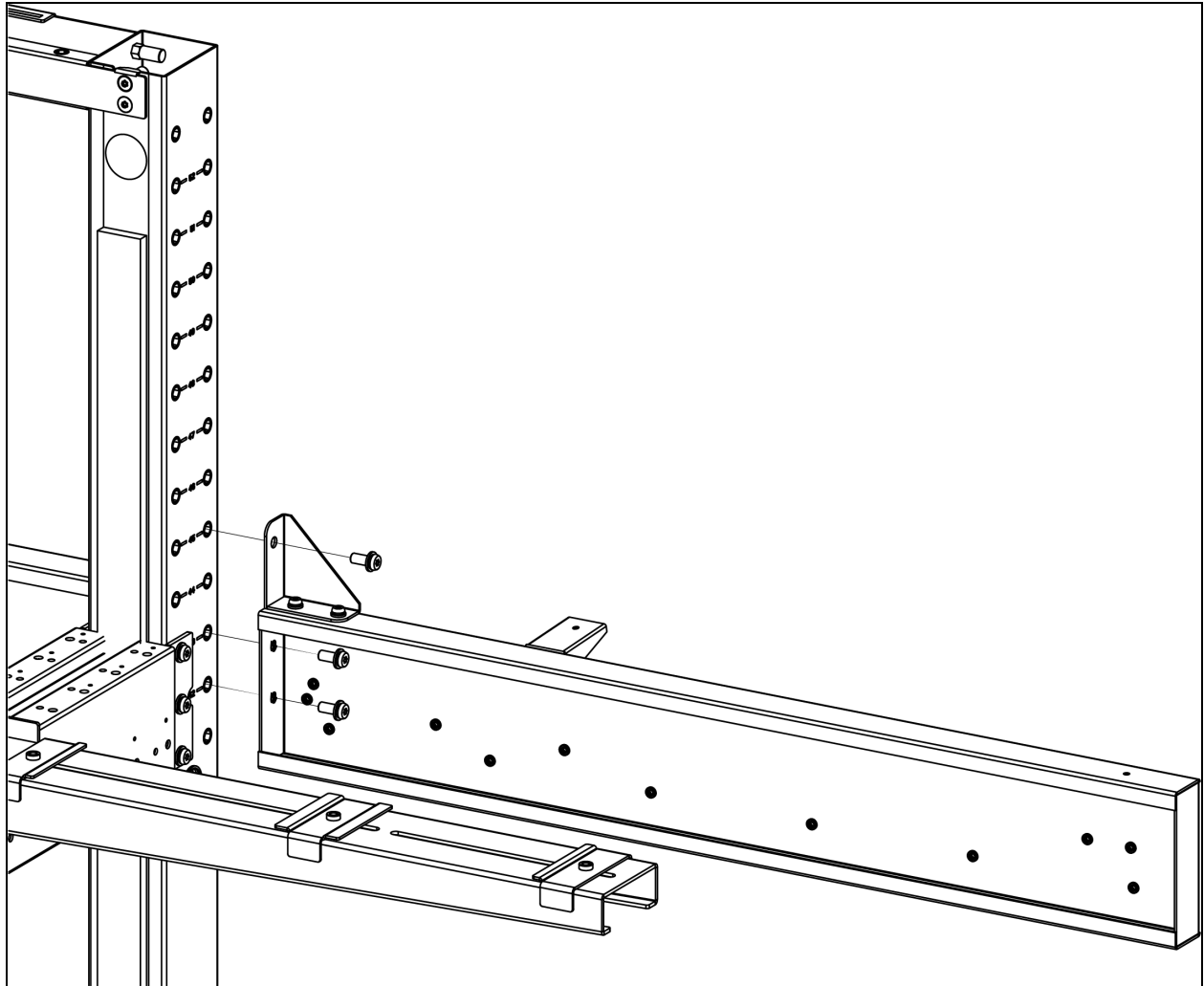
### 4.3.12 Sliding Rail Cover Component (for 914.4 mm (3 ft) Right Opening Sliding Door)

1. Fix the cover bracket to the width beam using M5 pan head screws. Fix the width beam to the vertical post using M8 pan head screws.

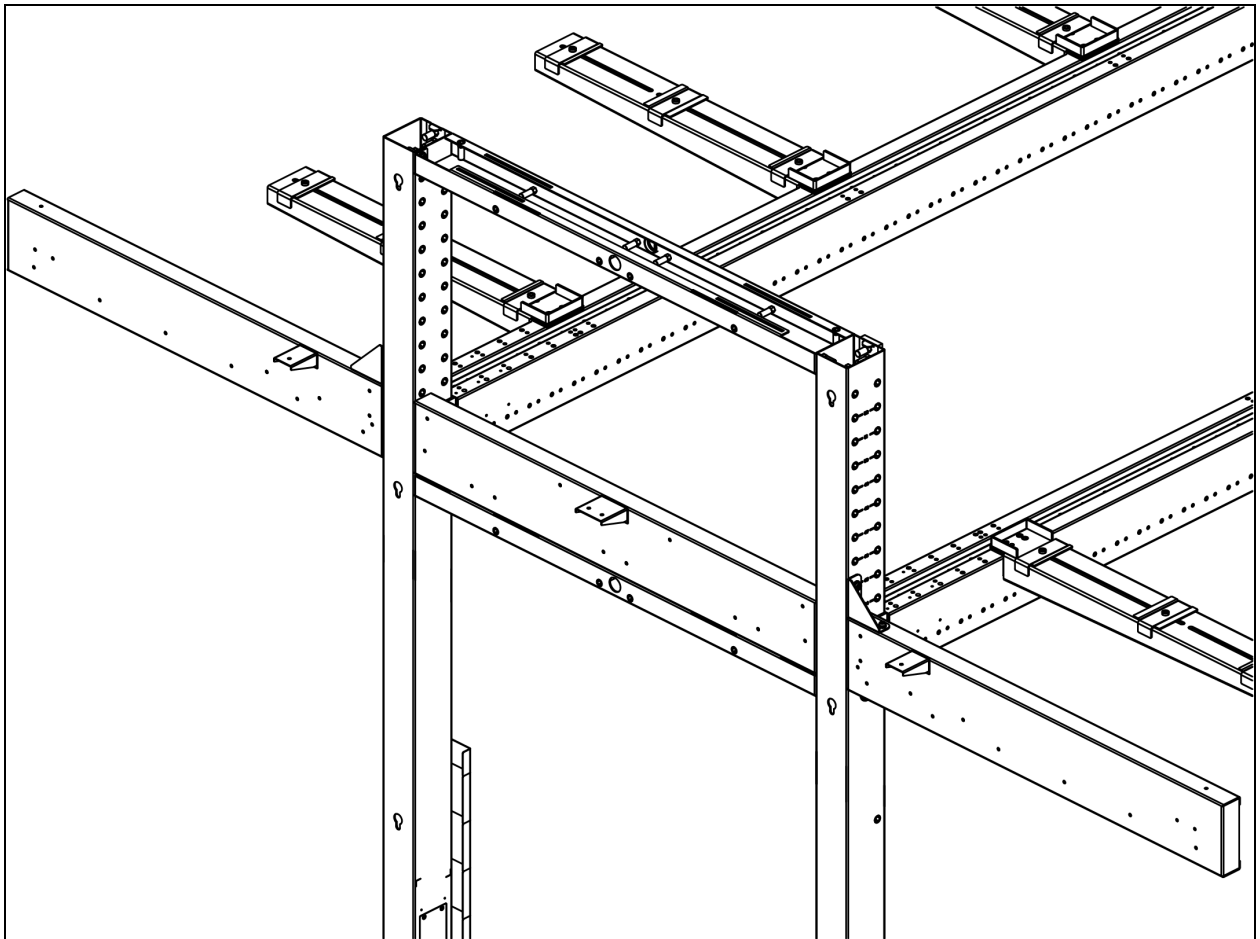


2. Fix the extendable beam bracket and the cover bracket to the extendable beam using M5 pan head screws.  
Fix the extendable beam to the vertical post using M8 pan head screws.

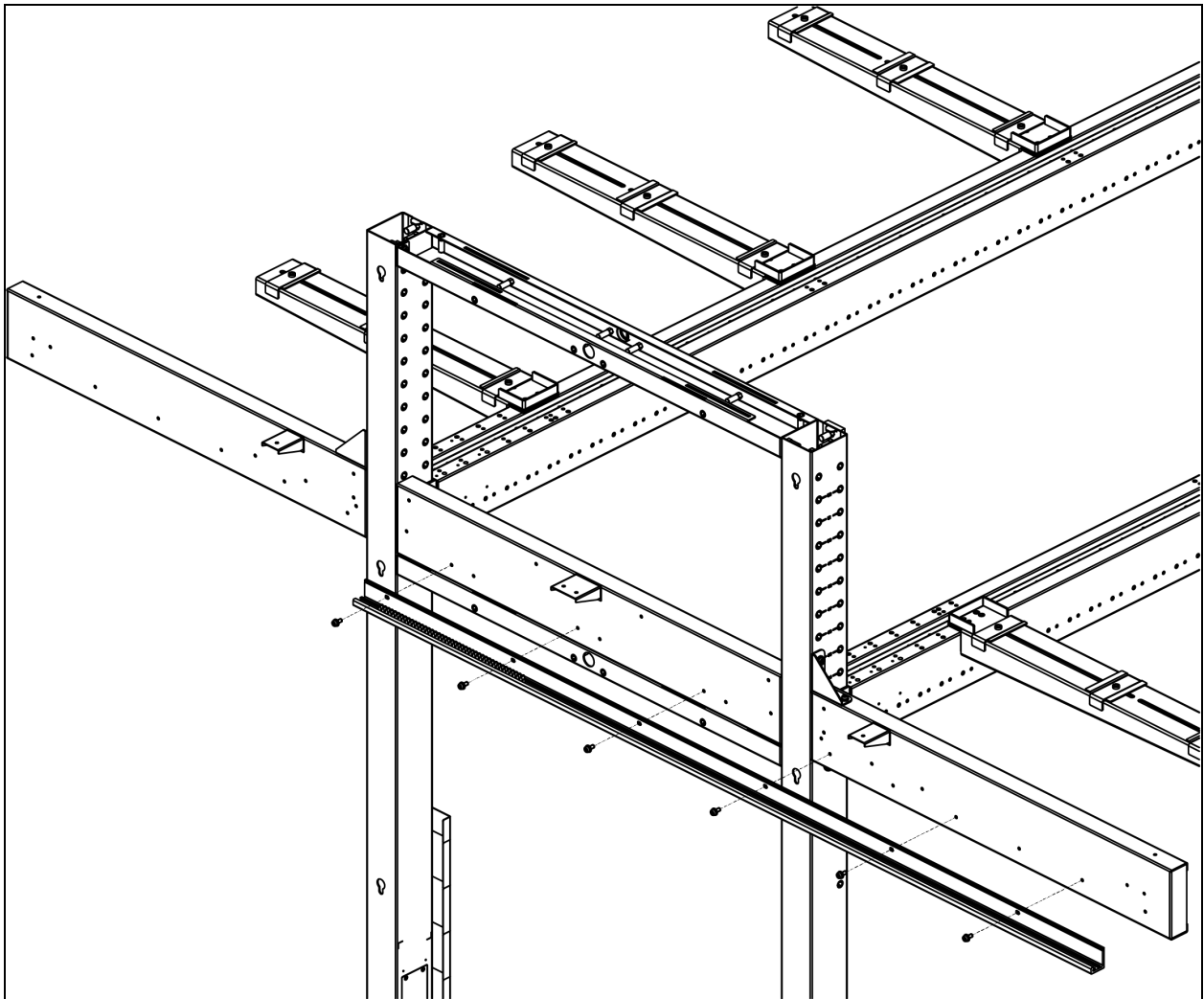




3. Repeat step 2 to install the extendable beam on the other side.

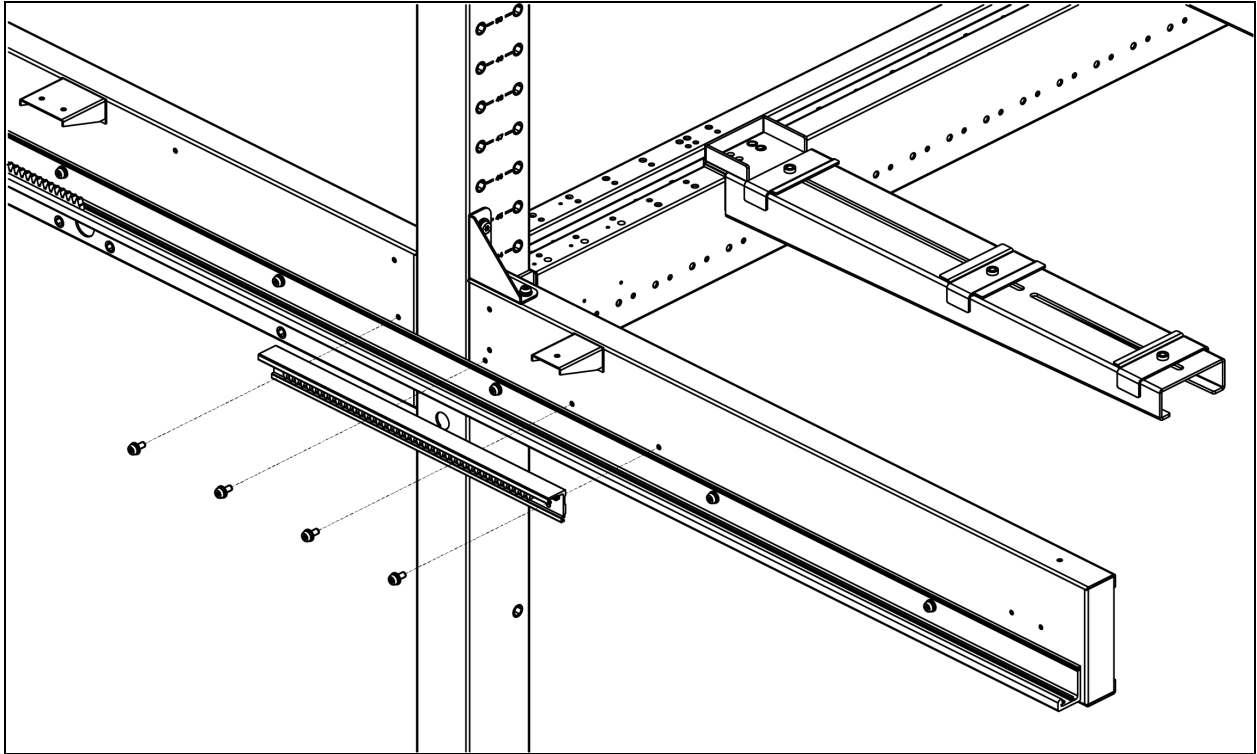


4. Fix the sliding rail to the width beam and the extendable beam using M5 pan head screws.

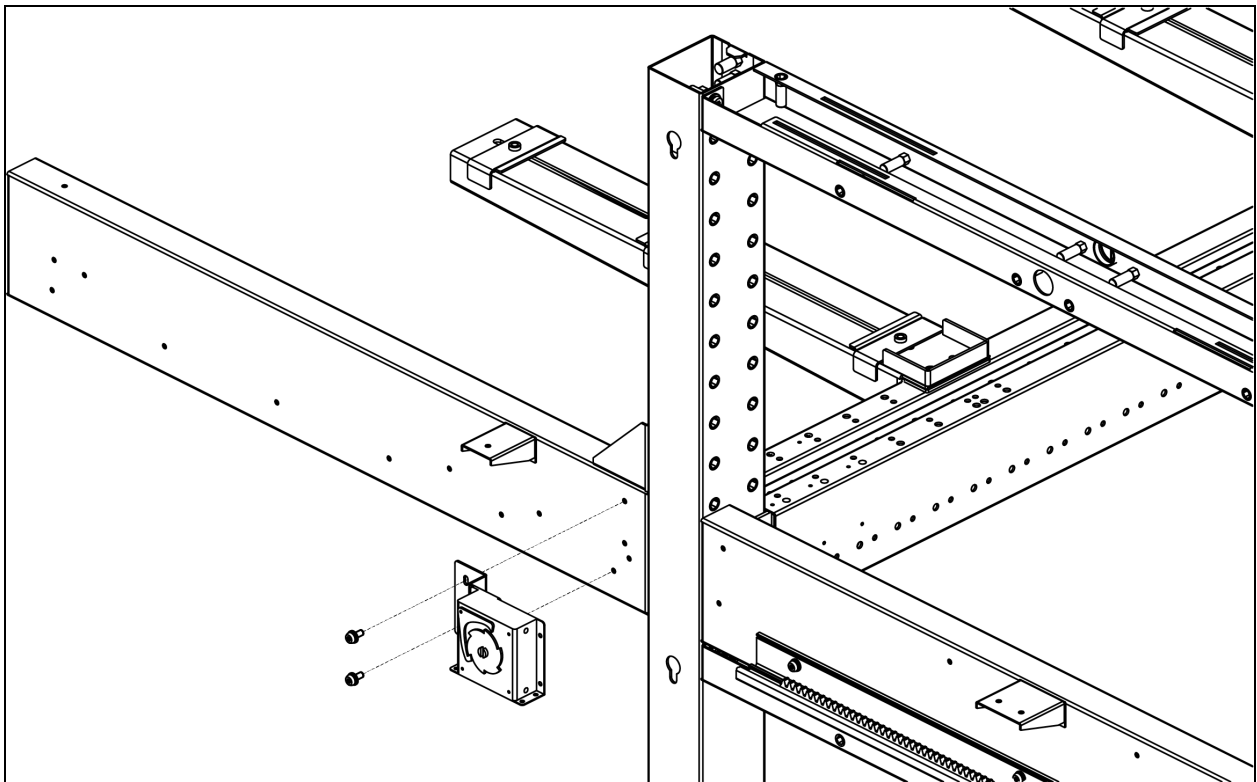




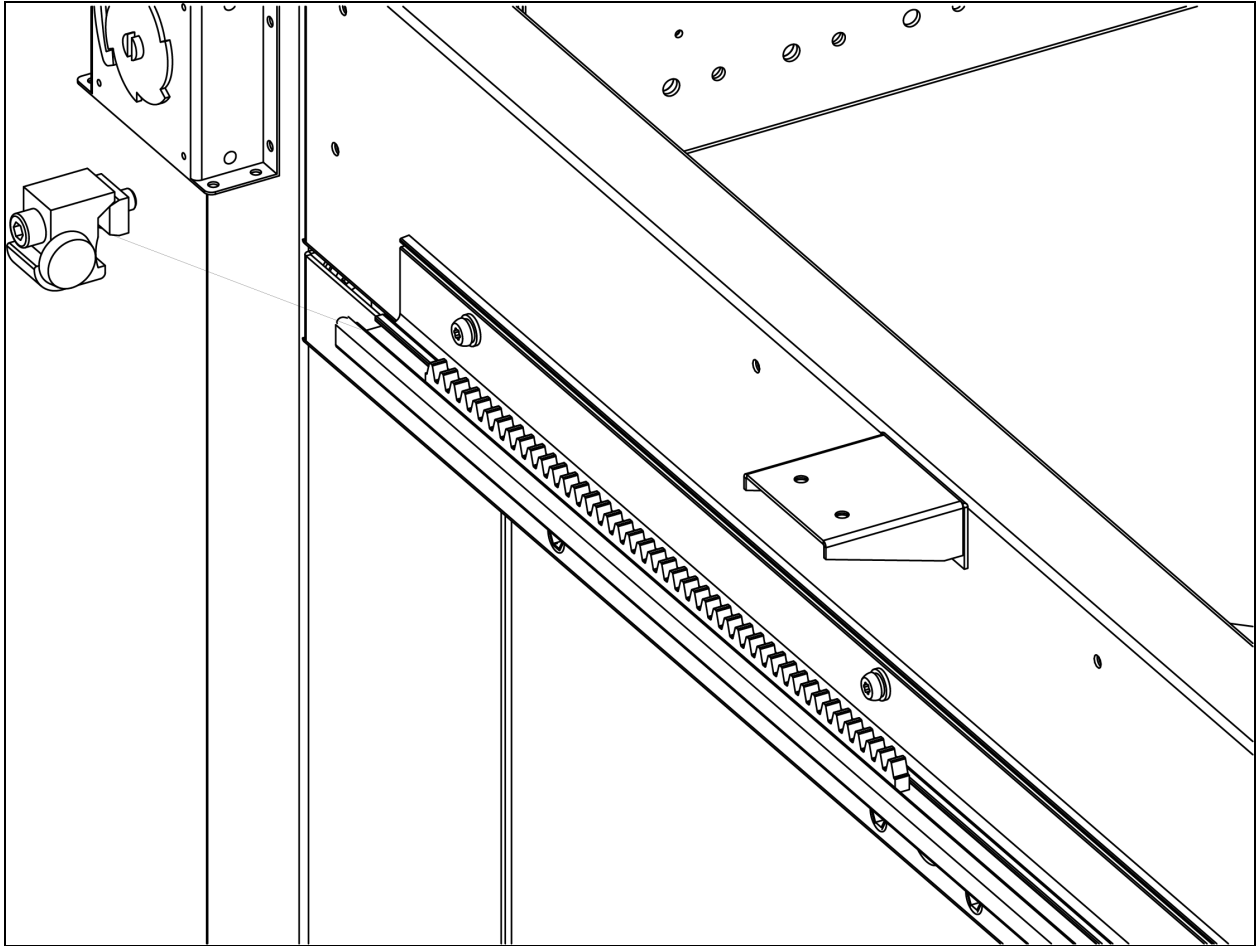
5. Fix the rail of the plastic tooth belt to the width beam and the extendable beam using M5 pan head screws.



6. Fix the drive device to the extendable beam on the left side using M5 pan head screws.

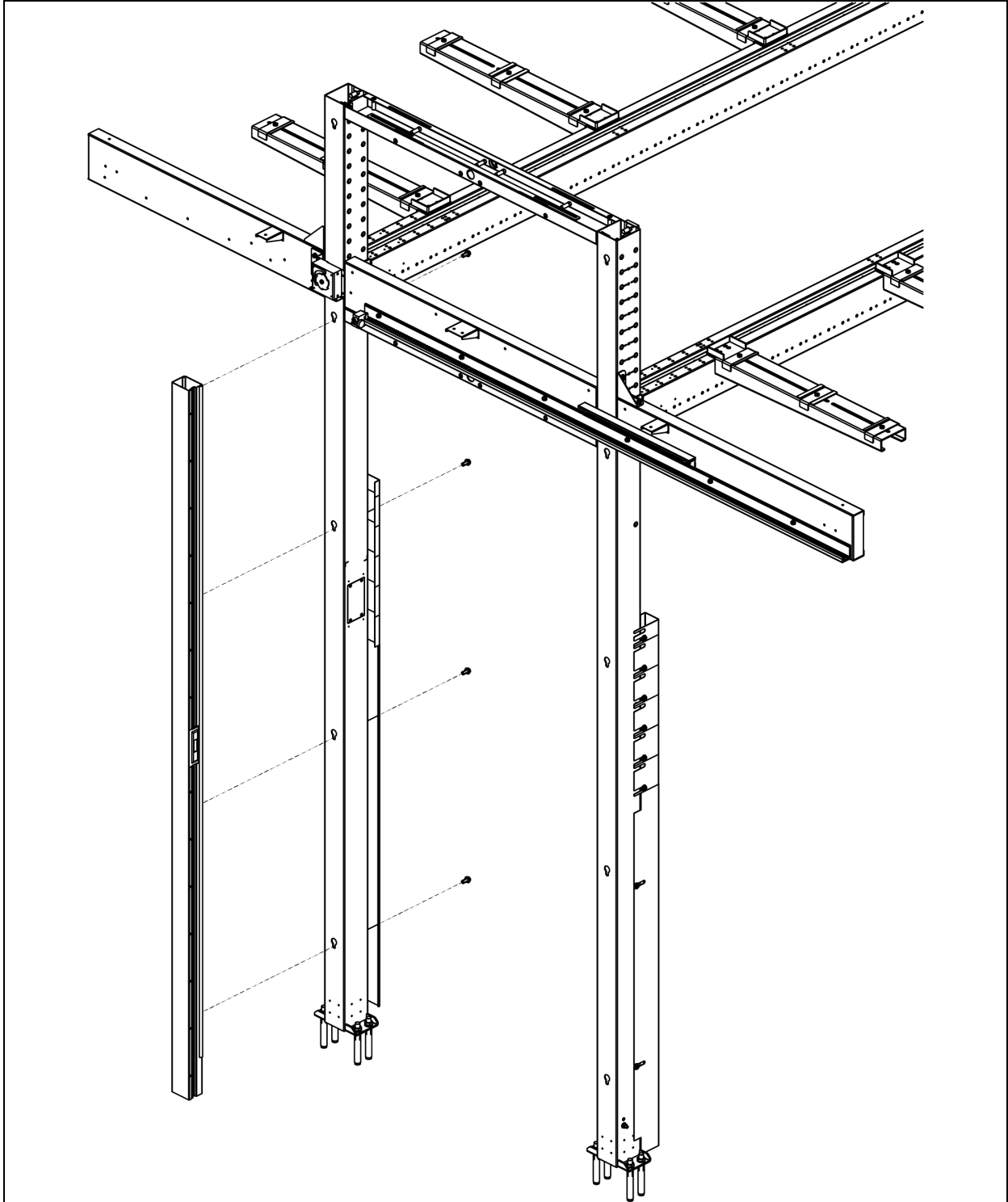


7. Fix the stopper to the sliding rail.

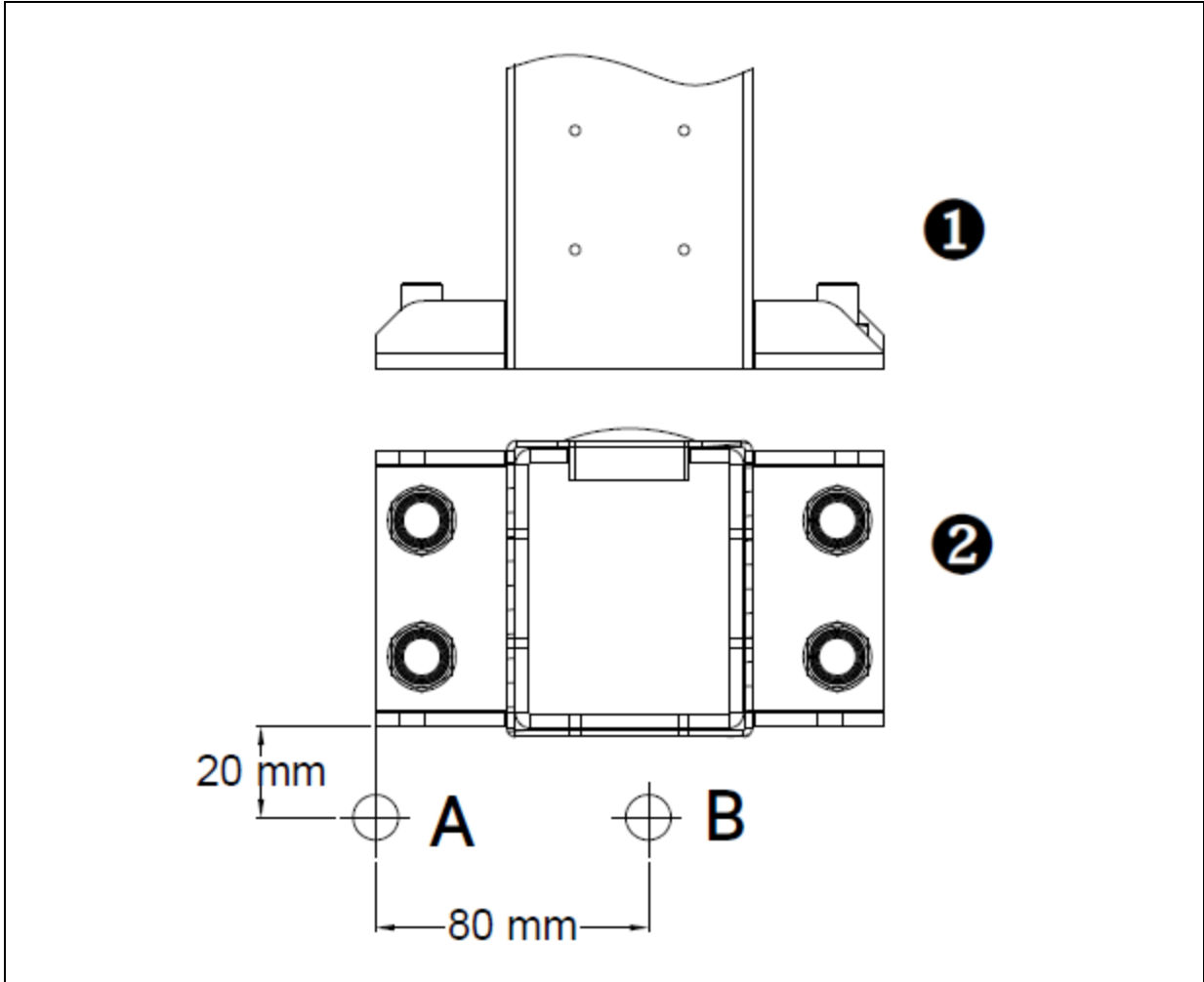


### 4.3.13 Semi-auto Sliding Door (for 914.4 mm (3 ft) Right Opening Sliding Door)

1. Fix the left sliding door adapter to the left vertical post using M8 pan head screws. Install the screws from the back side of the vertical post.

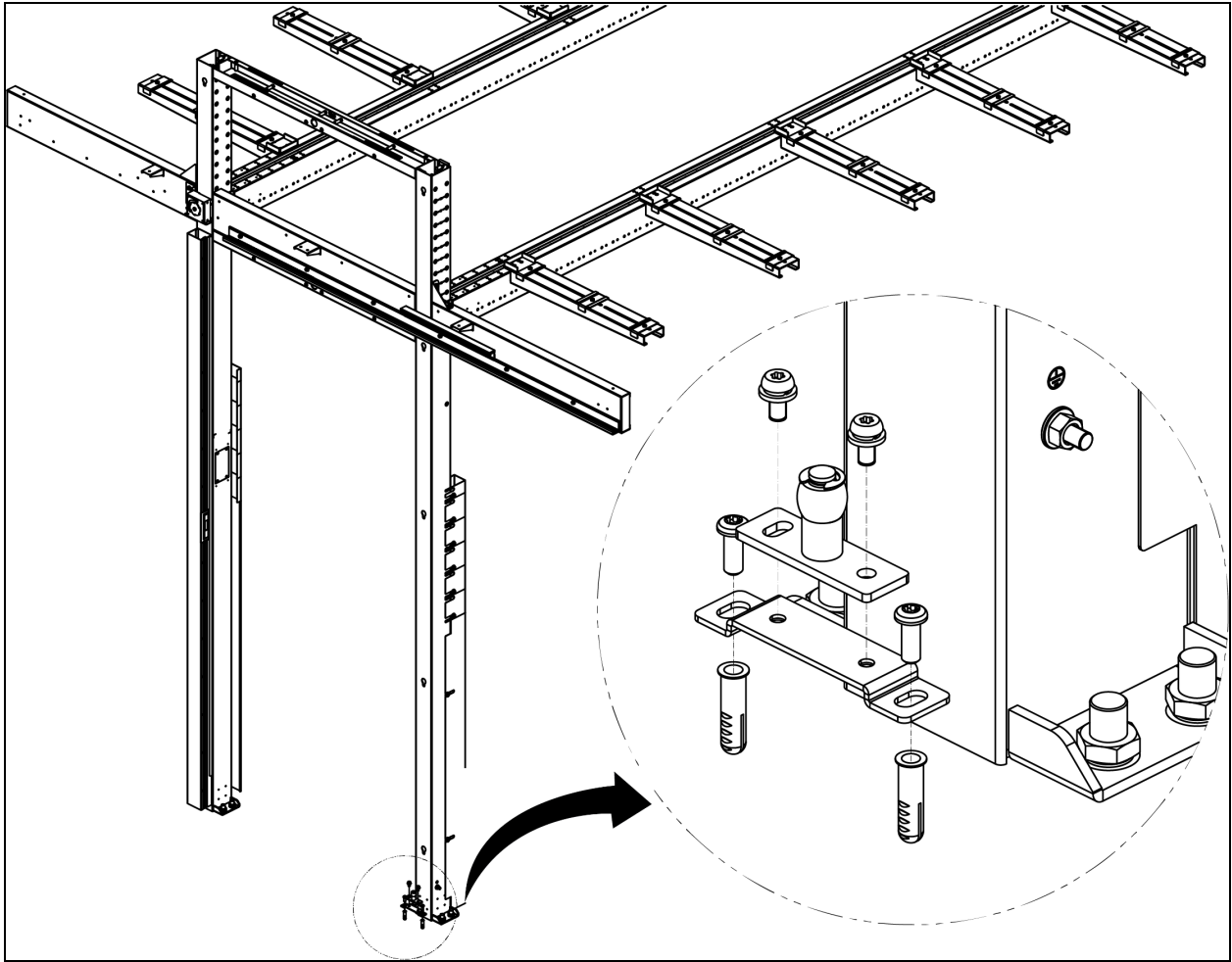


2. Install the door guide bracket near the right vertical post.
  - a. Use a tape measure to determine position A (20 mm vertically from the lower left corner of the right vertical post stand, viewing from the top). Mark position A on the floor.
  - b. Use a tape measure to determine position B (80 mm horizontally from position A). Mark position B on the floor.
  - c. Drill a  $\phi 6$  hole in position A and B and install a plastic expansion tube in each hole.

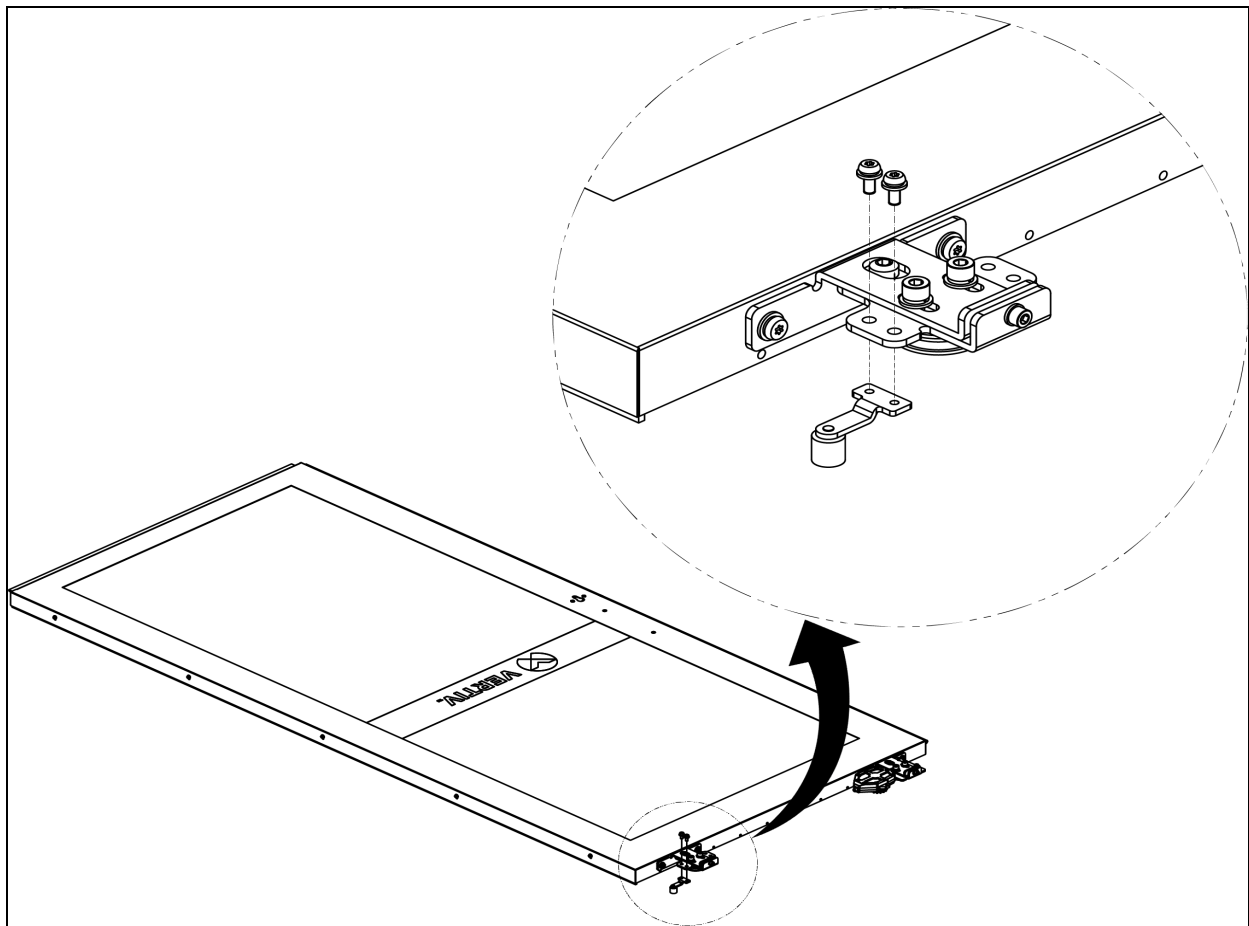


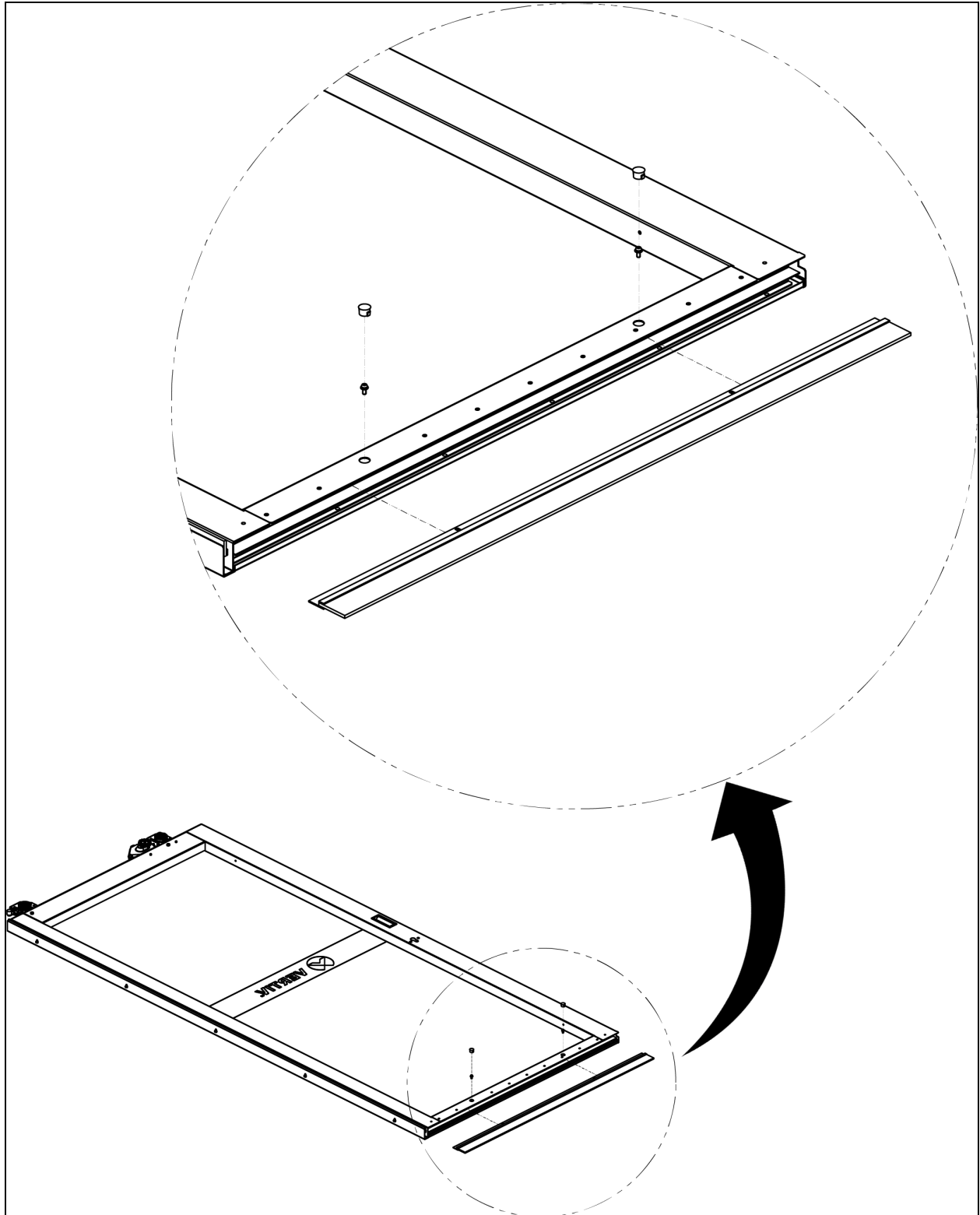
Item	Description
1	Right vertical post
2	Rght vertical post stand, viewing from the top

3. Fix the door guide bracket to the floor using M5 self-tapping screws. Fix the door guide to the door guide bracket using M5 pan head screws.

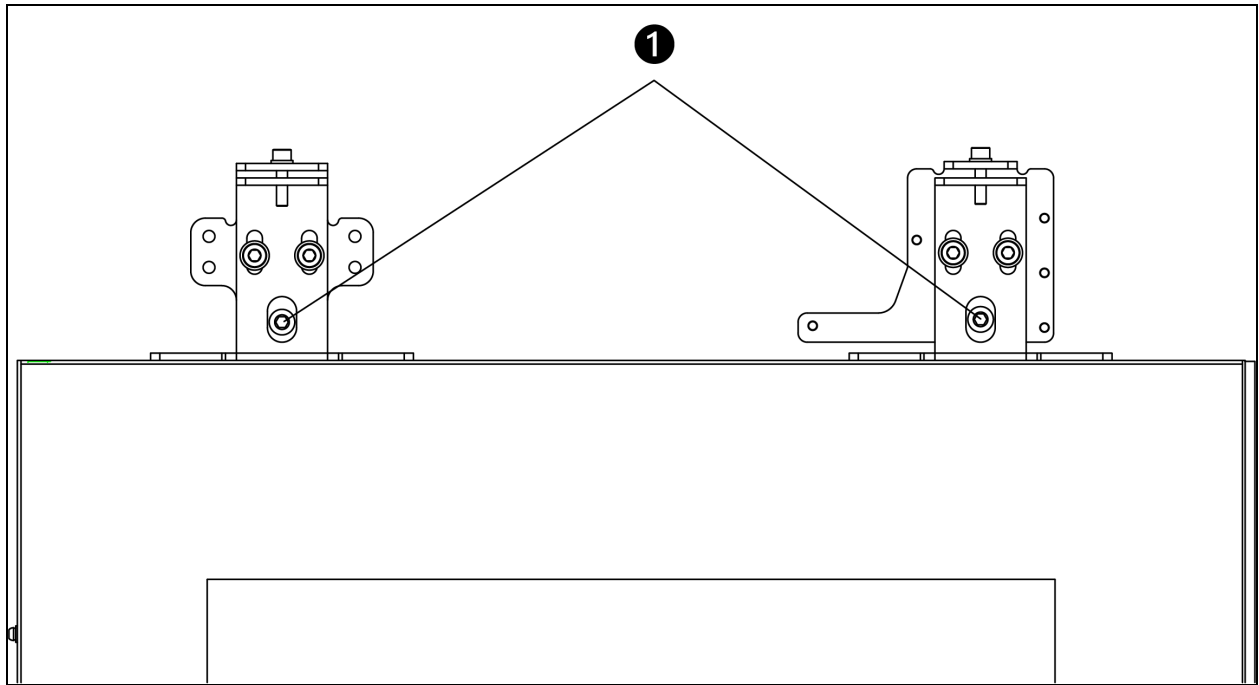


4. Fix the end wheel to the rear hanger roller using M5 screws. Install the brush under the sliding door using M4 pan head screws. The screws are installed in the inner side of the door. After that, cover each hole above the screw using a plastic cap.

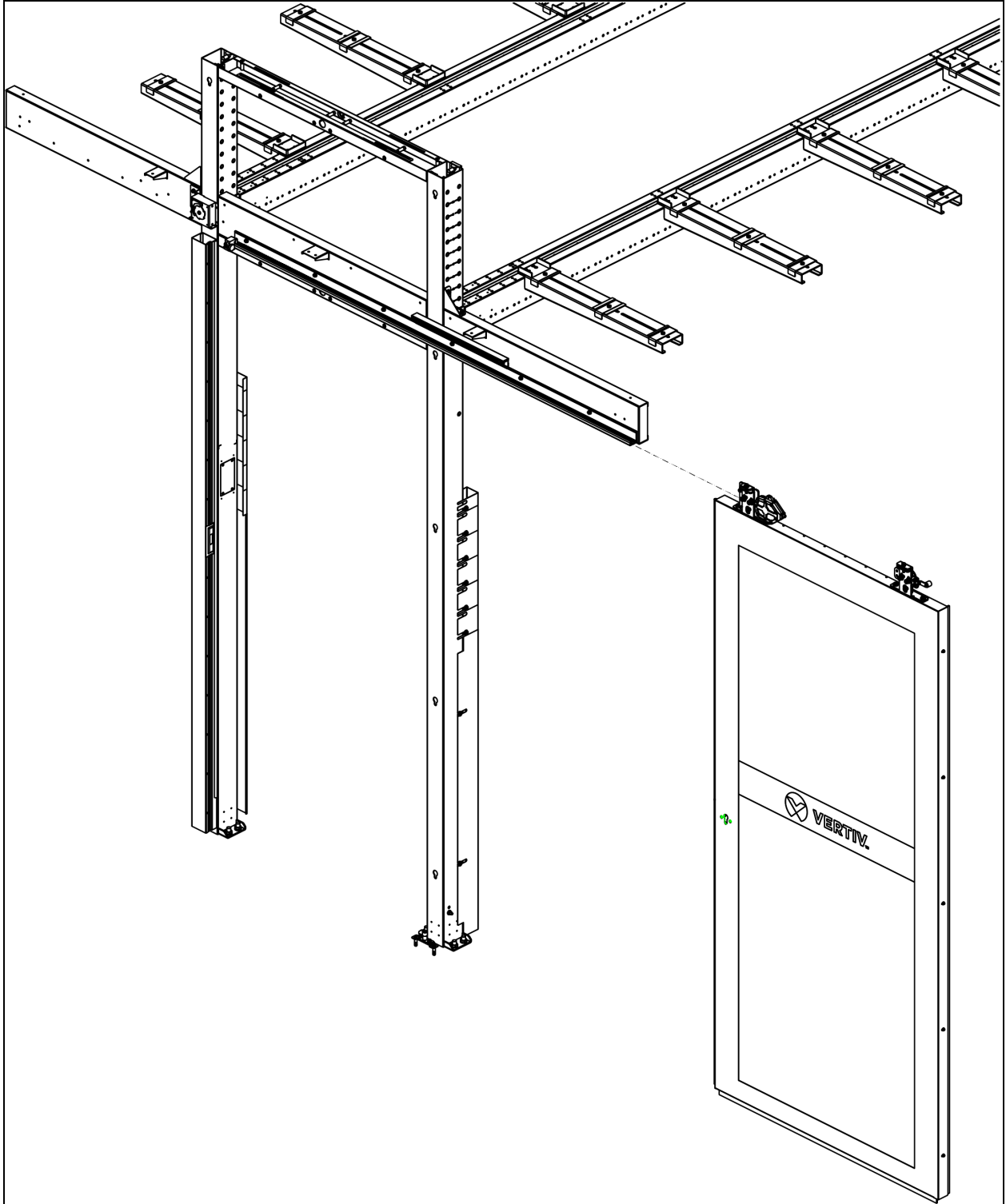




5. Remove the limit screws (1) from the hanger rollers, push the door panel into the sliding rail, and then fix the limit screws.



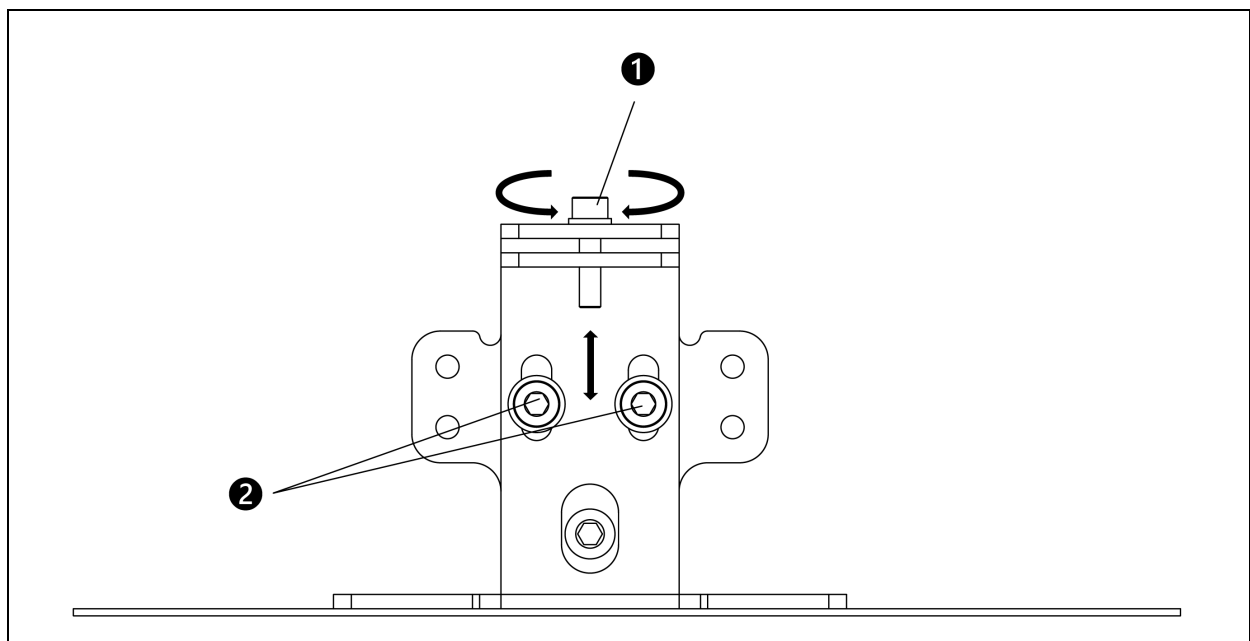
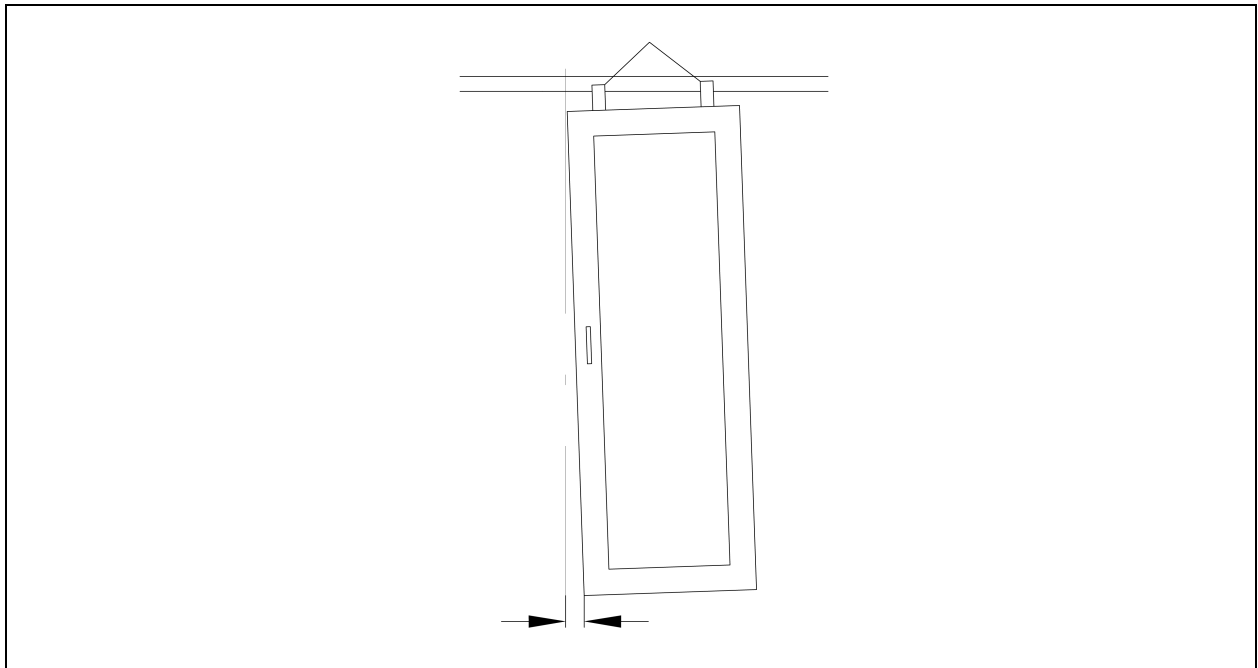




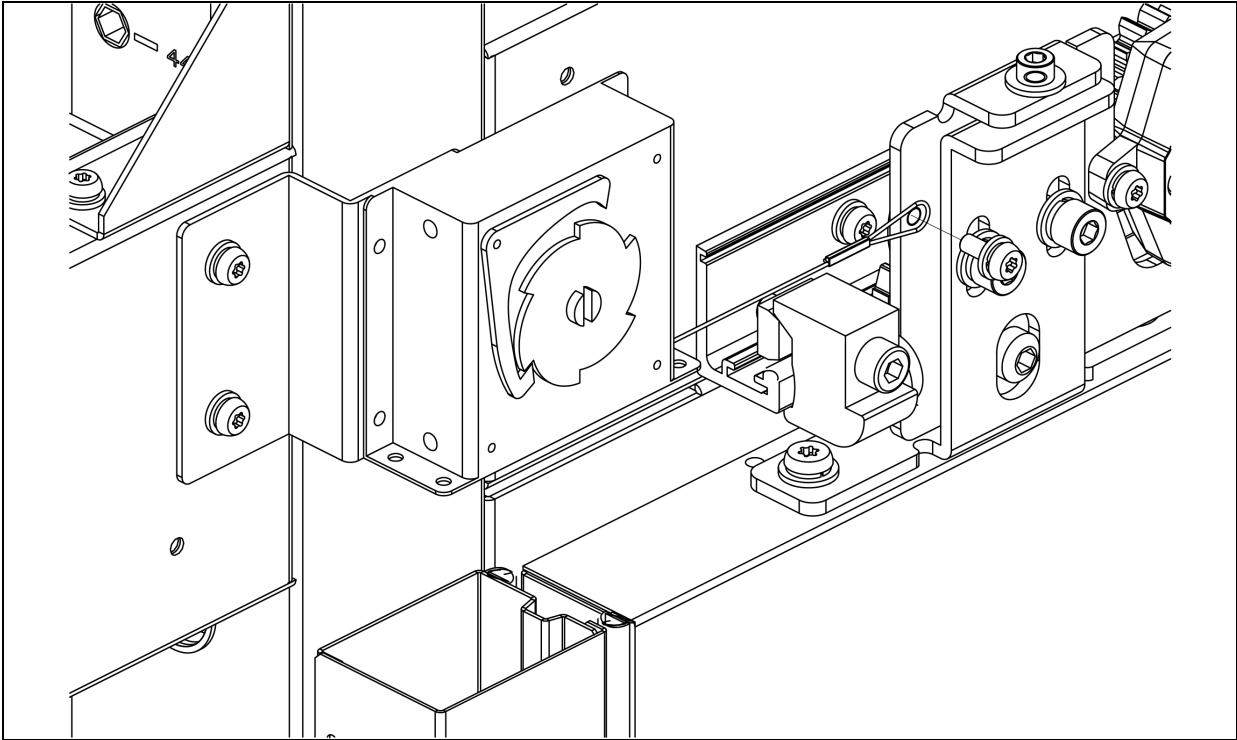
Adjust the gap to make the door panel vertical:

- a. Loosen the fixing screws (2) on the hanger rollers. Rotate the adjustable screw (1) clockwise to raise the door panel and counter-clockwise to lower the door panel.
- b. After the adjustment, tighten the fixing screws (2).
- c. Check that the door can slide smoothly.

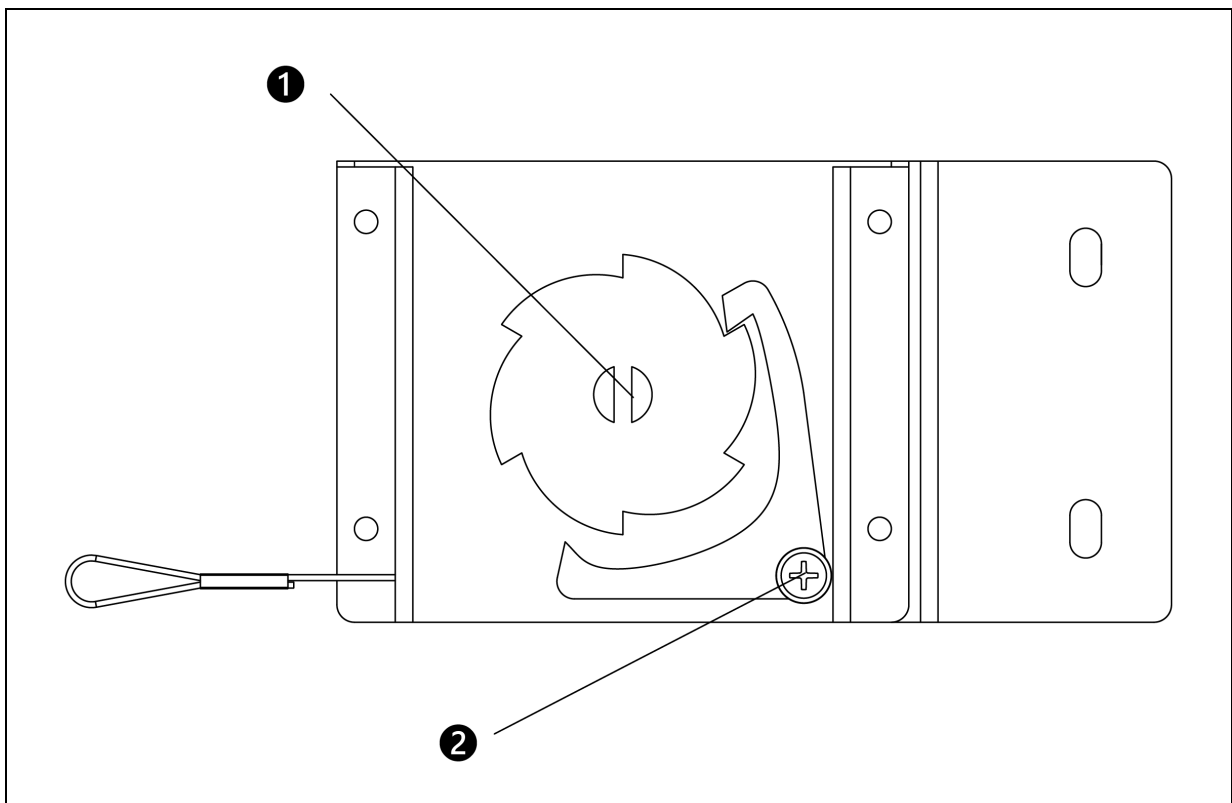
**NOTE: If the door cannot slide smoothly, check if the hanger rollers are within the rail and the door guide is in the groove.**



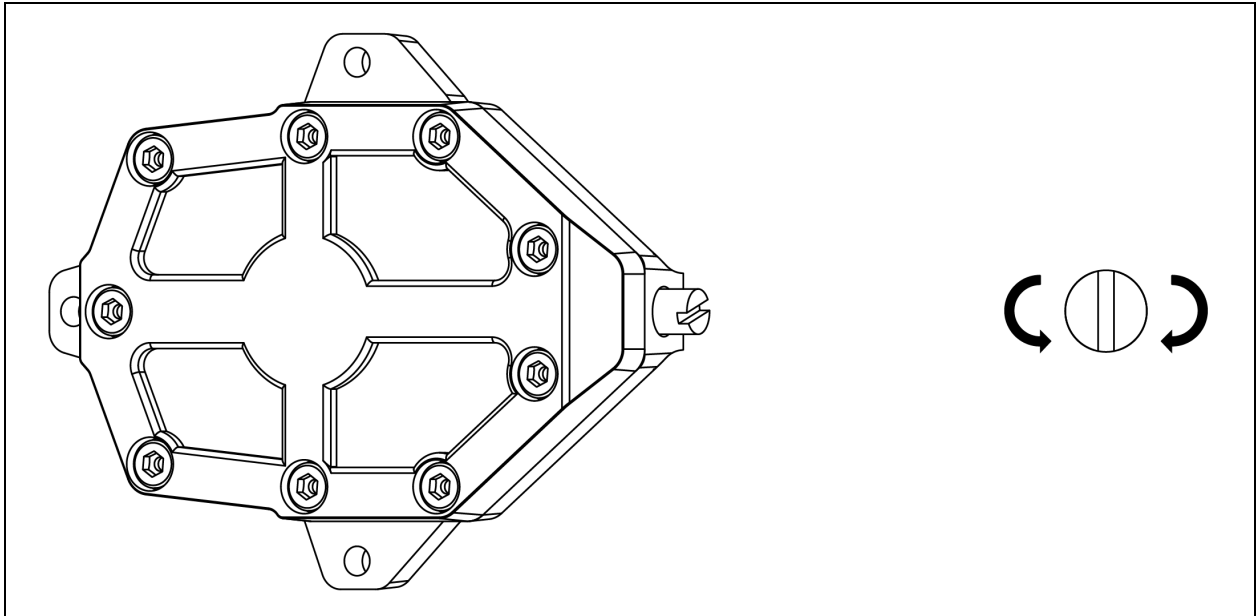
6. Pull the cable from the drive device and fix the cable to the front hanger roller.



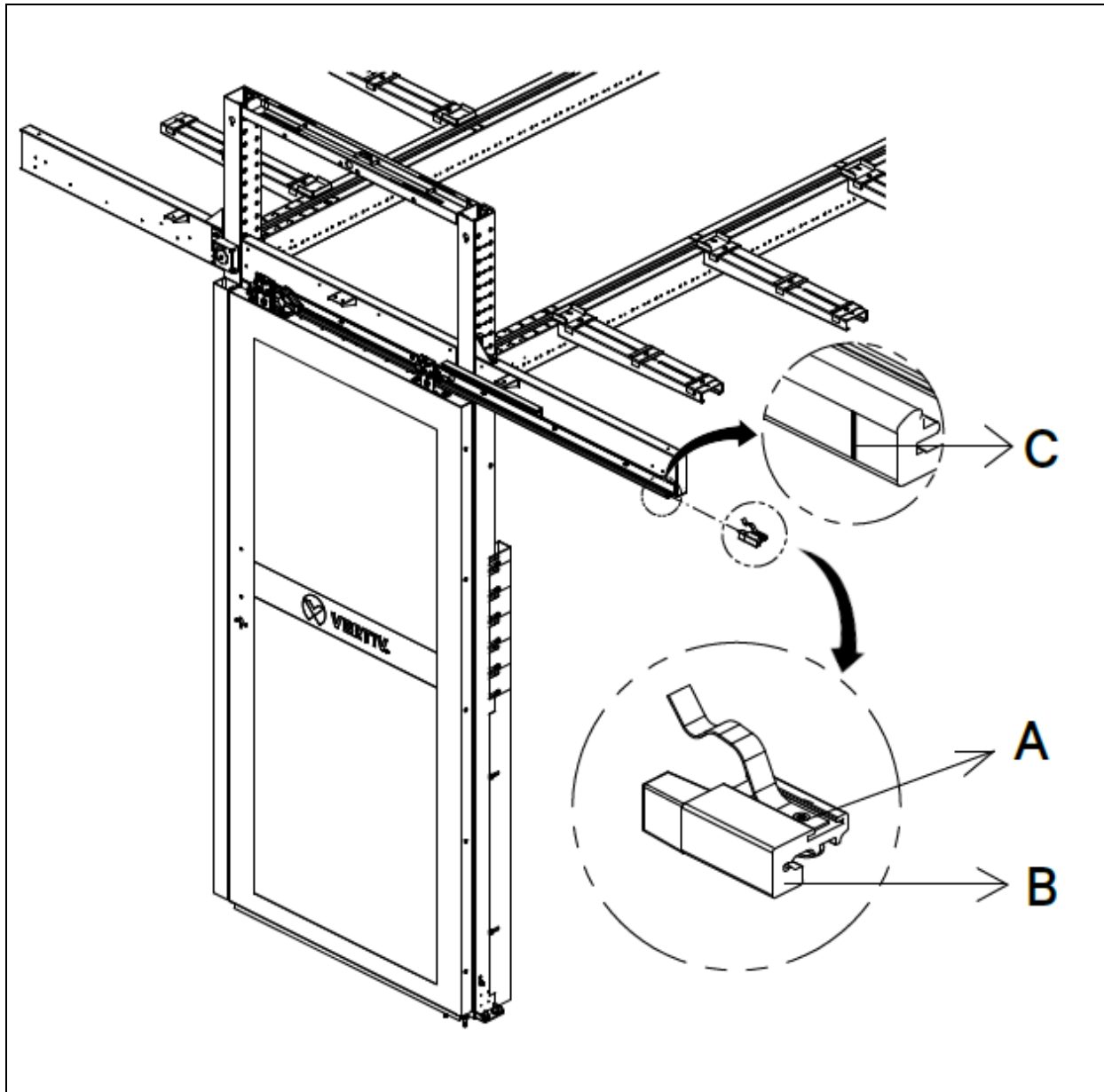
To adjust the resistance of the sliding door, loosen the Phillips head screw (2), use a slotted screwdriver to adjust the turntable (1), and then tighten the Phillips head screw (2).



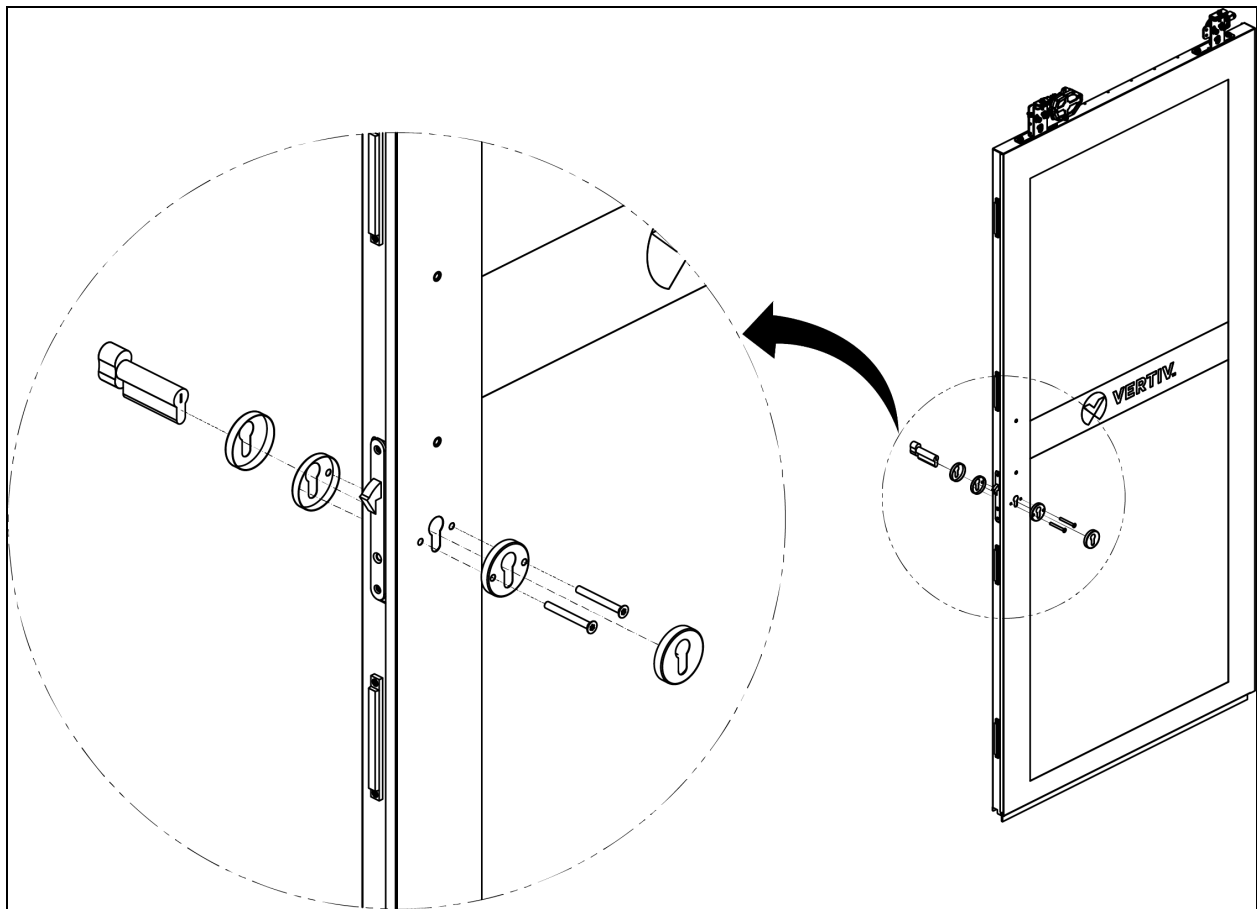
Use a rear brake to adjust the sliding speed: turn the valve clockwise to slower the speed and counter-clockwise to faster the speed.

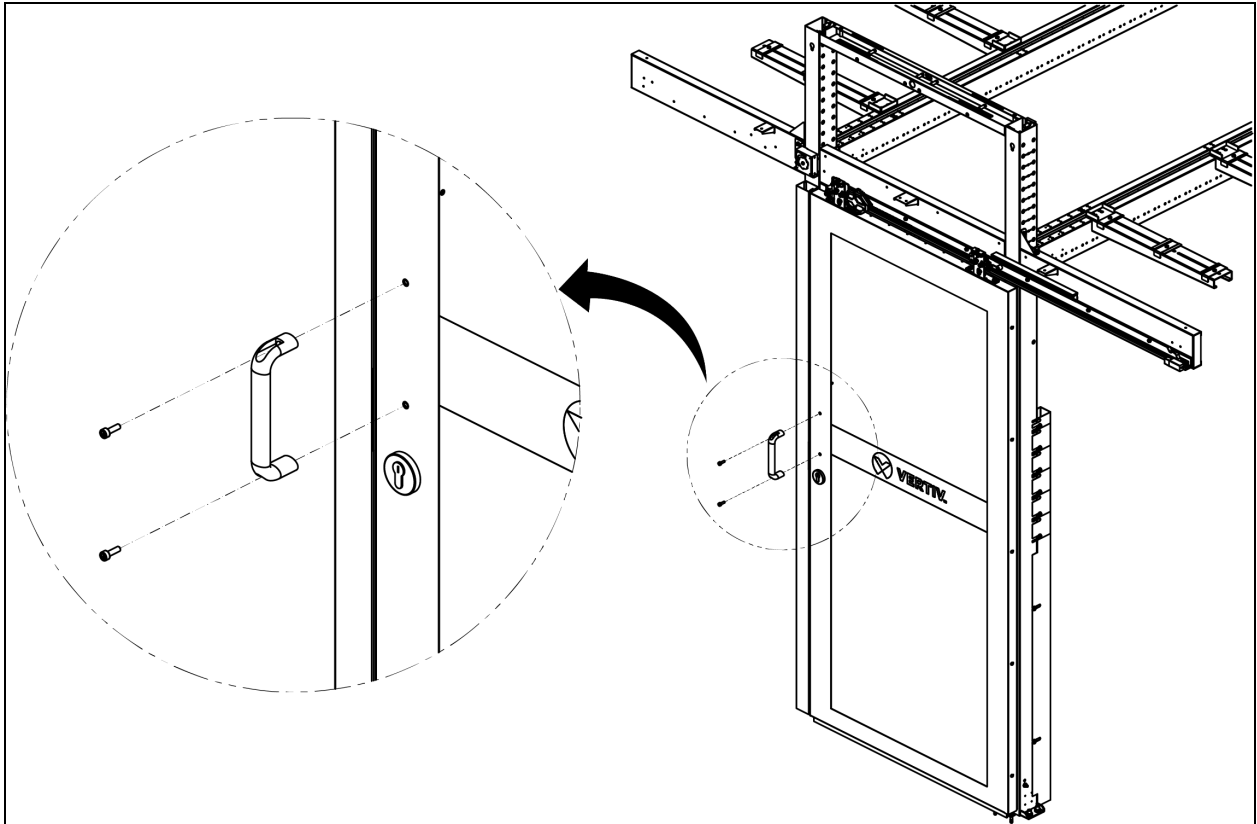


7. Loosen the screw (A) on the full open device, slide the full open device into the sliding rail till its edge (B) aligns with the mark (C) on the sliding rail, and tighten the screw.



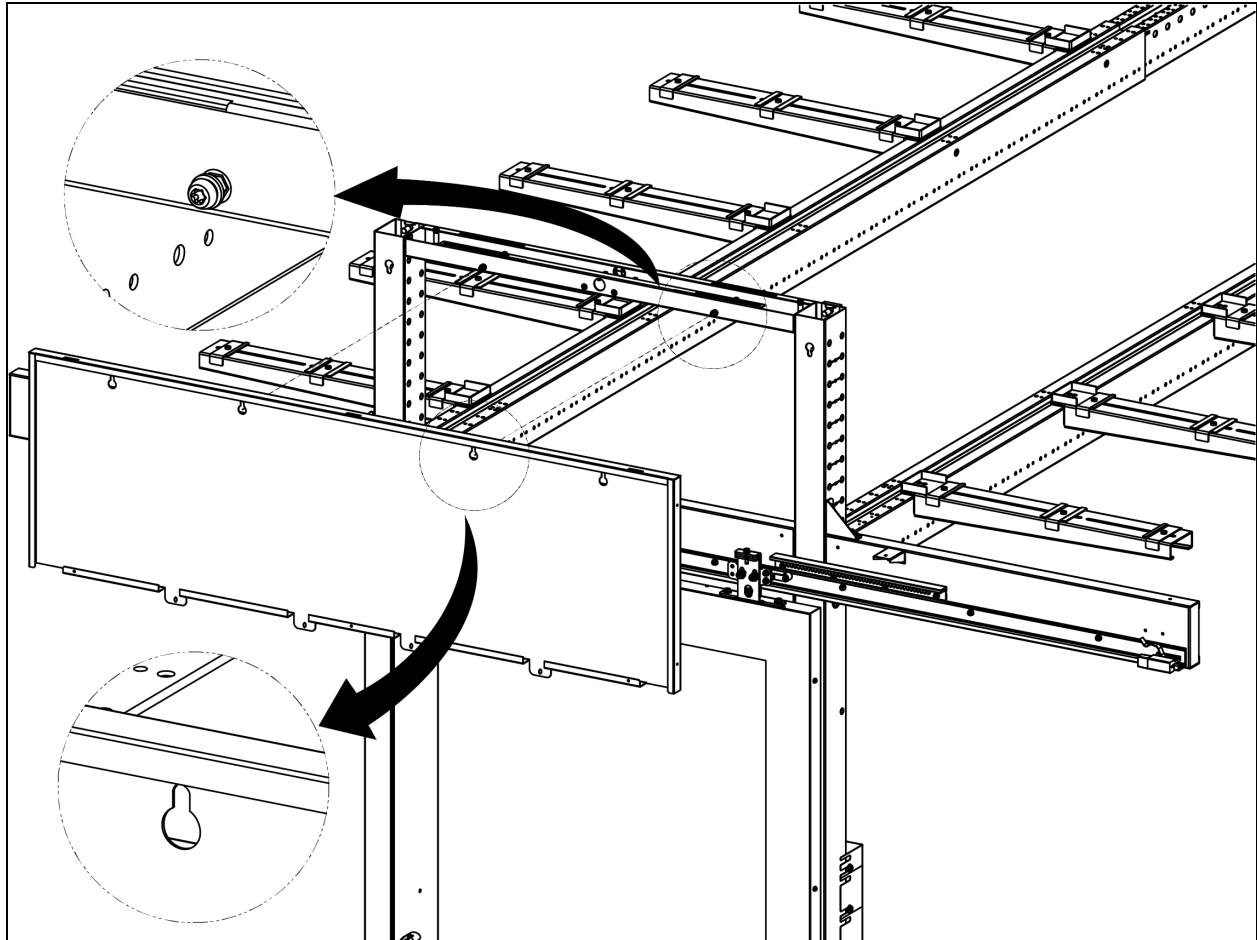
8. Insert the lock cylinder into the lock body. Install the lock cover and the door handle.



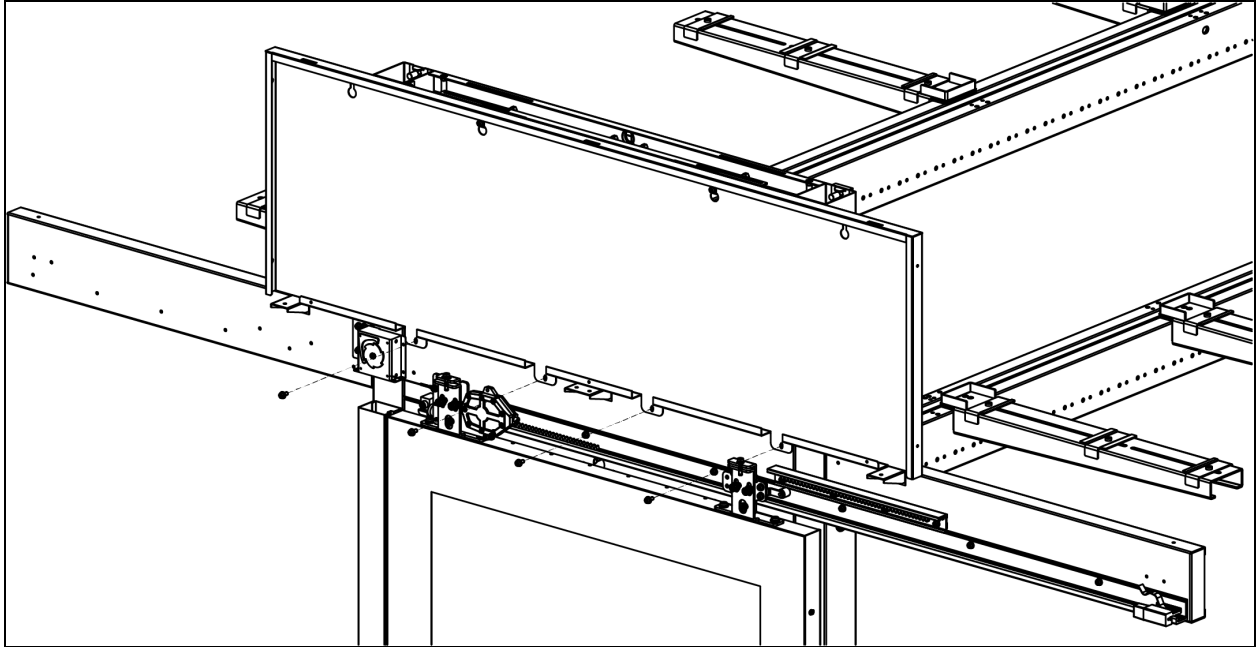


### 4.3.14 Sliding Door Header (for 914.4 mm (3 ft) Right Opening Door)

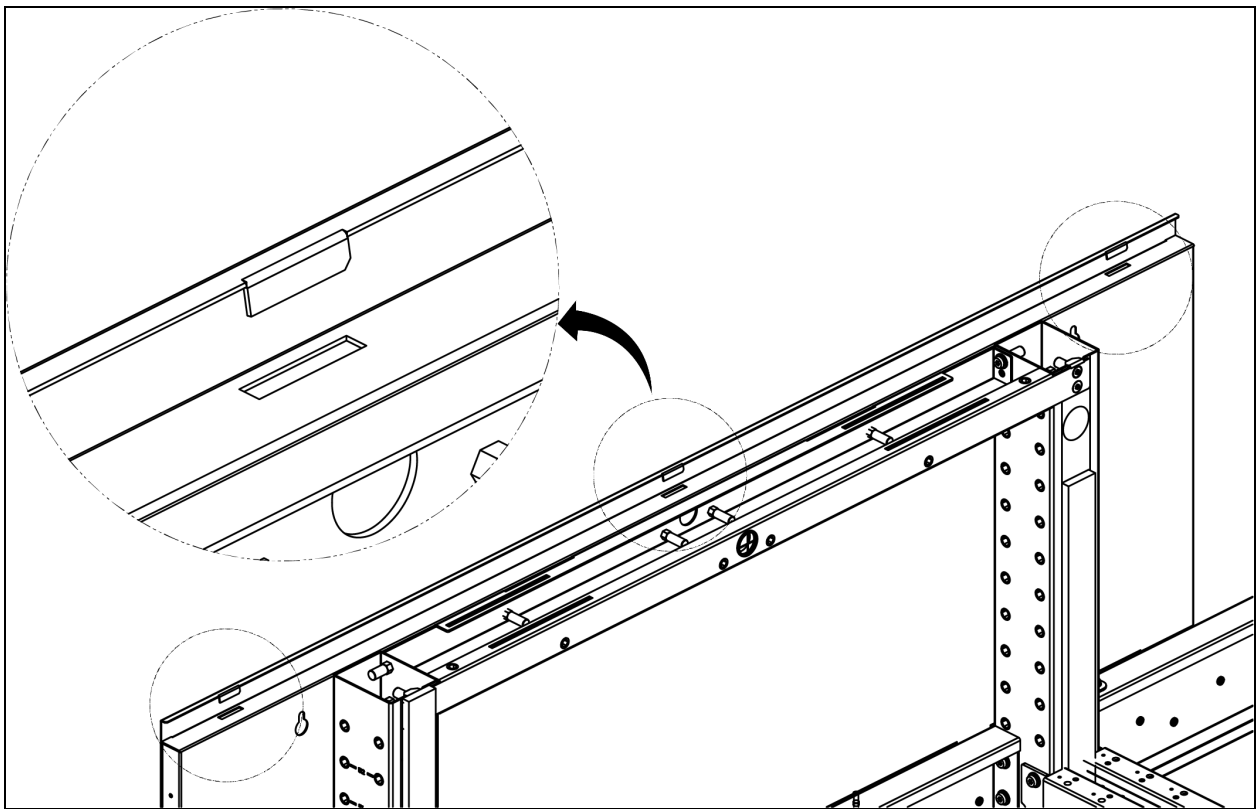
1. Insert two M6 pan head screws into the frame of the width connector, leaving 5 mm between the head of the screw and the surface of the frame. Hang the door header bracket on the screws and then tighten the screws. Fix the bottom of the door header bracket to the width beam using four M5 pan head screws.

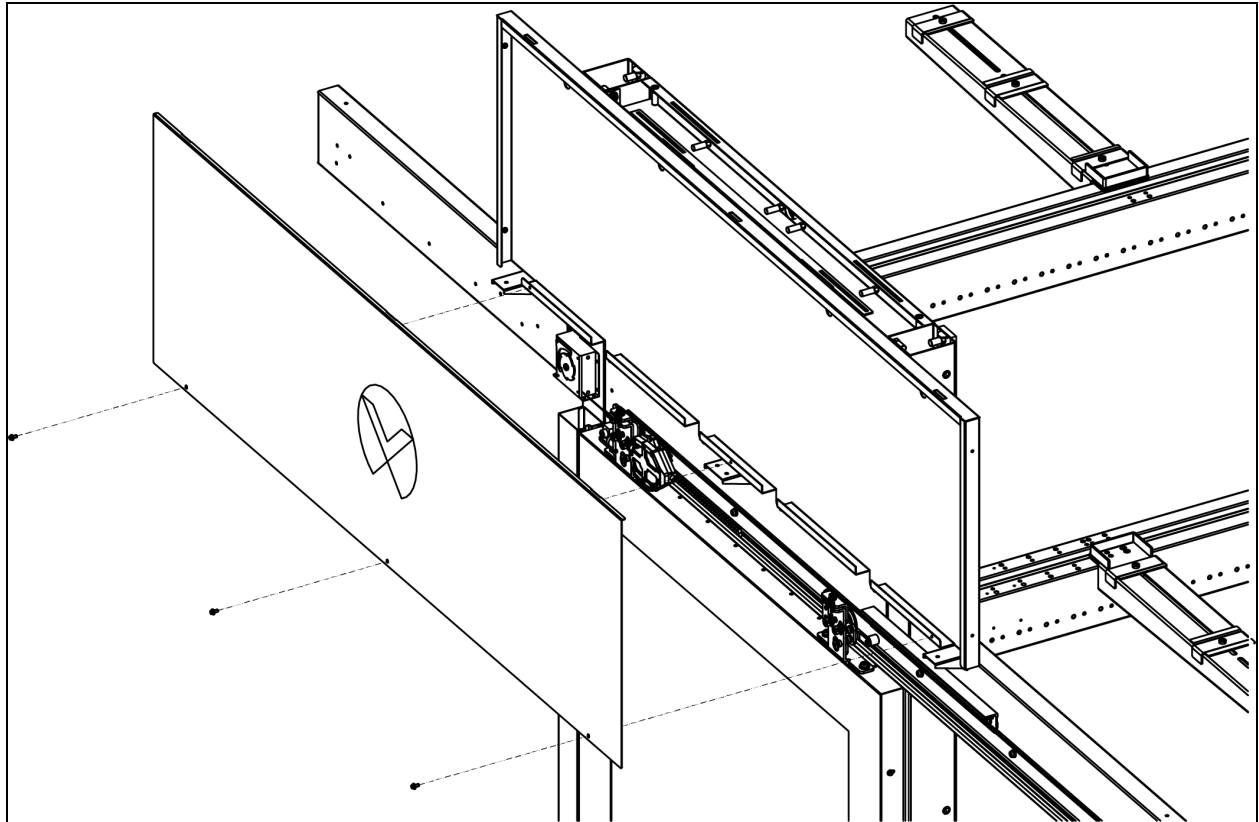




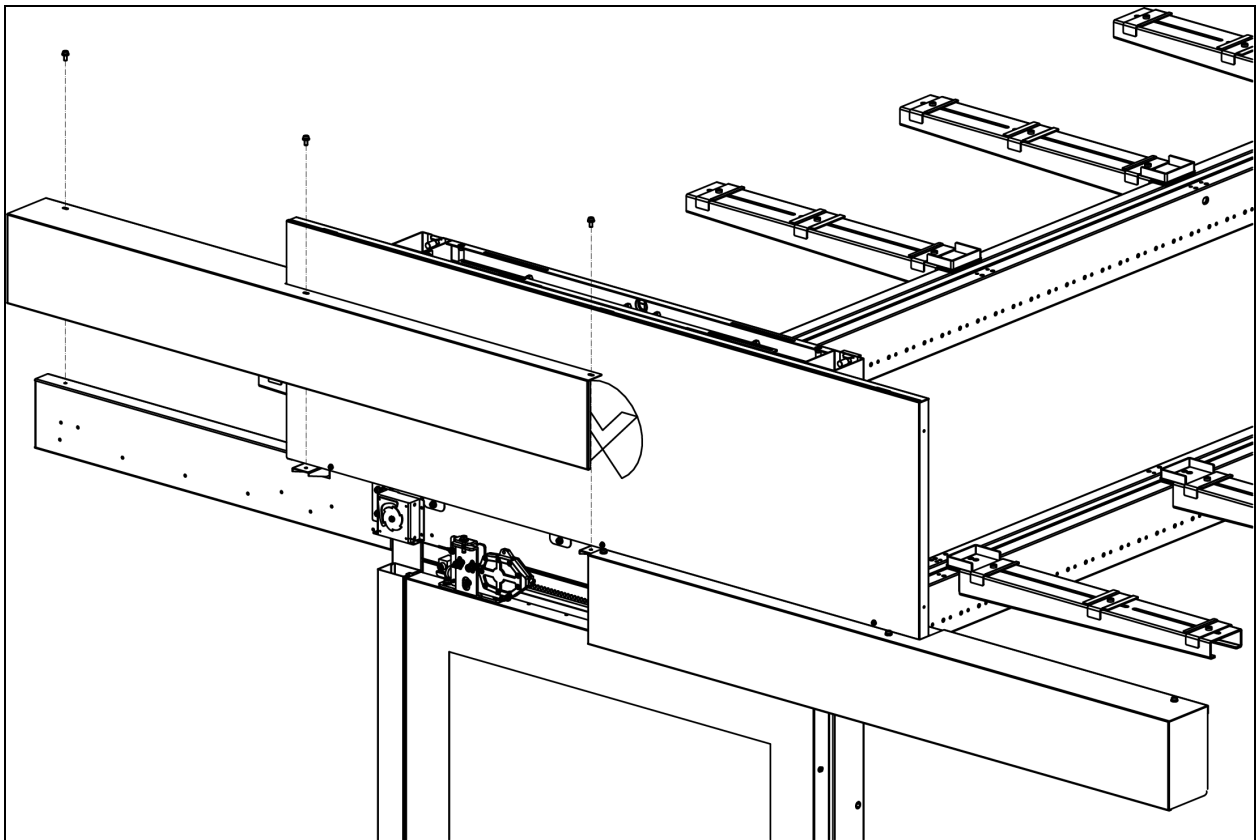
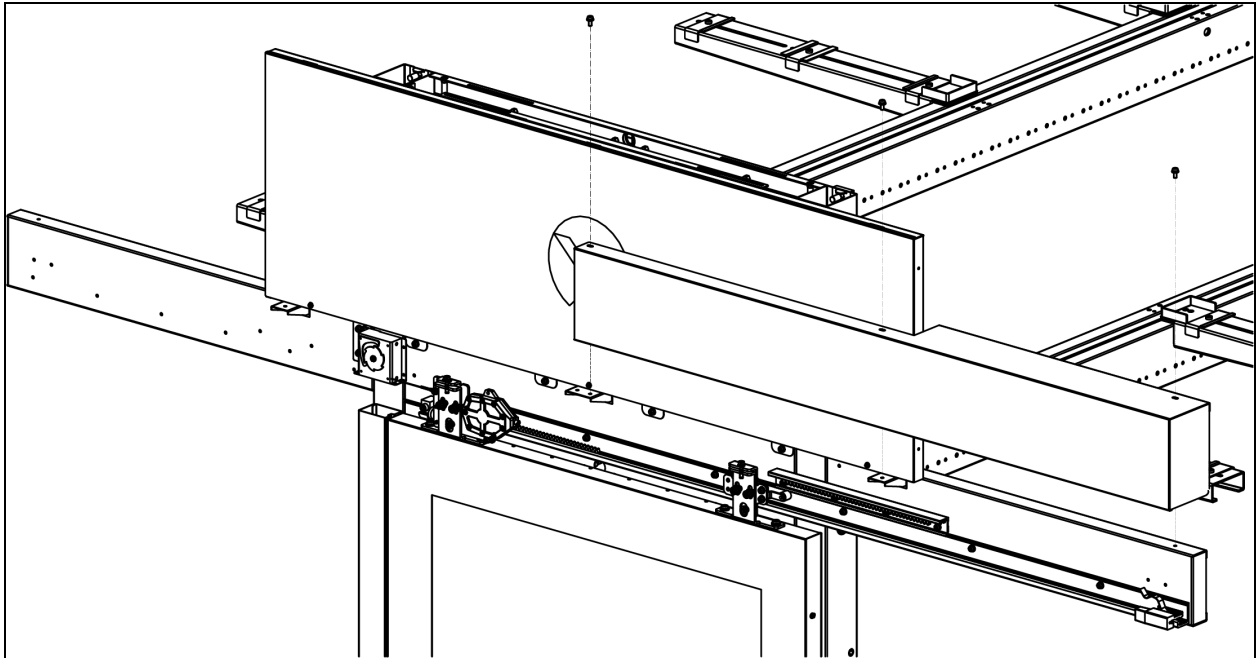


2. Hang the front panel onto the slot of the door header bracket and then fix the bottom of the panel to the bracket using three M4 pan head screws.

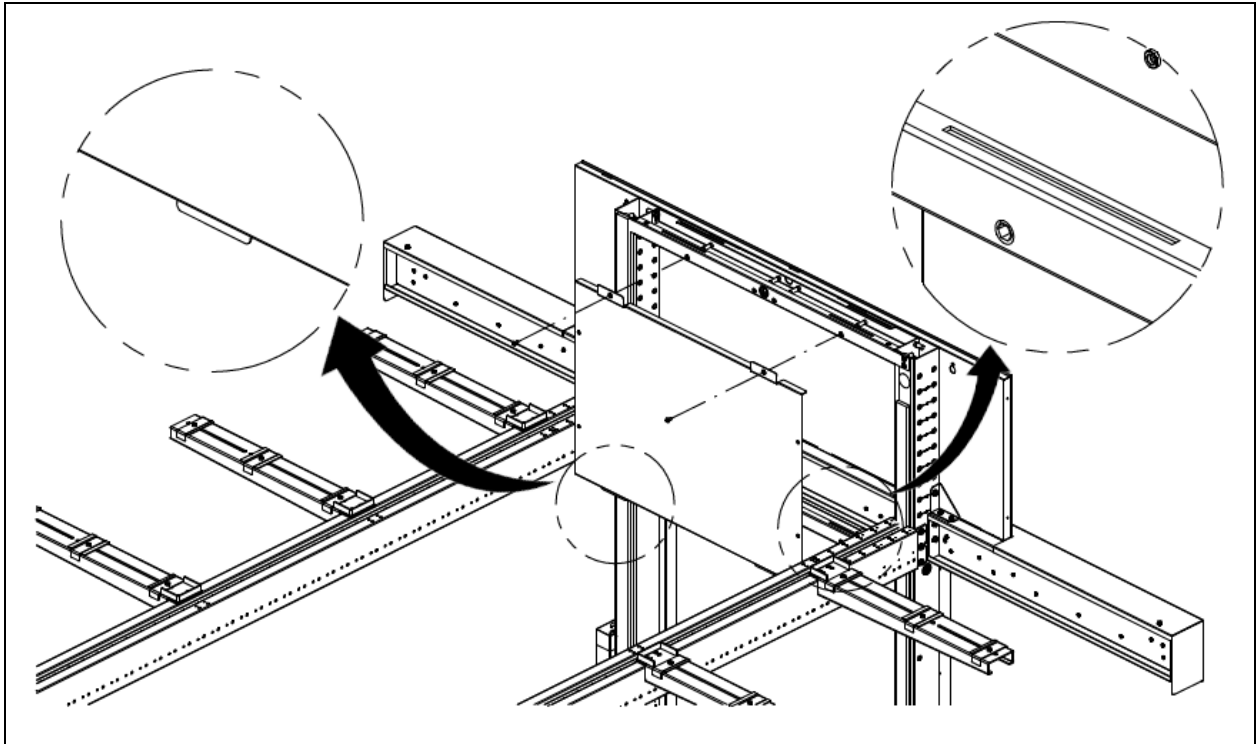




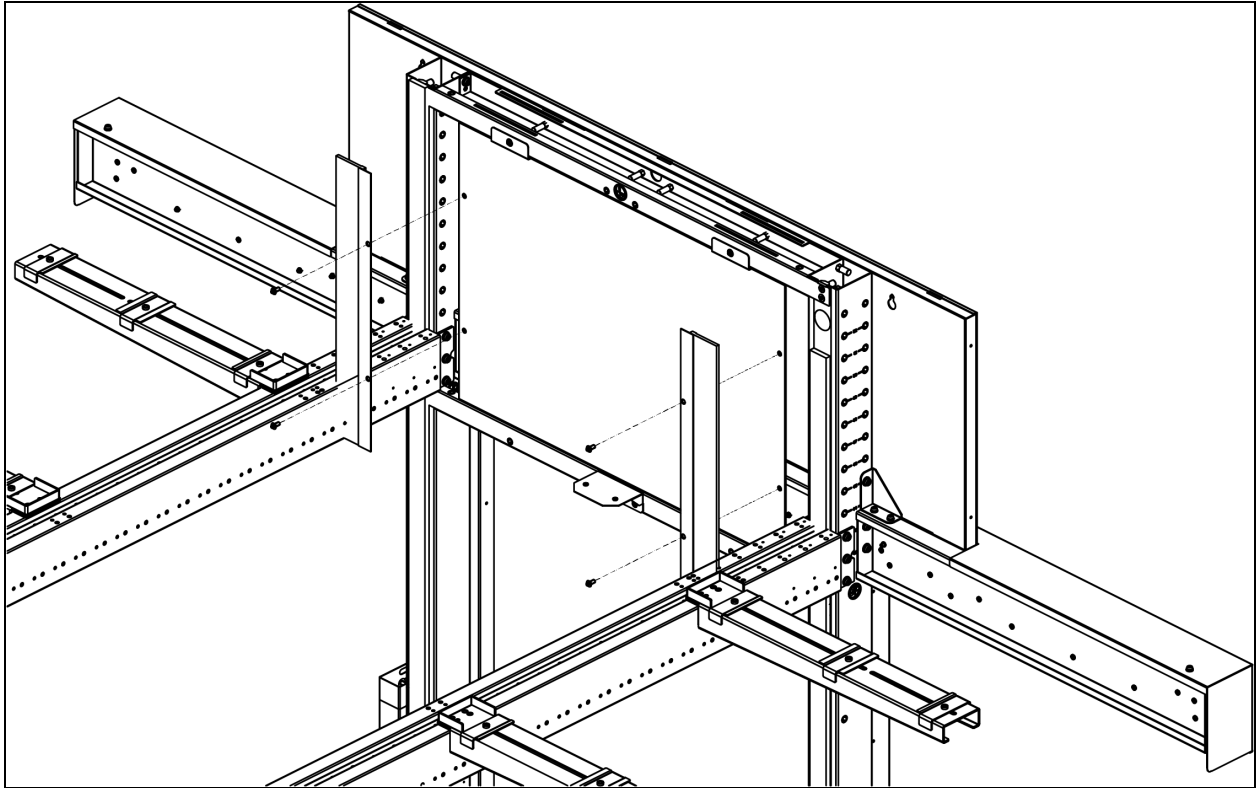
3. Fix the right cover panel to the cover bracket using M5 pan head screws. Fix the left cover panel to the cover bracket using M5 pan head screws.



4. Install the width panel on the inner side of the containment: inserting the bottom fringes of the width panel into the slot and fix the upper fringes to the frame using M6 countersunk screws.

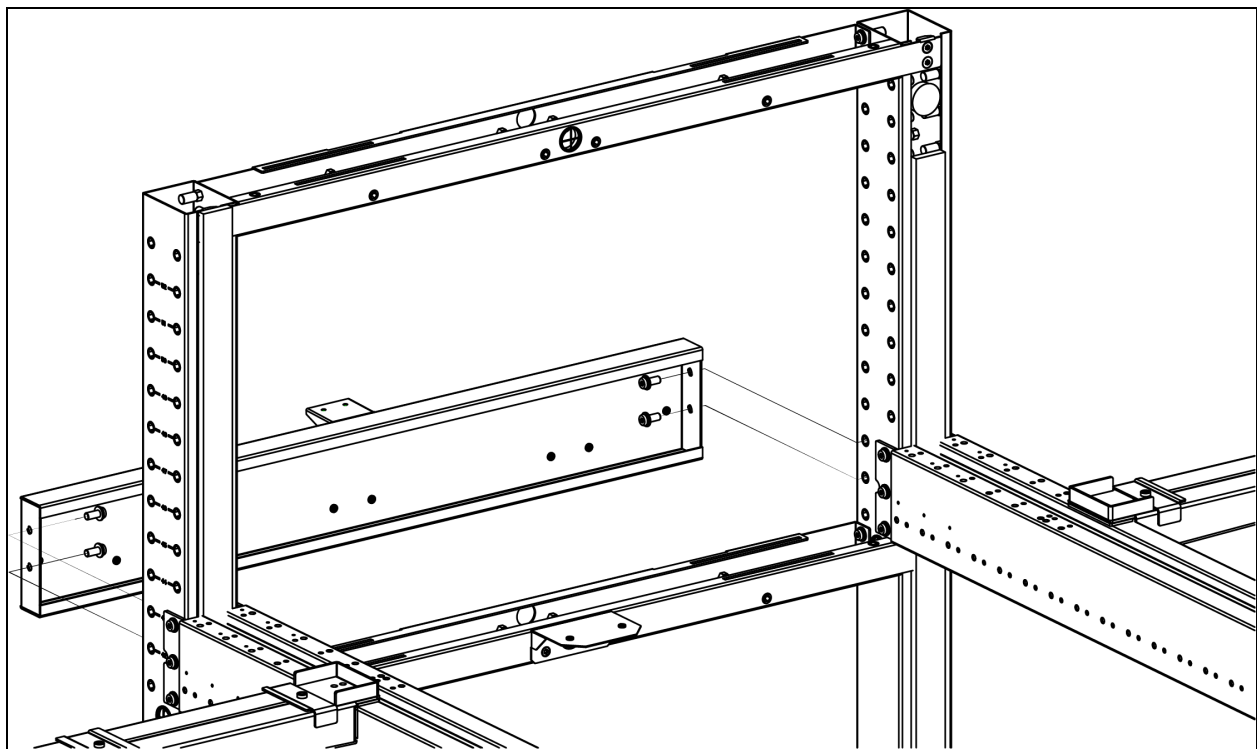
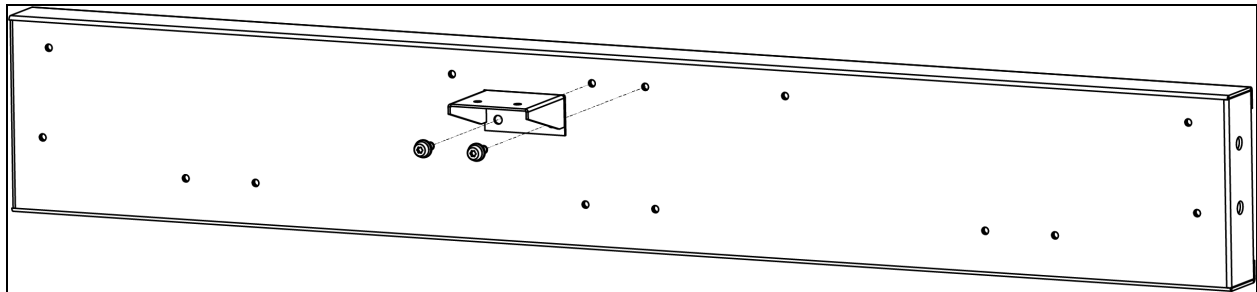


5. Install the brush on the width panel.

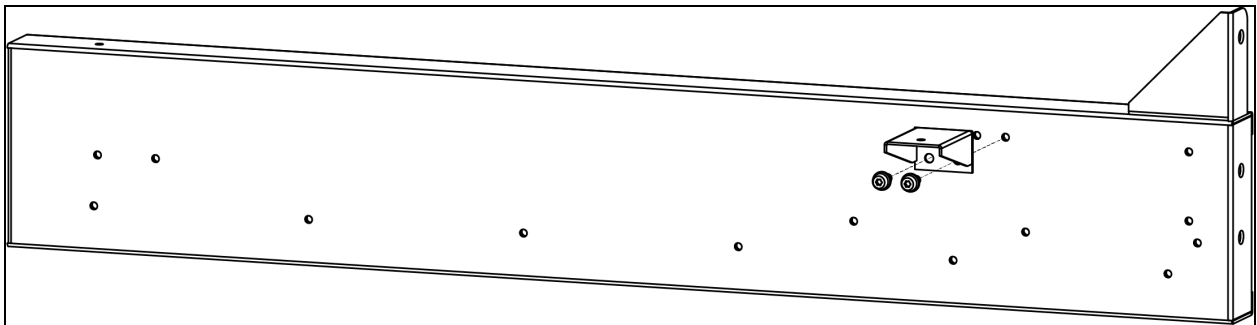
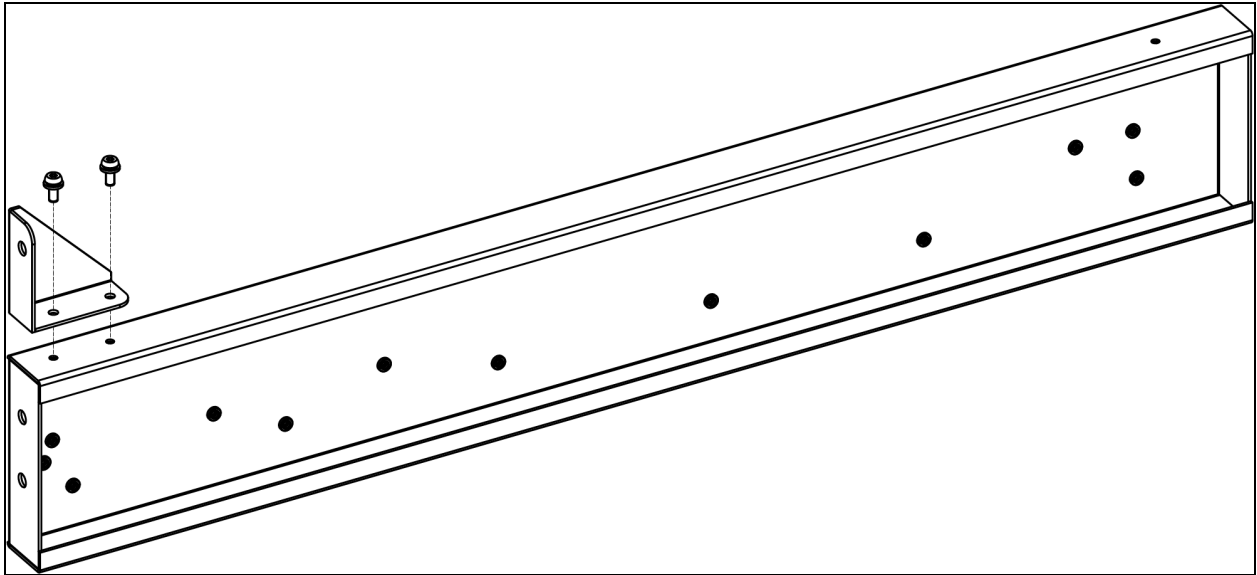


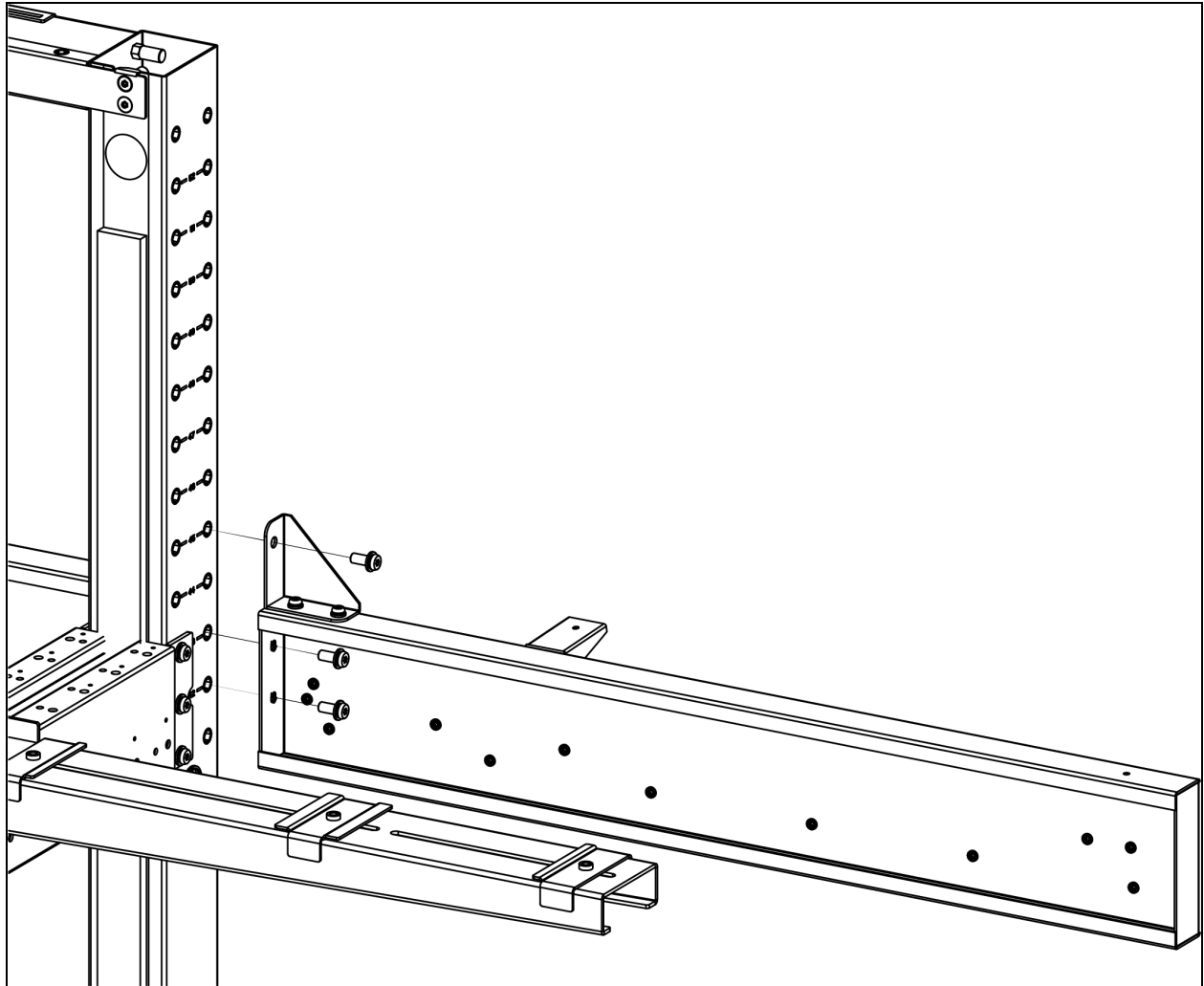
### 4.3.15 Sliding Rail Cover Component (for 914.4 mm (3 ft) Left Opening Door)

1. Fix the cover bracket to the width beam using M5 pan head screws. Fix the width beam to the vertical post using M8 pan head screws.



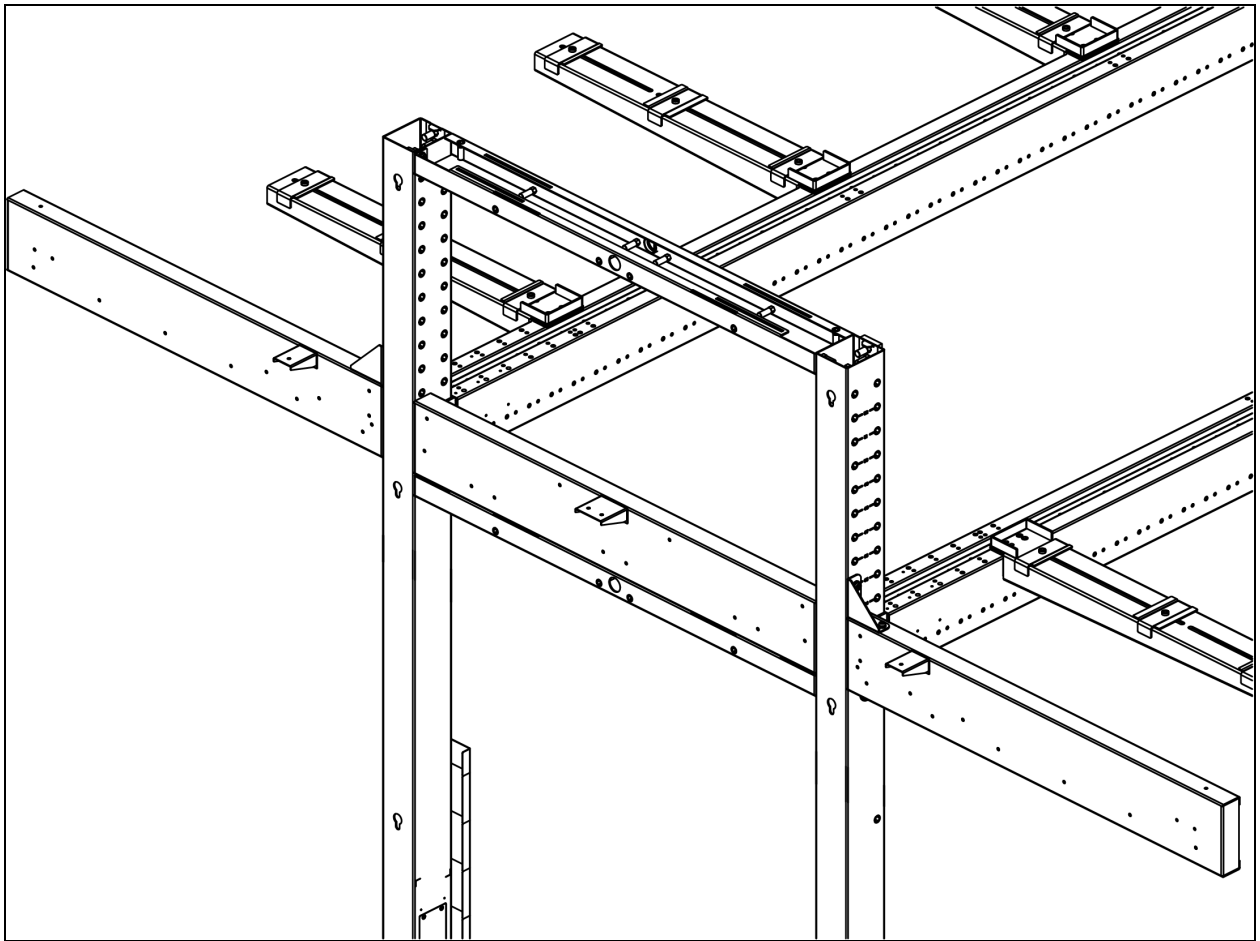
2. Fix the extendable beam bracket and the cover bracket to the extendable beam using M5 pan head screws.  
Fix the extendable beam to the vertical post using M8 pan head screws.



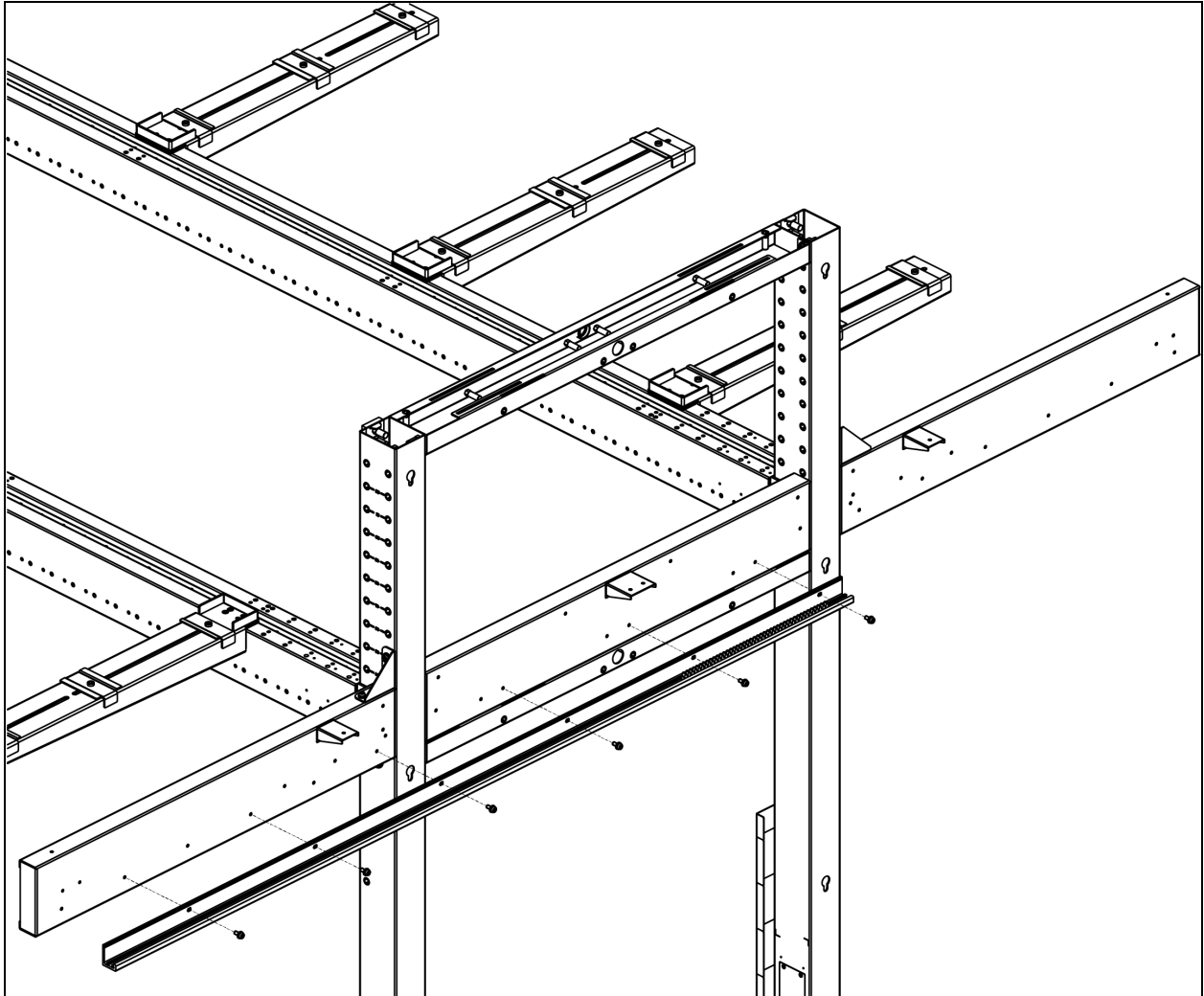




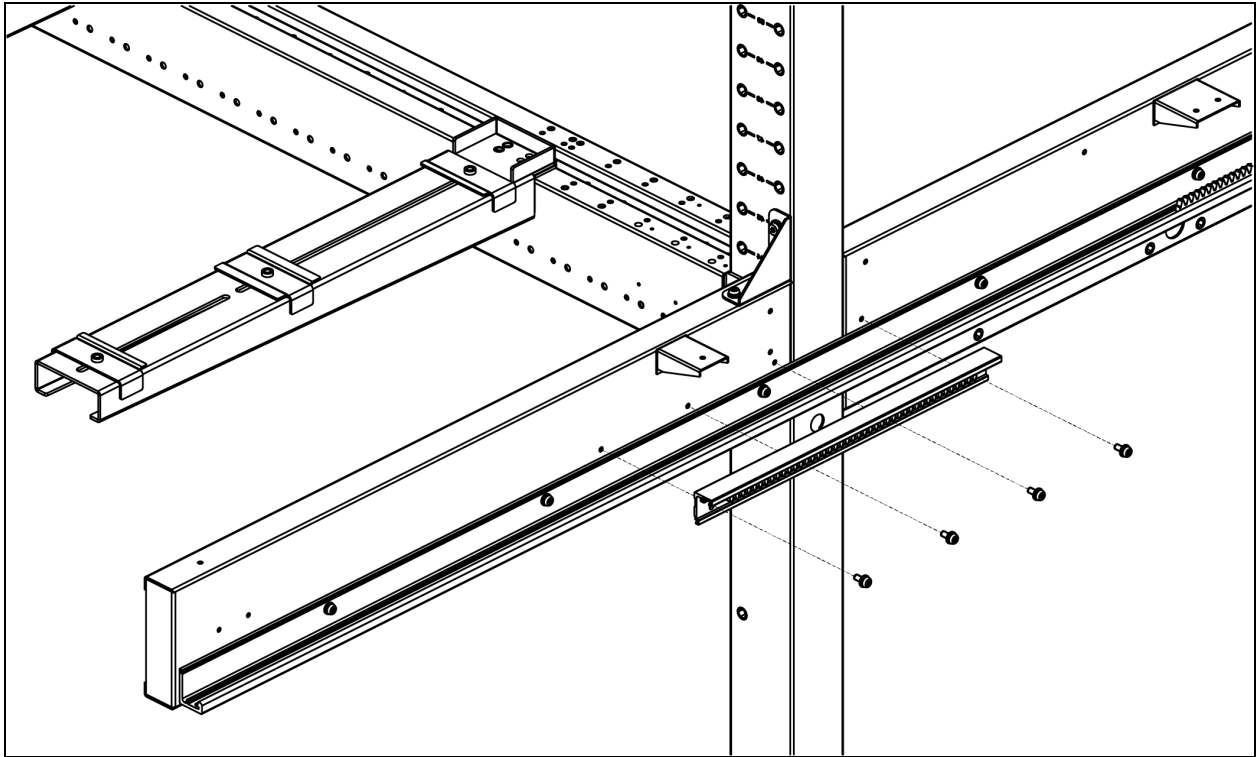
3. Repeat step 2 to install the extendable beam on the other side.



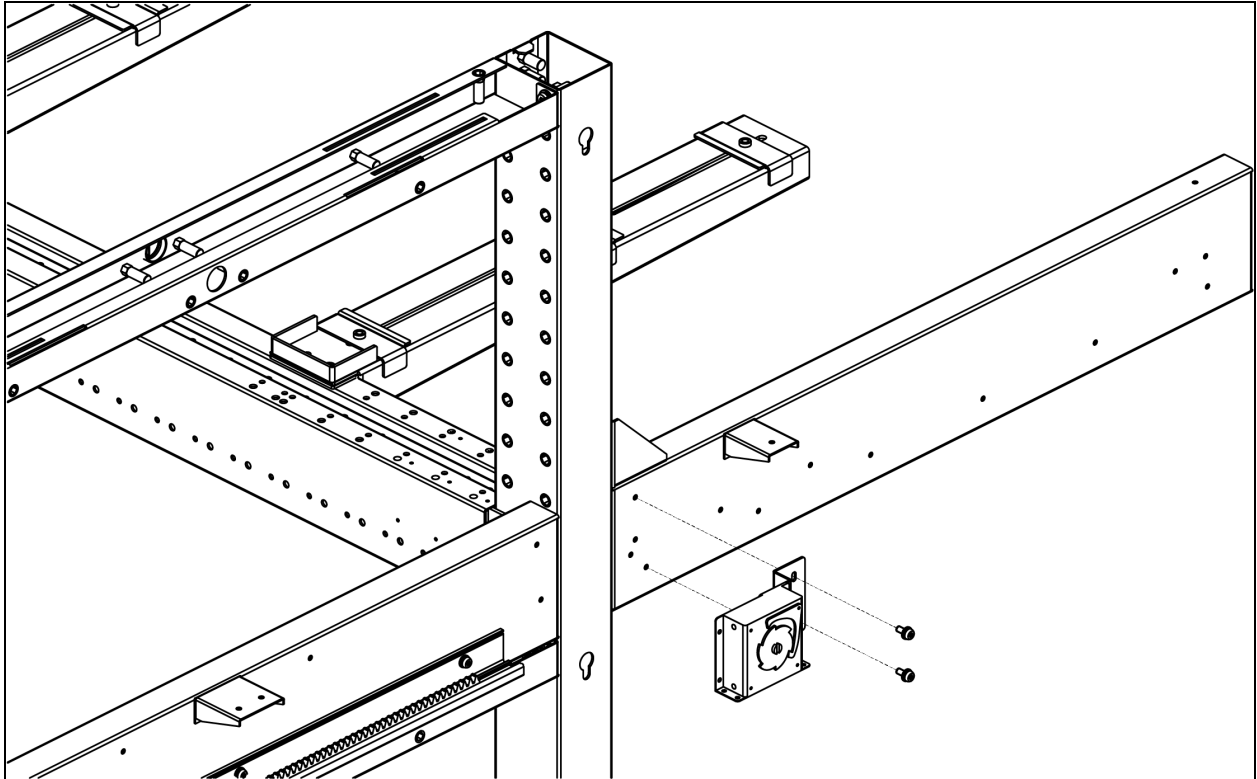
4. Fix the sliding rail to the width beam and the extendable beam using M5 pan head screws.



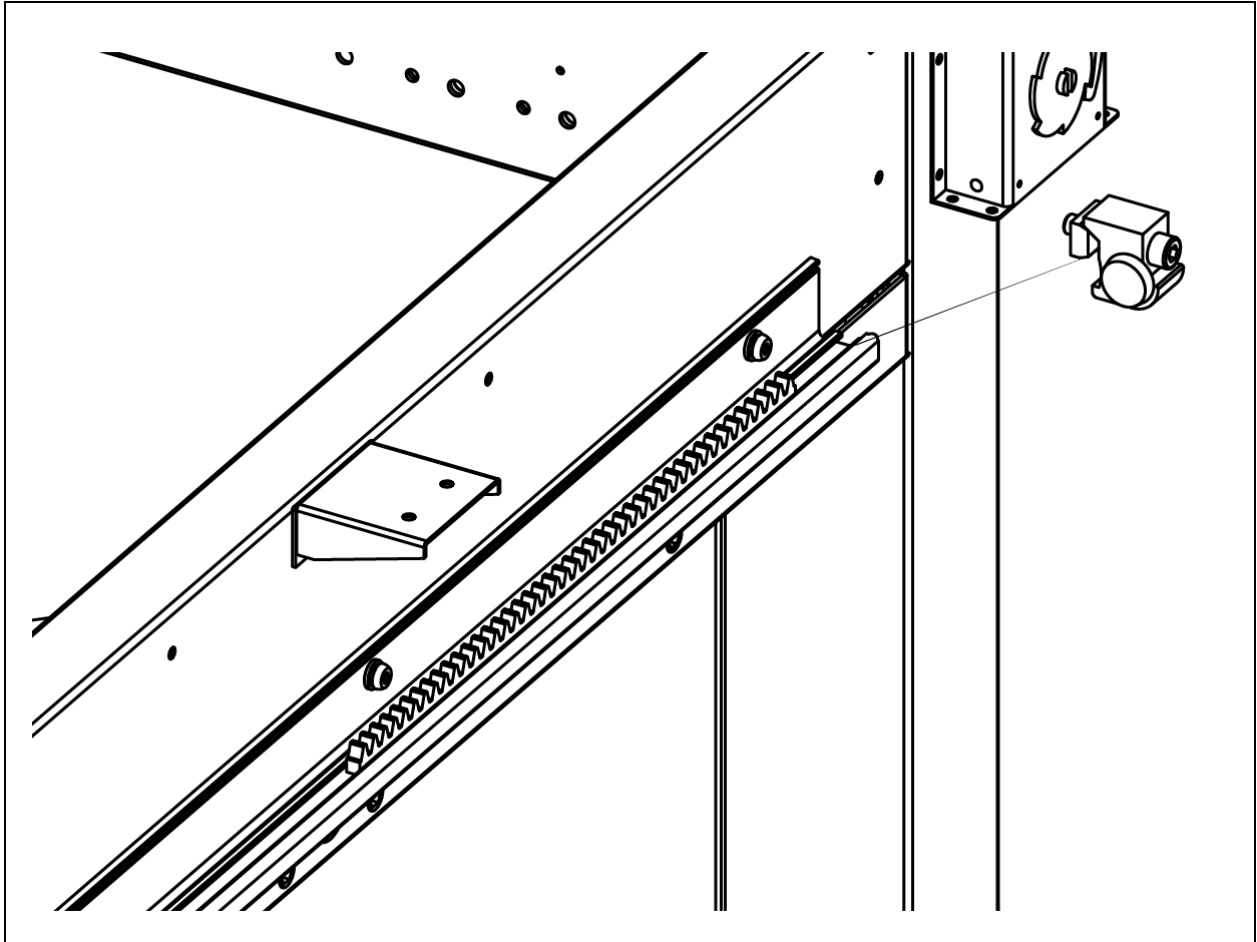
5. Fix the rail of the plastic tooth belt to the width beam and the extendable beam on the right side using M5 pan head screws.



6. Fix the drive device to the extendable beam on the right side using M5 pan head screws.

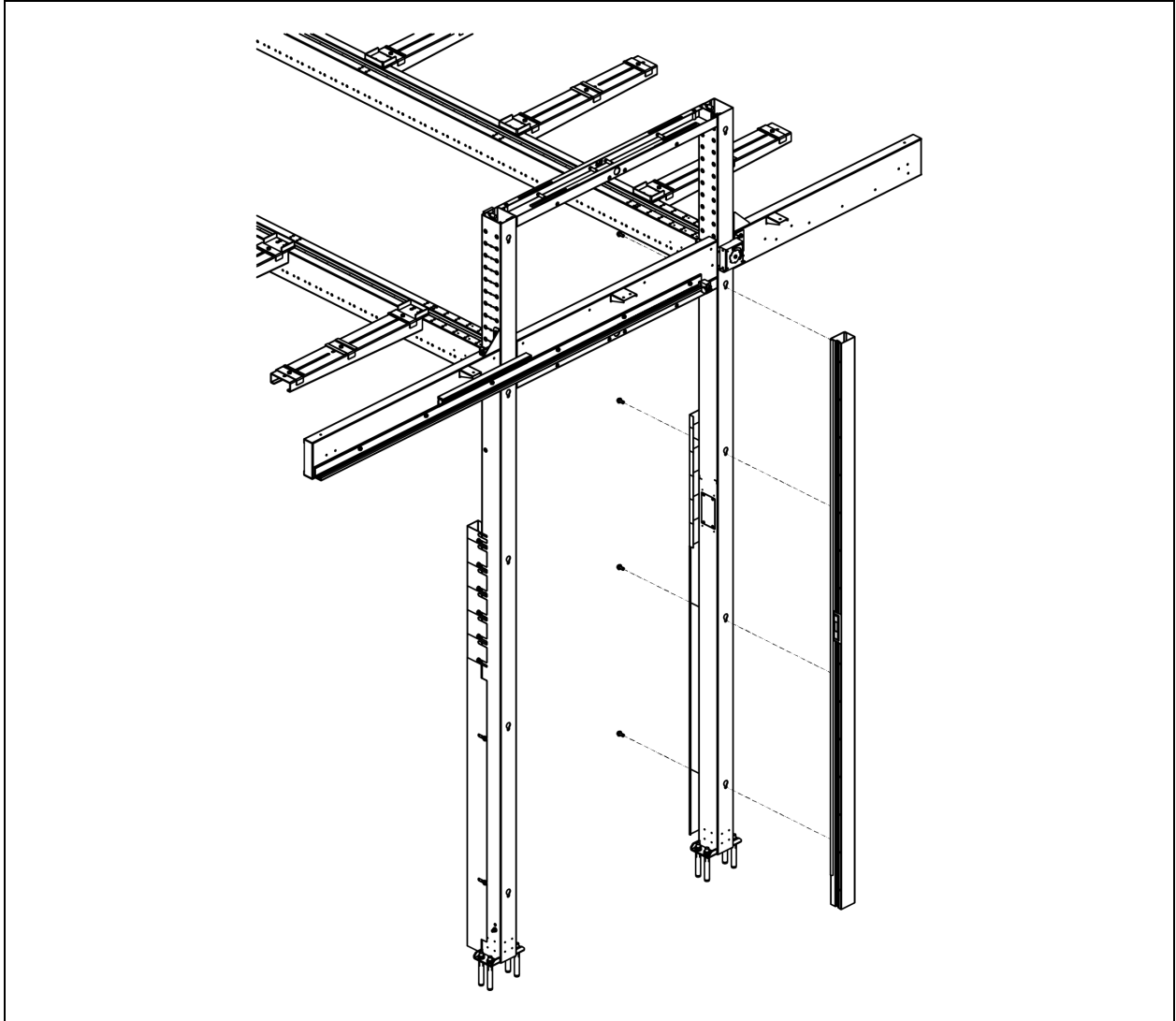


7. Fix the stopper to the sliding rail.

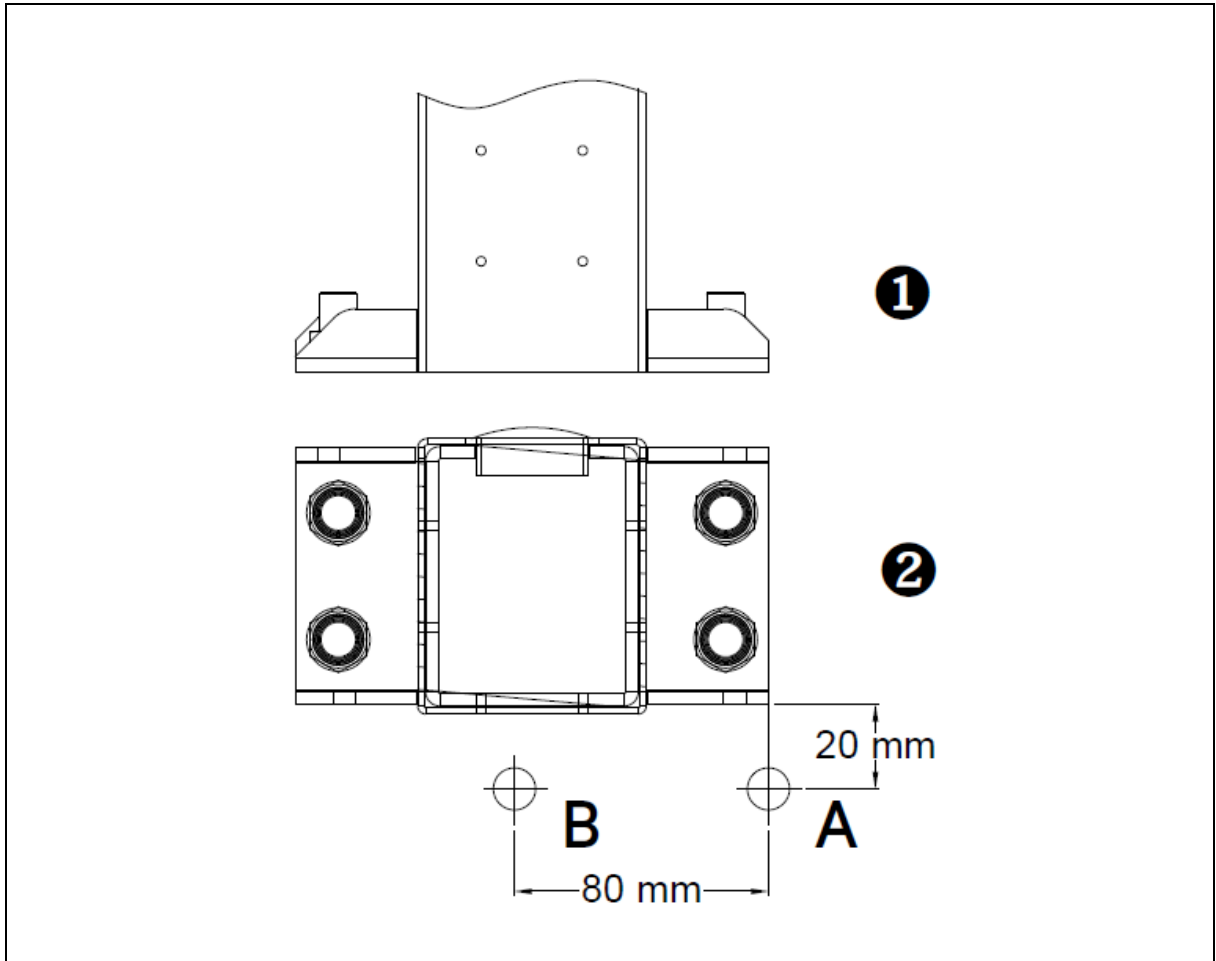


### 4.3.16 Semi-auto Sliding Door (for 914.4 mm (3 ft) Left Opening Door)

1. Fix the right sliding door adapter to the right vertical post using M8 pan head screws. Install the screws from the back side of the vertical post.

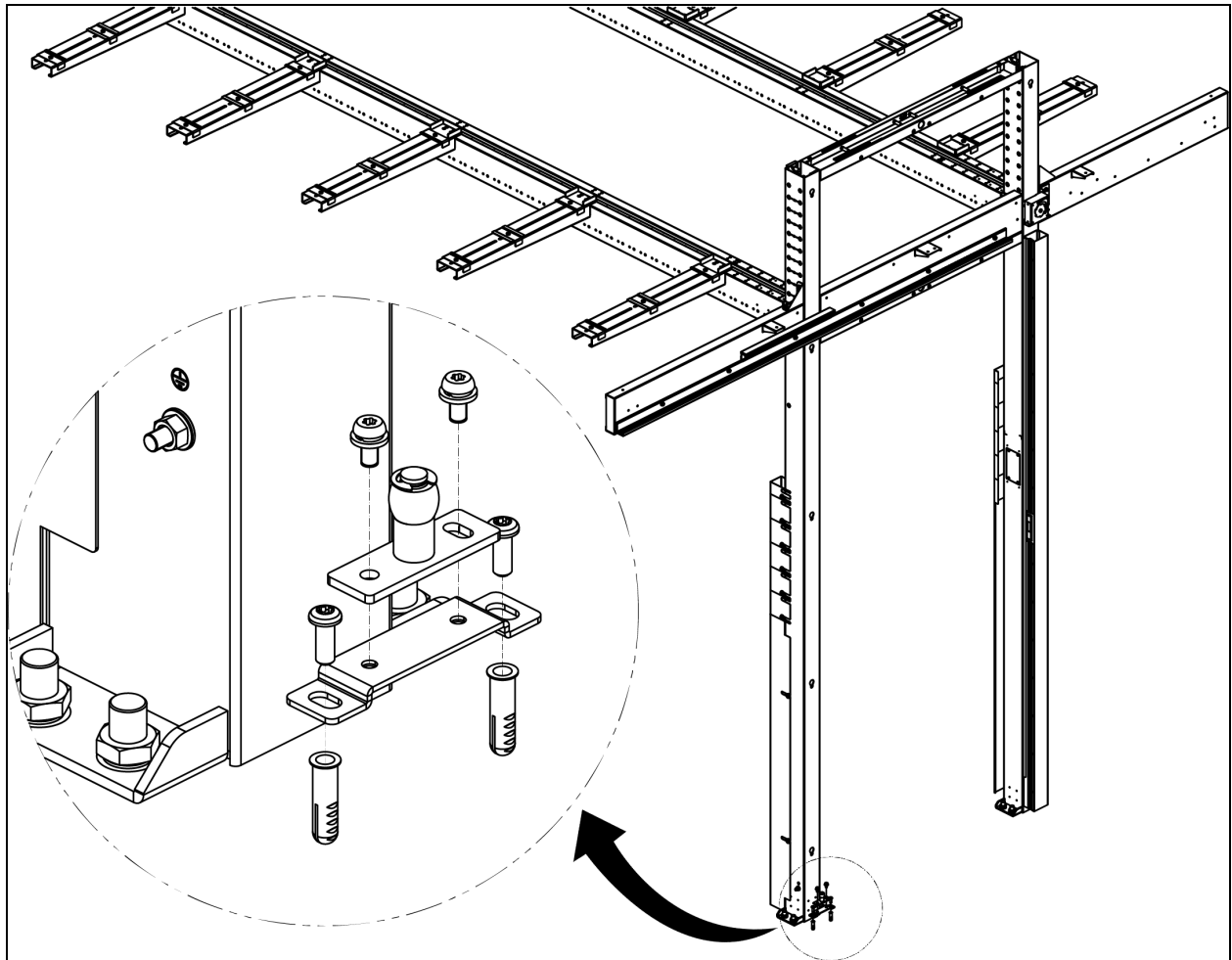


2. Install the door guide bracket near the left vertical post.
  - a. Use a tape measure to determine position A (20 mm vertically from the lower right corner of the left vertical post stand, viewing from the top). Mark position A on the floor.
  - b. Use a tape measure to determine position B (80 mm horizontally from position A). Mark position B on the floor.
  - c. Drill a  $\phi 6$  hole in position A and B and install a plastic expansion tube in each hole.



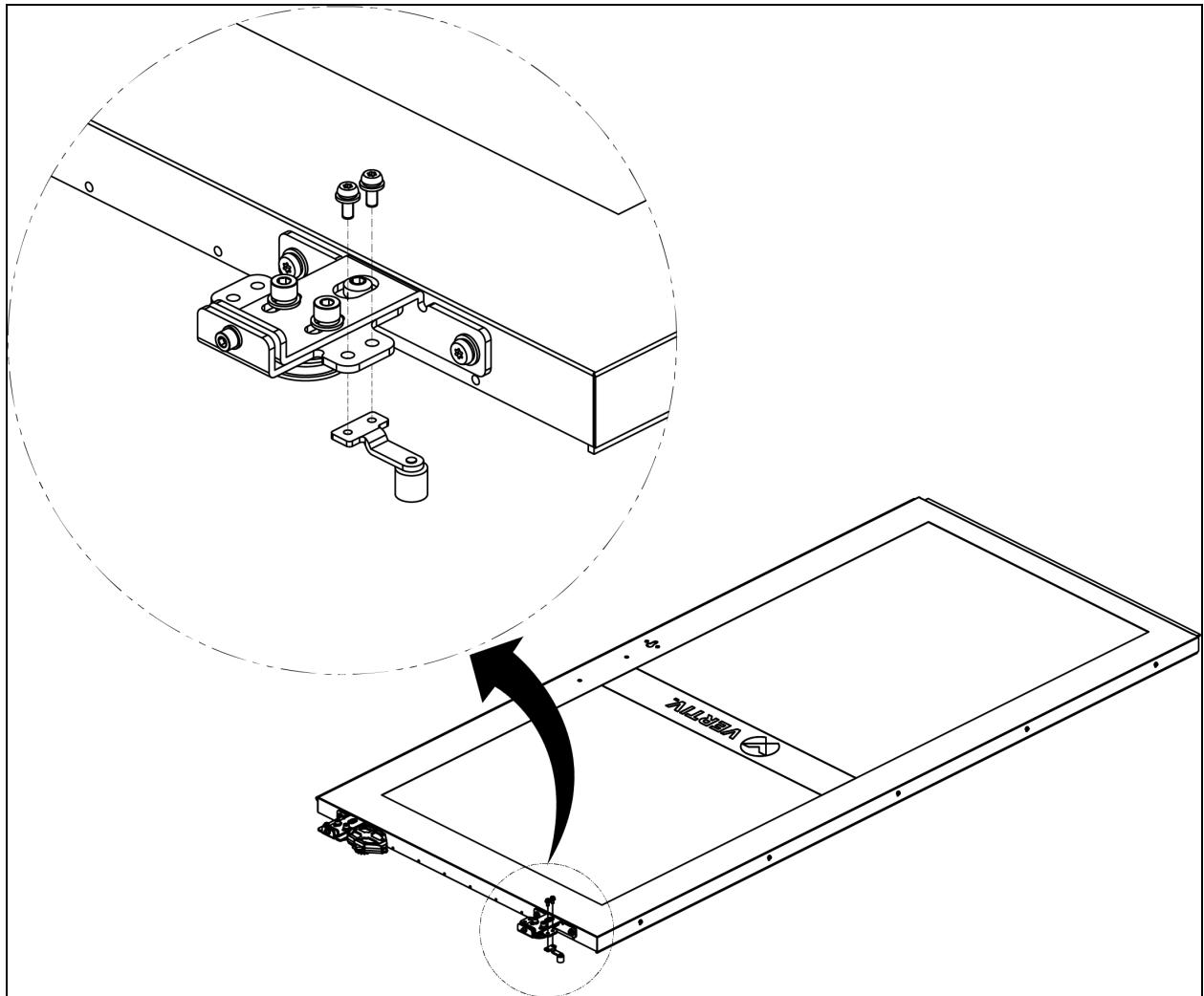
Item	Description
1	Left vertical post
2	Left vertical post stand, viewing from the top

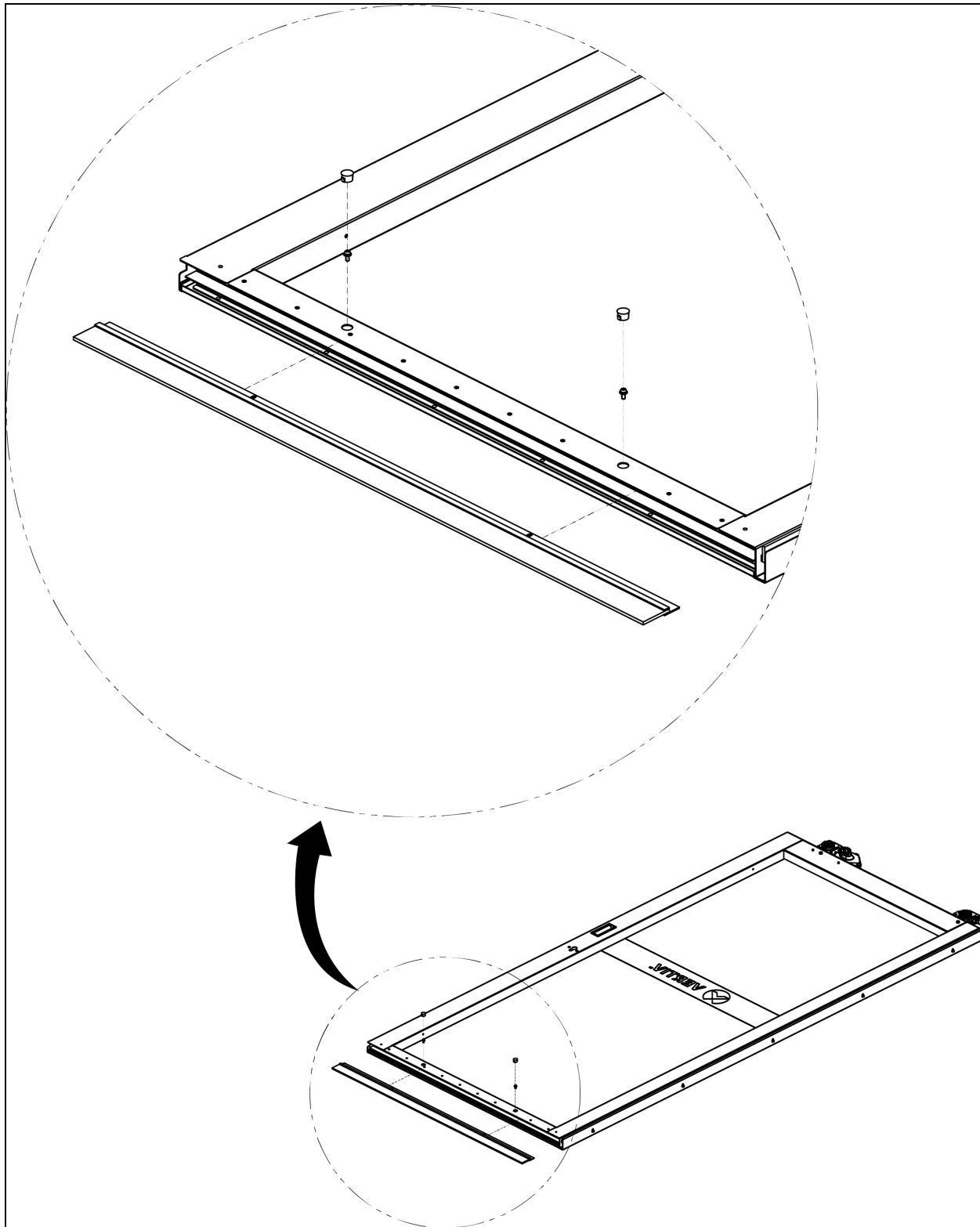
3. Fix the door guide bracket to the floor using M5 self-taping screws. Fix the door guide to the door guide bracket using M5 pan head screws.



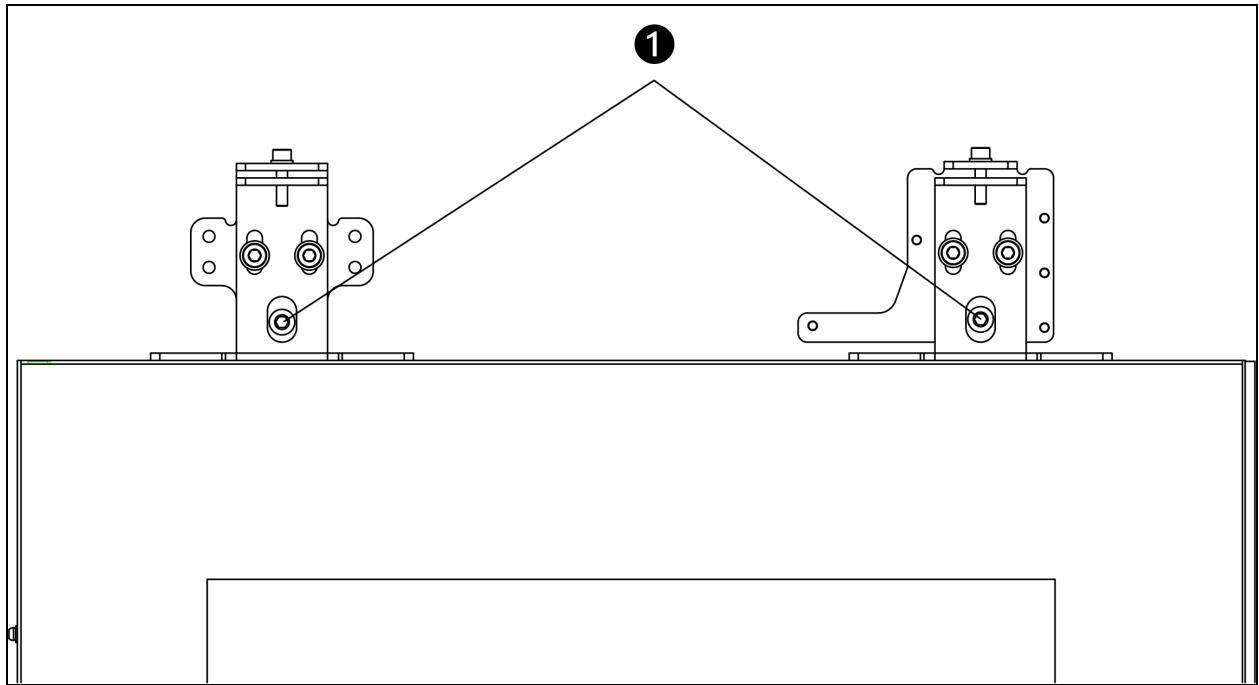


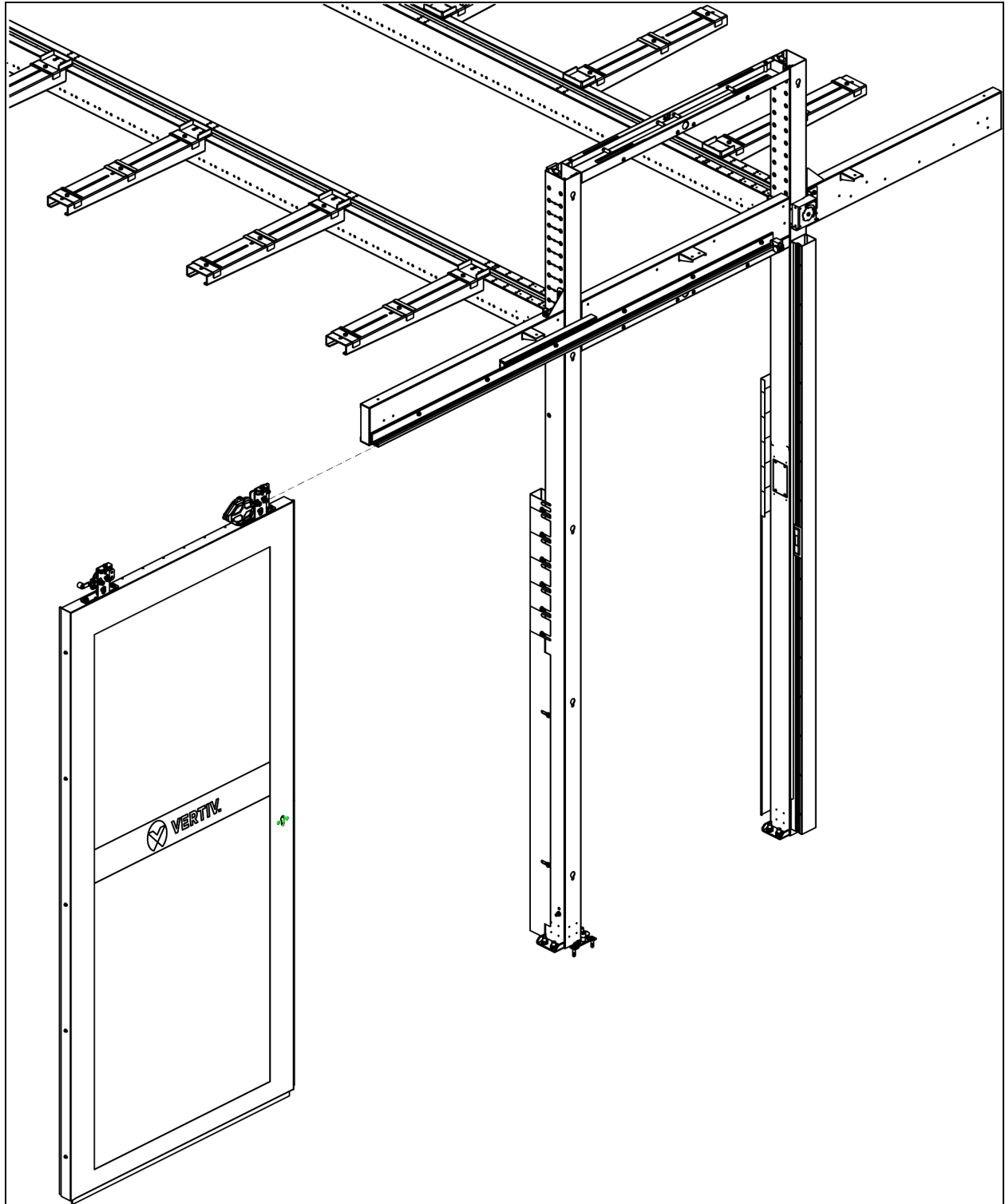
4. Fix the end wheel to the rear hanger roller using M5 screws. Install the brush under the sliding door using M4 pan head screws. The screws are installed in the inner side of the door. After that, cover each hole above the screw using a plastic cap.





5. Remove the limit screws (1) from the hanger rollers, push the door panel into the sliding rail, and then fix the limit screws.

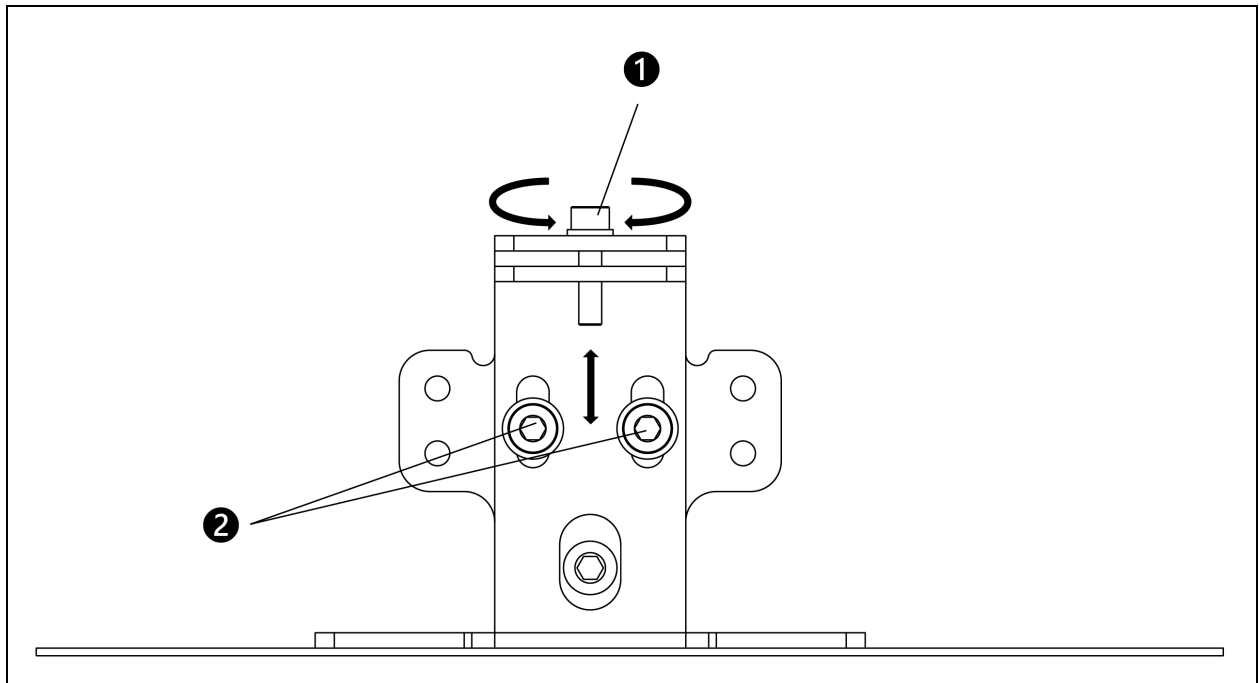
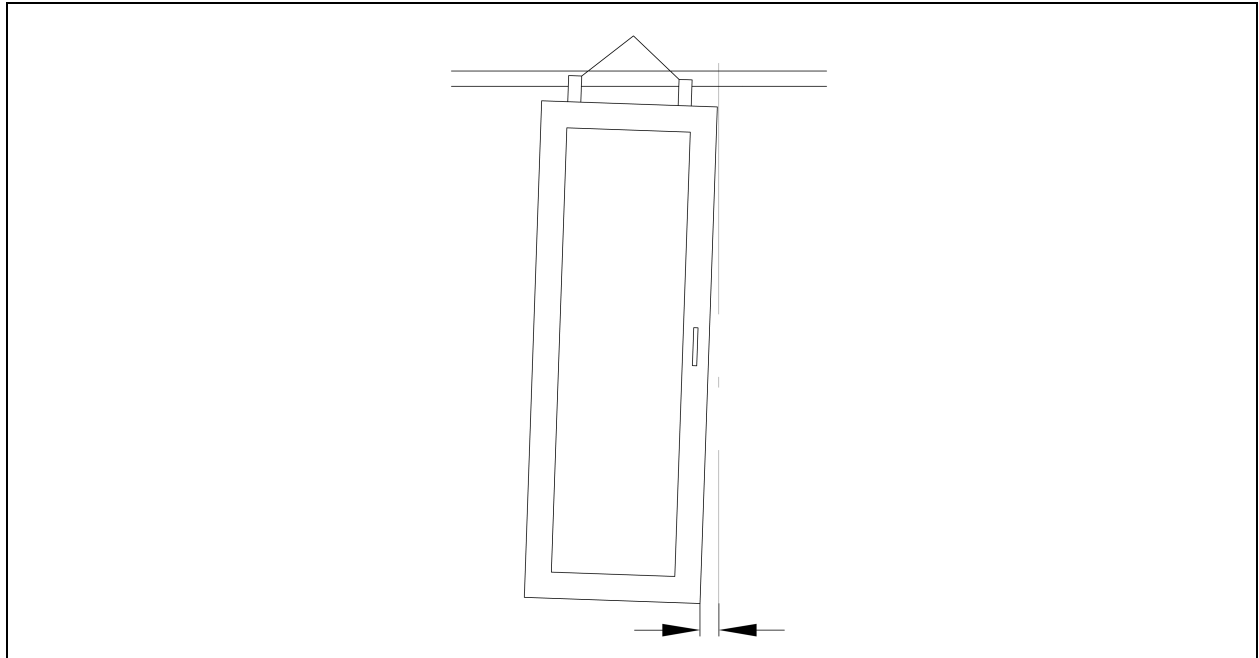




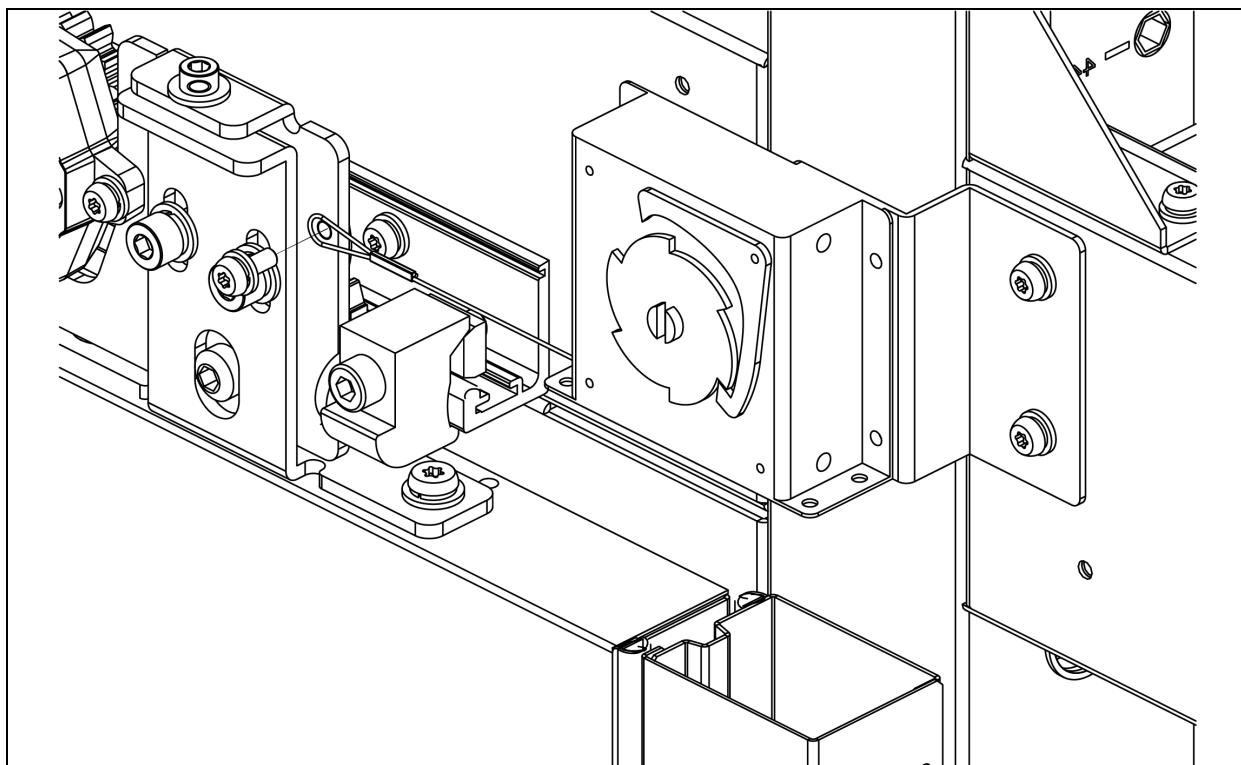
Adjust the gap to make the door panel vertical:

- a. Loosen the fixing screws (2) on the hanger rollers. Rotate the adjustable screw (1) clockwise to raise the door panel and counter-clockwise to lower the door panel.
- b. After the adjustment, tighten the fixing screws (2).
- c. Check that the door can slide smoothly.

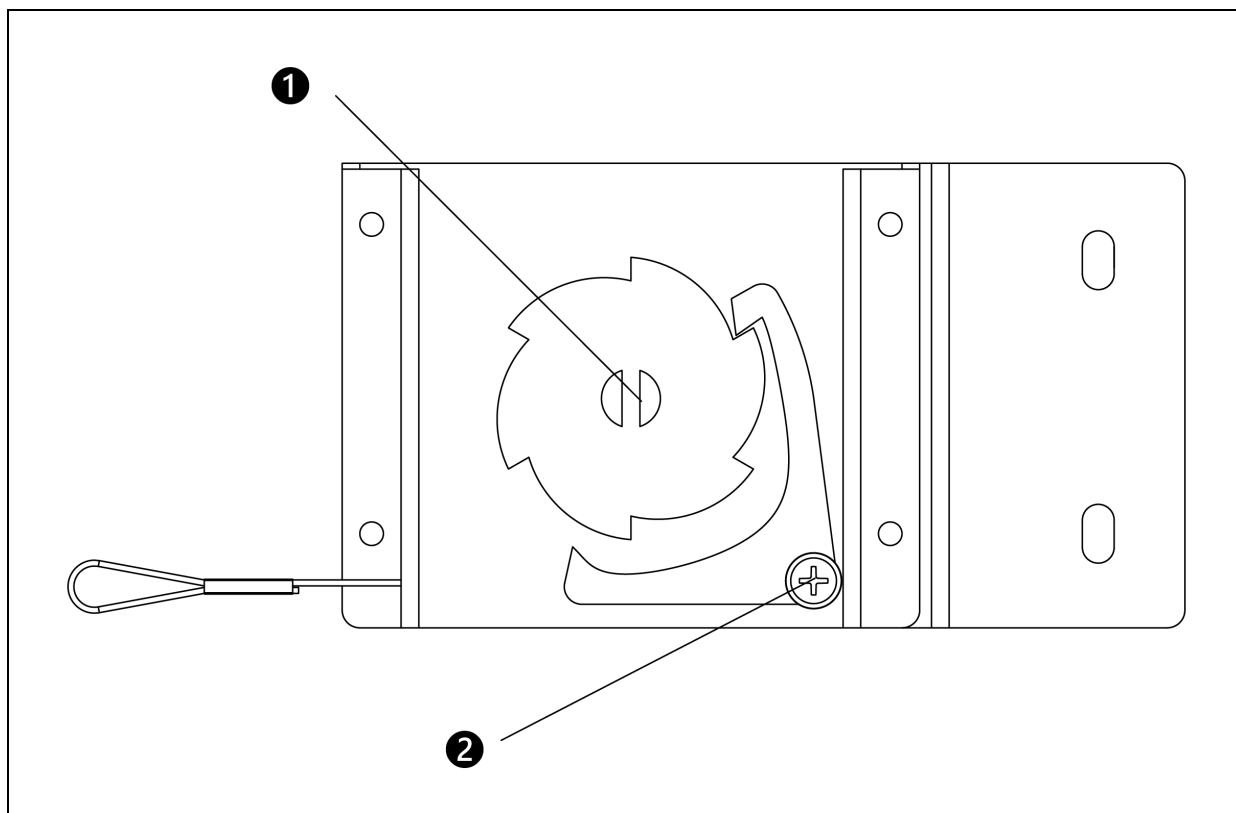
**NOTE:** If the door cannot slide smoothly, check if the hanger rollers are within the rail and the door guide is in the groove.



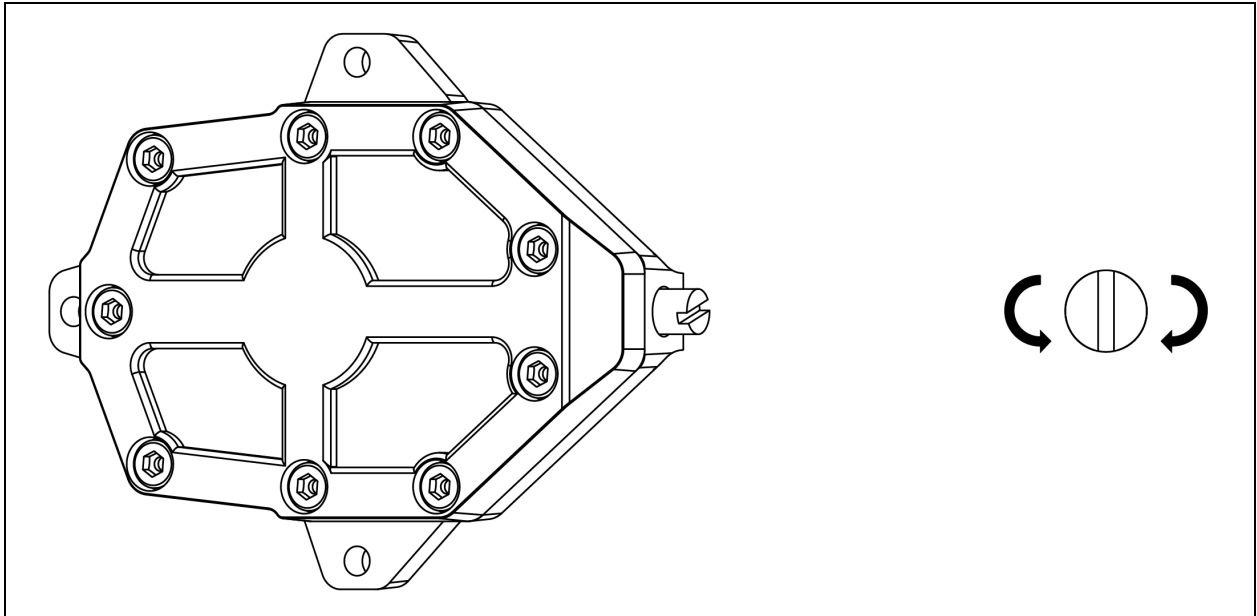
6. Pull the cable from the drive device and fix the cable to the front hanger roller.



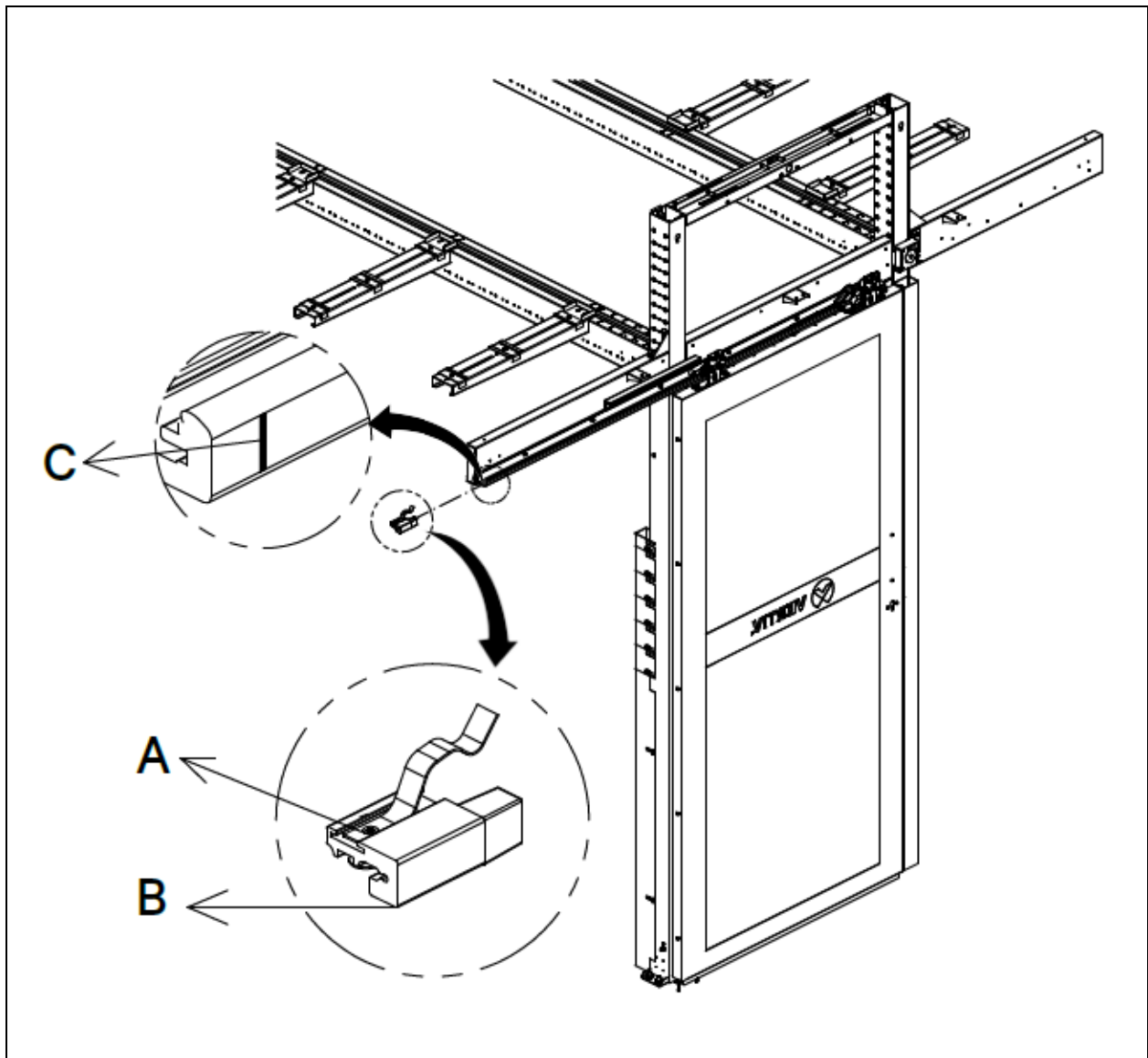
To adjust the resistance of the sliding door, loosen the Phillips head screw (2), use a slotted screwdriver to adjust the turntable (1), and then tighten the Phillips head screw (2).



Use a rear brake to adjust the sliding speed: turn the valve clockwise to slower the speed and counter-clockwise to faster the speed.

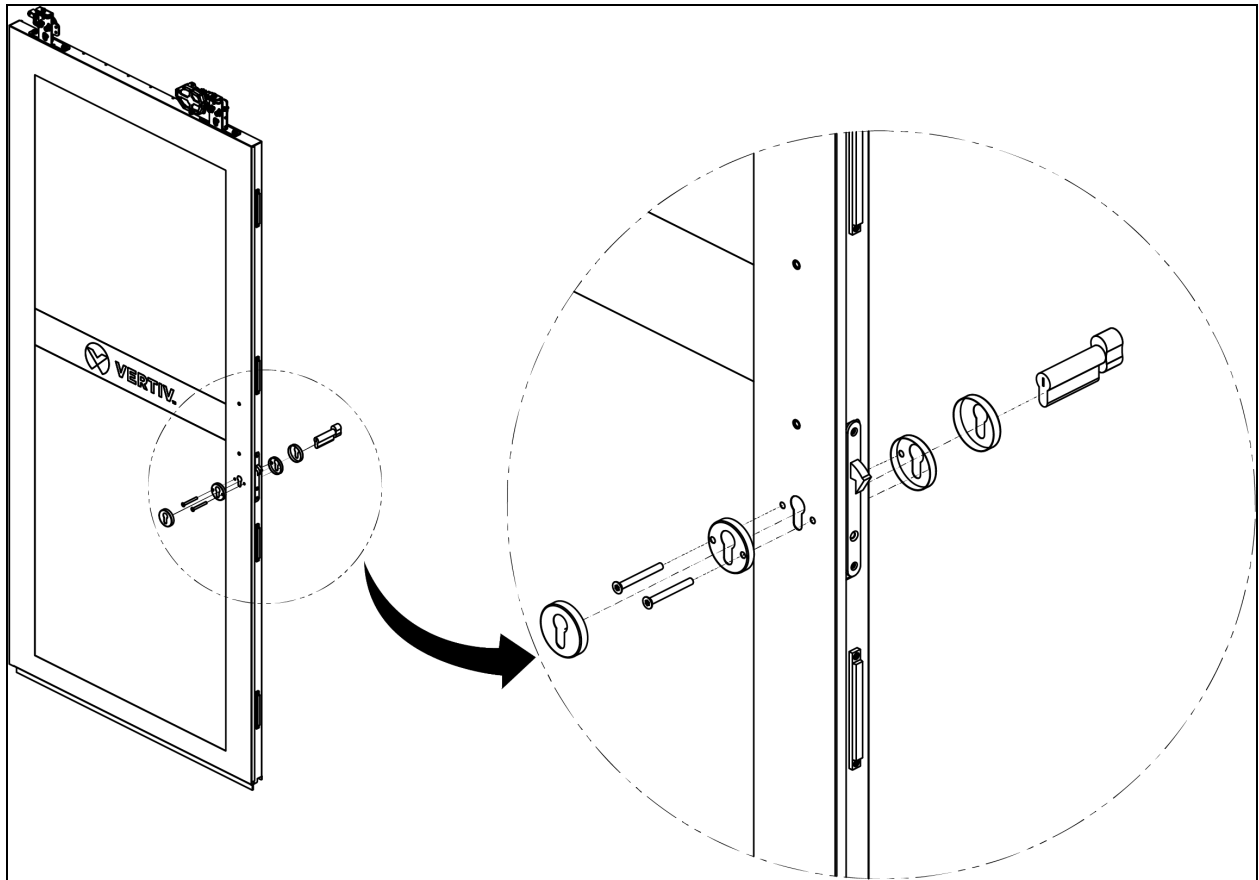


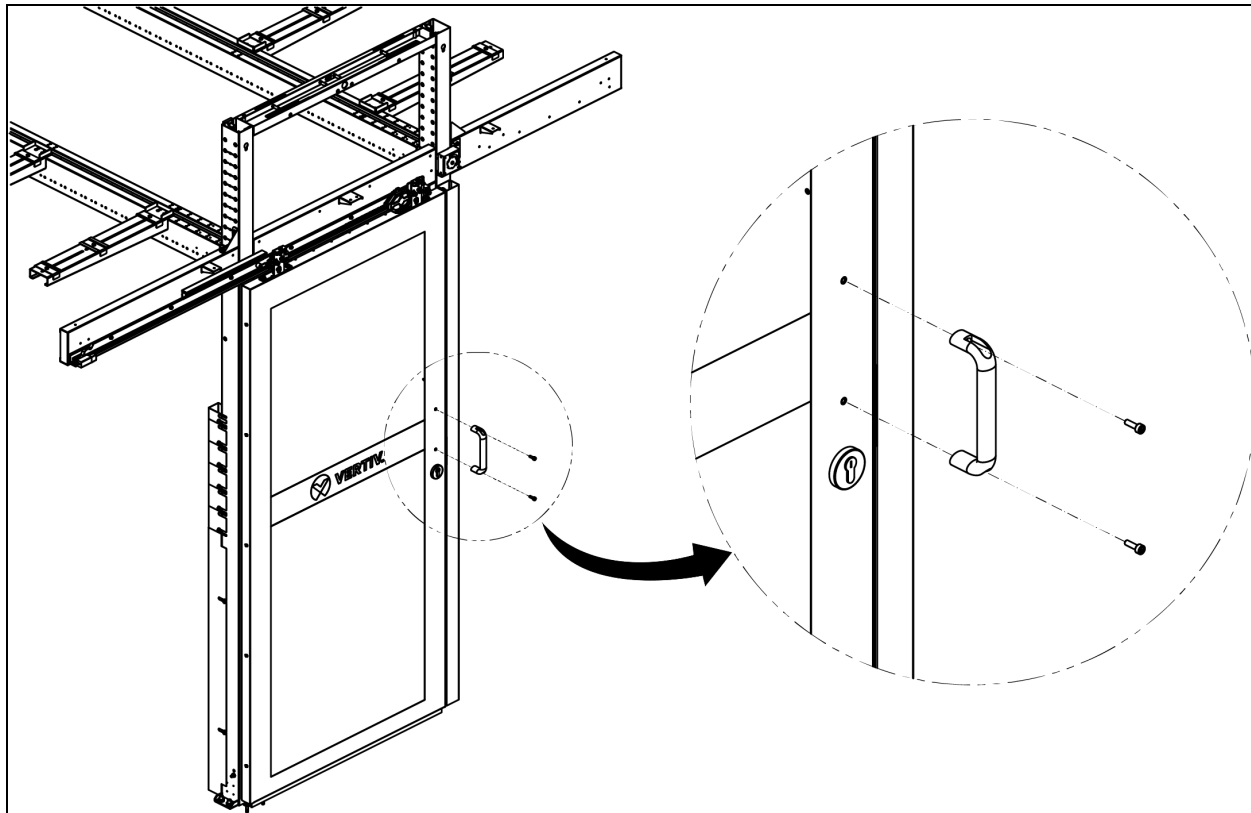
7. Loosen the screw (A) on the full open device, slide the full open device into the sliding rail till its edge (B) aligns with the mark (C) on the sliding rail, and tighten the screw.





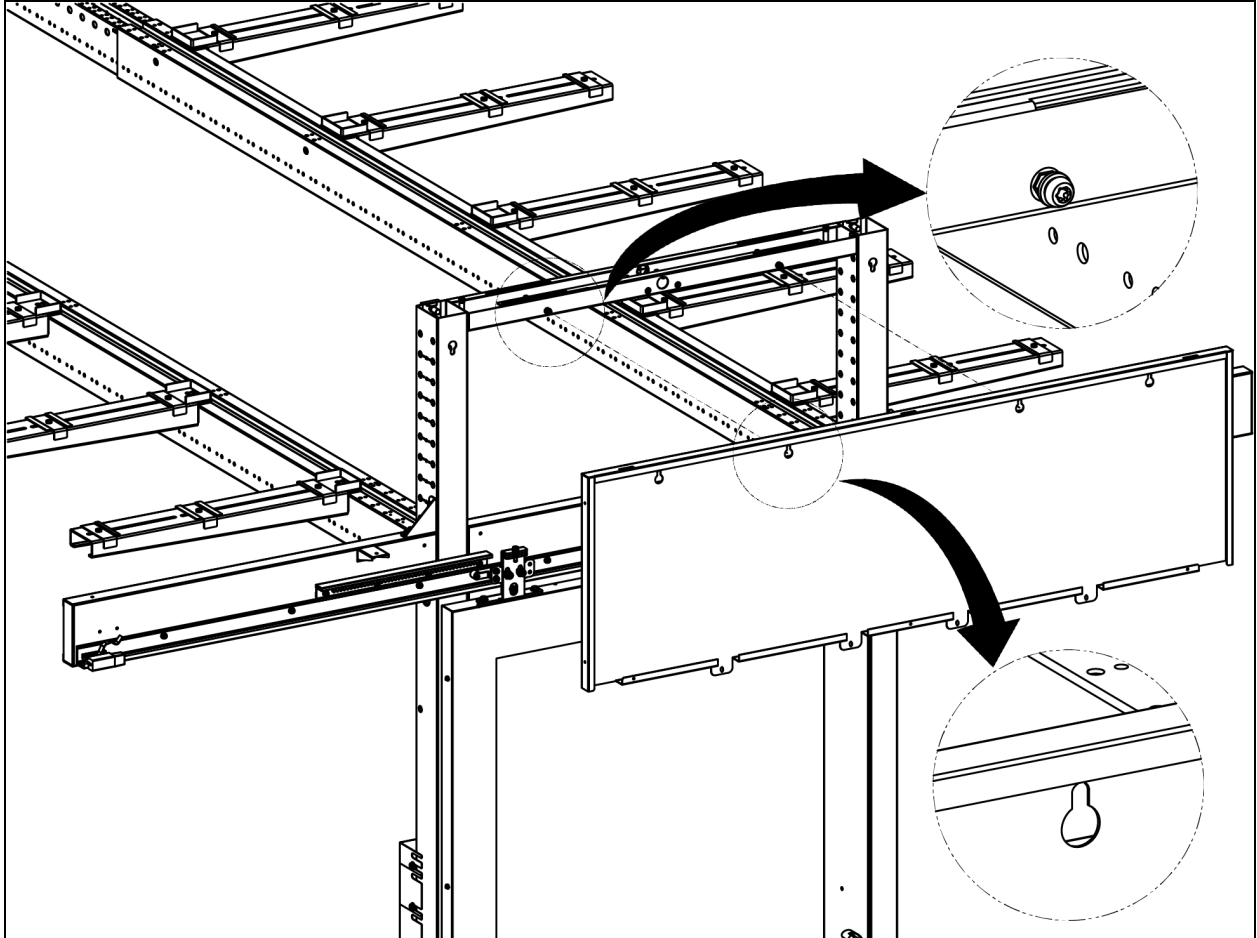
8. Insert the lock cylinder into the lock body. Install the lock cover and the door handle.

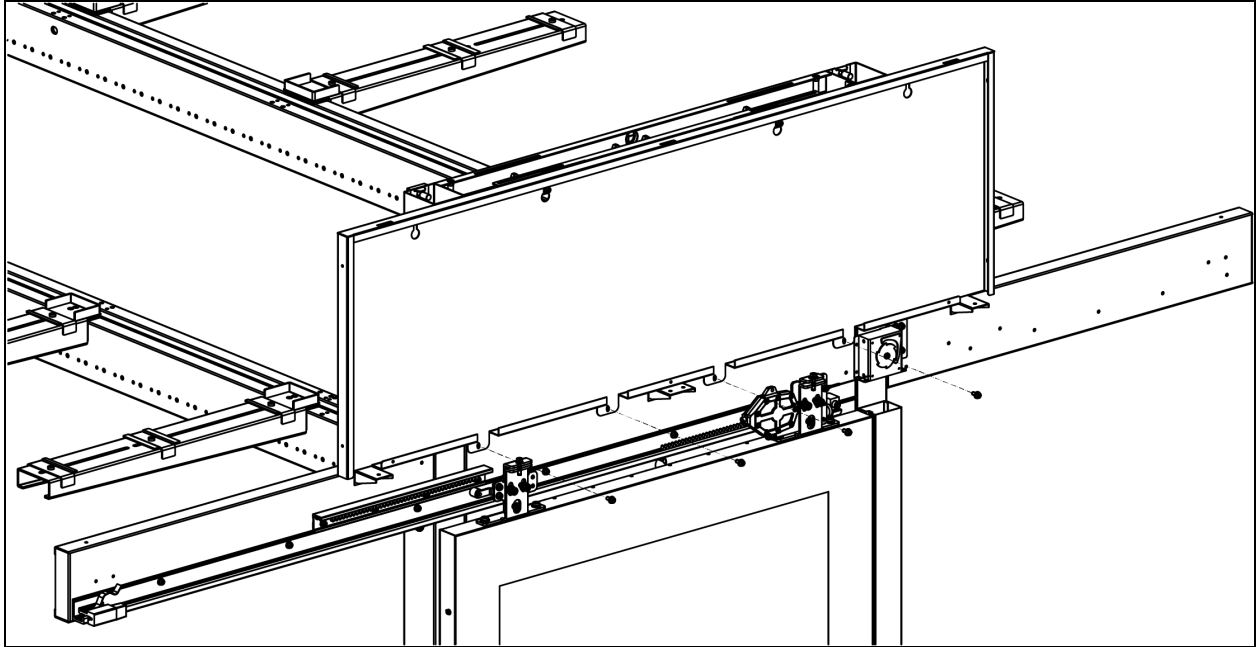




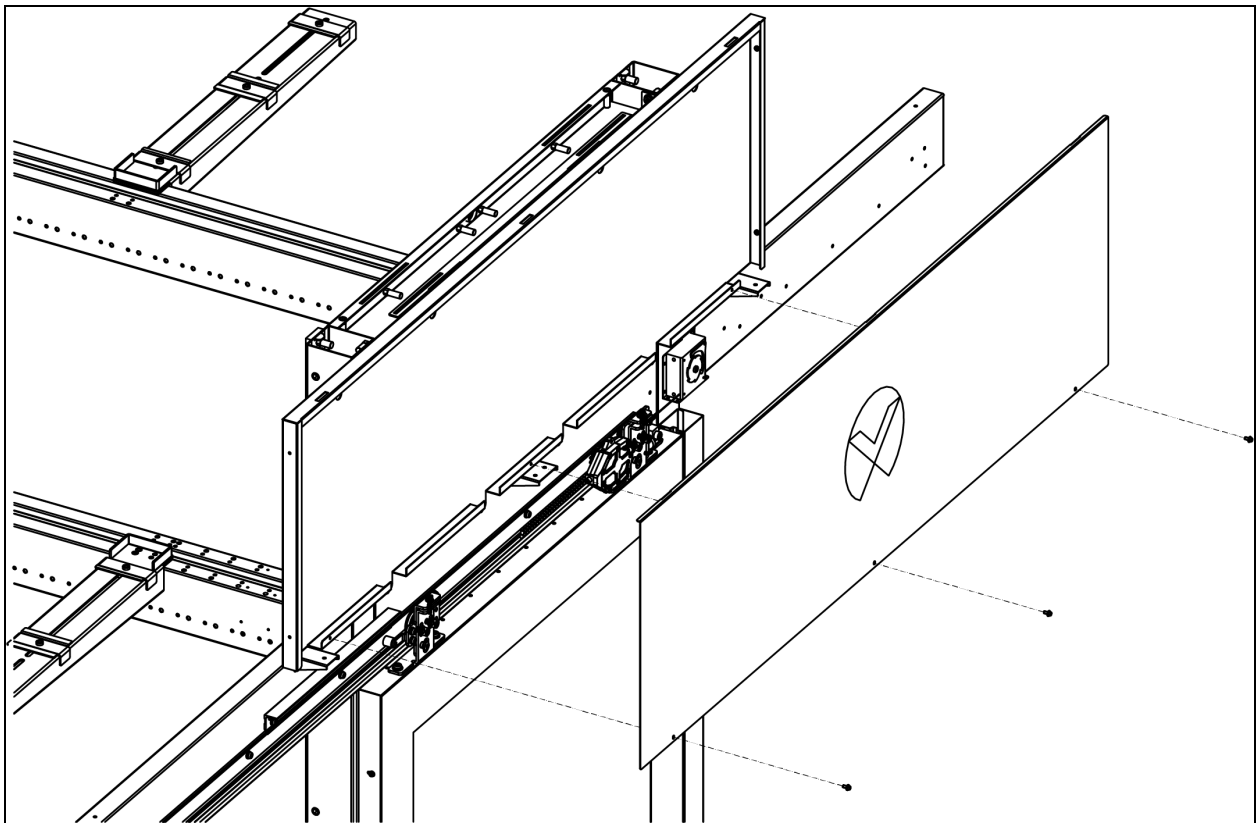
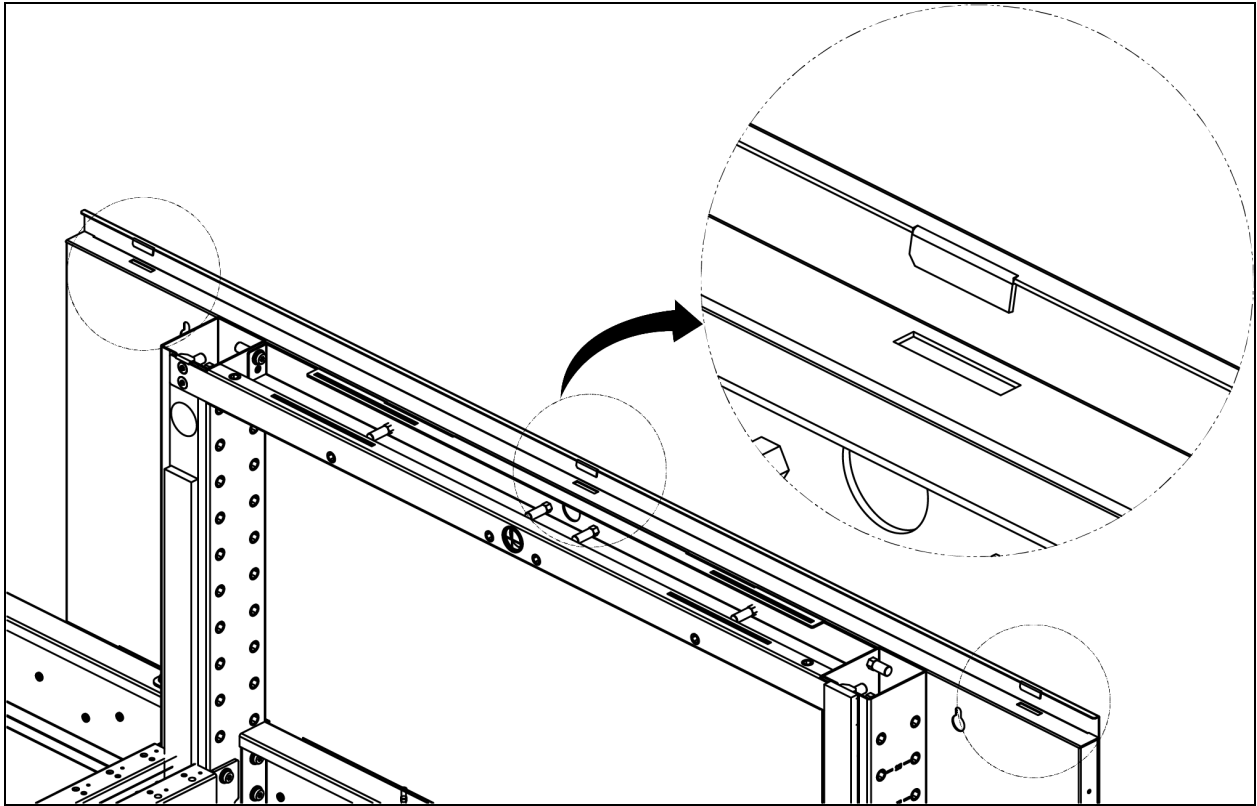
### 4.3.17 Sliding Door Header (for 914.4 mm (3 ft) Left Opening Door)

1. Insert M6 pan head screws into the frame of the width connector, leaving 5 mm between the head of the screw and the surface of the frame. Hang the door header bracket on the screws and then tighten the screws. Fix the bottom of the door header bracket to the width beam using M5 pan head screws.

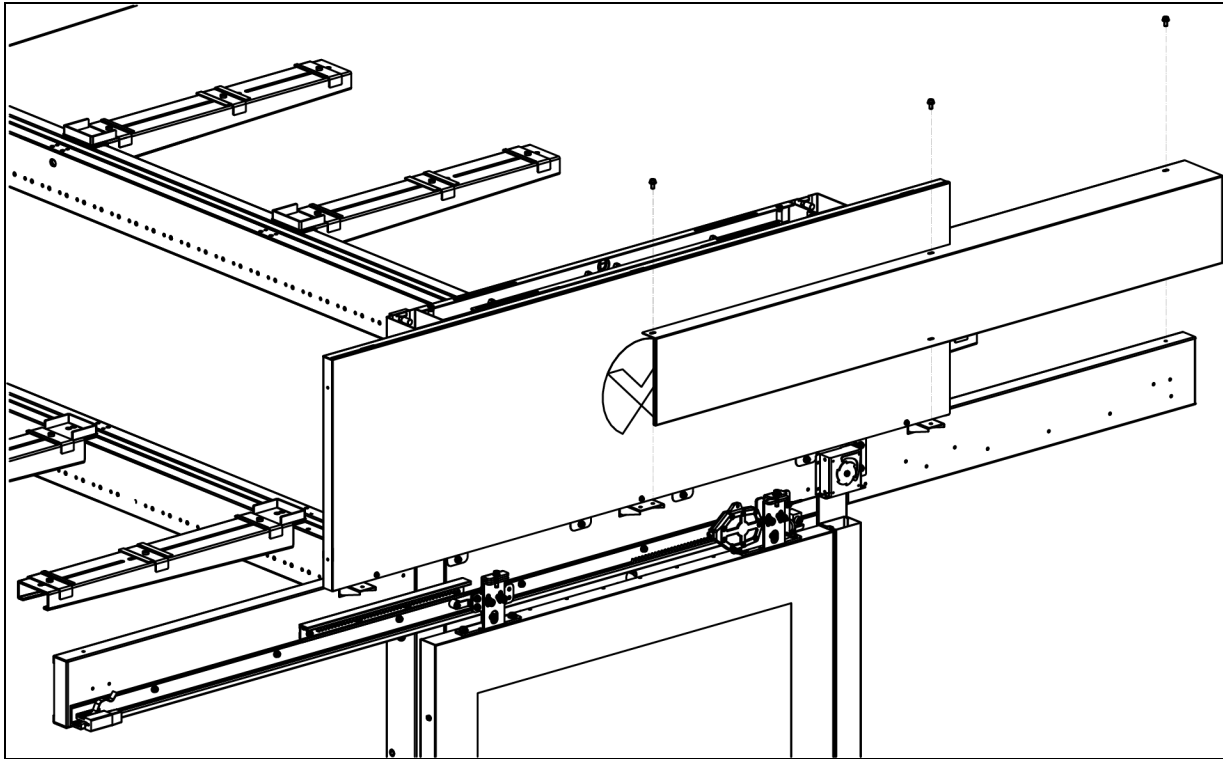


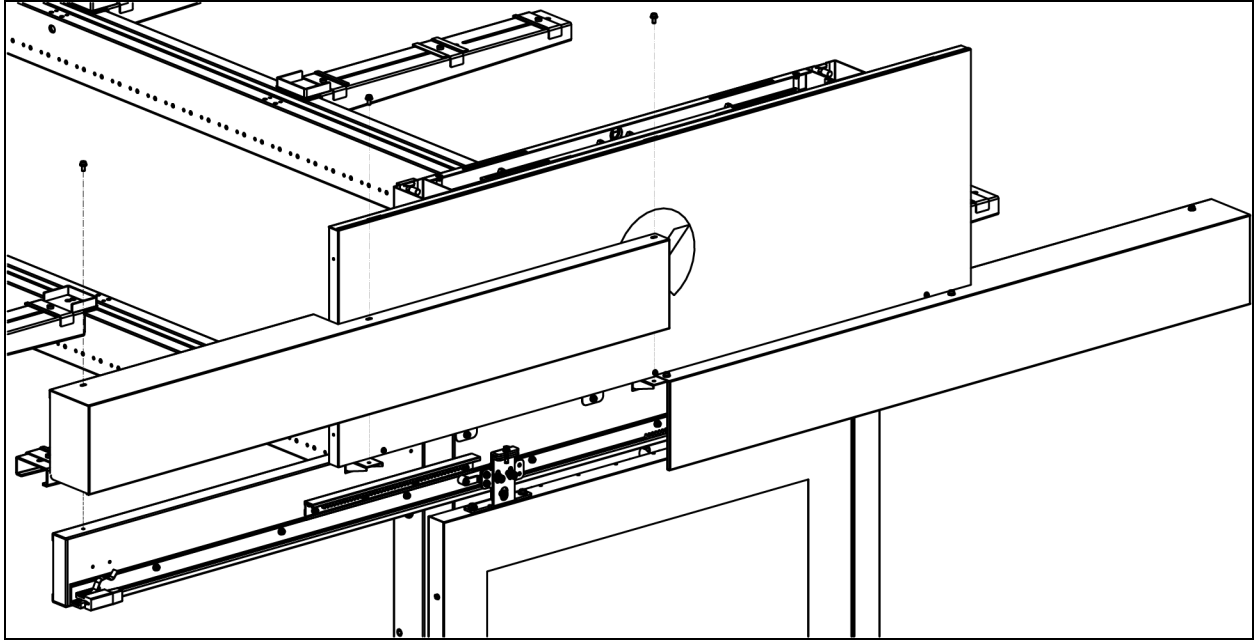


2. Hang the front panel onto the slot of the door header bracket and then fix the bottom of the panel to the bracket using three M4 pan head screws.

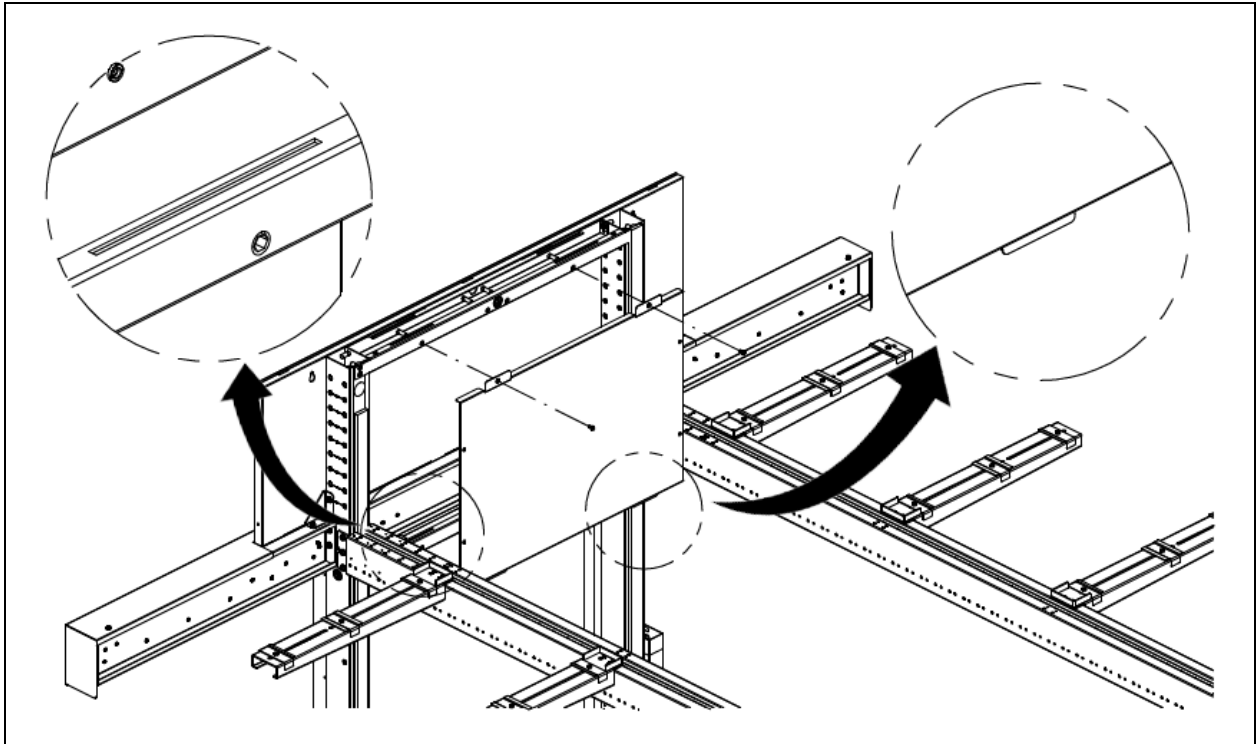


3. Fix the right cover panel to the cover bracket using M5 pan head screws. Fix the left cover panel to the cover bracket using M5 pan head screws.



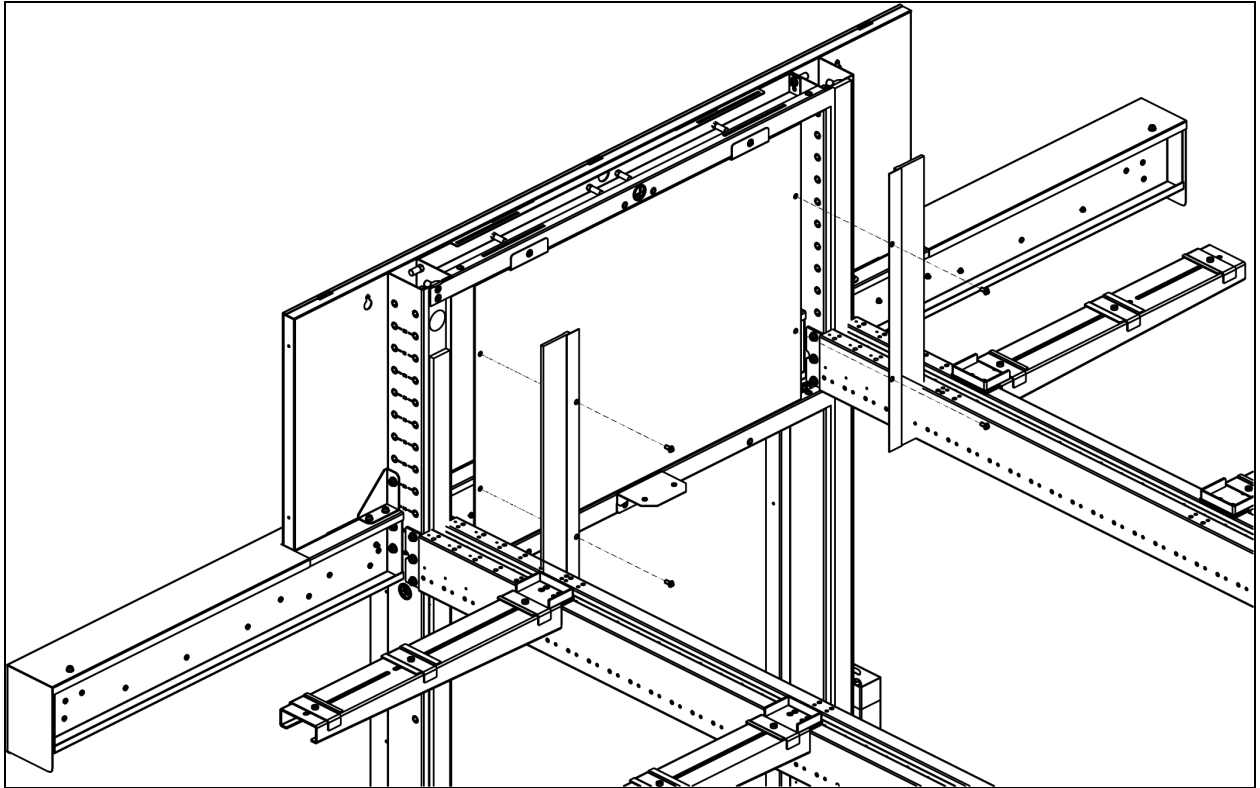


4. Install the width panel on the inner side of the containment: inserting the bottom fringes of the width panel into the slot and fix the upper fringes to the frame using M6 countersunk screws.



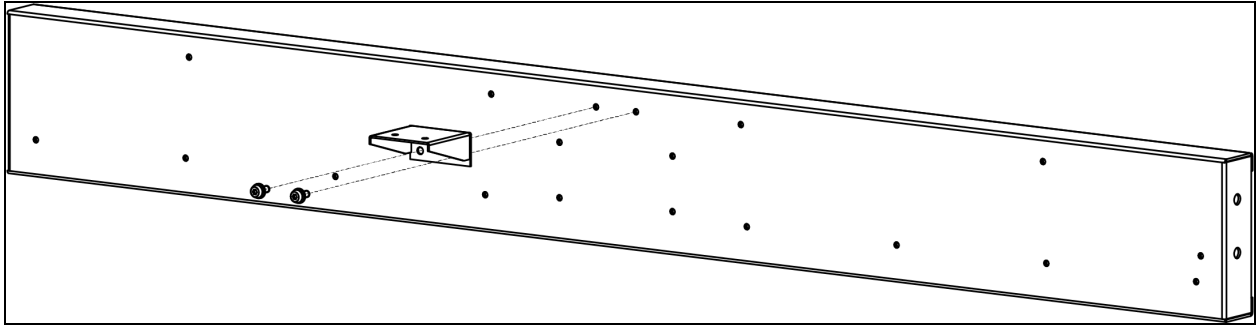


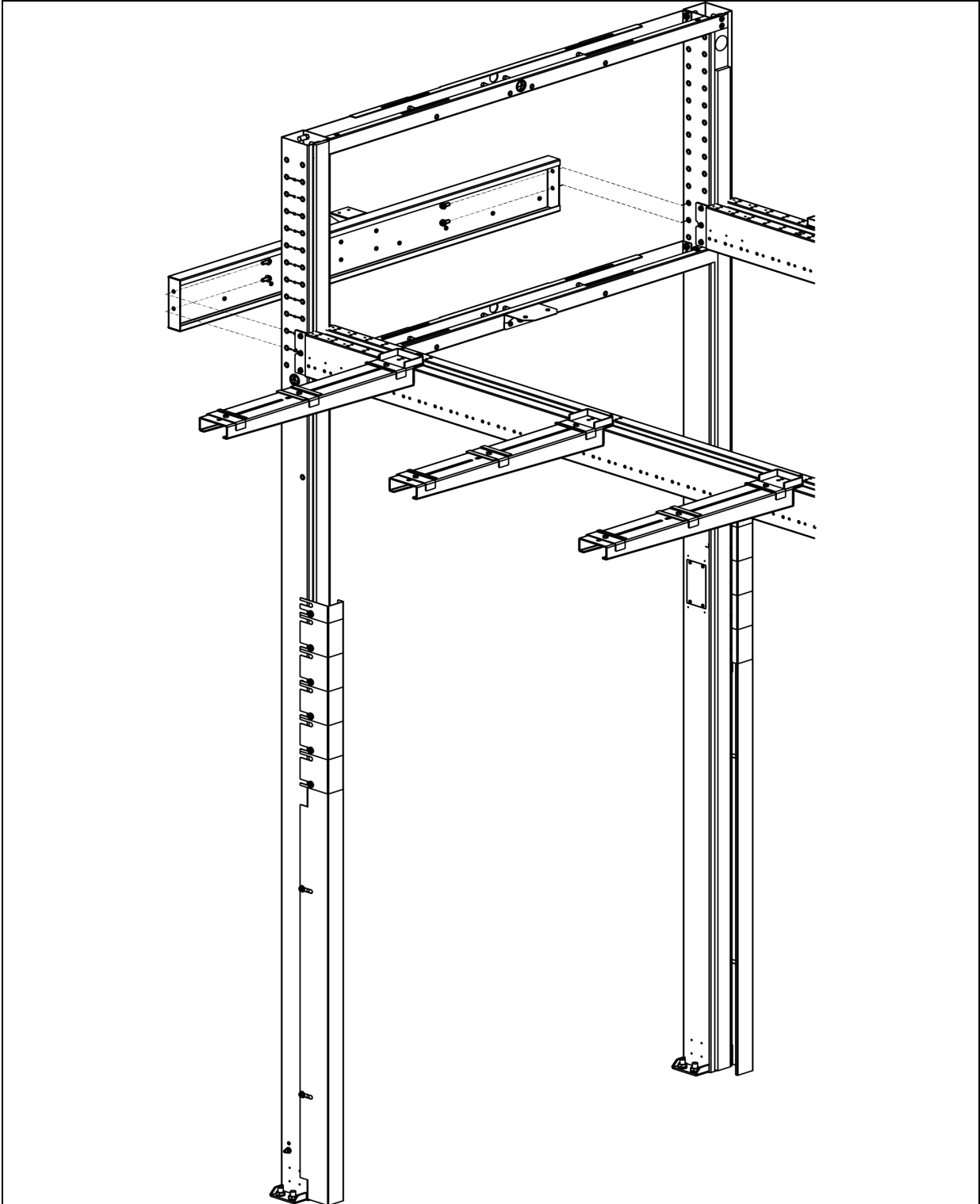
5. Install the brush on the width panel.



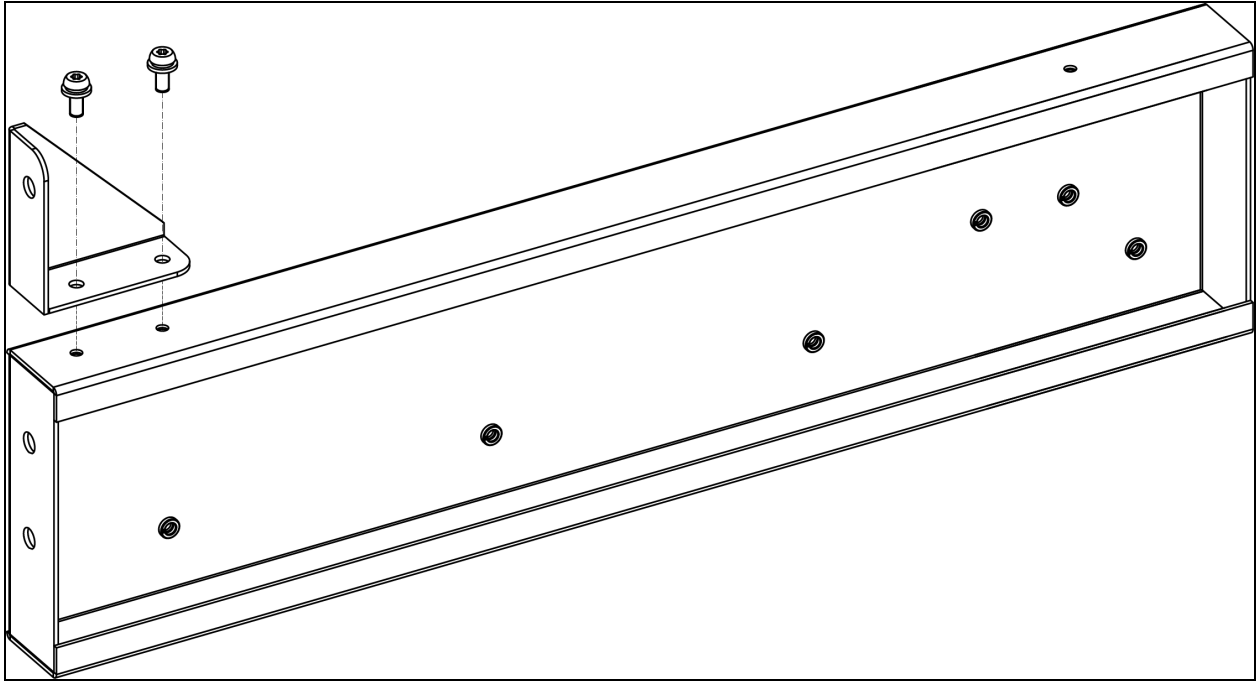
### 4.3.18 Sliding Rail Cover Component (1219.2 mm (4 ft))

1. Fix the cover bracket to the width beam using M5 pan head screws. Fix the width beam to the vertical post using M8 pan head screws.

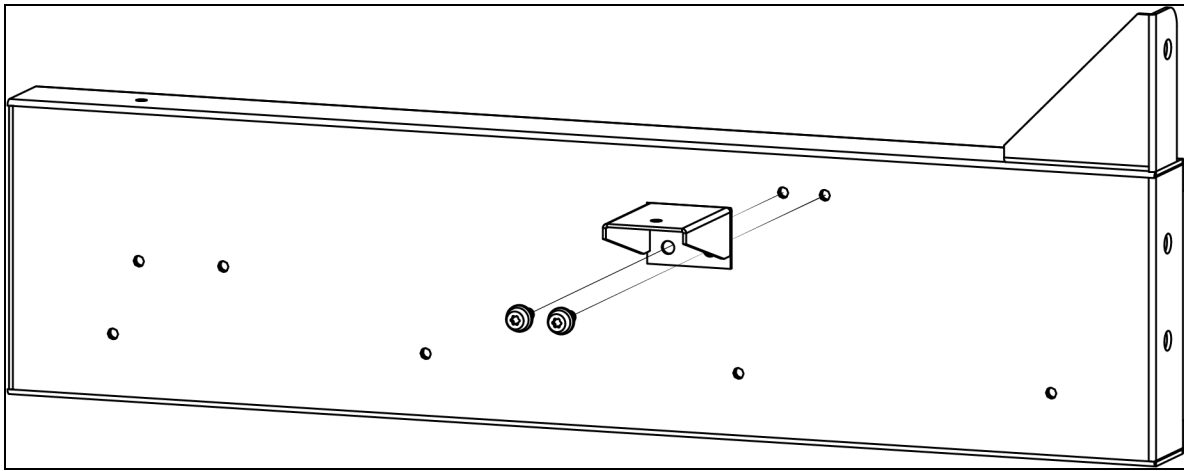




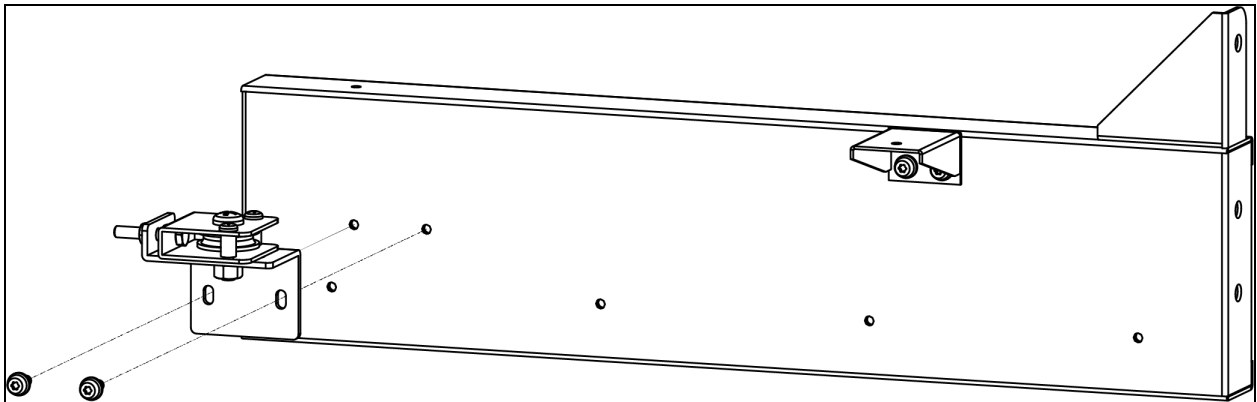
2. Fix the extendable beam bracket to the extendable beam using M5 pan head screws.



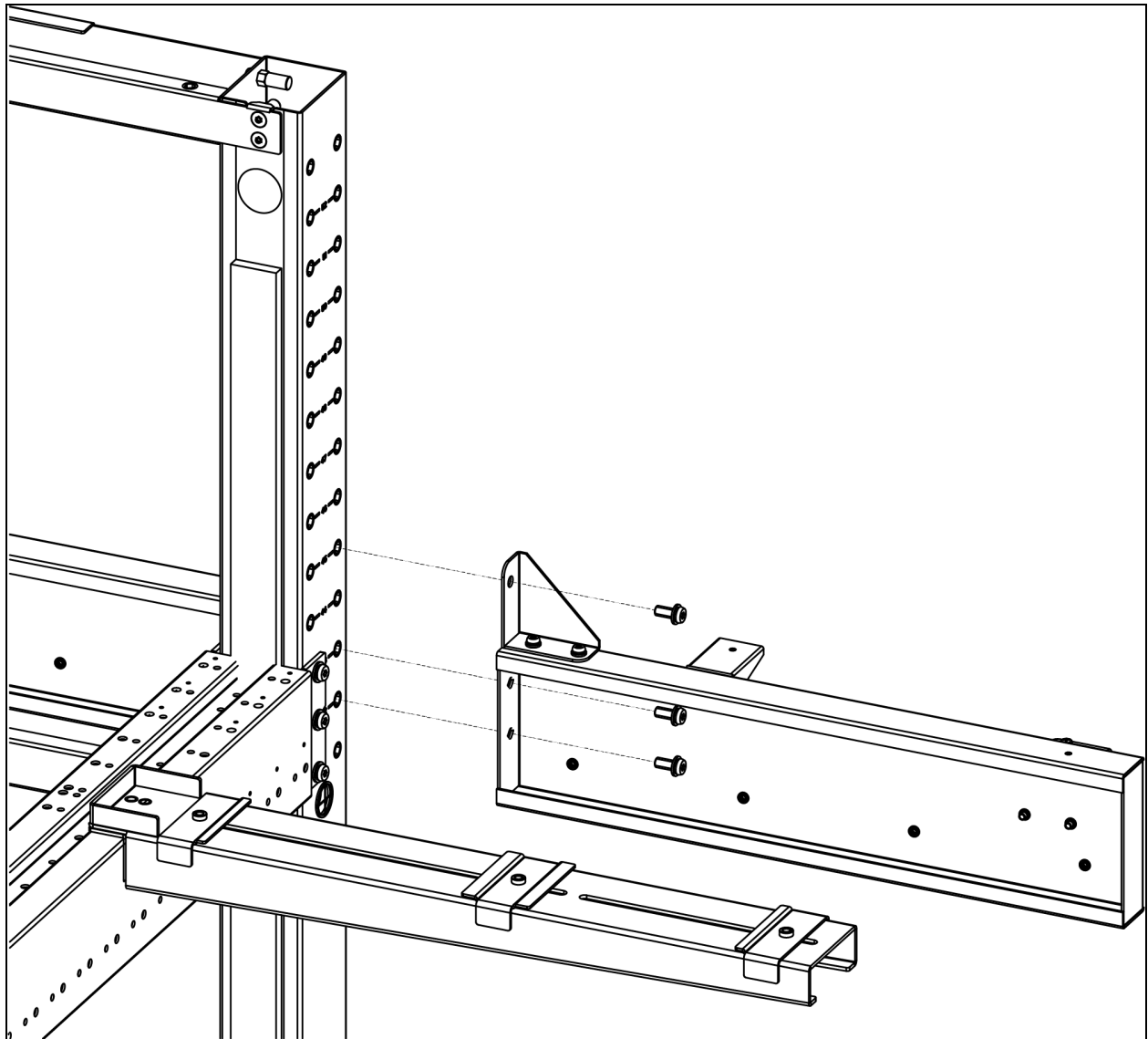
3. Fix the cover bracket to the extendable beam using M5 pan head screws.



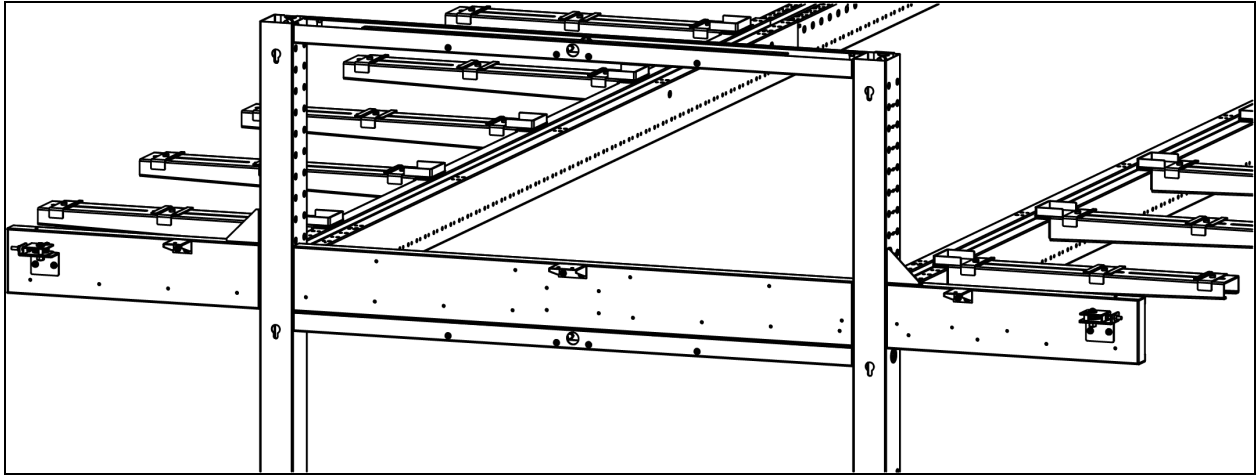
4. Fix the left steering wheel to the extendable beam using M5 pan head screws.



5. Fix the extendable beam to the vertical post using M8 pan head screws.

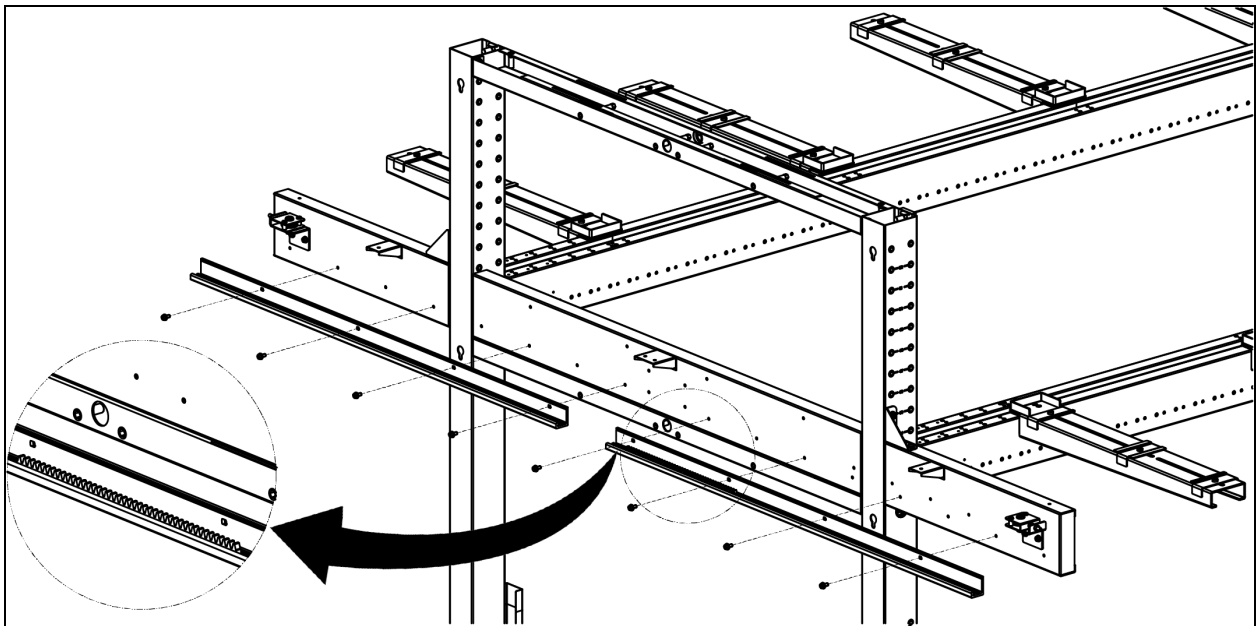


- Repeat step 2 to step 5 to install the extendable beam on the other side.

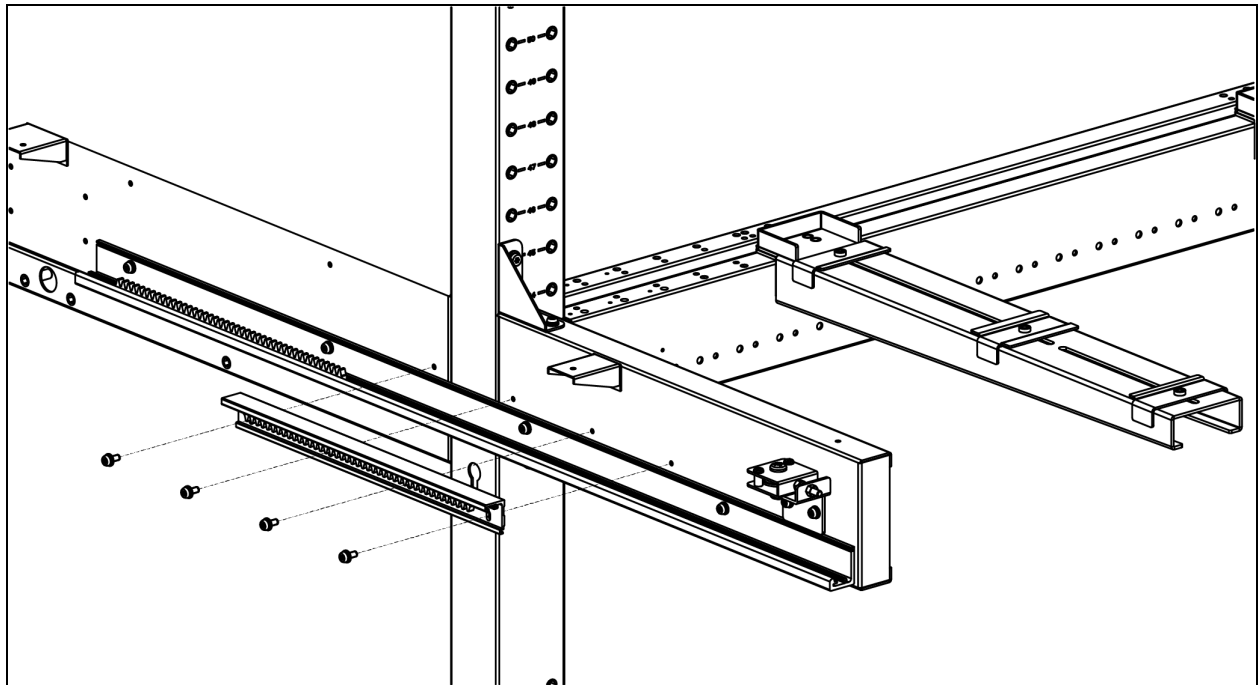


- Fix two sliding rails to the width beam and extendable beam using M5 pan head screws.

**NOTE:** The sliding rail with tooth belt (amplified in the figure below) is installed on the right side.

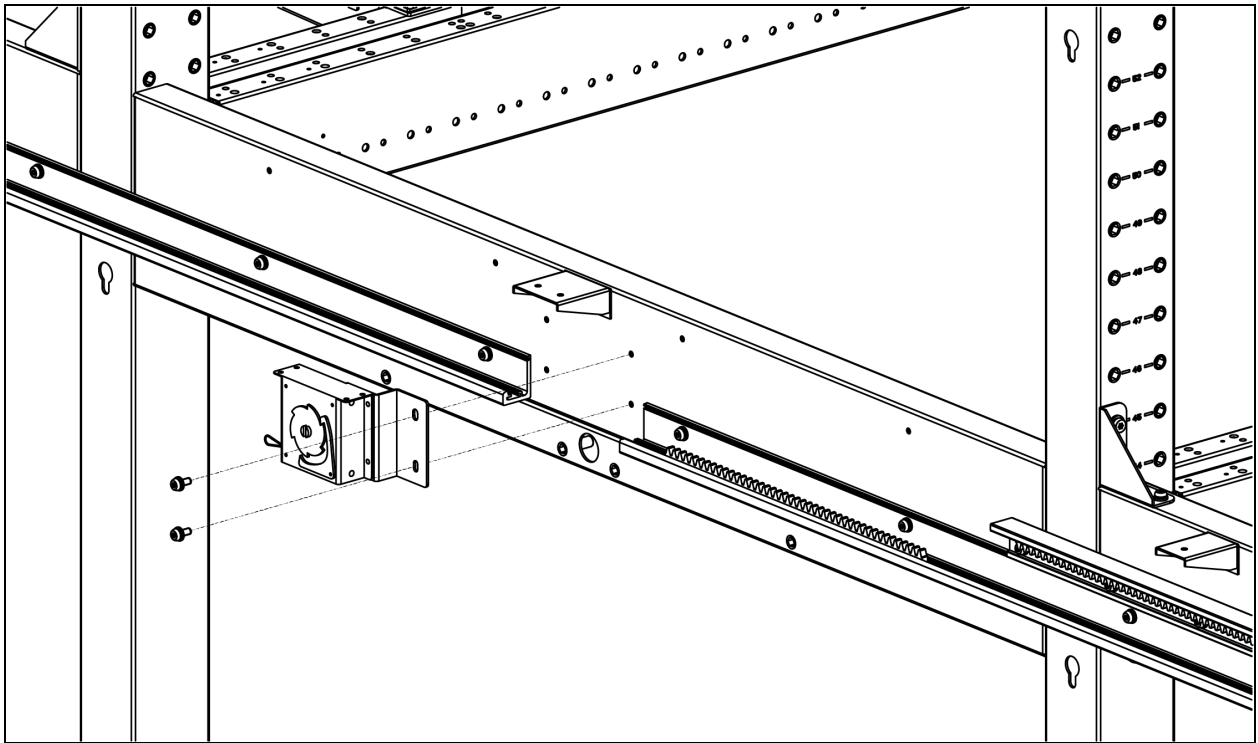


8. Fix the rail of the plastic tooth belt to the width beam and the extendable beam on the right side using M5 pan head screws.

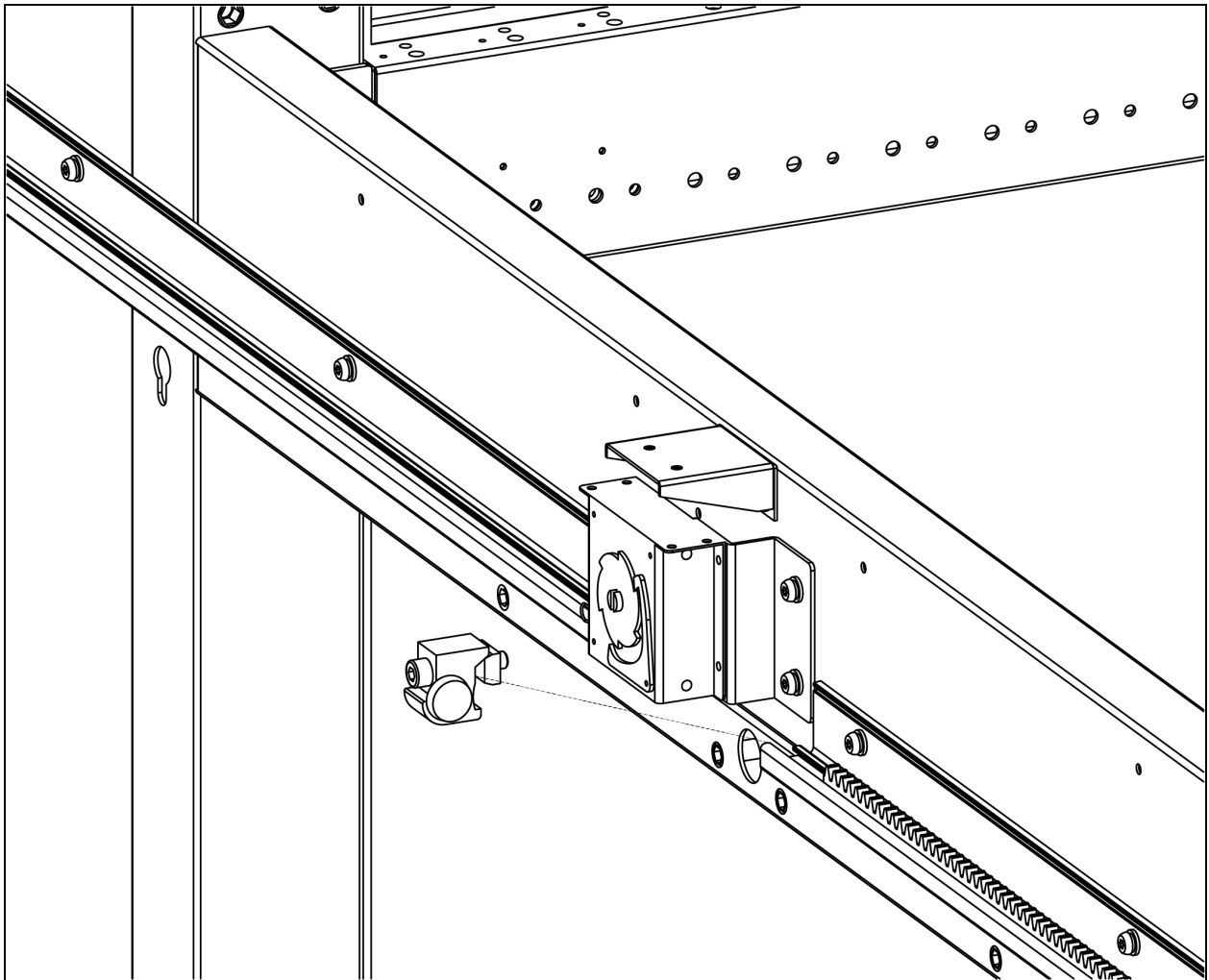




9. Fix the drive device to the width beam using M5 pan head screws.

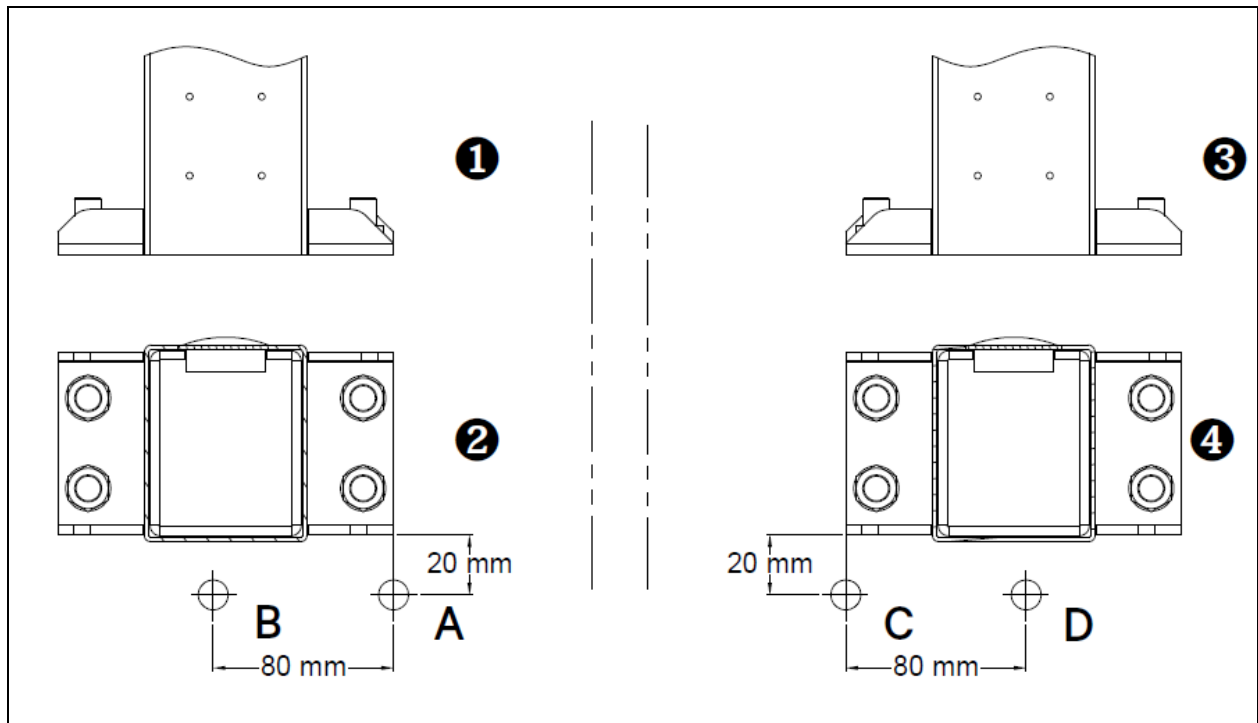


10. Fix the stopper to the sliding rail.



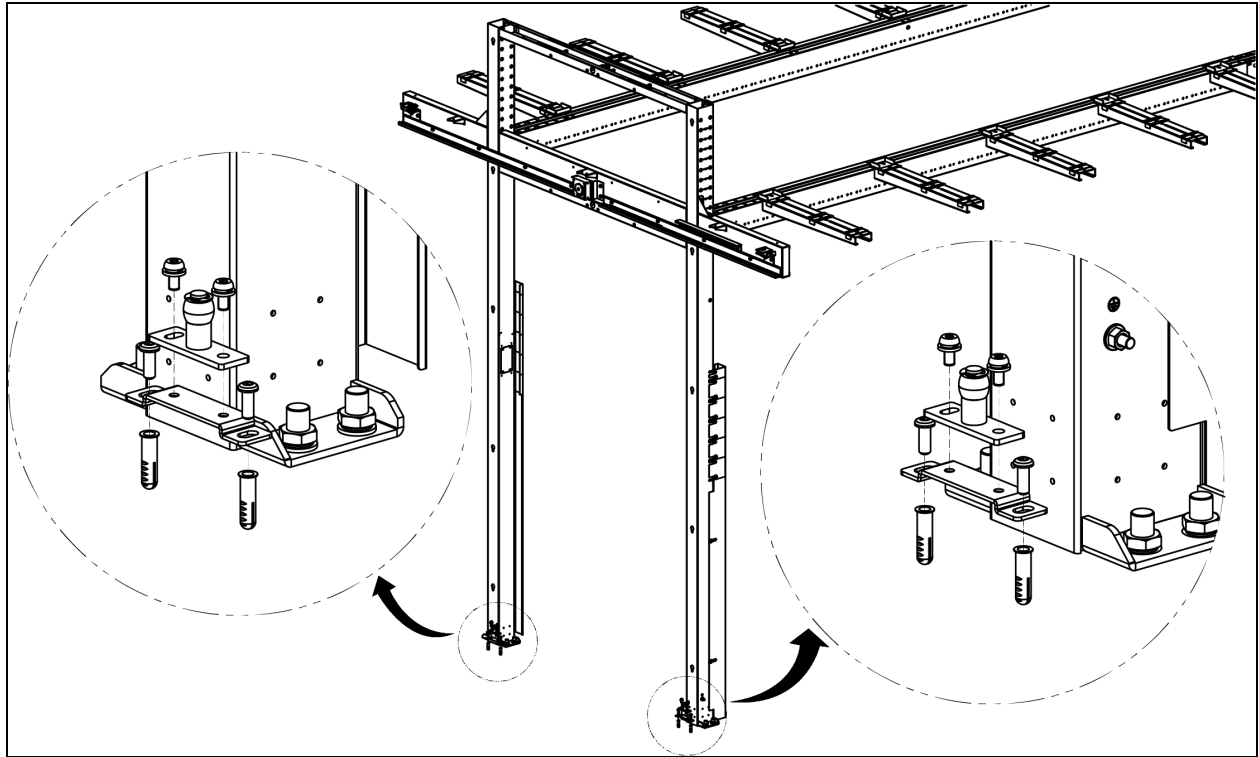
### 4.3.19 Semi-auto Sliding Door (1219.2 mm (4 ft))

1. Install the door guide bracket near the left vertical post.
  - a. Use a tape measure to determine position A (20 mm vertically from the lower right corner of the left vertical post stand, viewing from the top). Mark position A on the floor.
  - b. Use a tape measure to determine position B (80 mm horizontally from position A). Mark position B on the floor.
  - c. Drill a  $\phi 6$  hole in position A and B and install a plastic expansion tube in each hole.
2. Install the door guide bracket near the right vertical post.
  - a. Use a tape measure to determine position C (20 mm vertically from the lower left corner of the right vertical post stand, viewing from the top). Mark position C on the floor.
  - b. Use a tape measure to determine position D (80 mm horizontally from position C). Mark position D on the floor.
  - c. Drill a  $\phi 6$  hole in position C and D and install a plastic expansion tube in each hole.

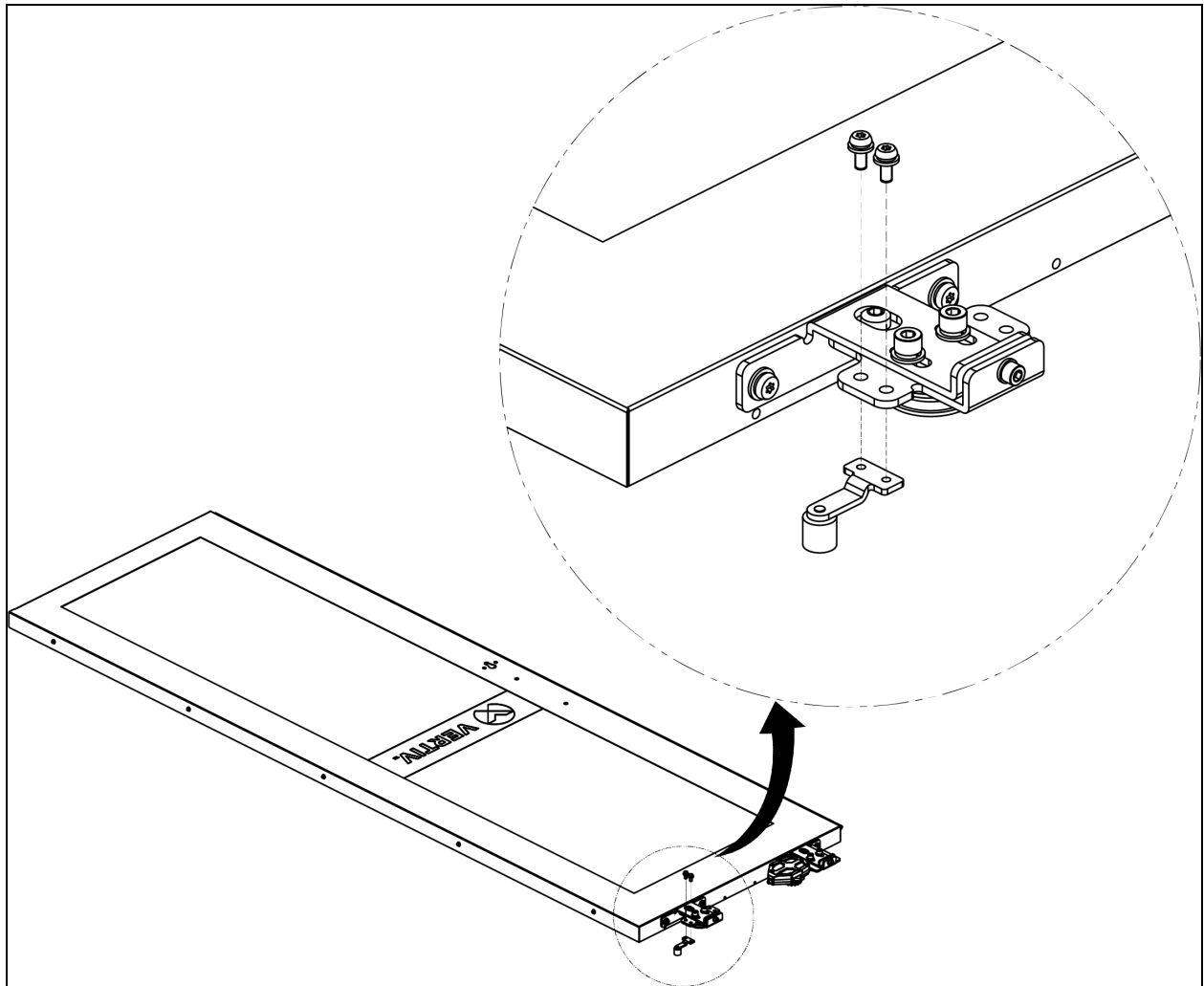


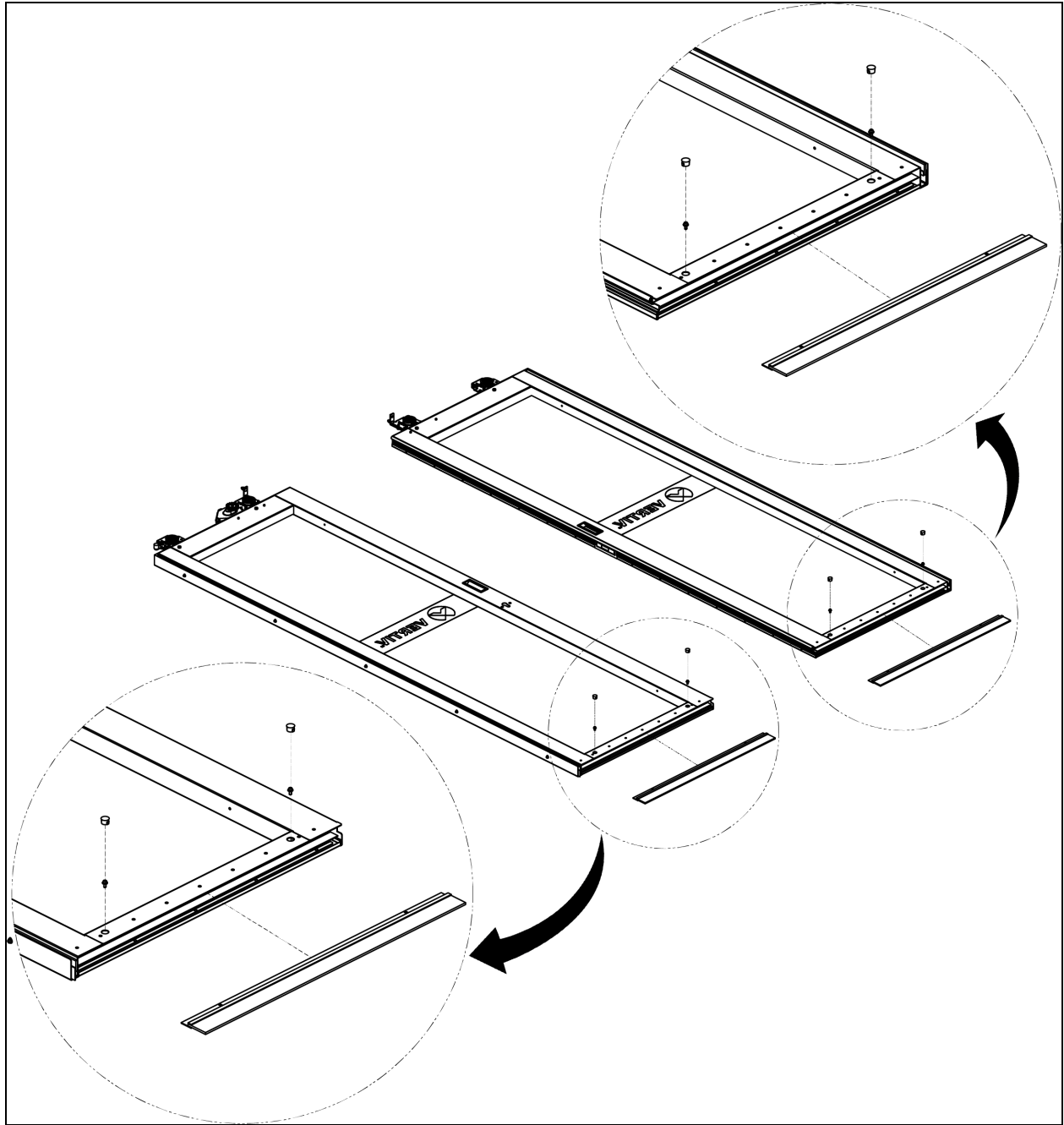
Item	Description
1	Left vertical post
2	Left vertical post stand, viewing from the top
3	Right vertical post
4	Right vertical post stand, viewing from the top

3. Fix two door guide brackets to the floor using M5 self-taping screws. Fix the door guides to the door guide brackets using M5 pan head screws.

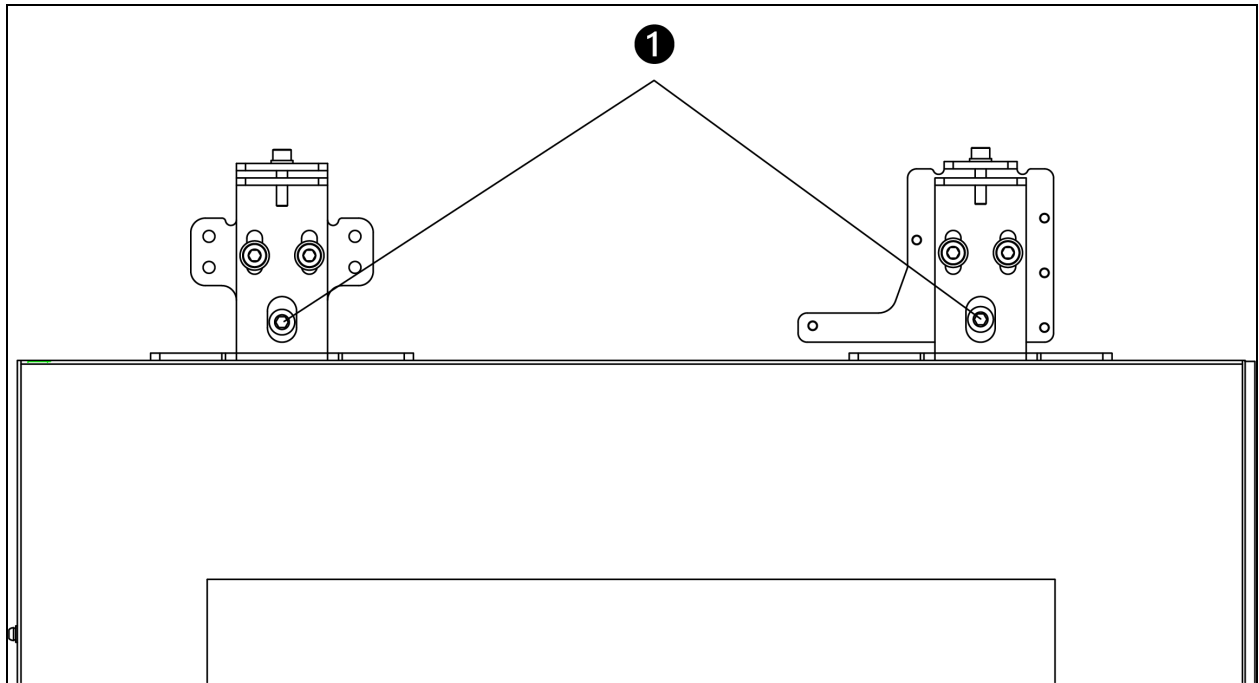


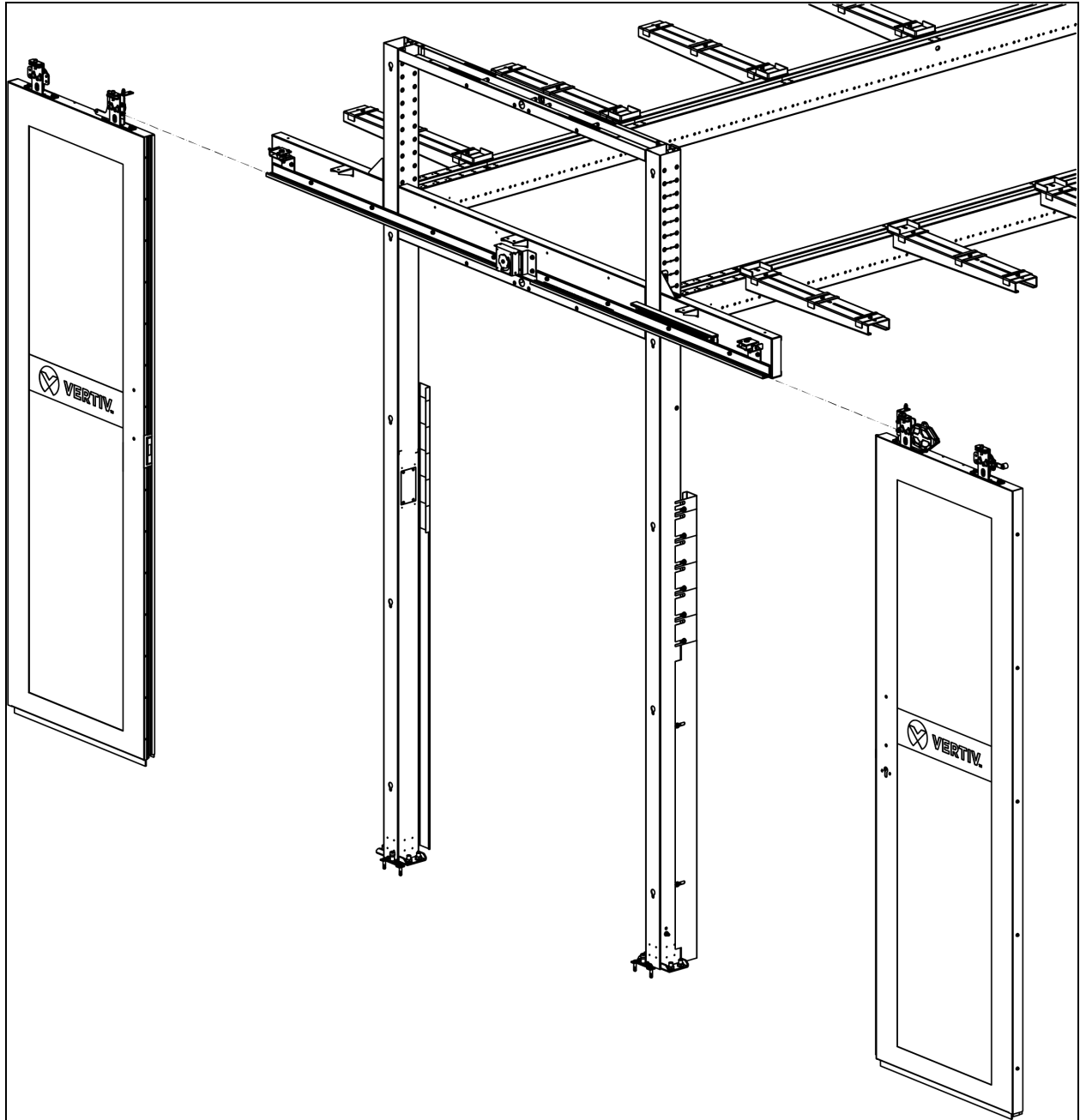
4. Fix the end wheel to the rear hanger roller of the right door panel using M5 screws. Install the brush under the sliding door using M4 pan head screws. The screws are installed in the inner side of the door. After that, cover each hole above the screw using a plastic cap.





5. Remove the limit screws (1) from the hanger rollers, push the two door panels into the sliding rail, and then fix the limit screws.



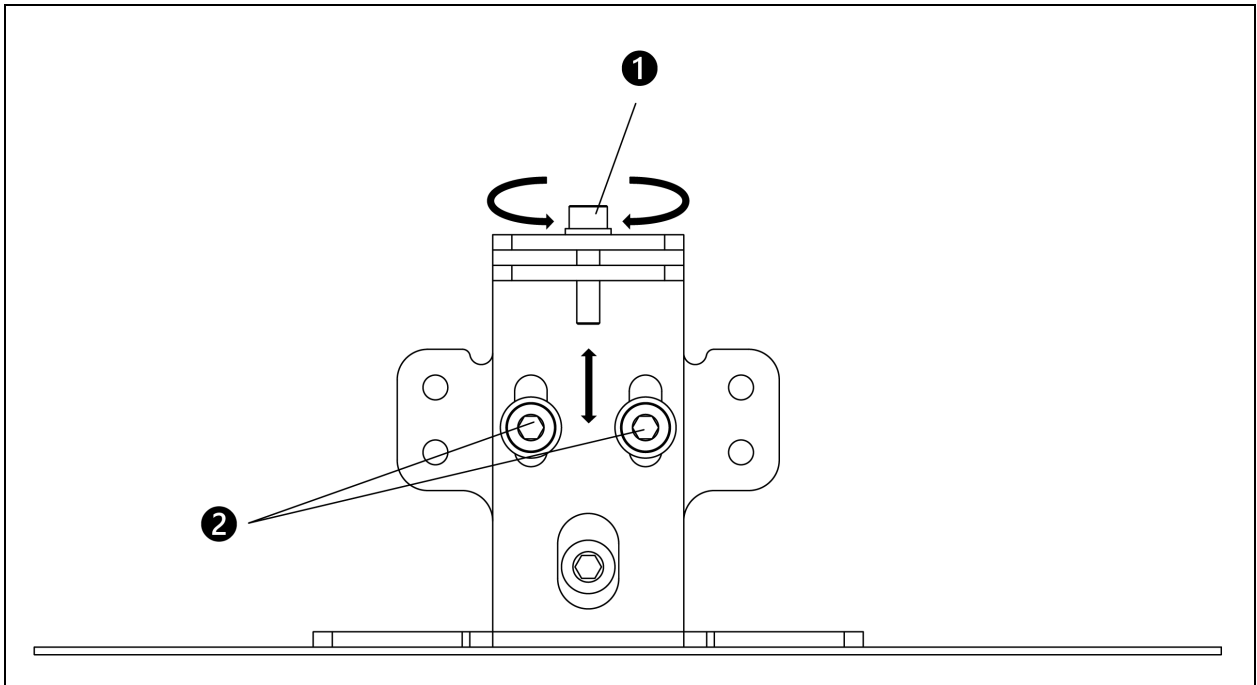
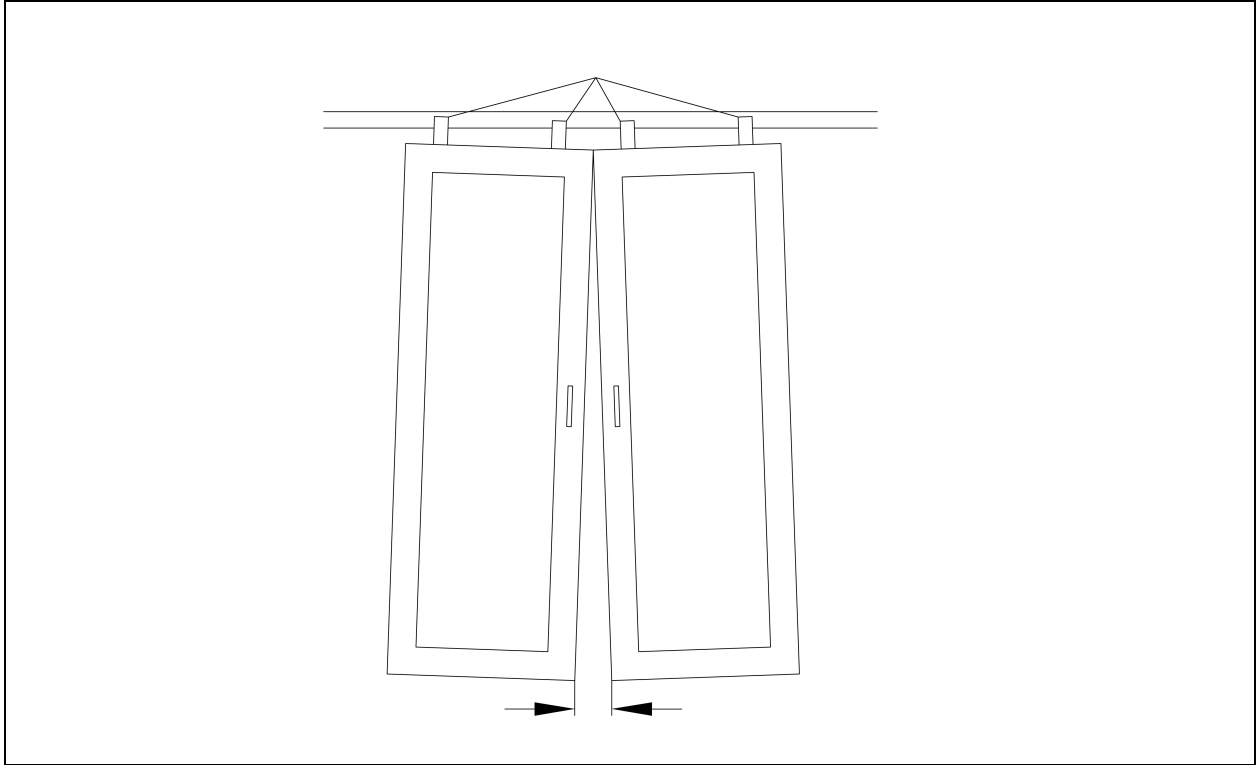


Adjust the gap between the door panels as follows:

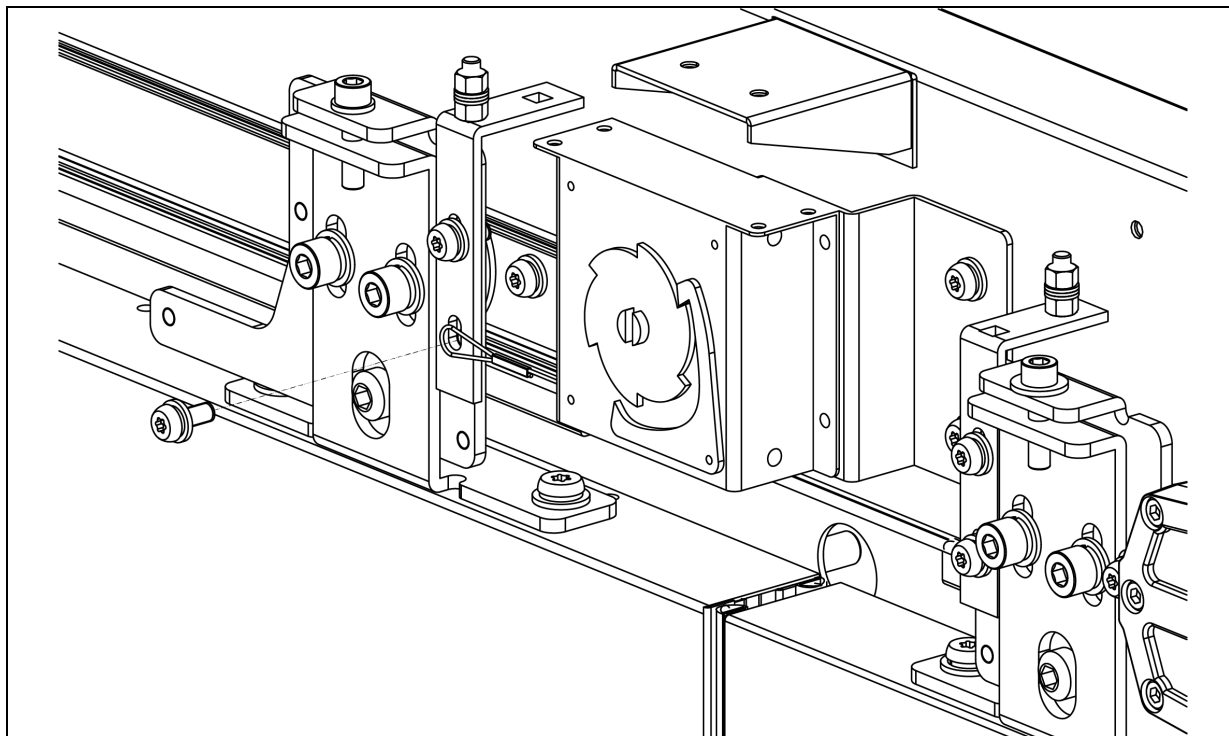
- a. Loosen the fixing screws (2) on the hanger rollers. Rotate the adjustable screw (1) clockwise to raise the door panel and counter-clockwise to lower the door panel.
- b. After the adjustment, tighten the fixing screws (2).
- c. Check that the door can slide smoothly.

**NOTE: If the door cannot slide smoothly, check if the hanger rollers are within the rail and the door guide is in the groove.**

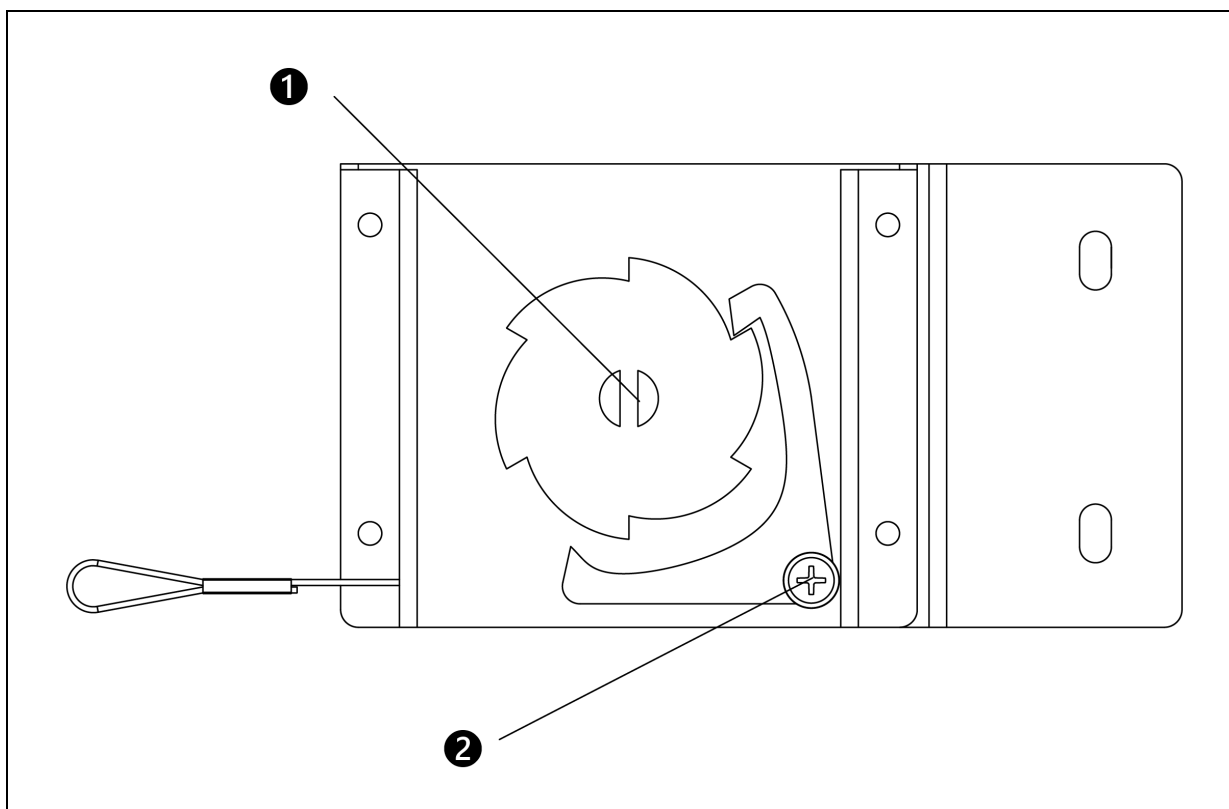




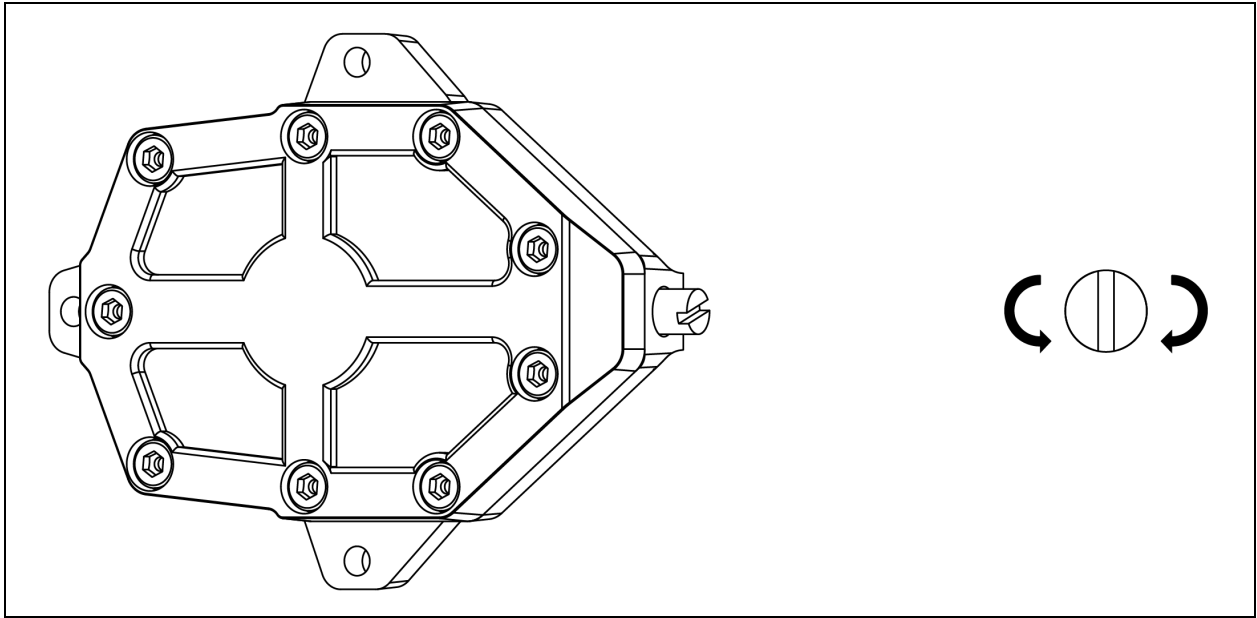
6. Pull the cable from the drive device and fix the cable to the front hanger roller.



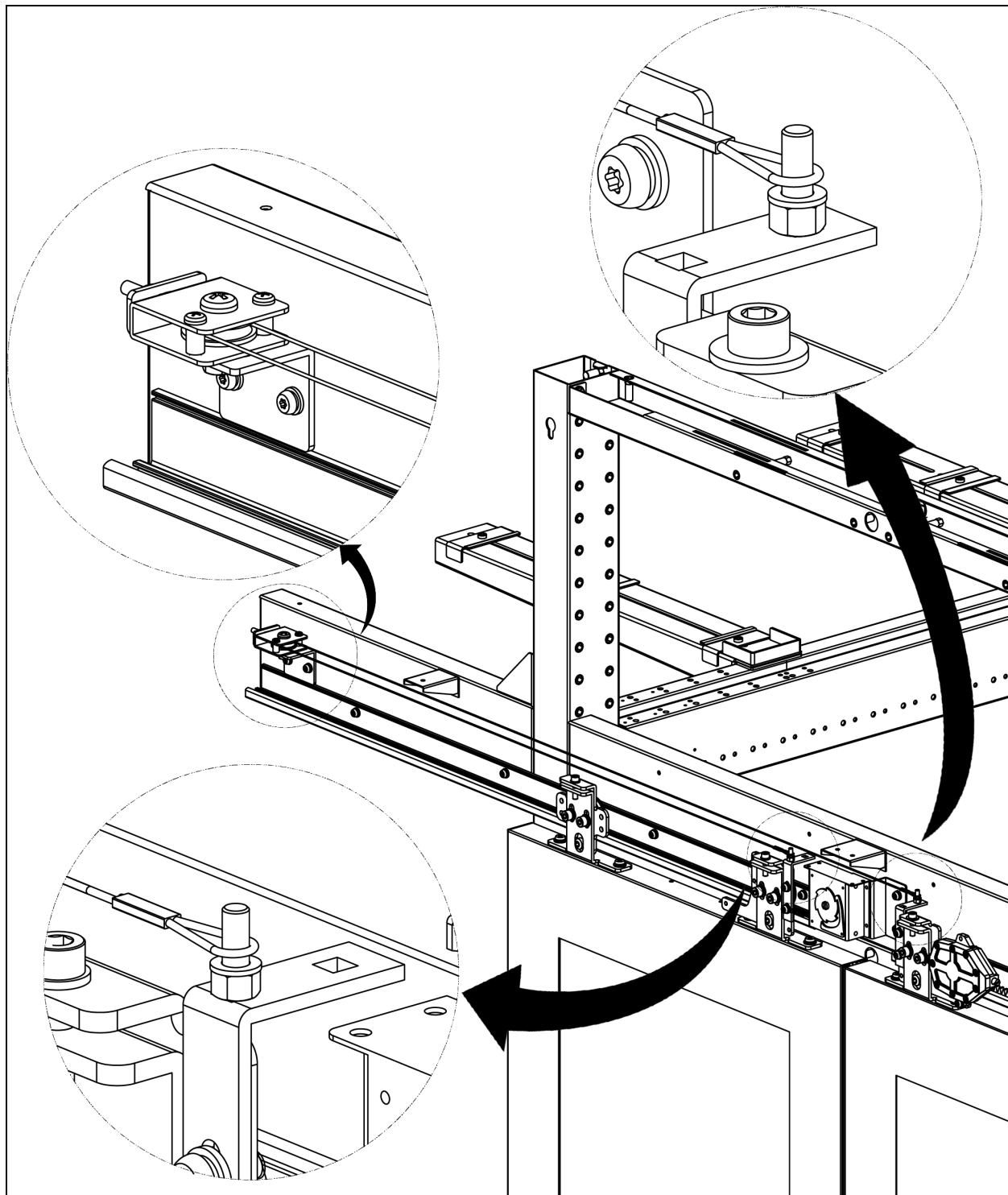
To adjust the resistance of the sliding door, loosen the Phillips head screw (2), use a slotted screwdriver to adjust the turntable (1), and then tighten the Phillips head screw (2).



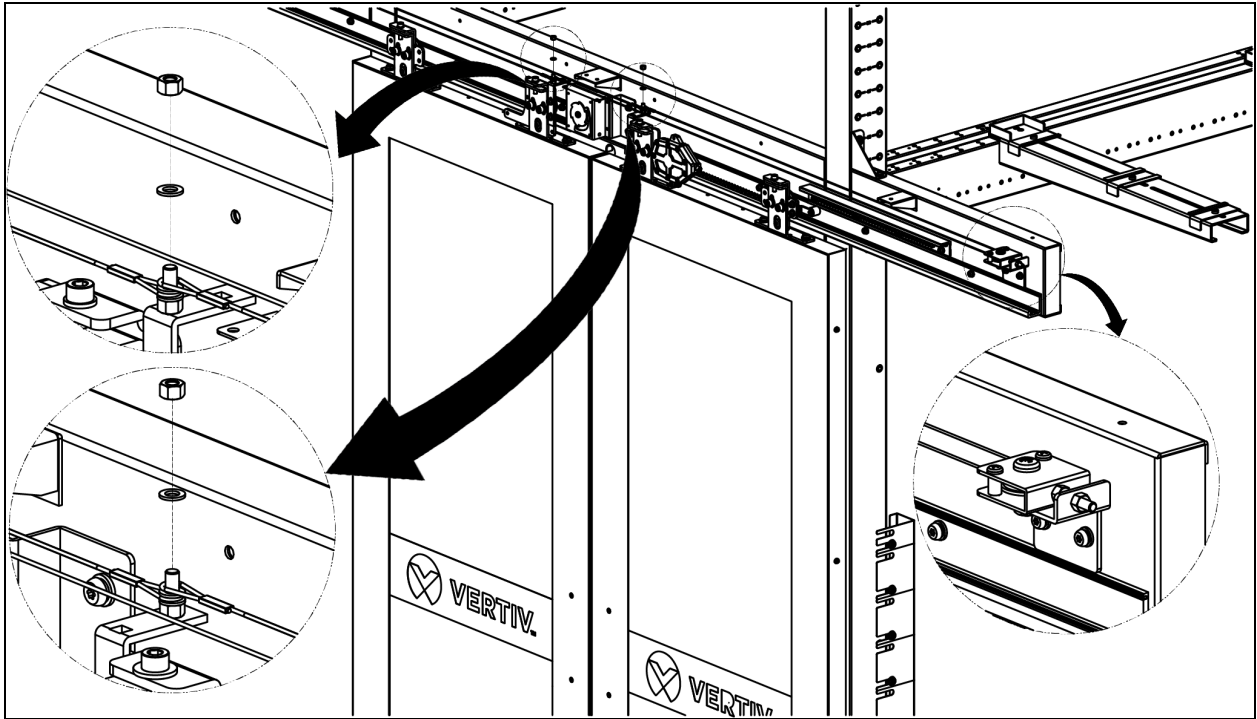
Use a rear brake to adjust the sliding speed: turn the valve clockwise to slower the speed and counter-clockwise to faster the speed.



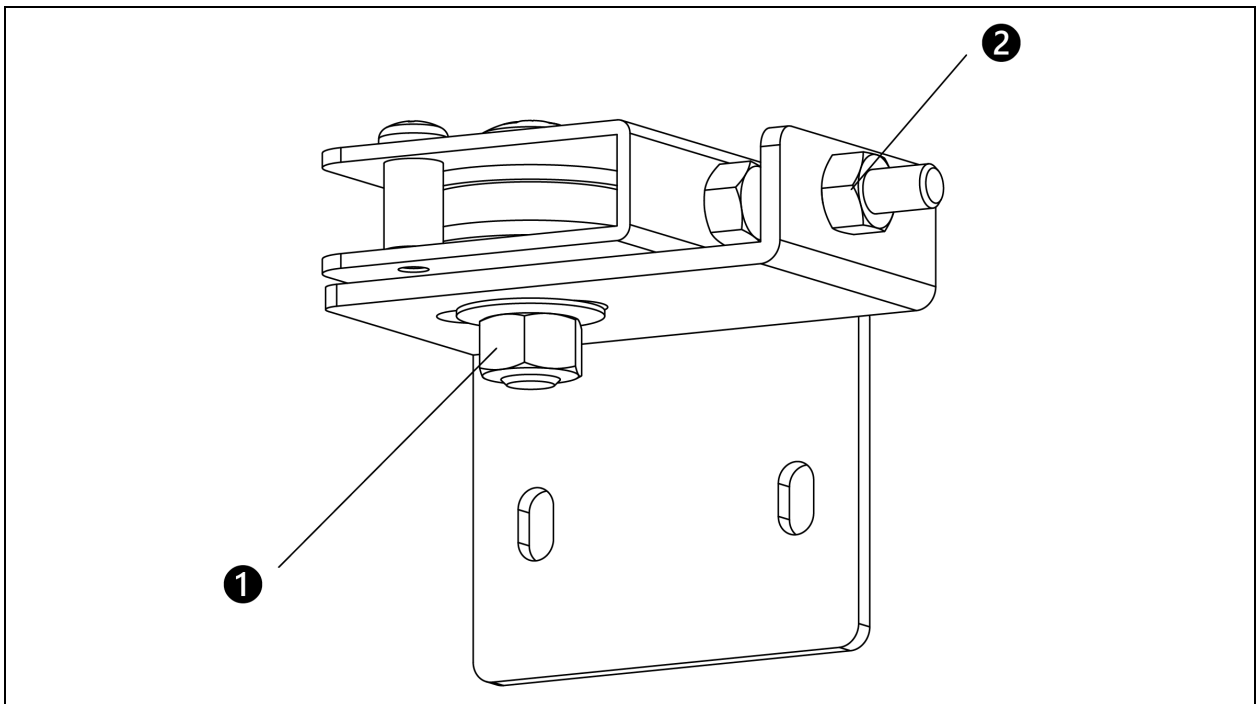
7. Route the steel wire around the left steering wheel and connect one end of the wire to the threading support of the left door panel and the other end to the threading support of the right door panel.



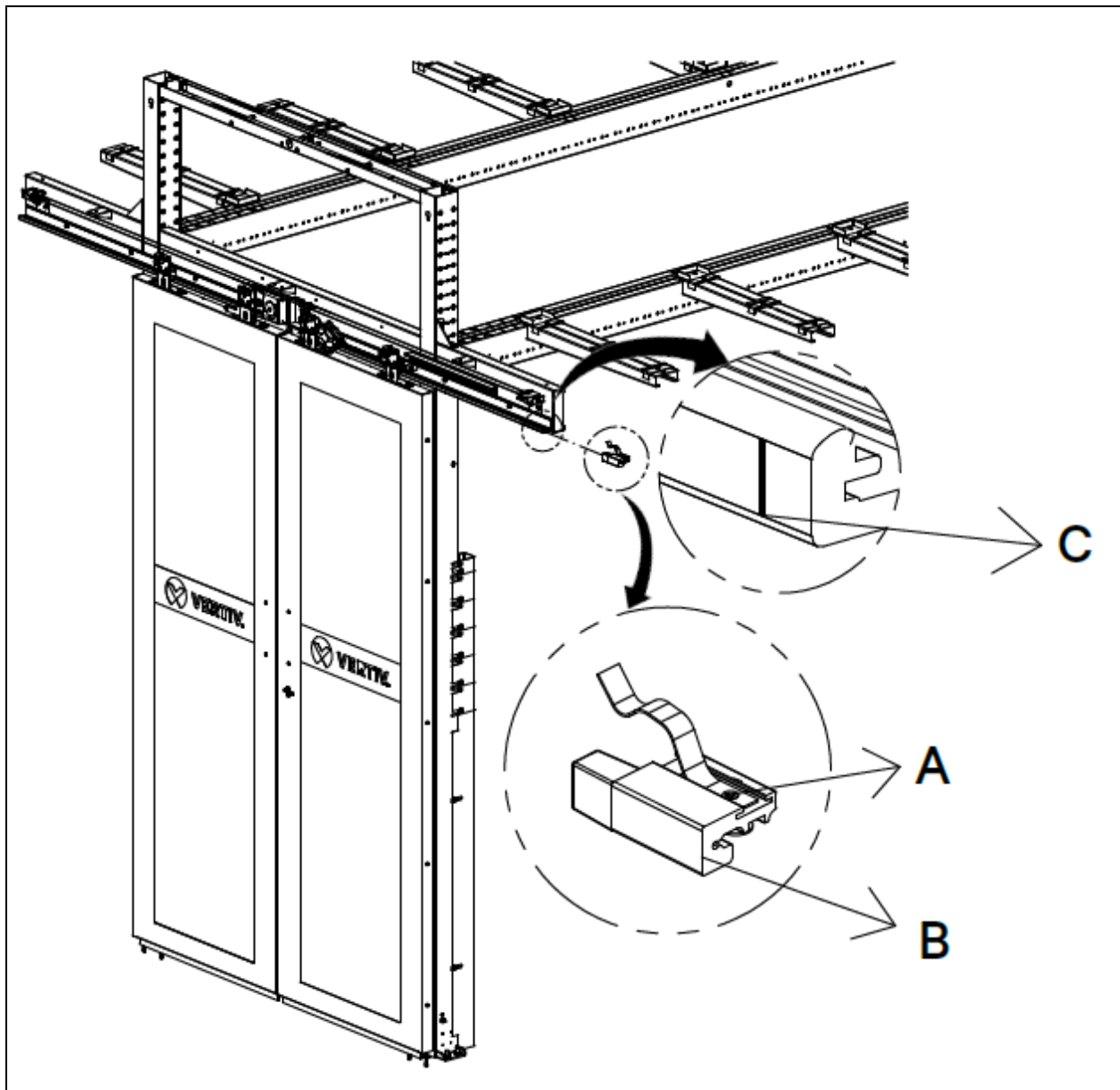
8. Route another steel wire around the right steering wheel and connect one end of the wire to the threading support of the left door panel and the other end to the threading support of the right door panel. Place a washer and a nut onto each threading support and fasten the nut.



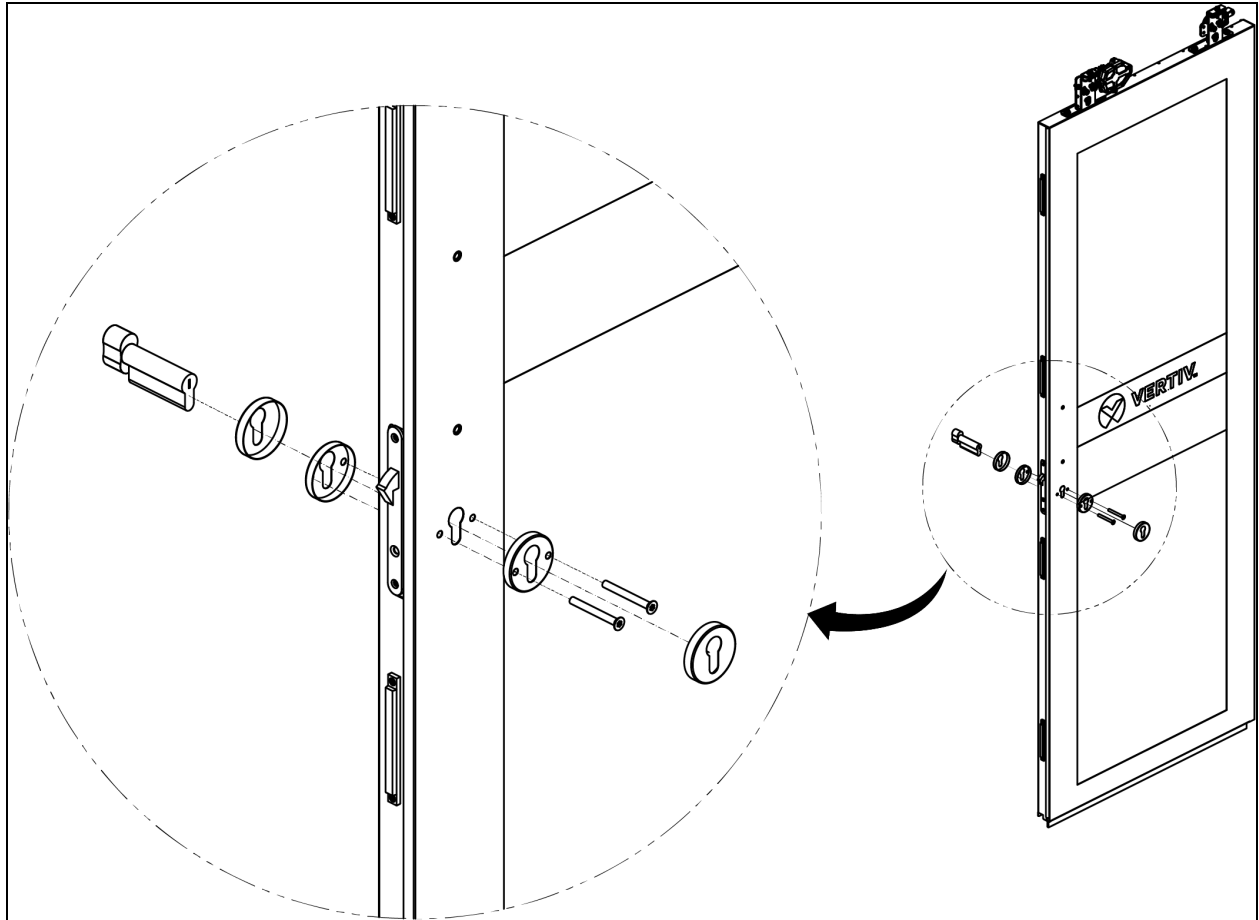
After the steel wire is connected, loosen the pulley nuts (1) on the left and right steering wheels, rotate the adjustable nuts (2) to take the slack out of the wire wrapped around the steering wheels, and then tighten the pulley nuts (1).

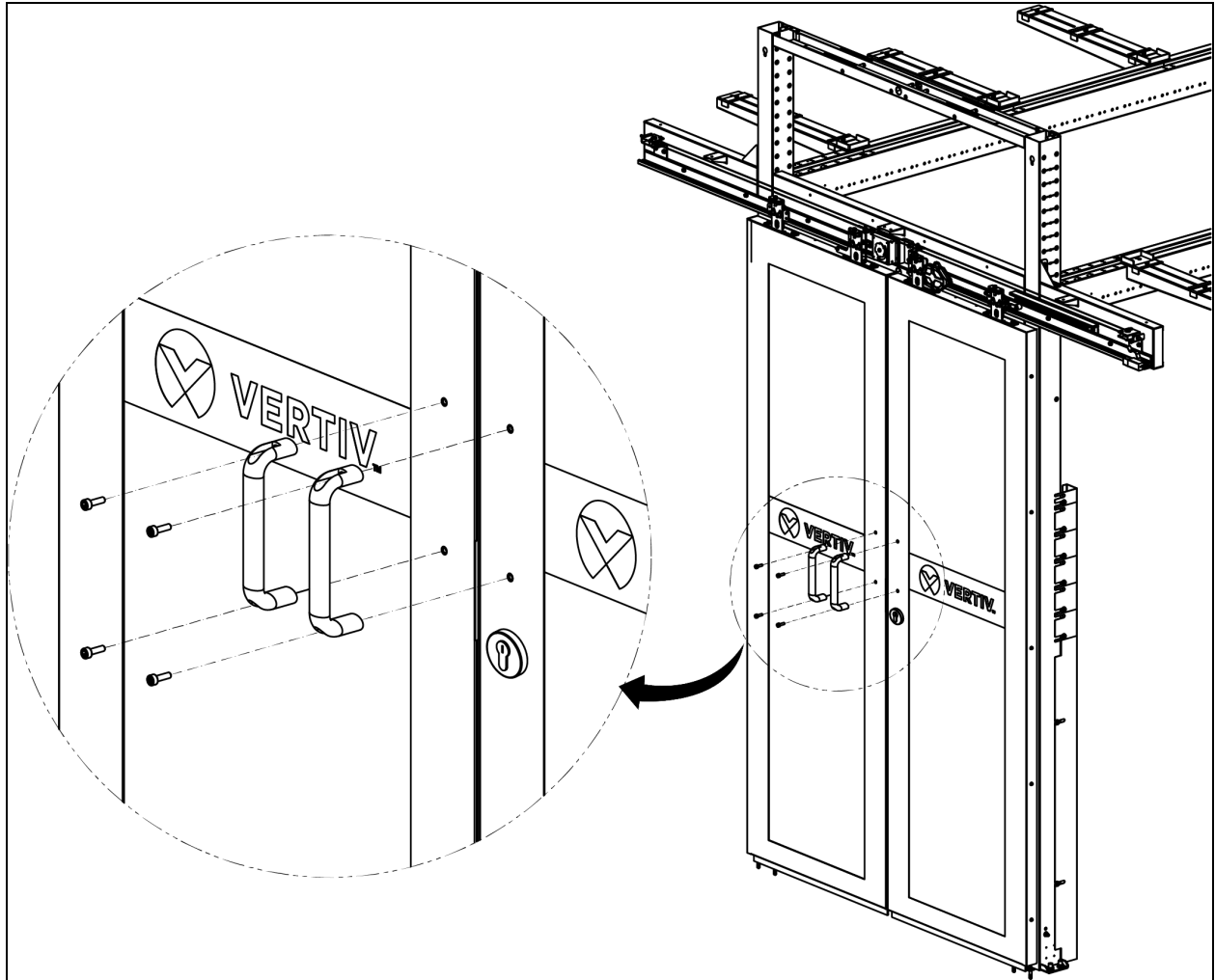


9. Loosen the screw (A) on the full open device, slide the full open device into the sliding rail till its edge (B) aligns with the mark (C) on the sliding rail, and tighten the screw.



10. Insert the lock cylinder into the lock body of the right door panel and then install the lock cover. After that, install door handles for the left door panel and right door panel.

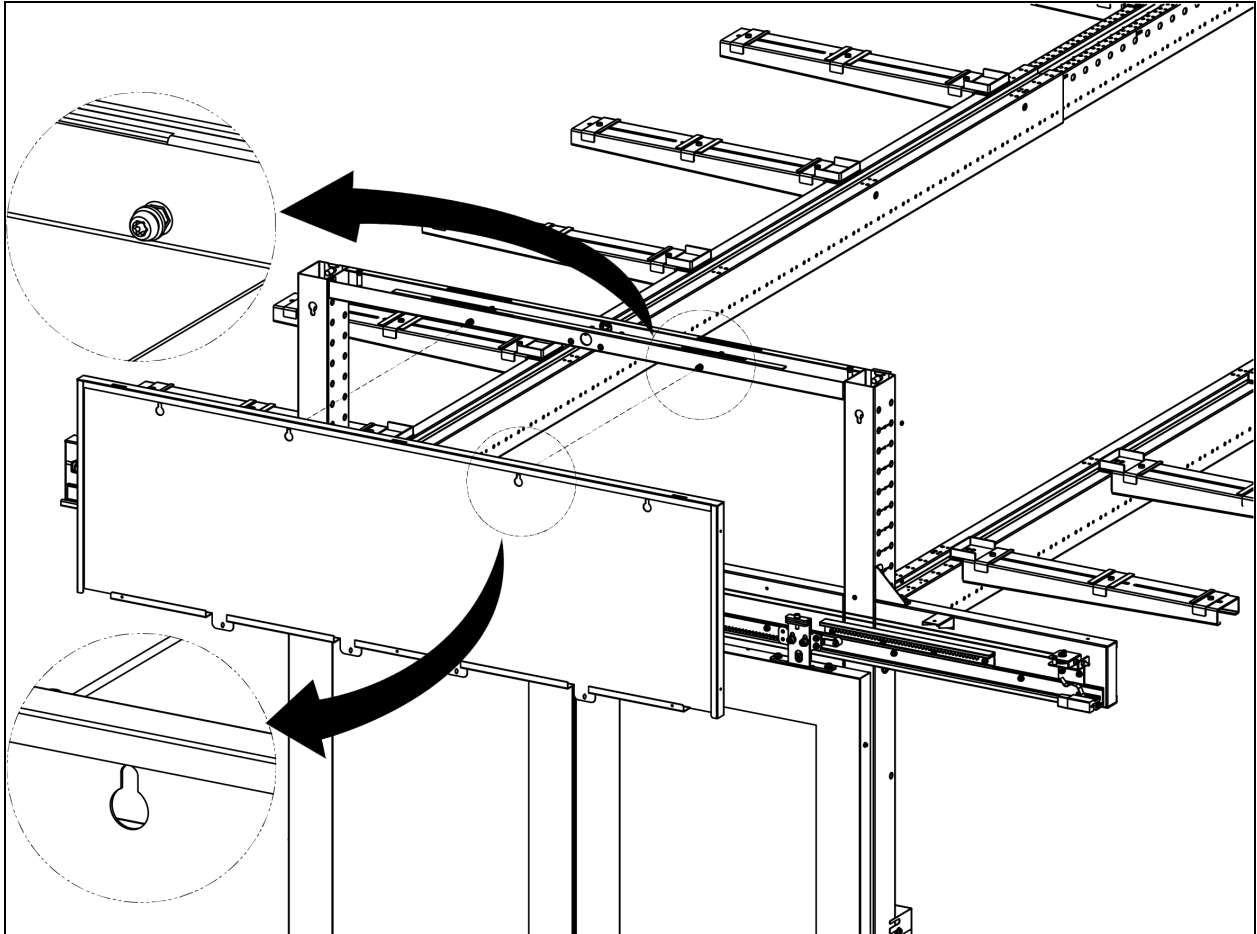


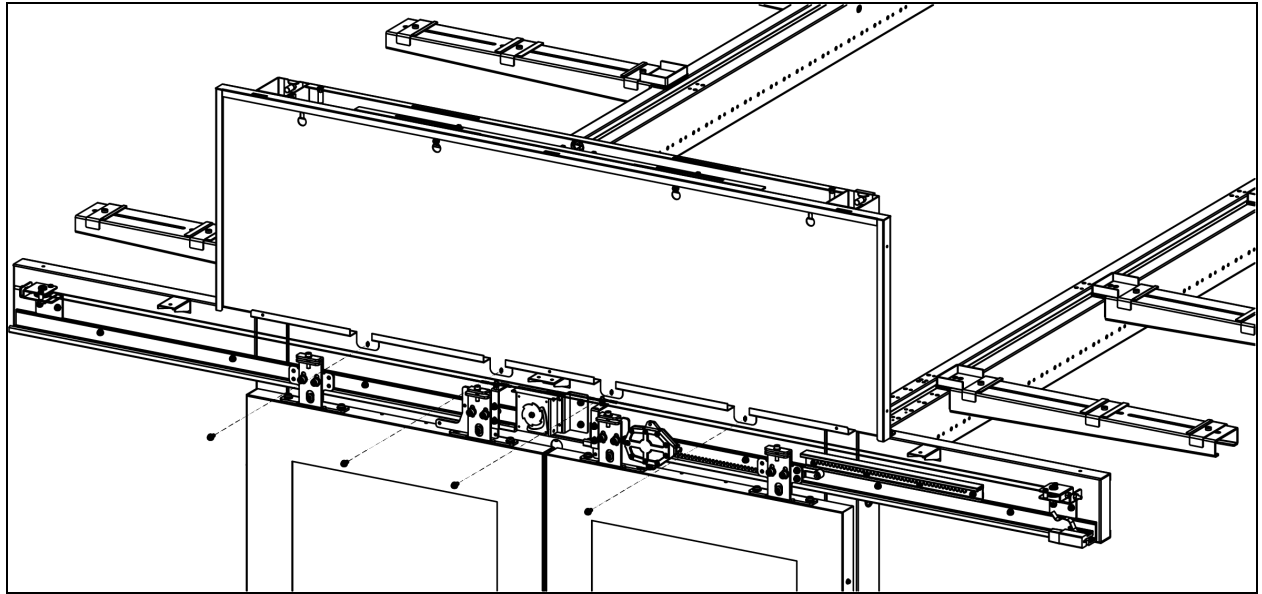




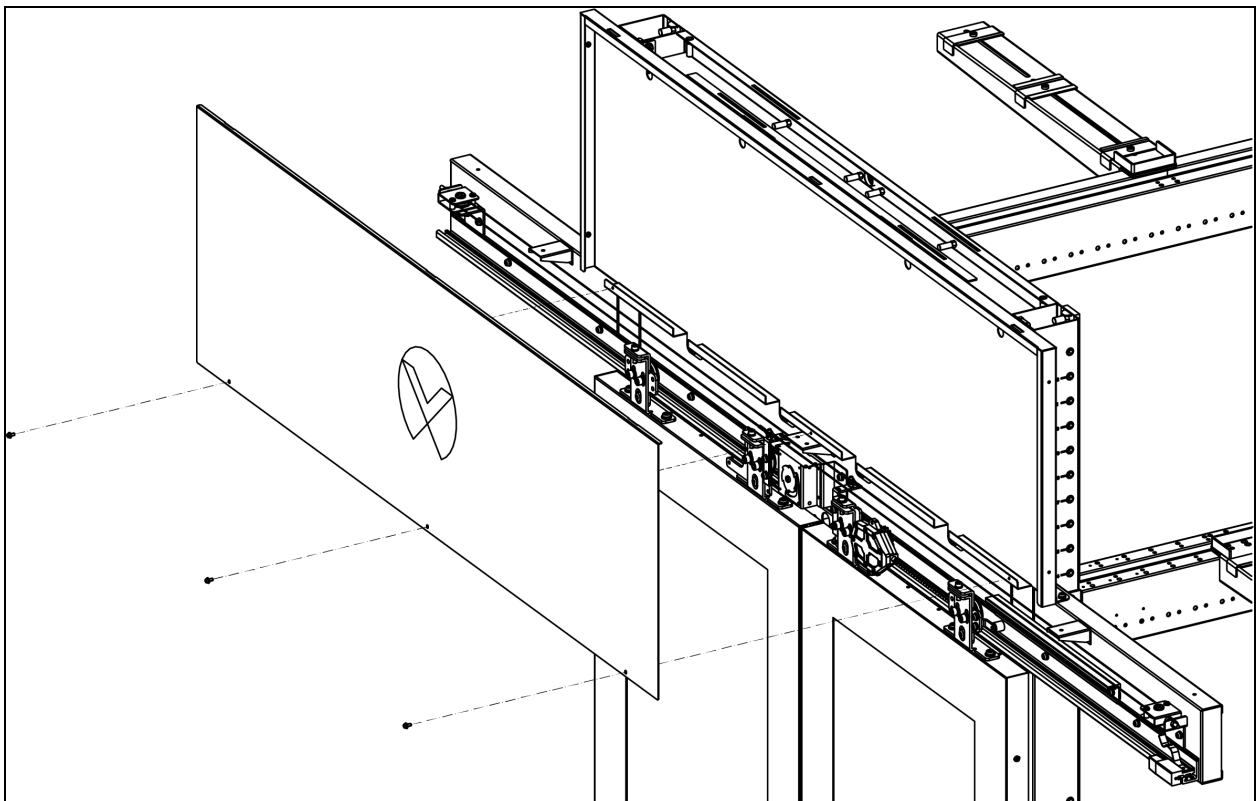
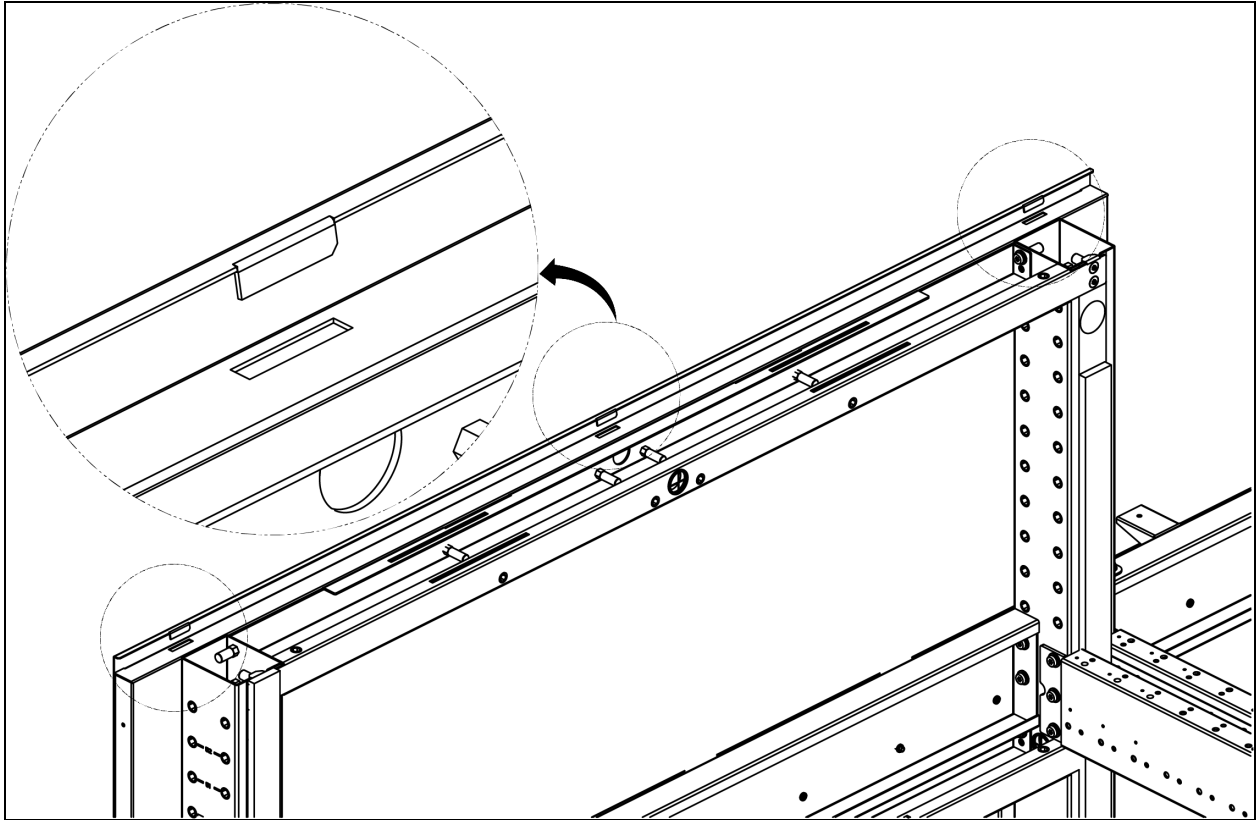
### 4.3.20 Sliding Door Header (1219.2 mm (4 ft))

1. Insert M6 pan head screws into the frame of the width connector, leaving 5 mm between the head of the screw and the surface of the frame. Hang the door header bracket on the screws and then tighten the screws. Fix the bottom of the door header bracket to the width beam using M5 pan head screws.

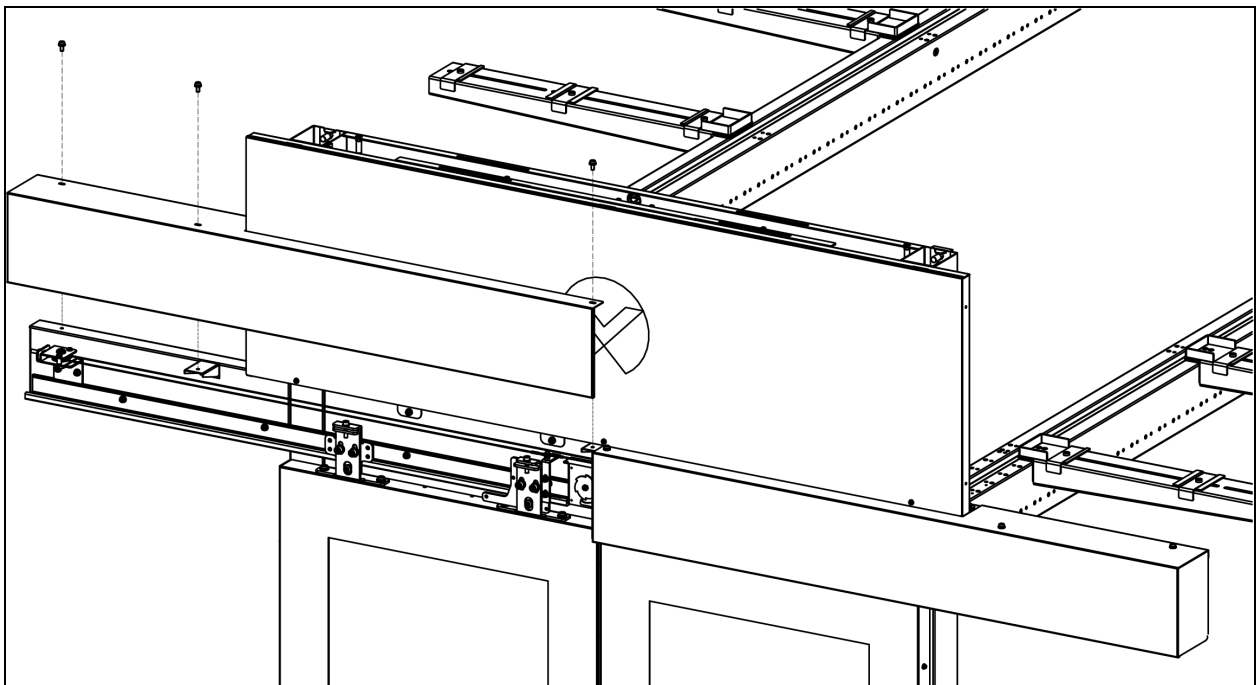
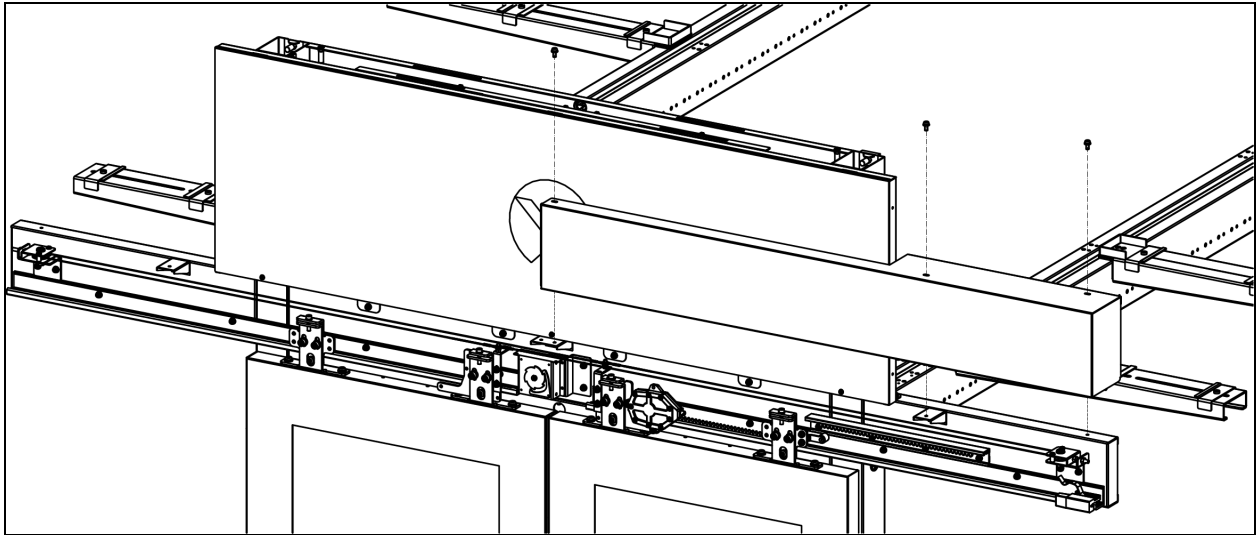




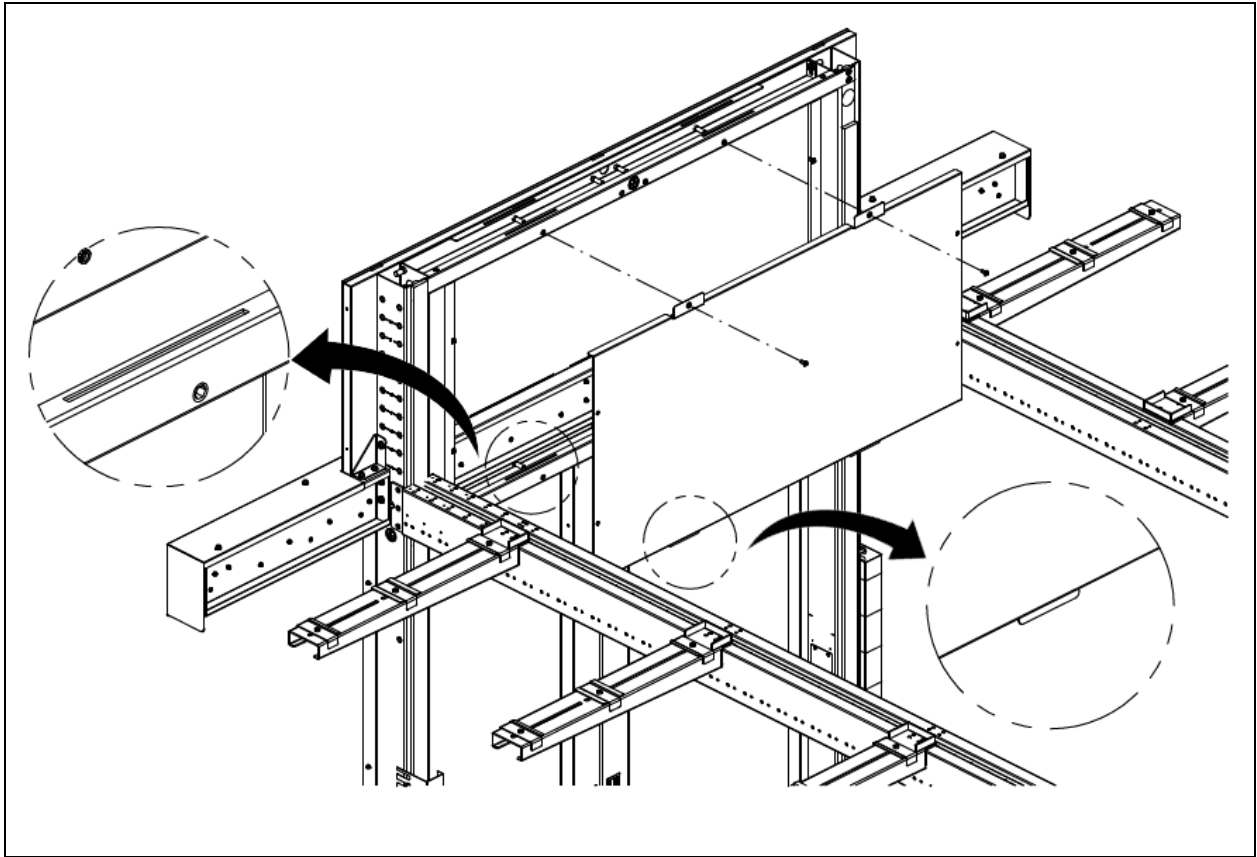
2. Hang the front panel onto the slot of the door header bracket and then fix the panel using M4 pan head screws.



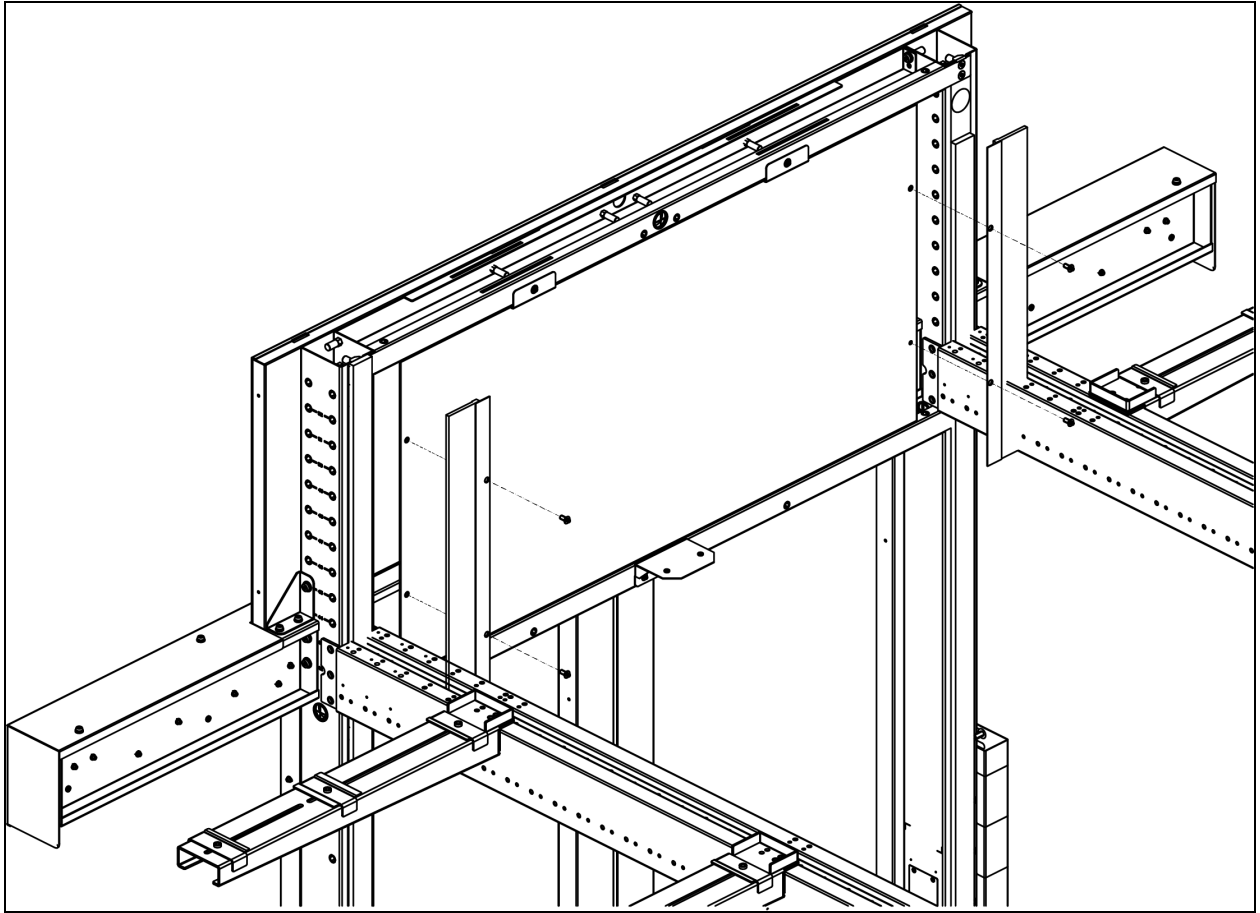
3. Fix the right cover panel to the cover bracket using M5 pan head screws. Fix the left cover panel to the cover bracket using M5 pan head screws.



4. Install the width panel on the inner side of the containment: inserting the bottom fringes of the width panel into the slot and fix the upper fringes to the frame using M6 countersunk screws.

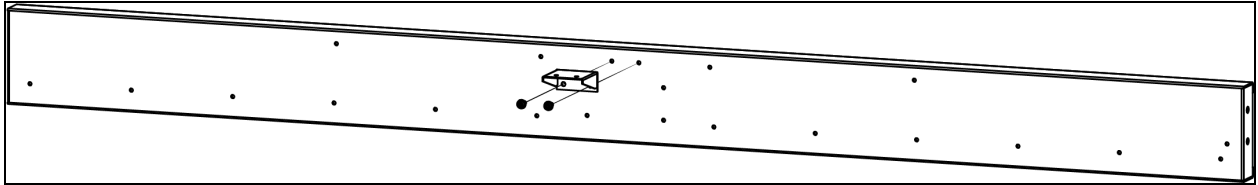


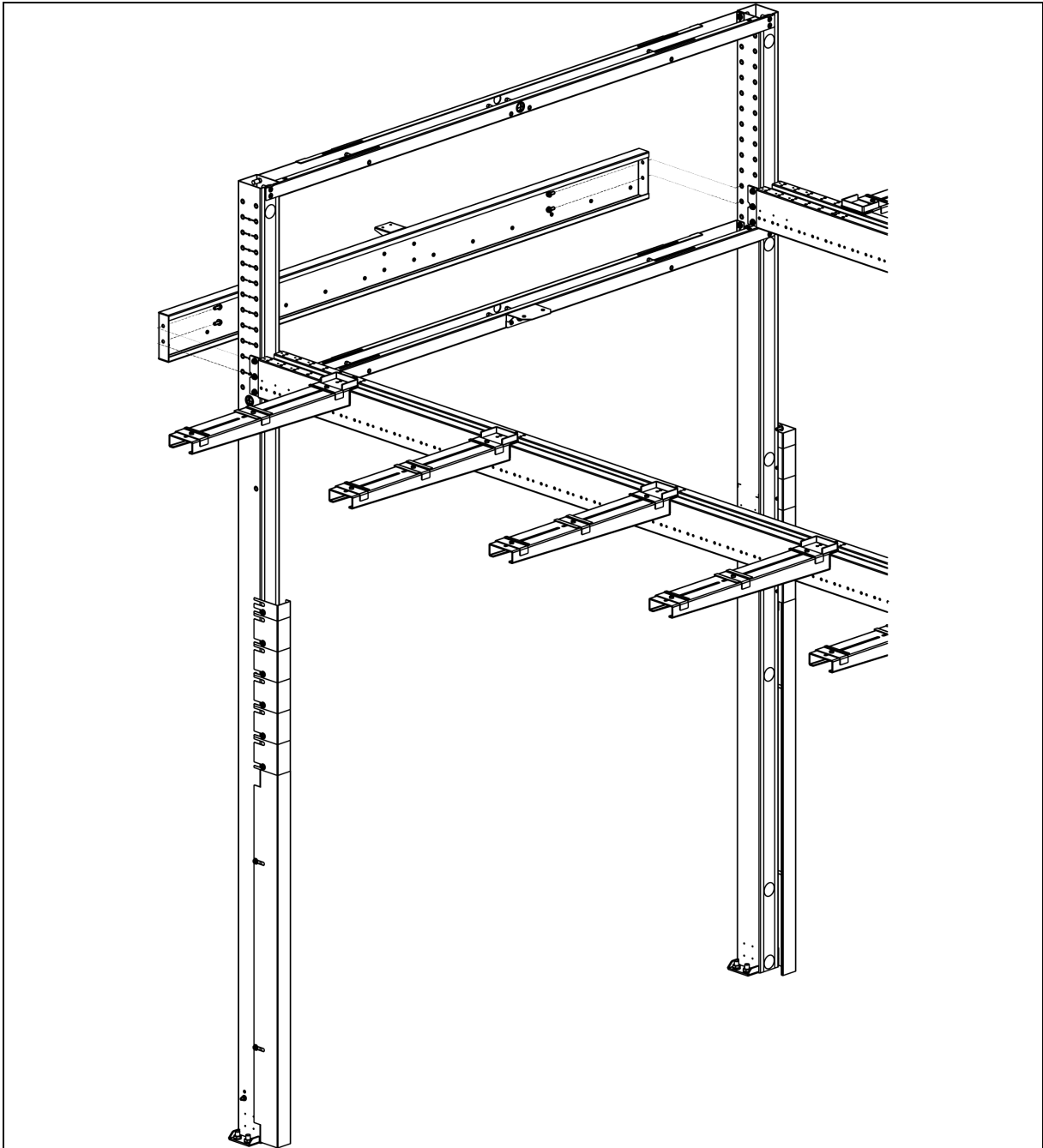
5. Install the brush on the width panel.



### 4.3.21 Sliding Rail Cover Component (1828.8 mm (6 ft))

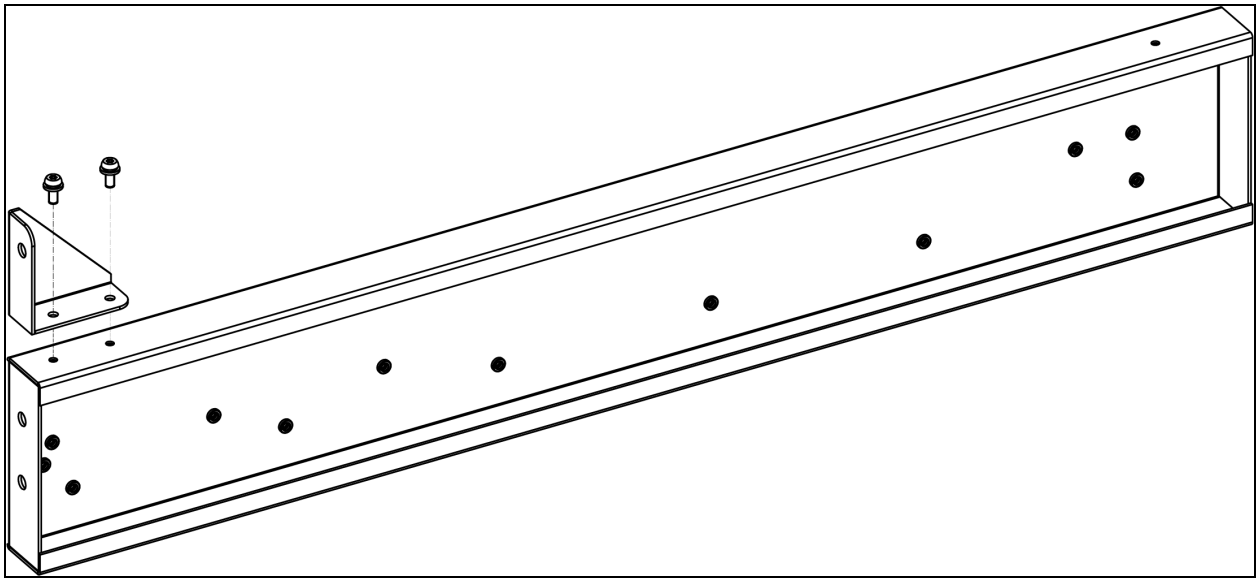
1. Fix the cover bracket to the width beam using M5 pan head screws. Fix the width beam to the vertical post using M8 pan head screws.



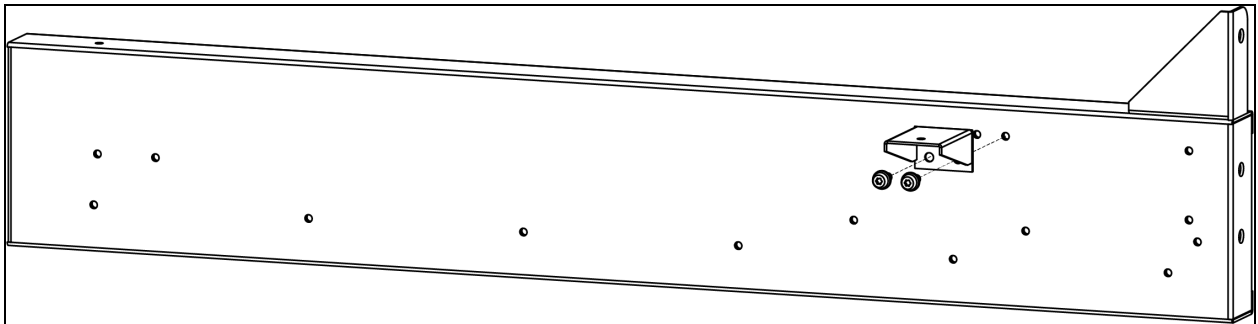




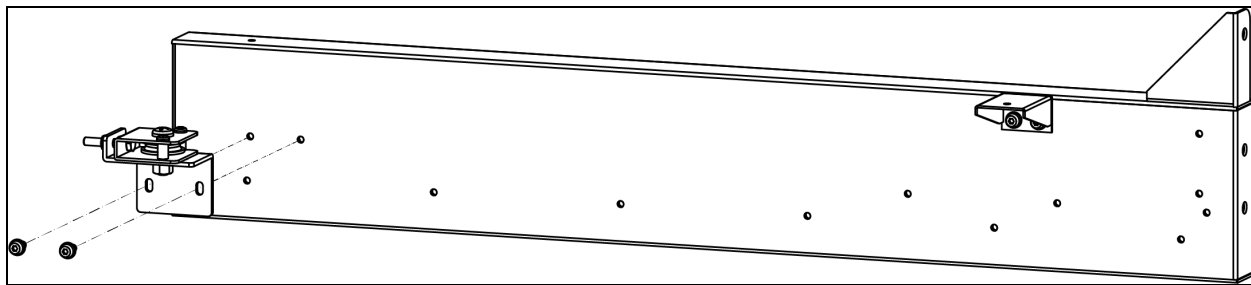
2. Fix the extendable beam bracket to the extendable beam using M5 pan head screws.



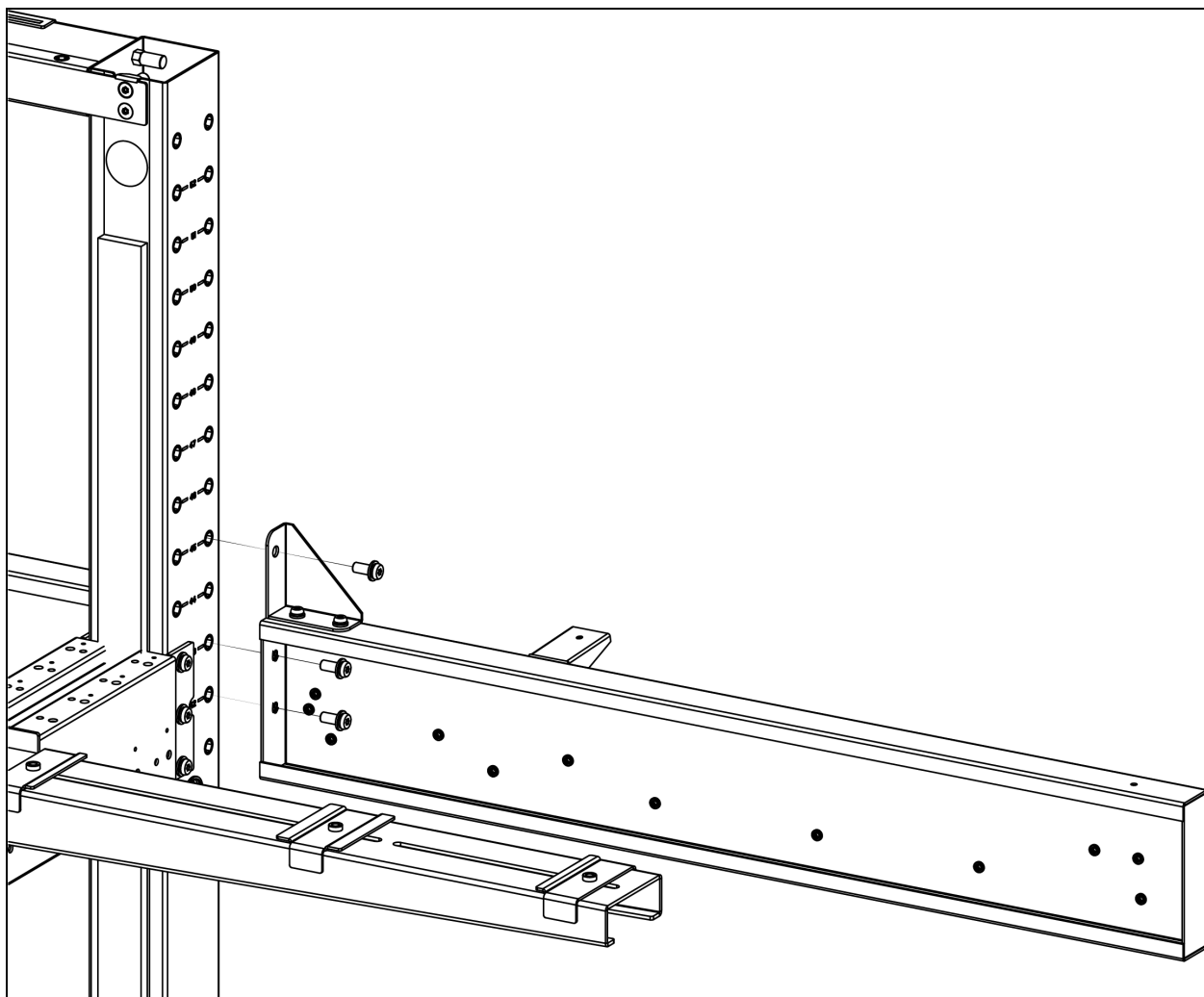
3. Fix the cover bracket to the extendable beam using M5 pan head screws.



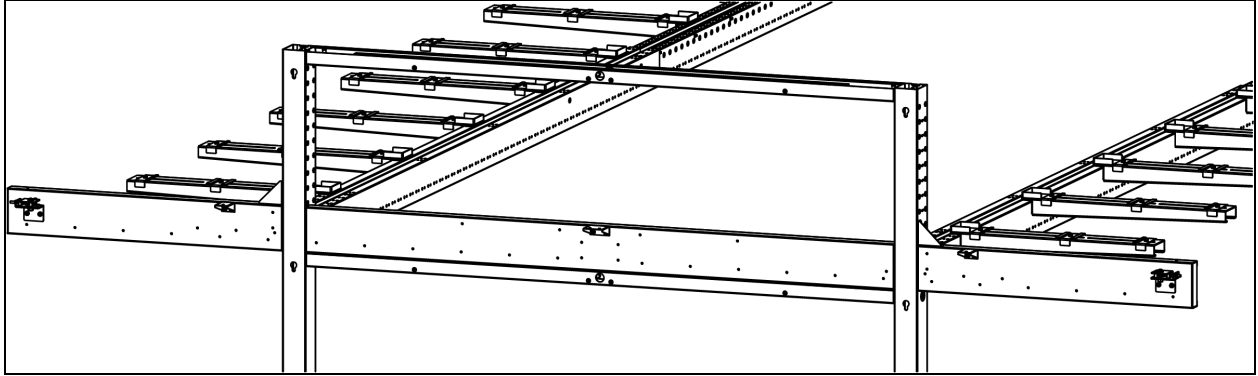
4. Fix the left steering wheel to the extendable beam using M5 pan head screws.



5. Fix the extendable beam to the vertical post using M8 pan head screws.

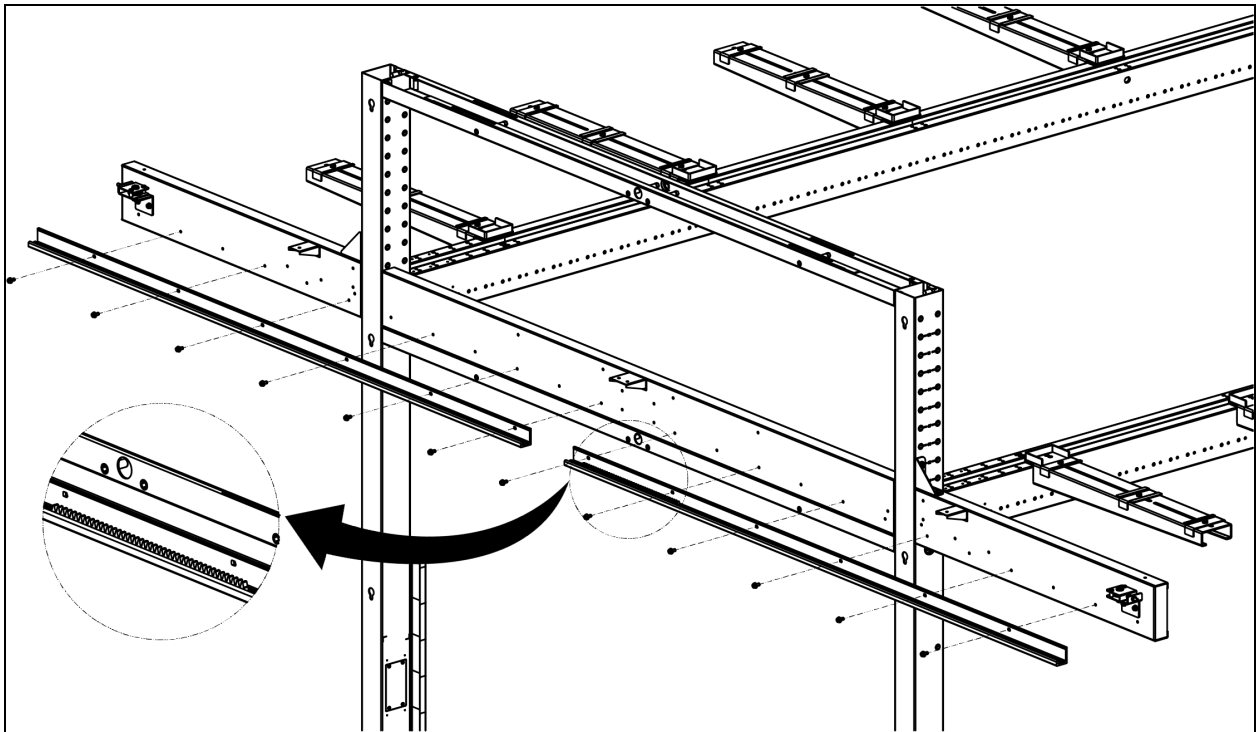


- Repeat step 2 to step 5 to install the extendable beam on the other side.

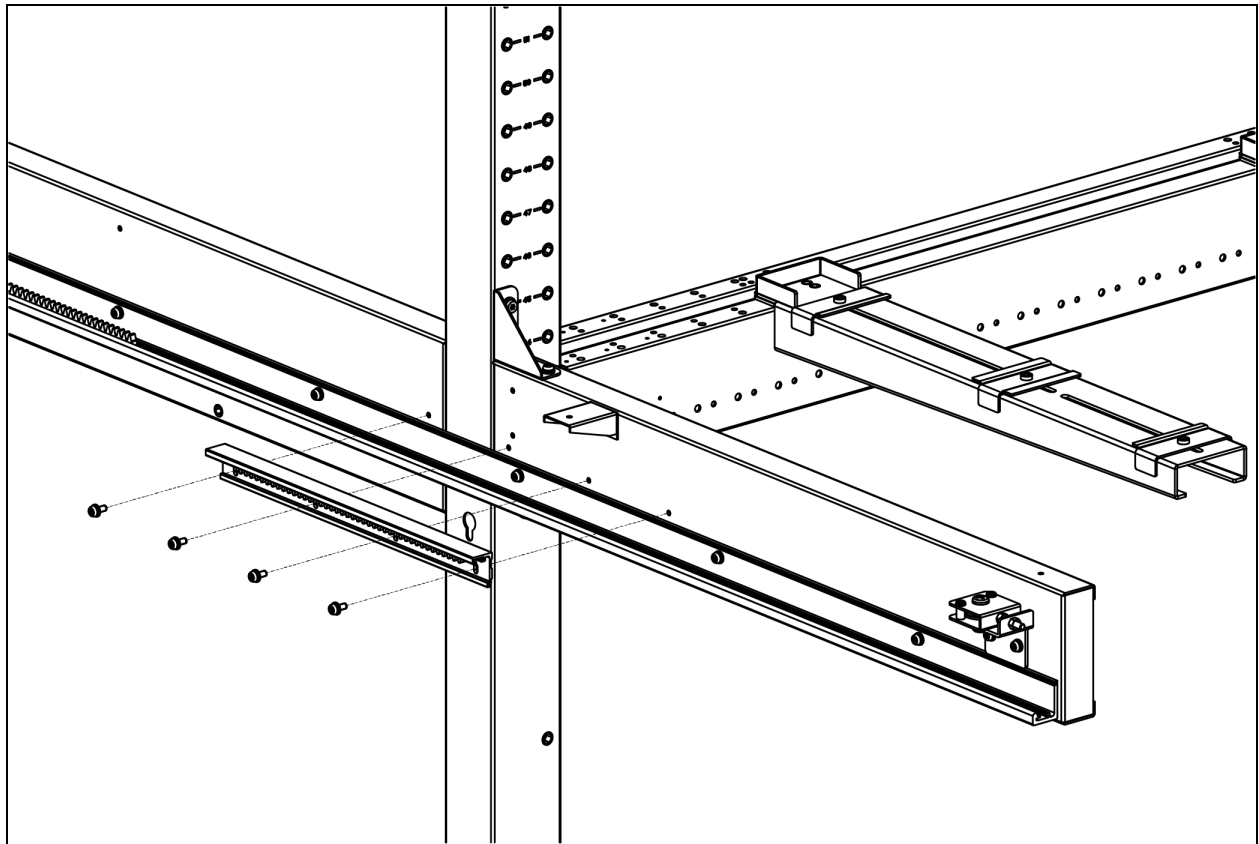


- Fix two sliding rails to the width beam and the extendable beam using M5 pan head screws.

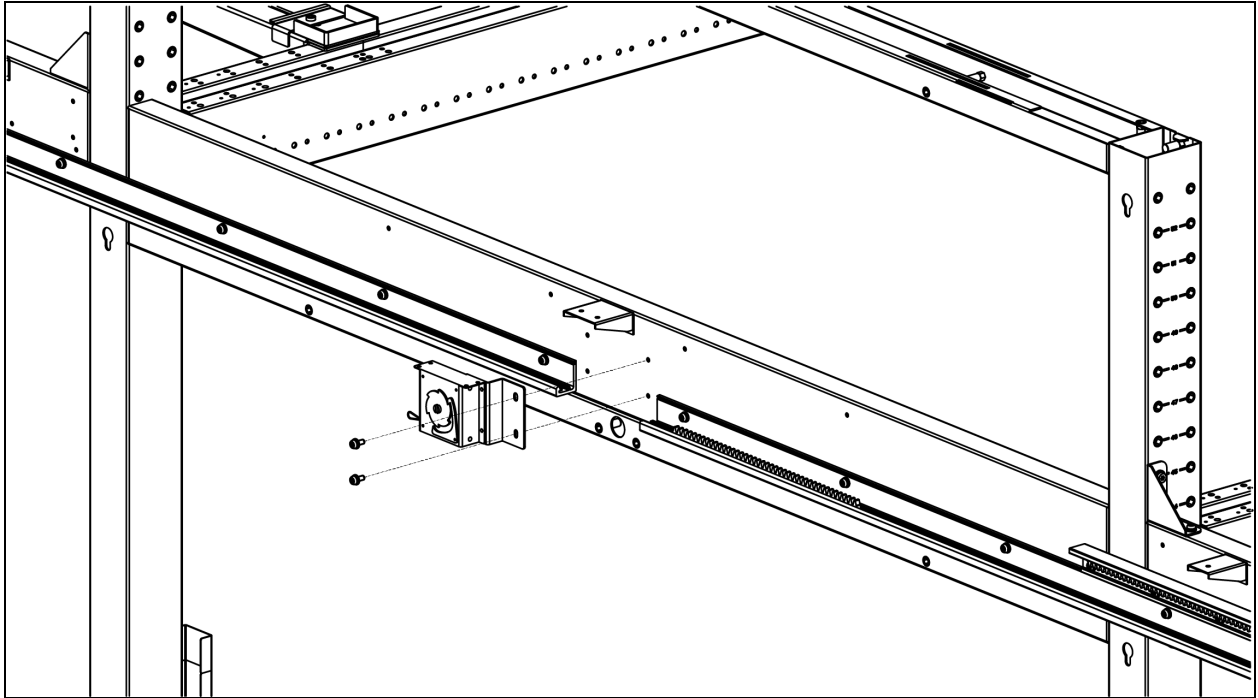
**NOTE:** The sliding rail with tooth belt (amplified in the figure below) is installed on the right side.



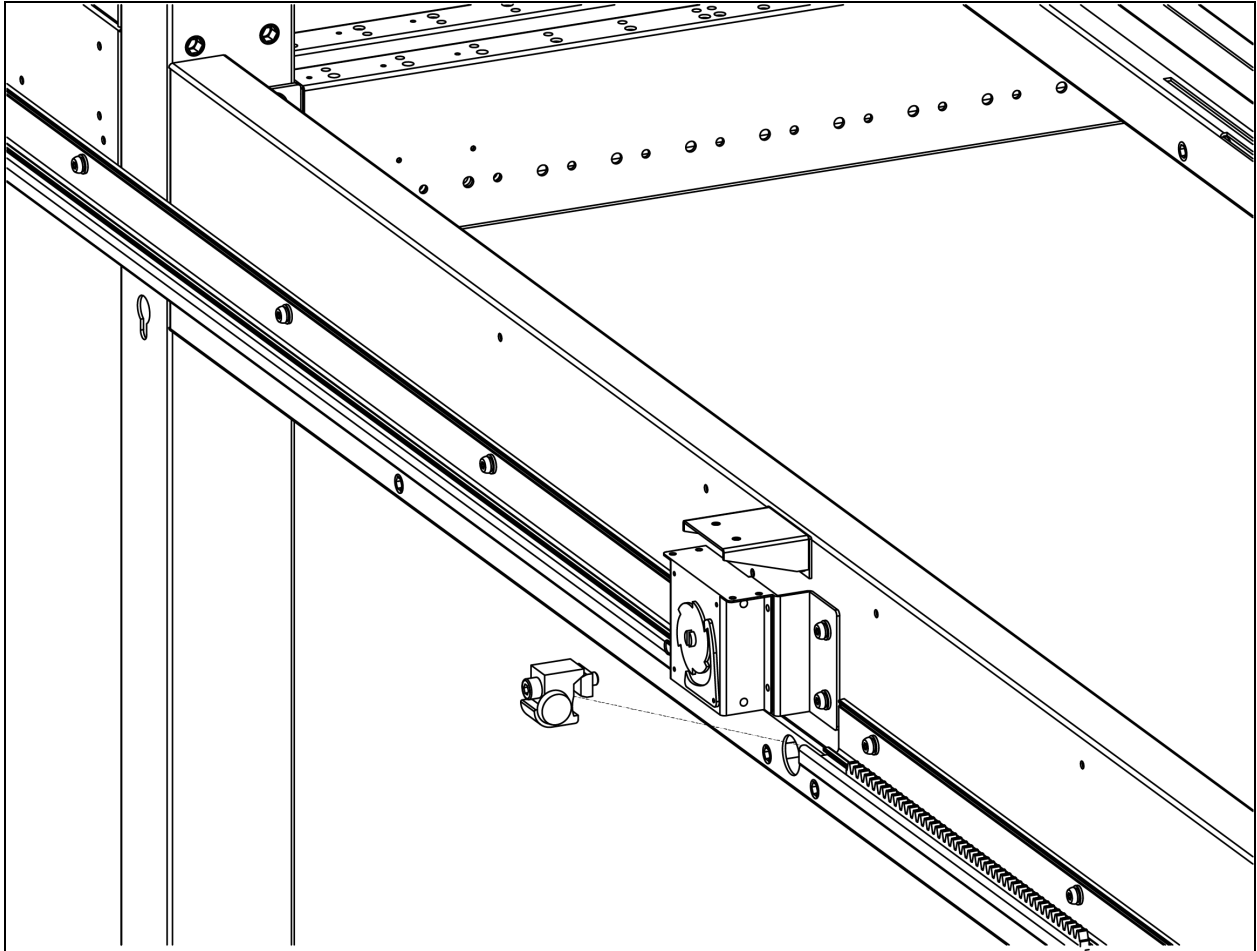
8. Fix the rail of the plastic tooth belt to the width beam and the extendable beam on the right side using M5 pan head screws.



9. Fix the drive device to the width beam using M5 pan head screws.

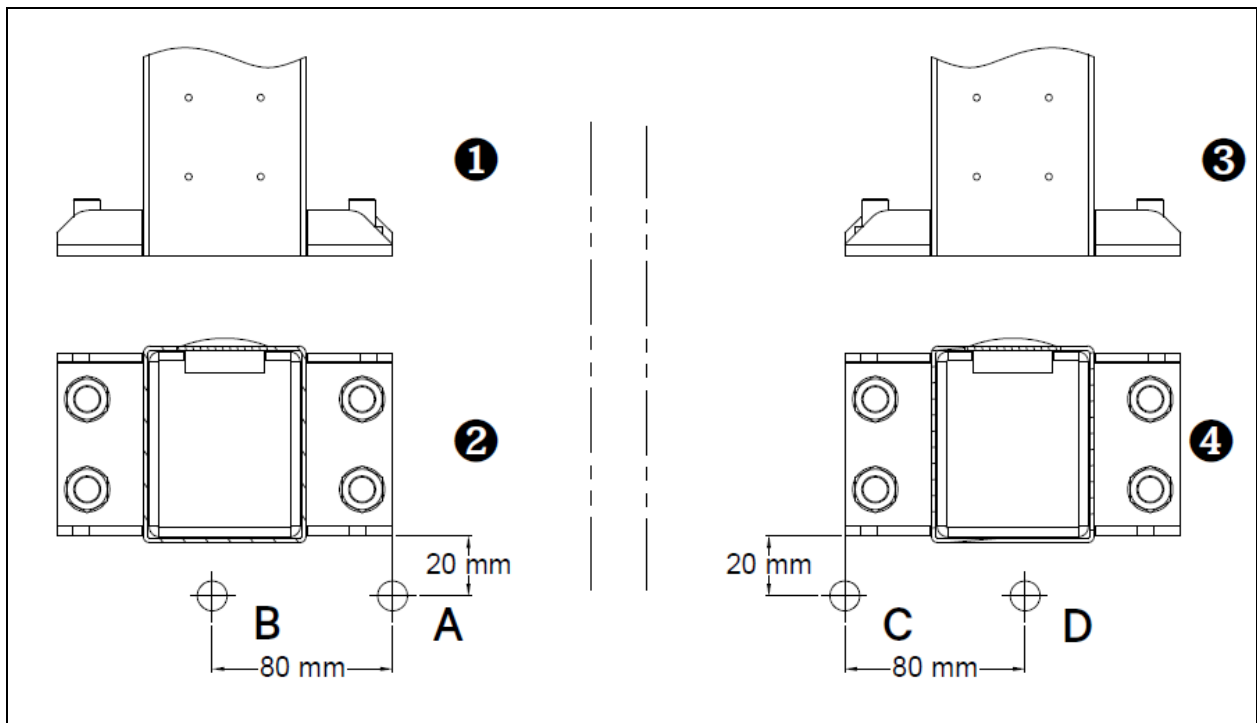


10. Fix the stopper to the sliding rail.



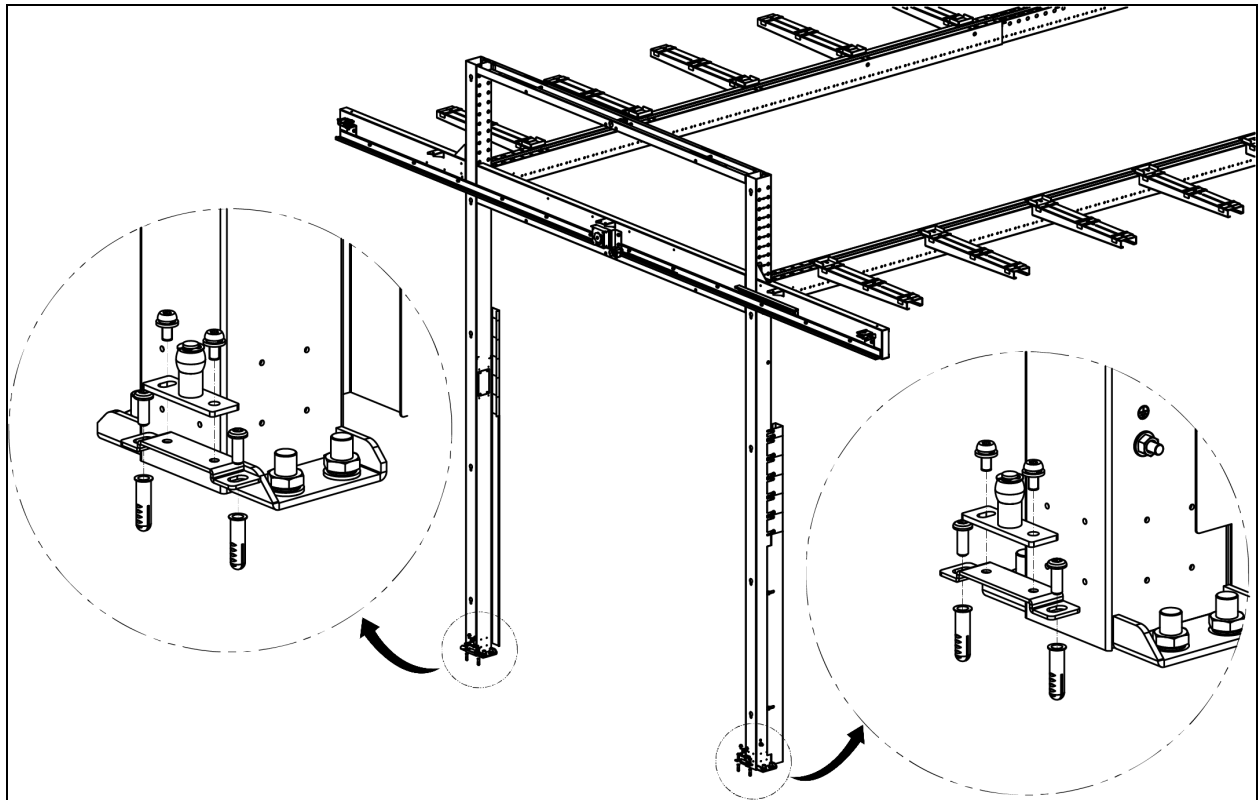
### 4.3.22 Semi-auto Sliding Door (1828.8 mm (6 ft))

1. Install the door guide bracket near the left vertical post.
  - a. Use a tape measure to determine position A (20 mm vertically from the lower right corner of the left vertical post stand, viewing from the top). Mark position A on the floor.
  - b. Use a tape measure to determine position B (80 mm horizontally from position A). Mark position B on the floor.
  - c. Drill a  $\phi 6$  hole in position A and B and install a plastic expansion tube in each hole.
2. Install the door guide bracket near the right vertical post.
  - a. Use a tape measure to determine position C (20 mm vertically from the lower left corner of the right vertical post stand, viewing from the top). Mark position C on the floor.
  - b. Use a tape measure to determine position D (80 mm horizontally from position C). Mark position D on the floor.
  - c. Drill a  $\phi 6$  hole in position C and D and install a plastic expansion tube in each hole.



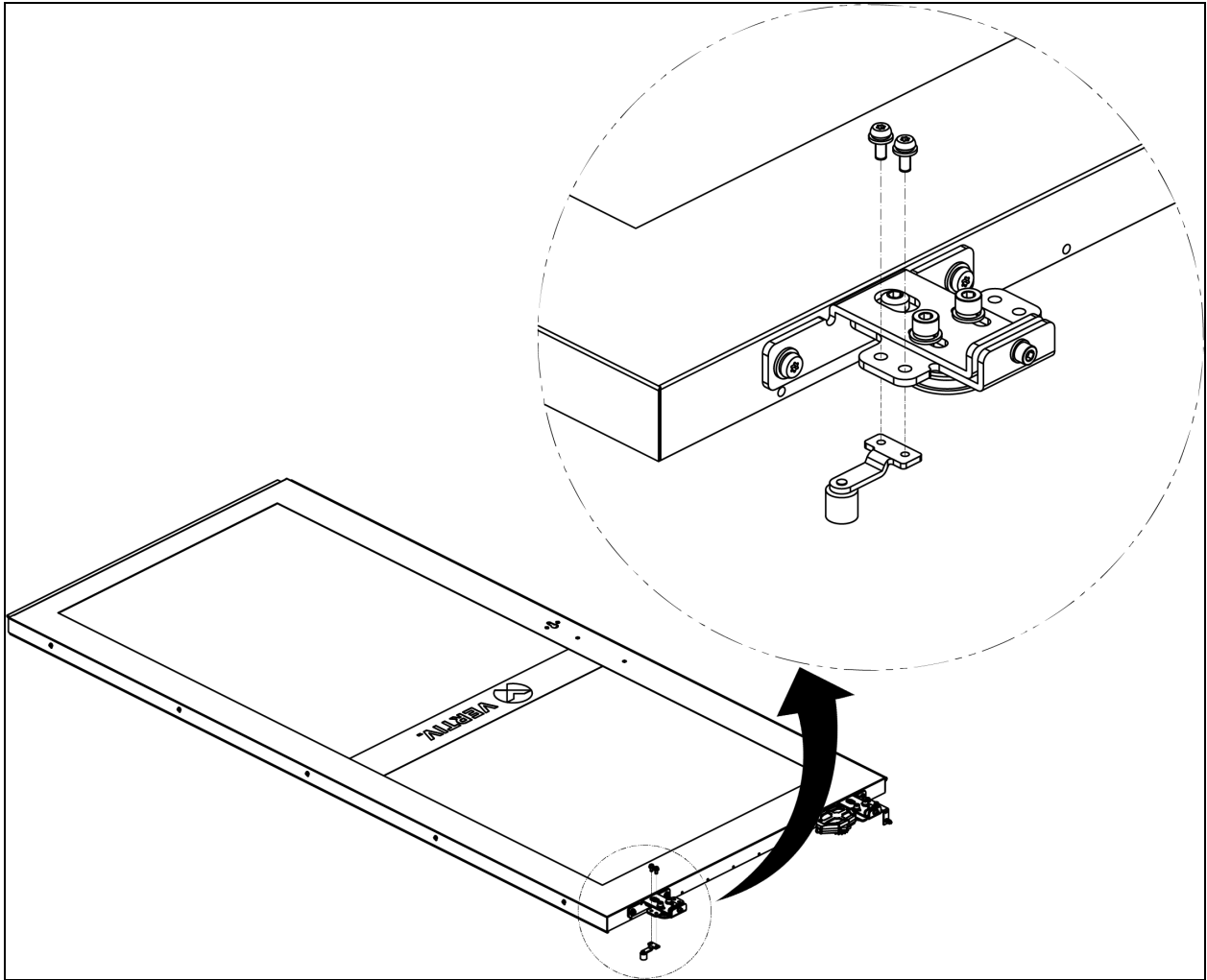
Item	Description
1	Left vertical post
2	Left vertical post stand, viewing from the top
3	Right vertical post
4	Right vertical post stand, viewing from the top

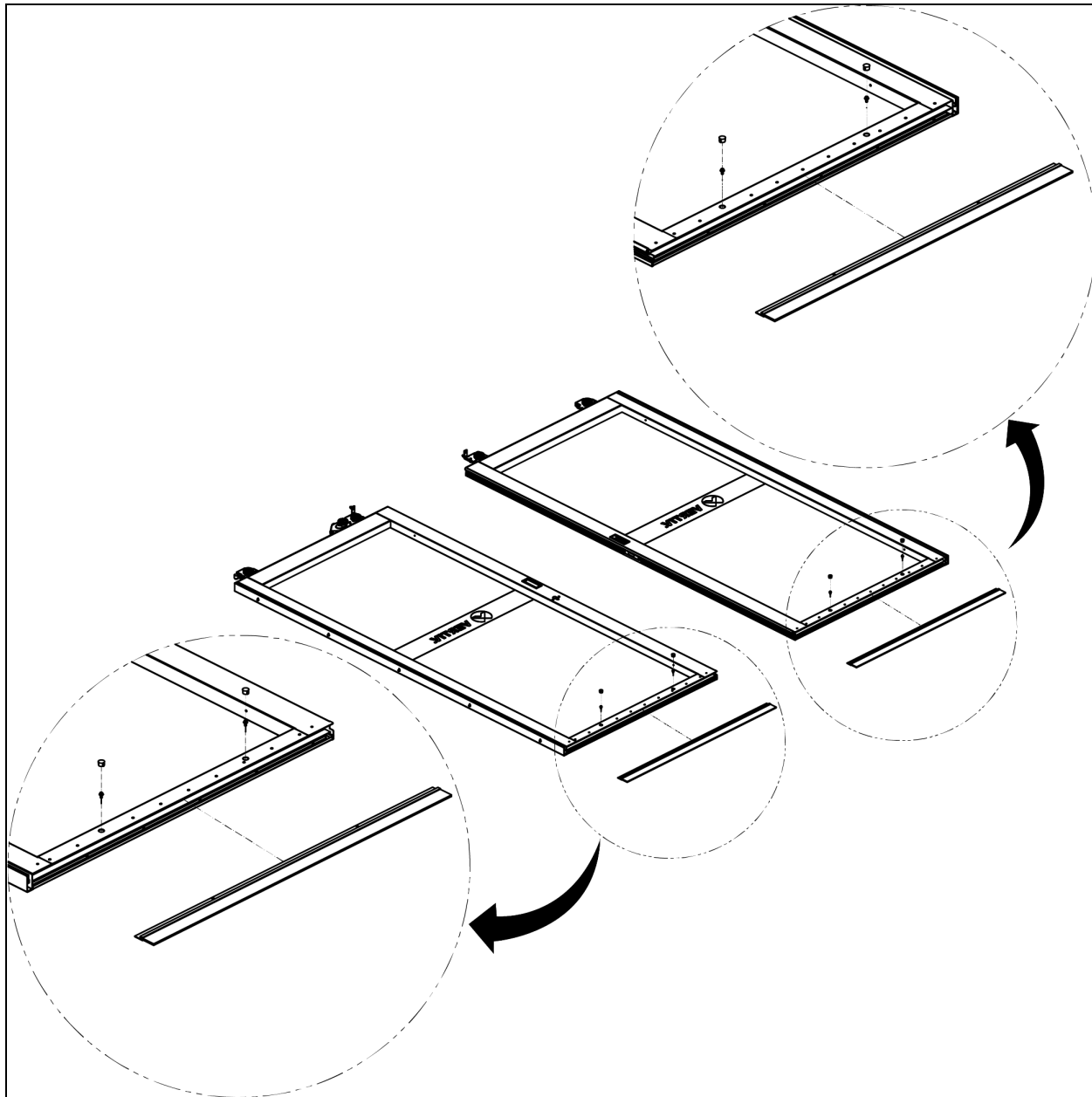
3. Fix two door guide brackets to the floor using M5 self-taping screws. Fix the door guides to the door guide brackets using M5 pan head screws.



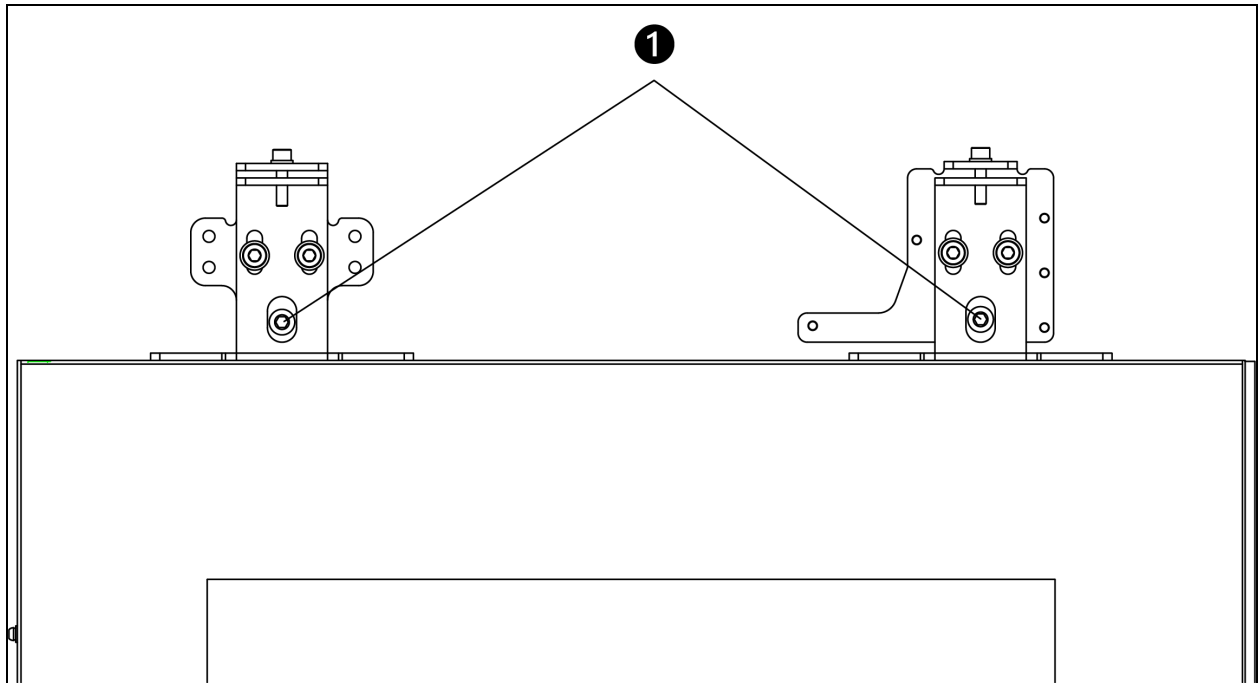


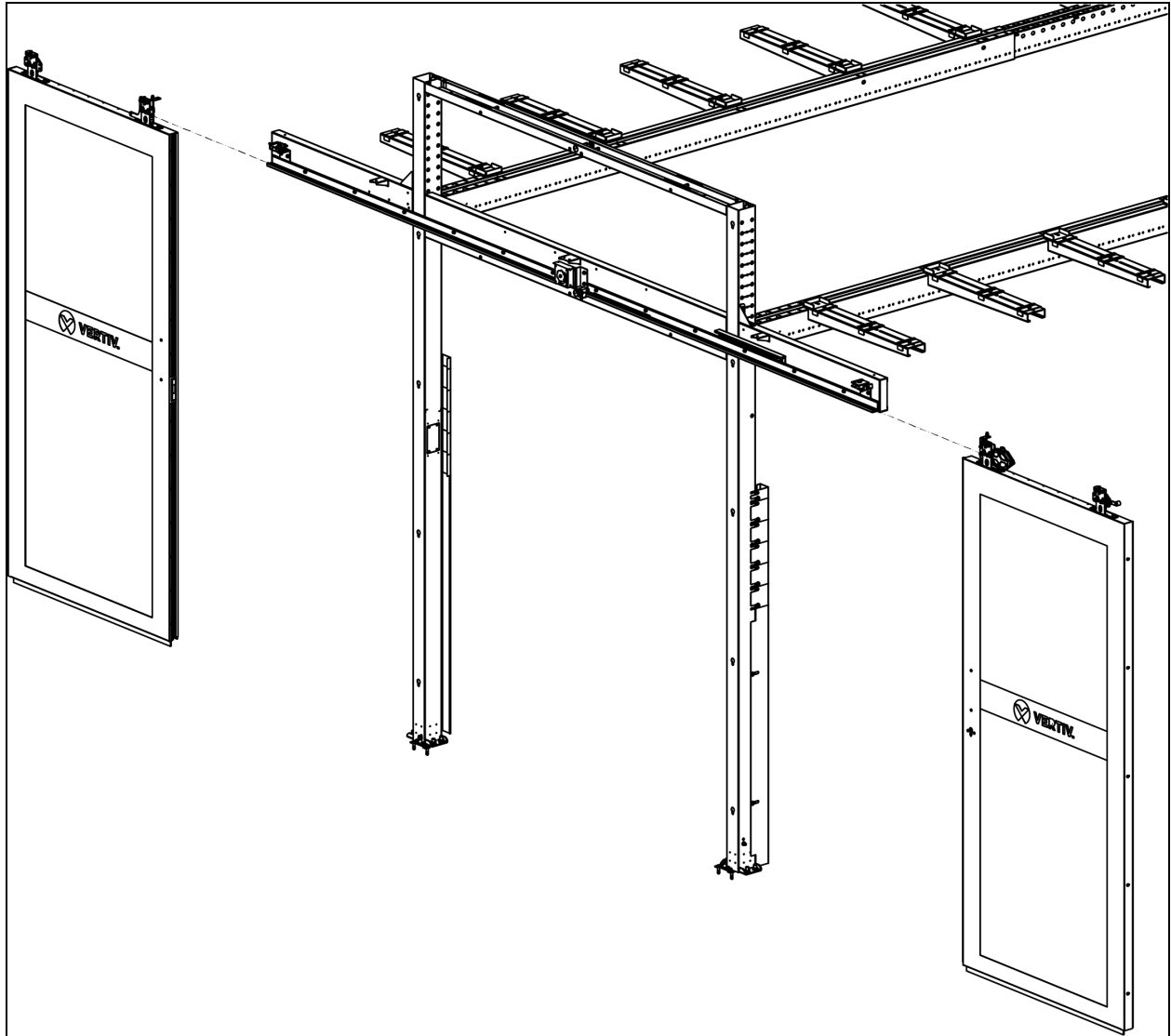
4. Fix the end wheel to the rear hanger roller of the right door panel using M5 screws. Install the brush under the sliding door using M4 pan head screws. The screws are installed in the inner side of the door. After that, cover each hole above the screw using a plastic cap.





5. Remove the limit screws (1) from the hanger rollers, push the two door panels into the sliding rail, and then fix the limit screws.

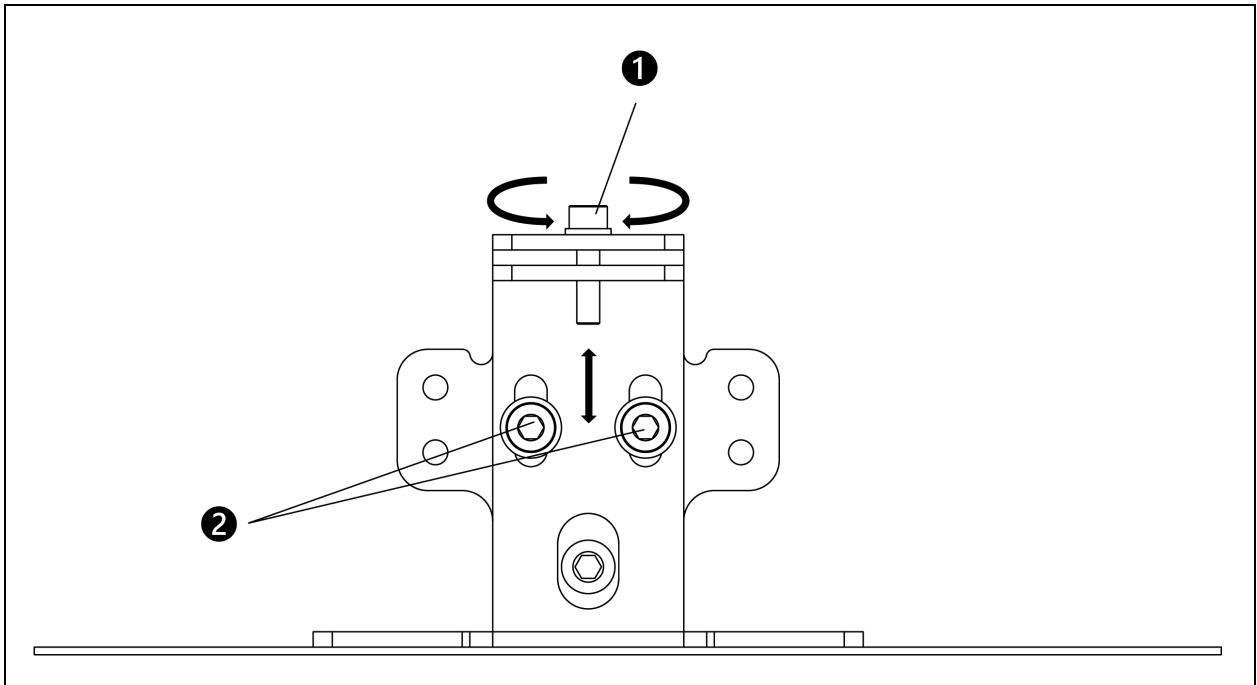
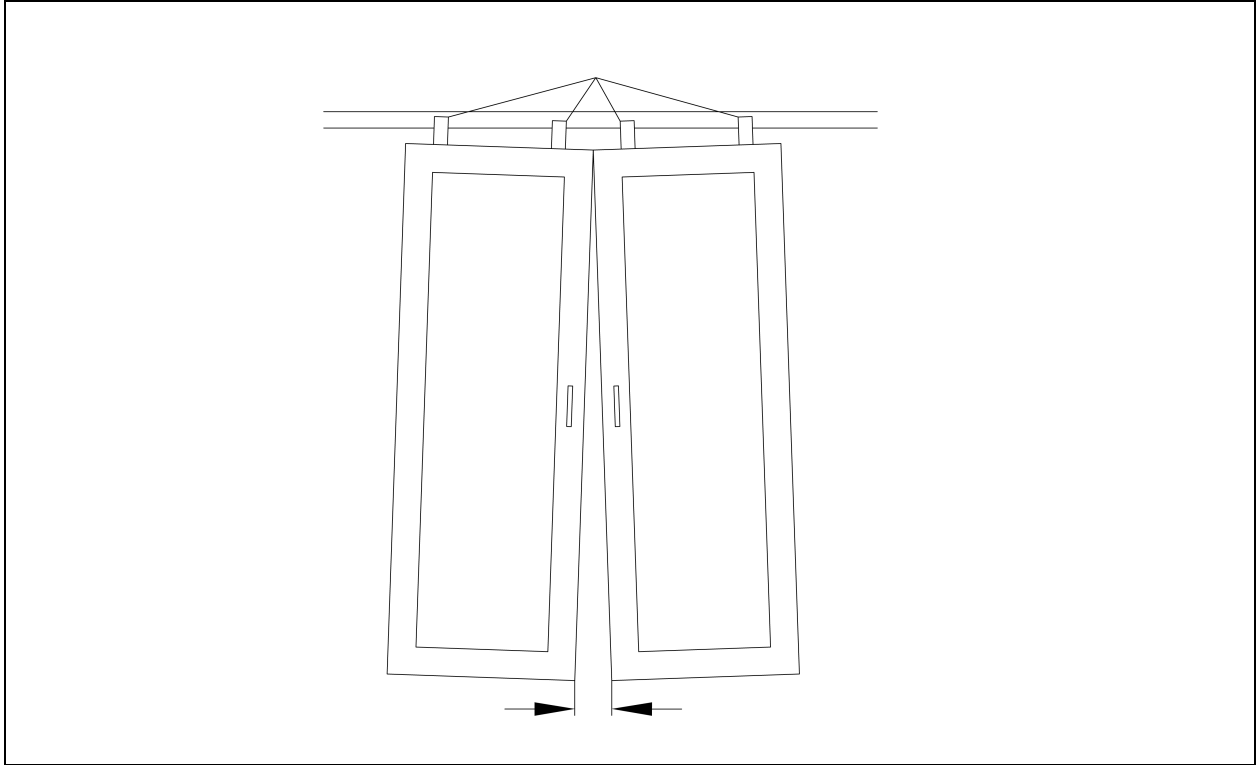




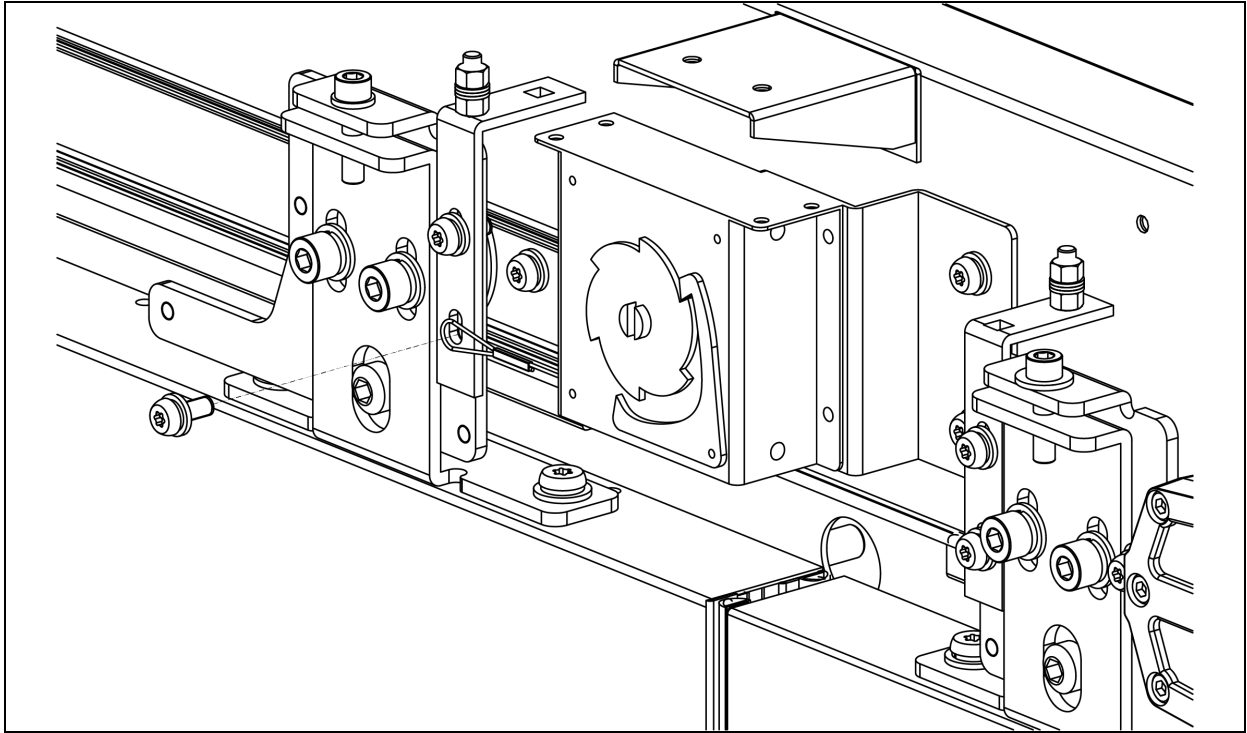
Adjust the gap between the door panels as follows:

- a. Loosen the fixing screws (2) on the hanger rollers. Rotate the adjustable screw (1) clockwise to raise the door panel and counter-clockwise to lower the door panel.
- b. After the adjustment, tighten the fixing screws (2).
- c. Check that the door can slide smoothly.

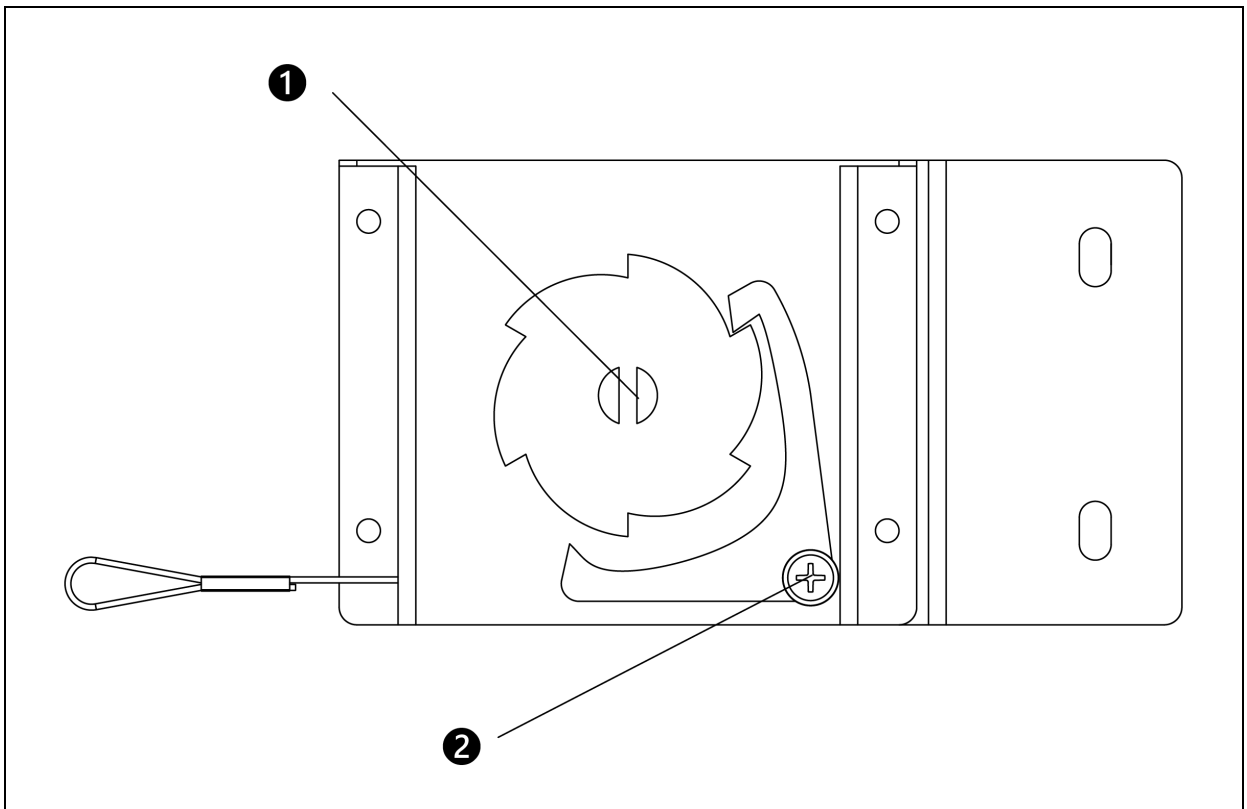
**NOTE: If the door cannot slide smoothly, check if the hanger rollers are within the rail and the door guide is in the groove.**



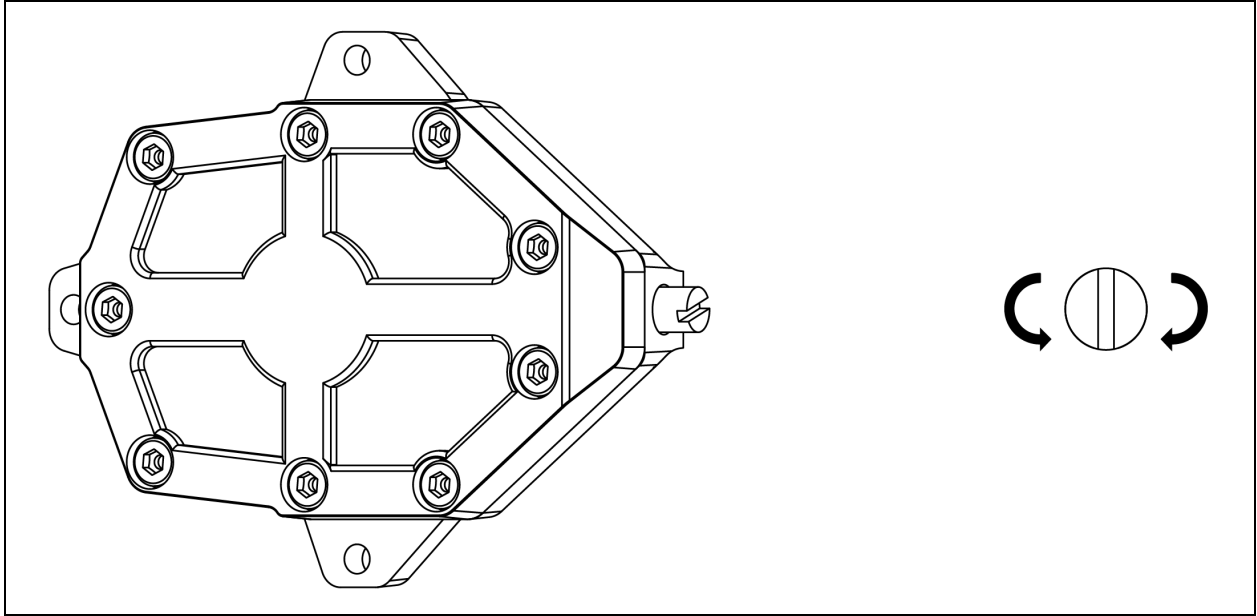
6. Pull the cable from the drive device and fix the cable to the front hanger roller.



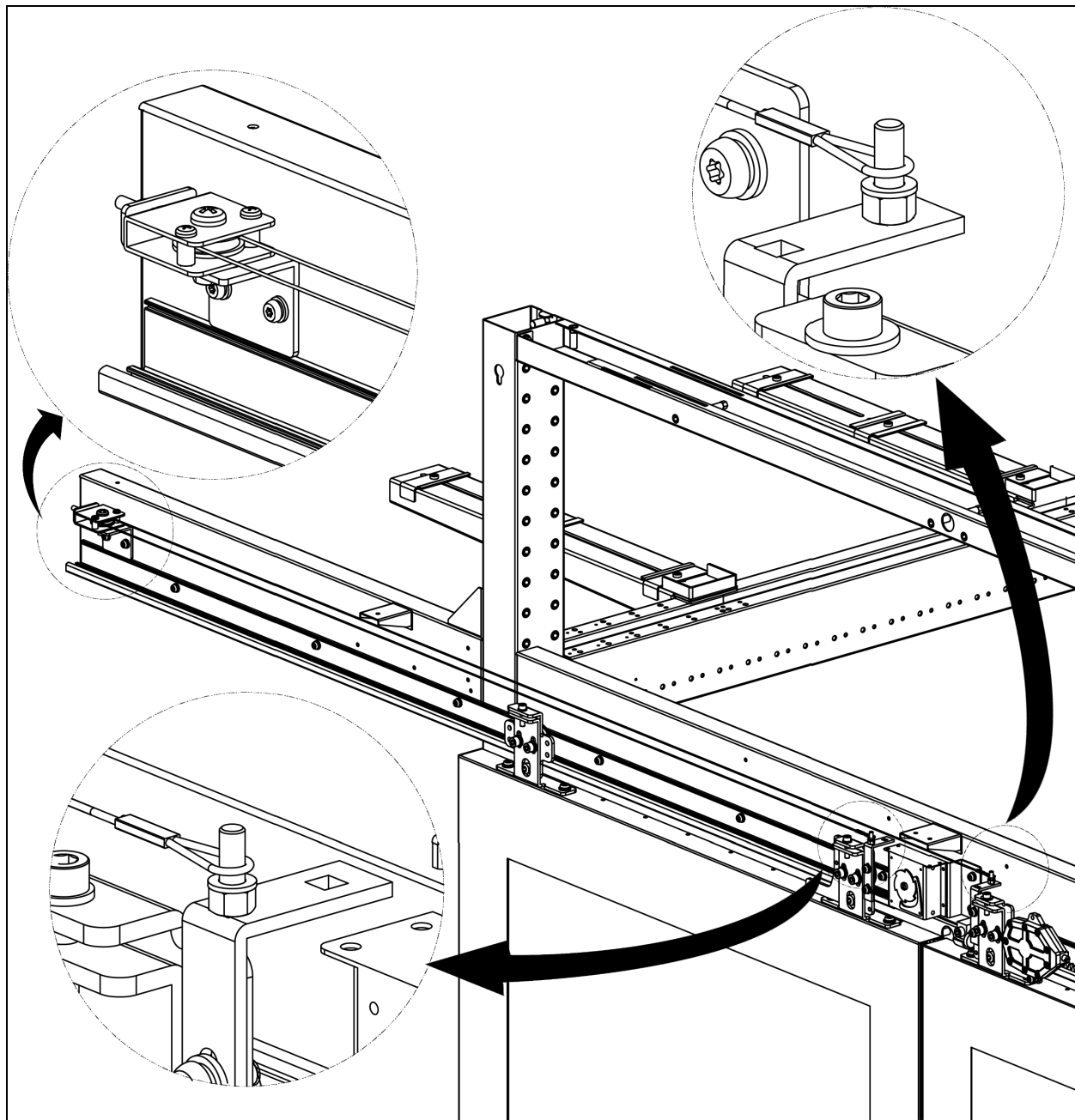
To adjust the resistance of the sliding door, loosen the Phillips head screw (2), use a slotted screwdriver to adjust the turntable (1), and then tighten the Phillips head screw (2).



Use a rear brake to adjust the sliding speed: turn the valve clockwise to slower the speed and anti-clockwise to faster the speed.

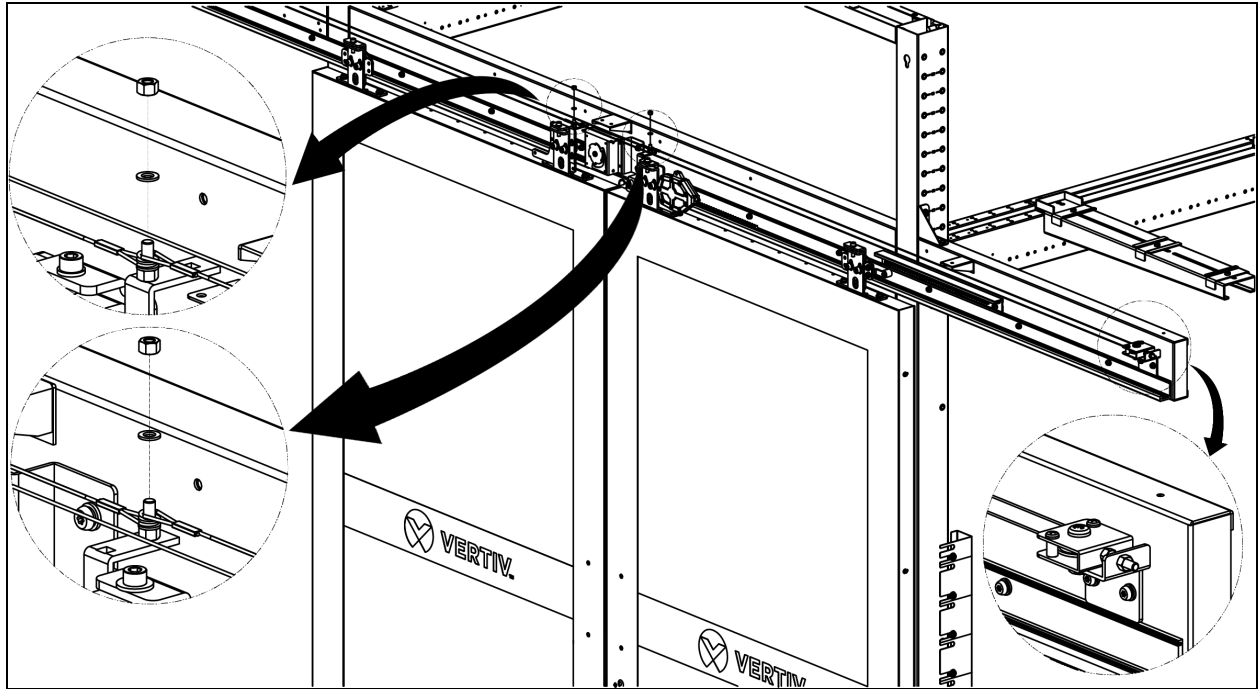


7. Route the steel wire around the left steering wheel and connect one end of the wire to the threading support of the left door panel and the other end to the threading support of the right door panel.

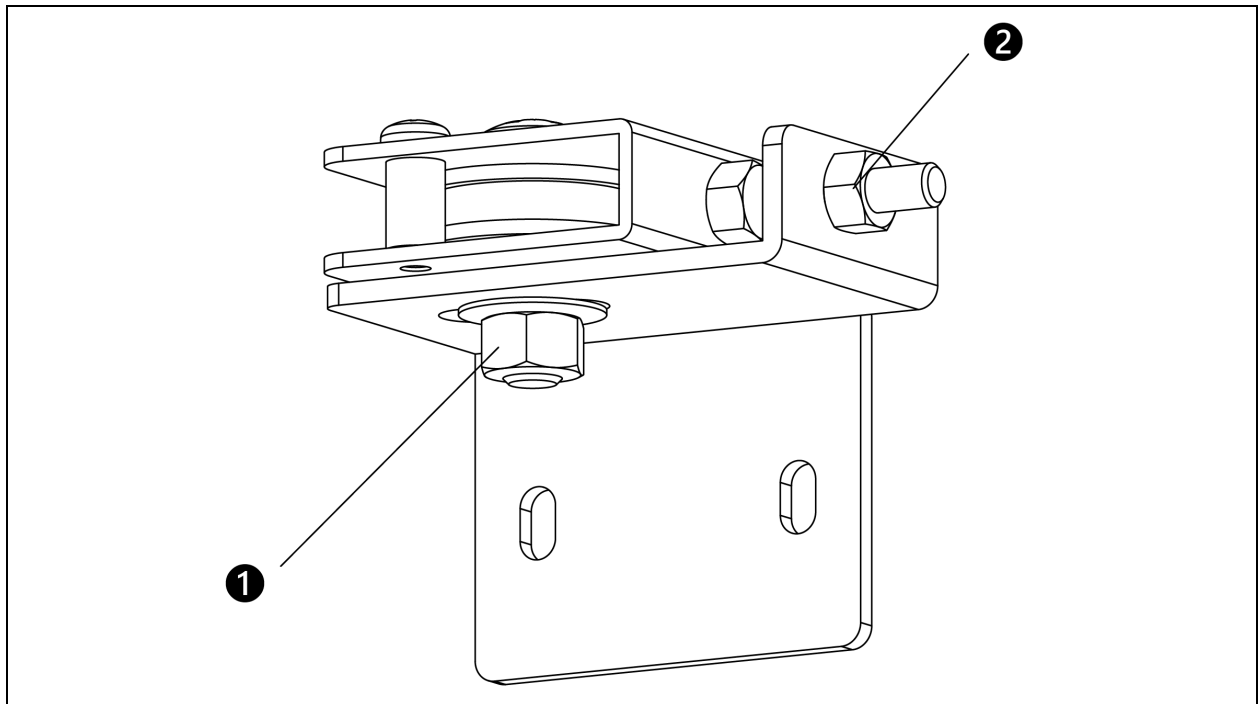




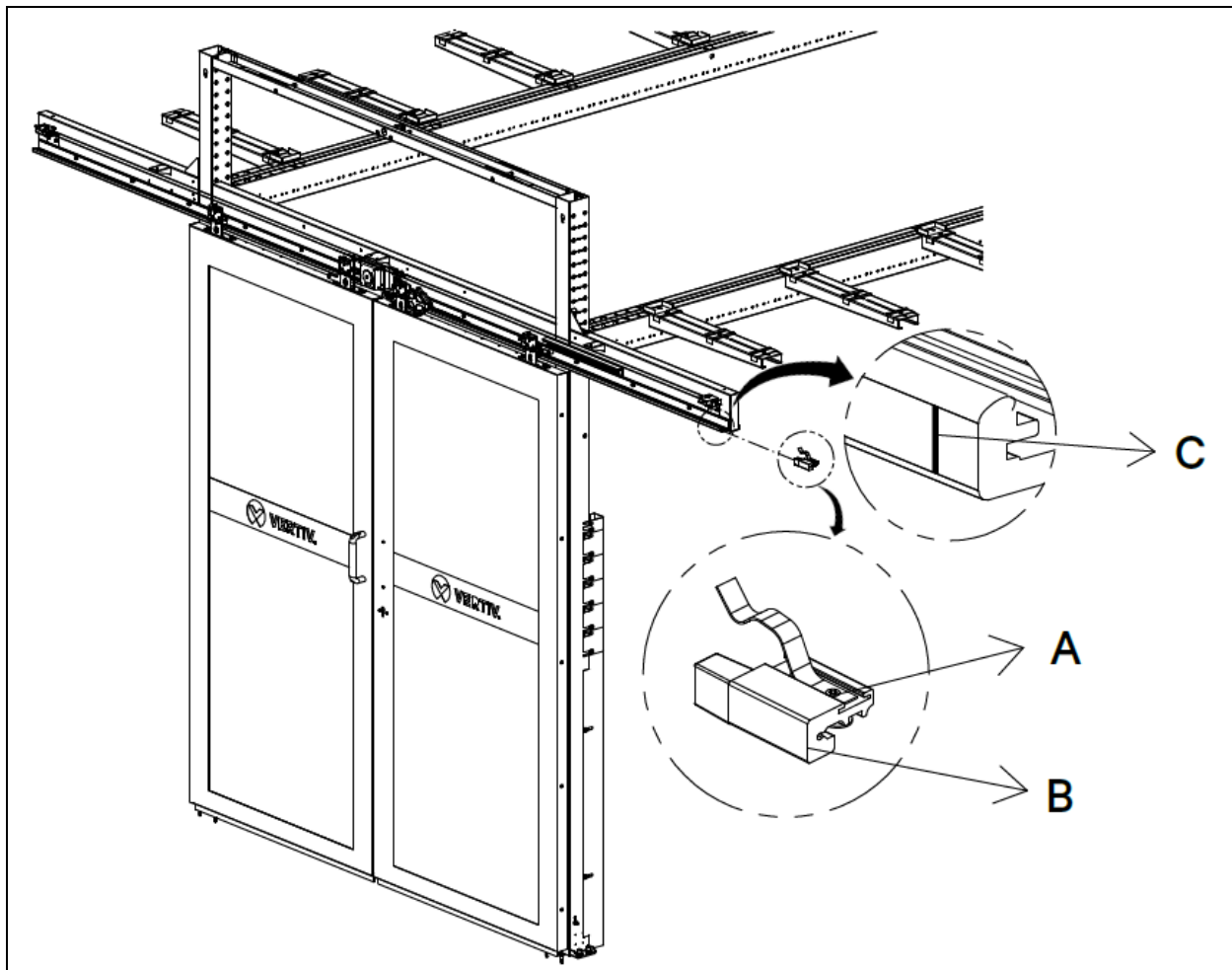
8. Route another steel wire around the right steering wheel and connect one end of the wire to the threading support of the left door panel and the other end to the threading support of the right door panel. Place a washer and a nut onto each threading support and fasten the nut.



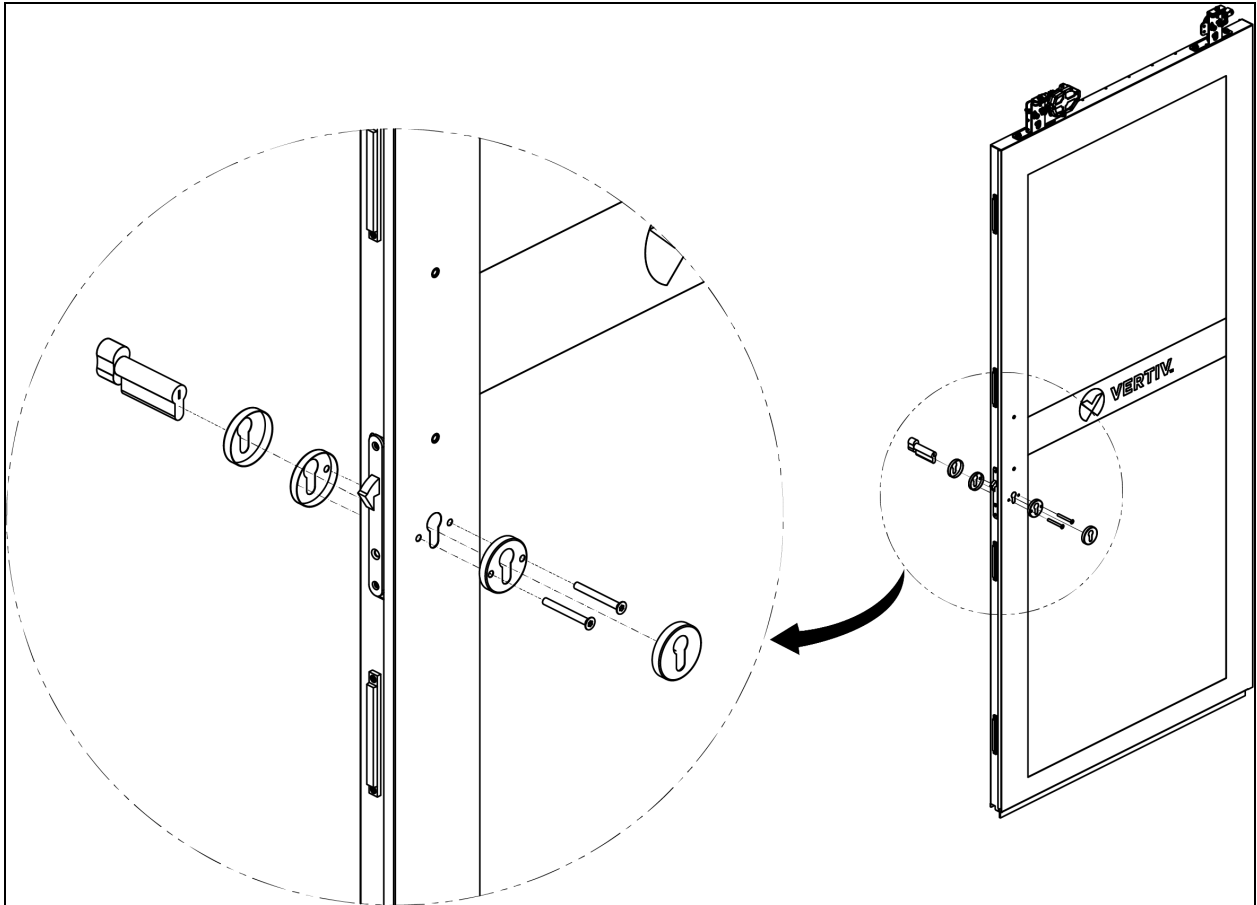
After the steel wire is connected, loosen the pulley nuts (1) on the left and right steering wheels, rotate the adjustable nuts (2) to take the slack out of the wire wrapped around the steering wheels, and then tighten the pulley nuts (1).

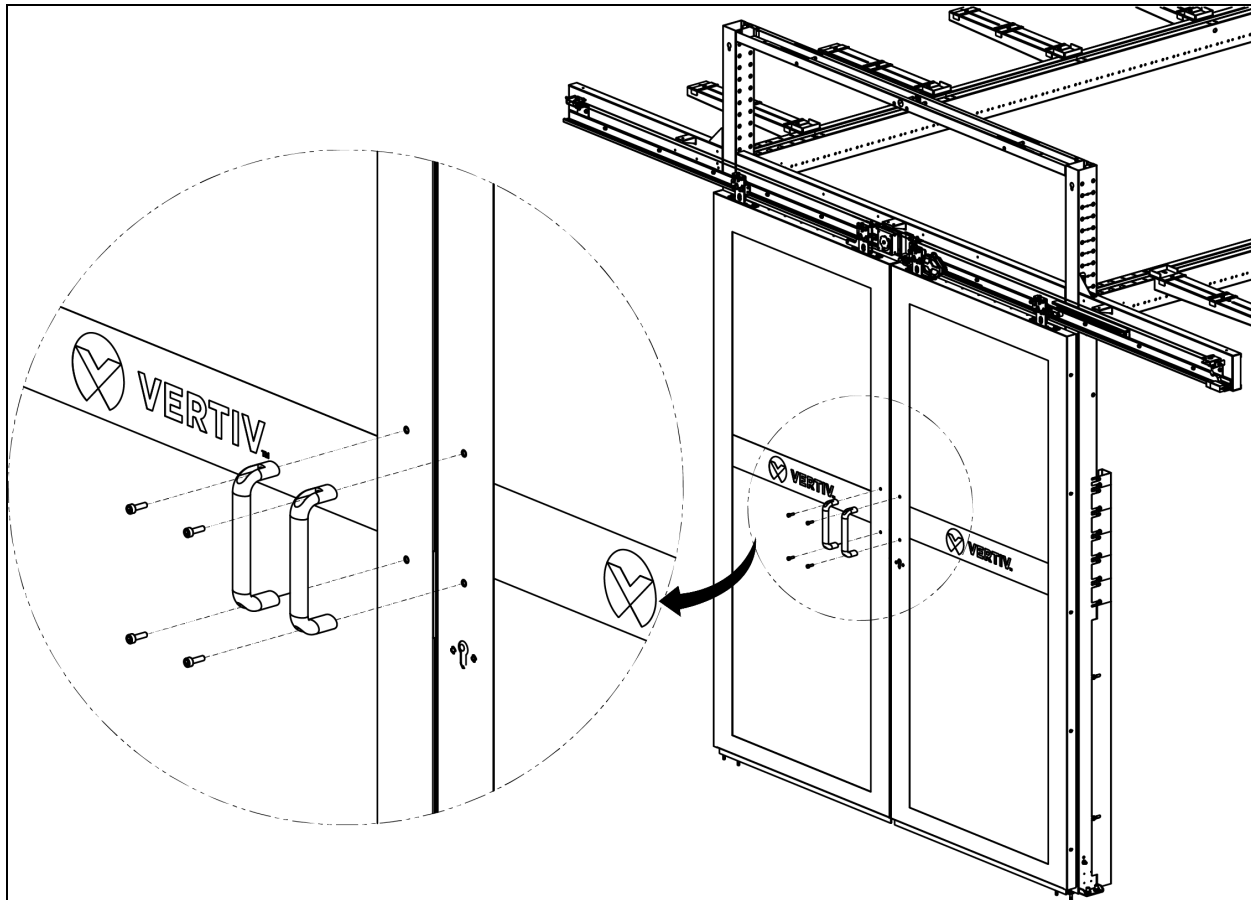


9. Loosen the screw (A) on the full open device, slide the full open device into the sliding rail till its edge (B) aligns with the mark (C) on the sliding rail, and tighten the screw.



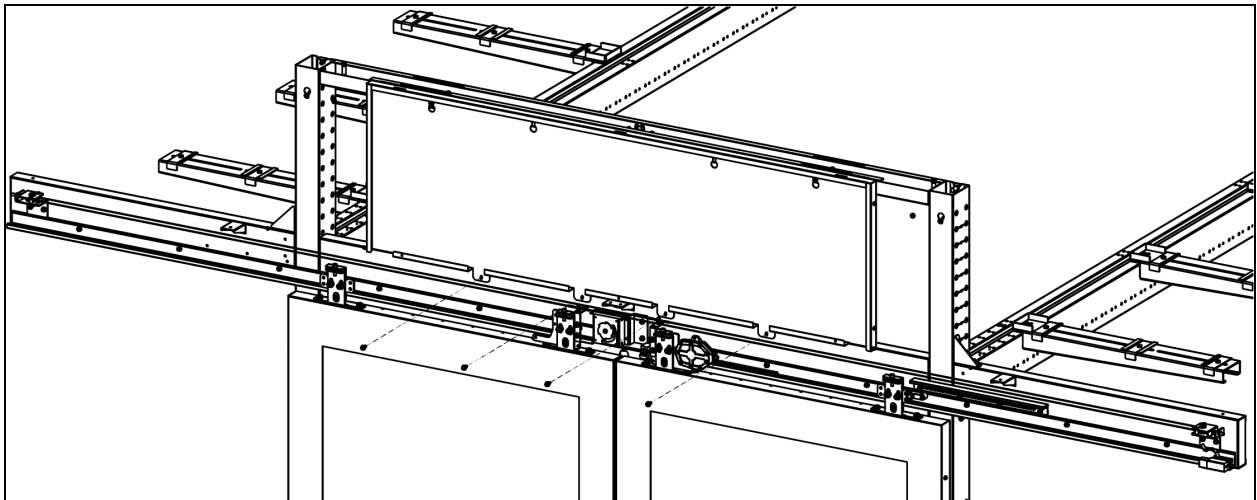
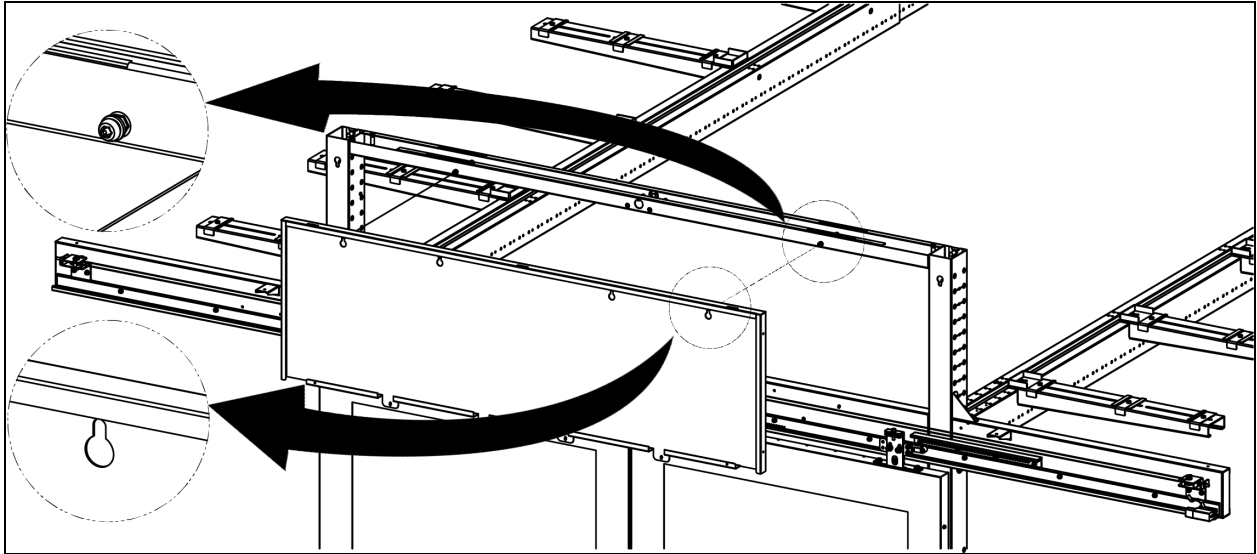
10. Insert the lock cylinder into the lock body of the right door panel and then install the lock cover. After that, install door handles for the left door panel and right door panel.



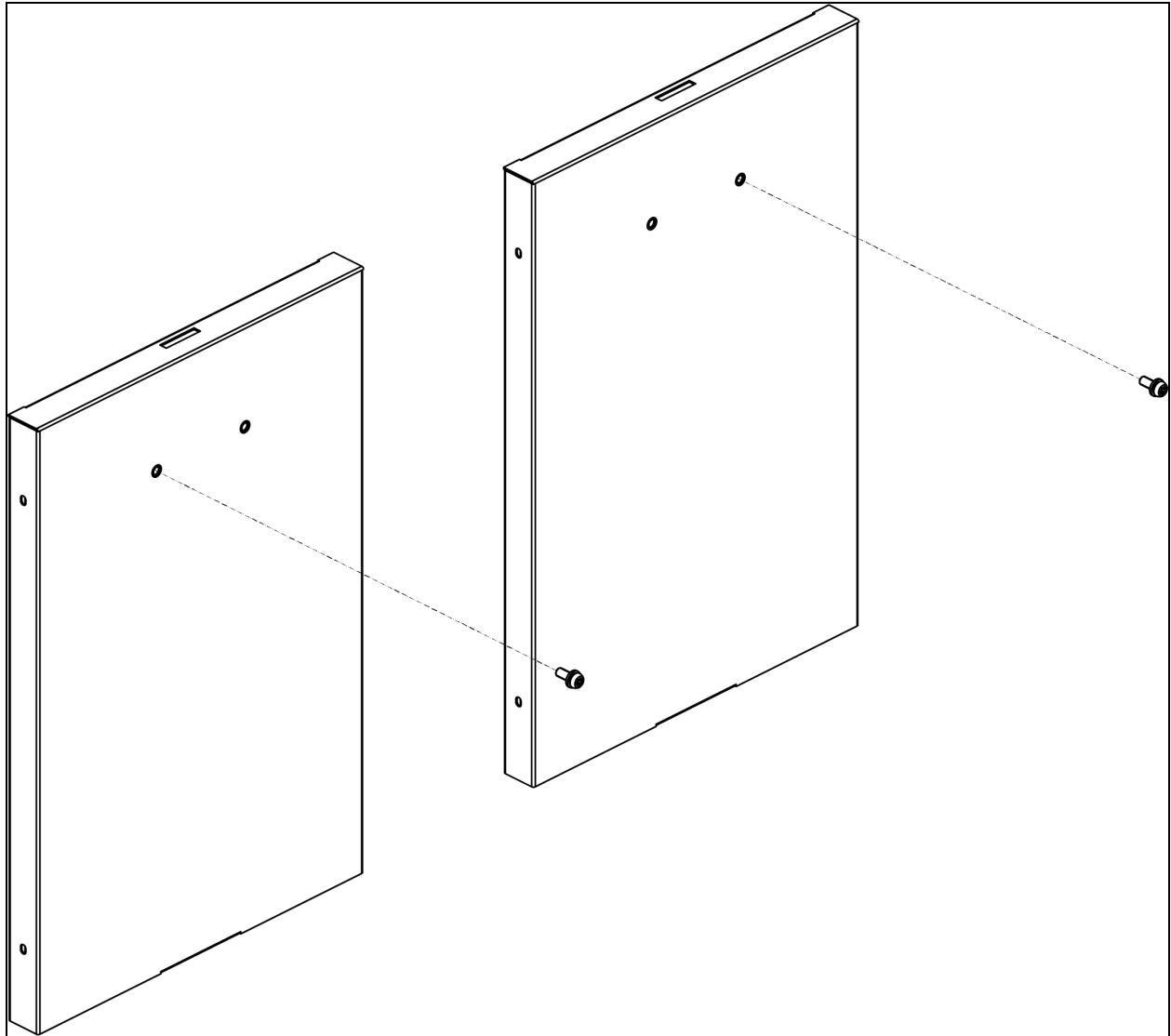


### 4.3.23 Sliding Door Header (1828.8 mm (6 ft))

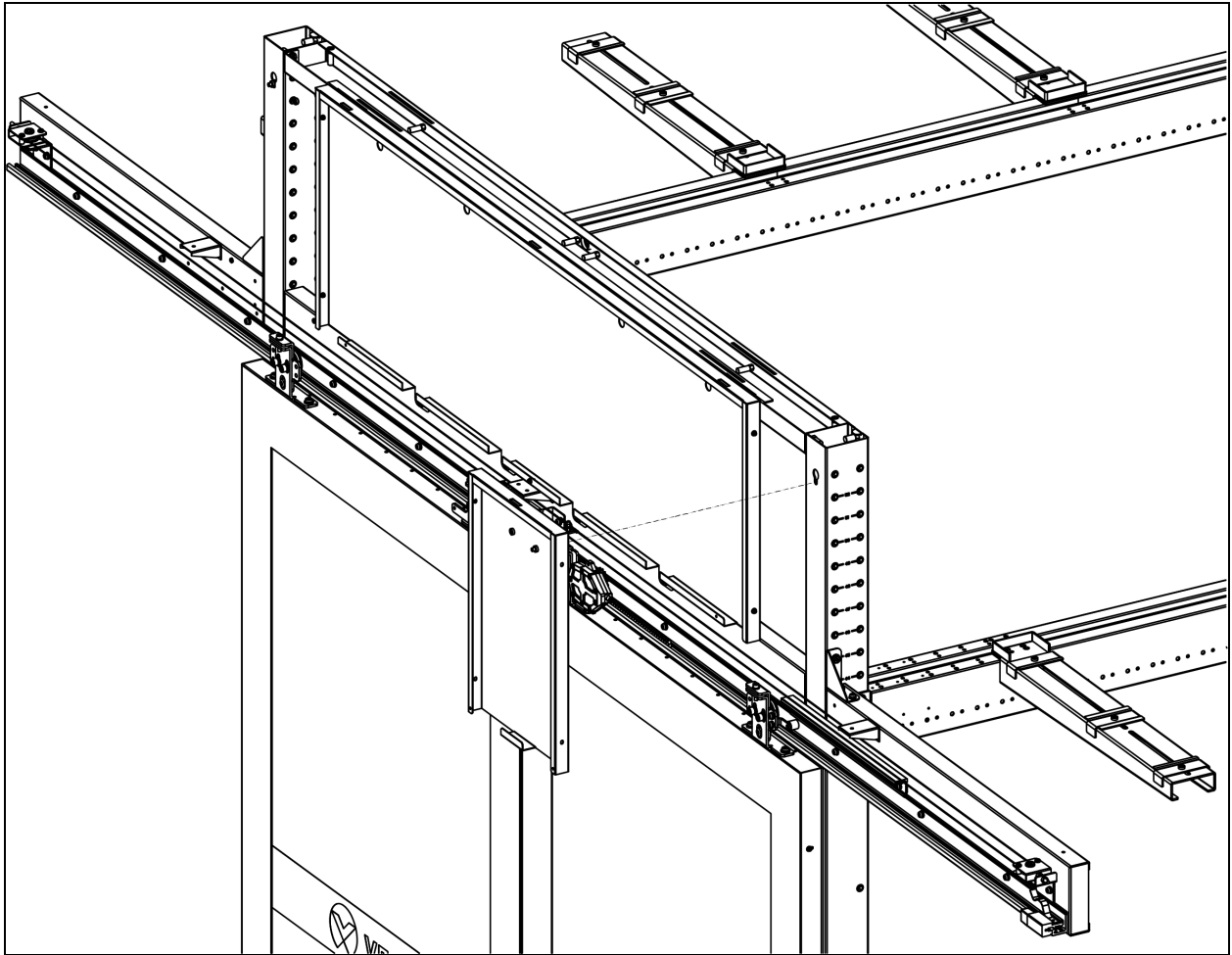
1. Insert M6 pan head screws into the frame of the width connector, leaving 5 mm between the head of the screw and the surface of the frame. Hang the door header bracket on the screws and then tighten the screws. Fix the bottom of the door header bracket to the width beam using M5 pan head screws.

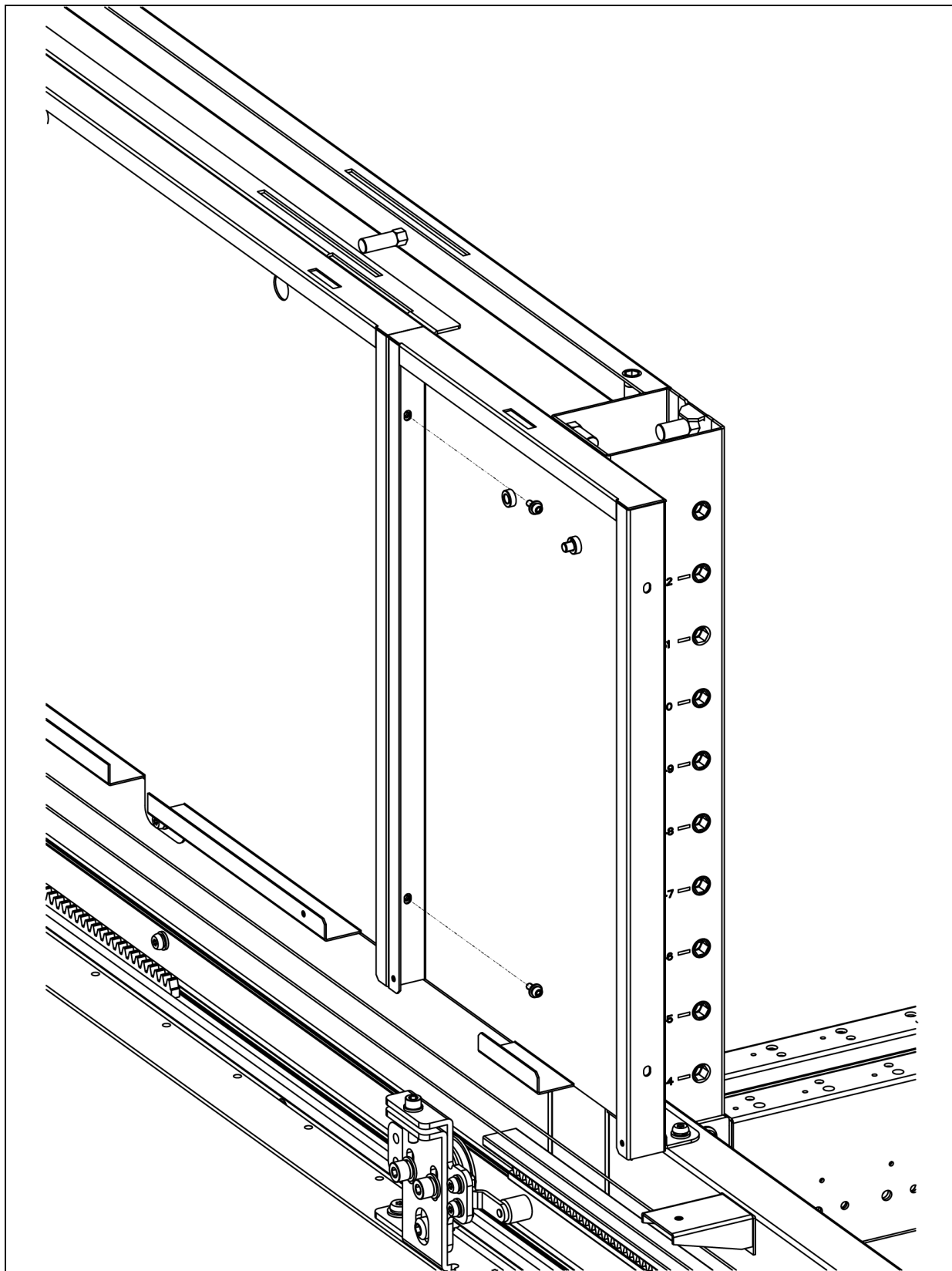


2. Insert M6 pan head screws onto the door header adapter, leaving 5 mm between the head of the screw and the surface of the adapter.



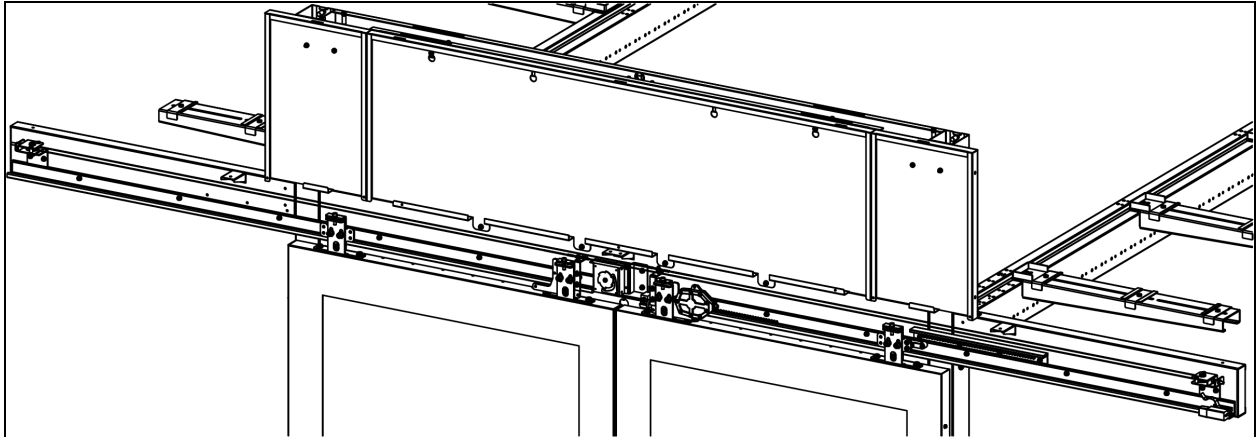
3. Hang the door header adapter onto the vertical post and tighten the screws. Install the door header adapter on the door header bracket using M4 pan head screws.



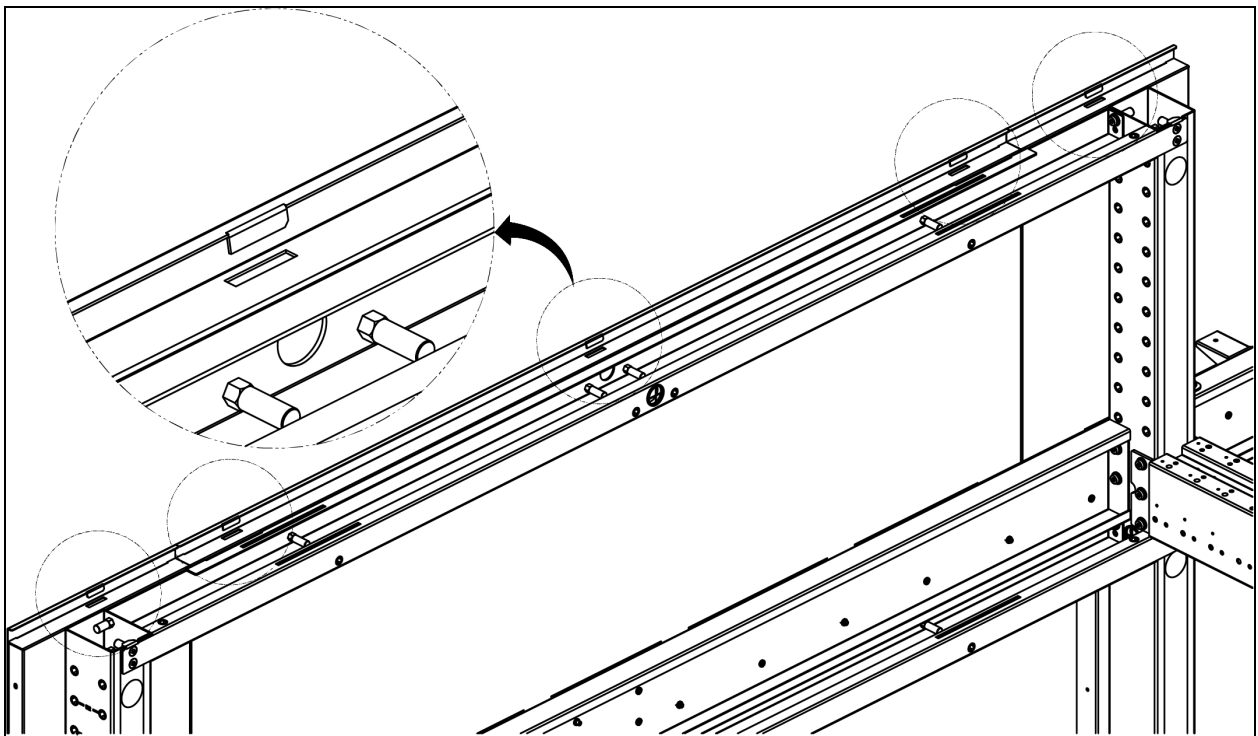


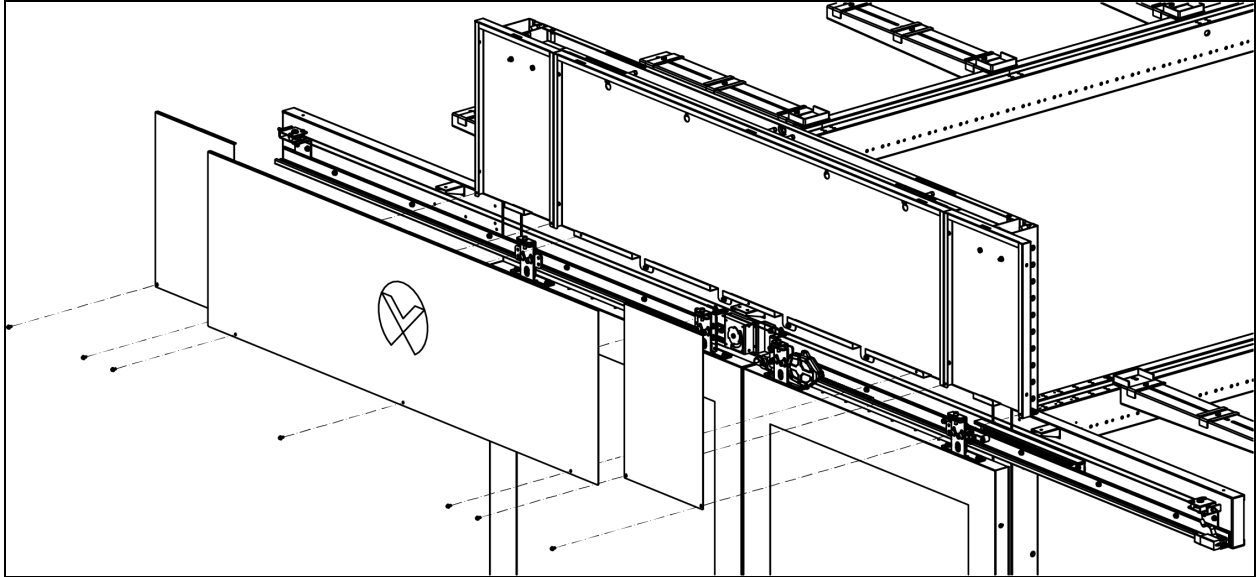


4. Install the door header adapter on the other side.

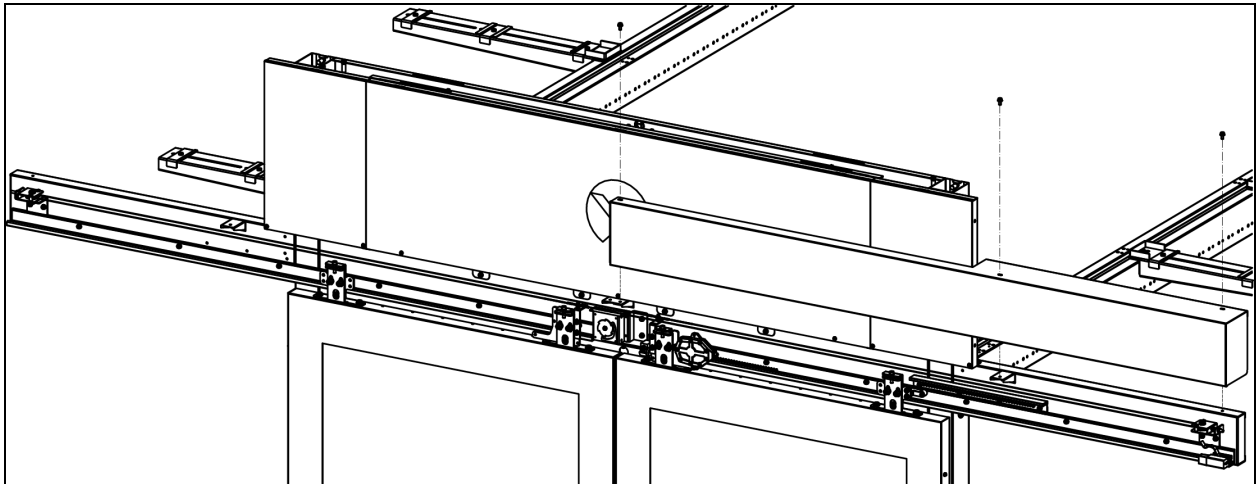


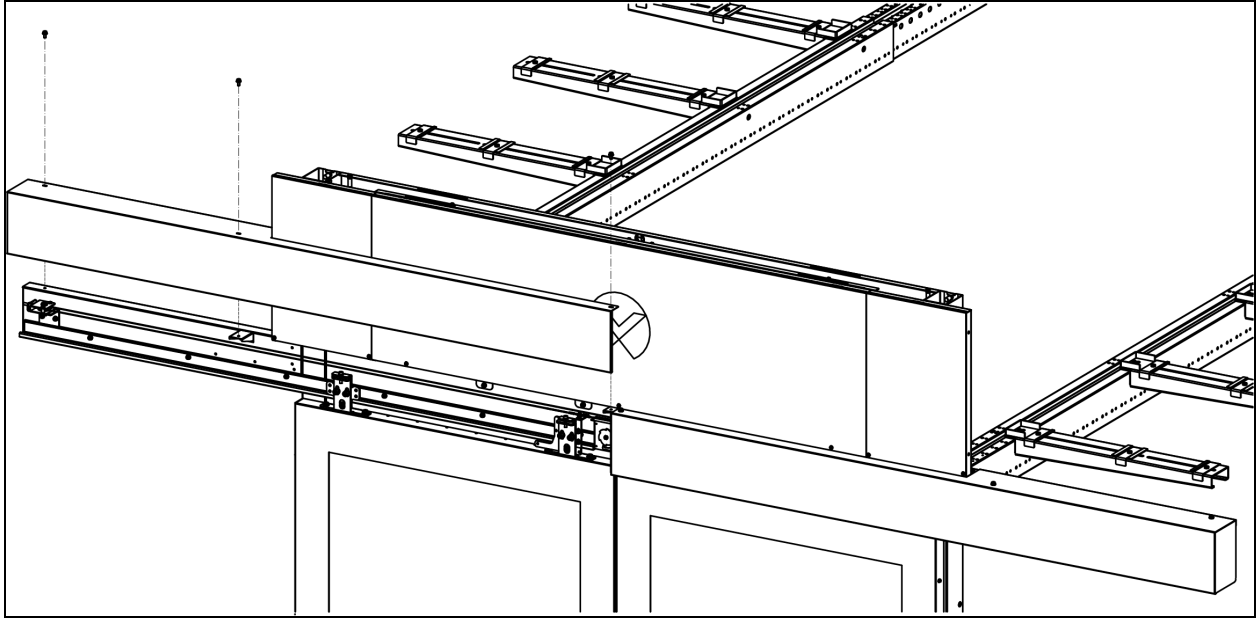
5. Hang the front panel onto the slot of the door header bracket and then fix the panel using M4 pan head screws.



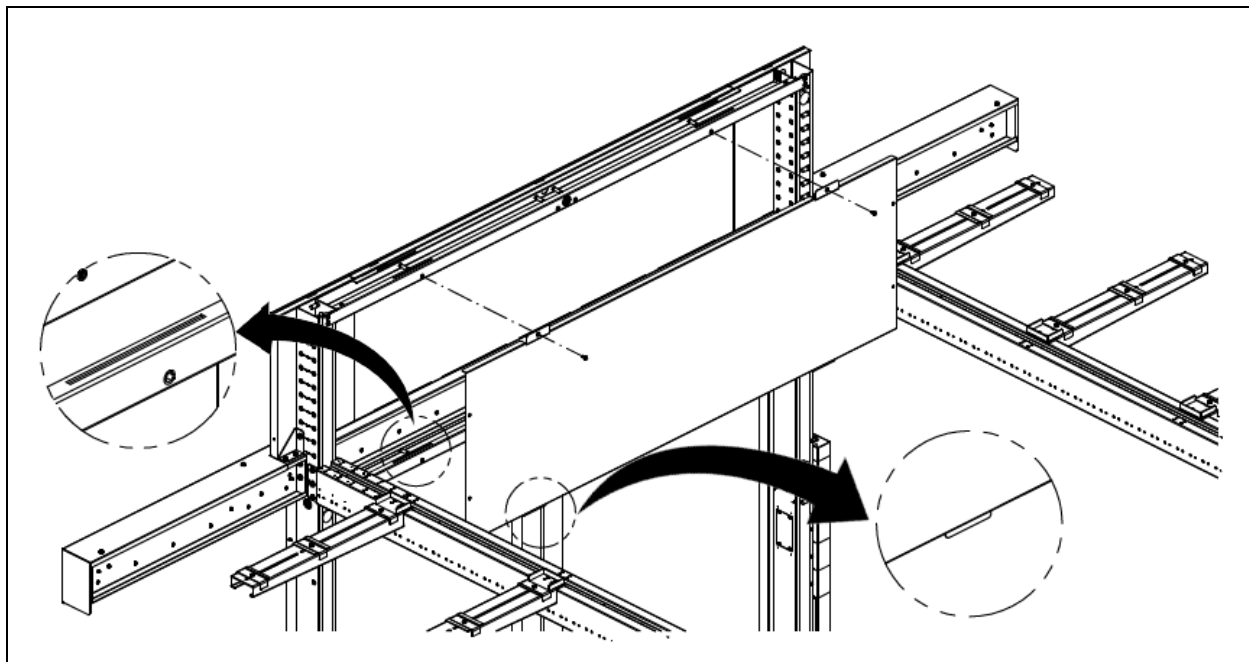


6. Fix the right cover panel to the cover bracket using M5 pan head screws. Fix the left cover panel to the cover bracket using M5 pan head screws.

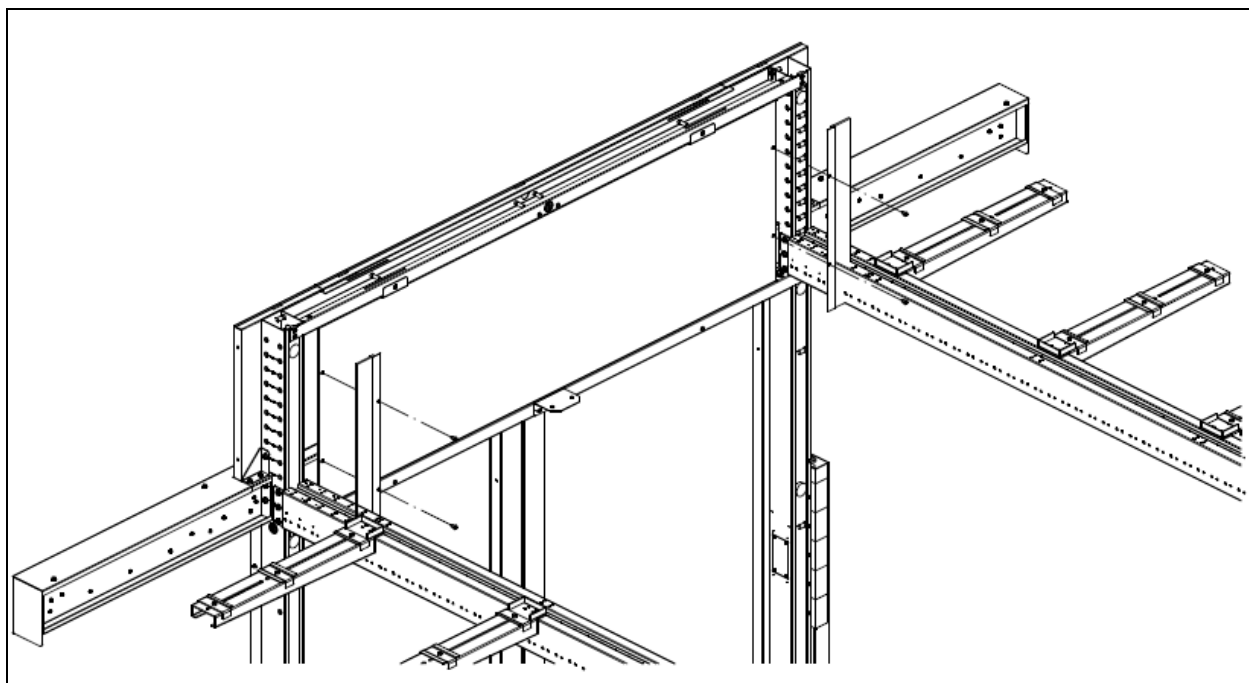




7. Install the width panel on the inner side of the containment: inserting the bottom fringes of the width panel into the slot and fix the upper fringes to the frame using M6 countersunk screws.

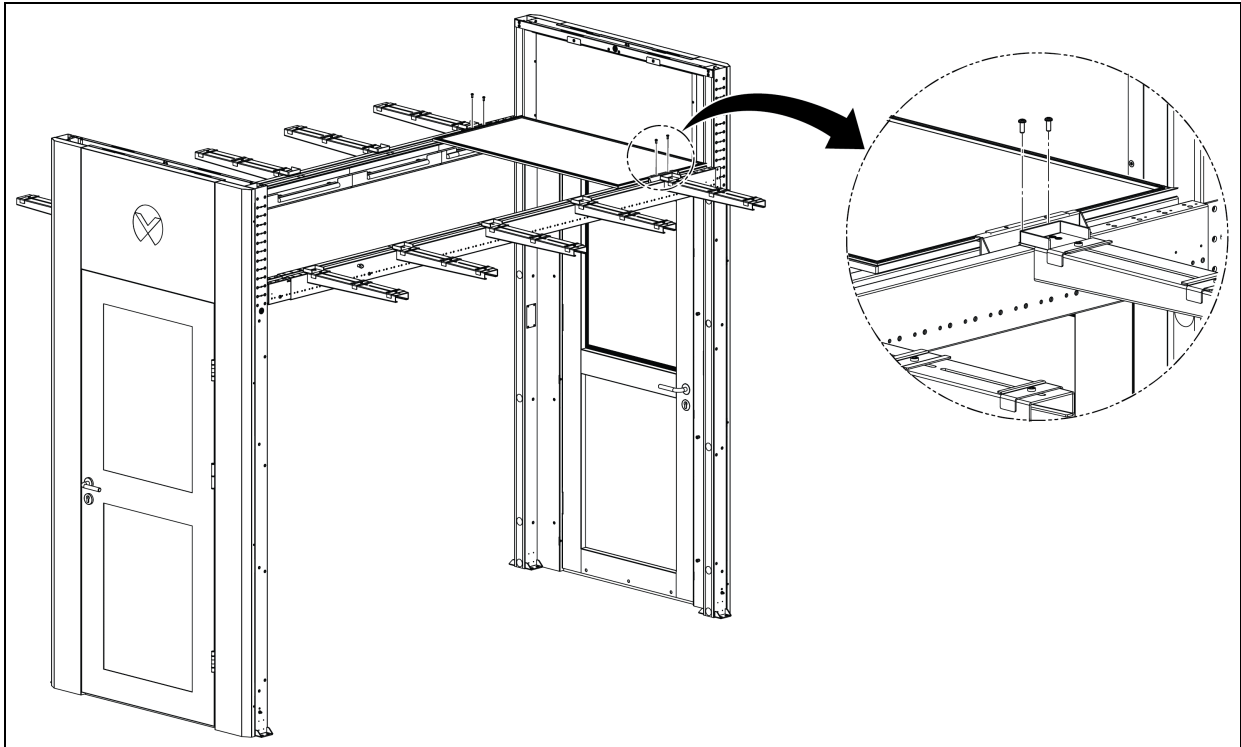


8. Install the brush on the width panel.



### 4.3.24 Fixed Roof

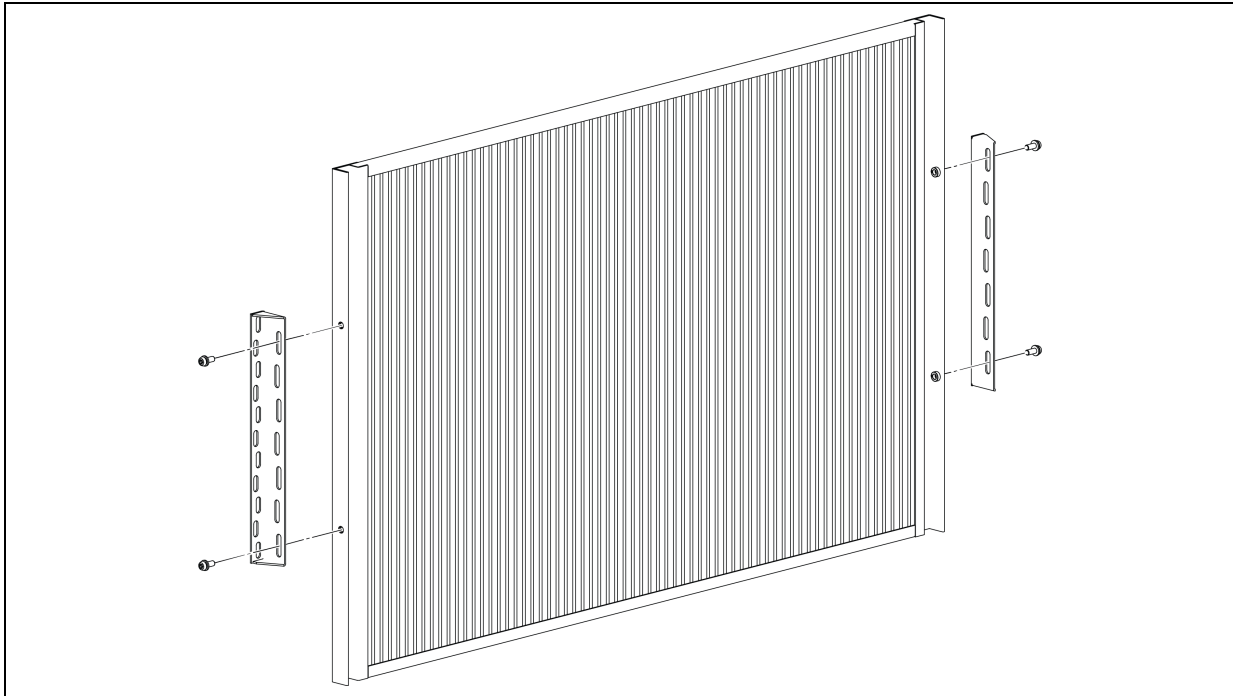
1. Attach the seal on the side of the fixed roof, place it on the extendable beam, and secure the fixed roof on it using two brackets.



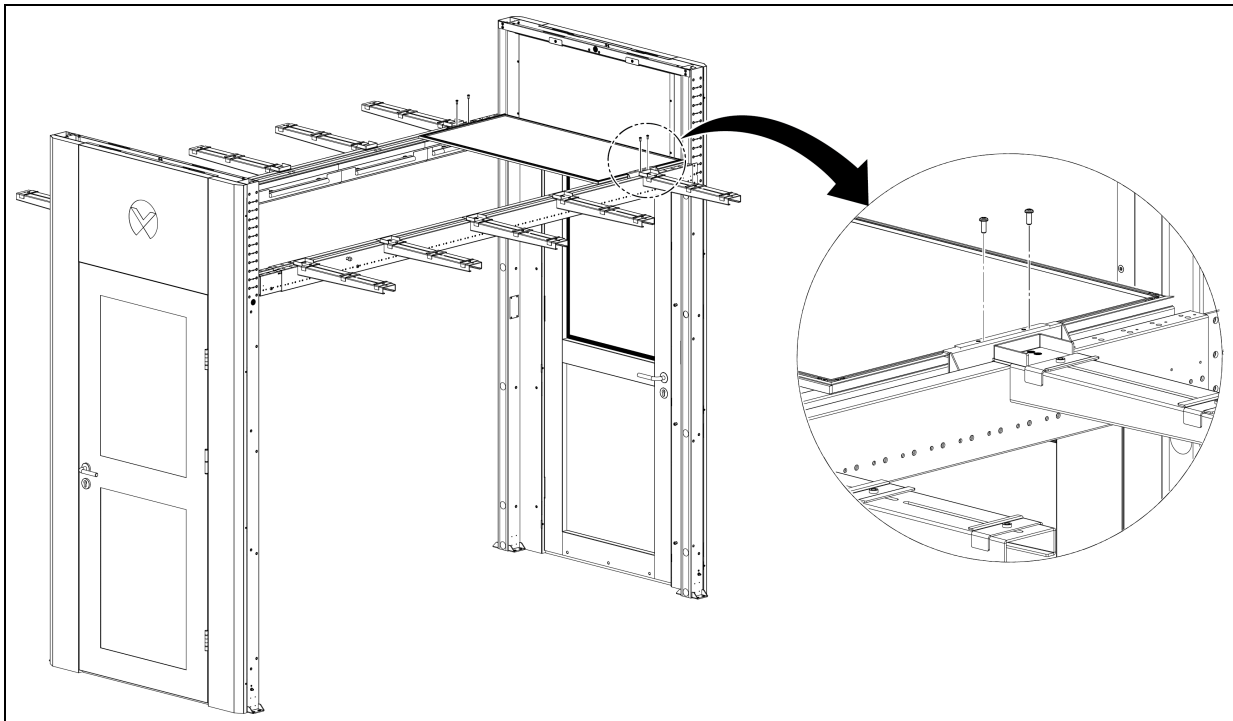
2. Secure the fixed roof using M6 self-tapping screws on the brackets.

### 4.3.25 Shrink Roof

1. Place the seal on the side of the shrink roof.

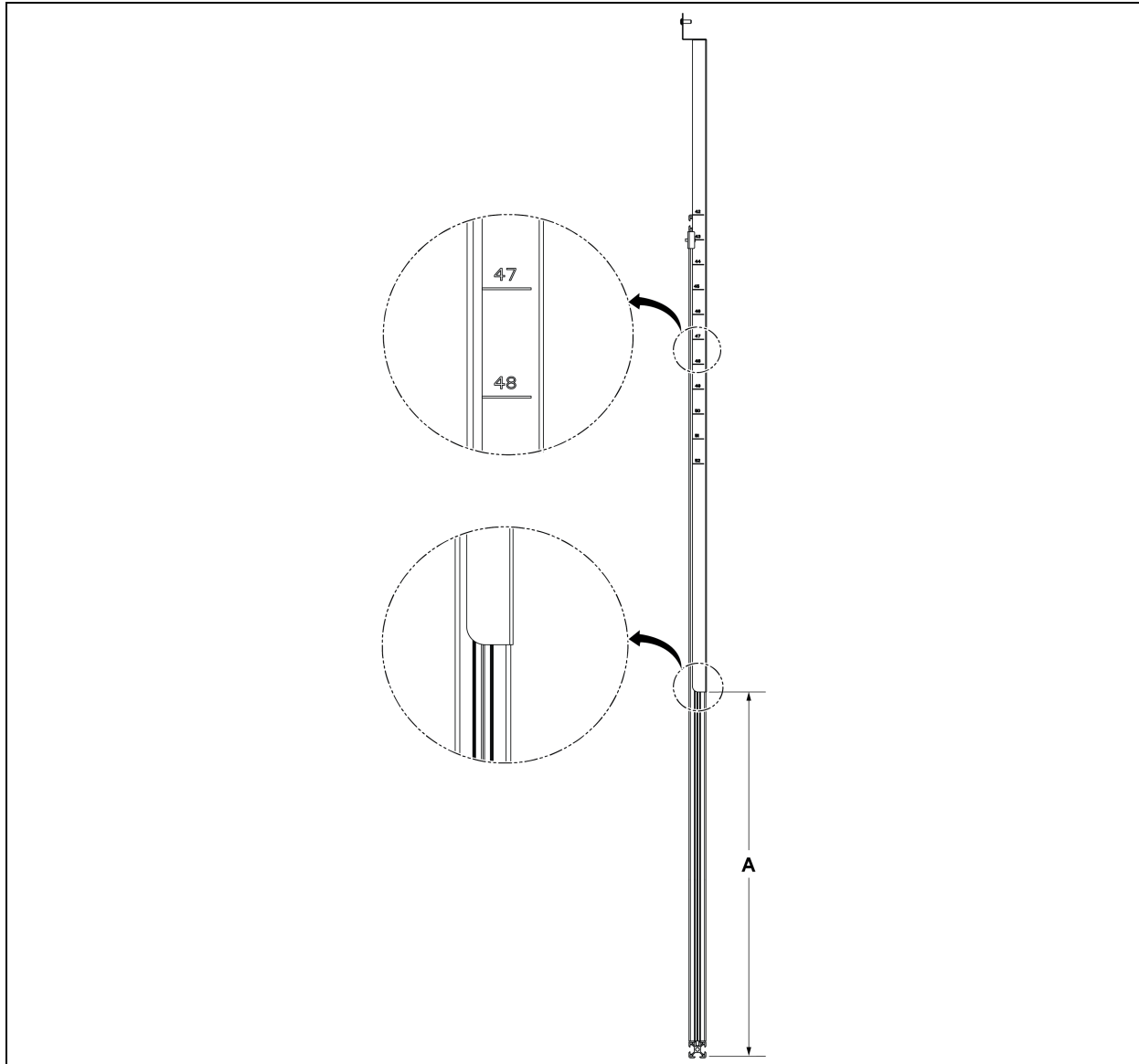


2. Secure the retention bracket on both sides of the shrink roof using M6 pan head screws.
3. Place the shrink roof on the extendable beam (the bracket is placed in the groove of the extendable beam) and secure the holder using M6 self-tapping screws.

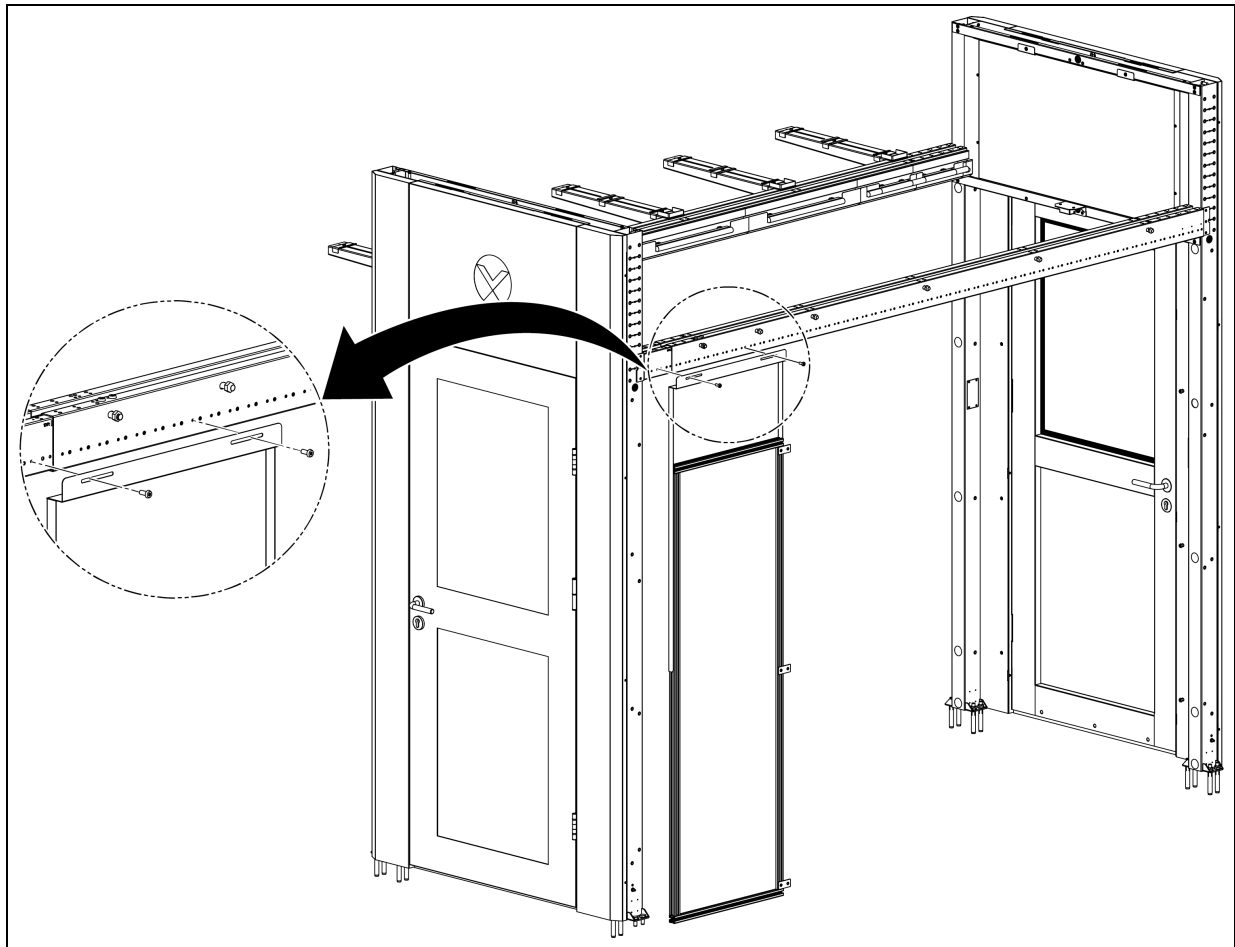


### 4.3.26 Blanking Panel

1. Slide the sheet metal on the upper side of the blanking panel to the desired position. This depends on the installation height of the extendable beam. Paste the sealed foam of blanking panel into area A. The length of the area A varies with the total height of the blanking panel.

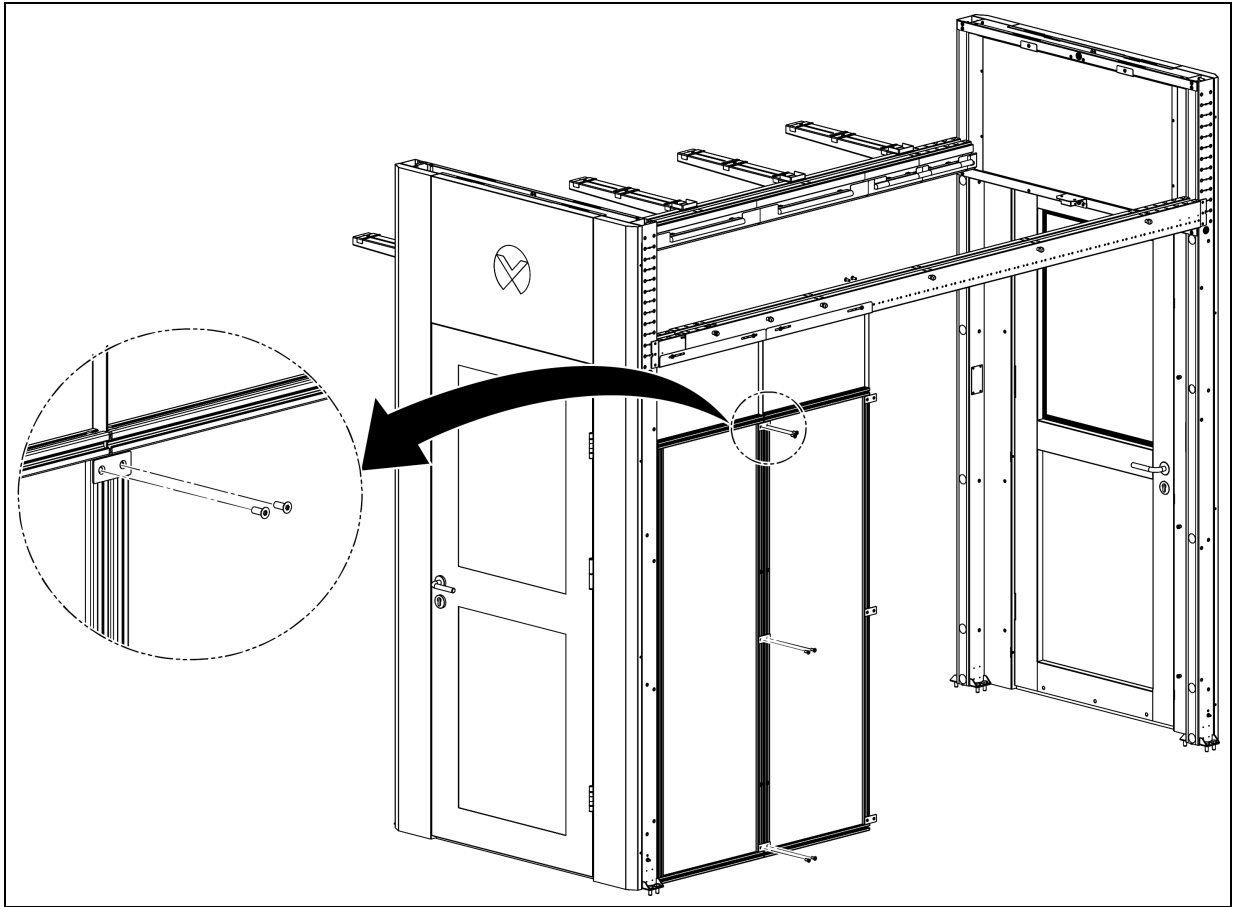


2. Use M6 self-tapping screws to secure the blanking panel on the extendable beam.



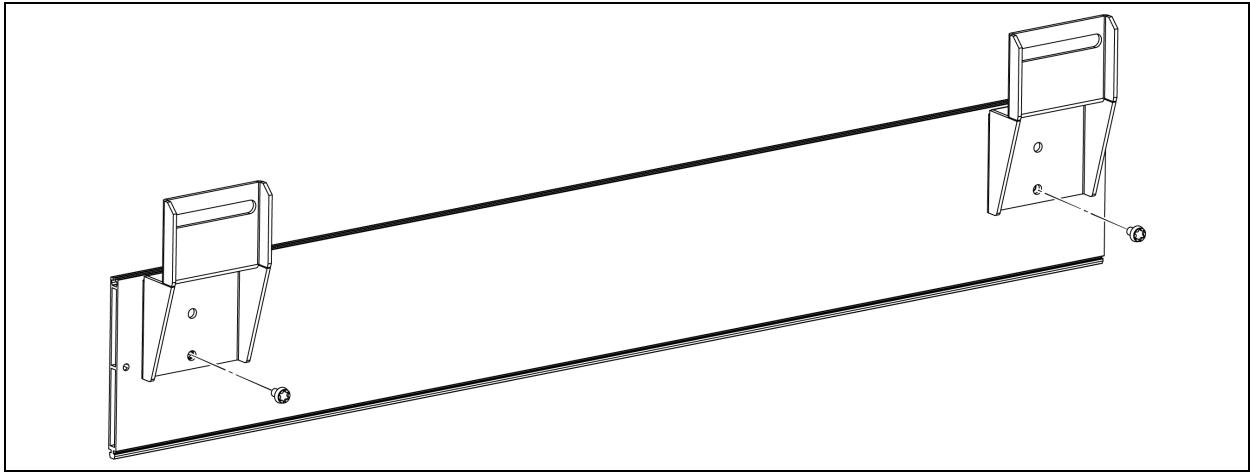


3. If the two blanking panels are adjacent, use connectors to connect the two panels from top to bottom. Each blanking panel is equipped with three connectors. Insert the spring nut into the chute and use M6 countersunk screws to lock the connecting sheet.

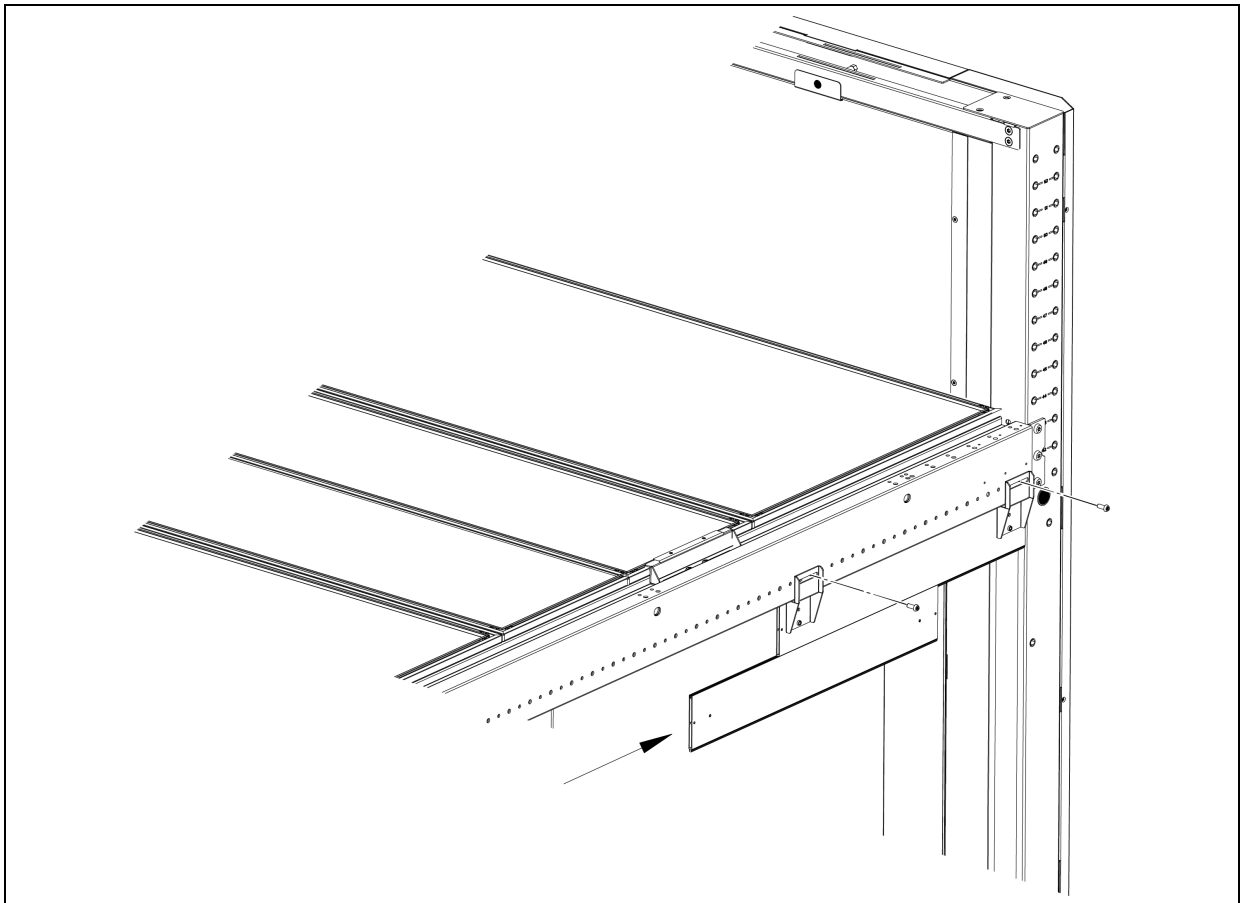


### 4.3.27 Height Adapter & Height Adapter Brush

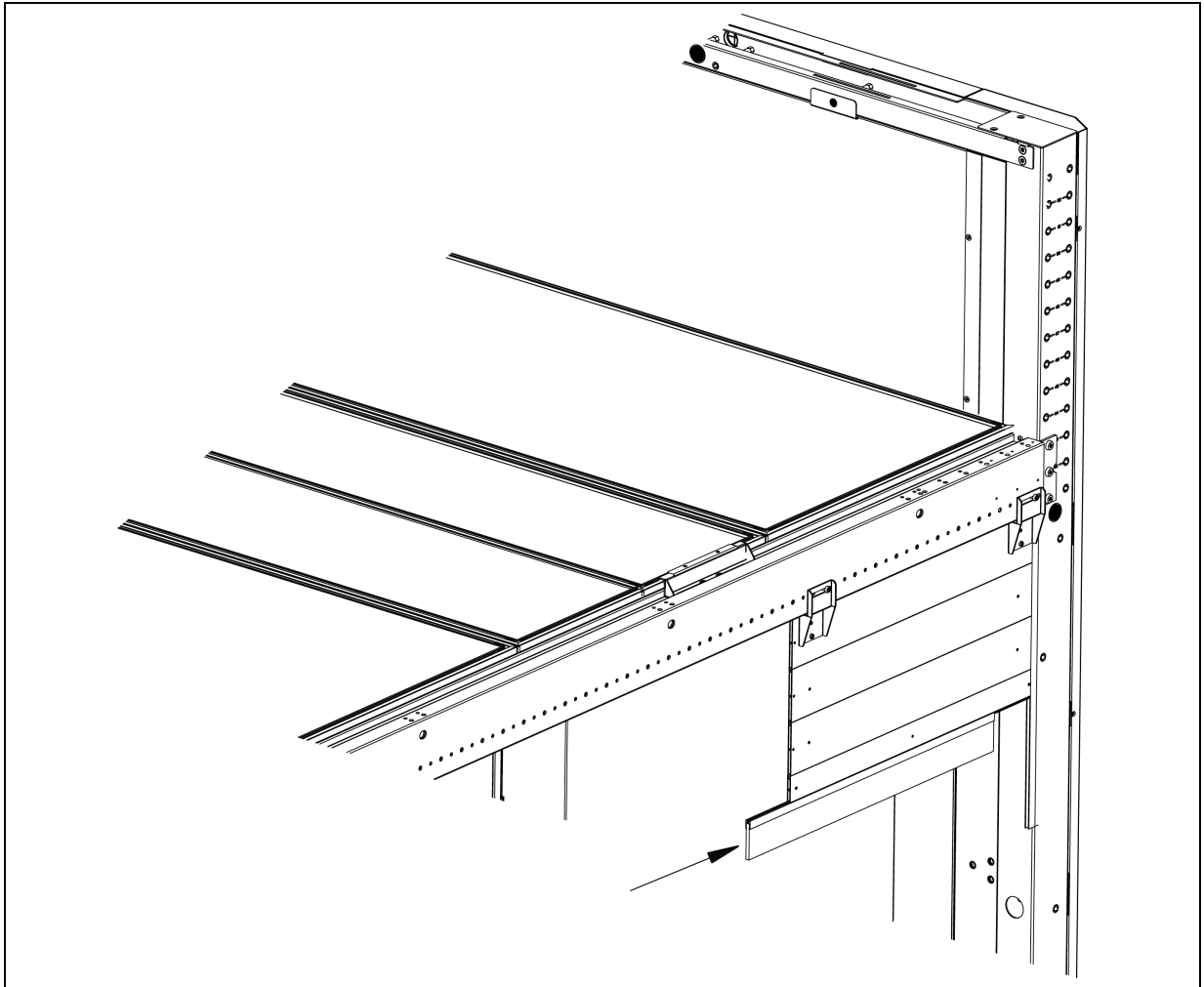
1. Attach the height adapter brackets to the height adapter using M4 pan head screws.



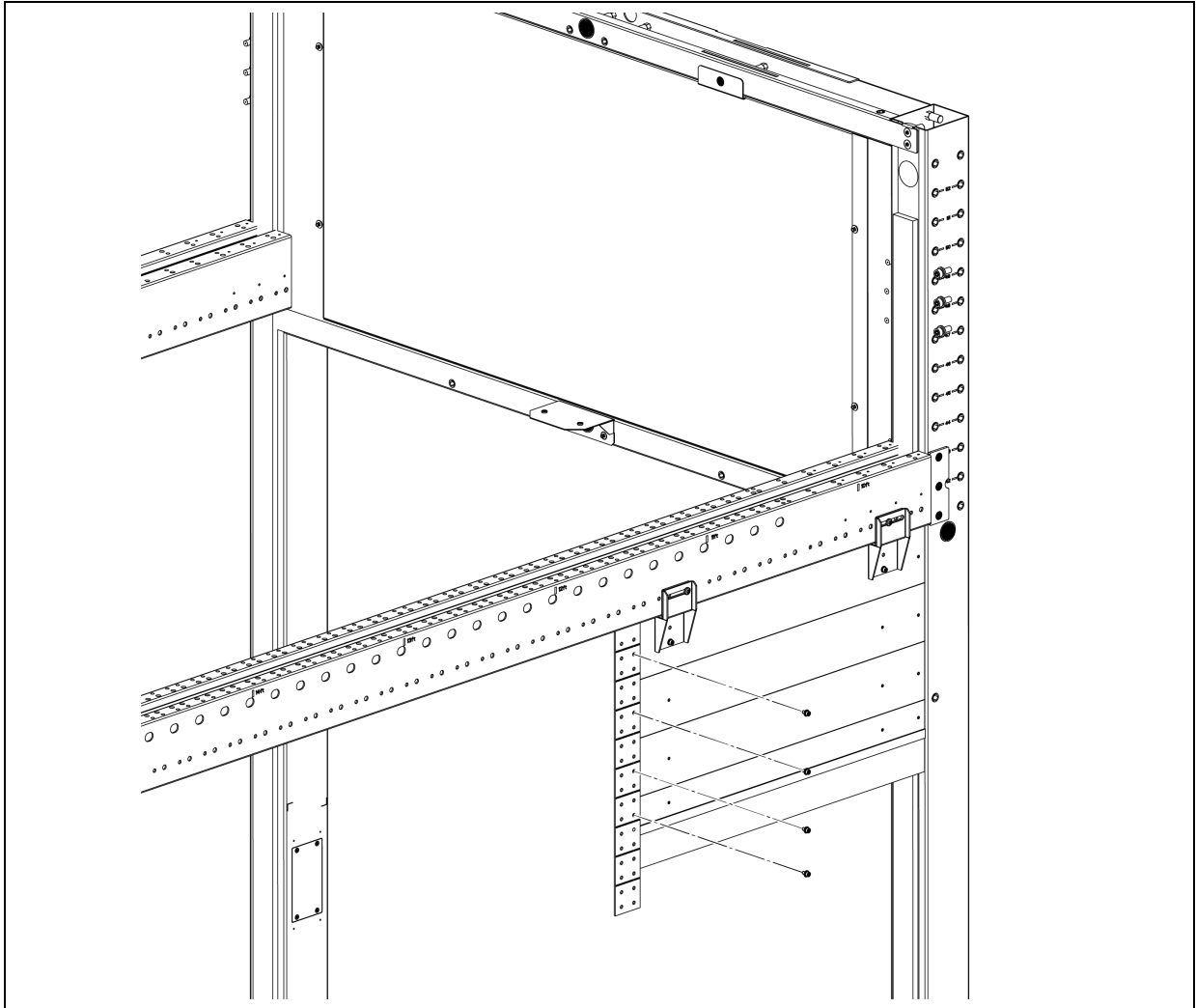
2. Use M6 self-tapping screws to attach the height adapter sub-assembly through the brackets of the height adapter onto the extendable beam. Insert the second height adapter panel onto the first height adapter panel. The bumps on the height adapter match the grooves.



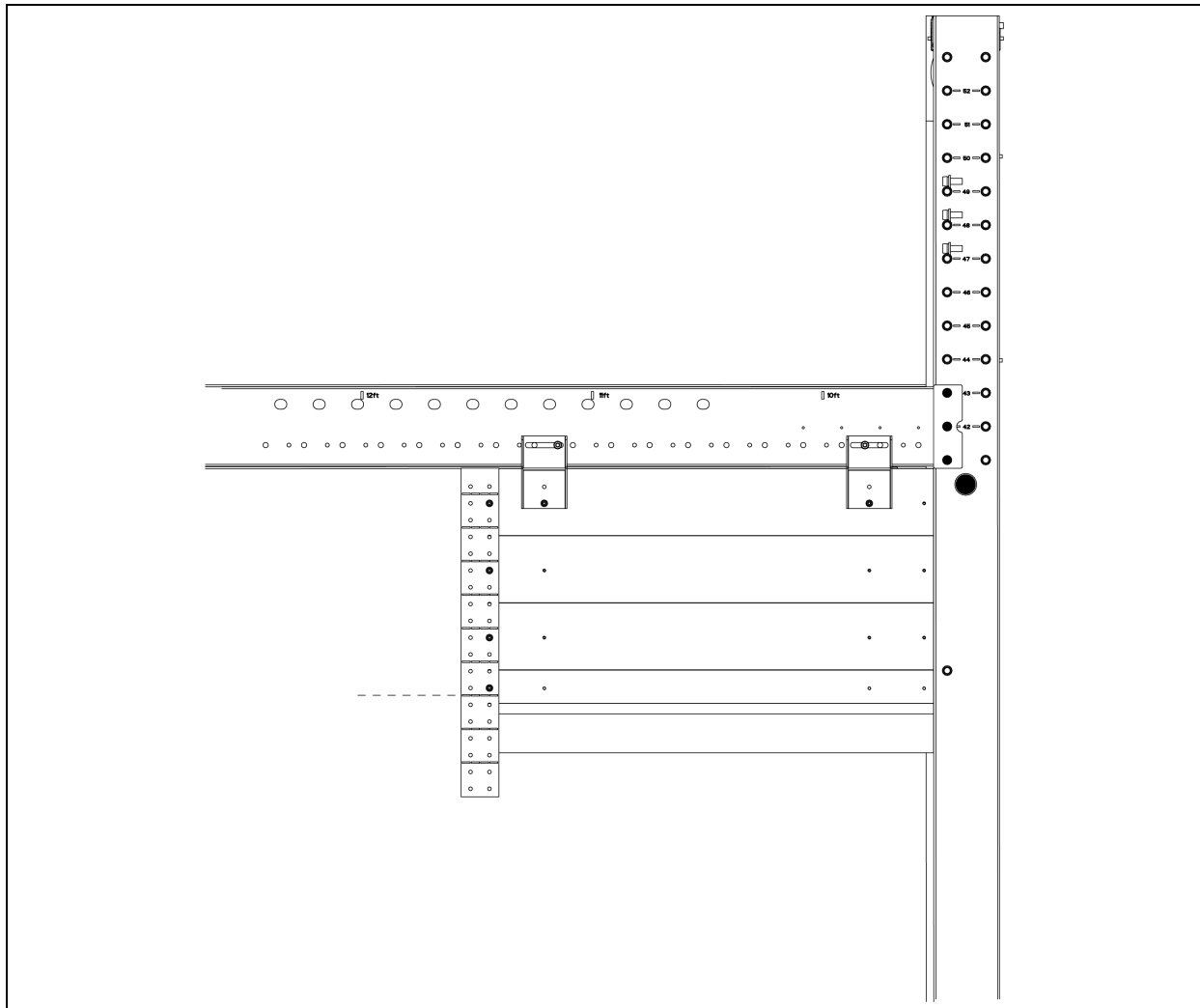
3. Install the required number of height adapter panels. Install the height adapter brush strip onto the end of the last adapter panel.



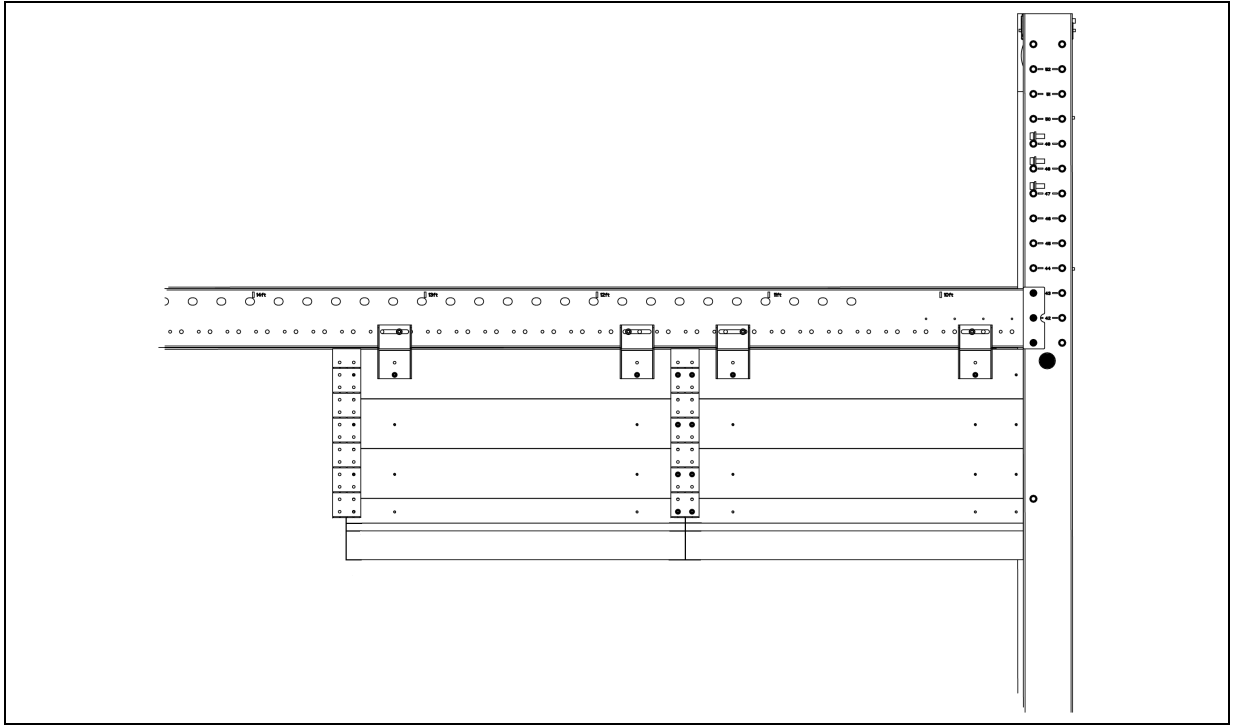
4. Secure the height adapter bracket to one side of the height adapter using M4 pan head screw.



5. The height adapter bracket needs to be cut according to the actual length of the adapter to meet the needs of all configurations.



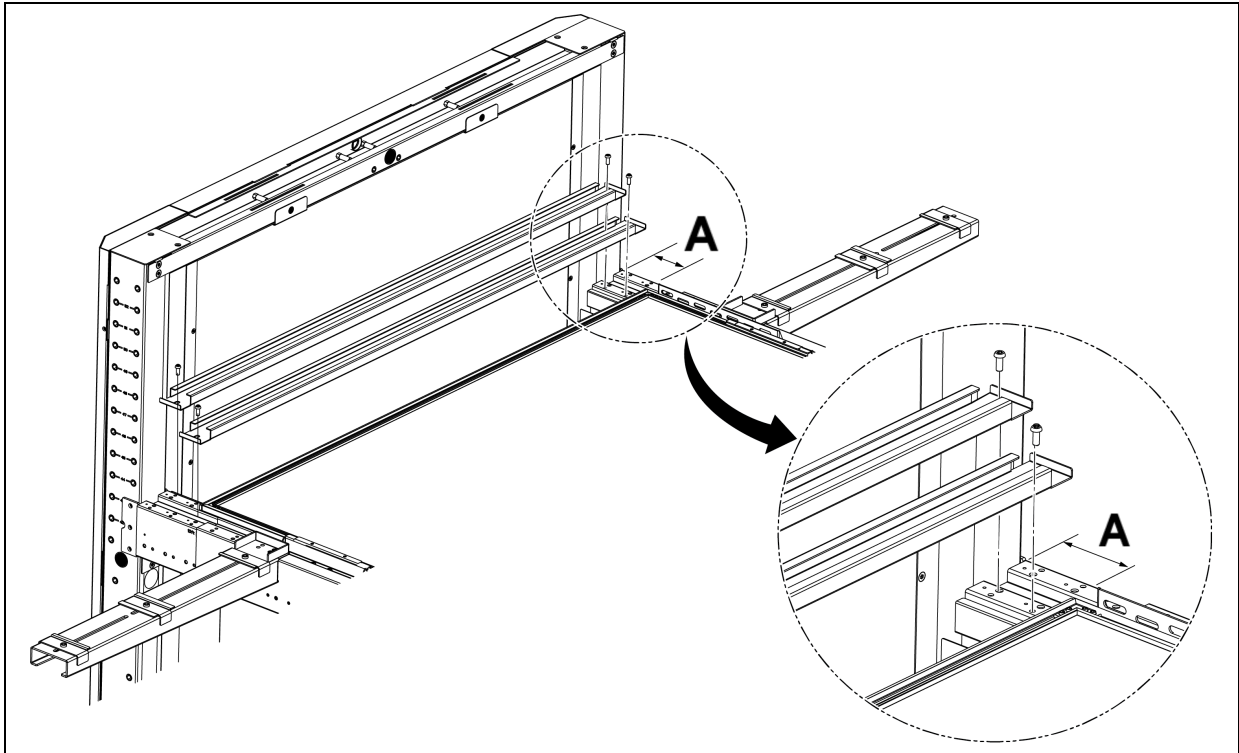
6. Install the remaining parts of the height adapters.



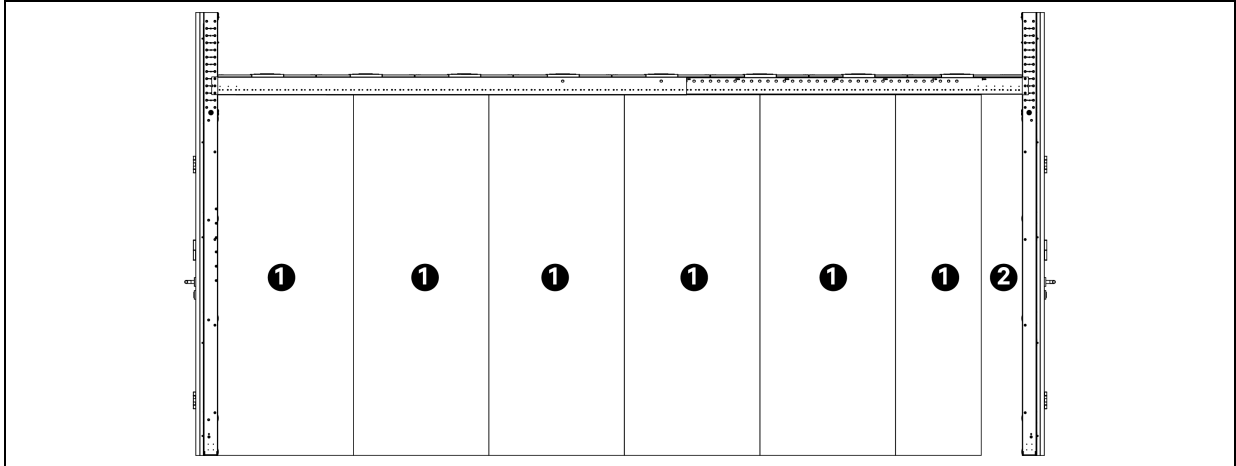
### 4.3.28 Solid Roof Filler

1. Use M6 self-tapping screws to secure the solid roof panels onto the extendable beam. If there is less than 304.8 mm (1 ft) end gap (A), fill the gap with solid roof filler panels. The width of each solid roof filler panel is 2 in. Calculate the end gap size and place the solid roof filler panels onto the extendable beam and snap in tightly.

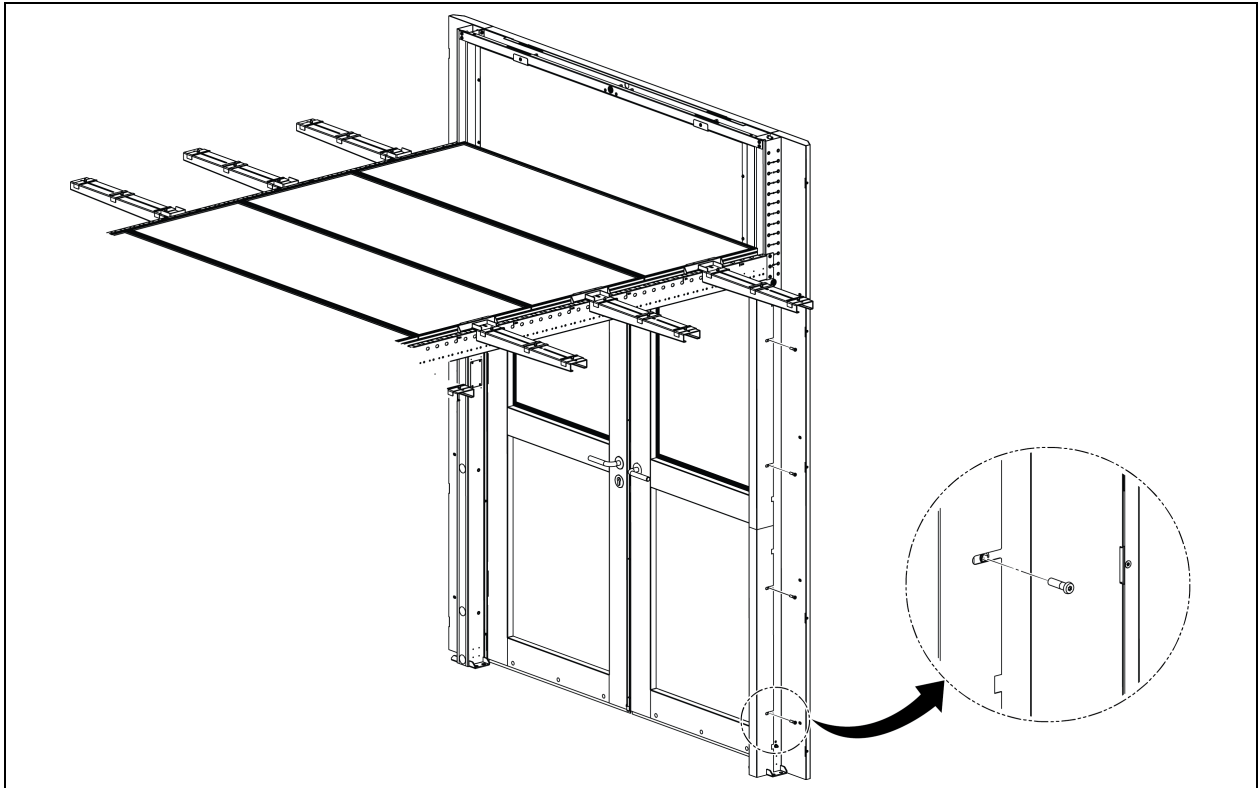
The end sealing bracket is used to fill the vertical gap at the back end of the aisle after the assembly of the cabinet and height adapters.



2. There may be gaps at the another end of the aisle. Remove the end sealing with the vertical post, install the end bracket, and adjust the end sealing position to accommodate the different gap fillings.

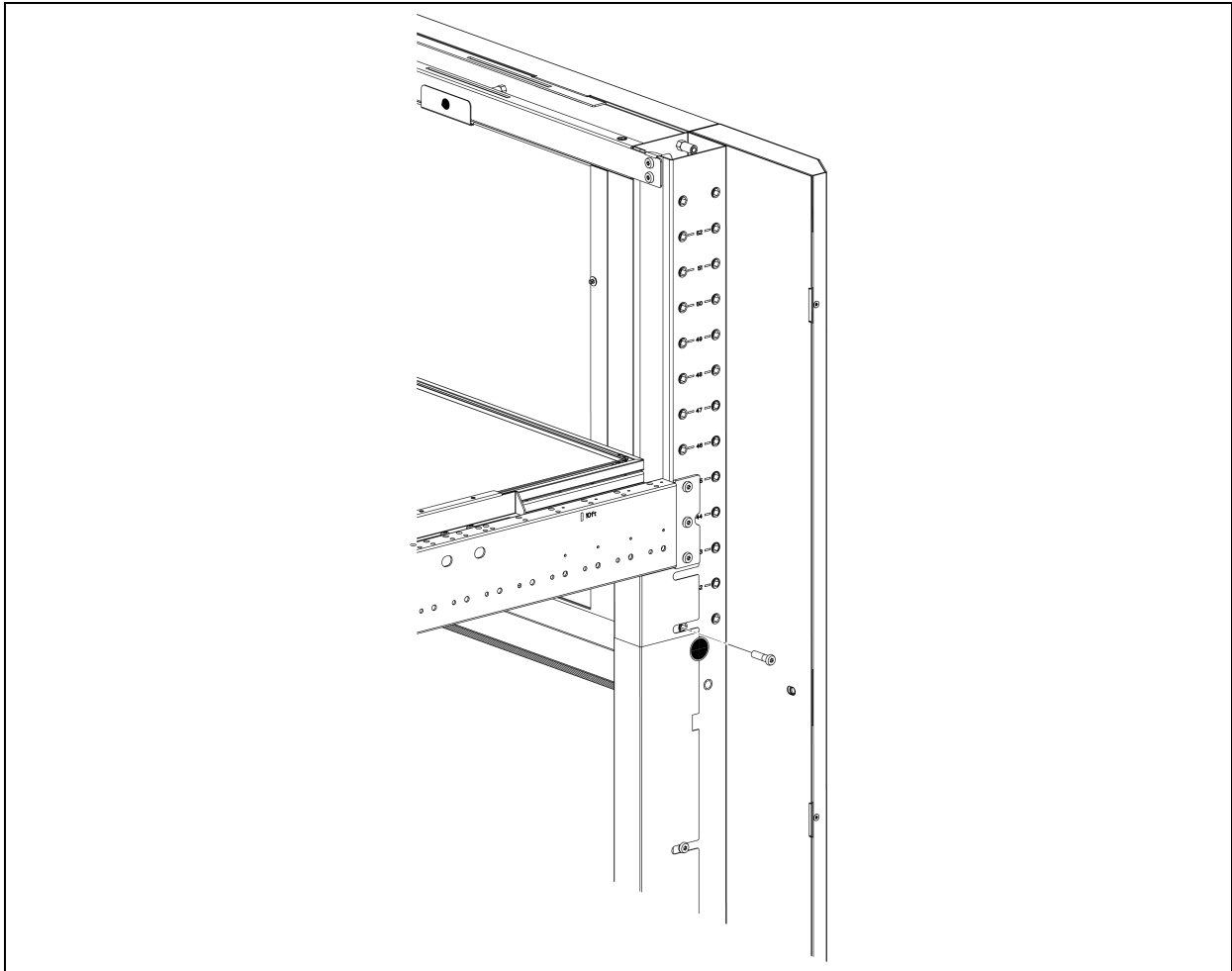


Item	Description
1	Rack and height adapter
2	Gap





3. If the installation height of the extendable beam is greater than 42U, it needs to be filled with the end bracketing of 1U and 2U. Each vertical post comes with 52U end bracket and 1U end sealing, which can be combined to meet the needs of different extendable beam mounting heights.



4. Apply foam gasket to the end surface of the end sealing bracket in contact with the cabinet.

### 4.3.29 Vertical Duct

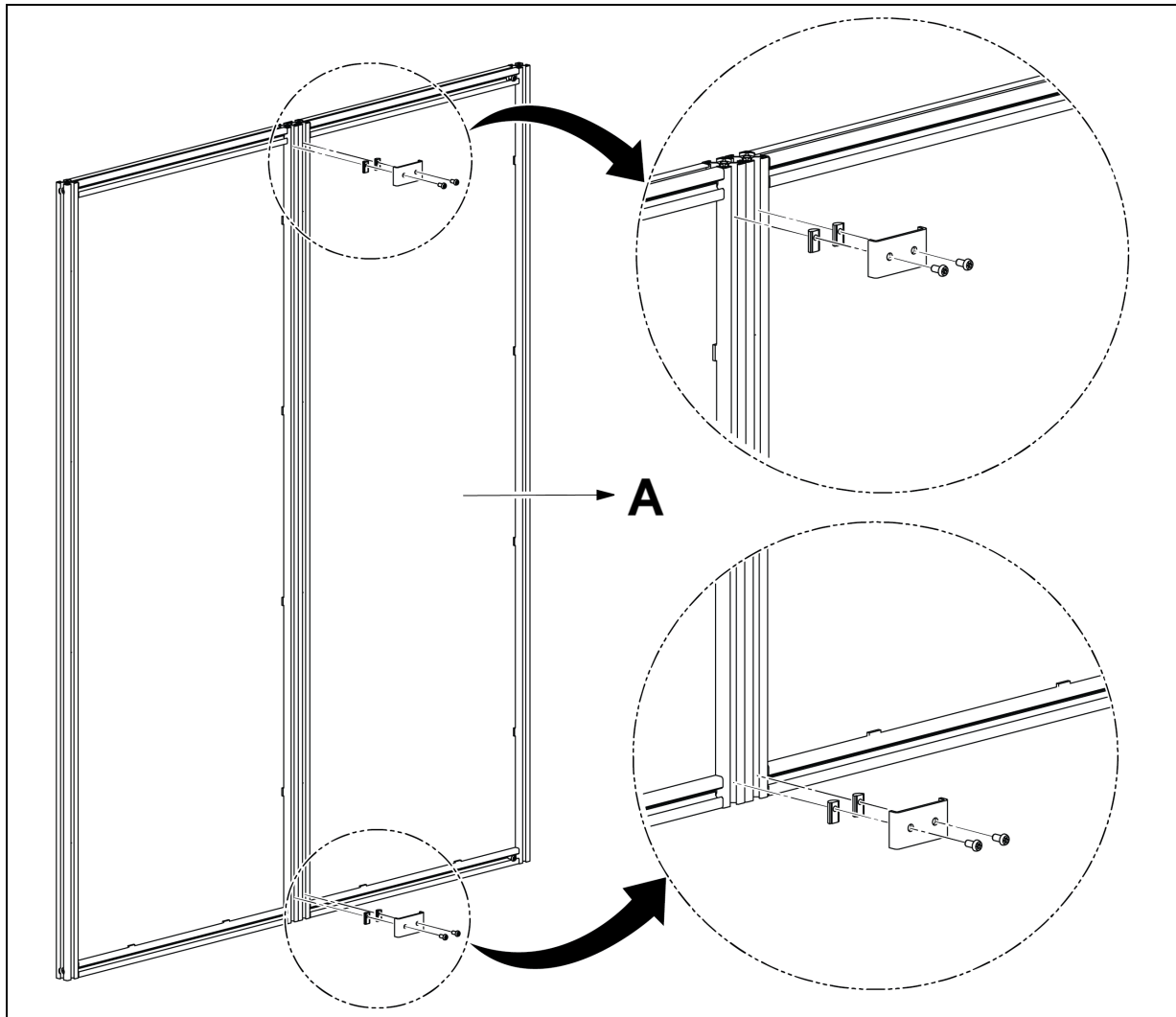
The height of the vertical panel is 304.8 mm (1 ft.), 609.6 mm (2 ft.), or 1524 mm (5 ft.). The width of the vertical panel is 304.8 mm (1 ft.), 609.6 mm (2 ft.) 914.4 mm (3 ft.), or 1219.2 mm (4 ft.). The 304.8 mm (1 ft.) and 609.6 mm (2 ft.) wide panels are used for the length direction of the aisle, while the 914.4 mm (3 ft.) and 1219.2 mm (4 ft.) wide panels are used for the width direction of the aisle.

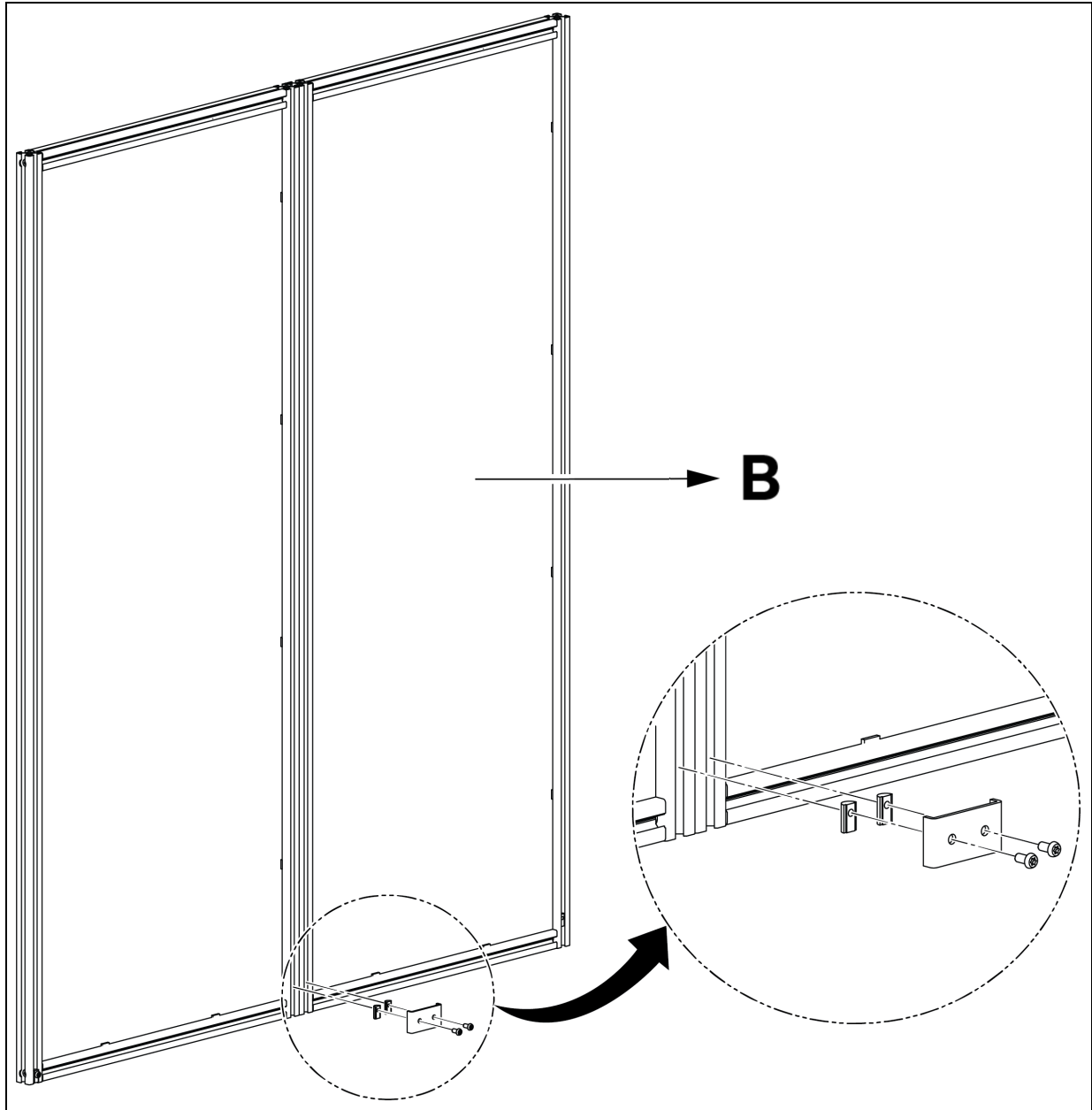
It is recommended to assemble the duct first and then hoist the duct on top of the aisle. The maximum height reached by the vertical duct is 4572 mm (15 ft) (from the ground level).

#### Single Layer Duct

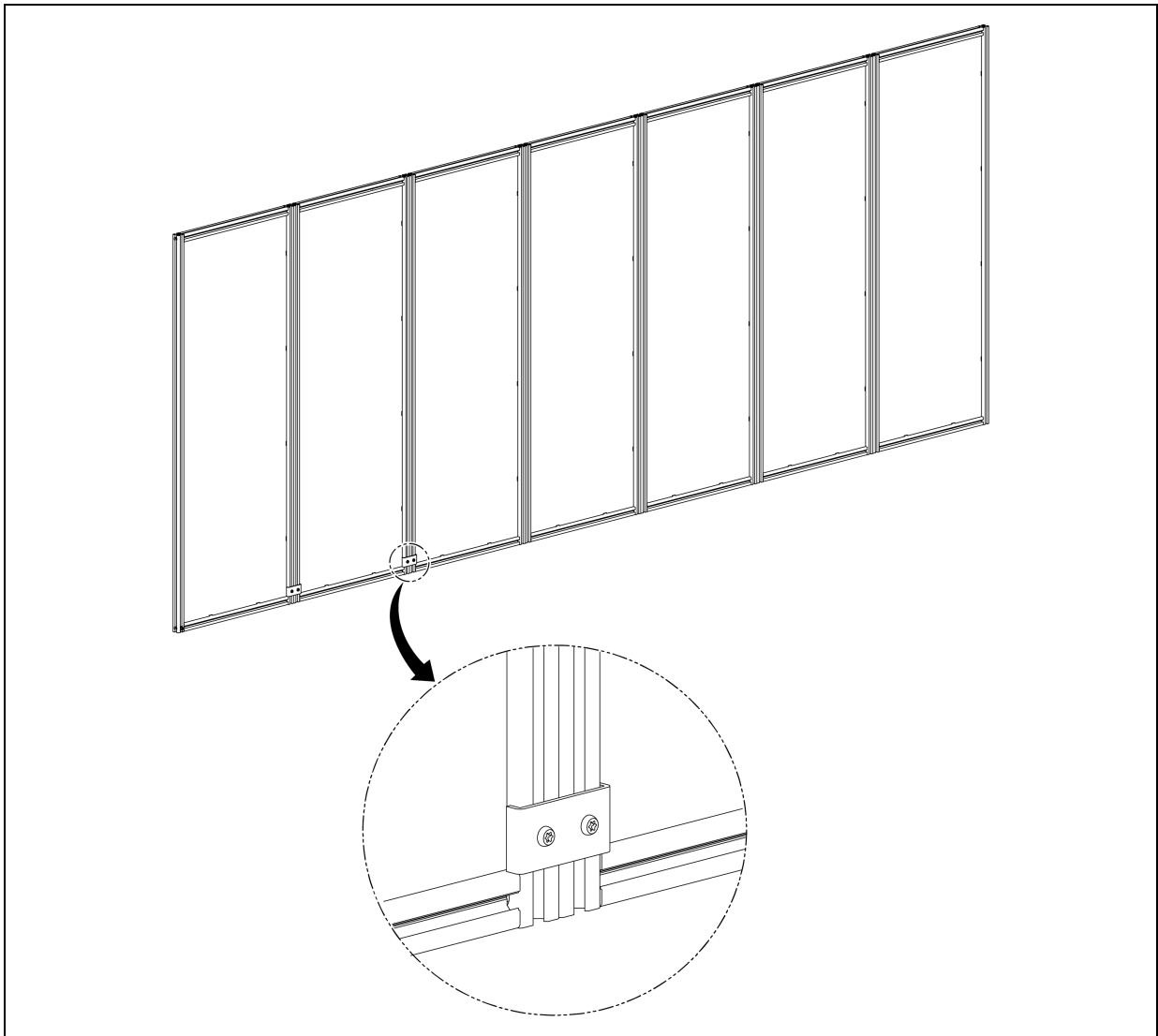
1. Connect two vertical panels with baying kit 1. In the interior side of the panel (indicated as A), install two baying kits with one at the upper edge and the other at the lower edge. In the exterior side (indicated as B), install one baying kit at the lower edge.

To install each baying kit, insert two floating nuts into the slots and secure the baying kit with two pan head screws.

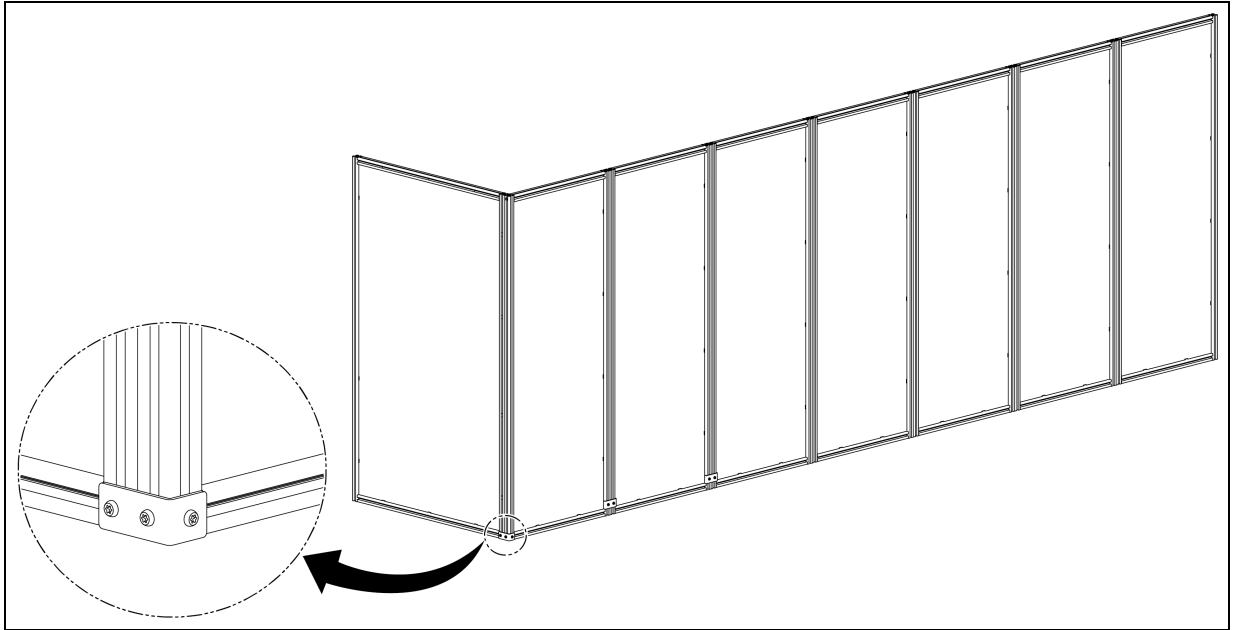




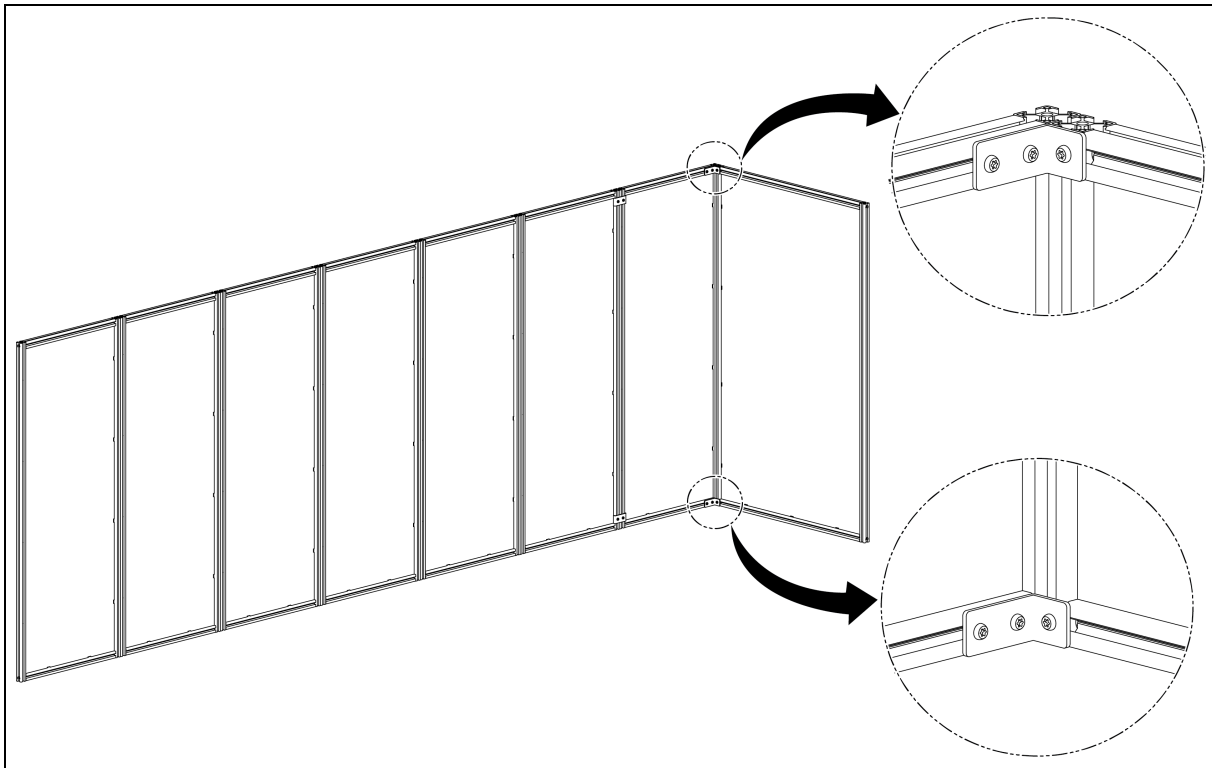
2. Connect the rest of the vertical panels.



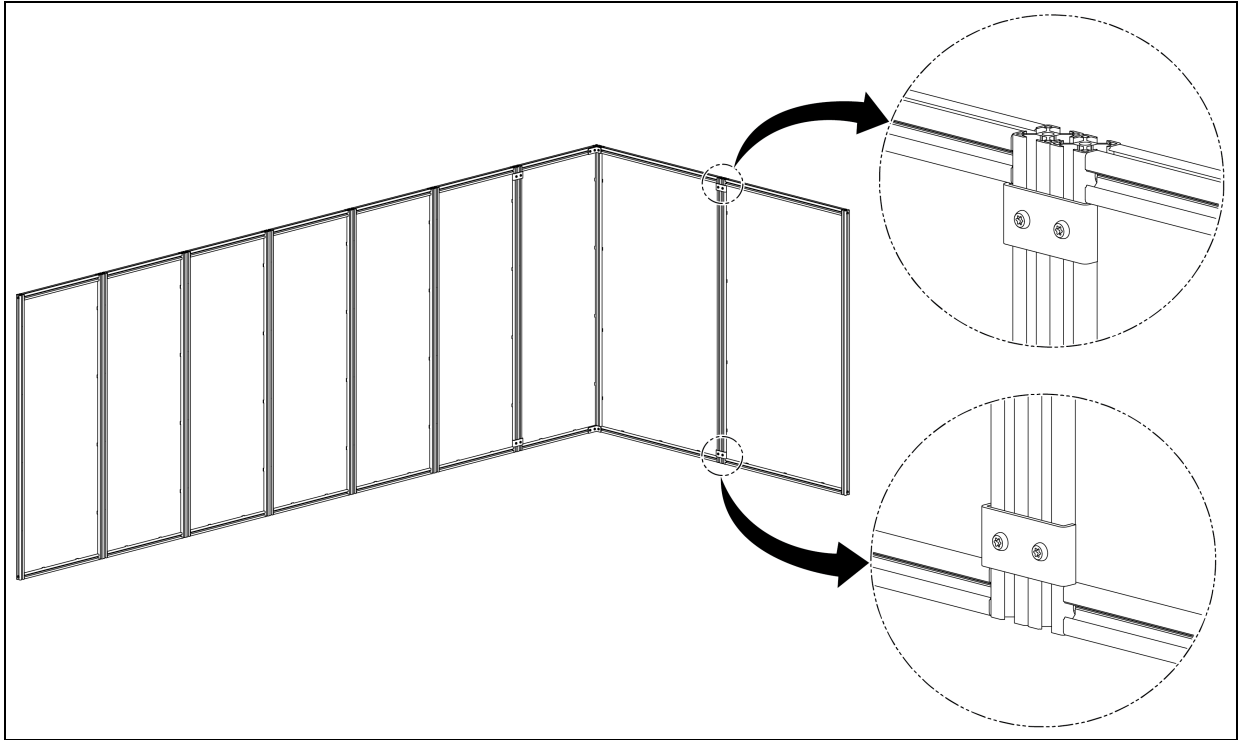
3. Use the L-type baying kit 2 to secure the vertical panel in the width direction.



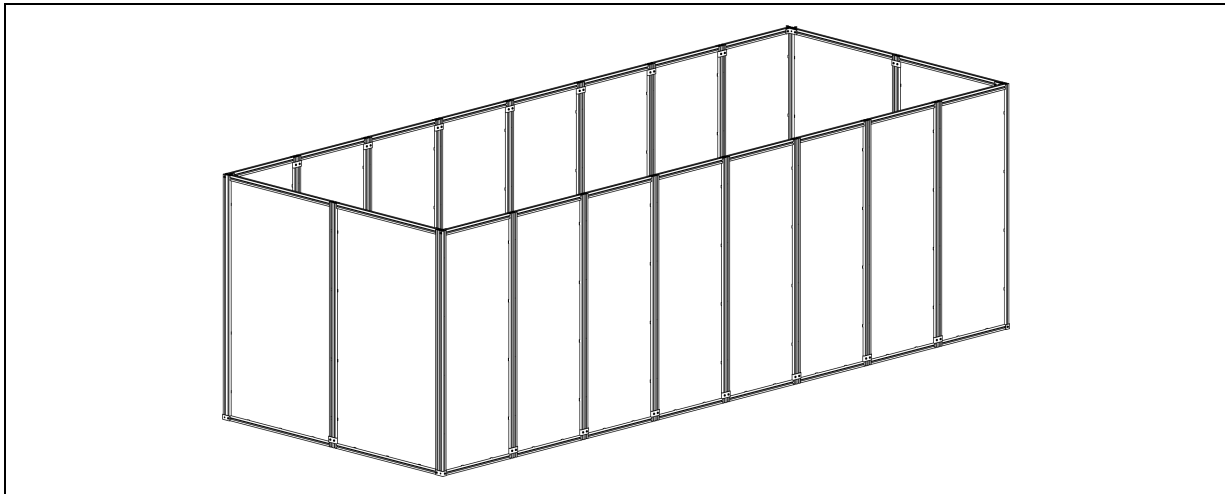
4. Secure the L-type baying kit 2 inside the vertical duct.



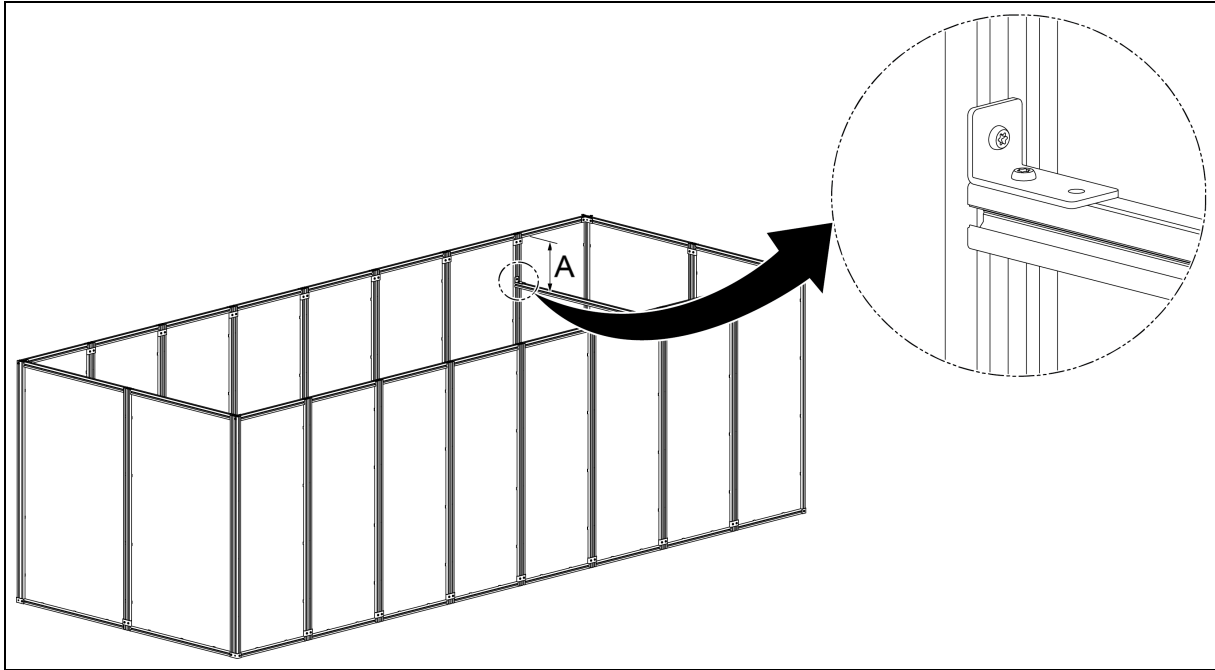
5. The illustration below shows two 914.4 mm (3 ft) wide vertical panels installed in the aisle width direction.



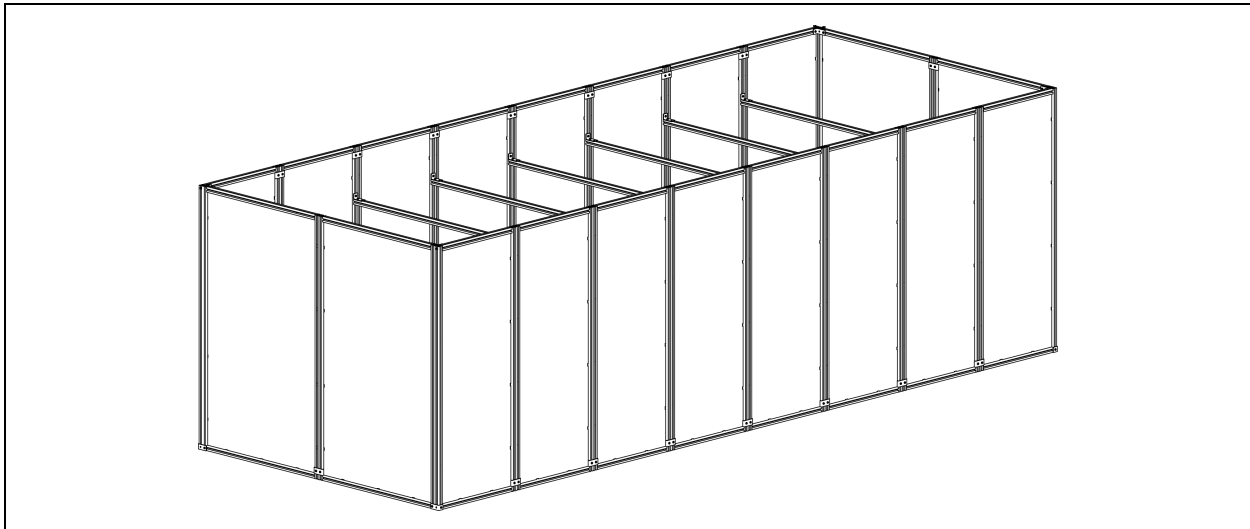
6. Connect the rest of the vertical panels.



7. Install the fixed beam at the required height (A = 304.8 mm (1 ft)).



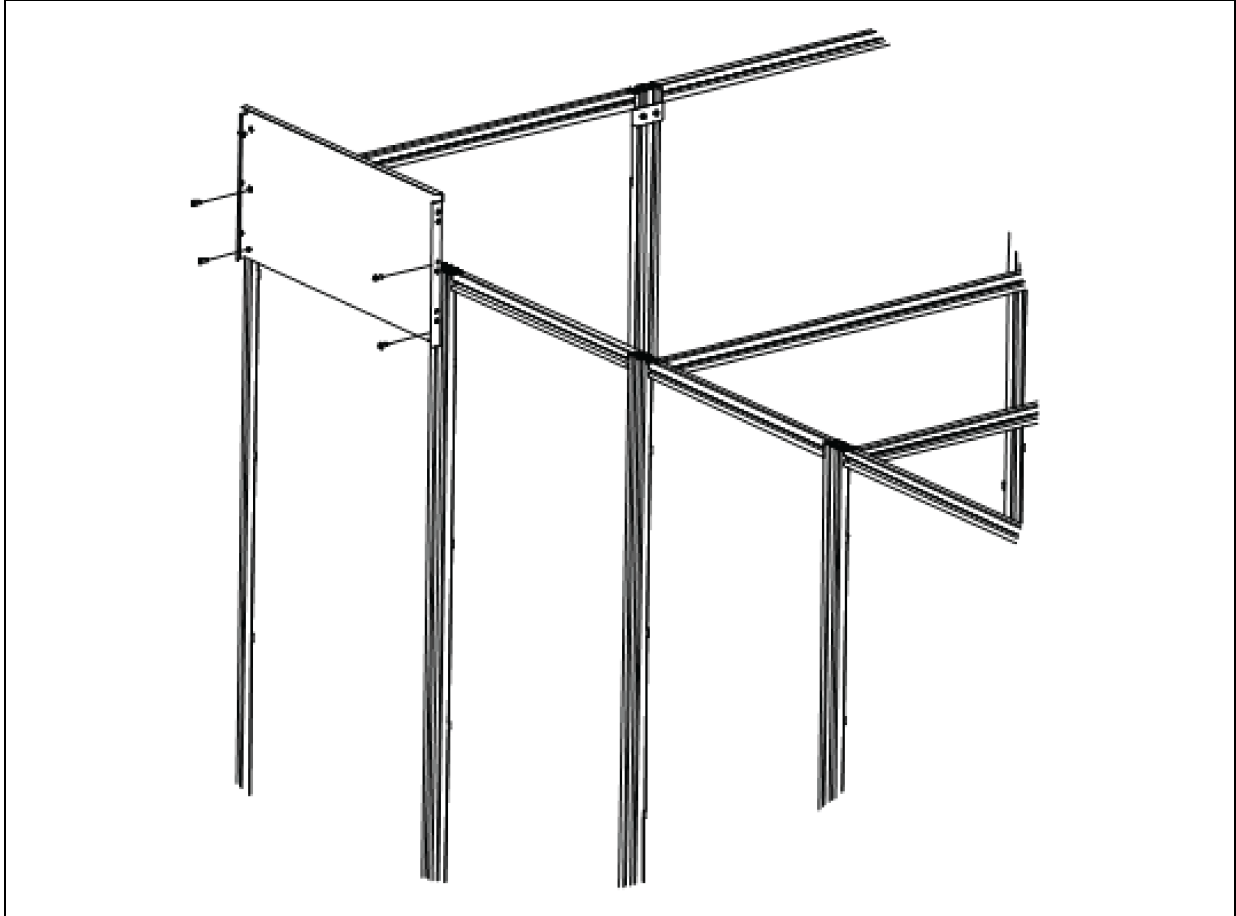
8. Install the rest of the beams.



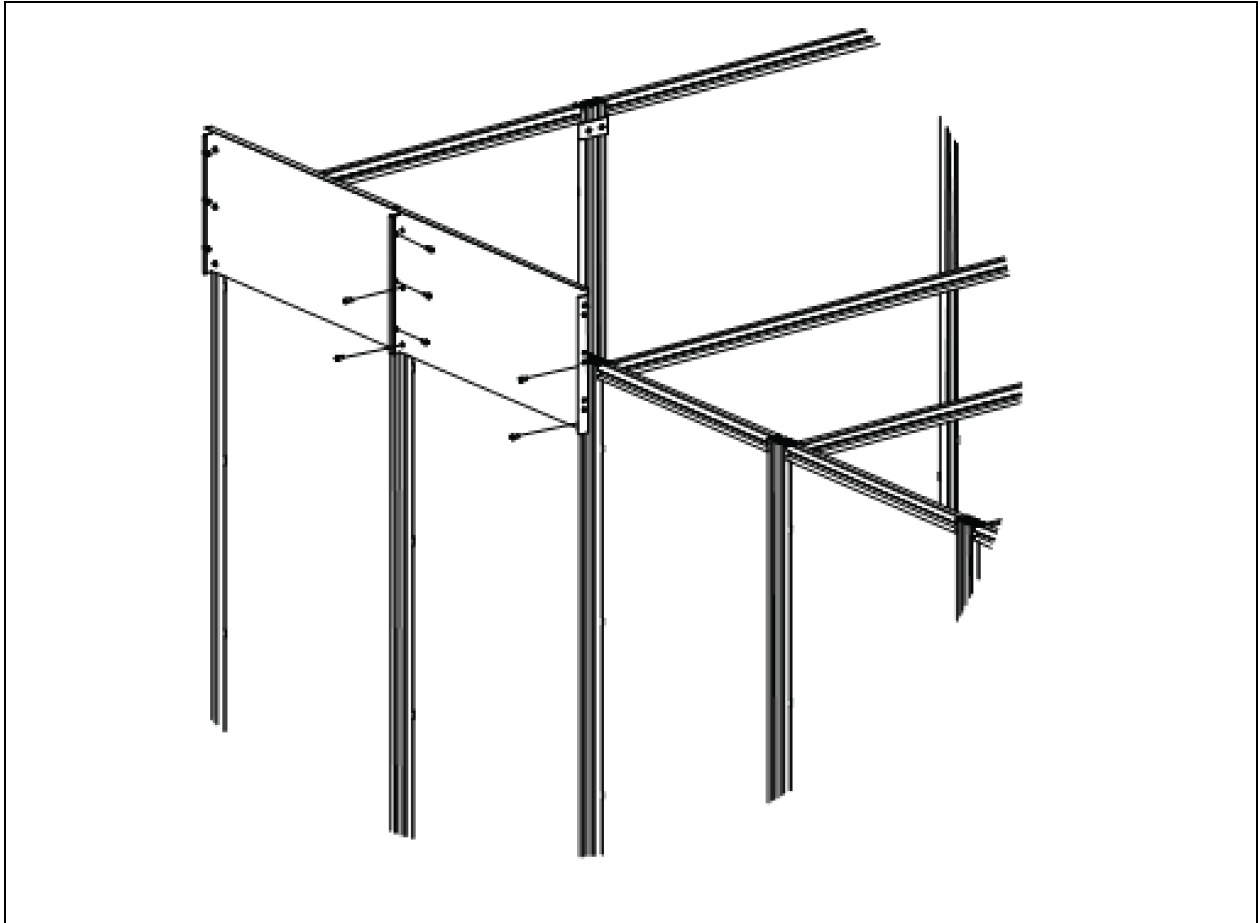


9. Secure the sliding panel on the aluminum frame of the vertical panel using floating nuts and M6 pan head screws.

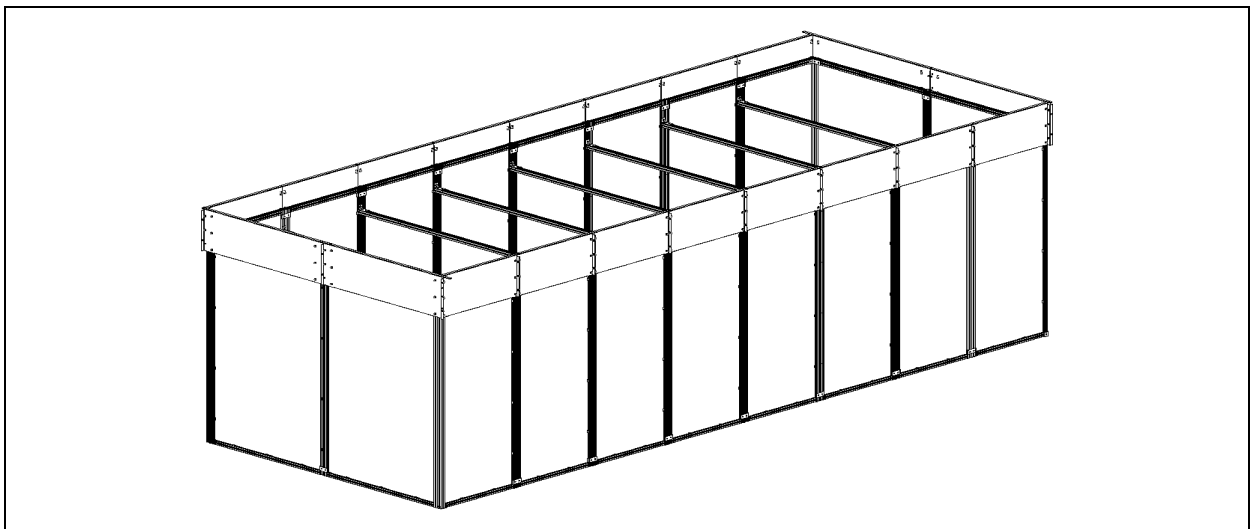
The sliding panel has a height of 304.8 mm (1 ft.) to make up for a gap of less than 304.8 mm (1 ft) between the vertical duct and the ceiling.



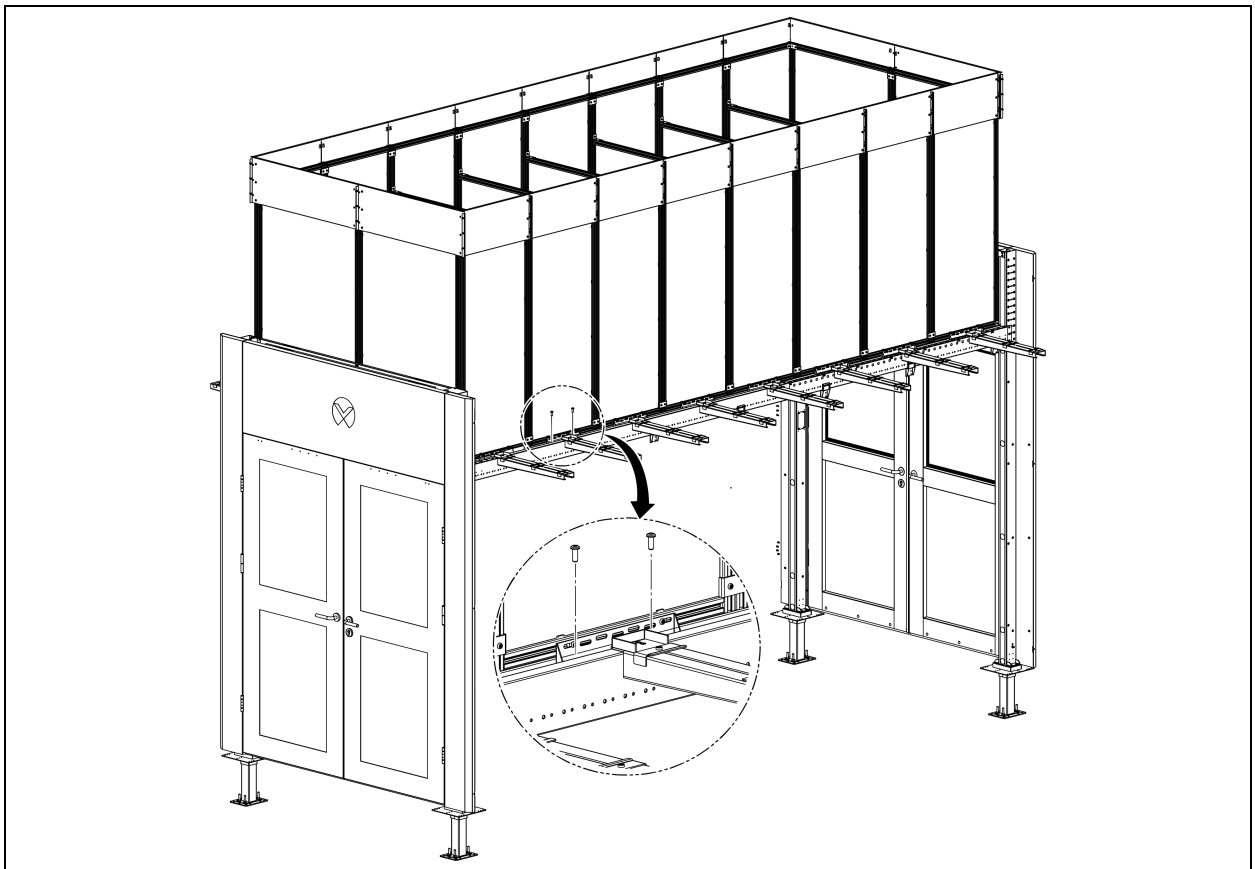
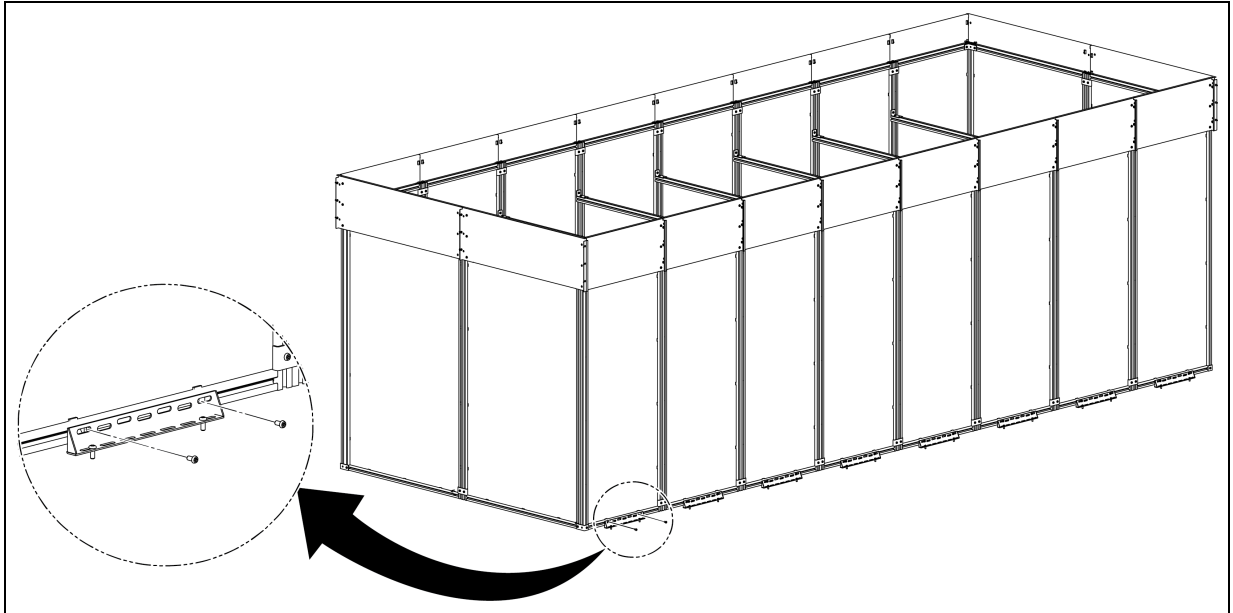
10. Secure the second sliding panel and secure the two adjacent sliding panels with M6 pan head screw.



11. Fix the rest of the slidings. Attach a sealed foam on the top of the sliding.

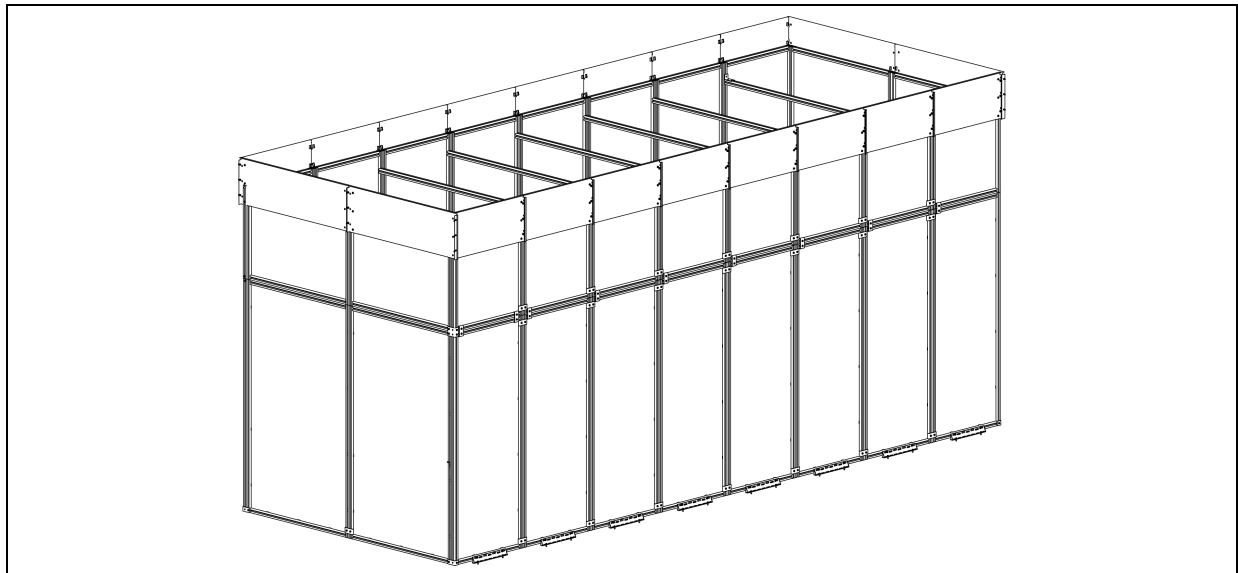
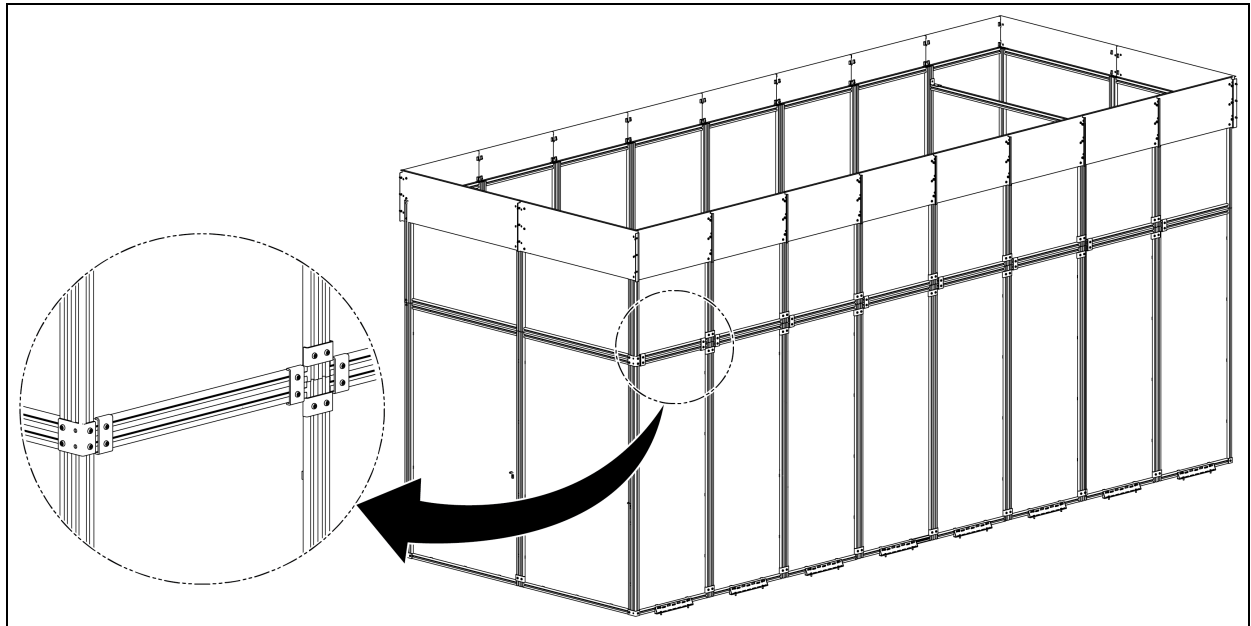


12. Install the assembled vertical duct on the frame using the lifting equipment.



### Multi-Layered Duct

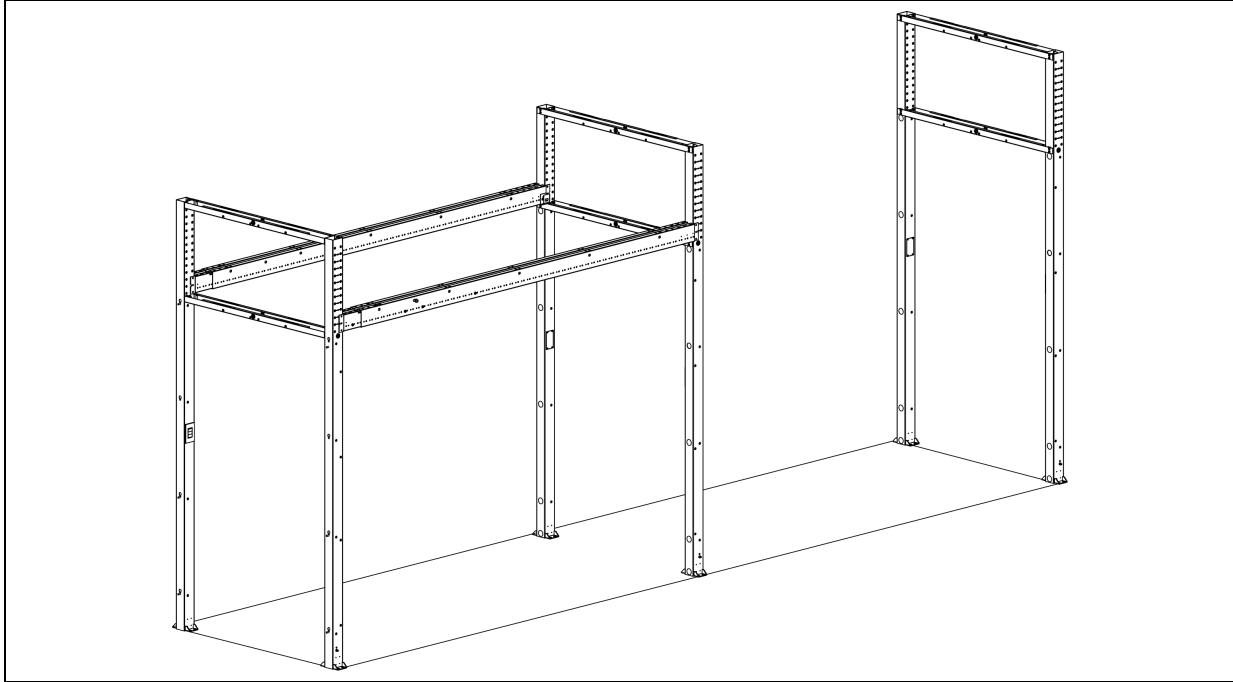
Install multi-layered duct by referring to the procedures described in Single-Layered Duct. Connect the two layers using baying kit 3.



### 4.3.30 Pod Extensions

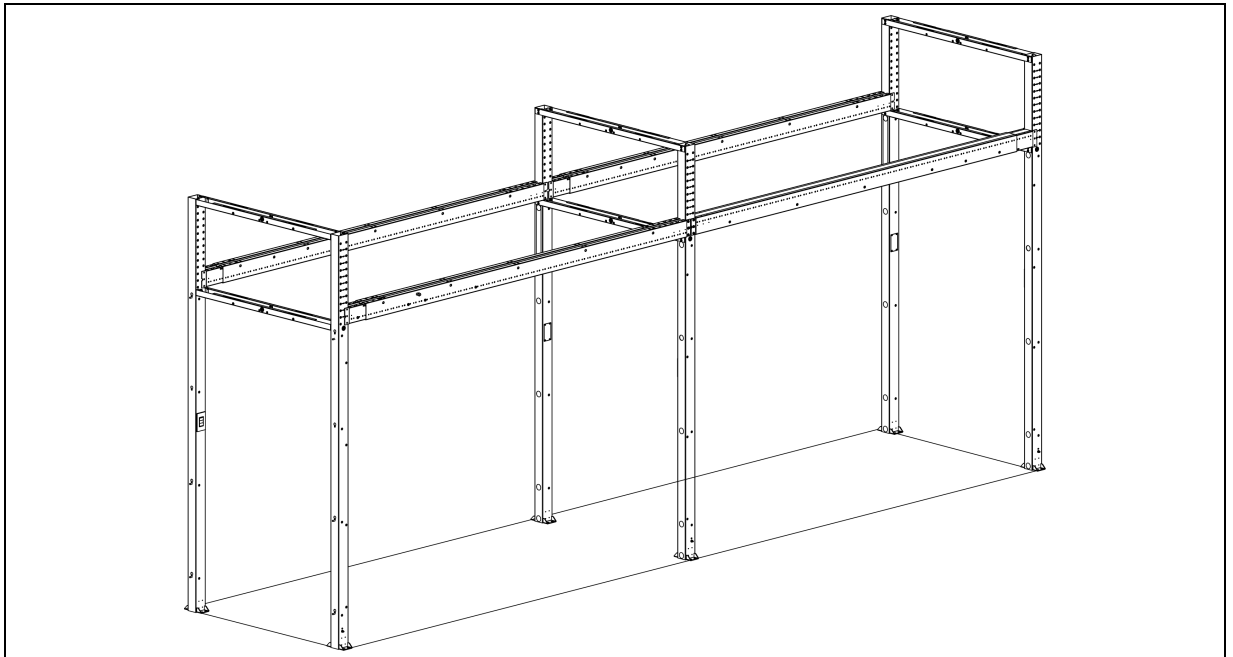
#### Extending a Pod

1. Determine the length and height of the extended aisle and install the vertical post and width connector.



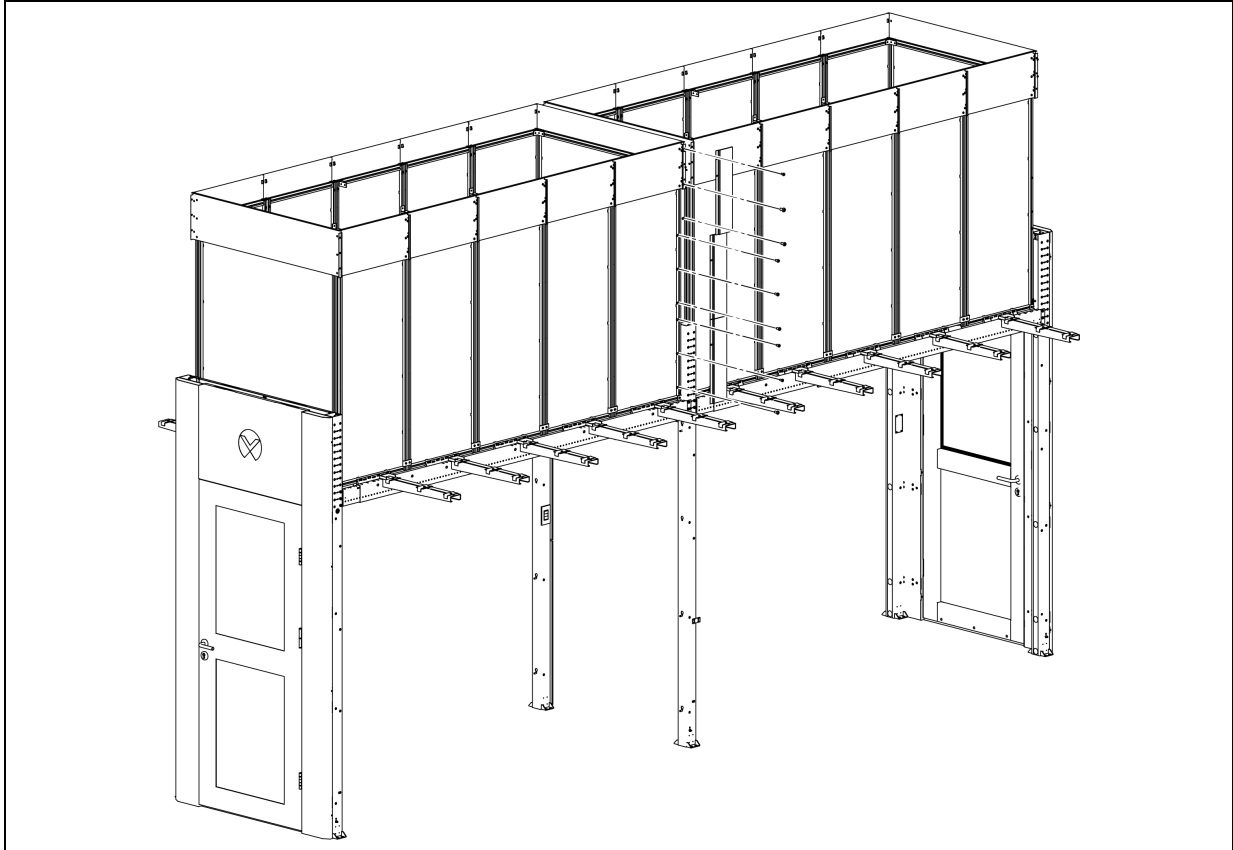
2. Install the extendable beam according to the instructions in [Extendable Beam](#) on page 71.

The aisle length and aisle height of the extended aisle can be adjusted. The number of aisle extensions is based on customer site conditions.



#### Installing the decorative brush

There is a gap between the two adjacent vertical ducts of the extended aisle, which does not affect the system function. You can use the decorative brushes to fill in the gap. The height of the decorative brush is 304.8 mm (1 ft) or 609.6 mm (2 ft). The installed decorative brushes should be 304.8 mm (1 ft) higher than the vertical duct. You can trim the decorative brush to avoid its interference with the post.



**Table 2.3 Combination of Decorative Brushes**

Height of Vertical Duct	Combination of Vertical Ducts	Combination of Decorative Brushes	Where to install
609.6 mm (2 ft)	609.6 mm (2 ft)	304.8 mm (1 ft) + 609.6 mm (2 ft)	<ul style="list-style-type: none"> <li>• 304.8 mm (1 ft) on vertical duct frame</li> <li>• 609.6 mm (2 ft) on duct sliding</li> </ul>
914.4 mm (3 ft)	609.6 mm (2 ft) + 304.8 mm (1 ft)	609.6 mm (2 ft) + 609.6 mm (2 ft)	<ul style="list-style-type: none"> <li>• 609.6 mm (2 ft) on vertical duct frame</li> <li>• 609.6 mm (2 ft) on duct sliding</li> </ul>
1219.2 mm (4 ft)	609.6 mm (2 ft) + 609.6 mm (2 ft)	609.6 mm (2 ft) + 304.8 mm (1 ft) + 609.6 mm (2 ft)	<ul style="list-style-type: none"> <li>• 609.6 mm (2 ft) + 304.8 mm (1 ft) on vertical duct frame</li> <li>• 609.6 mm (2 ft) on duct sliding</li> </ul>
1524 mm (5 ft)	1524 mm (5 ft)	609.6 mm (2 ft) + 609.6 mm (2 ft) + 609.6 mm (2 ft)	<ul style="list-style-type: none"> <li>• 609.6 mm (2 ft) + 609.6 mm (2 ft) on vertical duct frame</li> <li>• 609.6 mm (2 ft) on duct sliding</li> </ul>
1828.8 mm (6 ft)	1524 mm (5 ft) + 304.8 mm (1 ft)	1524 mm (5 ft) + 609.6 mm (2 ft)	<ul style="list-style-type: none"> <li>• 1524 mm (5 ft) on vertical</li> </ul>

**Table 2.3 Combination of Decorative Brushes (continued)**

Height of Vertical Duct	Combination of Vertical Ducts	Combination of Decorative Brushes	Where to install
	ft)		duct frame <ul style="list-style-type: none"> <li>• 609.6 mm (2 ft) on duct sliding</li> </ul>
2133.6 mm (7 ft)	1524 mm (5 ft) + 609.6 mm (2 ft)	1524 mm (5 ft) + 304.8 mm (1 ft) + 609.6 mm (2 ft)	<ul style="list-style-type: none"> <li>• 1524 mm (5 ft) + 304.8 mm (1 ft) on vertical duct frame</li> <li>• 609.6 mm (2 ft) on duct sliding</li> </ul>
2438.4 (8 ft)	1524 mm (5 ft) + 609.6 mm (2 ft) + 304.8 mm (1 ft)	1524 mm (5 ft) + 609.6 mm (2 ft) + 609.6 mm (2 ft)	<ul style="list-style-type: none"> <li>• 1524 mm (5 ft) + 609.6 mm (2 ft) on vertical duct frame</li> <li>• 609.6 mm (2 ft) on duct sliding</li> </ul>

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## 5 General Maintenance

### 5.1 Safety Measures

Follow the safety guidelines below:

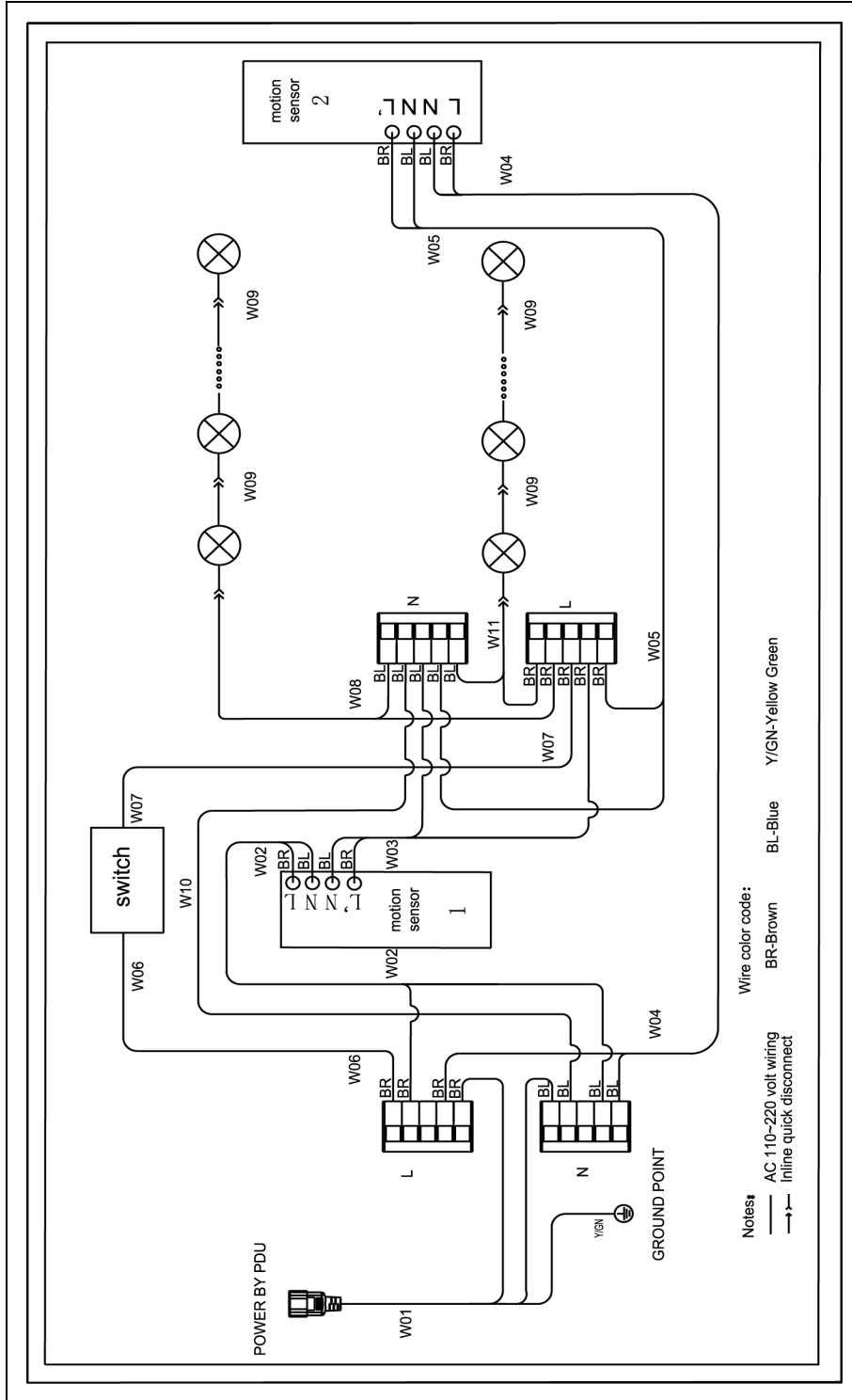
- System maintenance must be completed by trained and authorized service personnel.
- All maintenance operations must be in accordance with local protocols and laws.
- Ignoring safety guidance can put human life and surroundings at risk.
- Inappropriate parts can lead to reduced performance or equipment downtime. Therefore, original components and recommended parts must be used.

### 5.2 Dismantling the System

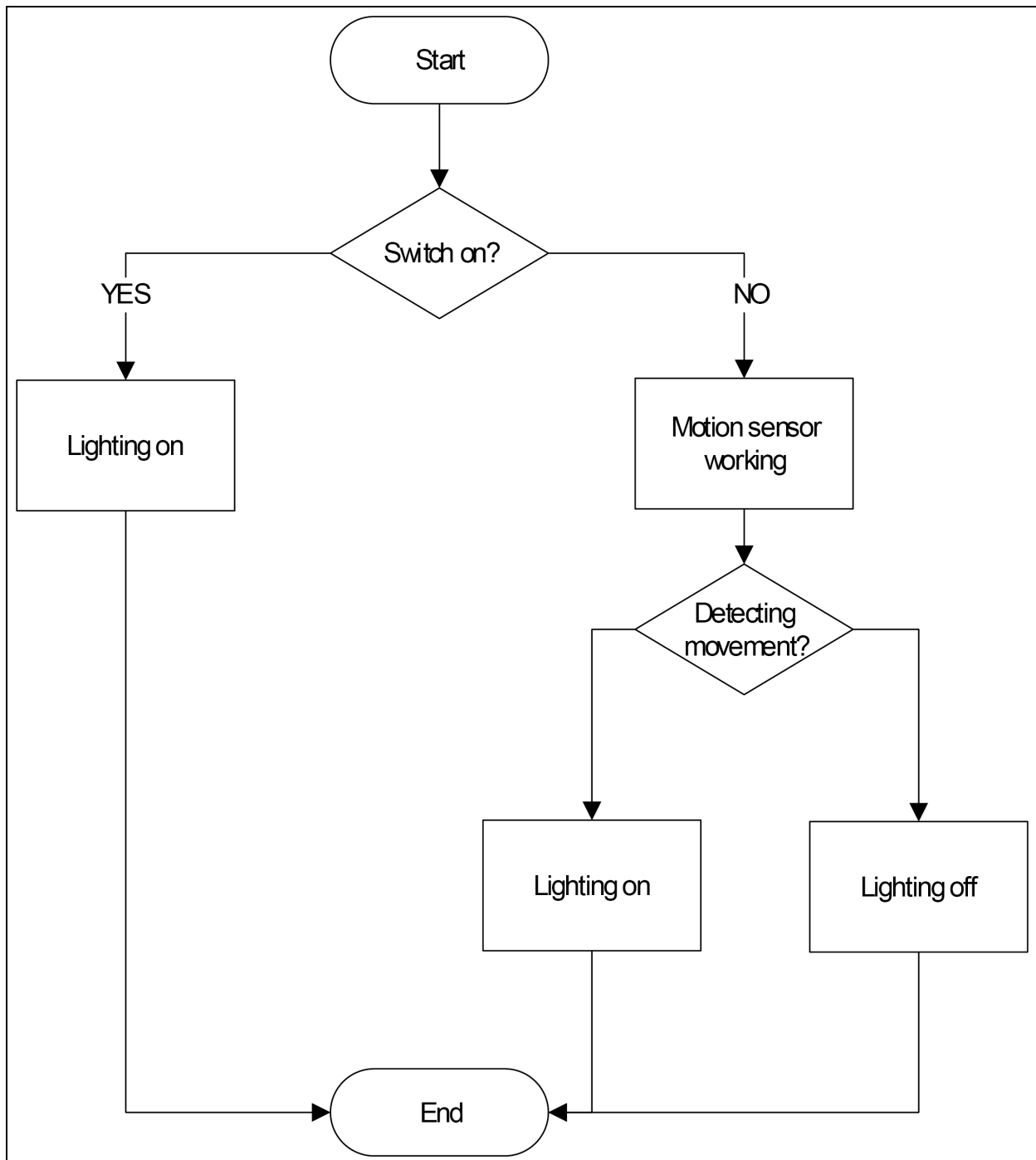
At the end of the useful life, when Vertiv™ Aisle Containment System is dismantled, the operation must be carried out by specialized technicians. The system must be delivered to suitable centers specialized in the collection and disposal of equipment.

# 6 Appendices

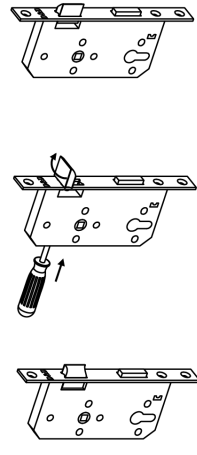
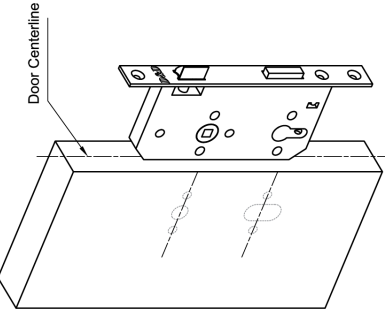
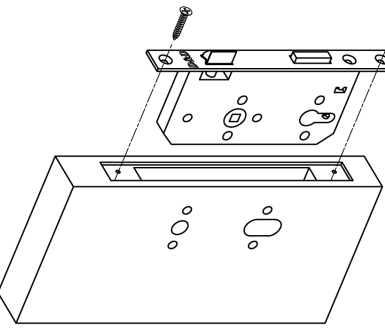
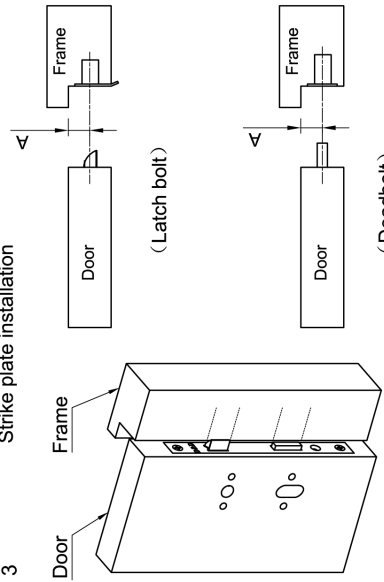
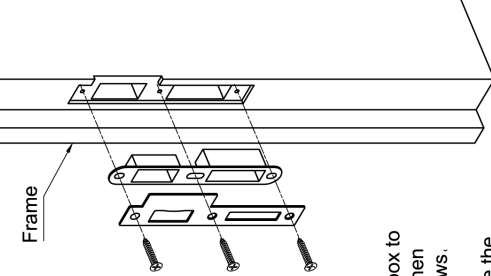
## Appendix A: Schematic of Lighting System

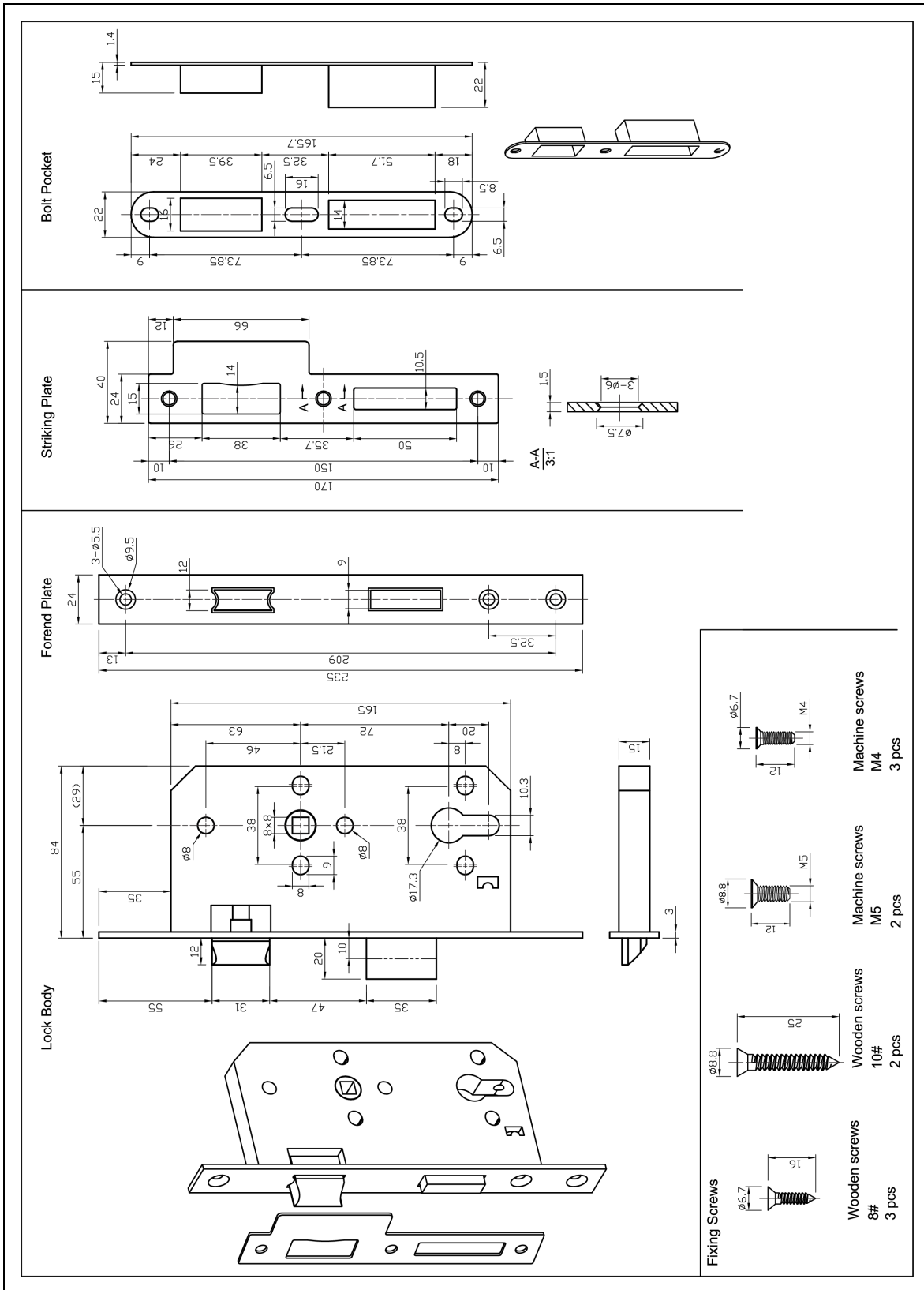


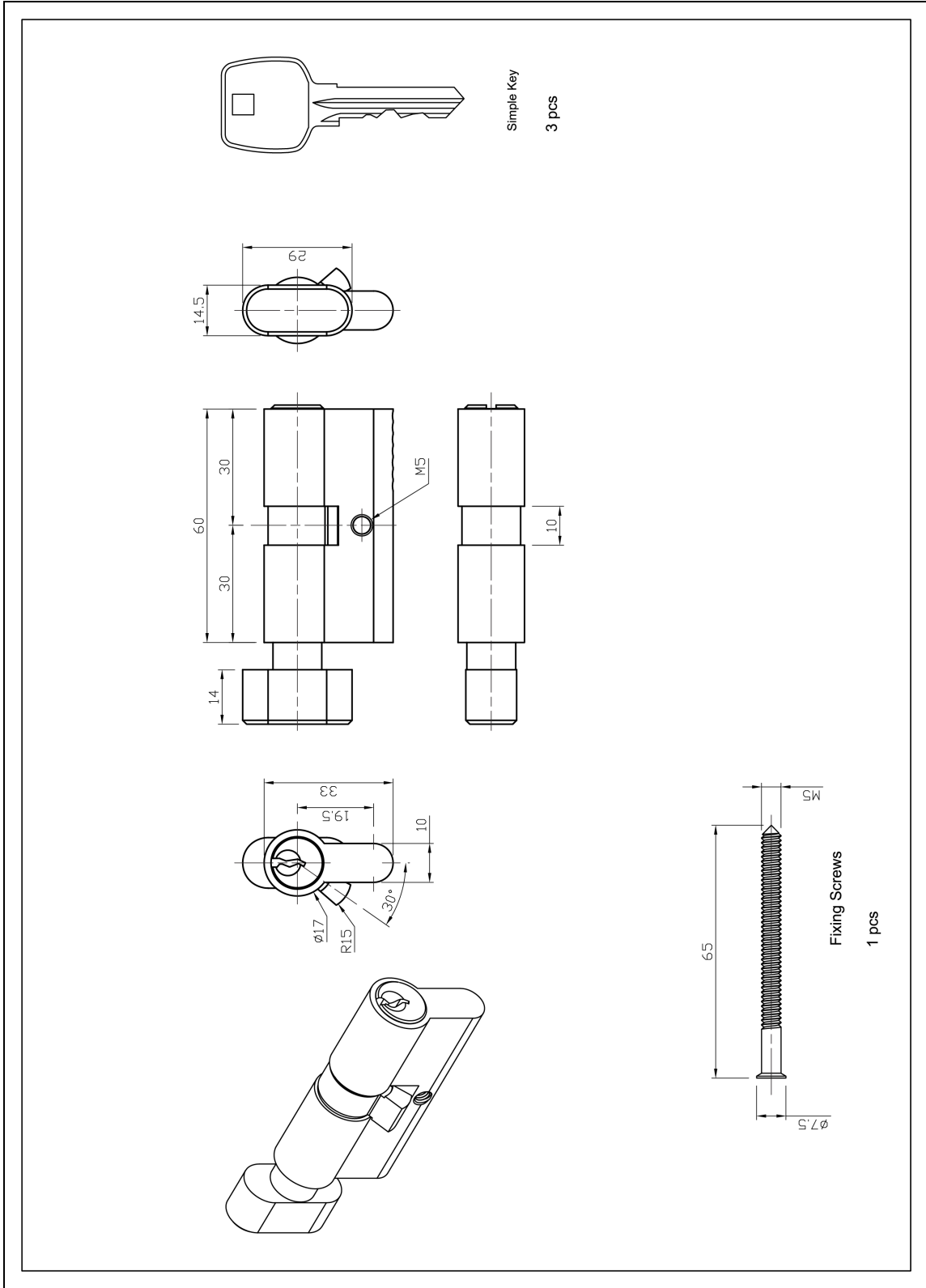
## Appendix B: Workflow of Lighting System



## Appendix C: Door Lock Installation Guide

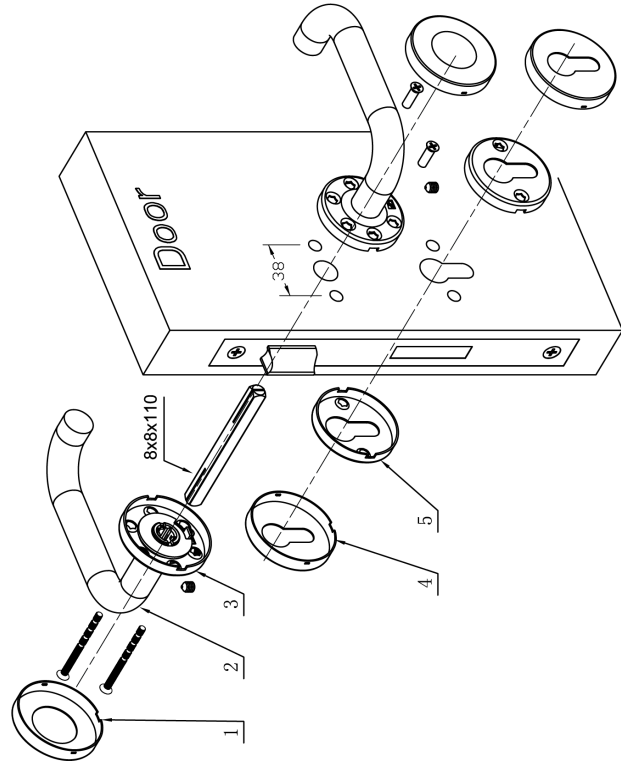
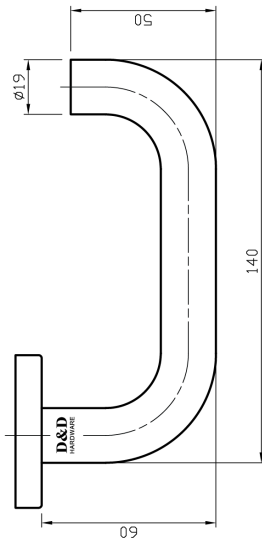
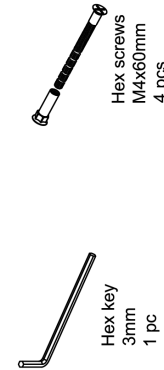

<p>Lockcase Reversible Direction</p> 	<p>Accessories</p> <ul style="list-style-type: none"> <li>Wooden screws 8#/10#</li> <li>Machine screws M4/M5</li> <li>Forend: 10#x25: 2pcs M5x12: 2pcs</li> <li>Strike plate 1 pc</li> <li>Strike box 1 pc</li> </ul>	<p>1</p>  <ol style="list-style-type: none"> <li>Normally the holes of forend should be on door centerline</li> <li>Holes for Lever handle and Cylinder should be vertical to door centerline</li> <li>Detailed holes size please refer for hole preparation instruction</li> </ol>	<p>2</p>  <ol style="list-style-type: none"> <li>Install the lockcase to the door then tighten the screw</li> <li>Make sure the prepared holes for lever handle and cylinder are matching with lockcase</li> </ol>
		<p>3</p> <p>Strike plate installation</p>  <ol style="list-style-type: none"> <li>Close the door and mark the latch bolt/dead bolt position onto the frame</li> <li>Transfer the lines from latch bolt and dead bolt onto the edge of the frame to mark the vertical positions (A)</li> </ol>	<p>4</p>  <ol style="list-style-type: none"> <li>Install the strike box to the prepared holes then strike plate with screws.</li> <li>After installation, check and make sure the lockcase functions properly</li> </ol>



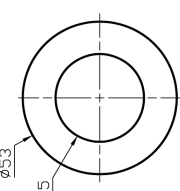


Item	Part	Size	Material	Number
1	rose cover	φ53x9	SUS304	2
2	handle	φ19x140	SUS304	2
3	base	φ51x8	SUS201	2
4	Escutcheon	φ53x9	SUS304	2
5	base	φ51x8	SUS201	2

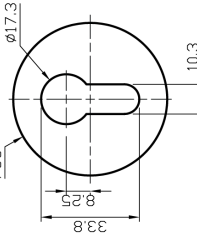
Installation Instruction

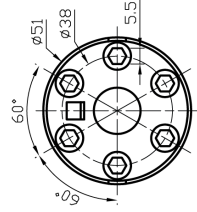
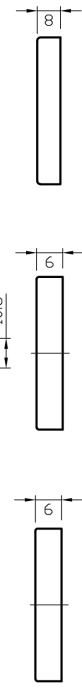
**Cover**



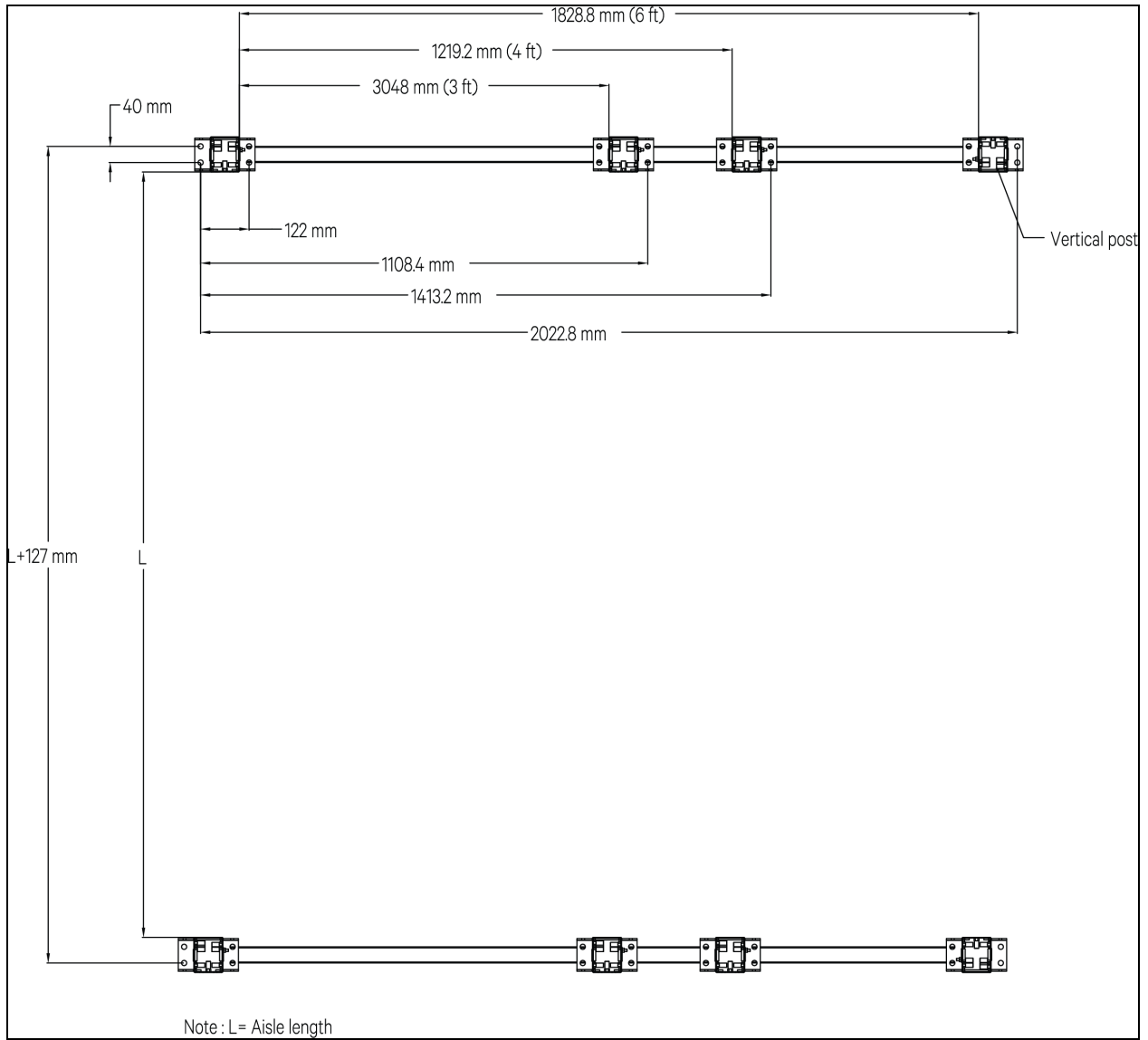
**Escutcheon**



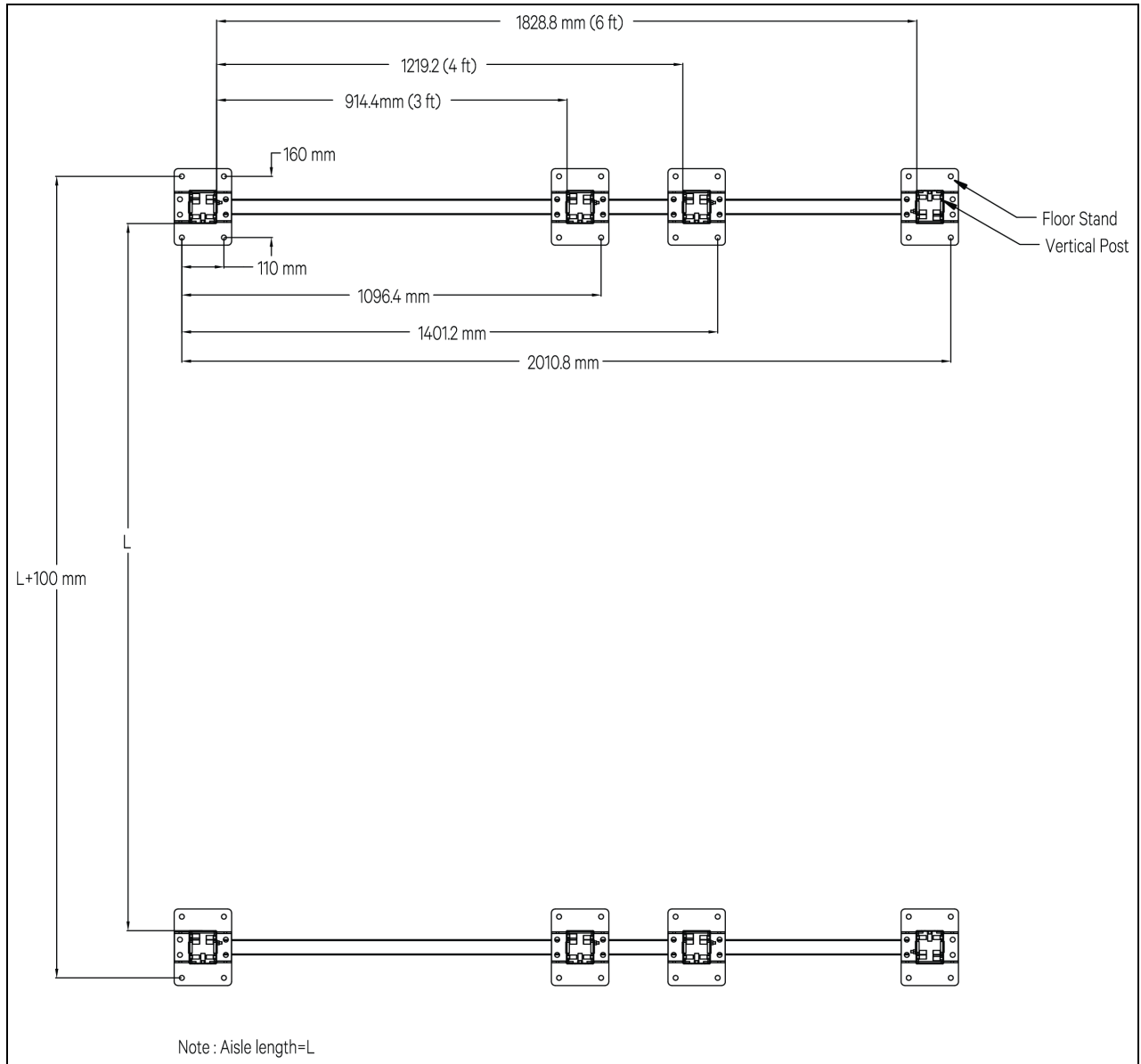
**Base**

## Appendix D: Vertical Post and Floor Stand Position



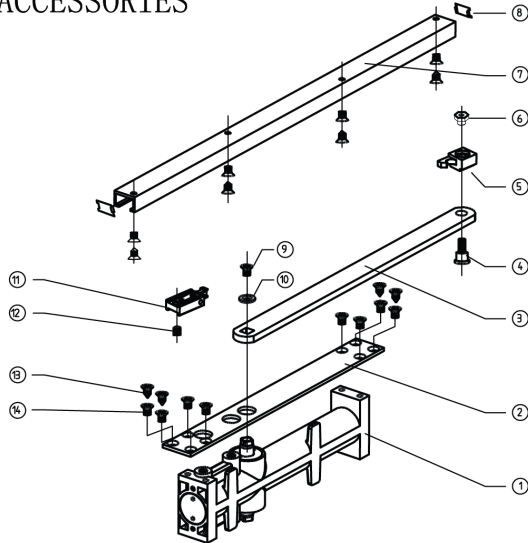




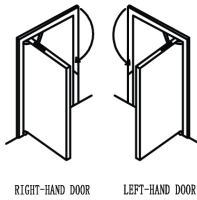
## Appendix E: Door Closer Installation Guide

### CONCEALED DOOR CLOSER INSTALLATION AND INSTRUCTION

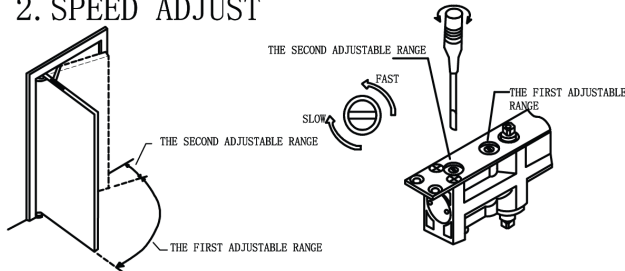
#### 1. ACCESSORIES



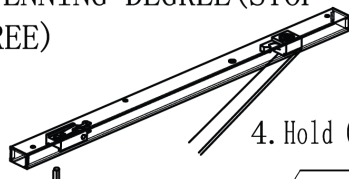
NO	ACCESSORY	QUANTITY
①	BODY	1
②	STATOR	1
③	ARM	1
④	SCREW	1
⑤	SLIDE PIN	1
⑥	SCREW	1
⑦	SLIDE RAIL	1
⑧	SLIDE PALLET	2
⑨	SCREW M5×12	1
⑩	GASKET	1
⑪	STATOR PALLET	1
⑫	HEXAGON SOCKET SERREW M8×12	1
⑬	SCREW ST4.8×25	8
⑭	SCREW M5×14	12



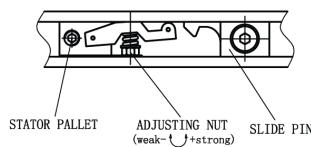
#### 2. SPEED ADJUST



#### 3. OPENING DEGREE (STOP DEGREE)

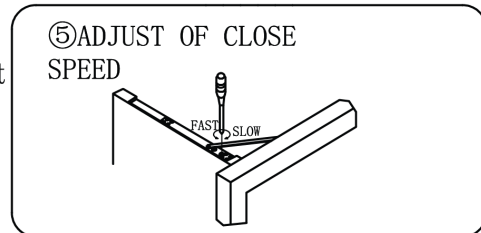
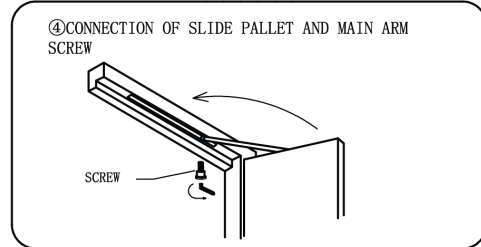
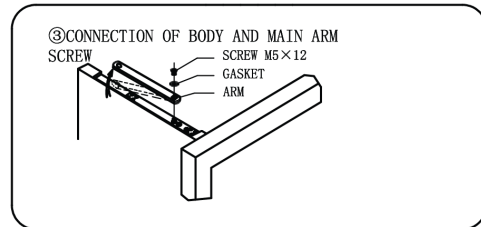
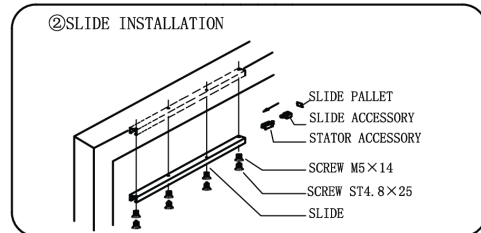
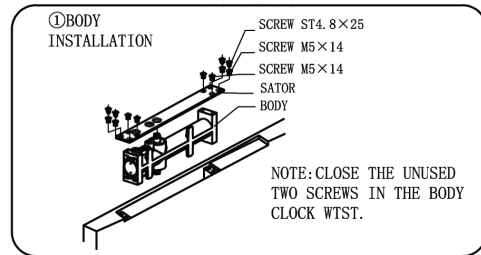


#### 4. Hold Open angle adjustment



NOTE: OPEN THE DOOR TO THE DEGREE NEEDED, FASTEN THE SCREW. IF IT IS NON-HOLD OPED (STOP), LOOSEN THE SCREW.

#### 5. BODY INSTALLATION FOR LEFT-HAND DOOR AND RIGHT-HAND DOOR



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