

MCCB (EMPTY) CASSETTE ASSEMBLY

KYT-070
11/2021

 Update Notes

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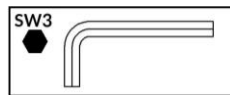
 Tools Symbol Guide



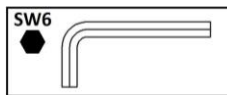
Cross



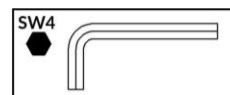
Slot



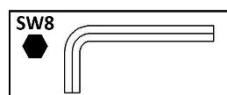
M4 Allen Key



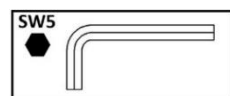
M8 Allen Key



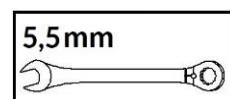
M5 Allen Key



M10 Allen Key



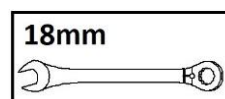
M6 Allen Key



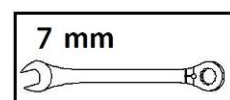
M3 Spanner



M6 Spanner



M12 Spanner



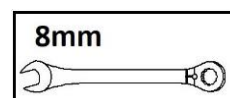
M4 Spanner



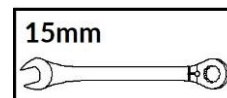
M8 Spanner



M18 Spanner



M5 Spanner



M10 Spanner

Caution: For safety precaution ; Protective gloves and equipments must be used while assembly.

As additional tools for assembly;

- Torque wrench features:
 - ✓ Tightening torque : 75 N.m
 - ✓ It has a reduced thickness, can be easily used to access non accessible joints/fishplates and between busbars.
- Torque wrench an accessories:
 - ✓ Wrench shaft - mandatory
 - ✓ Extra-thin pawl adapter - mandatory
 - ✓ Pawl for ordinary sockets
- Extra-thin sockets for pawl + shaft:
 - ✓ 13 mm extra-thin low socket
 - ✓ 13 mm extra-thin high socket
 - ✓ 15 mm extra-thin low socket
 - ✓ 15 mm extra-thin high socket
 - ✓ 18 mm extra-thin low socket
 - ✓ 18 mm extra-thin high socket

■ Torque Table for Screw/Bolt

Recommended tightening torque for mechanical and electrical links 8.8-class screws (with nut + washers)	
Diameter of Screw	Tightening Torque (N.m)
M3	1.5
M4	3.5
M5	7
M6	13
M8	28
M10	50
M12	75

Tightening torque for electrical links on the devices and for their fixing:

Marking varnish:

After tightening each electrical connection to the appropriate torque, apply some varnish:

- ✓ Between the nut and the screw or
- ✓ Between the screw head and the copper bar or
- ✓ Between the device for tightening on a threaded part

Varnish should not block the screw:

- ✓ It allows operator inspection, to verify if the bolts/ nut are tightened or not.
- ✓ It facilitates the identification of any loose nuts during the switchboard's lifetime.

Varnish features:

- ✓ Coloured acrylic varnish, indelible and able to resist a 150° C temperature.
- ✓ PDS recommends a red varnish as a standard to identify the panelbuilder's work.
- ✓ Other colours can be used by the contractor or any operators entitled to work on the switchboard after its commissioning.

■ Screw/Bolt/Special Parts for Assembly

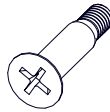
Philips Pan
Head Screw



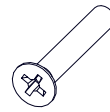
M6x23 Philips Flat
Head Screw (Teos)



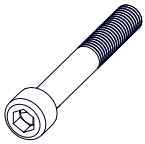
M5x20 Philips Flat
Head Screw (Teos)



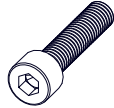
Philips Flat Head
Screw



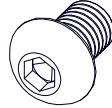
Hexagon Socket Head
Bolt (Half Thread)



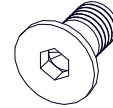
Hexagon Socket
Head Bolt



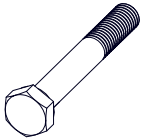
Hexagon Socket
Button Head Bolt



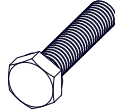
Hexagon Socket
Flat Head Bolt



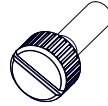
Hexagon Head Bolt
(Half Tread)



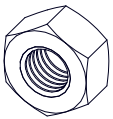
Hexagon Head
Bolt



Internal Door
Knob Bolt



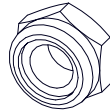
Regular Nut



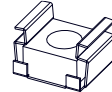
Flange Nut



Previling Torque
Nut



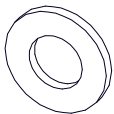
Cage Nut



Plastic Cage
Nut



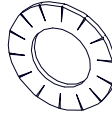
Flat Washer



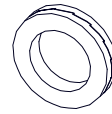
Spring Lock
Washer



Toothed Lock
Washer

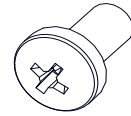


Wedge Lock
Washer

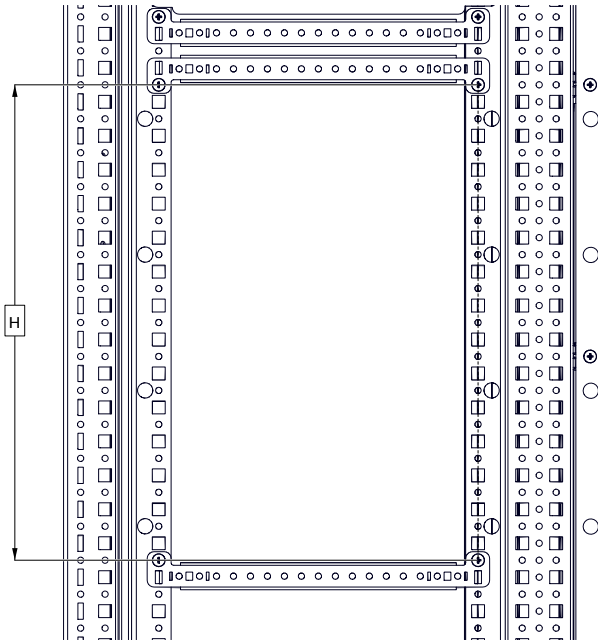


1. MCCB (EMPTY) MOUNTING SYSTEM ASSEMBLY

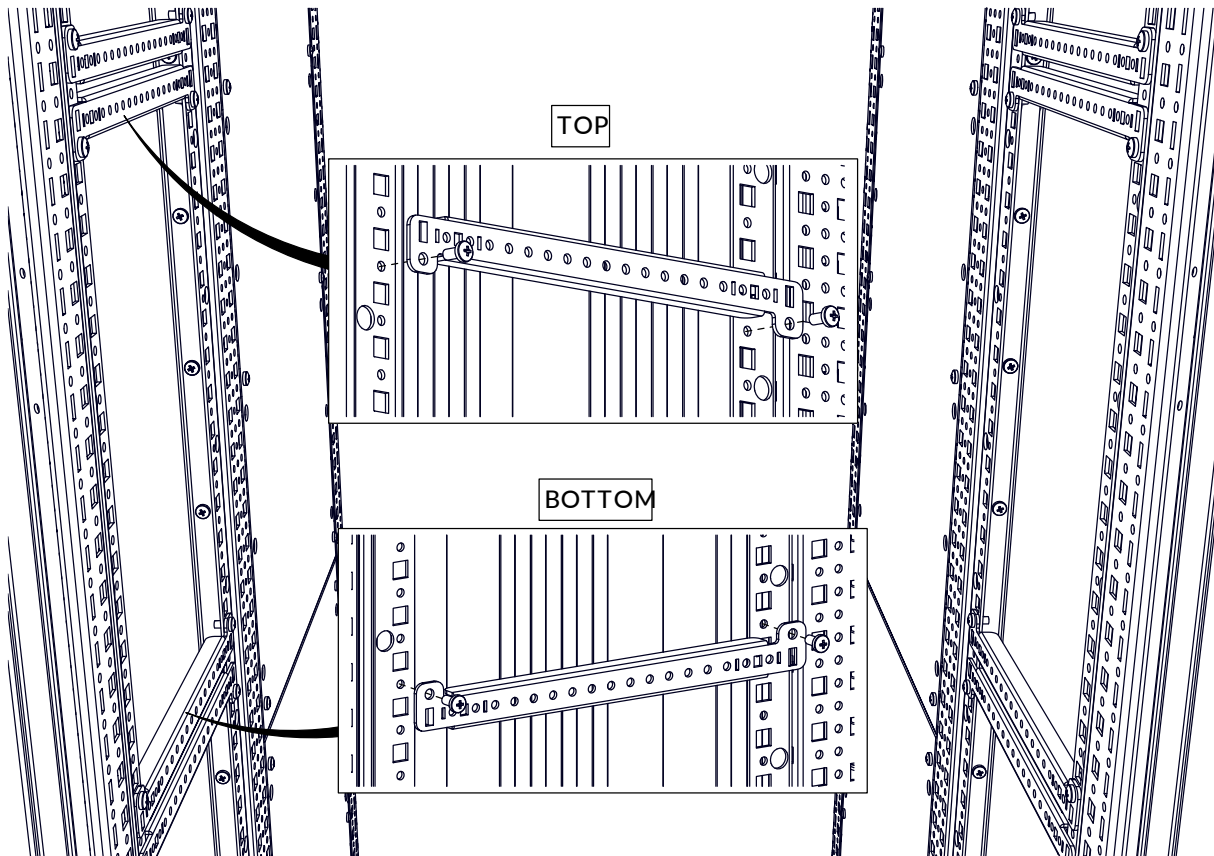
Required Packages:
1037.001



M5X10



Cassette Height	H (mm)
200	150
250	200
300	250
350	300
400	350
450	400
500	450
600	550

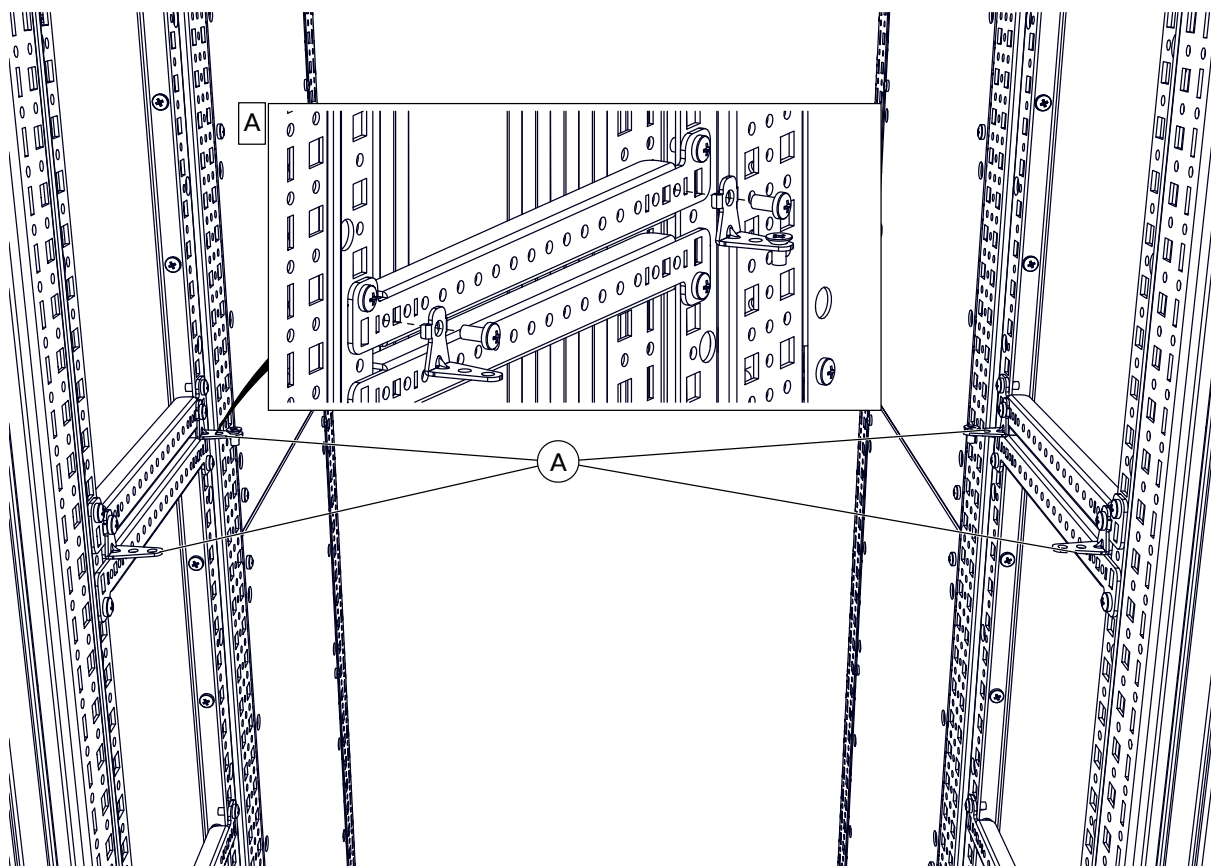
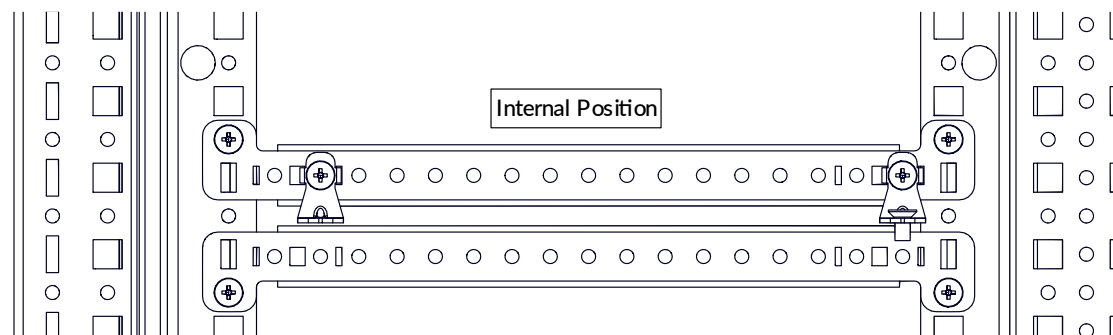
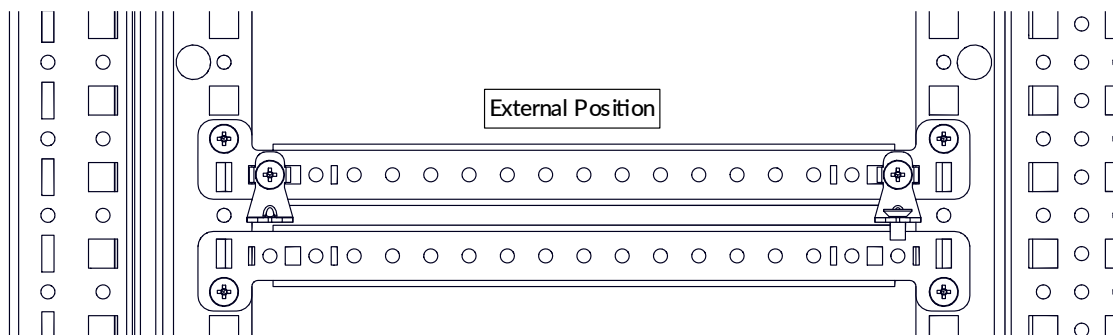


1. MCCB (EMPTY) MOUNTING SYSTEM ASSEMBLY**M5X10****Required Packages:**

400W:1032.040

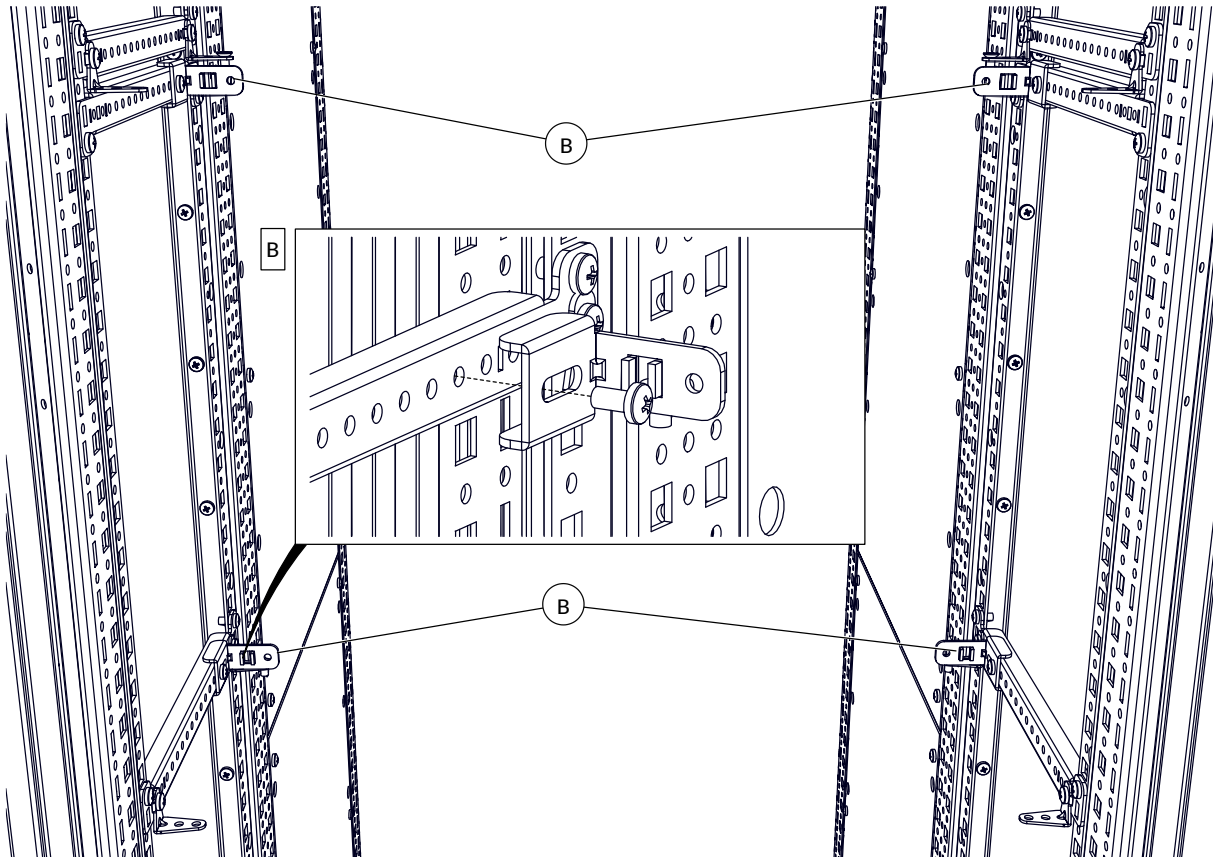
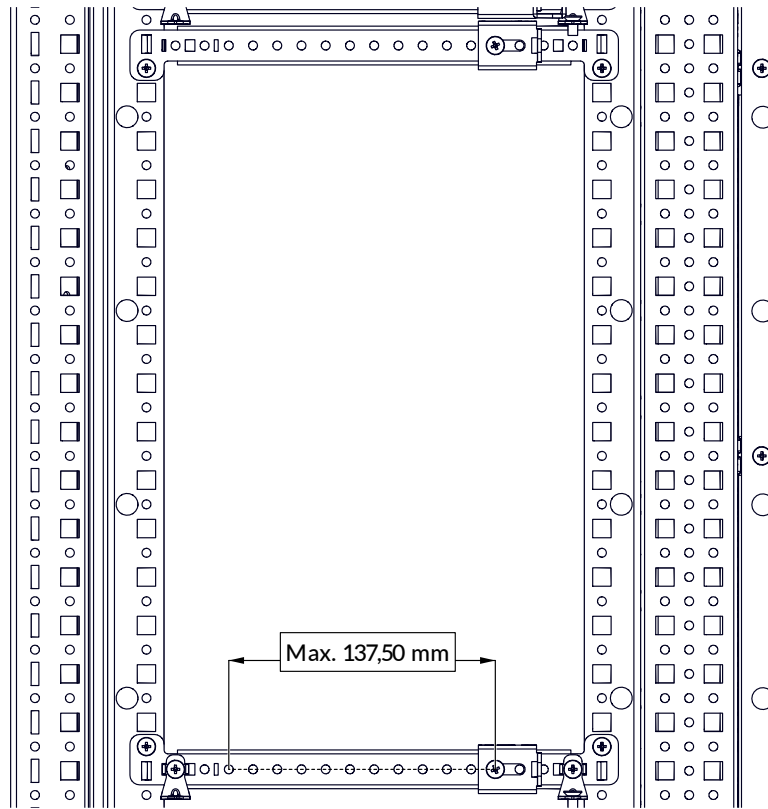
600W:1032.060

800W:1032.080



1. MCCB (EMPTY) MOUNTING SYSTEM ASSEMBLY

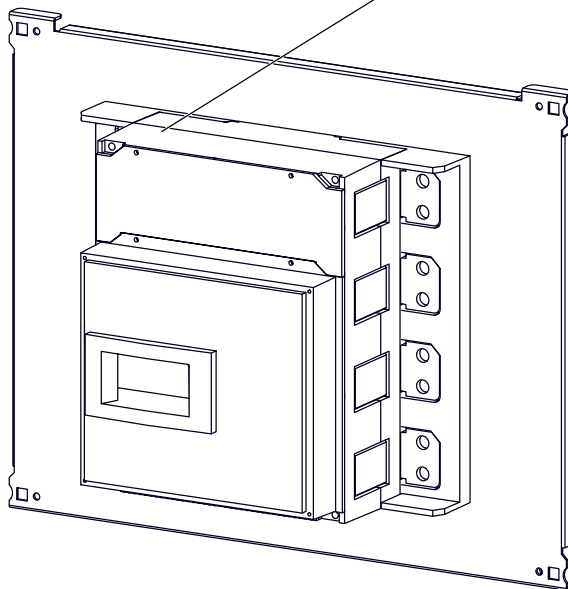
Required Packages:
1038.XXX



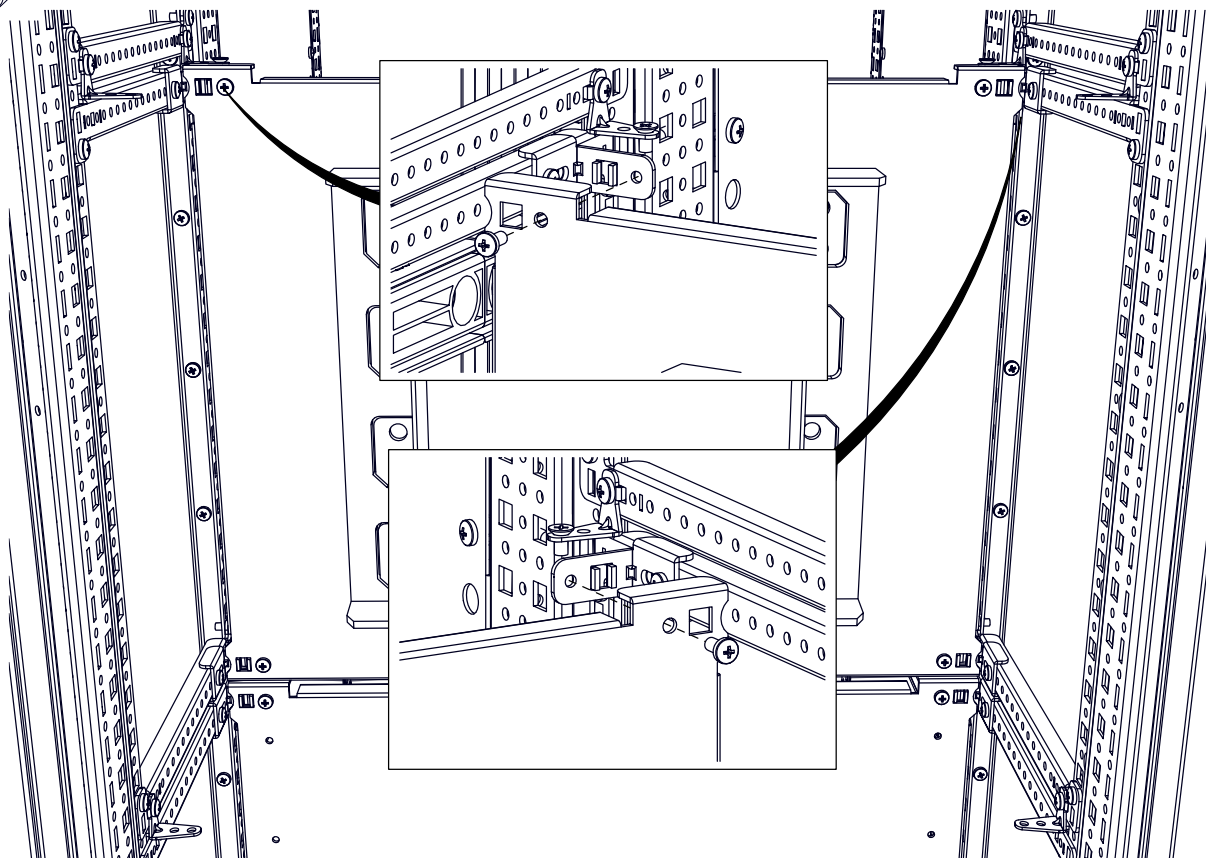
1. MCCB (EMPTY) MOUNTING SYSTEM ASSEMBLY

Required Packages:
1038.XXX

Assemble the breaker as Manufacturer Instructions



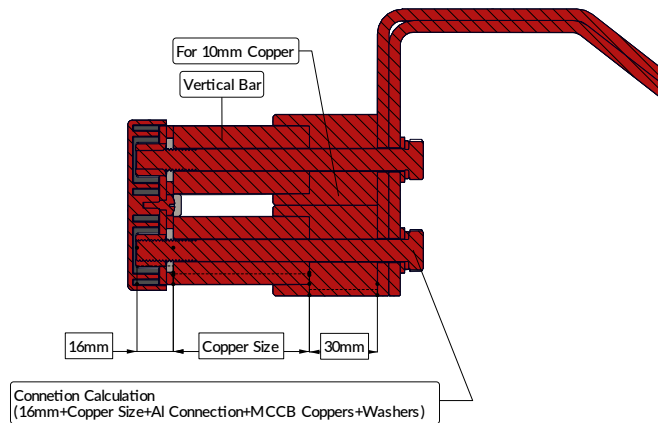
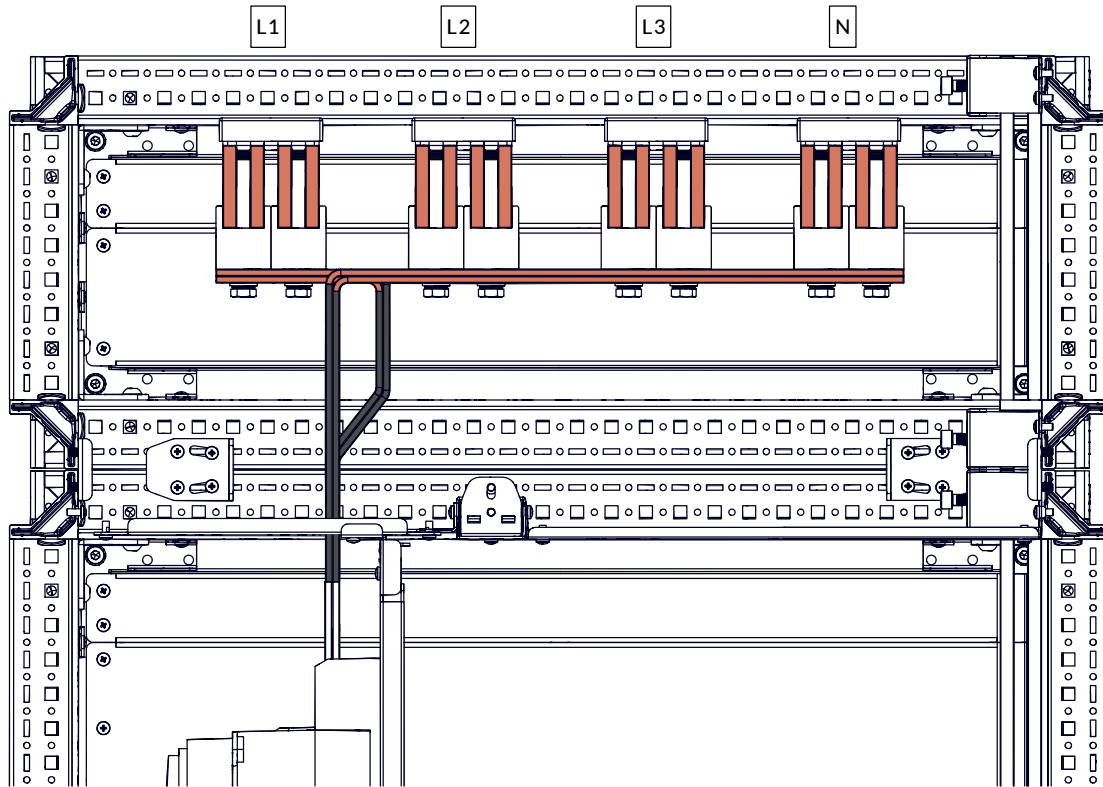
M5X10



2. MCCB (EMPTY)-VERTICAL BAR CONNECTION

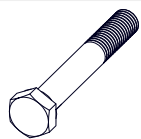
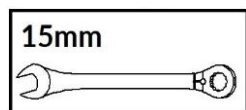
2.1 MCCB (EMPTY)-VERTICAL BAR CONNECTION (4 FLAT BAR)

Required Packages:
Connection: 1051.0XX
Fasteners:1035.4XXX



MCCB (A)	Copper Size	Copper Qty.	Hexagon Head Bolt Selection (800D)				Split Lock Washer	Flat Washer
			4000A	3400A	3000A	2500A		
			80/10	60/10	50/10	40/10		
1600A	50/10	2	M10x150	M10x130	M10x120	M10x110	M10	M10
1250A	40/10	2	M10x150	M10x130	M10x120	M10x110	M10	M10
1000A	50/5	2	M10x140	M10x120	M10x110	M10x100	M10	M10
800A	50/10	1	M10x140	M10x120	M10x110	M10x100	M10	M10
630A	30/5	2	M10x140	M10x120	M10x110	M10x100	M10	M10
400A	30/5	1	M10x135	M10x115	M10x105	M10x95	M10	M10
250A	20/5	1	M10x135	M10x115	M10x105	M10x95	M10	M10

■ 2.1 MCCB (EMPTY)-VERTICAL BAR CONNECTION (4 FLAT BAR)



M10x H

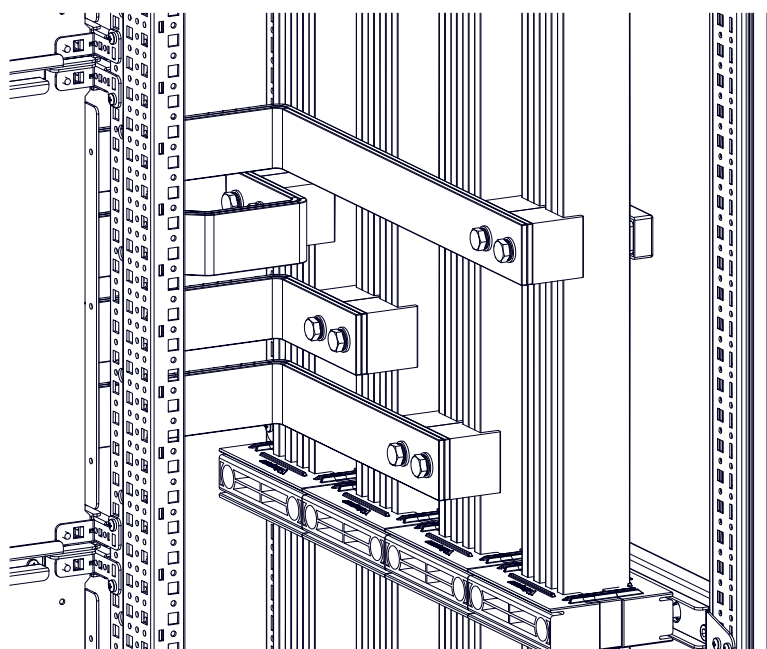
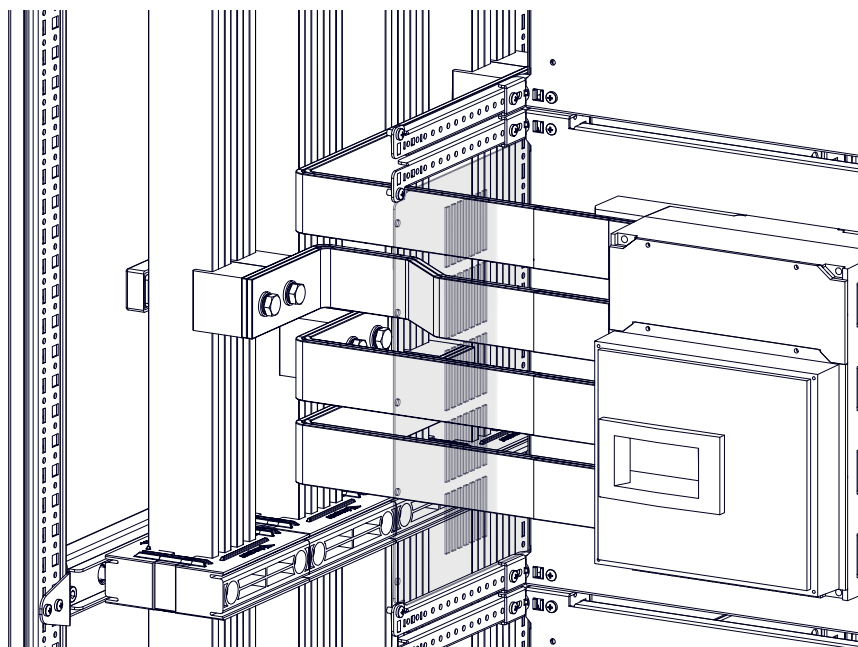
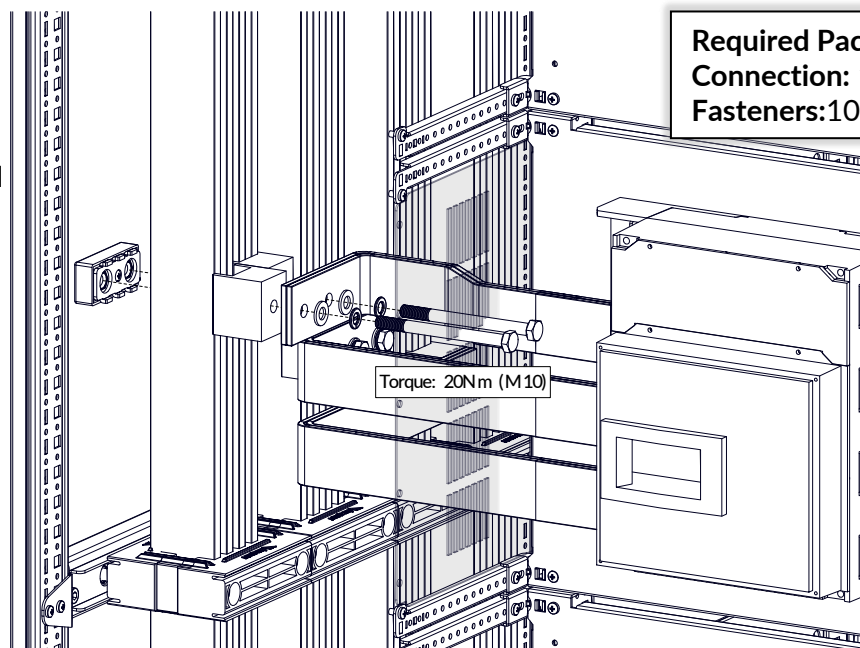


M10



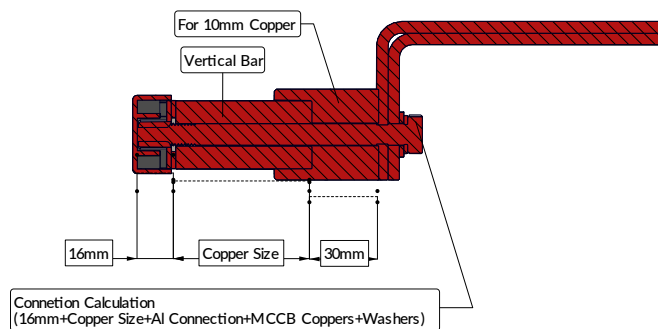
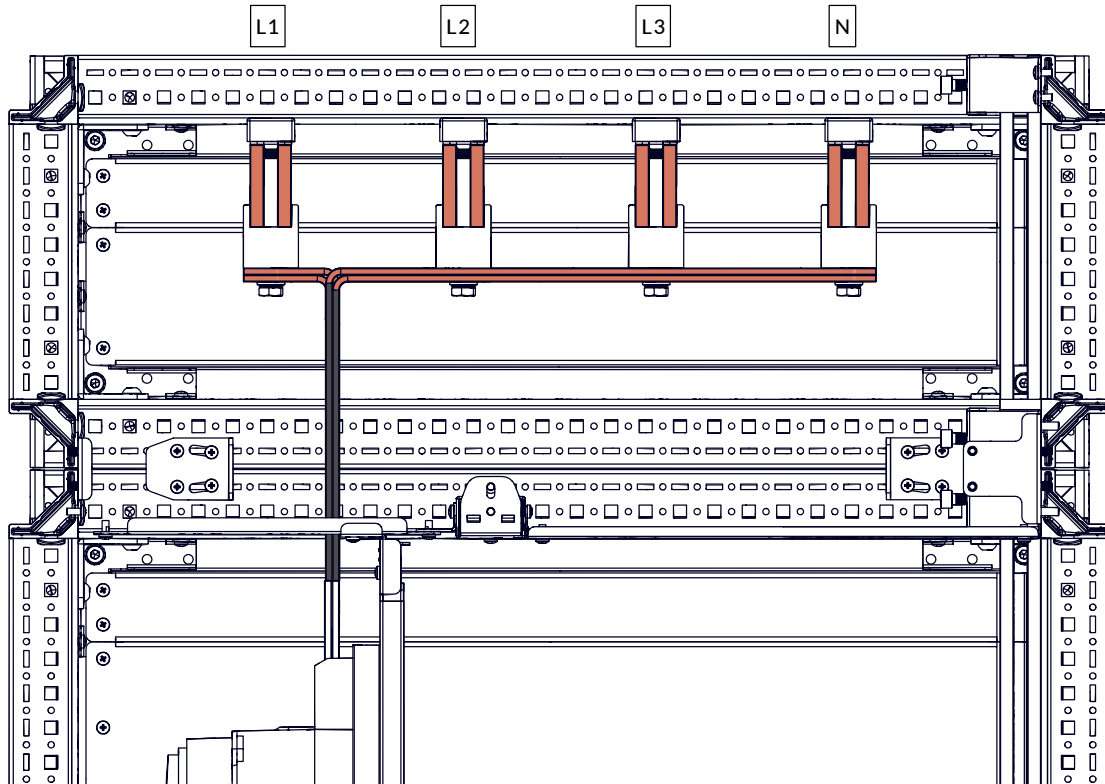
M10

Required Packages:
Connection: 1051.0XX
Fasteners: 1035.4XXX



2.2 MCCB (EMPTY)-VERTICAL BAR CONNECTION (2 FLAT BAR)

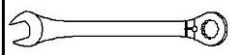
Required Packages:
 Connection: 1051.0XX
 Fasteners: 1035.2XXX



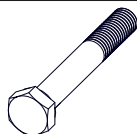
MCCB (A)	Copper Size	Copper Qty.	Hexagon Head Bolt Selection(600D/800D)				Split Lock Washer	Flat Washer
			2300A	1860A	1620A	1350A		
			80/10	60/10	50/10	40/10		
1600A	50/10	2	M8x150	M8x130	M8x120	M8x110	M8	M8
1250A	40/10	2	M8x150	M8x130	M8x120	M8x110	M8	M8
1000A	50/5	2	M8x140	M8x120	M8x110	M8x100	M8	M8
800A	50/10	1	M8x140	M8x120	M8x110	M8x100	M8	M8
630A	30/5	2	M8x140	M8x120	M8x110	M8x100	M8	M8
400A	30/5	1	M8x135	M8x115	M8x105	M8x95	M8	M8
250A	20/5	1	M8x135	M8x115	M8x105	M8x95	M8	M8

■ 2.2 MCCB (EMPTY)-VERTICAL BAR CONNECTION (2 FLAT BAR)

13mm



M8x H



M8

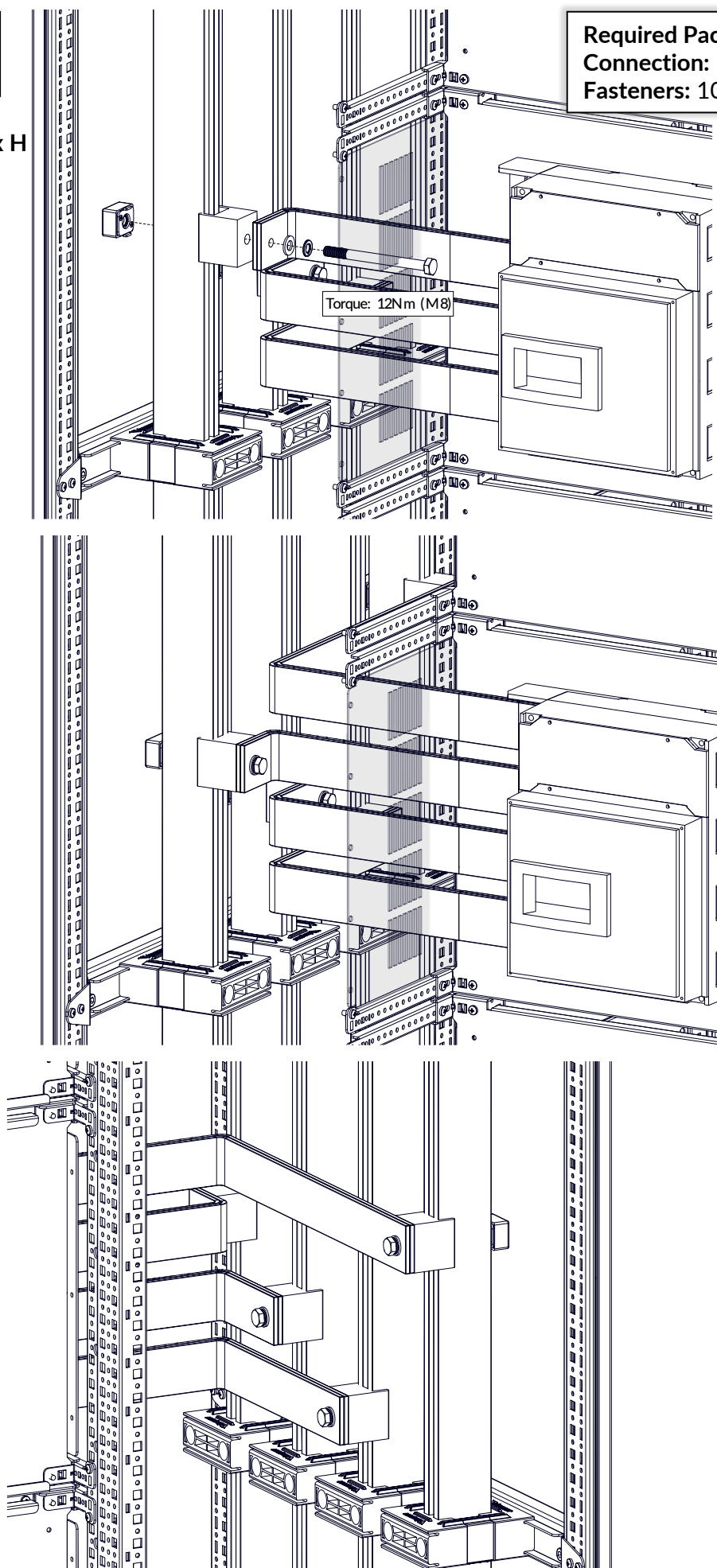


M8



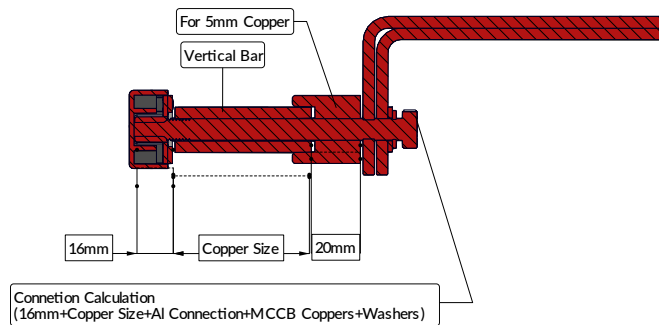
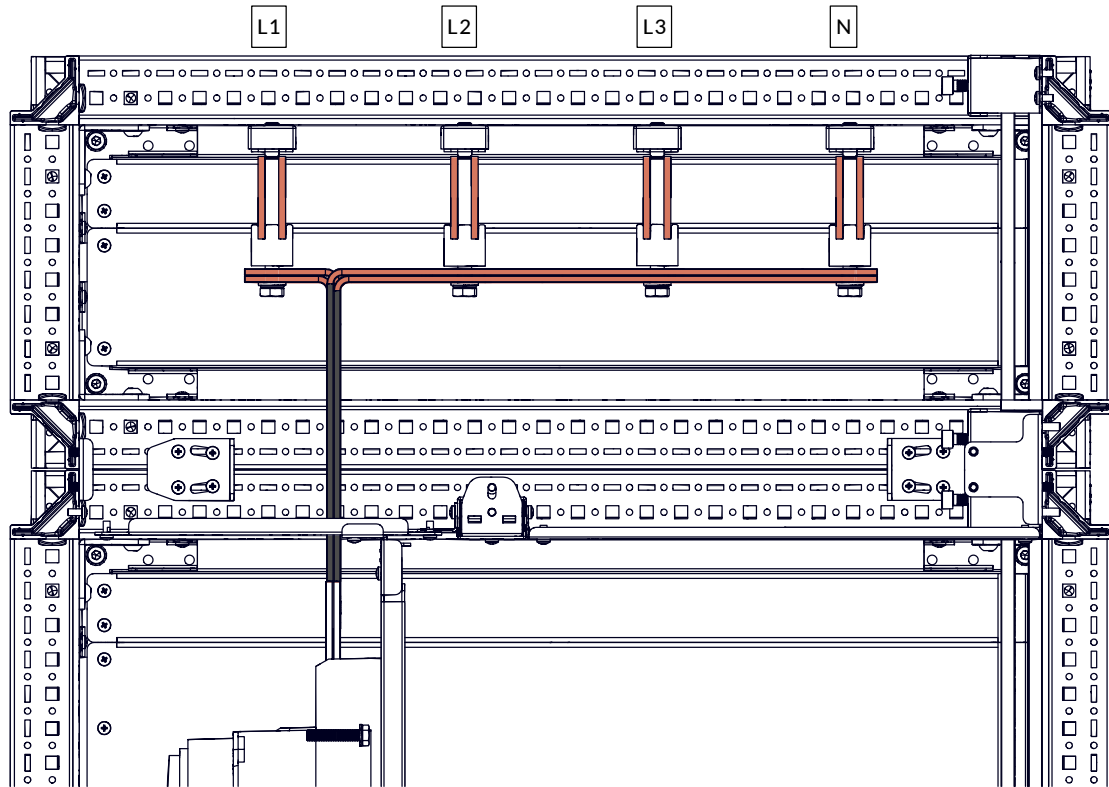
Required Packages:
Connection: 1051.0XX
Fasteners: 1035.2XXX

Torque: 12Nm (M8)



2.3 MCCB (EMPTY)-VERTICAL BAR CONNECTION (2 FLAT BAR-5mm)

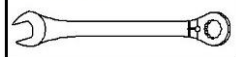
Required Packages:
 Connection: 1051.1XX
 Fasteners: 1035.2XXX



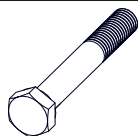
MCCB (A)	Copper Size	Copper Qty.	Hexagon Head Bolt Selection(600D/800D)					Split Lock Washer	Flat Washer
			1300A	1100A	900A	700A	495A		
			60/5	50/5	40/5	30/5	20/5		
1600A	50/10	2	M8x120	M8x110	M8x100	M8x90	M8x80	M8	M8
1250A	40/10	2	M8x120	M8x110	M8x100	M8x90	M8x80	M8	M8
1000A	50/5	2	M8x110	M8x100	M8x90	M8x80	M8x70	M8	M8
800A	50/10	1	M8x110	M8x100	M8x90	M8x80	M8x70	M8	M8
630A	30/5	2	M8x110	M8x100	M8x90	M8x80	M8x70	M8	M8
400A	30/5	1	M8x105	M8x95	M8x85	M8x75	M8x65	M8	M8
250A	20/5	1	M8x105	M8x95	M8x85	M8x75	M8x65	M8	M8

■ 2.3 MCCB (EMPTY)-VERTICAL BAR CONNECTION (2 FLAT BAR-5mm)

13mm



M8x H



M8

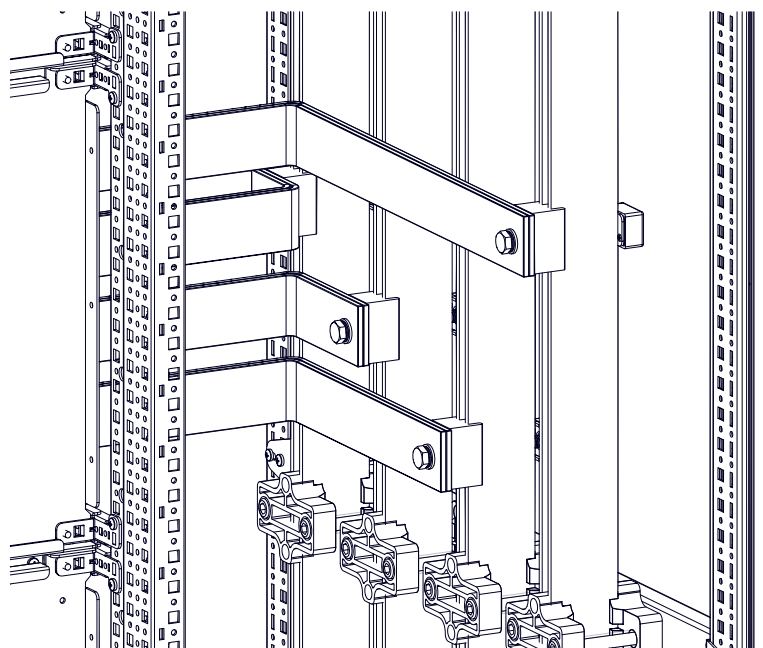


M8



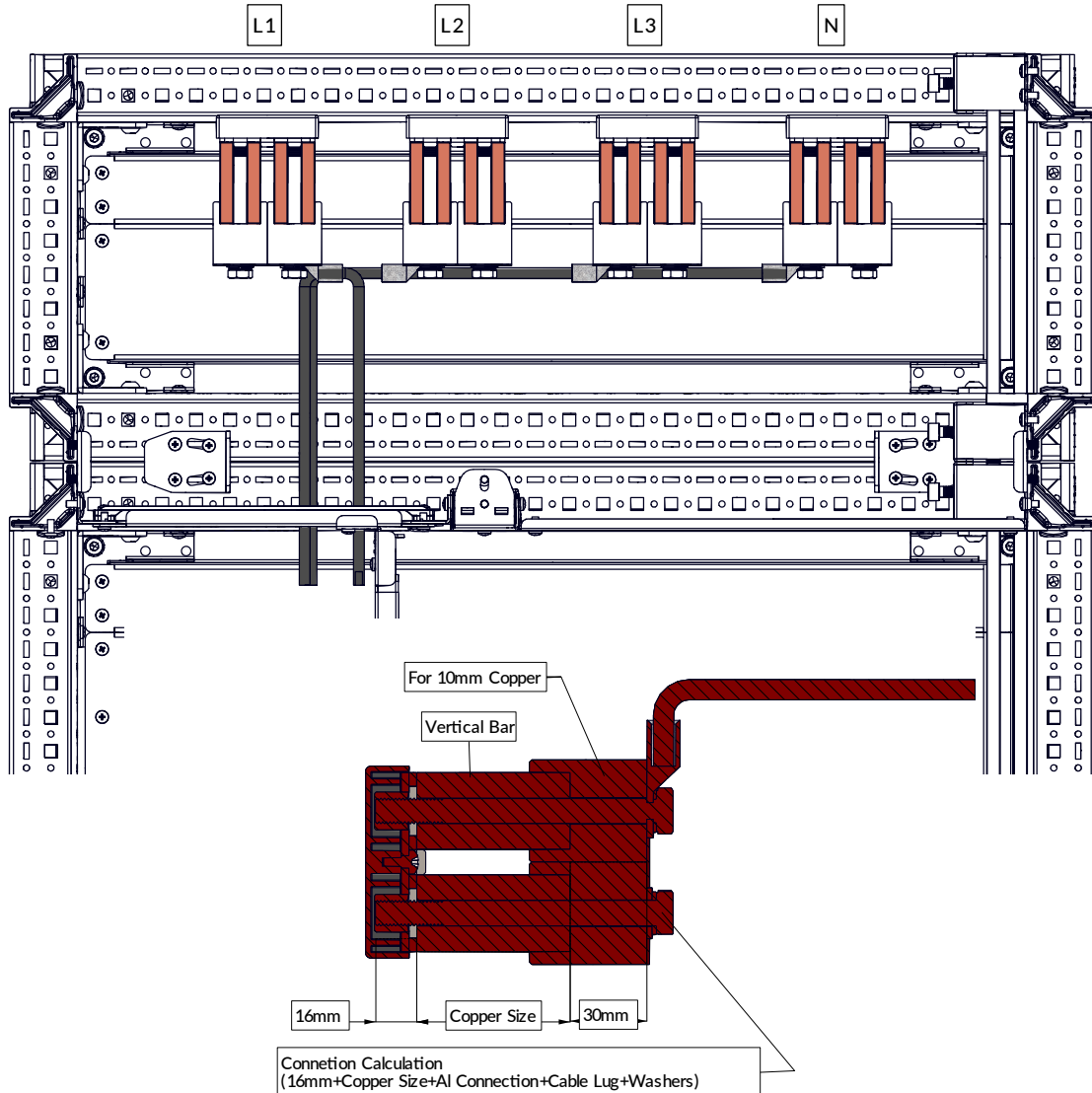
Required Packages:
Connection: 1051.1XX
Fasteners: 1035.2XXX

Torque: 12Nm (M8)



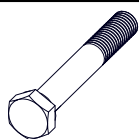
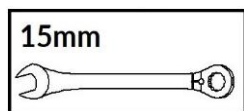
2.4 MCCB (EMPTY)-VERTICAL CABLE CONNECTION (4 FLAT BAR)

Required Packages:
 Connection: 1051.0XX
 Fasteners: 1035.4XXX



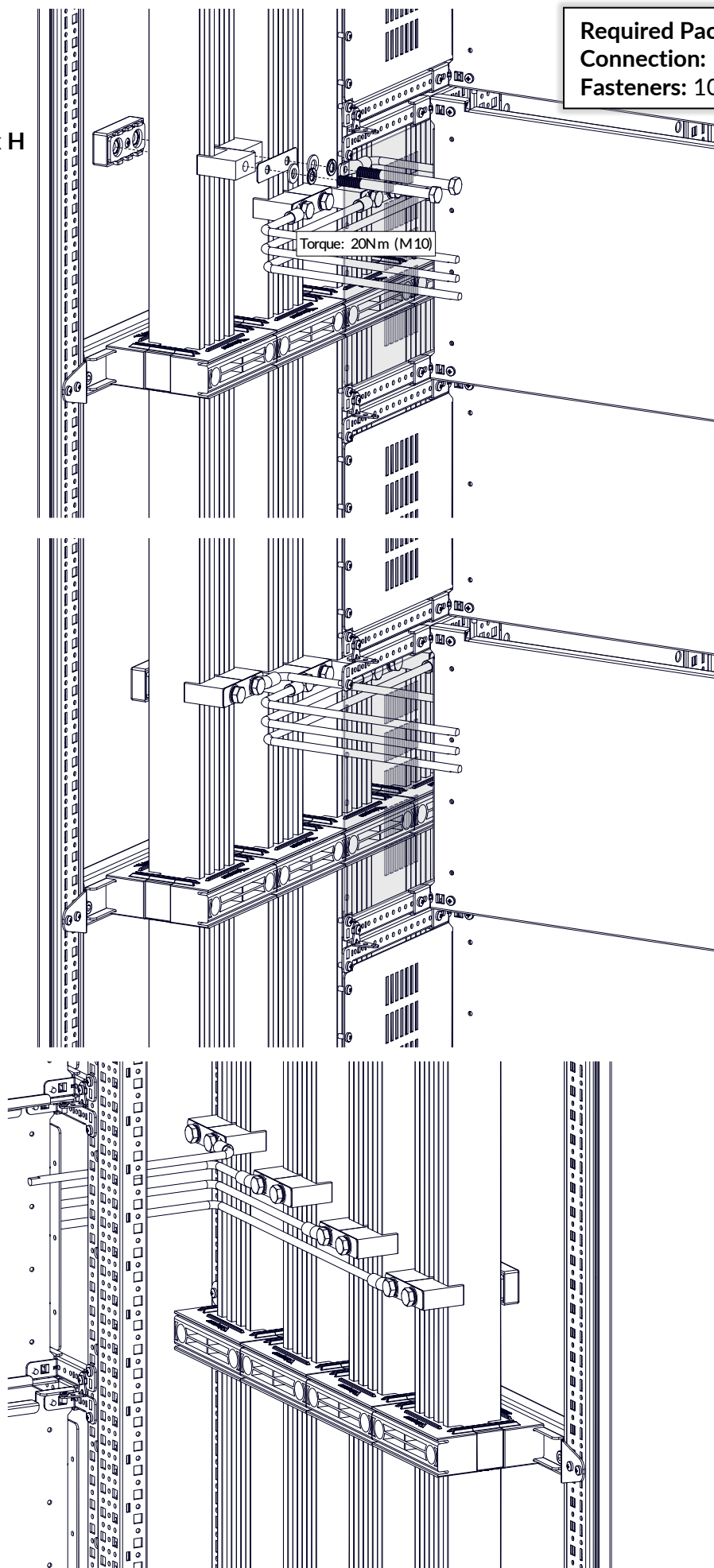
Cable Size	Hexagon Head Bolt Selection (800D)				Split Lock Washer	Flat Washer
	4000A	3400A	3000A	2500A		
	80/10	60/10	50/10	40/10		
16	M10x130	M10x110	M10x100	M10x90	M10	M10
25	M10x130	M10x110	M10x100	M10x90	M10	M10
35	M10x130	M10x110	M10x100	M10x90	M10	M10
50	M10x140	M10x120	M10x110	M10x100	M10	M10
70	M10x140	M10x120	M10x110	M10x100	M10	M10
95	M10x140	M10x120	M10x110	M10x100	M10	M10

■ 2.4 MCCB (EMPTY)-VERTICAL CABLE CONNECTION (4 FLAT BAR)



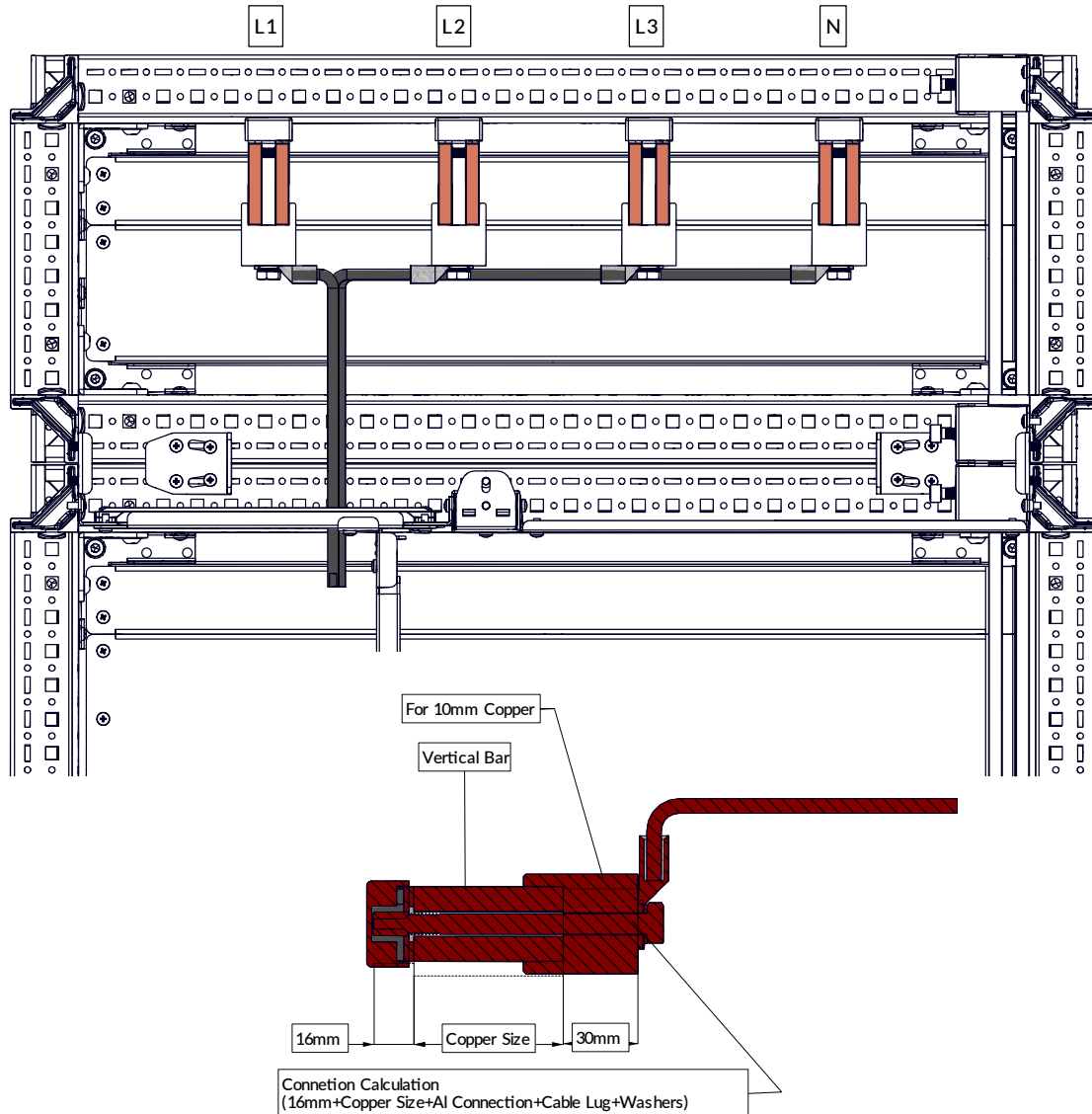
Required Packages:
Connection: 1051.0XX
Fasteners: 1035.4XXX

Torque: 20N·m (M10)



2.5 MCCB (EMPTY)-VERTICAL CABLE CONNECTION (2 FLAT BAR)

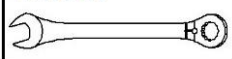
Required Packages:
 Connection: 1051.0XX
 Fasteners: 1035.2XXX



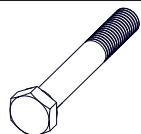
Copper Size	Hexagon Head Bolt Selection(600D/800D)				Split Lock Washer	Flat Washer
	2300A	1860A	1620A	1350A		
	80/10	60/10	50/10	40/10		
16	M8x130	M8x110	M8x100	M8x90	M8	M8
25	M8x130	M8x110	M8x100	M8x90	M8	M8
35	M8x130	M8x110	M8x100	M8x90	M8	M8
50	M8x140	M8x120	M8x110	M8x100	M8	M8
70	M8x140	M8x120	M8x110	M8x100	M8	M8
95	M8x140	M8x120	M8x110	M8x100	M8	M8

■ 2.5 MCCB (EMPTY)-VERTICAL CABLE CONNECTION (2 FLAT BAR)

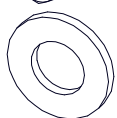
13mm



M8x H



M8

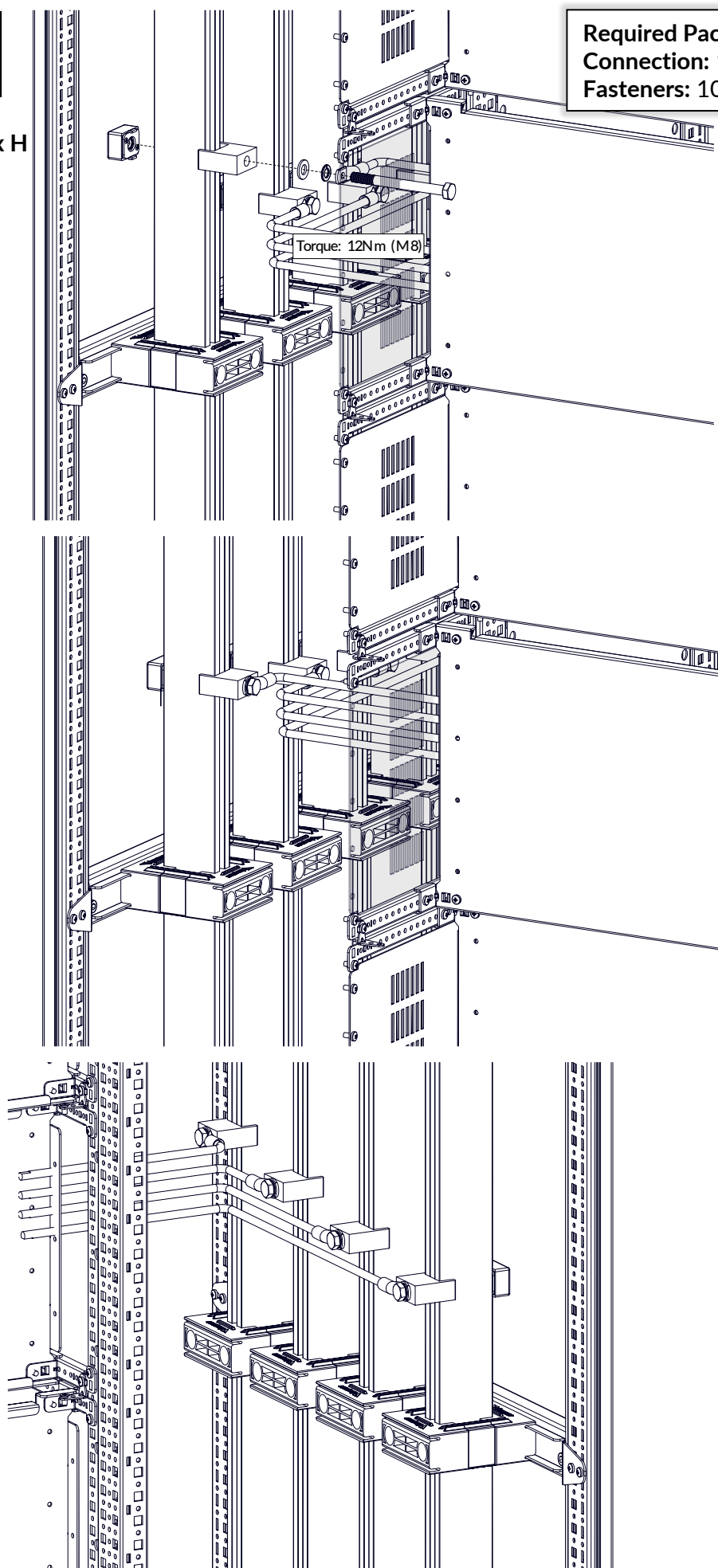


M8



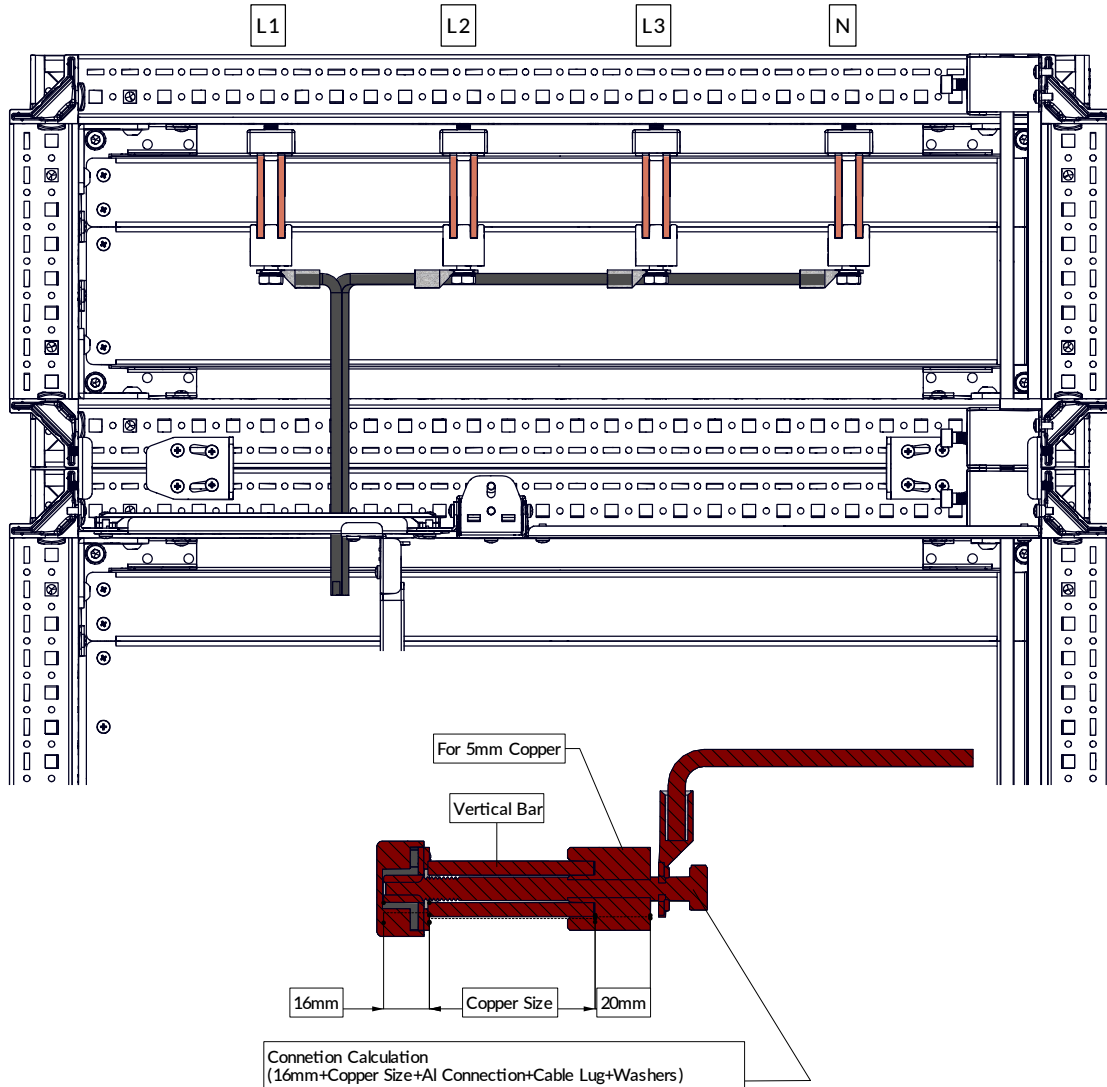
Required Packages:
Connection: 1051.0XX
Fasteners: 1035.2XXX

Torque: 12Nm (M8)



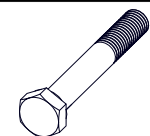
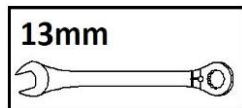
2.6 MCCB (EMPTY)-VERTICAL CABLE CONNECTION (2 FLAT BAR-5mm)

Required Packages:
Connection: 1051.1XX
Fasteners: 1035.2XXX



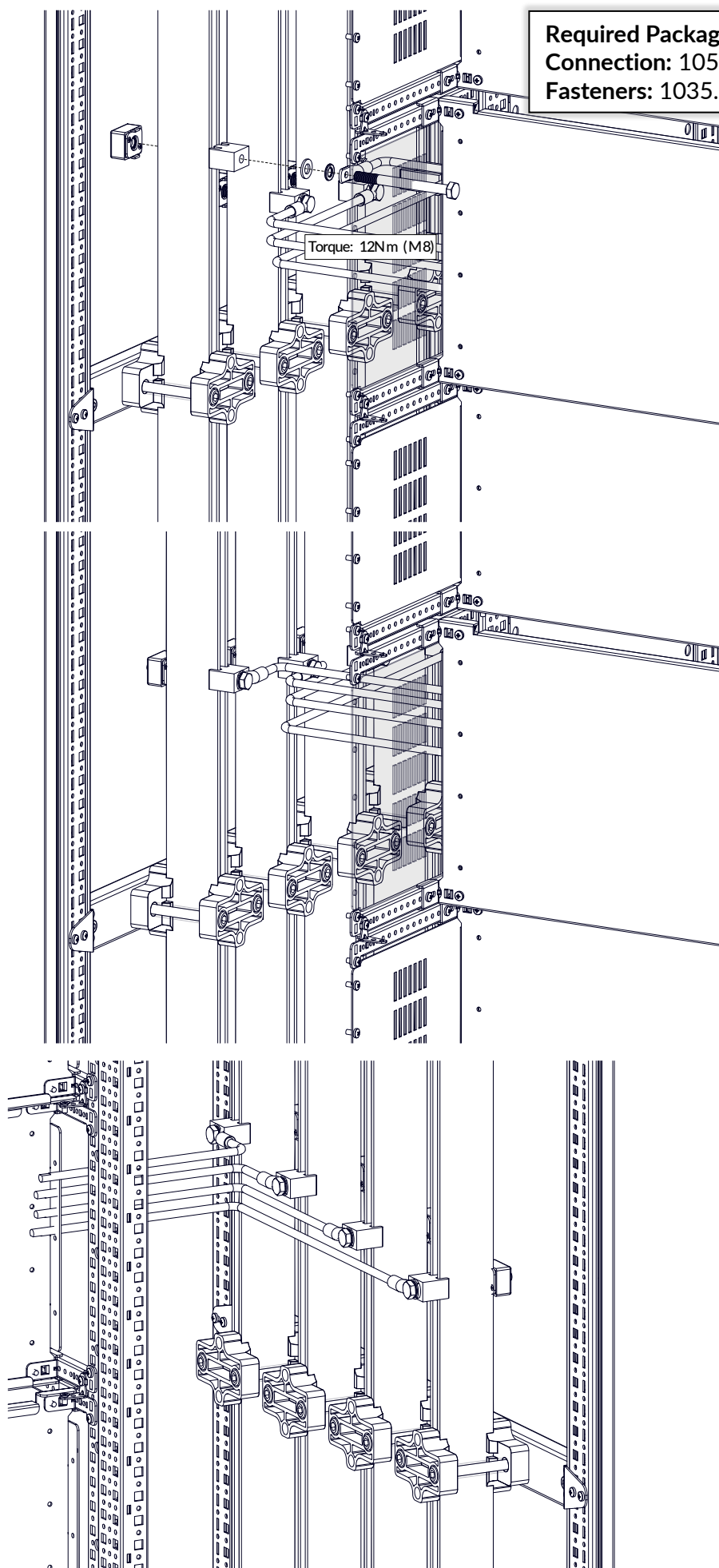
Copper Size	Hexagon Head Bolt Selection(600D/800D)					Split Lock Washer	Flat Washer
	1300A	1100A	900A	700A	495A		
	60/5	50/5	40/5	30/5	20/5		
16	M8x100	M8x90	M8x80	M8x70	M8x60	M8	M8
25	M8x100	M8x90	M8x80	M8x70	M8x60	M8	M8
35	M8x100	M8x90	M8x80	M8x70	M8x60	M8	M8
50	M8x110	M8x100	M8x90	M8x80	M8x70	M8	M8
70	M8x110	M8x100	M8x90	M8x80	M8x70	M8	M8
95	M8x110	M8x100	M8x90	M8x80	M8x70	M8	M8

■ 2.6 MCCB (EMPTY)-VERTICAL CABLE CONNECTION (2 FLAT BAR-5mm)



Required Packages:
Connection: 1051.1XX
Fasteners: 1035.2XXX

Torque: 12Nm (M8)



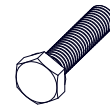
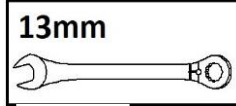
3. MCCB (EMPTY)-CABLING BAR CONNECTION

Required Packages:

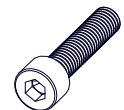
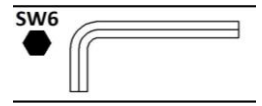
1053.XXX/1035.101/1035.111

Or

1061.XXX/1035.101/1035.111



M8xH



M8xH

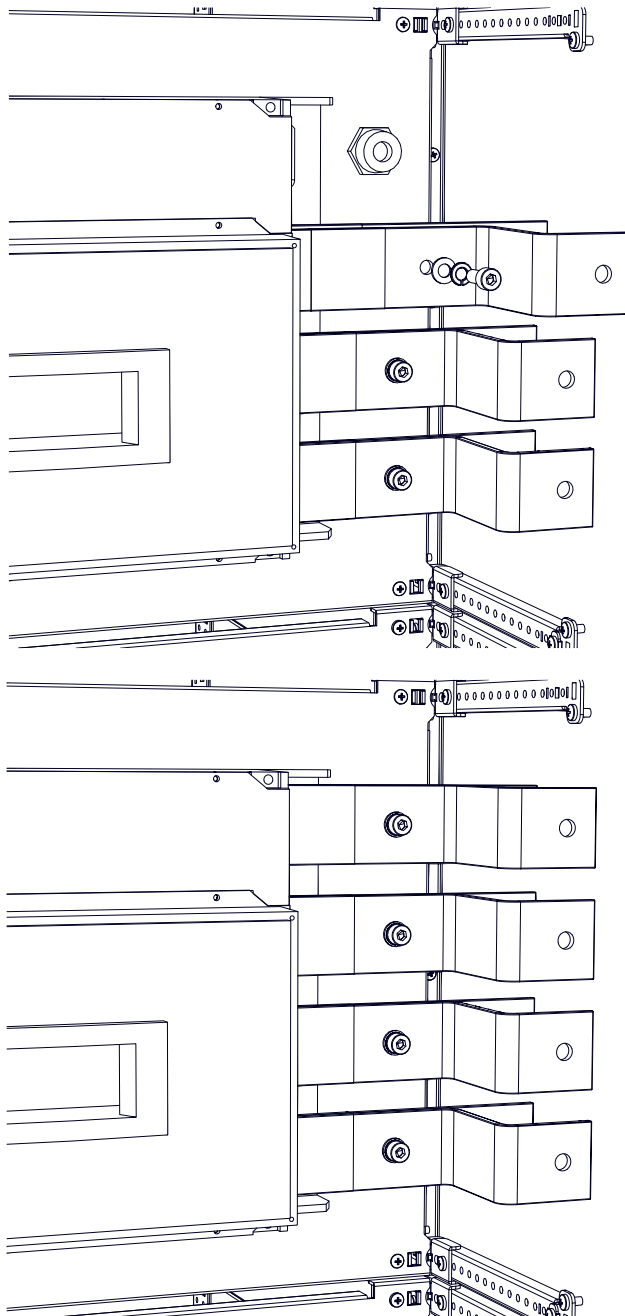
Empty Cassette Barrel Insulator Fastener Heights			
MCCB (A)	Copper Size	Copper Qty.	Connection
1600A	50/10	2	30
1200A	40/10	2	30
1000A	50/5	2	20
800A	50/10	1	20
630A	30/5	2	20
400A	30/5	1	15
250A	20/5	1	15



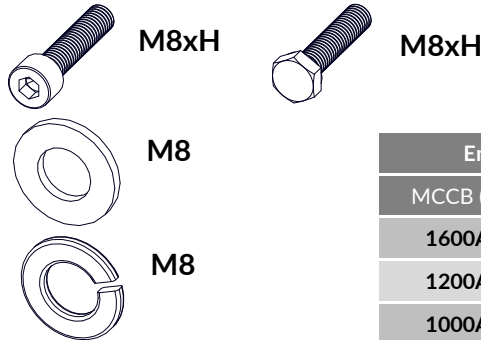
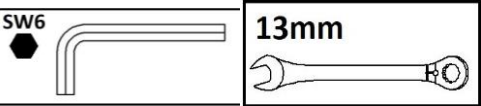
M8



M8

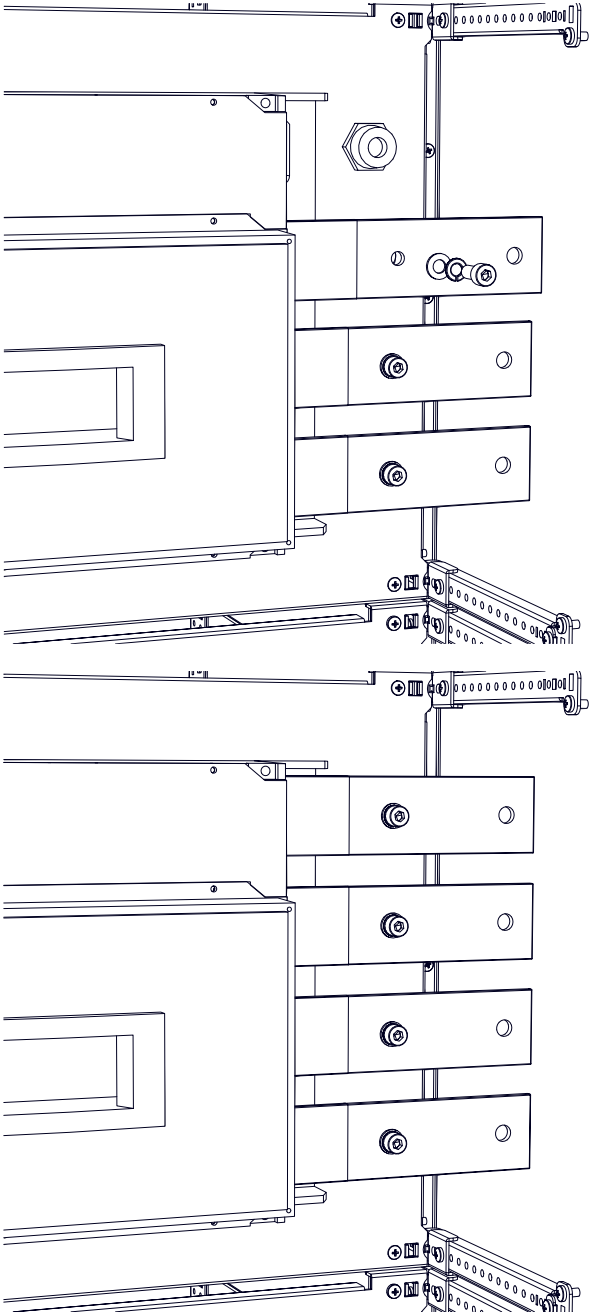


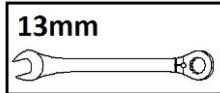
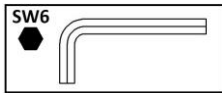
3. MCCB (EMPTY)-CABLING BAR CONNECTION



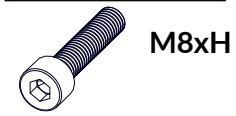
Required Packages:
1053.XXX/1035.101/1035.111
Or
1061.XXX/1035.101/1035.111

Empty Cassette Barrel Insulator Fastener Heights			
MCCB (A)	Copper Size	Copper Qty.	Connection
1600A	50/10	2	30
1200A	40/10	2	30
1000A	50/5	2	20
800A	50/10	1	20
630A	30/5	2	20
400A	30/5	1	15
250A	20/5	1	15

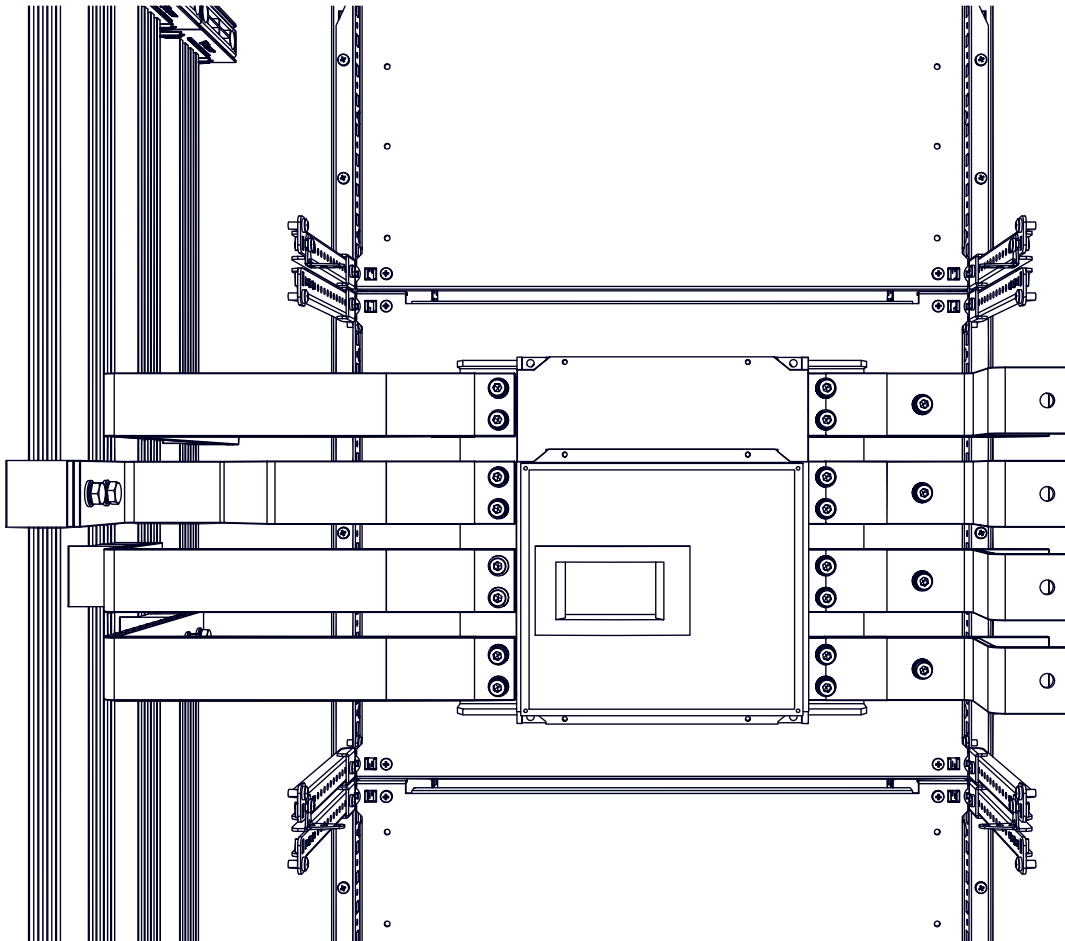


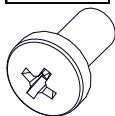
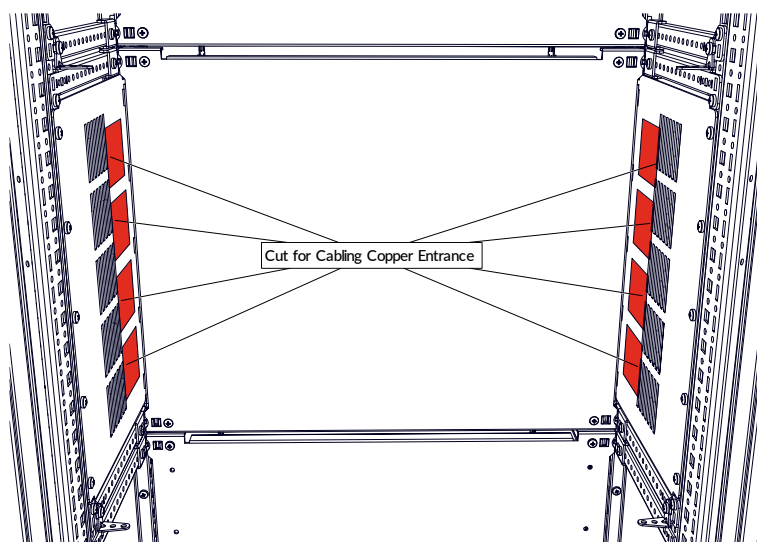
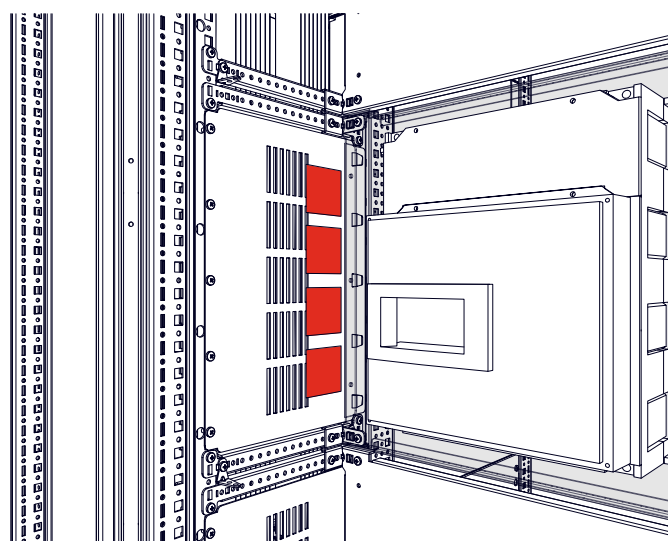
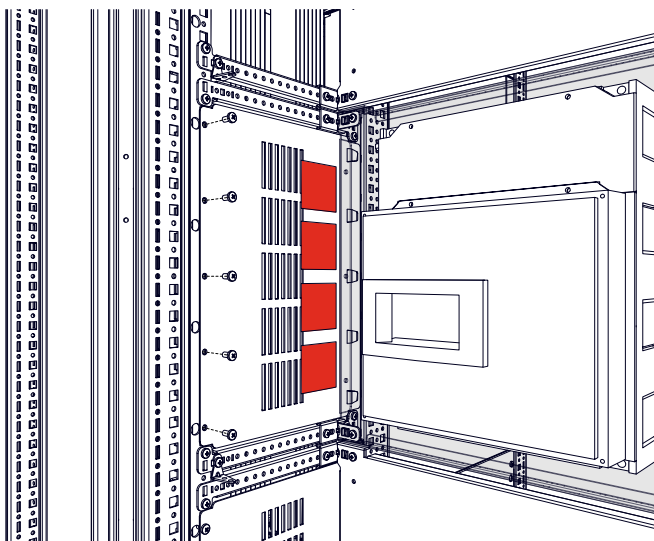
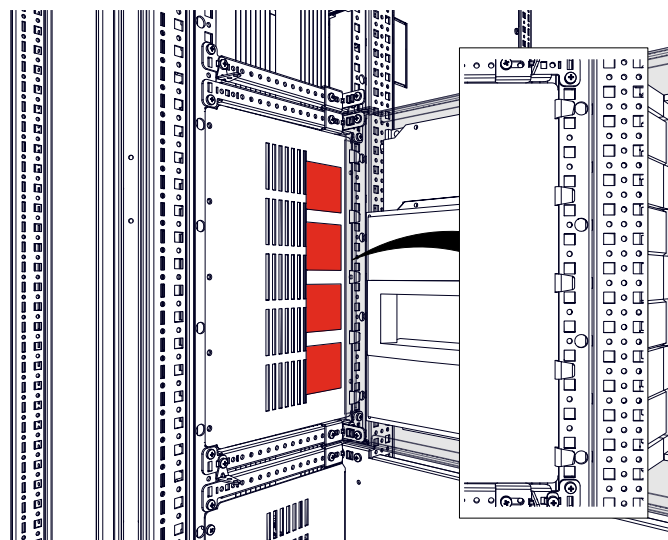
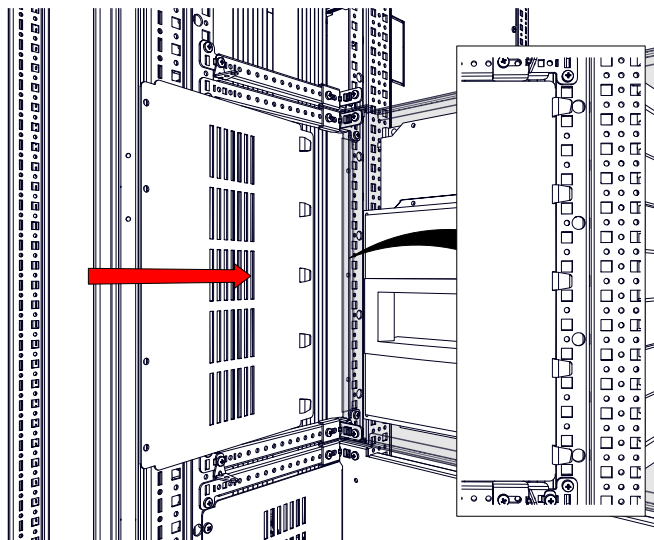
4. MCCB (EMPTY) BREAKER ASSEMBLY

Required Packages:
1039.0XX



Assemble the breaker's connections as Breaker Manufacturer's Instructions



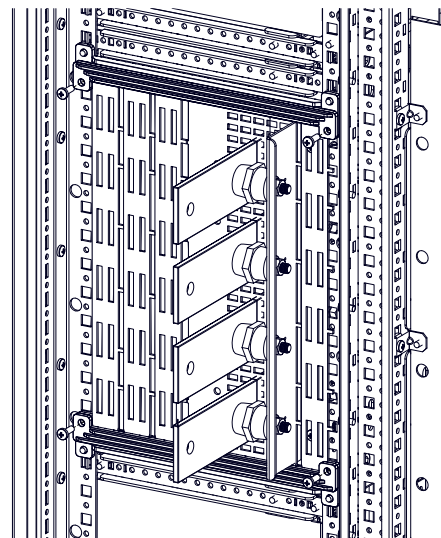
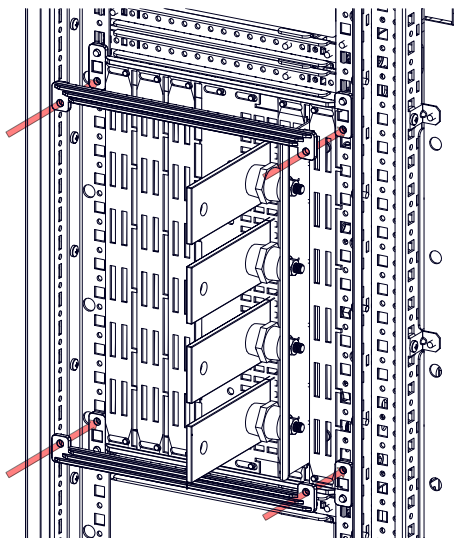
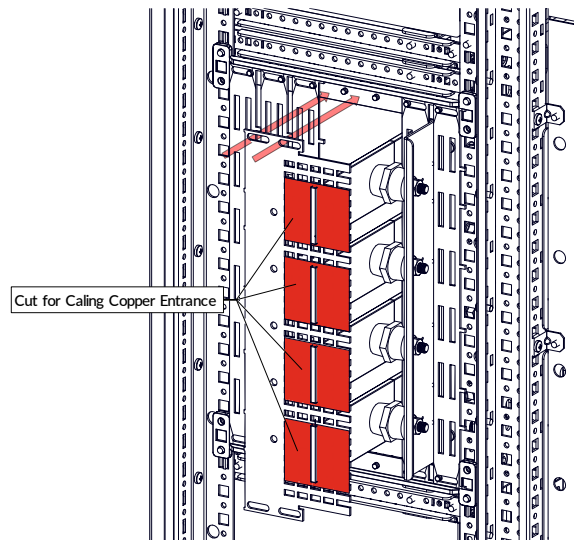
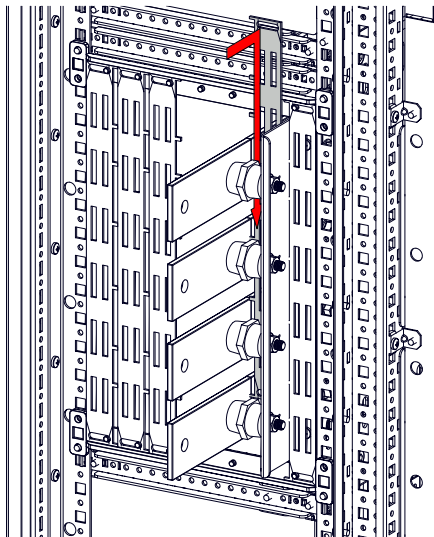
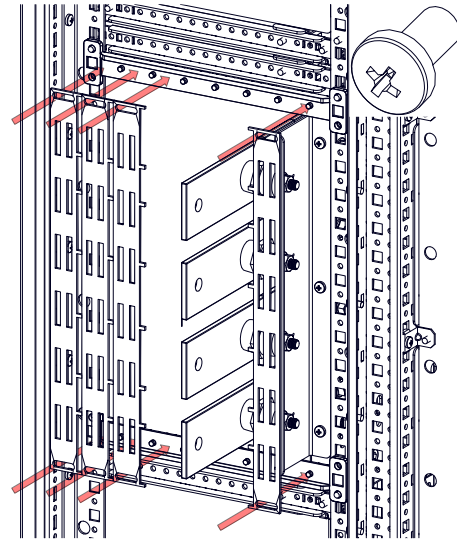
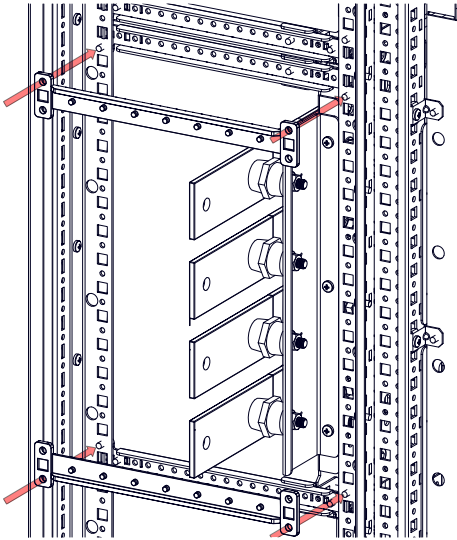
5. MCCB (EMPTY)- SIDE SEPARATION ASSEMBLY**5.1 MCCB (EMPTY)- SIDE SEPARATION ASSEMBLY****M5X10****Required Packages:**
1033.XXX

5.2 MCCB (EMPTY)-MODULAR SIDE SEPARATION ASSEMBLY

Required Packages:
1041.0XX



M5X16



6. MCCB (EMPTY) SEPARATION SHELF ASSEMBLY

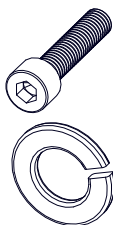
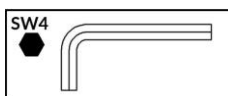
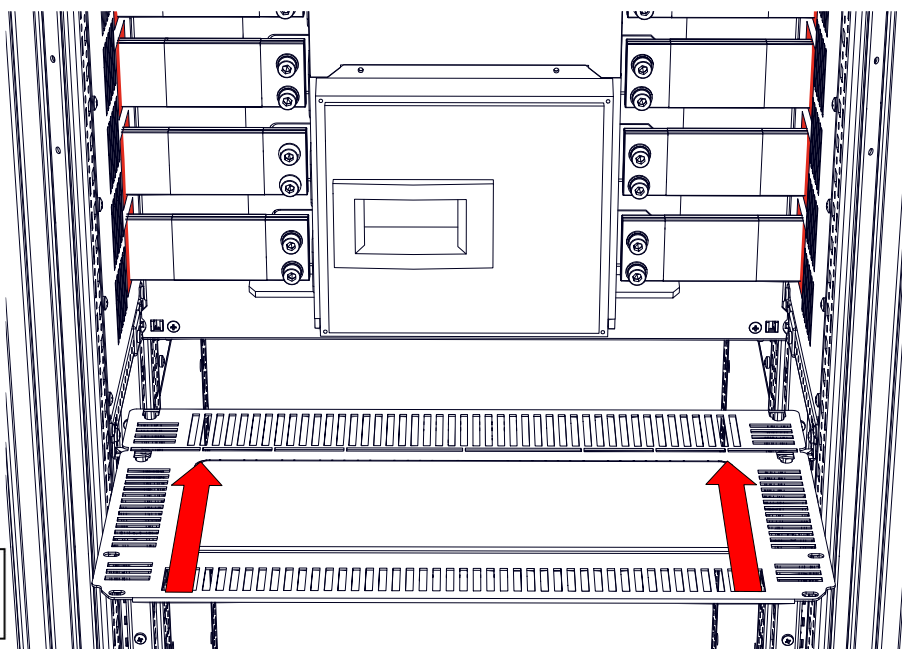
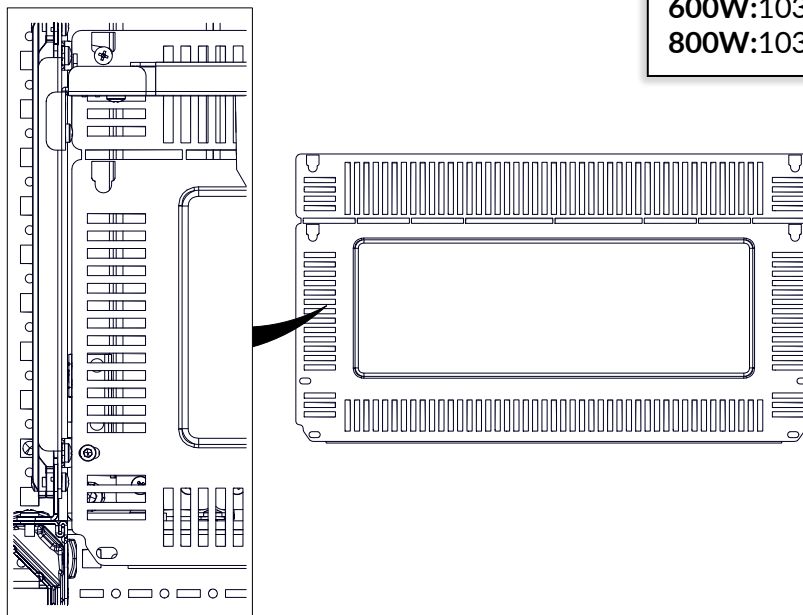
EXTERNAL POSITION

Required Packages:

400W:1032.040

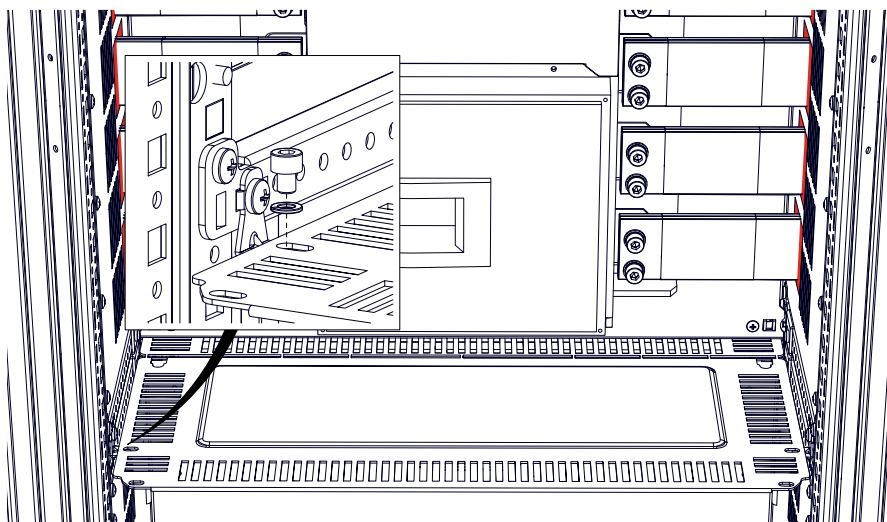
600W:1032.060

800W:1032.080



M5x6

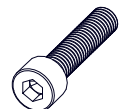
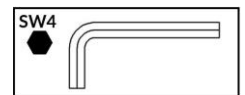
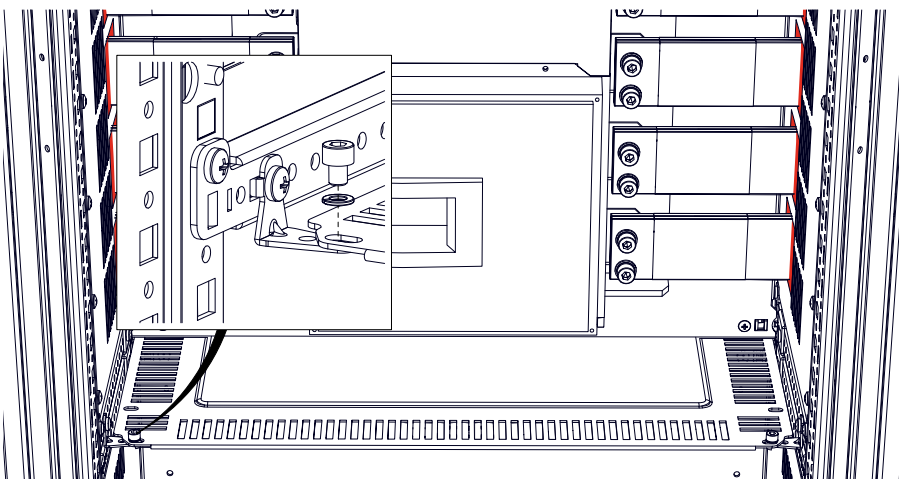
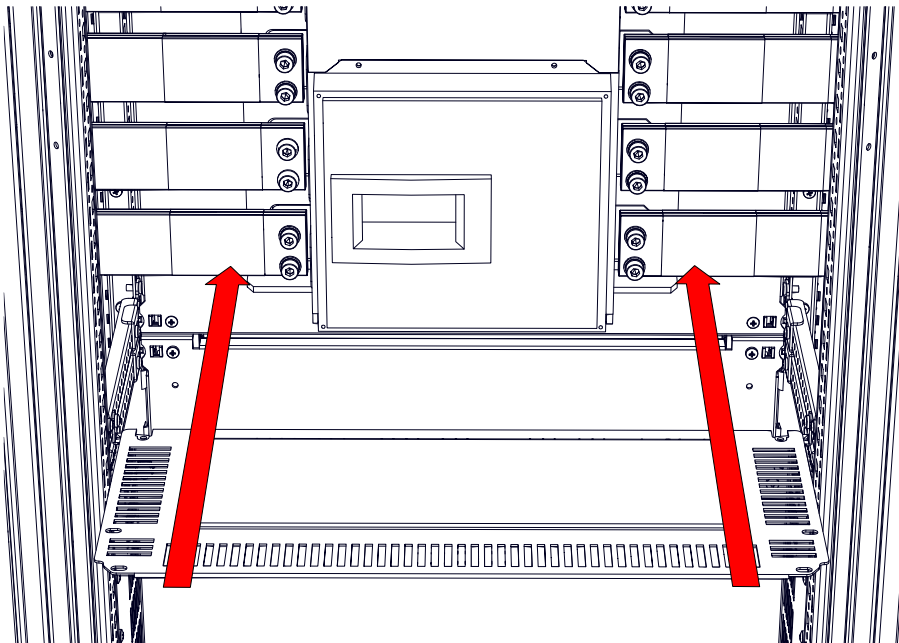
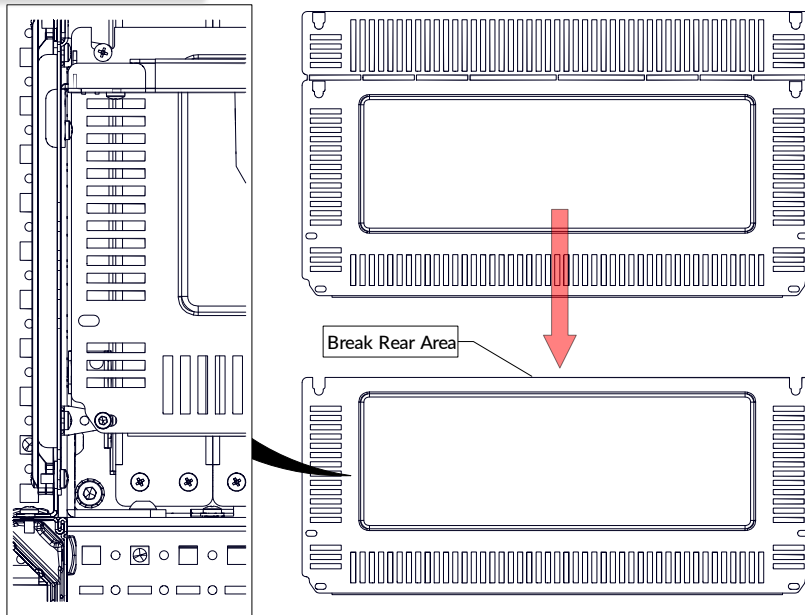
M5



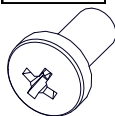
6. MCCB (EMPTY) SEPARATION SHELF ASSEMBLY

Required Packages:
400W:1032.040
600W:1032.060
800W:1032.080

INTERNAL POSITION

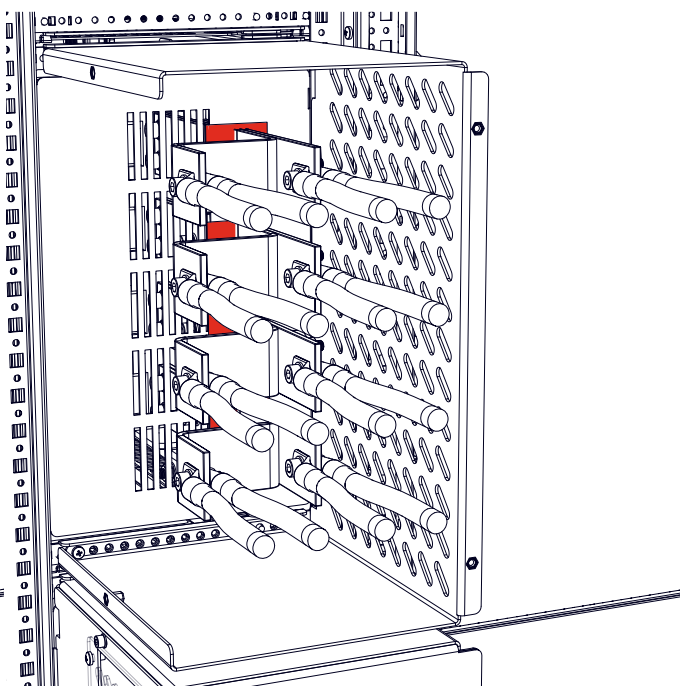
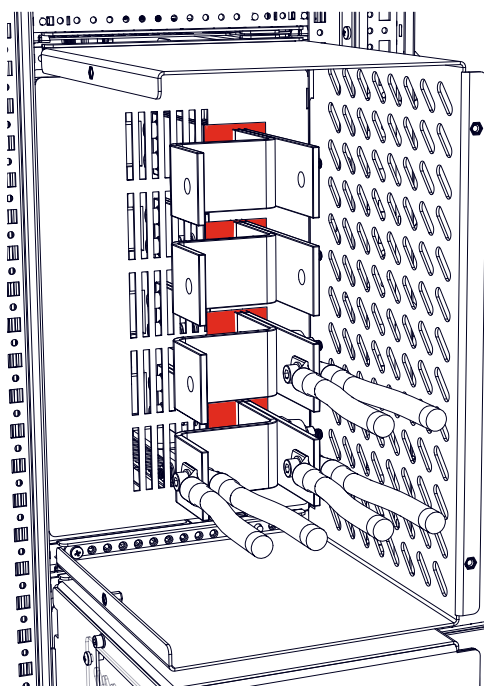
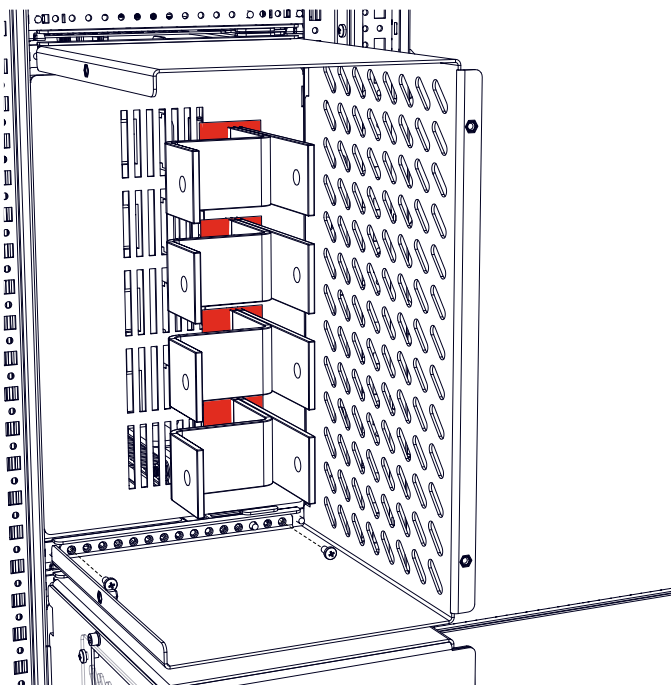
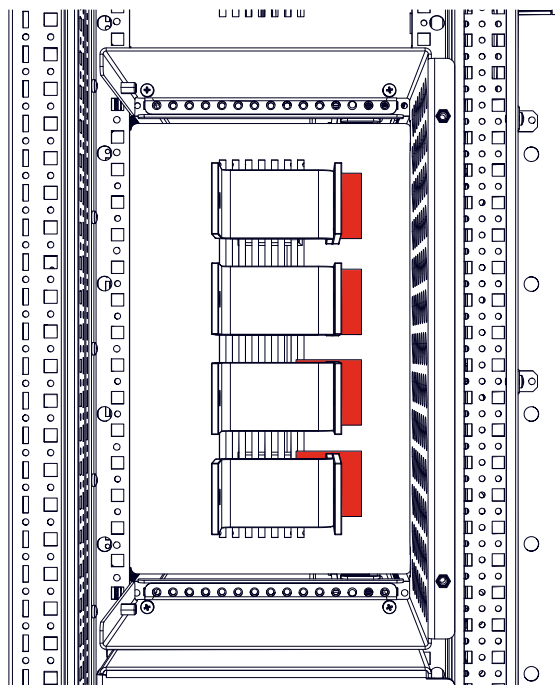


7. MCCB (EMPTY) FORM BOX ASSEMBLY



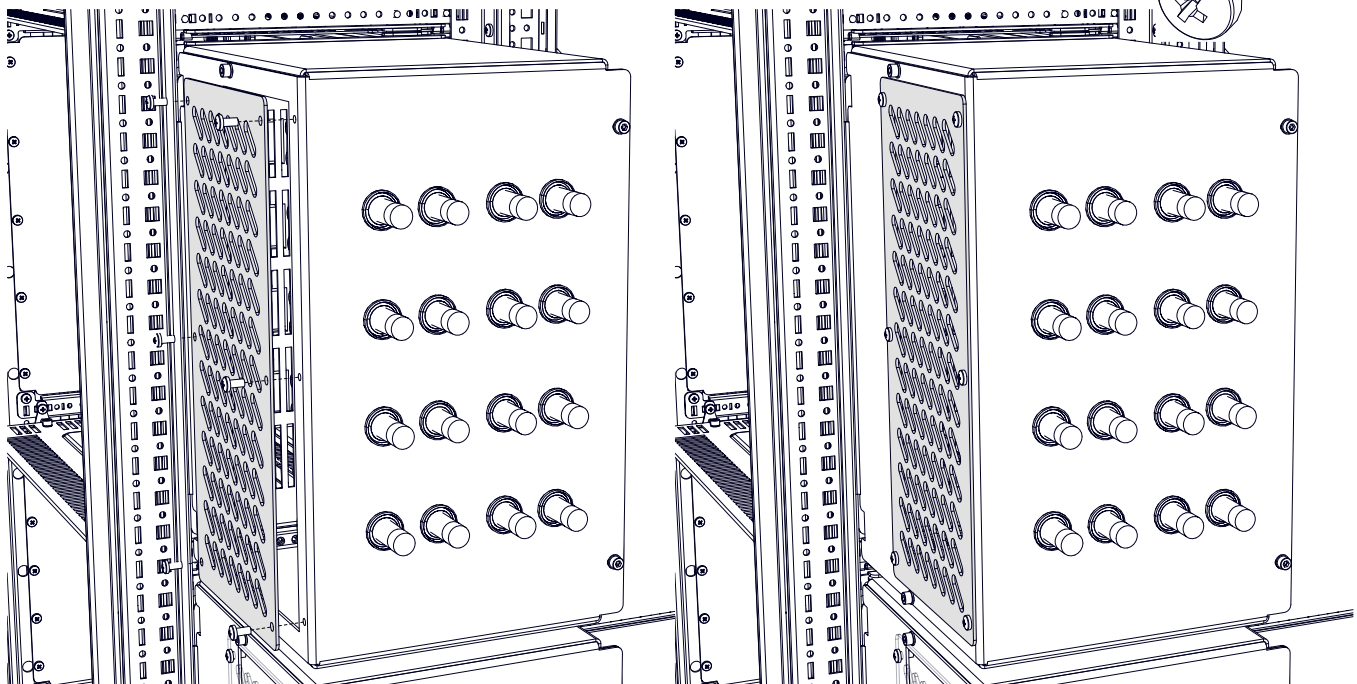
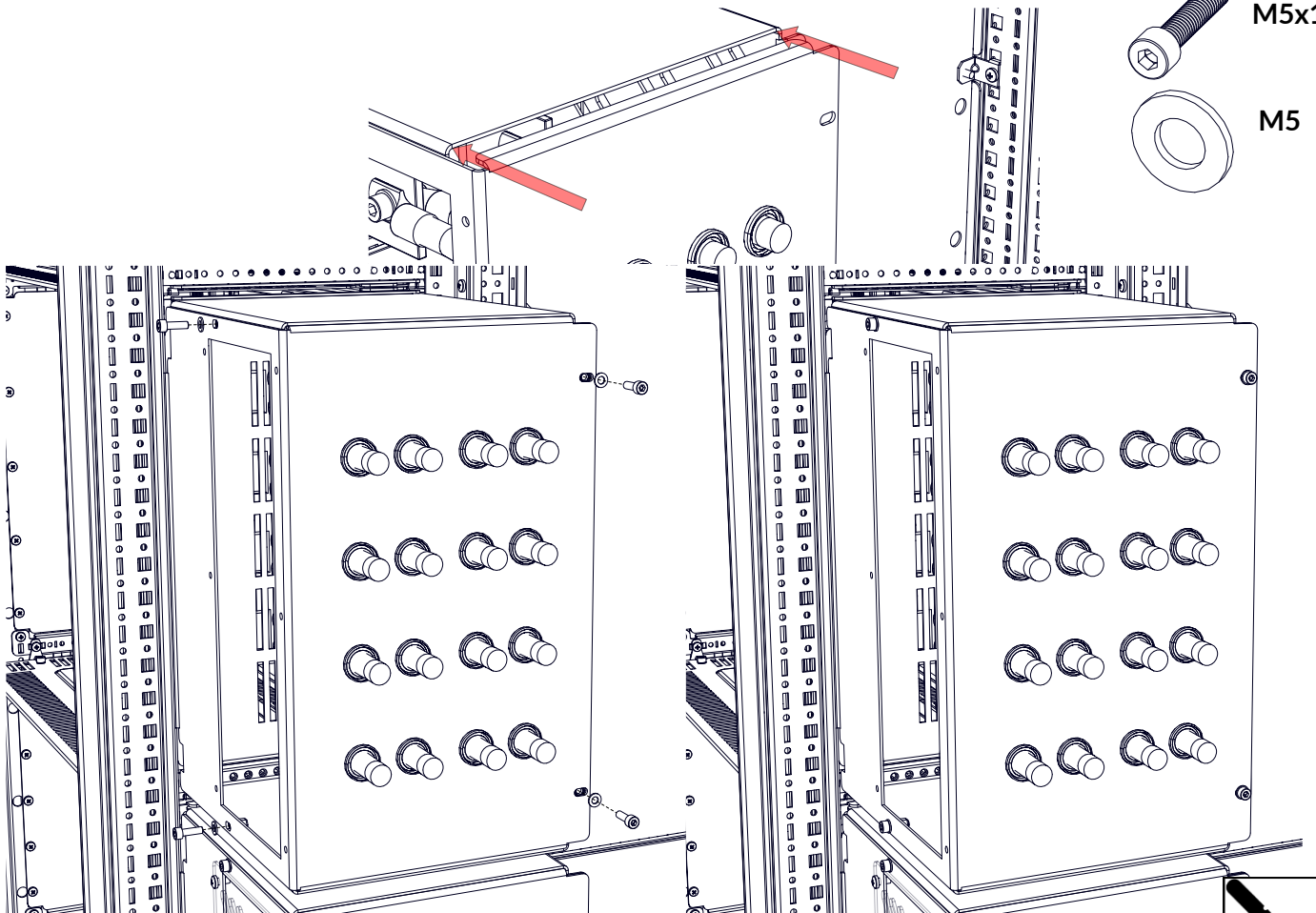
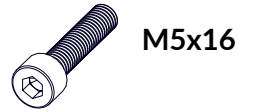
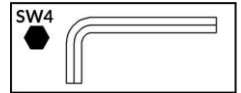
M5X10

Required Packages:
1042.0XX



7. MCCB (EMPTY) FORM BOX ASSEMBLY

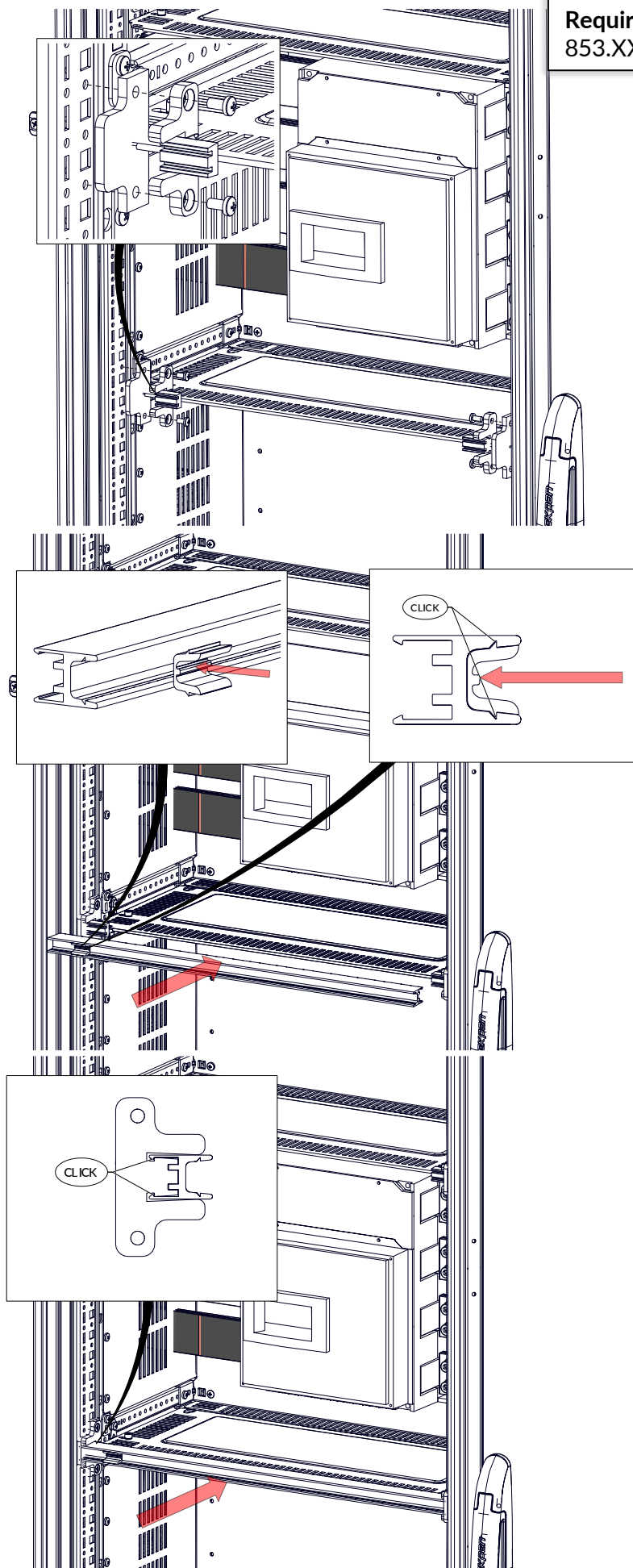
Required Packages:
1042.0XX



8. FRONT DOOR ASSEMBLY**8.1 EXTERNAL PARTIAL DOOR ASSEMBLY**

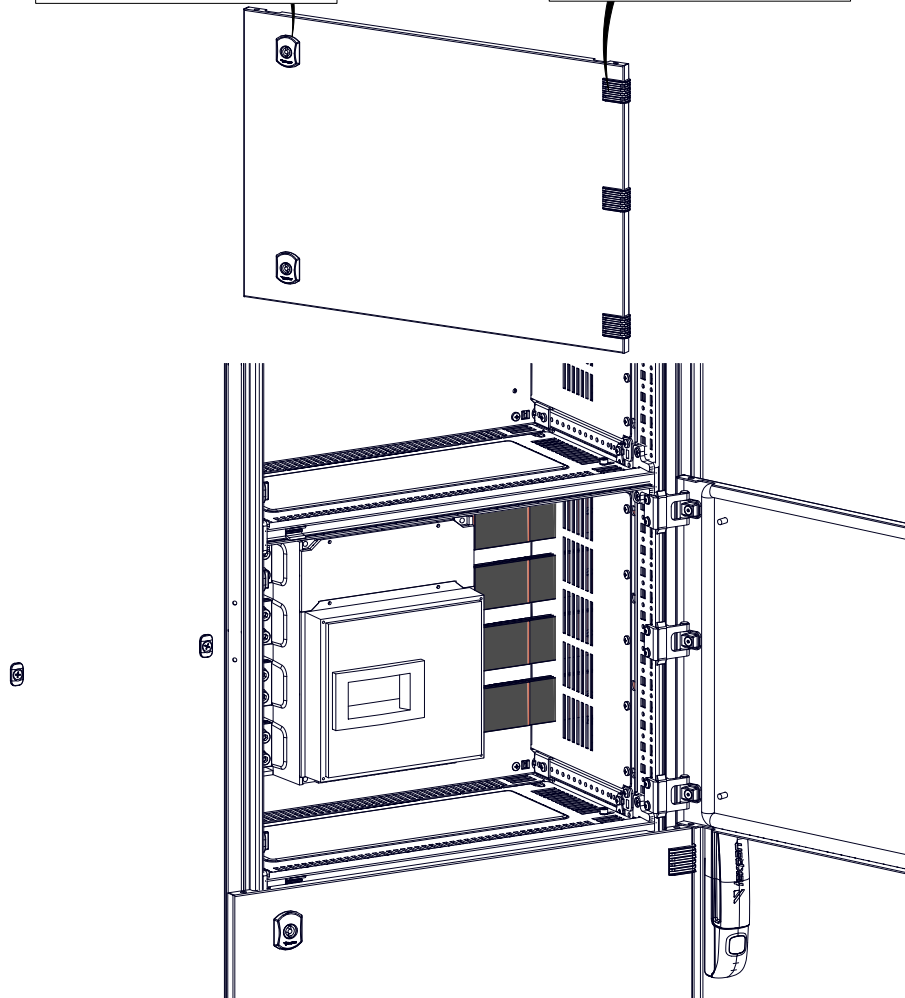
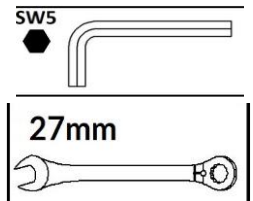
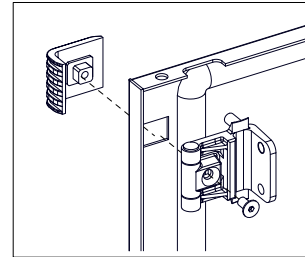
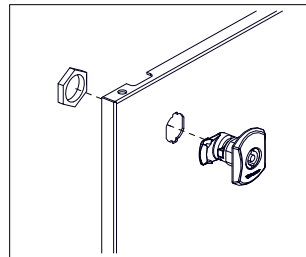
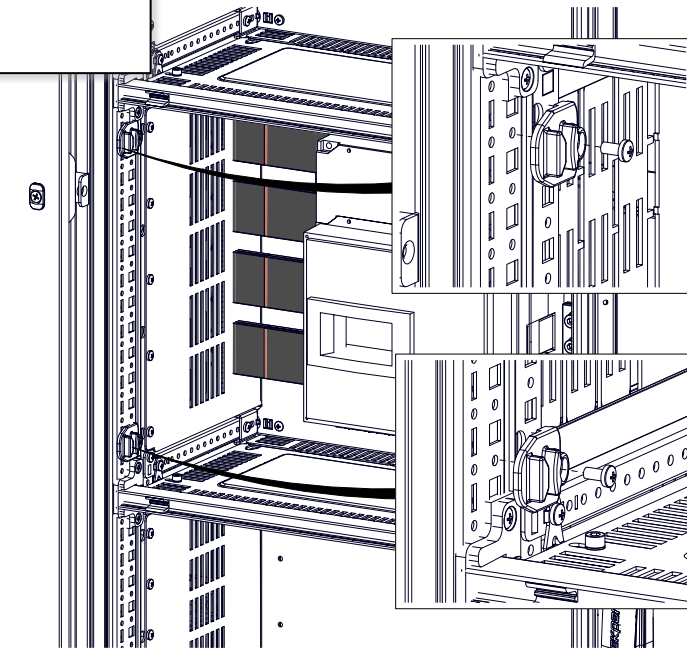
M5X10

Required Packages:
853.XXX



8.1 EXTERNAL PARTIAL DOOR ASSEMBLY

Required Packages:
853.XXX

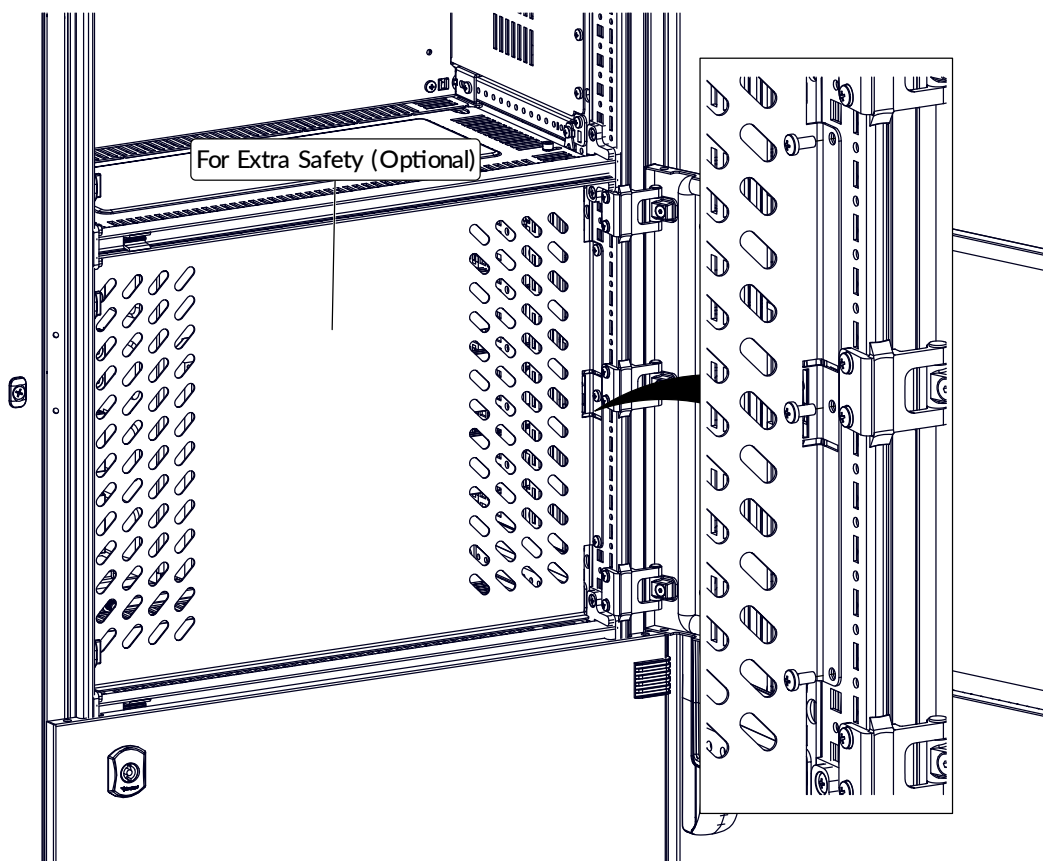
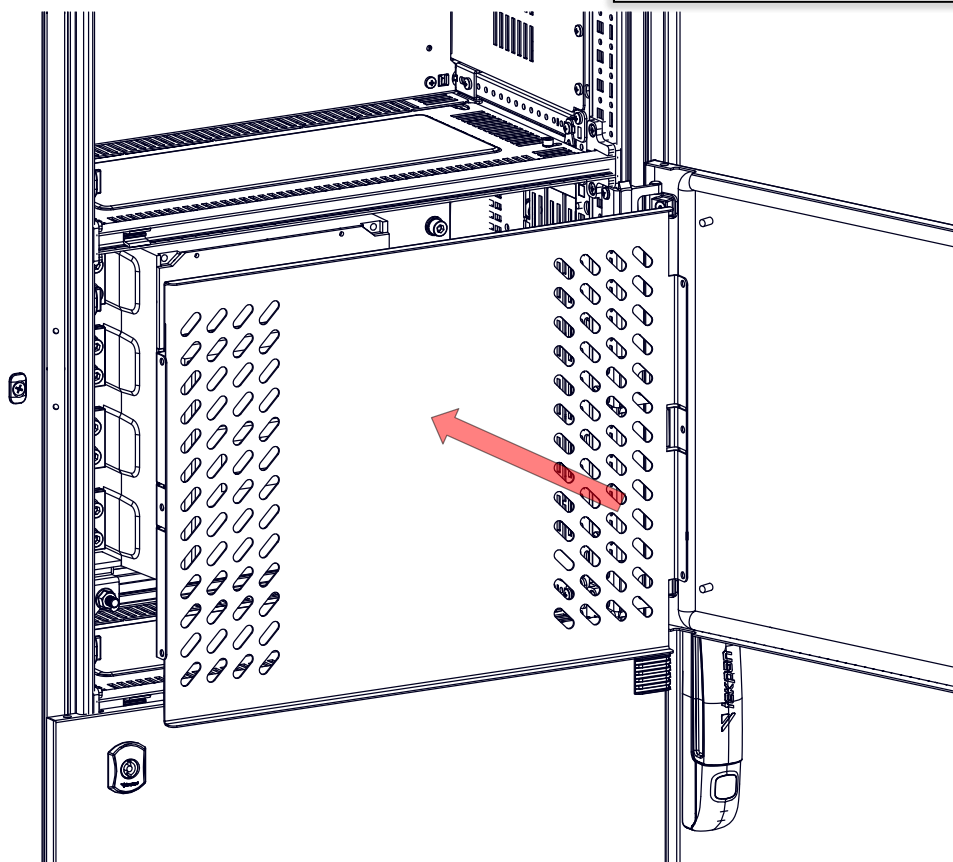


8.2 MCCB SAFETY COVER ASSEMBLY (OPTIONAL)



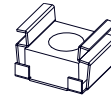
M5X10

Required Packages:
1064.XXX

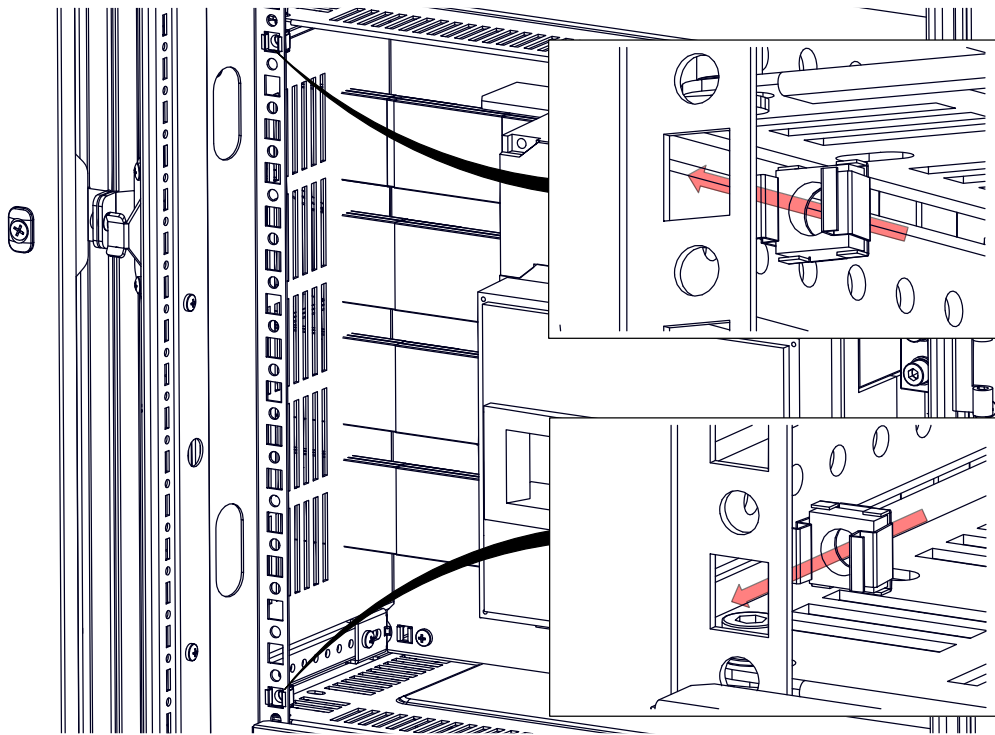


9. INTERNAL PARTIAL DOOR ASSEMBLY

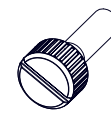
Required Packages:
954.XXX



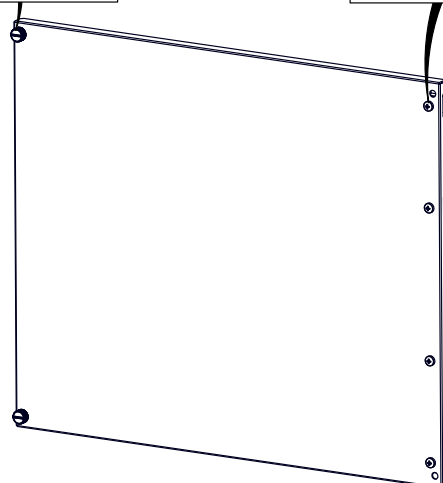
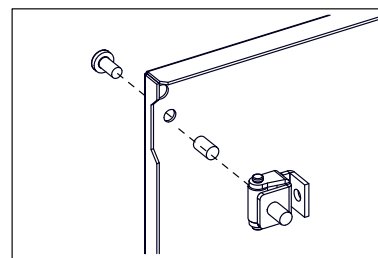
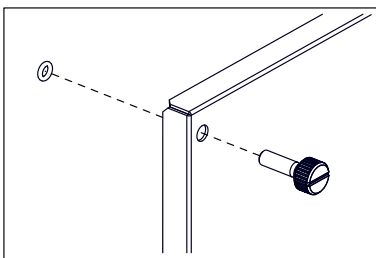
M6 Cage Nut



M5X10



M6 Knob Bolt



■ 9. INTERNAL PARTIAL DOOR ASSEMBLY

