ICC 730 Finalized Design for ATC 23/4/2018

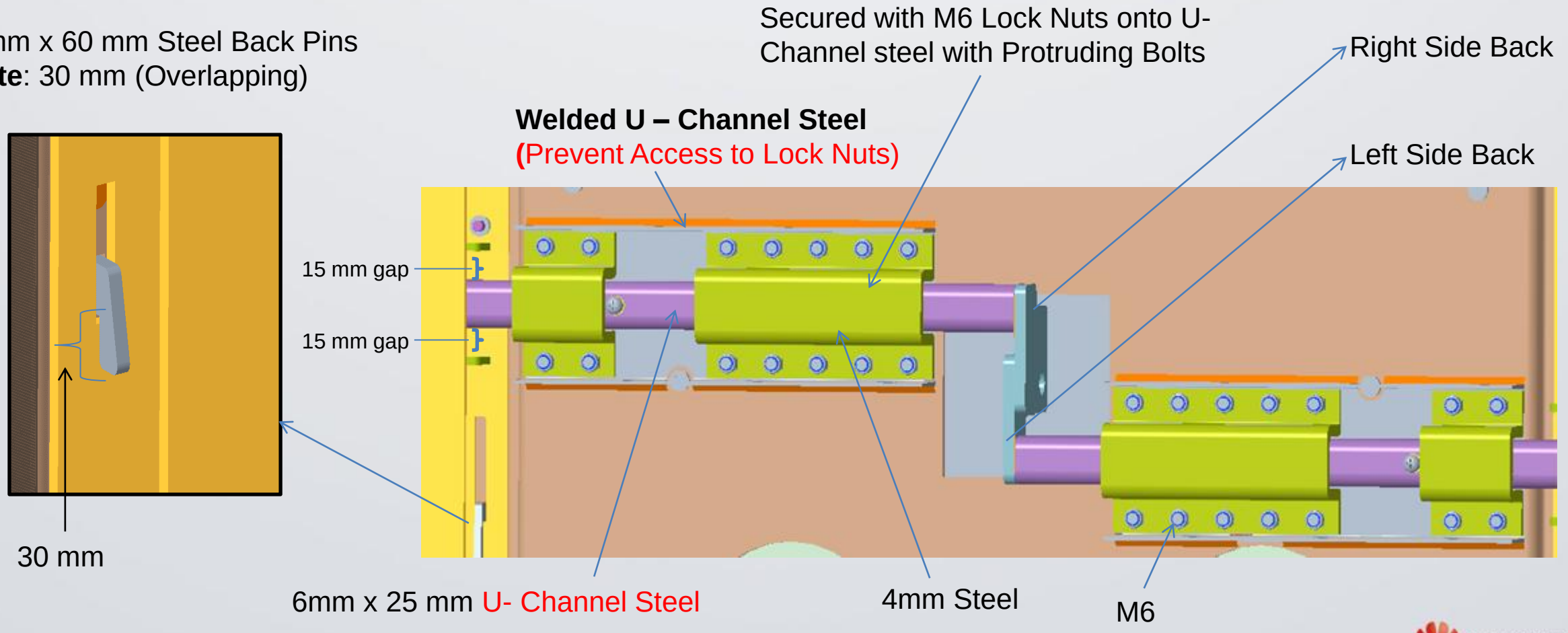
Updated Clarification

Battery Safe Cover:

Front – Lock cover with hidden lock, 8 x TORX screws

Back – 8 x 6 mm x 30 mm (Overlapping) Steel Back Pins,

Sliding cross bars secured on each end with15mm Gap (Bottom /Top) to Ensure Cross Bar can be Easily Secured on Uneven Plinth Installation



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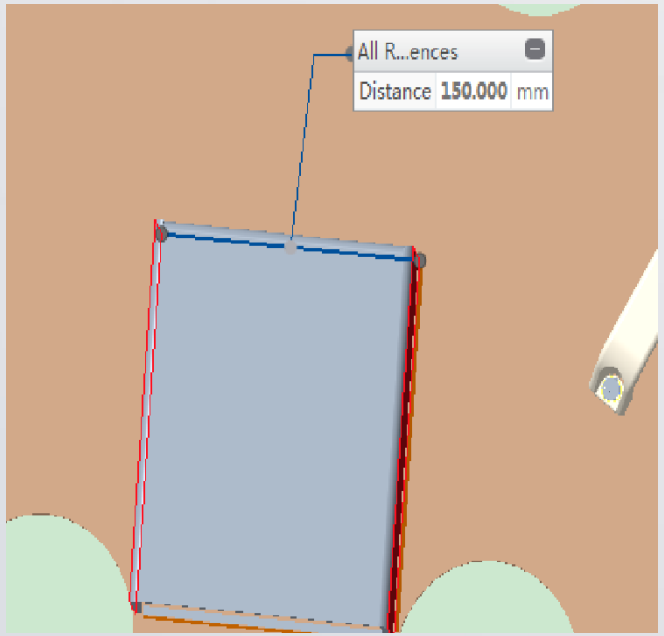
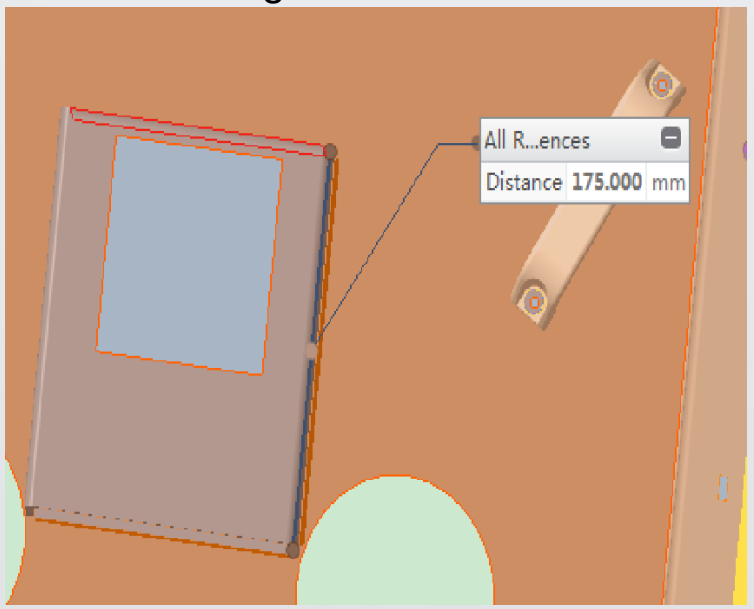
Battery Safe 4 mm Lock Cover Dimensions

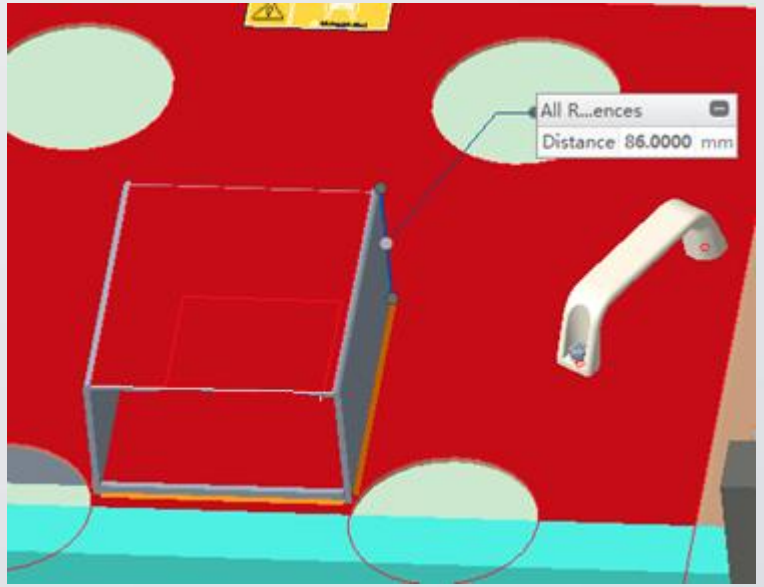
Width = 150mm



Length = 175 mm



Height = 86mm



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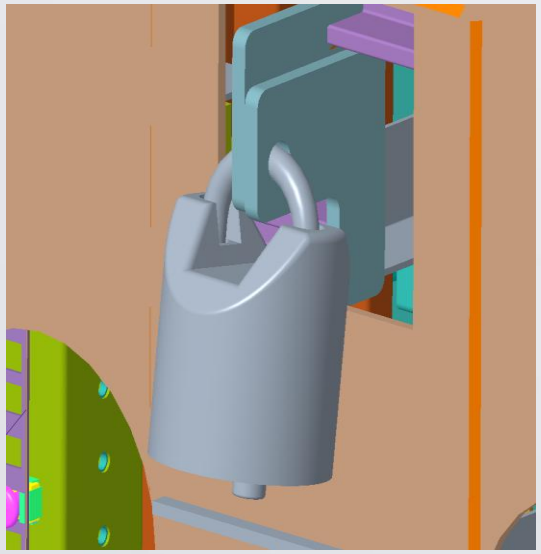
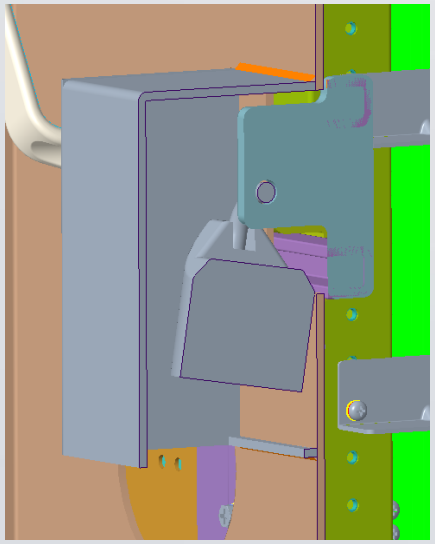
Battery Safe Lock Mechanism to accommodate ATC Approved PL2, PL5 and Glam Locks

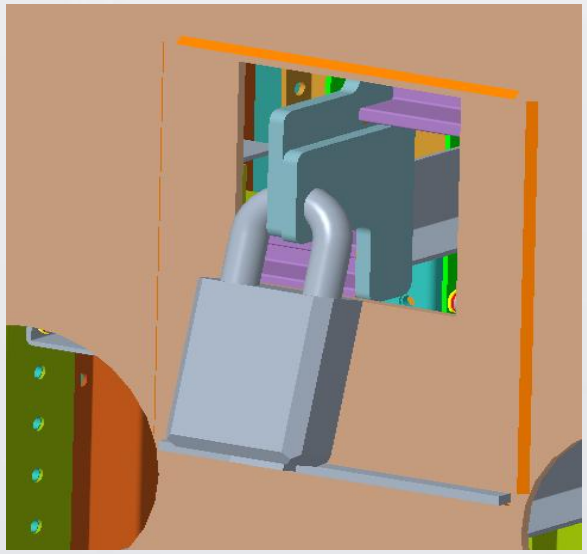
Note: All locks are protected within front lock cover

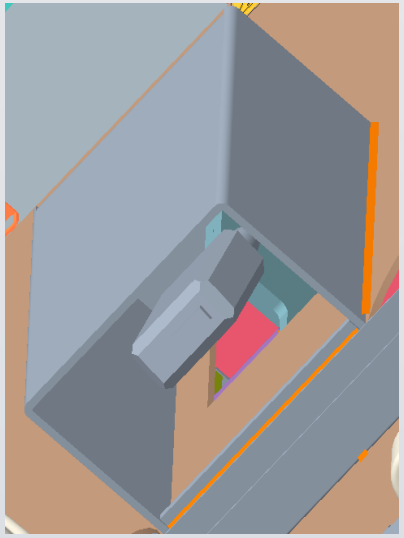
Glam Smartlock



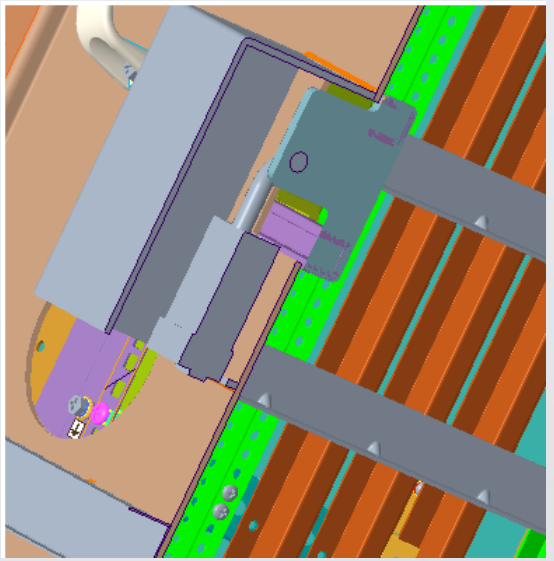


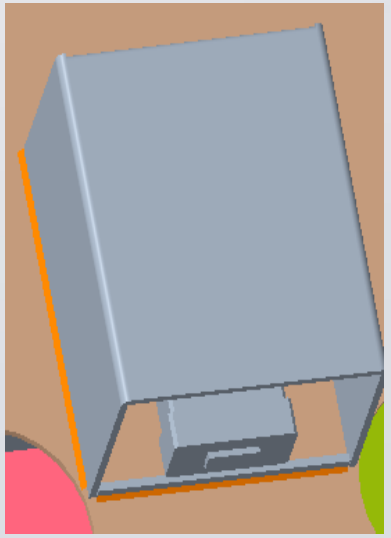
PL2





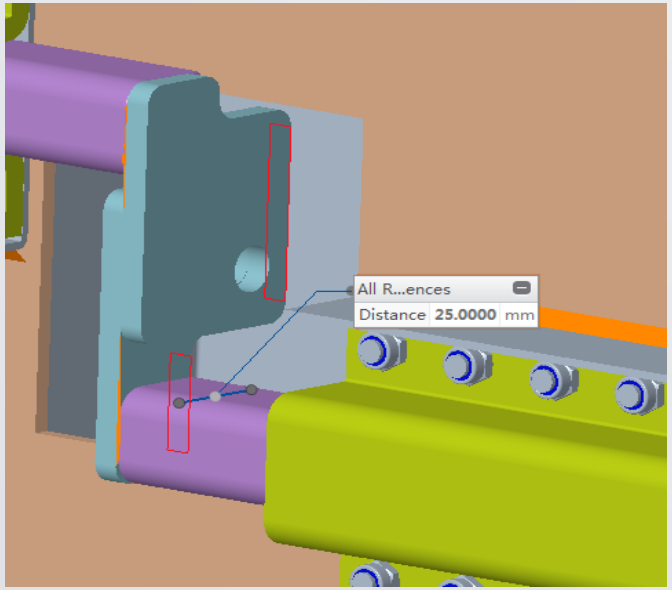
PL5



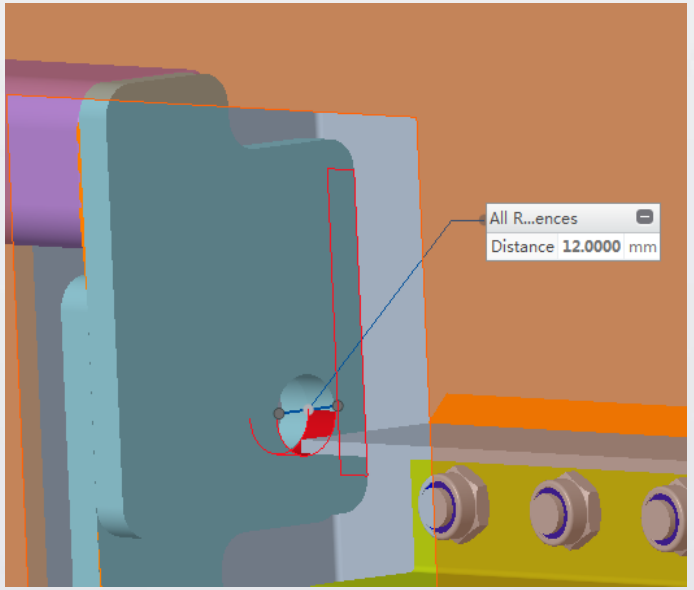


Hidden Lock Mechanism Dimensions- Right Side Back

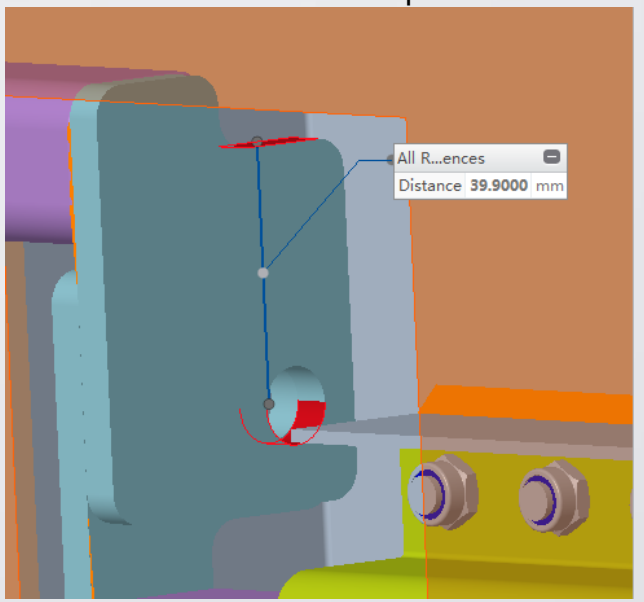
6mm x 25 mm U-Channel



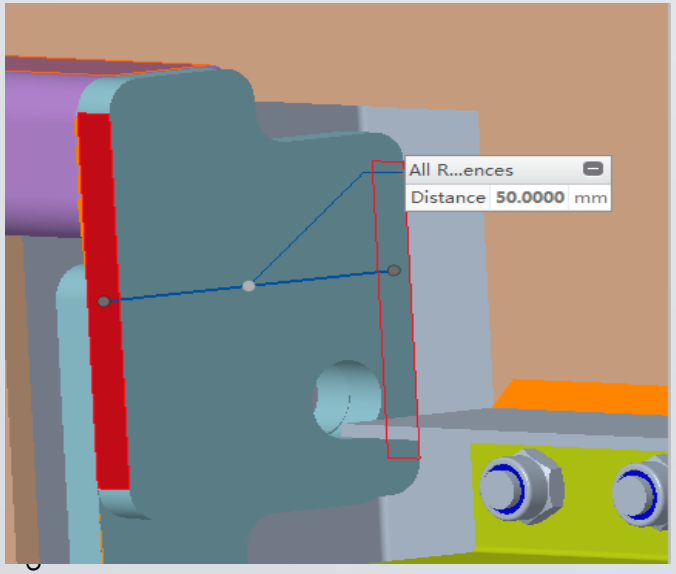
Hole diameter for lock shackle = 12 mm



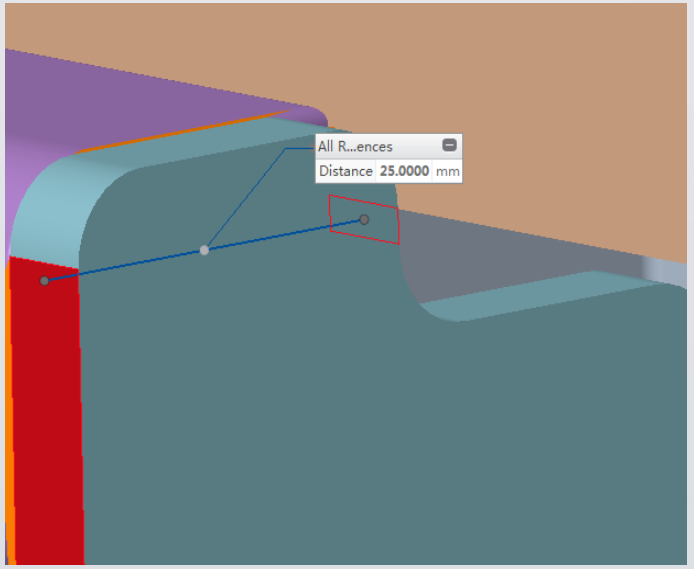
From middle of hole to top = 39 mm



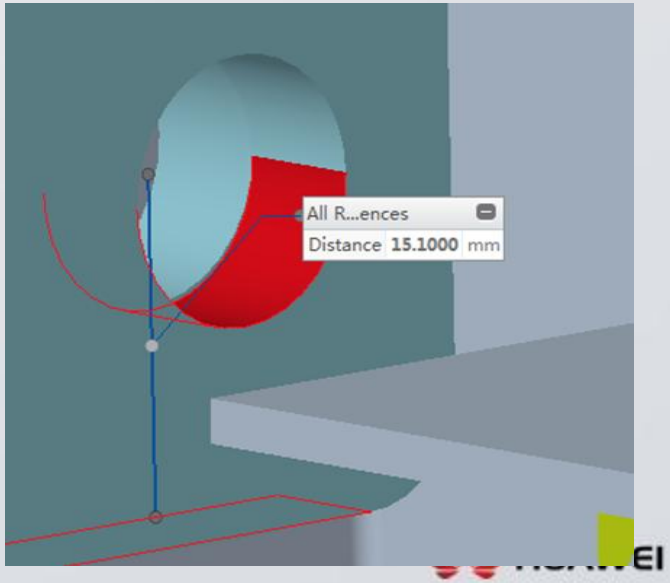
6 mm steel (from back to front)= 50 mm



6mm steel (from back to middle) = 25 mm

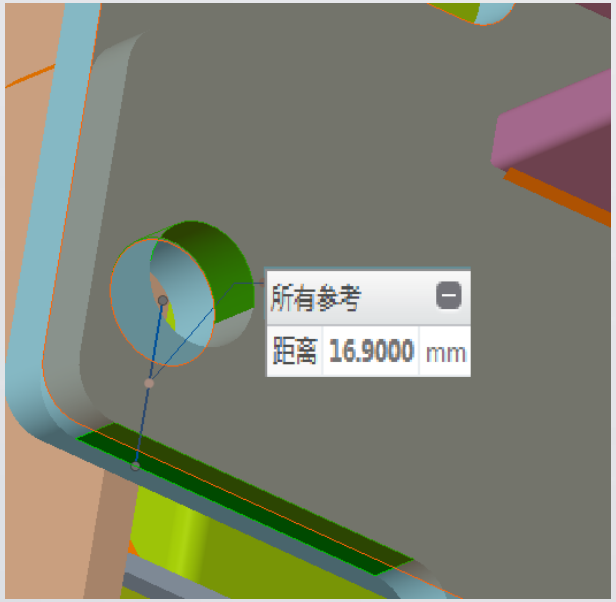


From middle of hole to bottom = 15 mm

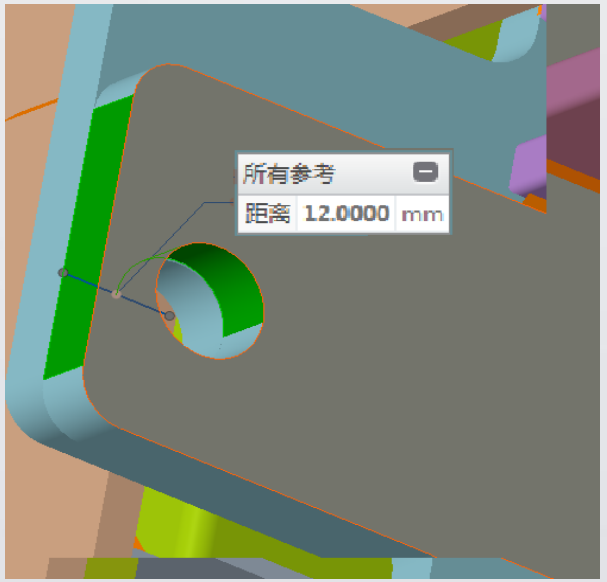


Hidden Lock Mechanism Dimensions- Left Side Back

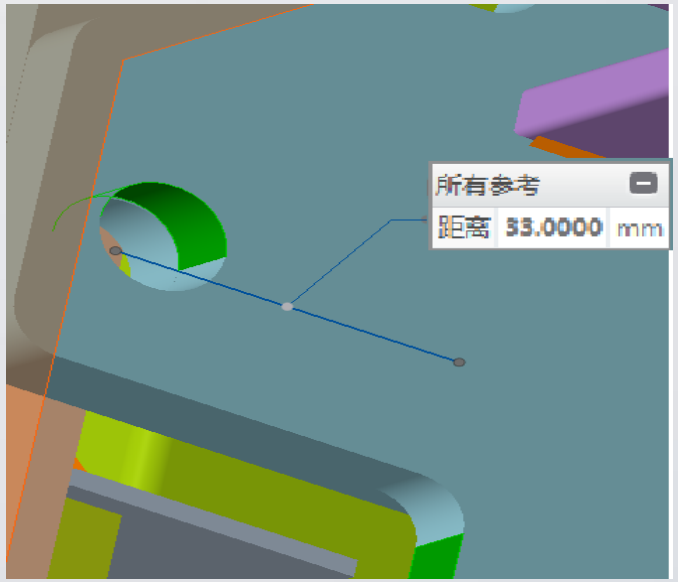
From middle of hole to bottom -16.9mm



From middle of hole to front – 12 mm



From middle of hole to back – 33 mm



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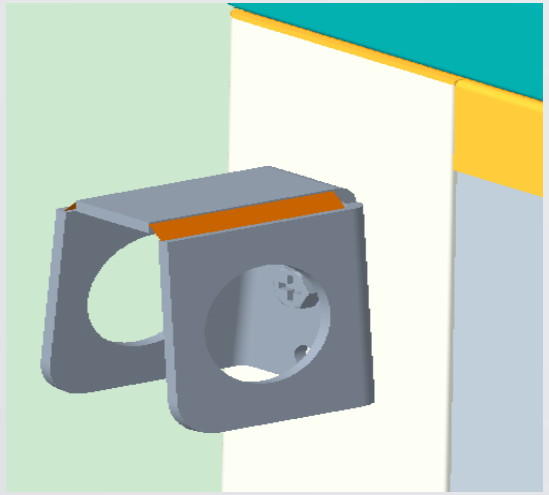
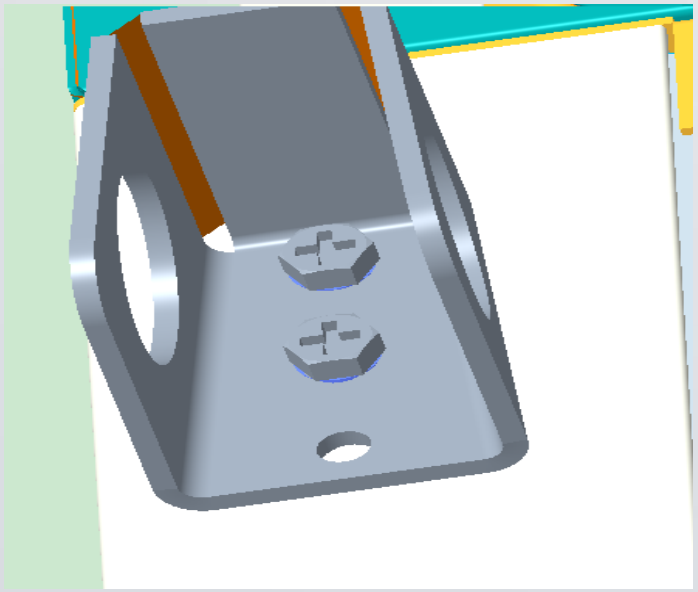
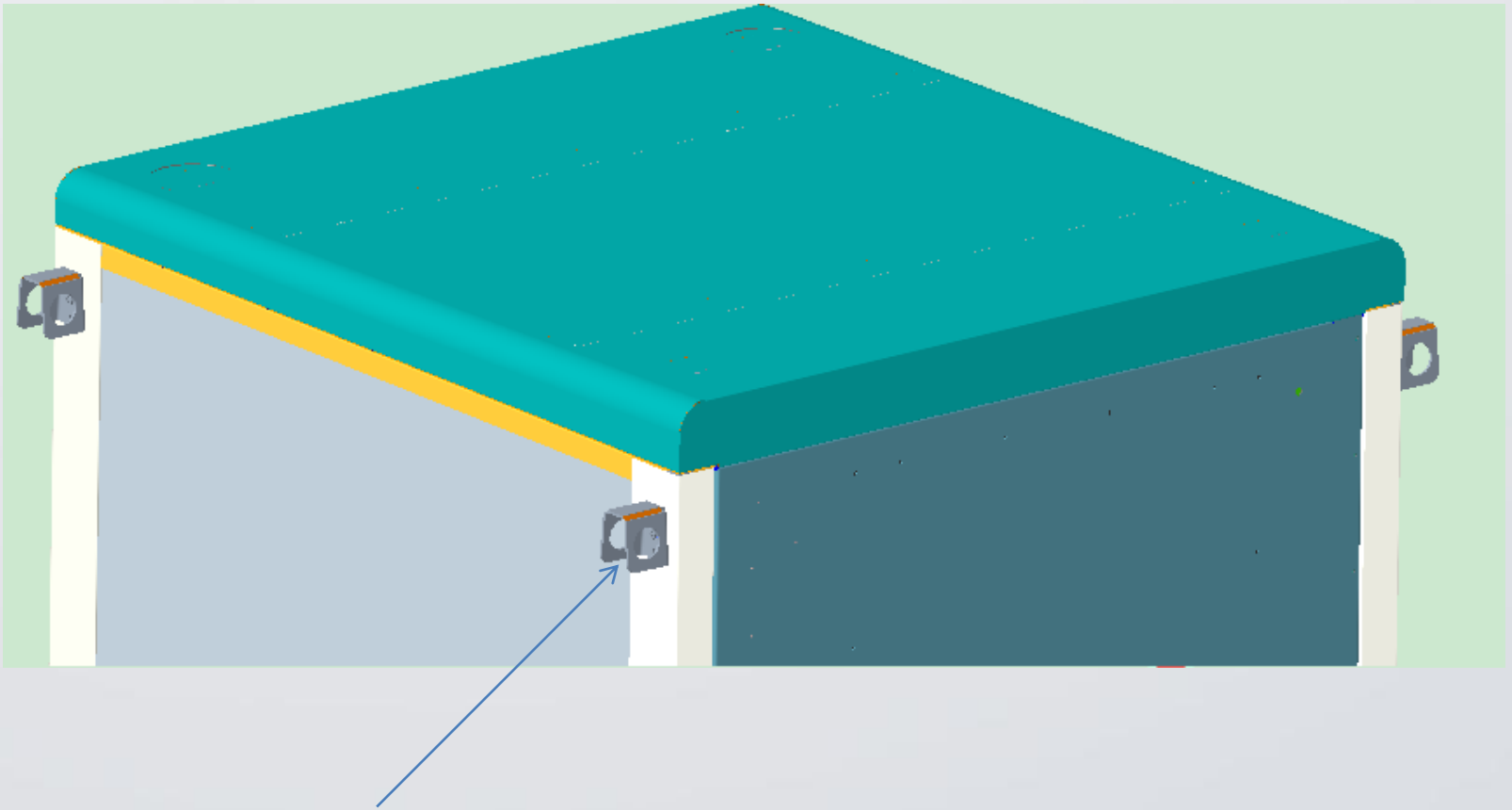
ICC 730 Cabinet Overview

Lifting Hooks for Crane Installation as per Global Supply

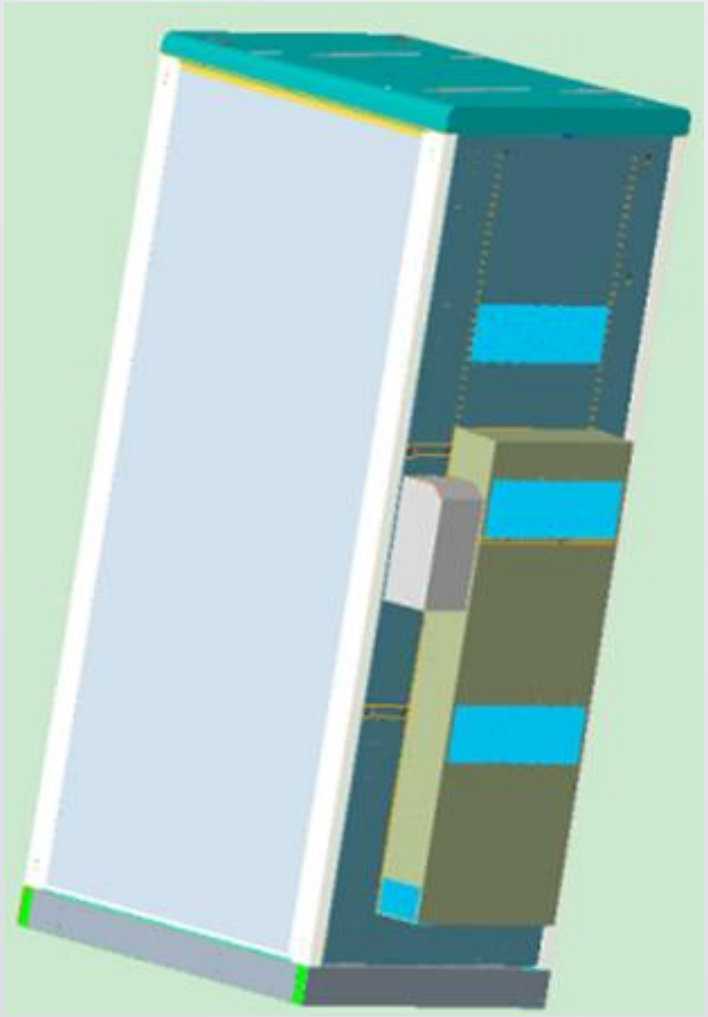
Note: 4 x Lifting hooks will be provided separately with accessories within cabinet

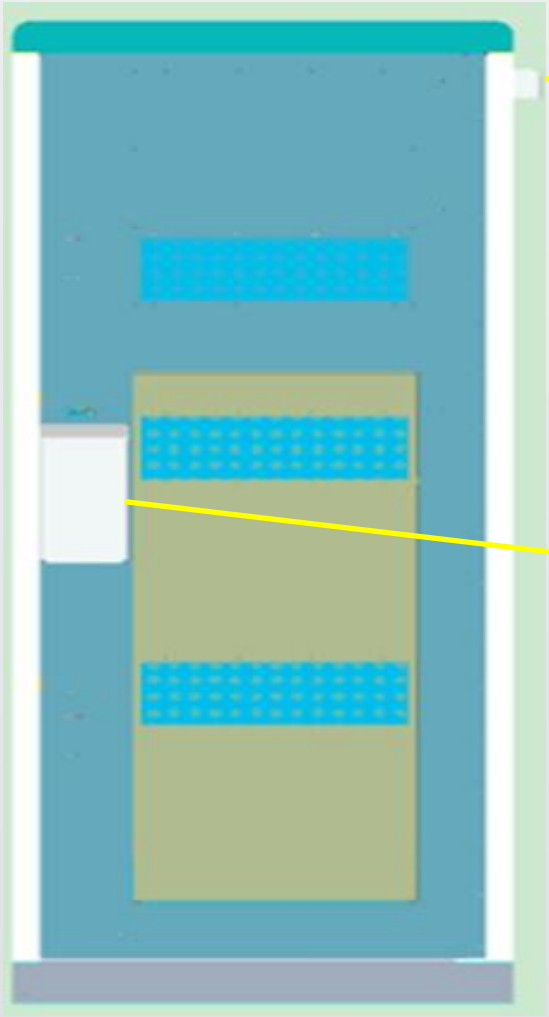




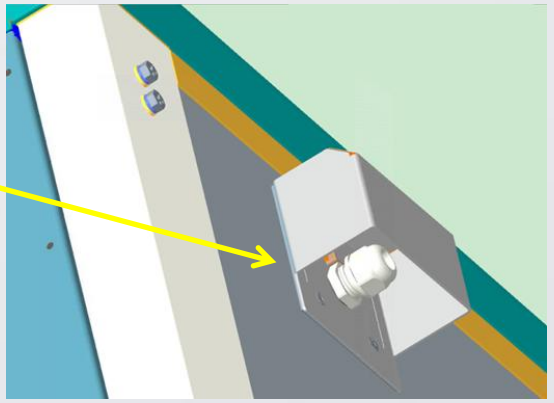


Complete Cabinet Exterior View

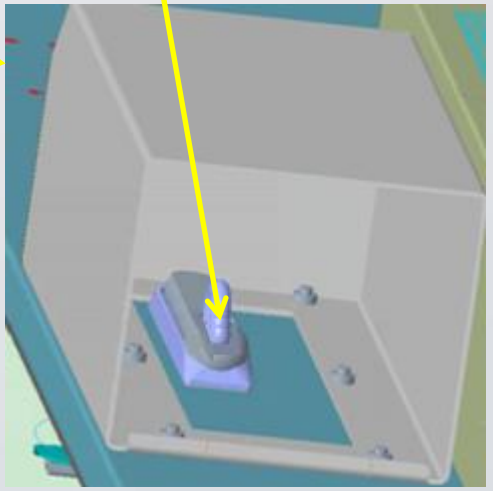




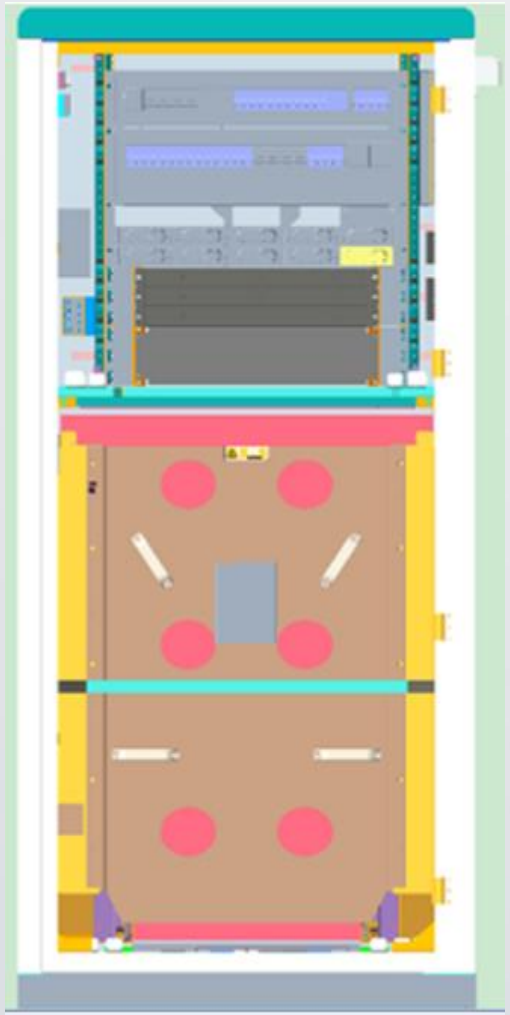
Rain hood with compression Gland



100% Stainless Steel Lock

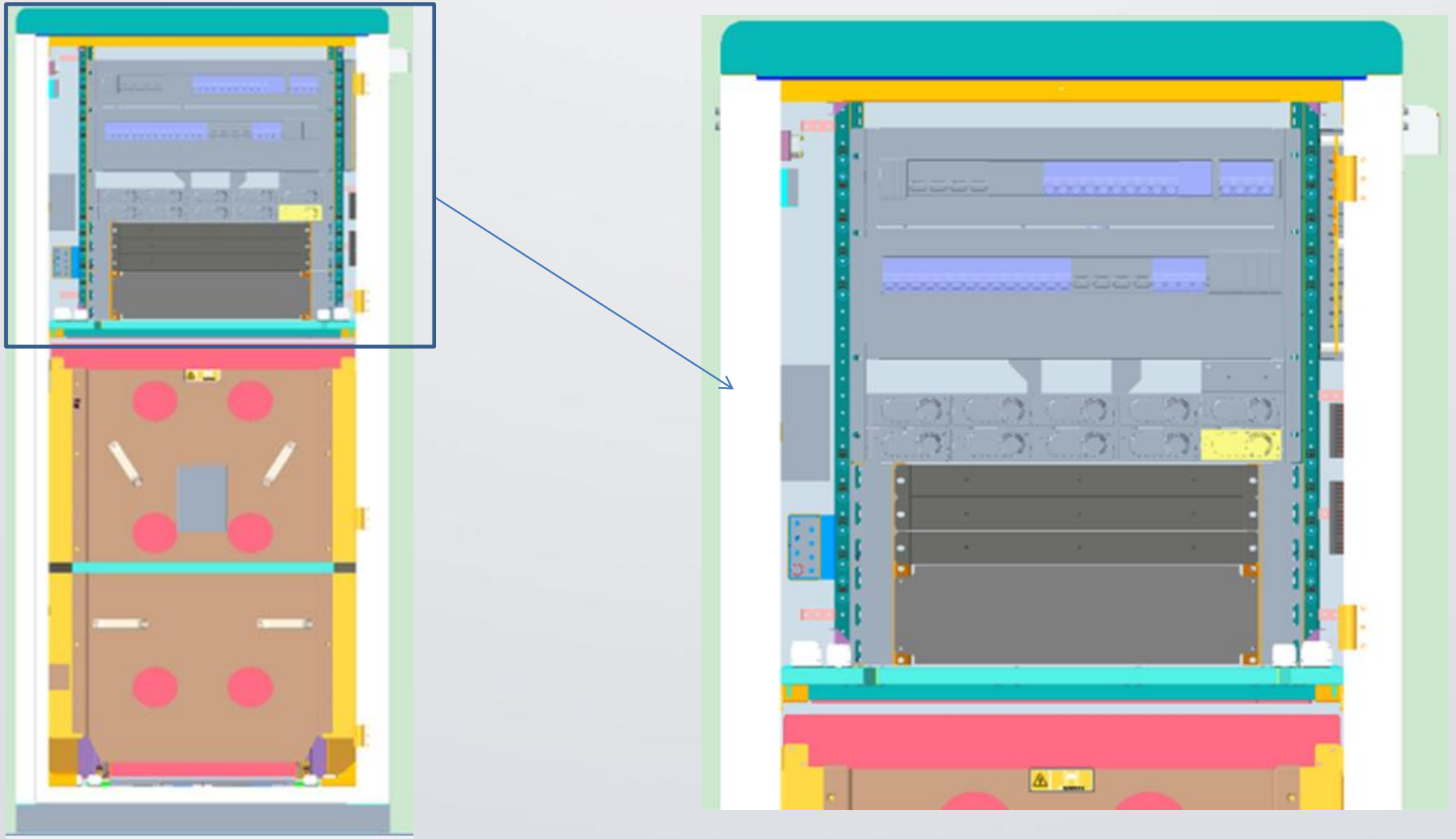


Complete Cabinet Interior Front View – Without Door

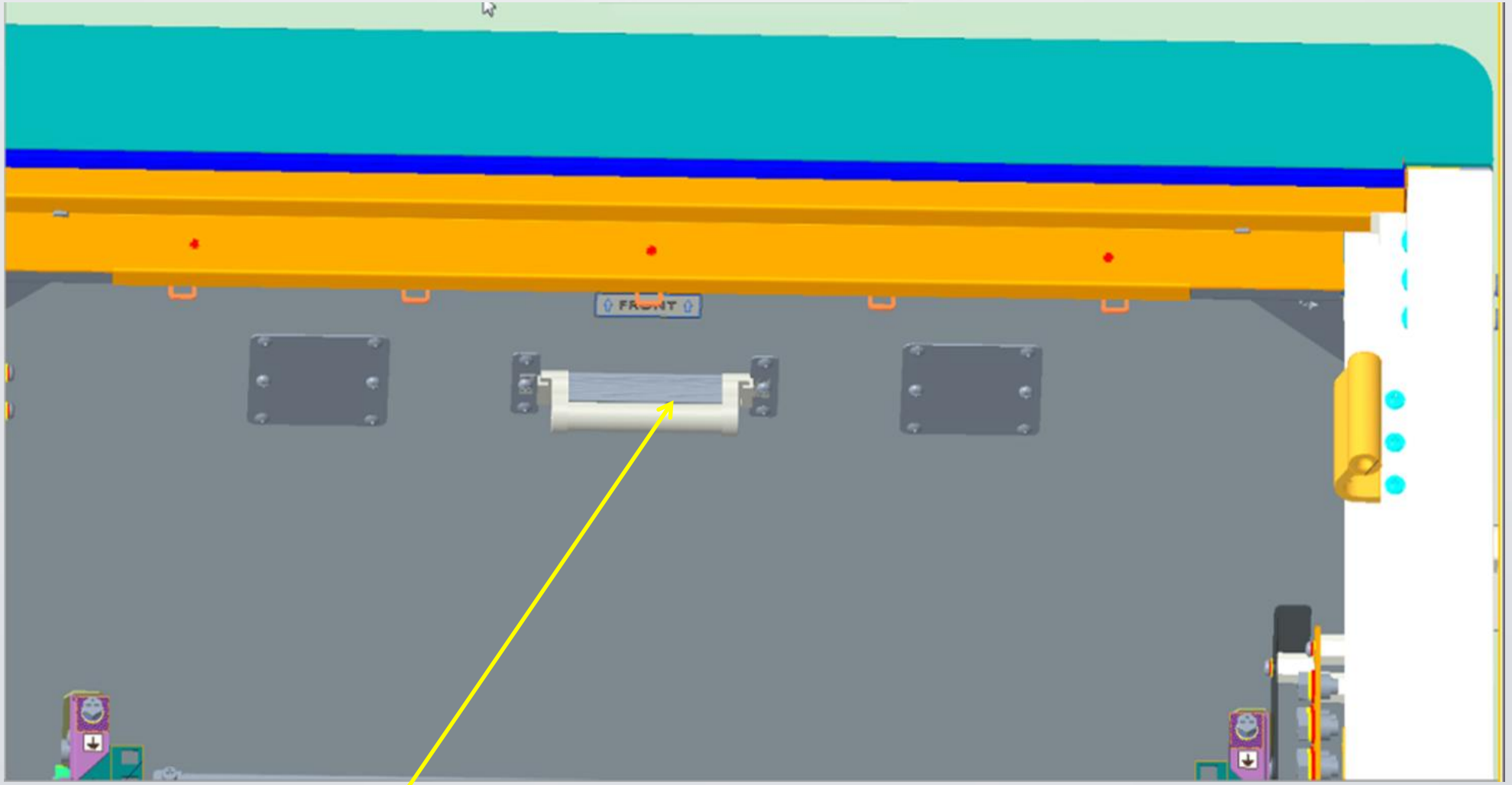


Equipment Compartment

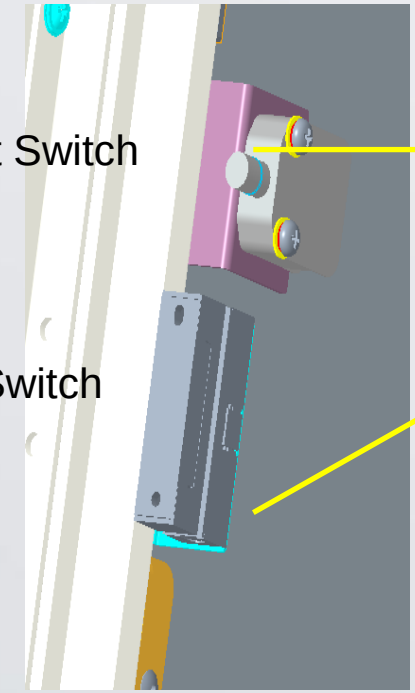
Equipment Compartment Front View



Top Angle View – DC Service Light, Blanking Plates for 2 x Additional Sensors



Left Side View – Earth bar, Inverter Installation, Reed Switch and Light Switch

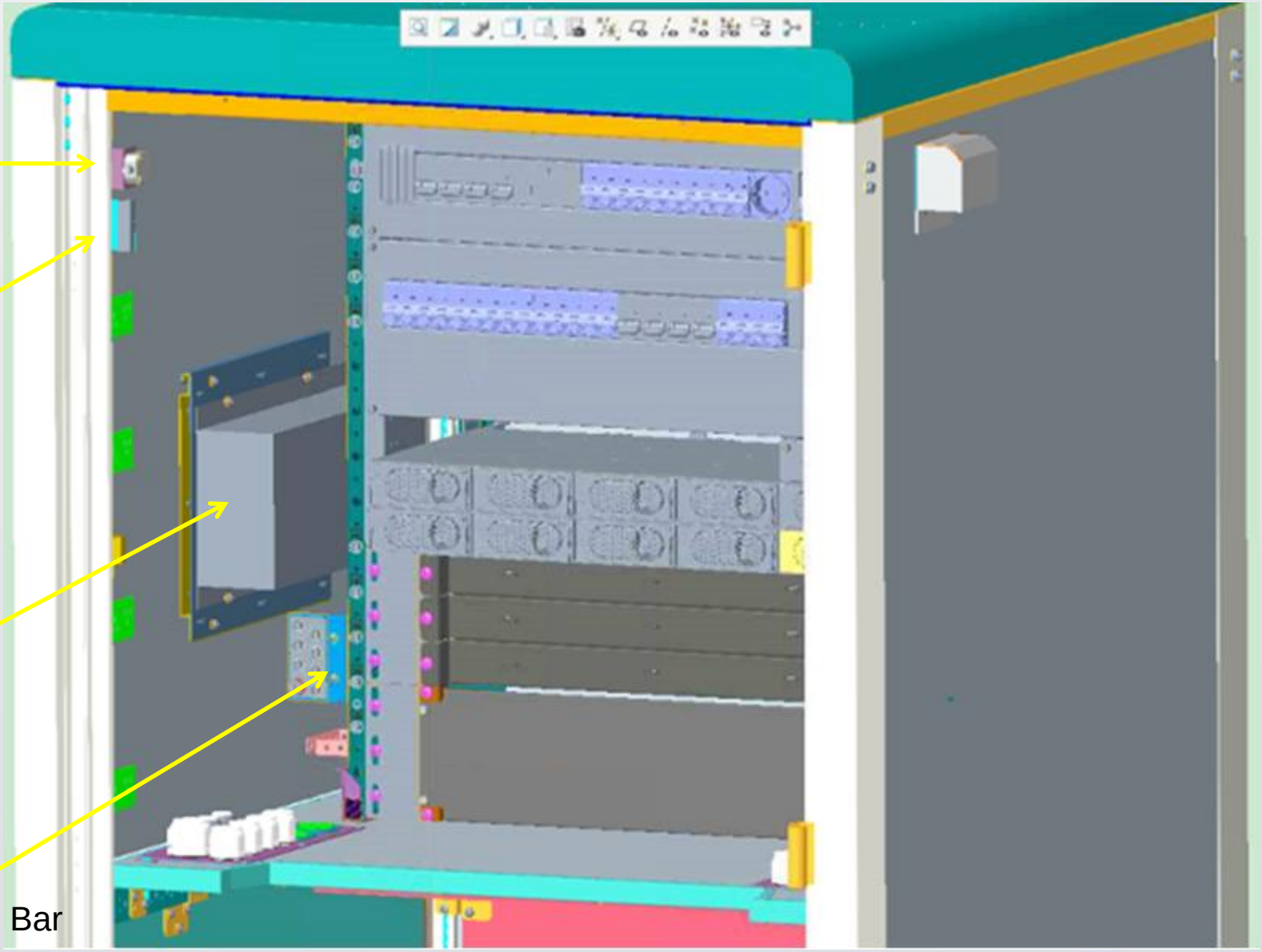


Light Switch

Reed Switch

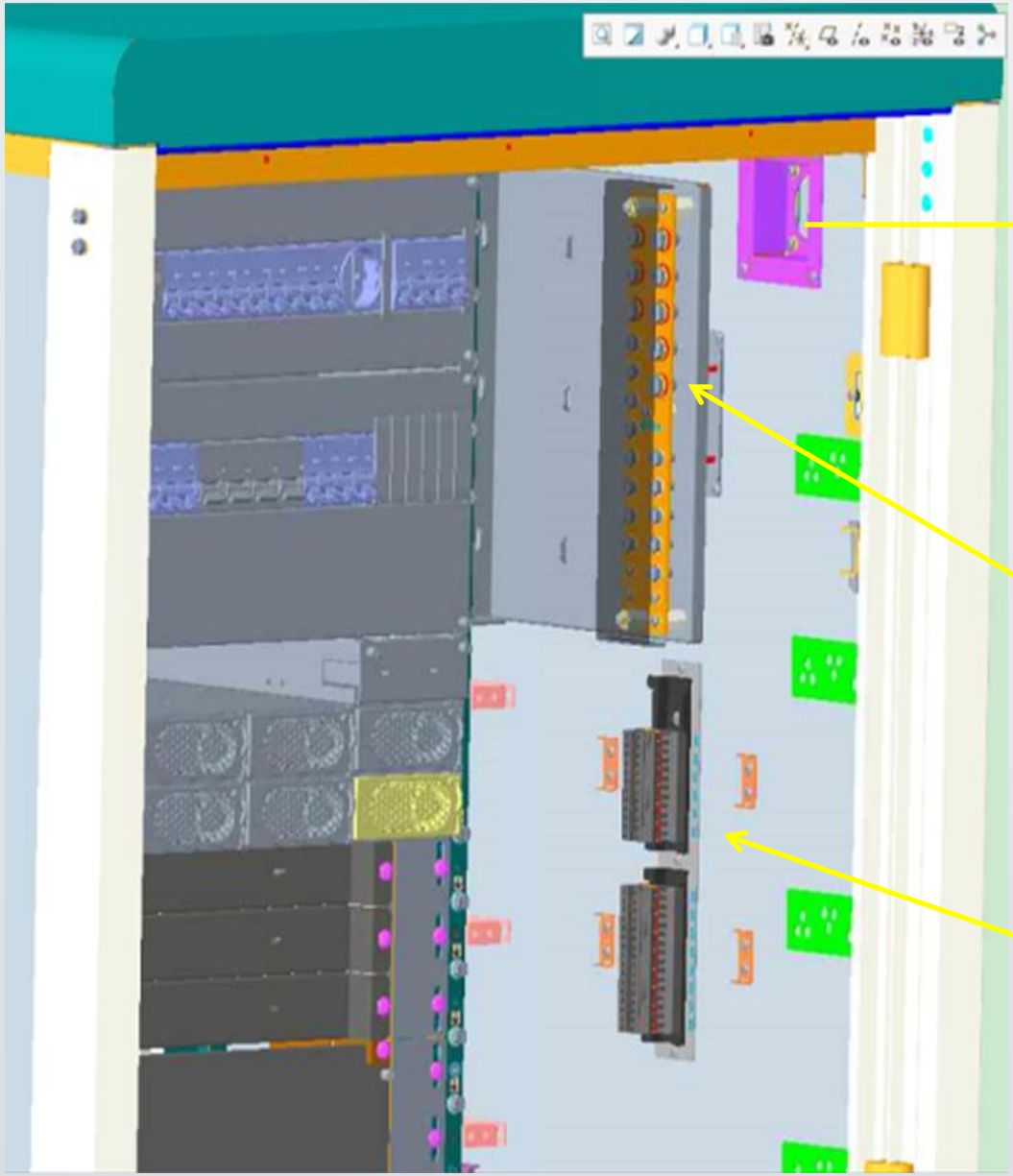
Blanket design for ATC Approved Inverter Installation

Note : Mounting holes pre-drilled on mounting plate



Main Earth Bar

Right Side View – Antenna Cable Entry, Positive termination bar and DIN Rail Mounted Alarm Terminations



Antenna Cable Entry

Positive Termination Bar

1.5 mm DIN rail mount screw terminals

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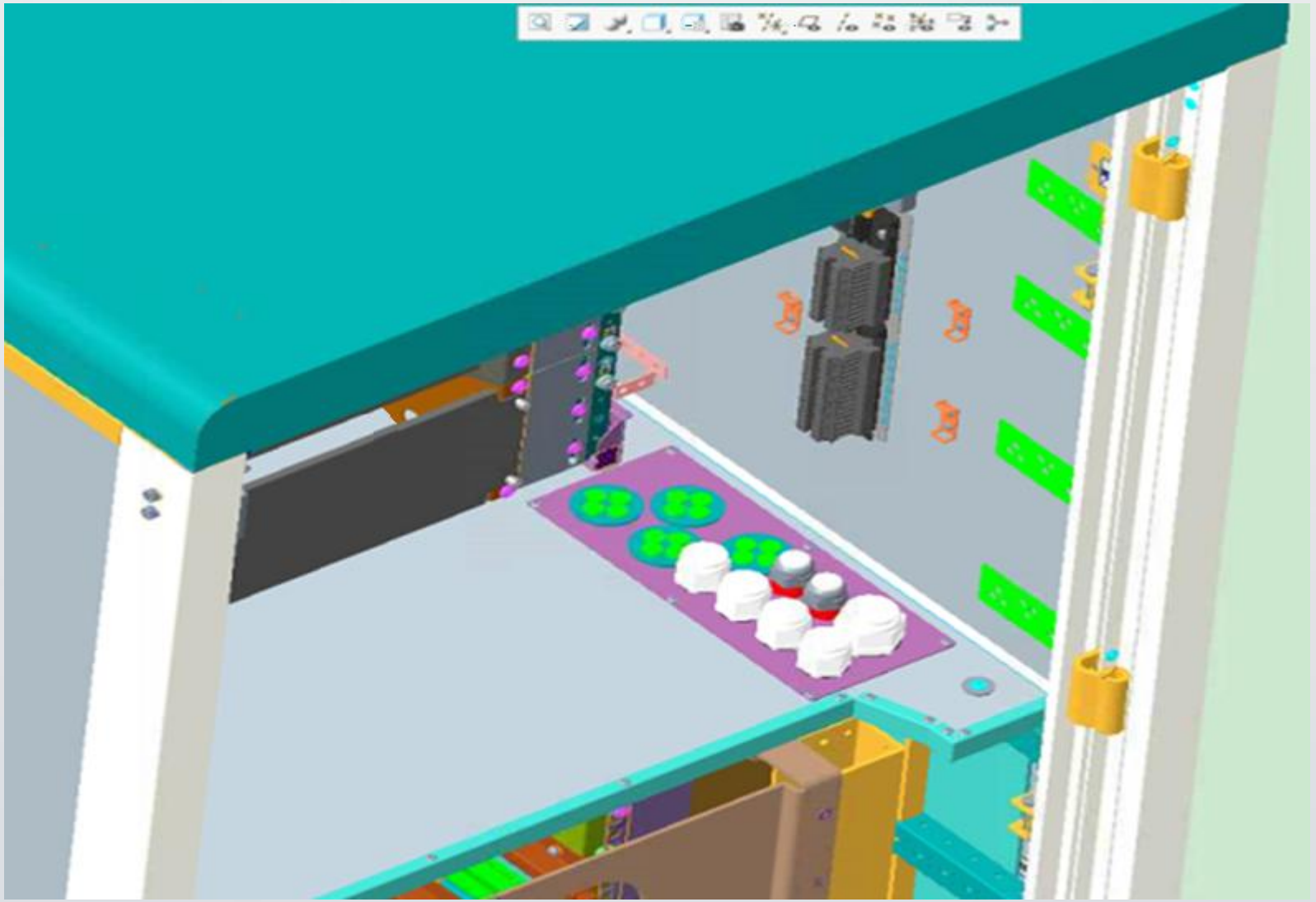
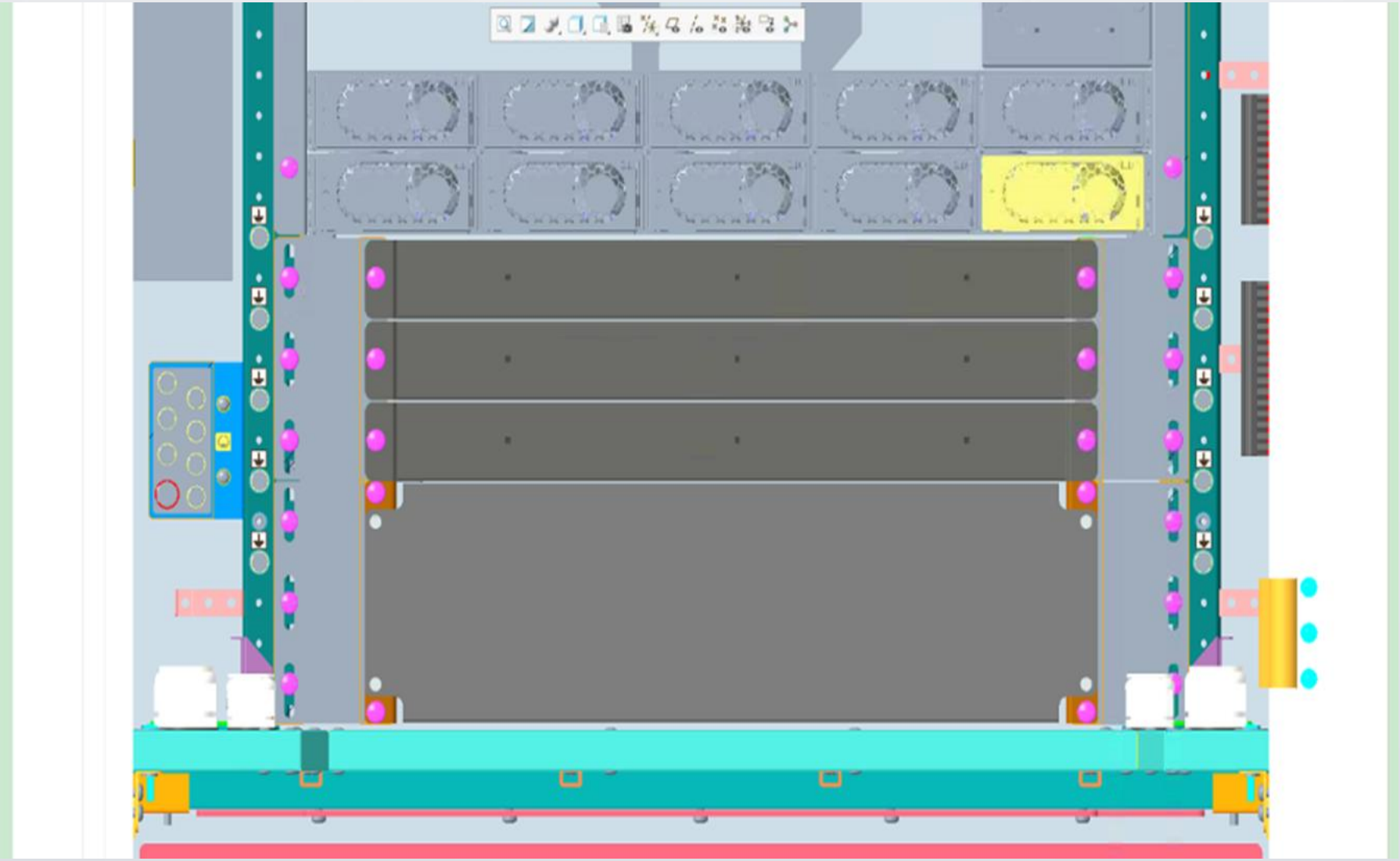
Left Side View – PG Cable Gland Entry with Sufficient Spacing for Tool: 1 x PG29 ,4 x PG21
2 x PG16, Multi glands for 16 x battery cables

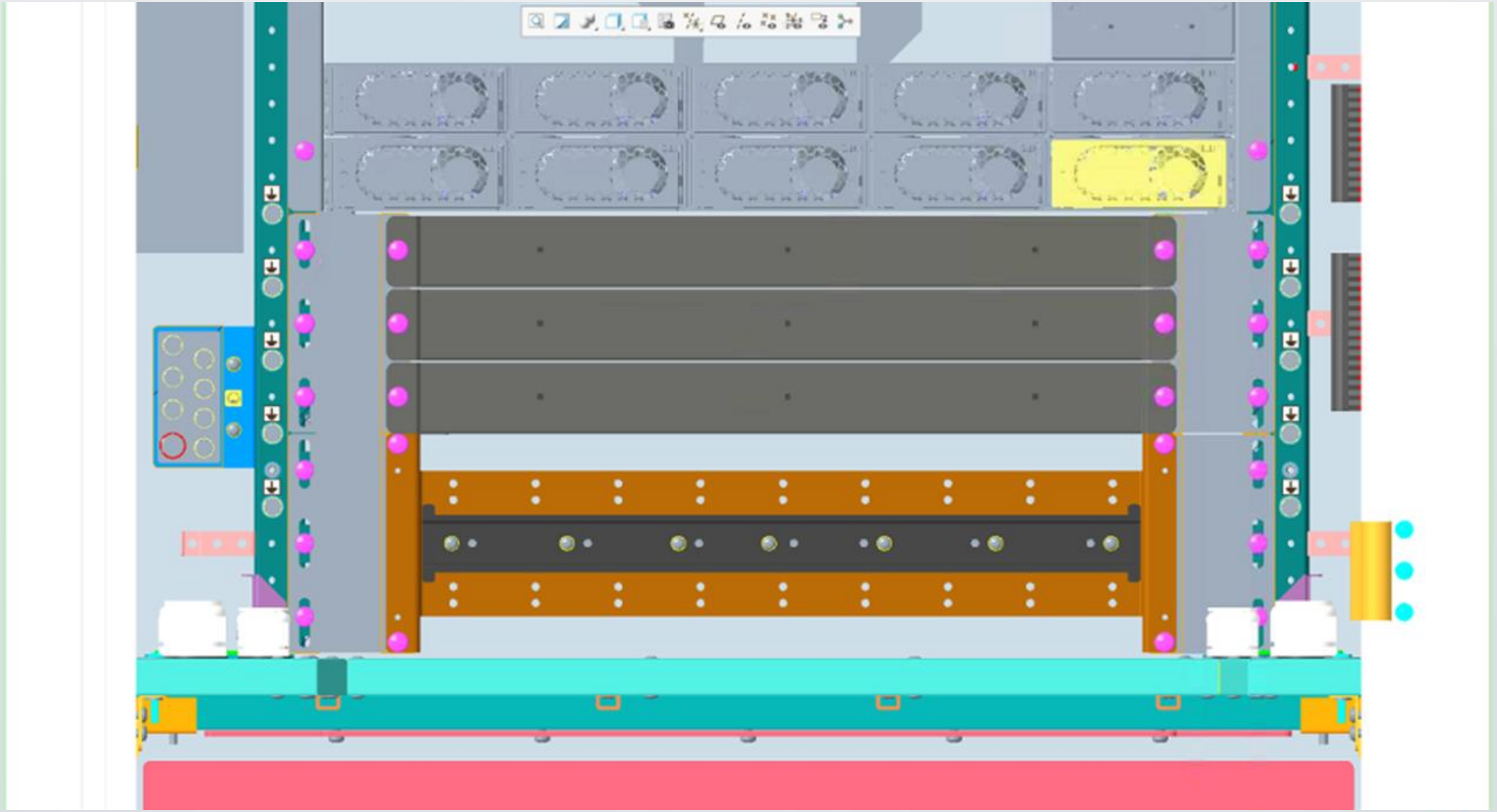
Right Side View – PG Cable Gland Entry with Sufficient Spacing for Tool:1 x PG29 ,4 x PG21
2 x PG16, Multi glands for 16 x battery cables



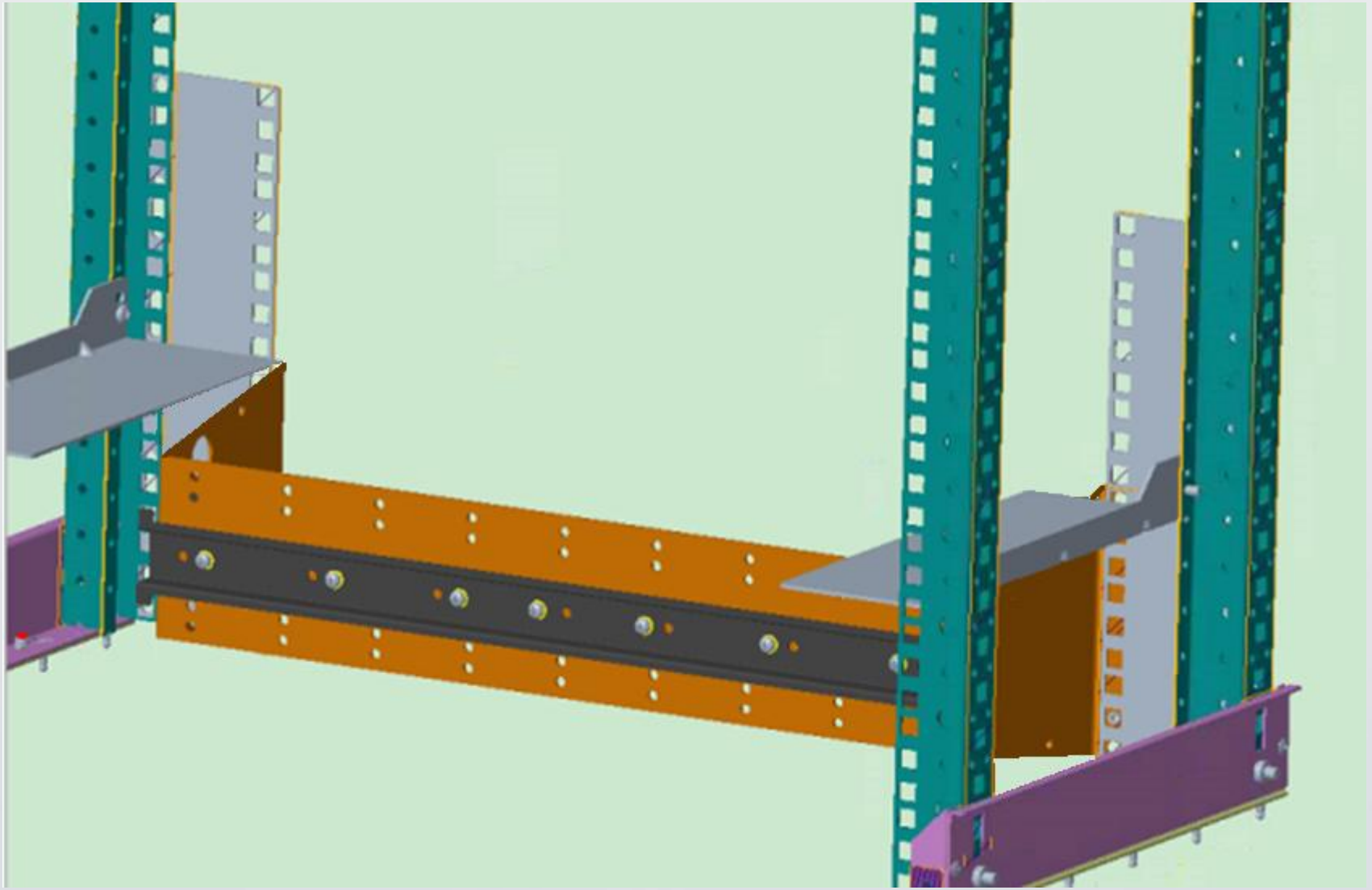
6U Equipment Space - Top with 3 x 1U Blanking Plates and Bottom 3U Equipment Space with 1 x 3U Blanking Plate



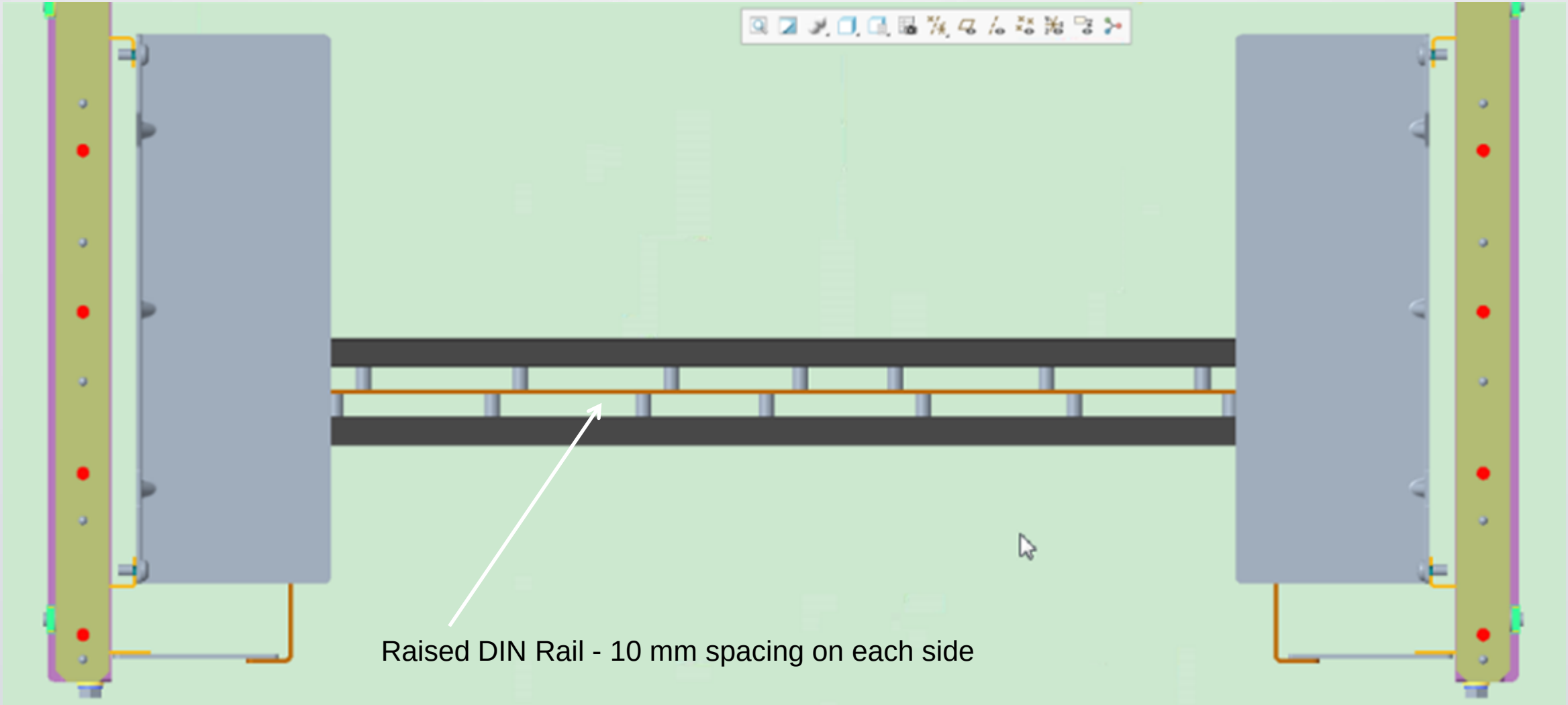
Bottom 3U - Removable Equipment Rack Front View, Recessed 120 mm, Tapered Down to 2U with DIN Rail Raised 10 mm for Cables



Bottom 3U - Removable Equipment Rack Back View



Bottom 3U Removable Equipment Rack Top View- DIN Rails Raised 10 mm for Cables



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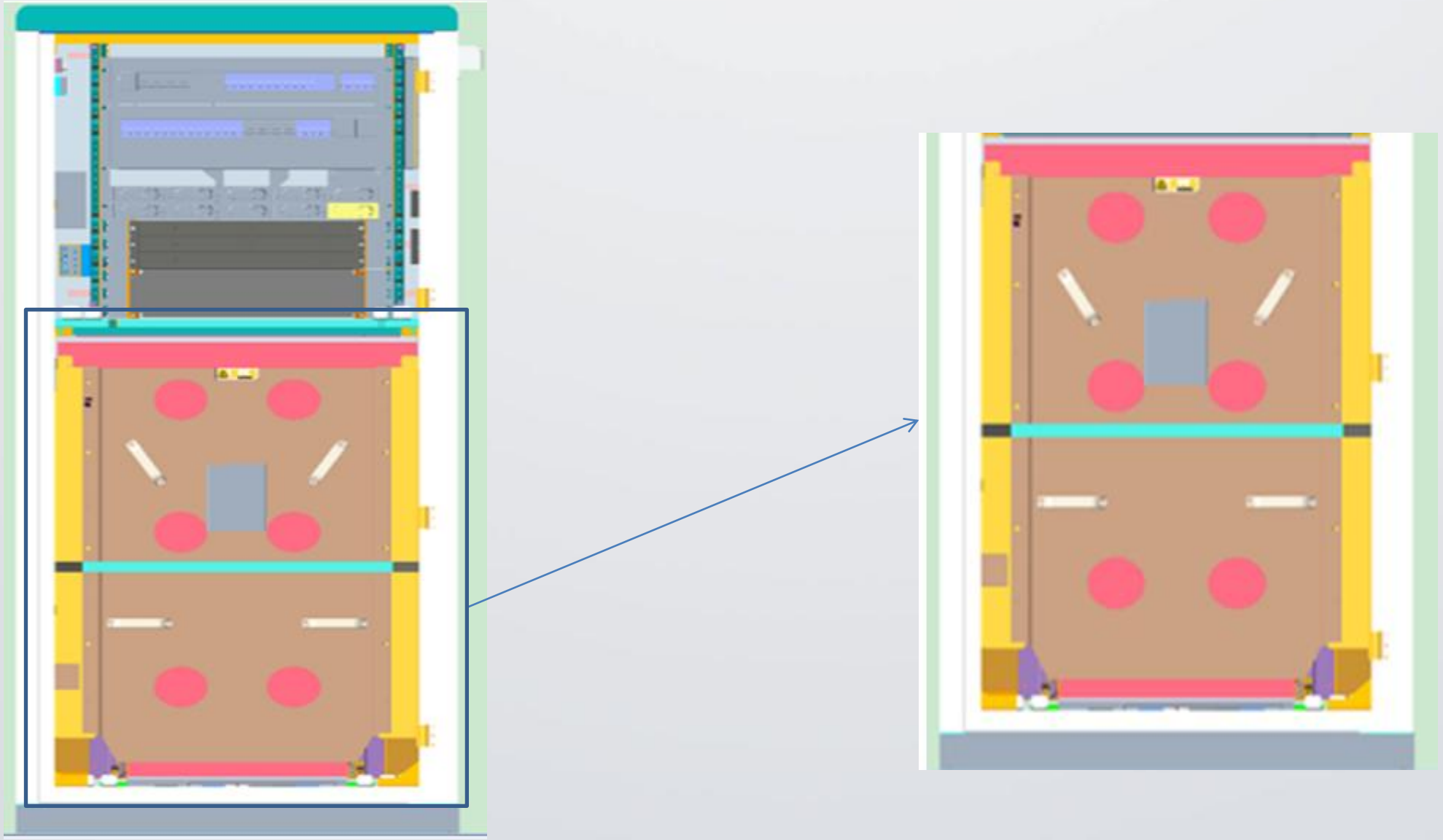
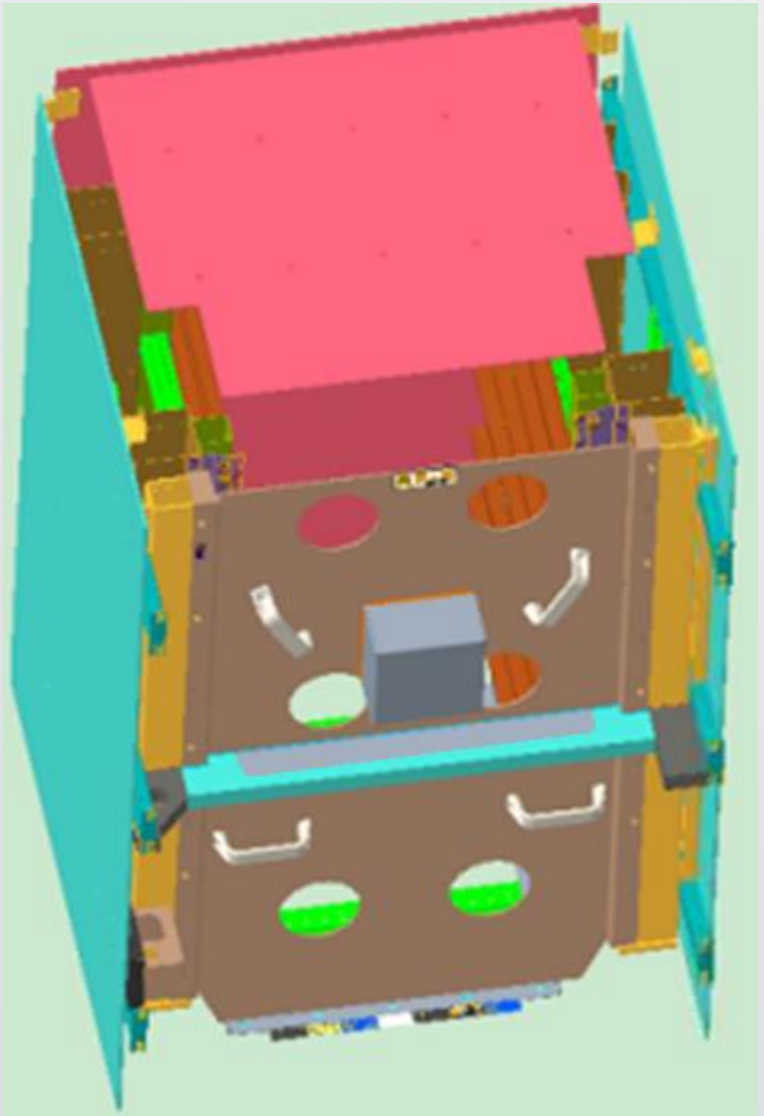
Battery Compartment

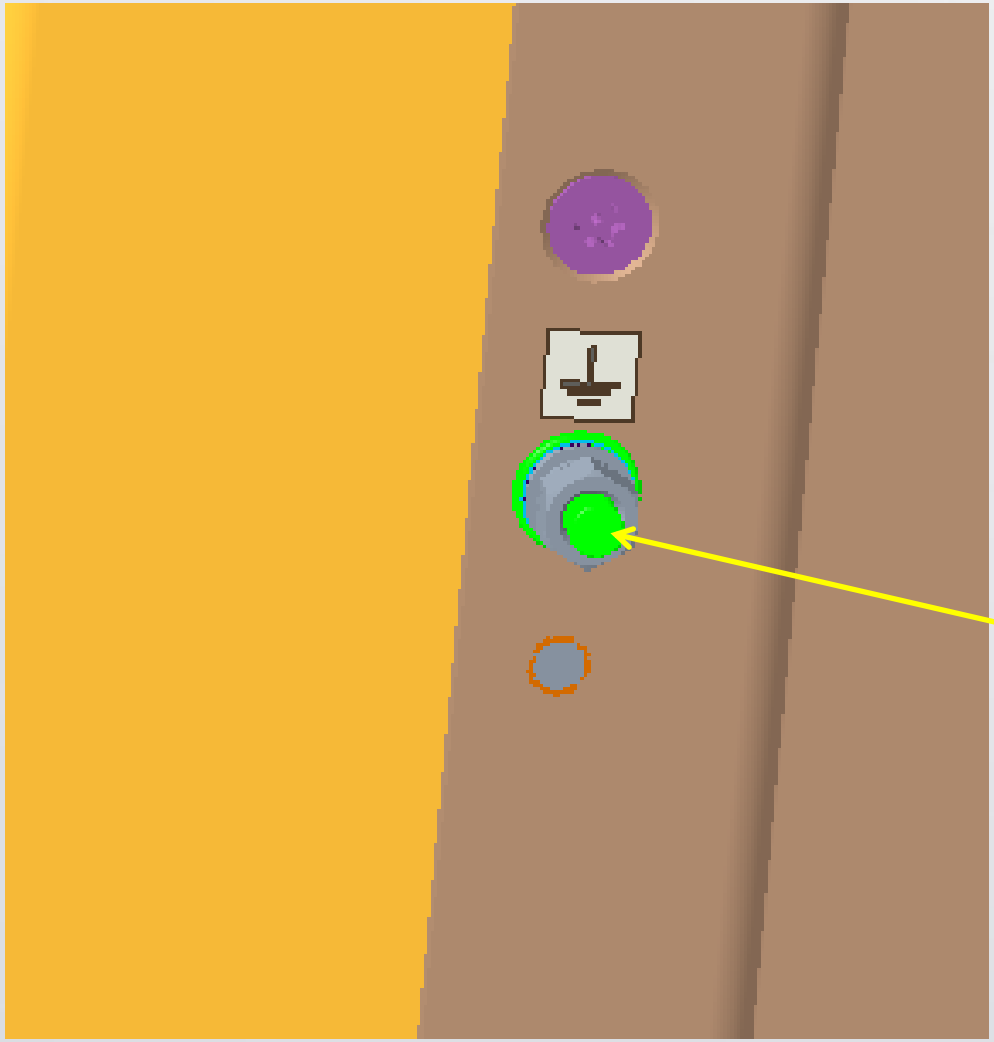
Battery Compartment Front View



Battery Safe Overview - 4mm Steel at Top and Sides with Removable 4 mm / 6 mm Steel Front Cover, 4 mm / 6mm Lock Cover, Cooling Isolation Installed Inside 40 mm U-Metal, 4 x Lifting Handles, 8 x TORX Screws

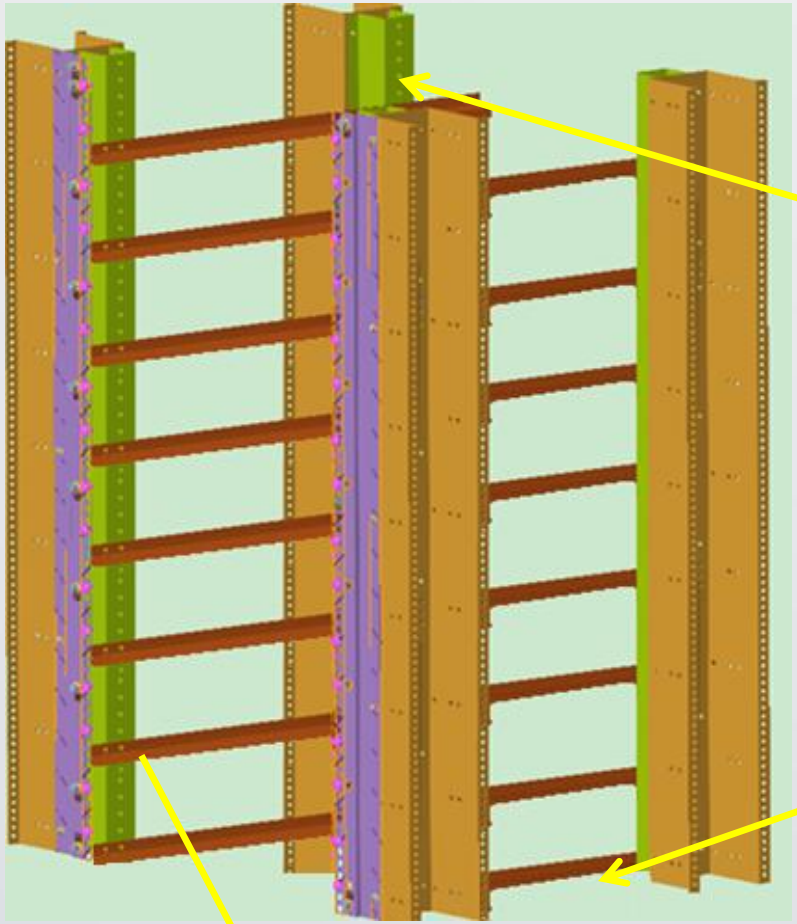


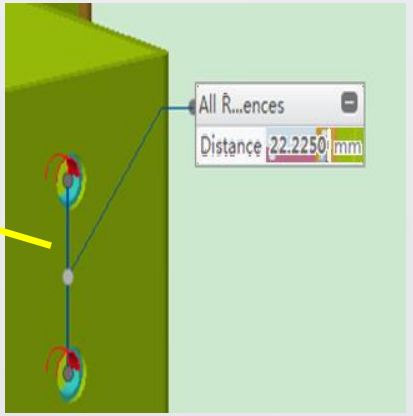
Battery cover plate bonding connection to main earth bar. Wire with male and female lugs for when cover is removed during maintenance

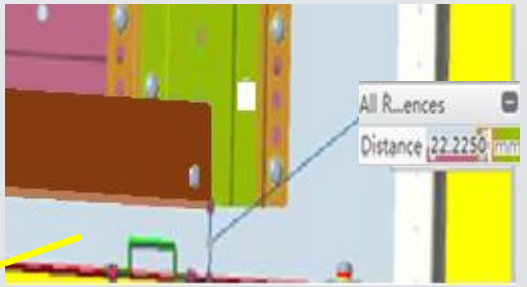


Bonding connection for 16 mm² cable from cover plate to earth bar with male and female lugs when front cover is removed

Adjustable battery shelves for ATC approved 2U, 3U, 4U LIB to ensure sufficient spacing and cooling between LIB batteries







Gap for airflow underneath bottom installed battery

L- Steel bar for ATC approved LIB

Note: Additional T-bar provided for Lead acid conversion

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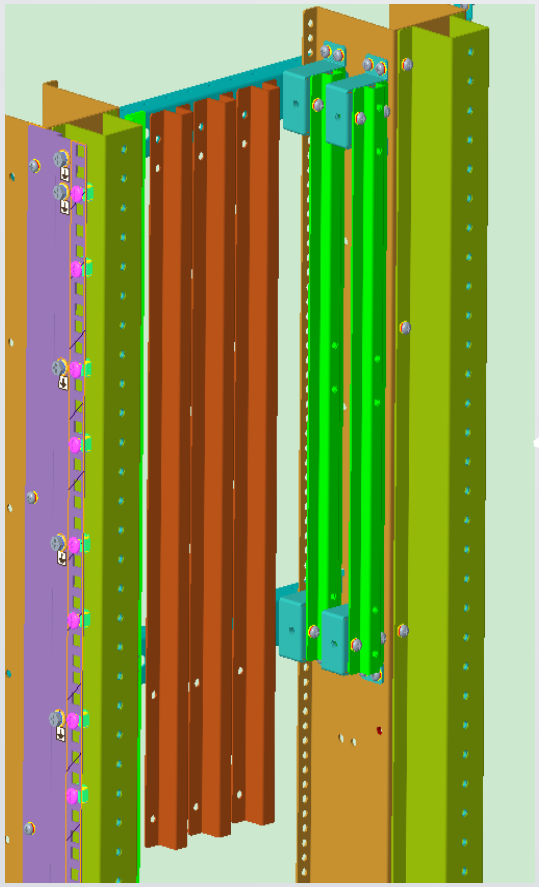
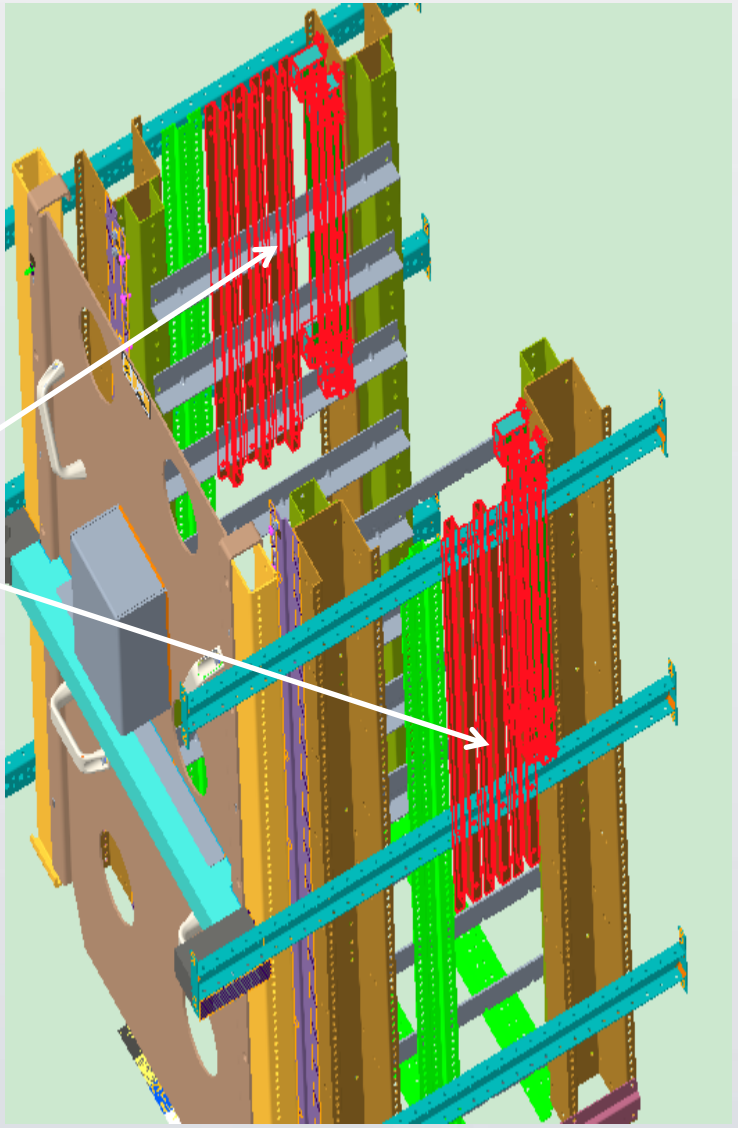
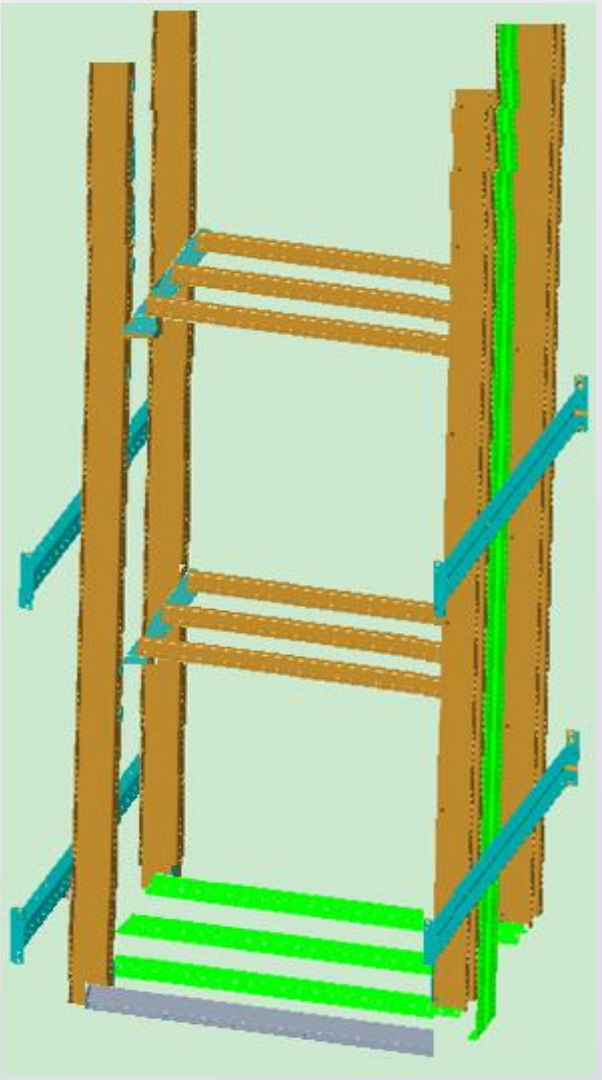
Field Upgradable Battery Racks provided to convert from LIB to Lead Acid



✓Lead acid support **fixed** on Left and Right hand side

✓**Note:** Cooling not affected

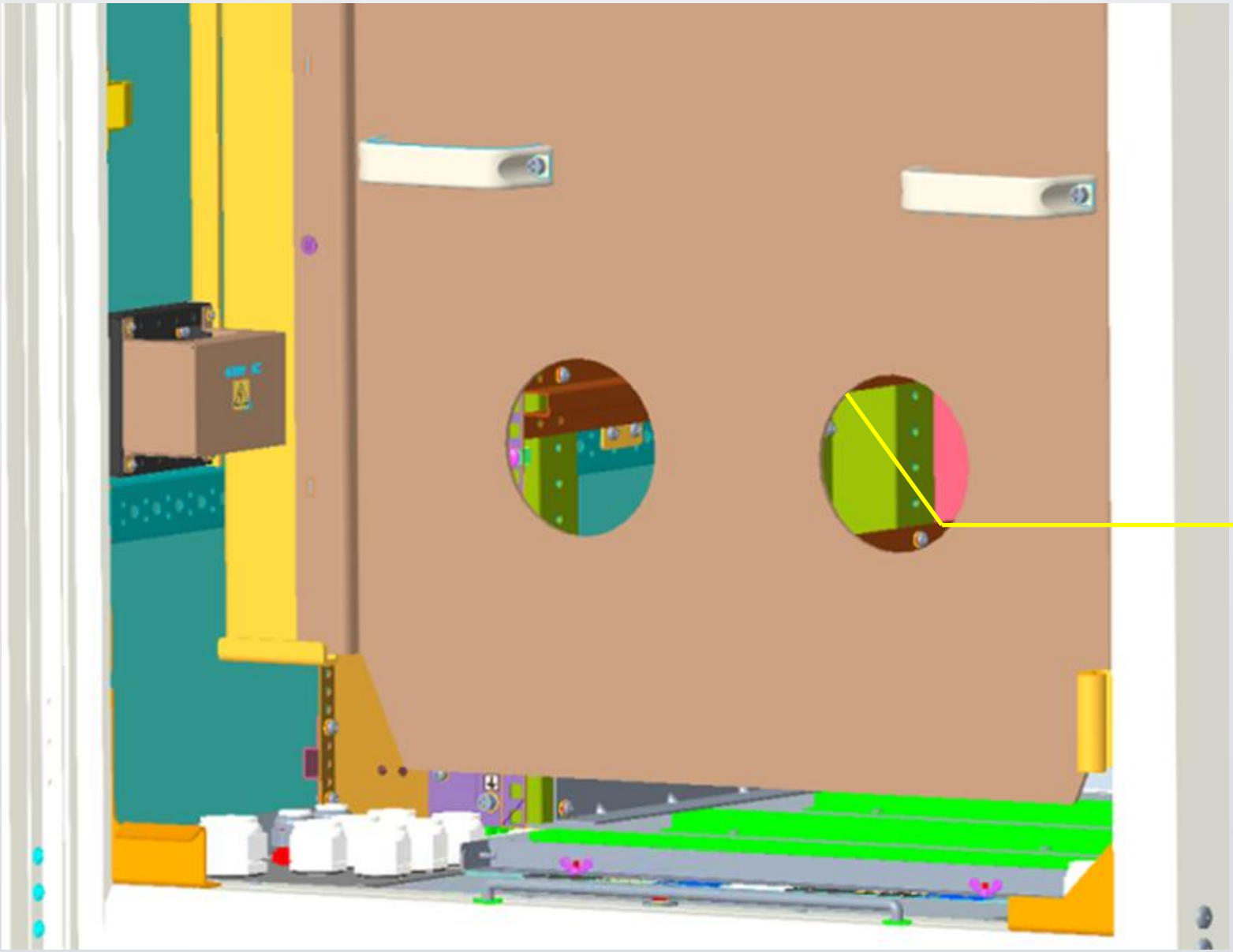




✓Lead Acid Conversion

✓Cross Bars Fixed by Screws Provided

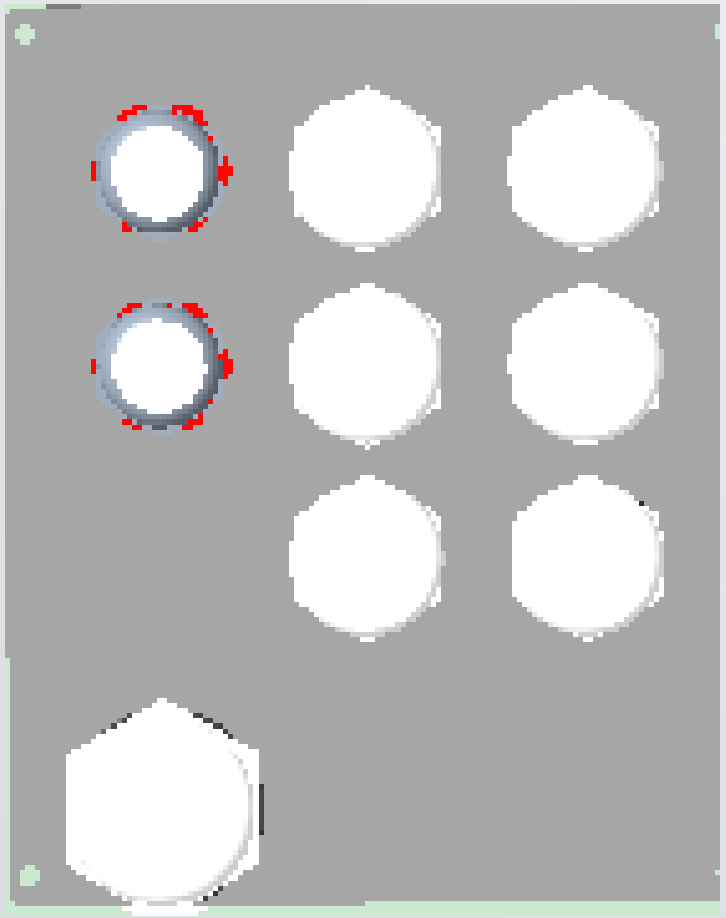
AC Termination – Left Hand Side in Front of Battery Safe Cover



Cable Gland Entry on Left and Right Hand Side:1 x PG29 6 x PG21, 2 x PG16

Cable Gland Entry on Left Hand Side

Left - Cable Glands Entry Ensure Sufficient Access with Tool and for Cable Feed:



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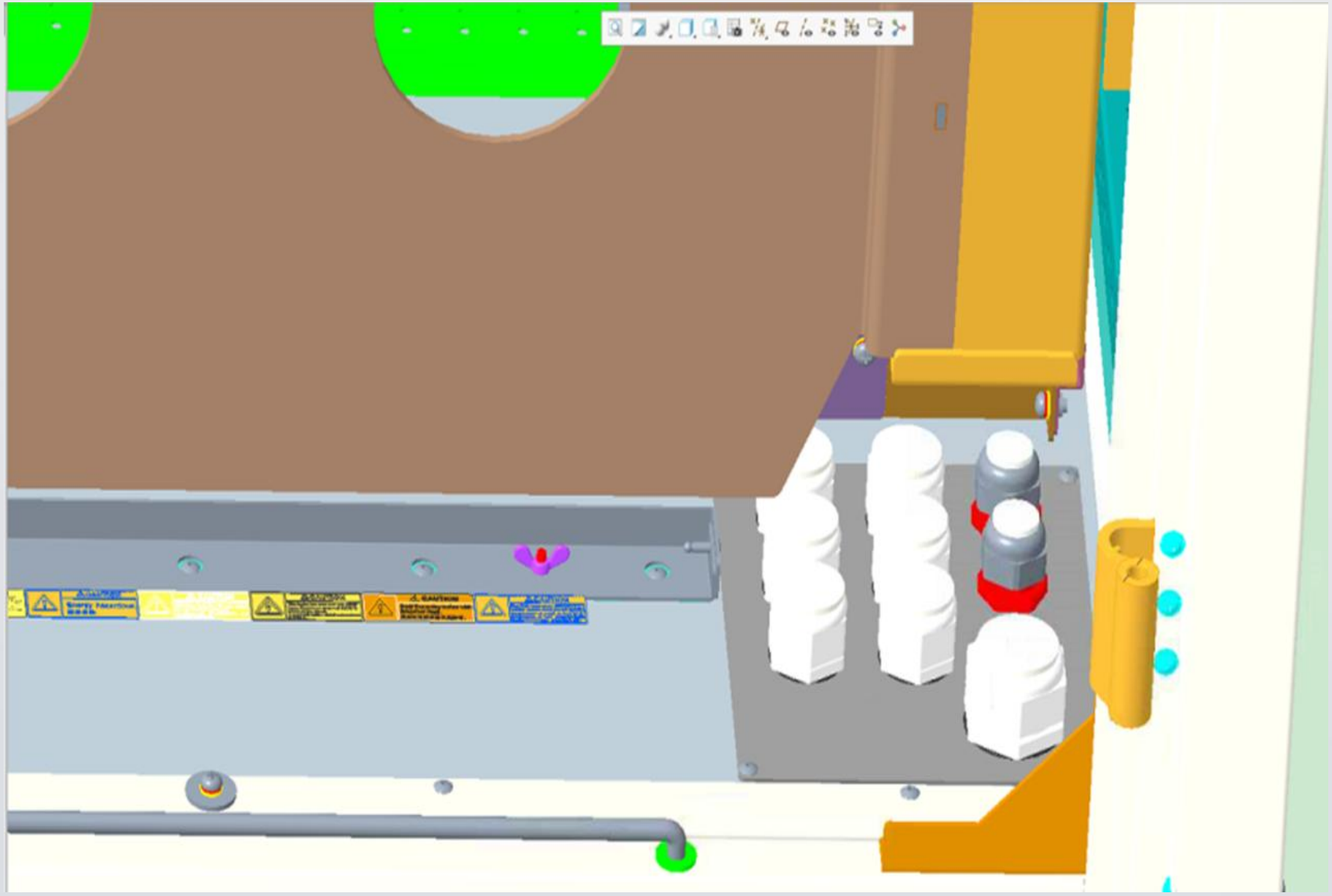
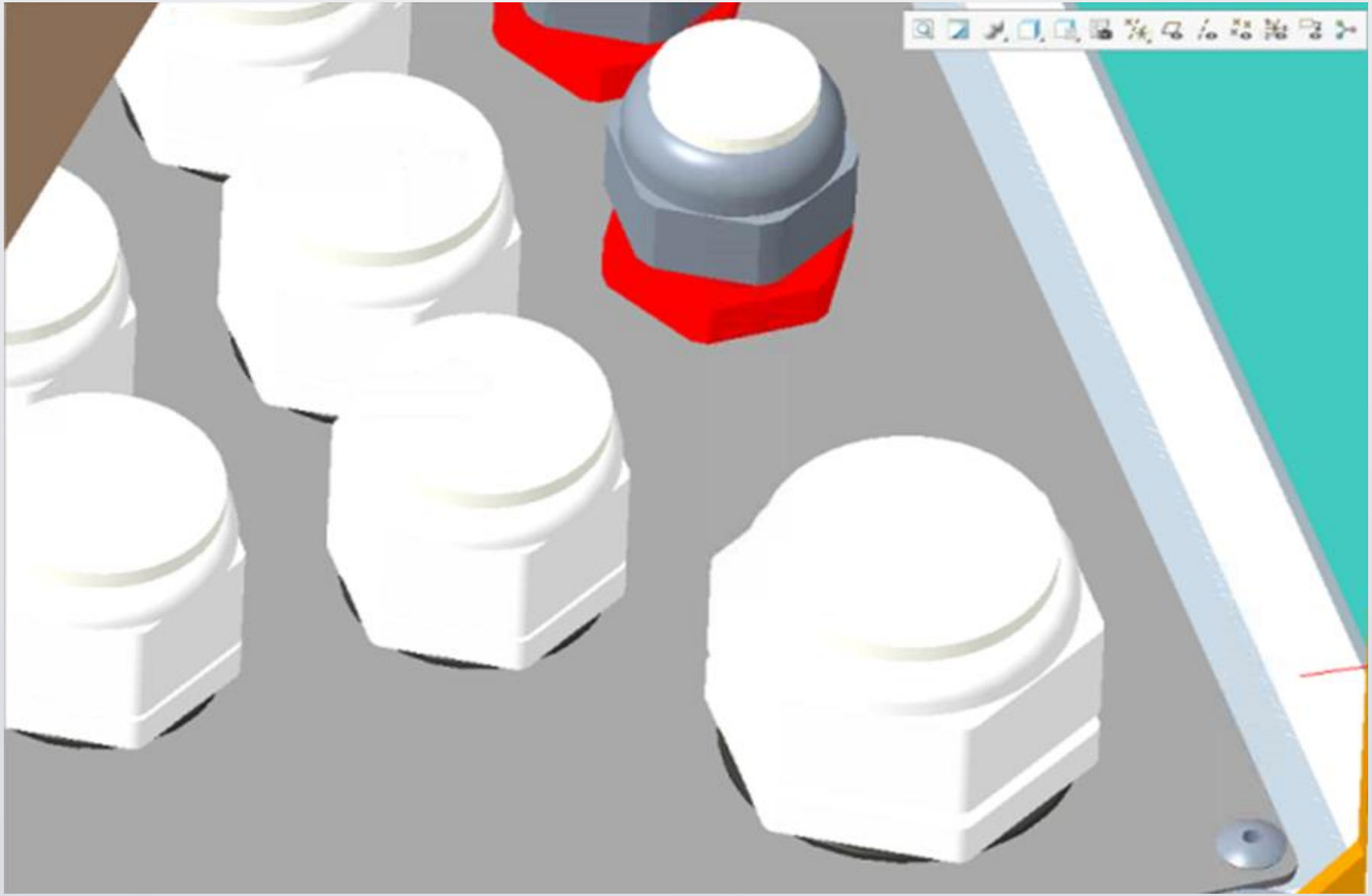
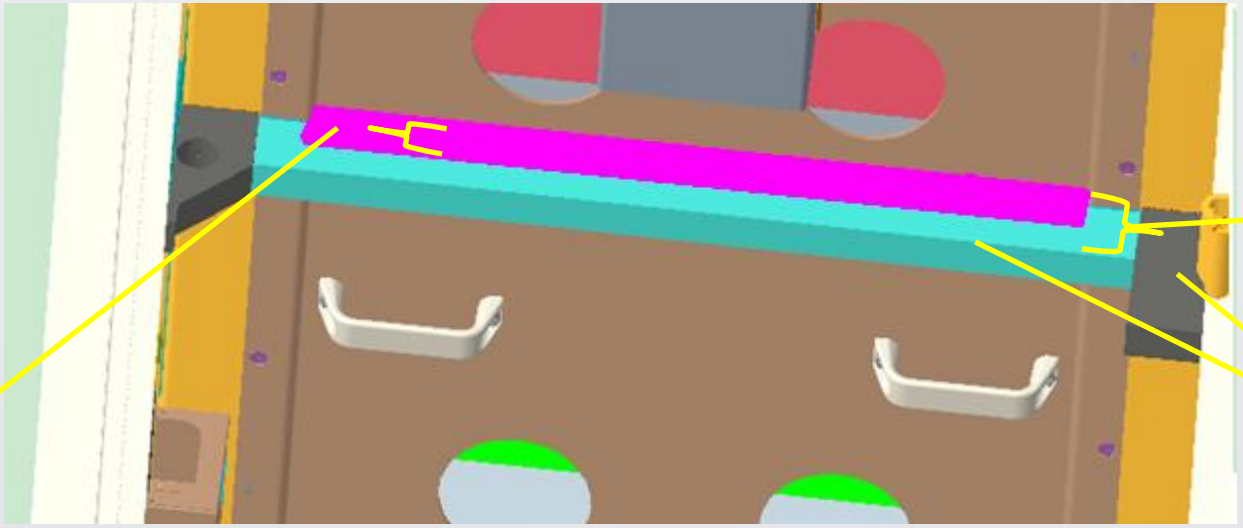
Cable Gland Entry on Right Hand Side



Right- Cable Glands Entry Ensure Sufficient Access with Tool and for Cable Feed



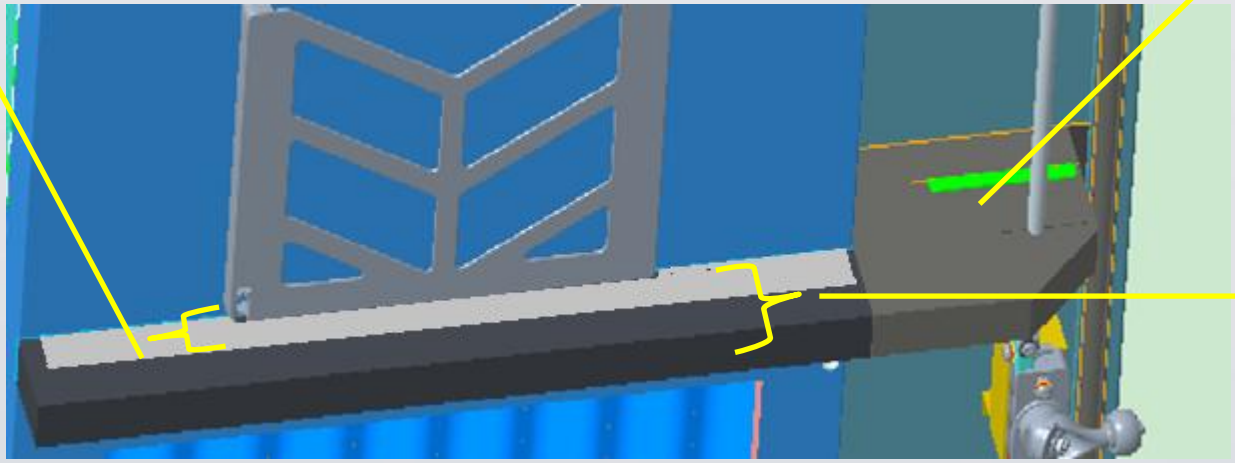
Isolation material on door, cabinet sides and front cover



65 mm

Non- memory
Isolation material

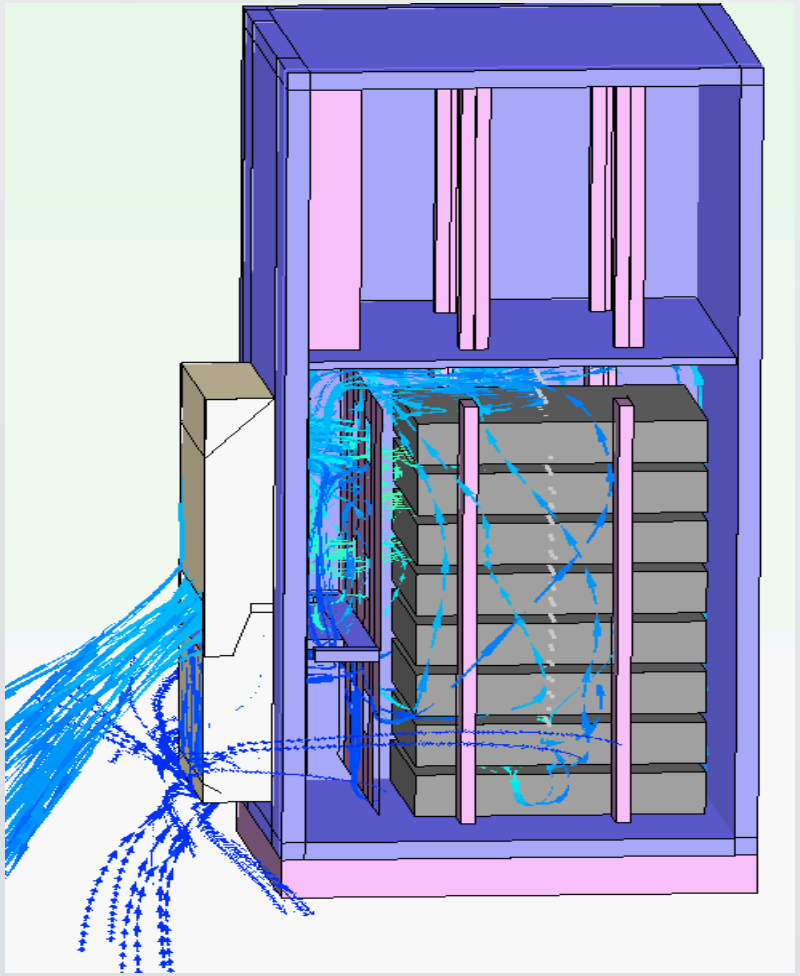
40mm U-metal bracket
added



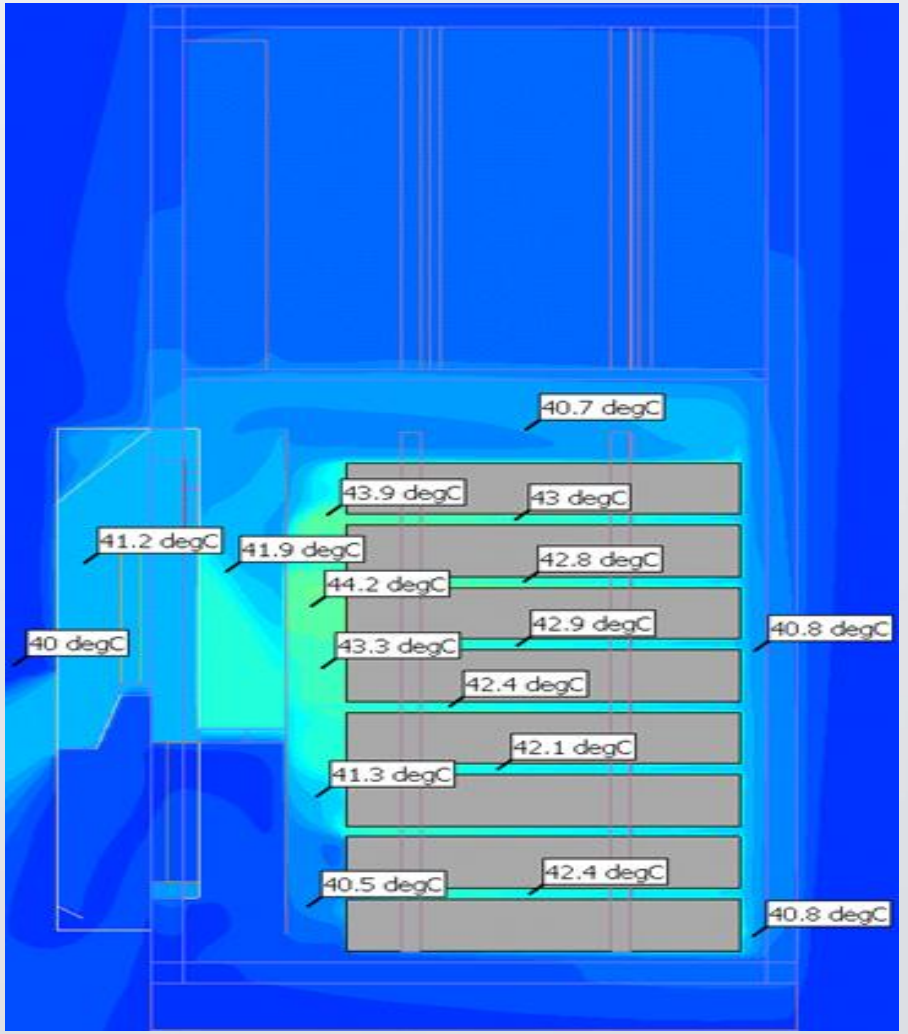
55 mm

Front Door Design and Cooling

Isolation material on door, cabinet sides and front cover: Cooling Simulation for airflow and temperature distribution

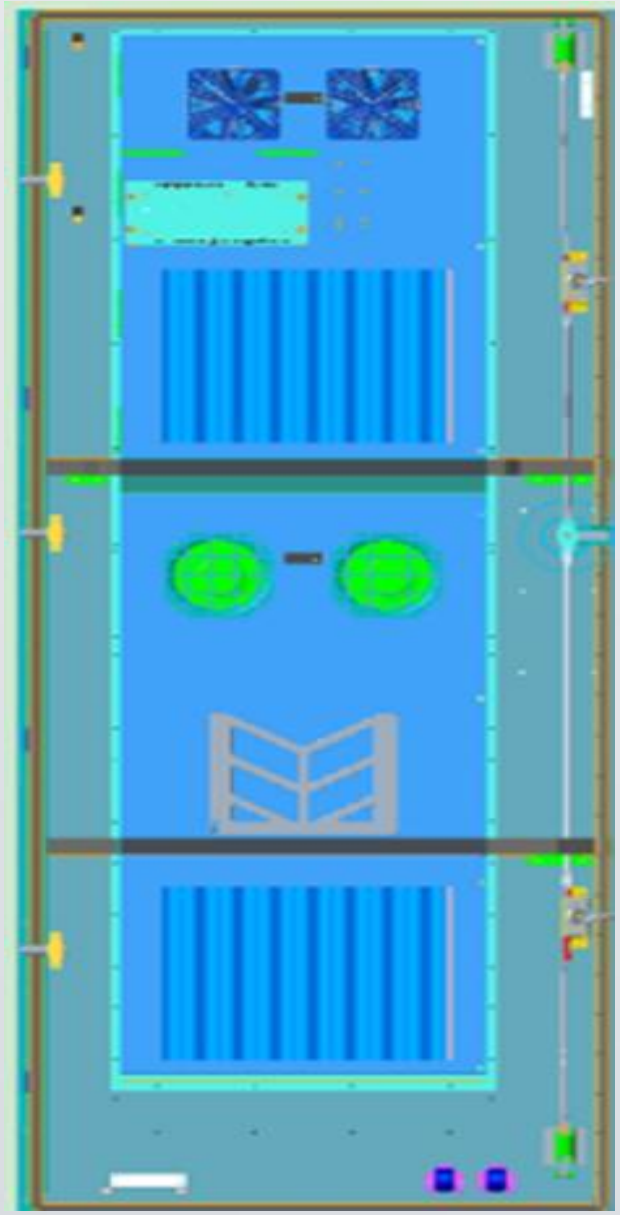


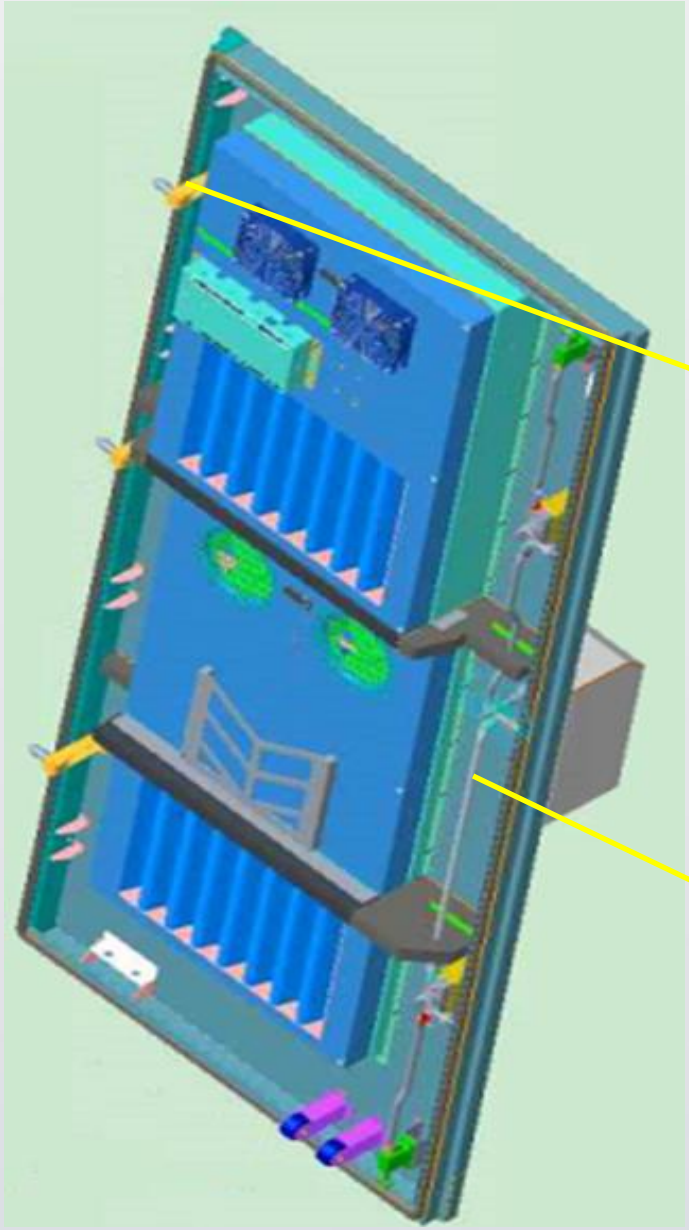
Airflow – Simulation with outlet moved upward

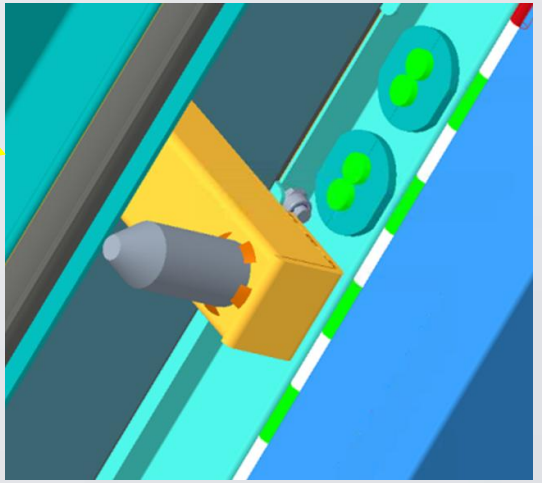


Temperature simulation

Front Door - Overview



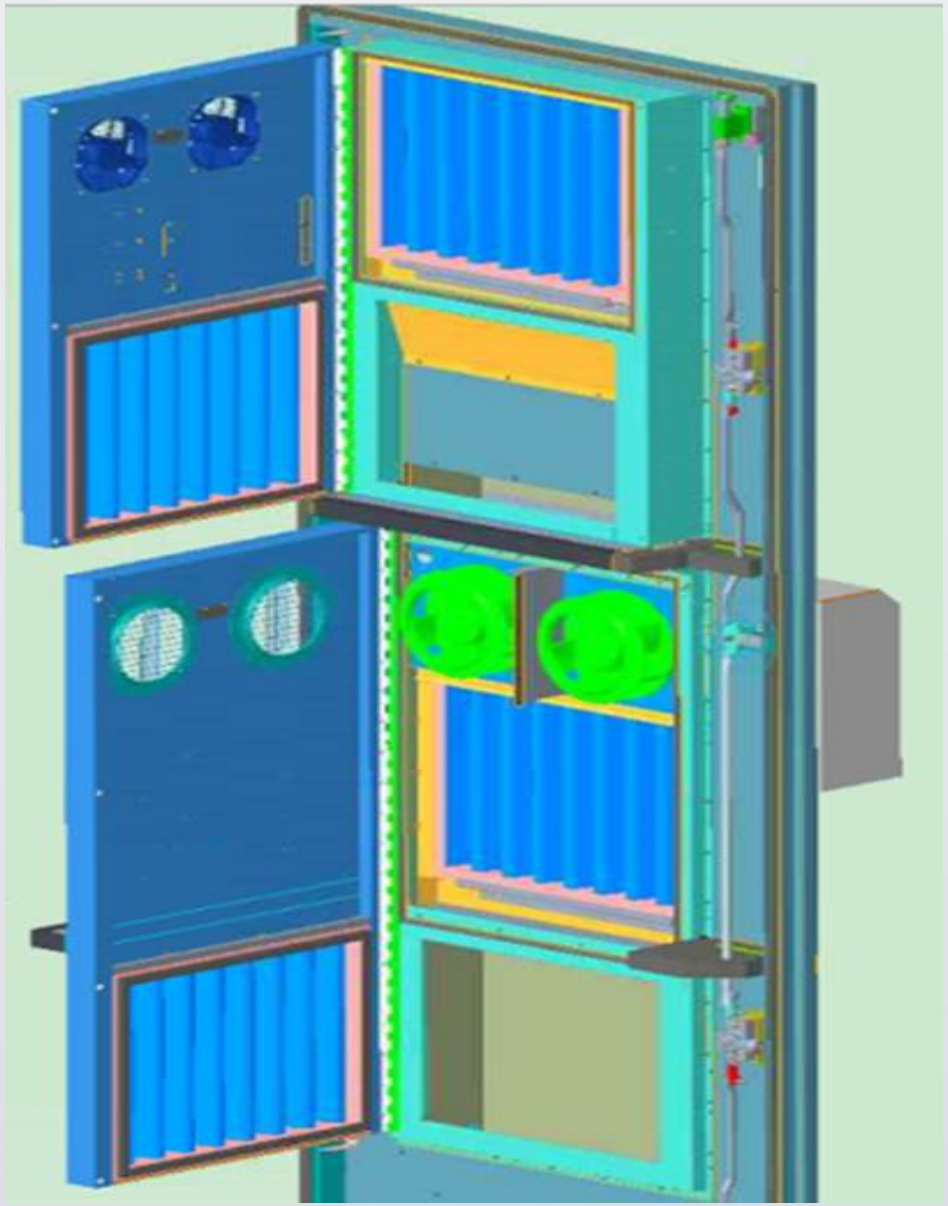




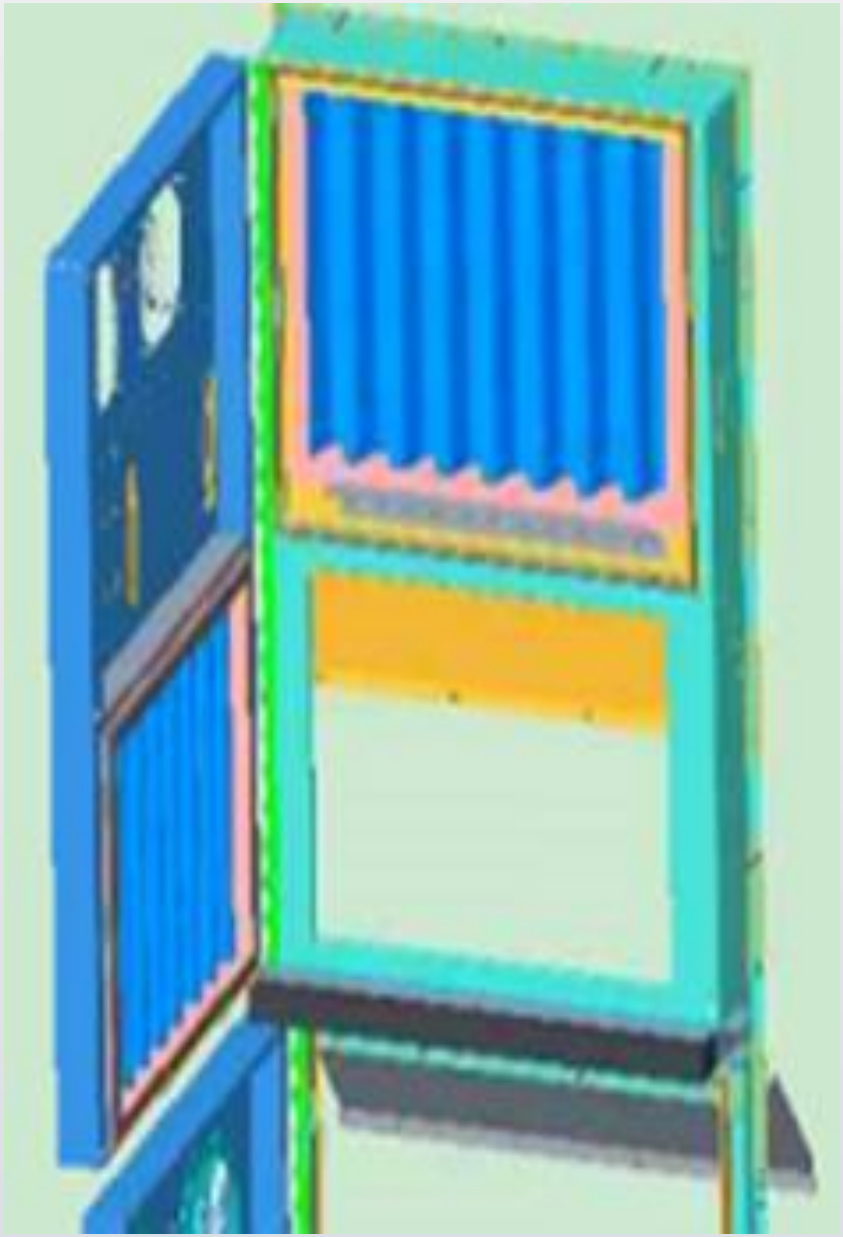
3 x Bumper Pins

5- Point Locking Mechanism

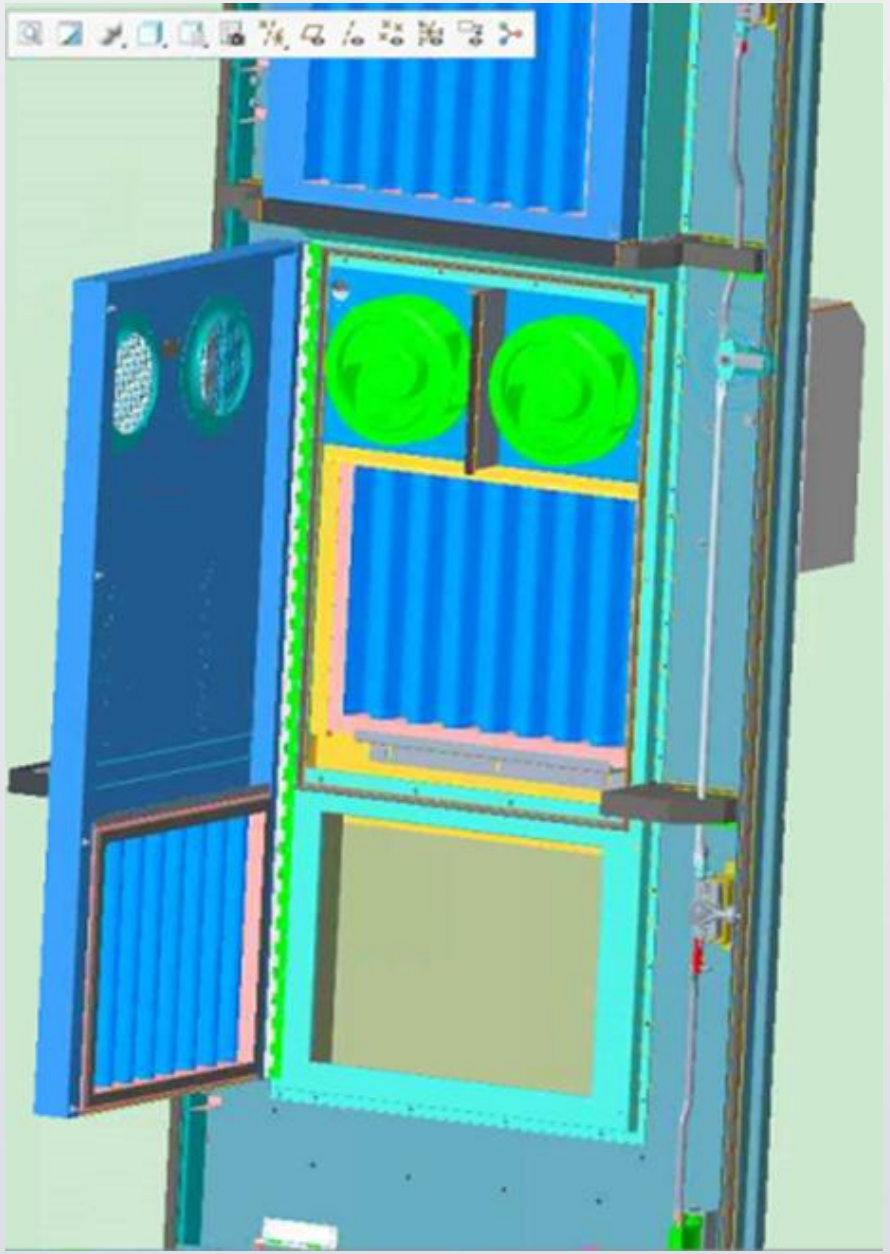
Easy Filter Maintenance – Equipment and Battery Compartment



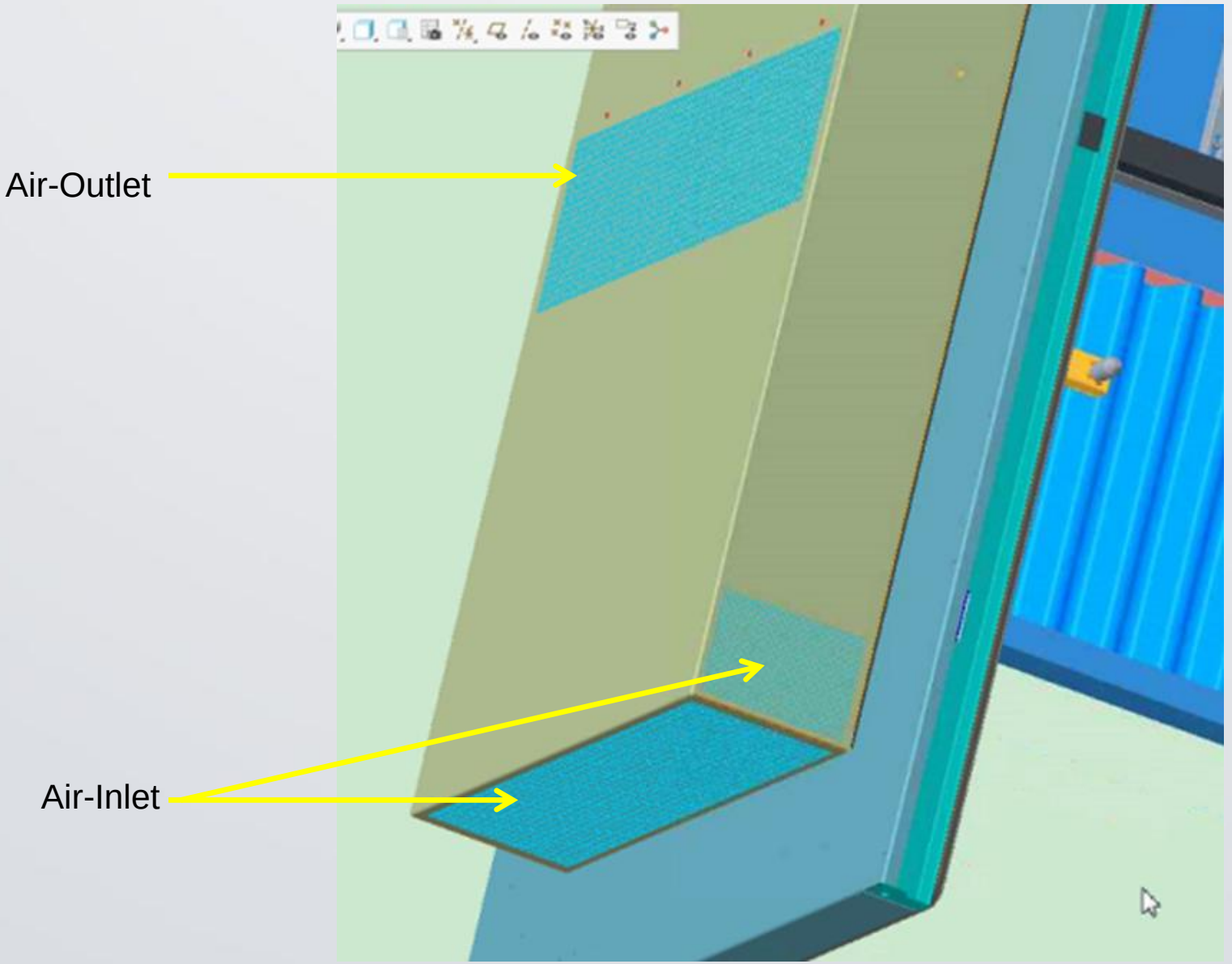
Easy Filter Maintenance – Equipment Compartment



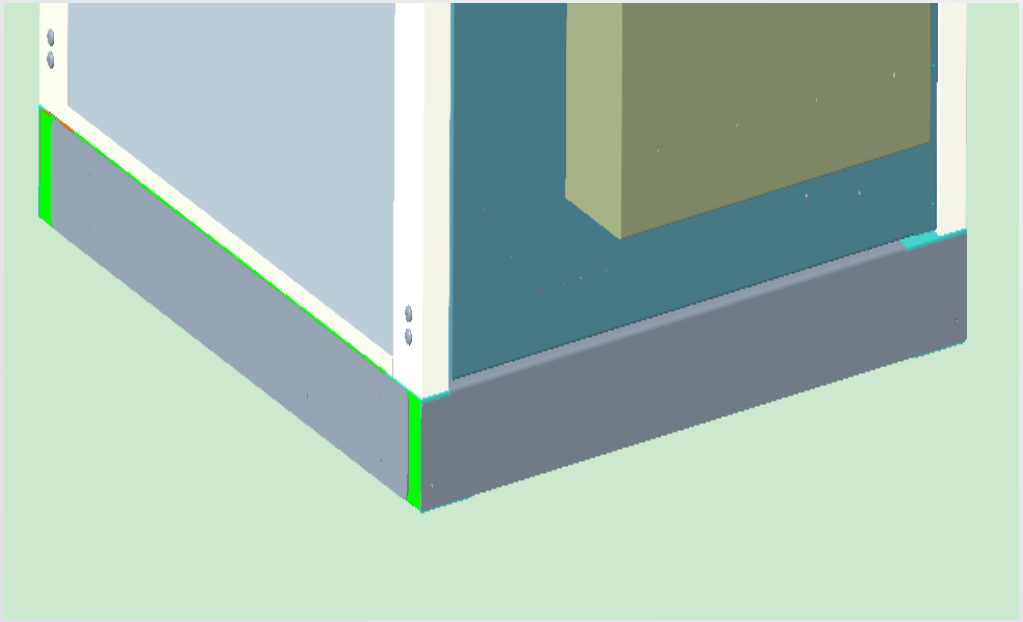
Easy Filter Maintenance – Battery Compartment



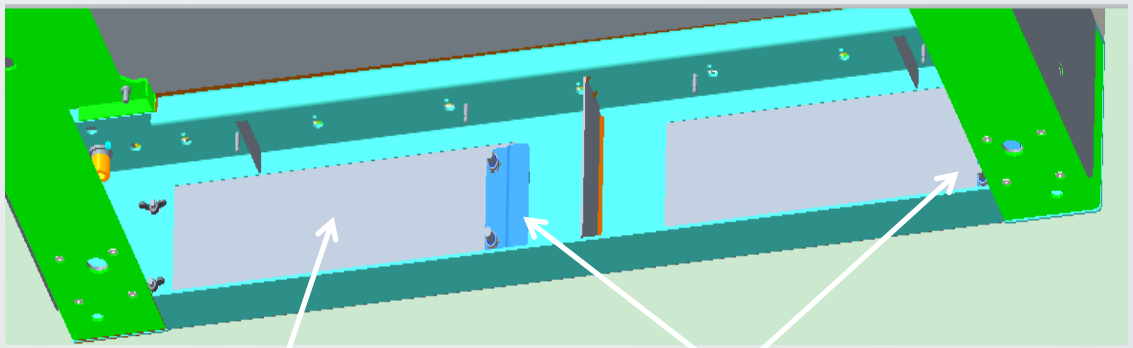
External Air Inlet and Outlet for Battery Compartment



Plinth - Removable Front, Back and Side Cover Plates (No Exposed screws) and Cable Entry Holes



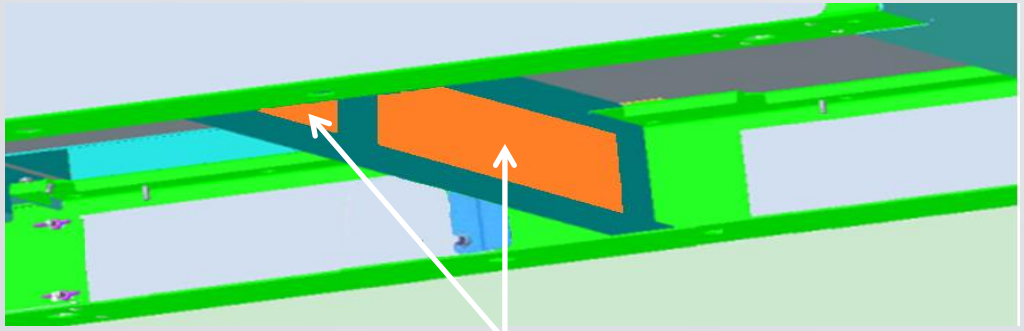
Removable Back and Side Cover Plates



300 mm x 70 mm cable entry holes

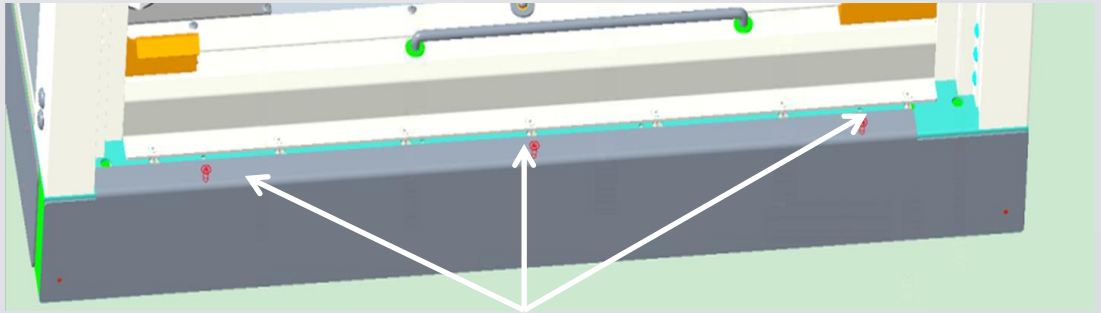
Back and Side cover internally secured with 2 x wing nuts from the front and 2 x steel lips that overlap internally.

Middle Support with Holes for Cross Cable Feeding



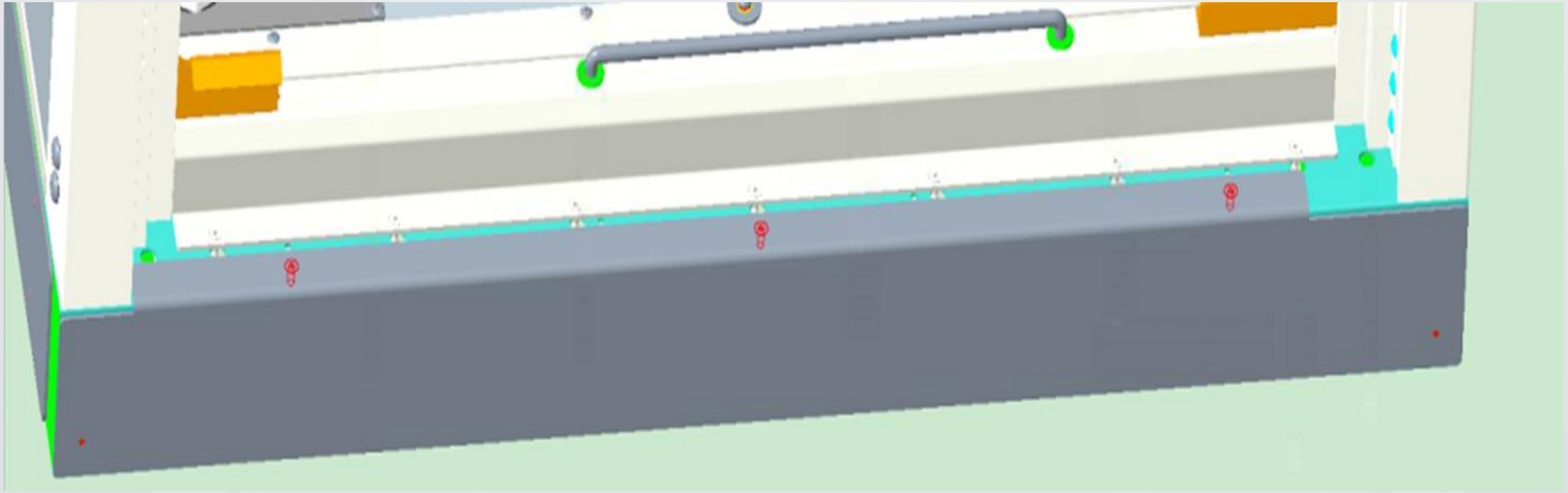
2 cable entry holes (200mm x 70 mm)

Removable Front Cover Plate

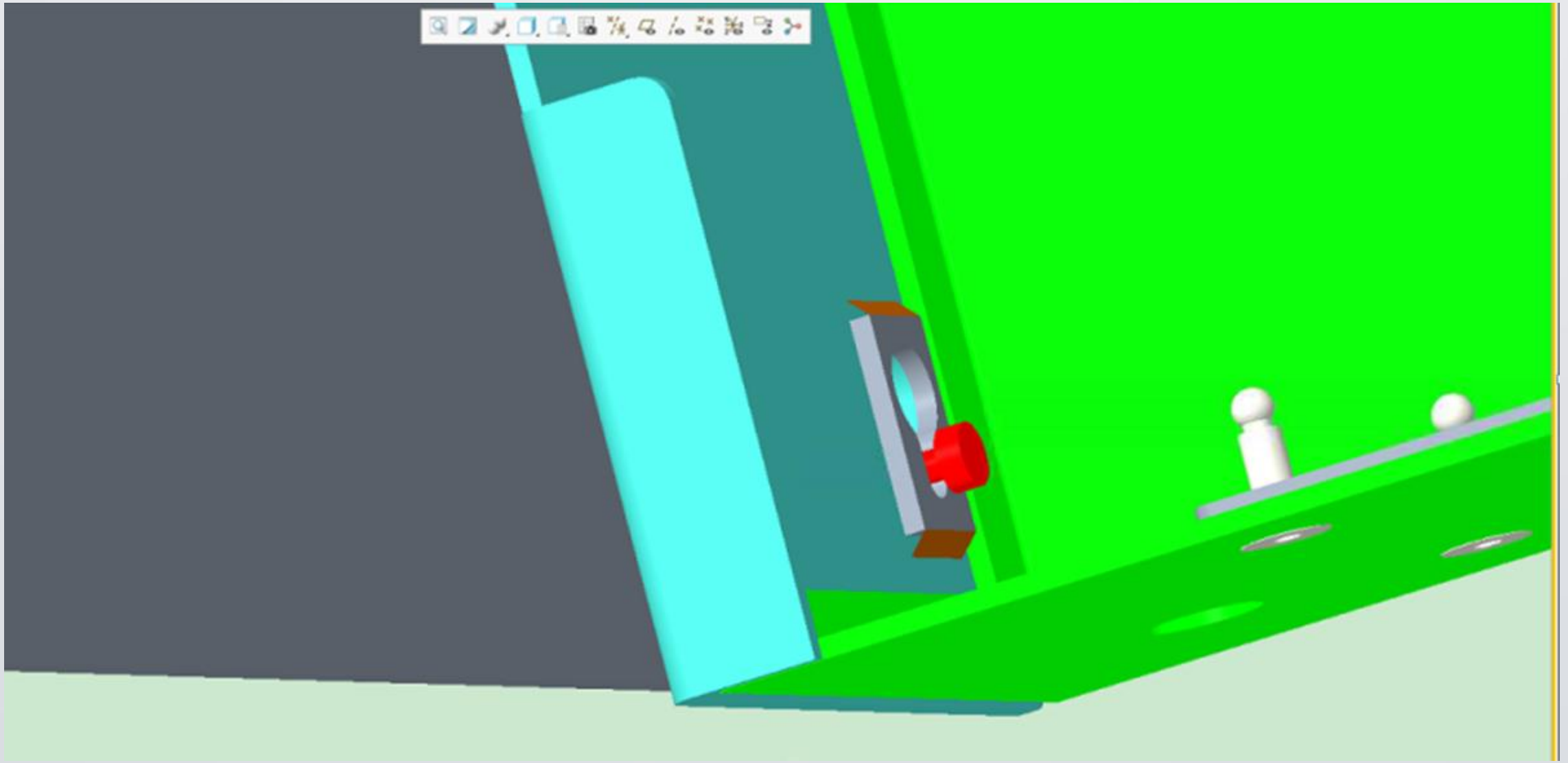


3 x Hidden screws when door is closed

Plinth - Removable Front Cover Plate – External 3 x Countersunk Screws Hidden when Door is Closed to Prevent Removal

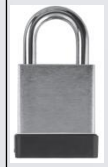


Plinth - Removable Front Cover Plate –2 x Internal Hook Pins on Each Side to Prevent Removal when Front Cover is Secured with screws

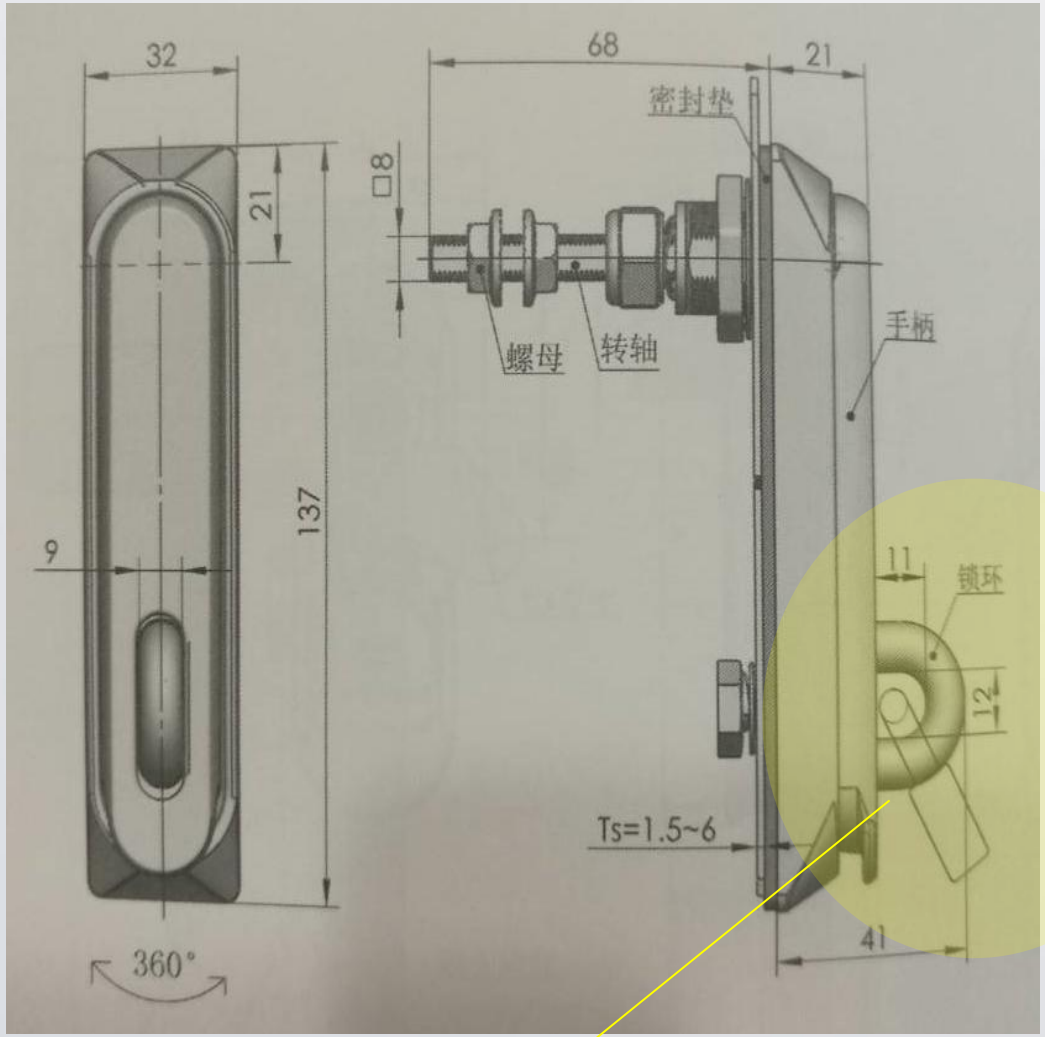


ANNEXURE – Supplementary Information

ATC Approved Locks

Description	PL2	PL5	SmartLock PLD-002-0000/ PDL-002-1000
Picture			
Shackle	10 mm	11mm	9.5 mm
Height	115.9mm	130.7 mm	93 mm
Width	56 mm	69 mm	66.4 mm
Depth	28 mm	30.1mm	66.4 mm

Stainless steel door swing handle for padlock (Anti-Clockwise)



Cater for 12 mm shackle
(9mm stainless steel bended round bar)

100% Stainless Steel

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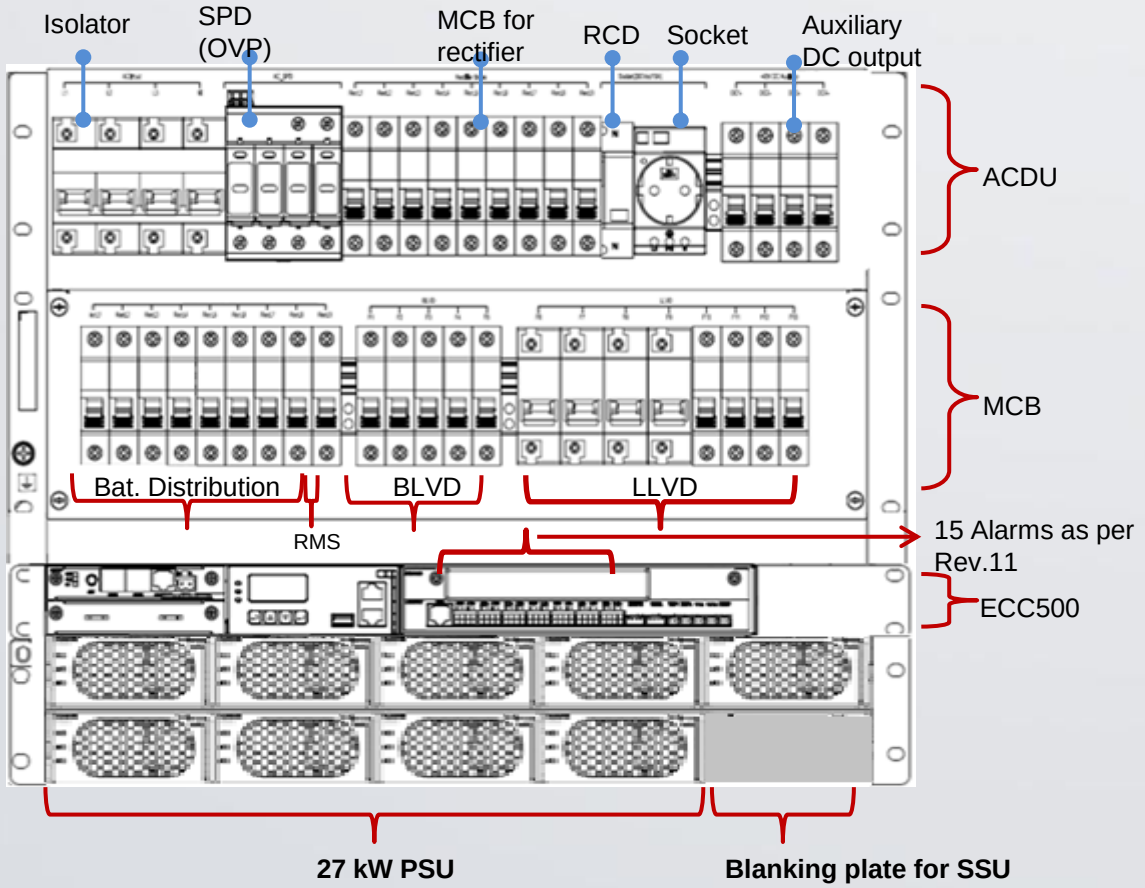
High Capacity Distribution



ACDU (Schneider)	
Dimensions	Width 23"; Height 3U
Input	100A 4P Isolator
Output:	9 x 25A MCB's for rectifier 1 x standard European socket with **10A** RCD (30mA)
Auxiliary DC output	(4 x MCB's) : 2 x 6A; 1 x16A; 2 x 20A
AC SPD	Phoenix Contact: VAL-MS 230 3+1 FM,3L+N (Class II)
DCDU (Schneider)	
Dimensions	Width 23"; Height 8U
Capacity: 450A(50A*9);	450A (50A x 9);
Battery MCB	Batteries - 8 x 63A RMS - 1 x 6A
DC Distribution:	**BLVD**: 1 x 63A ; 1 x 32A ; 1 x 16A ; 1 x 10A ; 1 x 6A **LLVD**: 4 x 125A; 2 x 63A ; 2 x 32A
Integrated DC SPD (Within rectifier module)	10KA/20KA
Module Slots	**Slot 1-9** support PSU **Slot 10** supports SSU
ECC500	
Alarms	15 as per Revision 11

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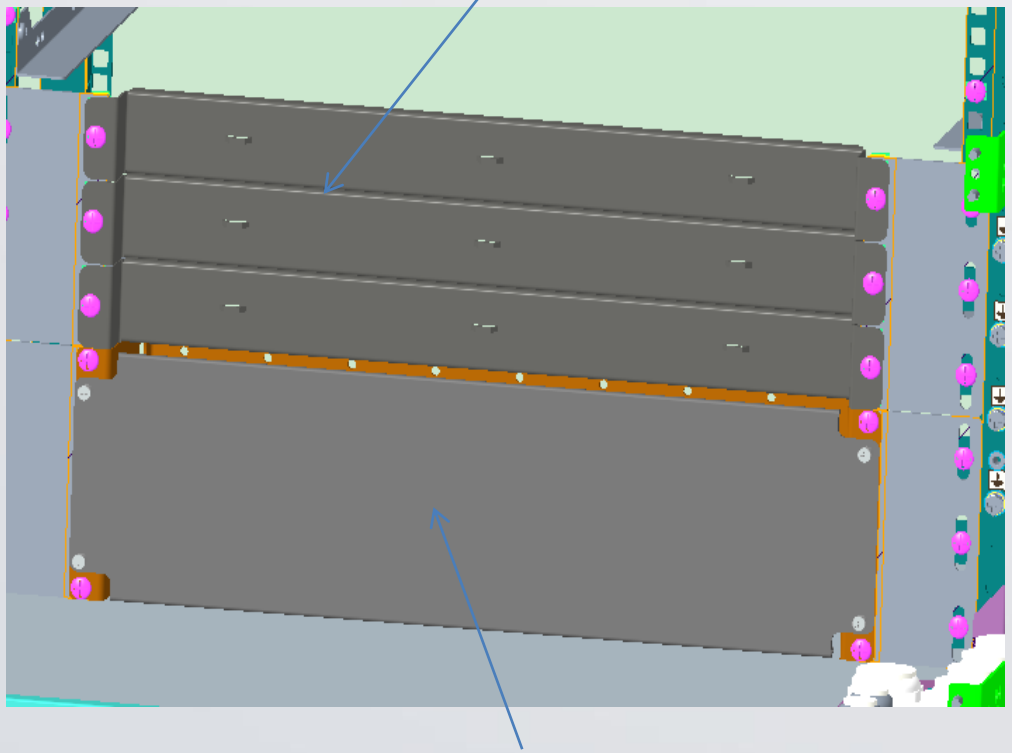
2 x 3U Equipment rack space for equipment

Top 3U

✓Equipment rack for solar
✓19”
✓3 x 1U blanking plate



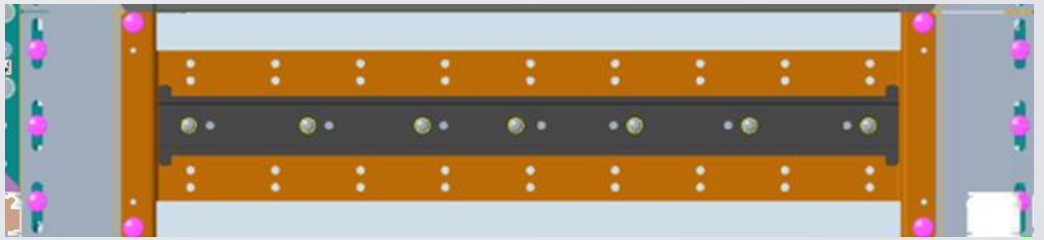
Bottom 3U

✓19”
✓1 x 3U blanking plate

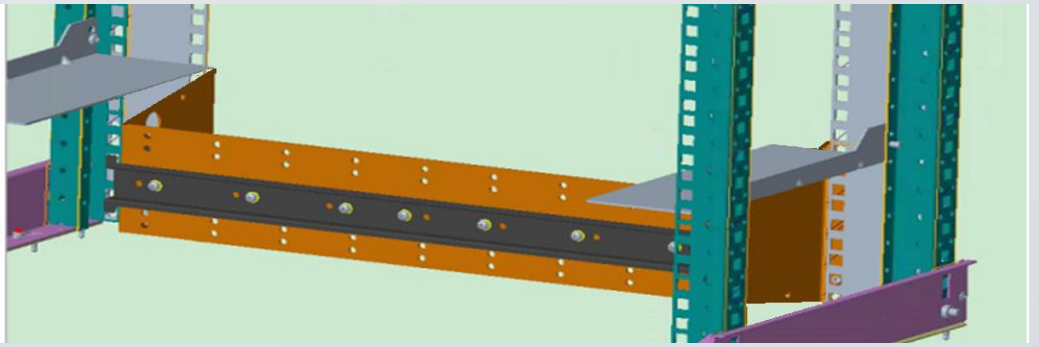
Bottom 3U subrack

✓Removable 19”, 3 U equipment rack fitted onto 19” rail
✓3U recessed (120 mm) DIN rail distribution carrier with 3U solid cover plate.
✓Front and back DIN rail profiles raised by 10 mm from carrier frame
✓Perforation for cable ties
✓2U back plate tapered

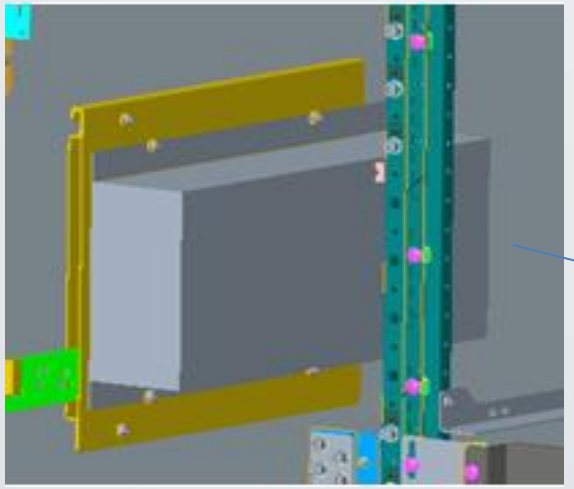
Front View

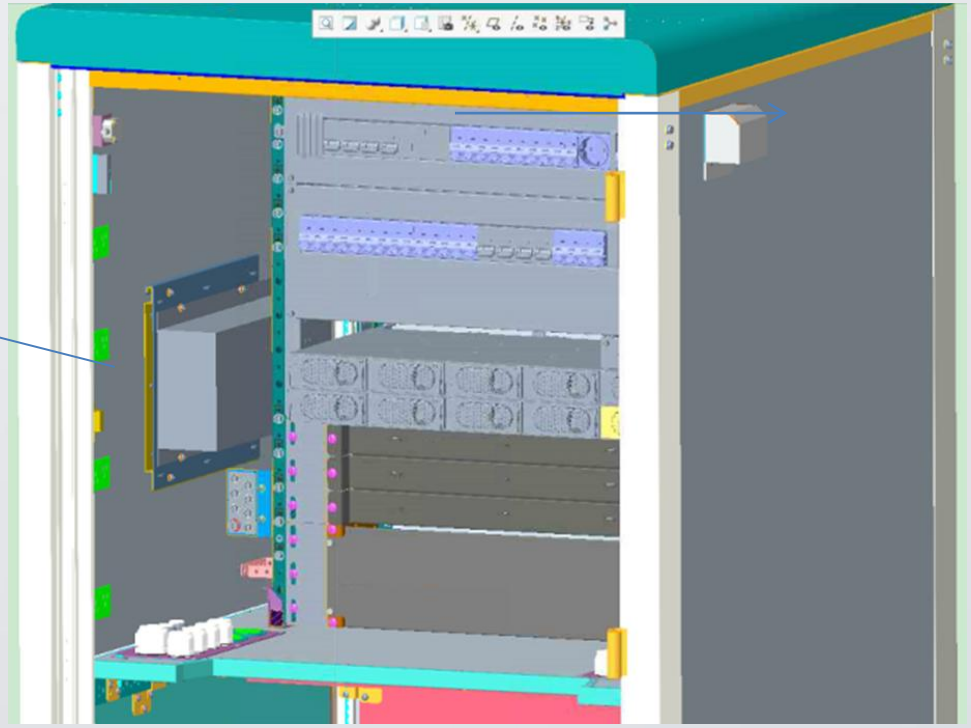


Back View



Horizontal Inverter Installation

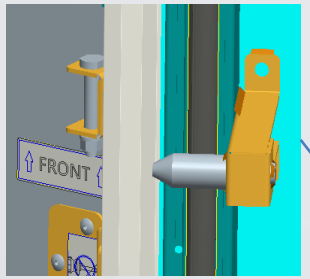




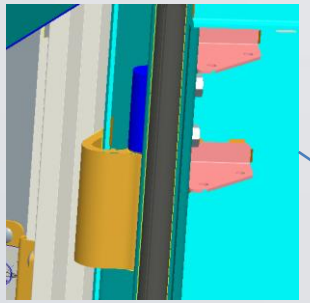
✓Inverter installed horizontally on left hand side
✓Blanket design
✓Easy installation, removal and maintenance

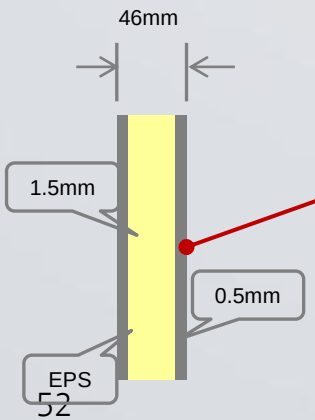
Anti-theft Cabinet Design

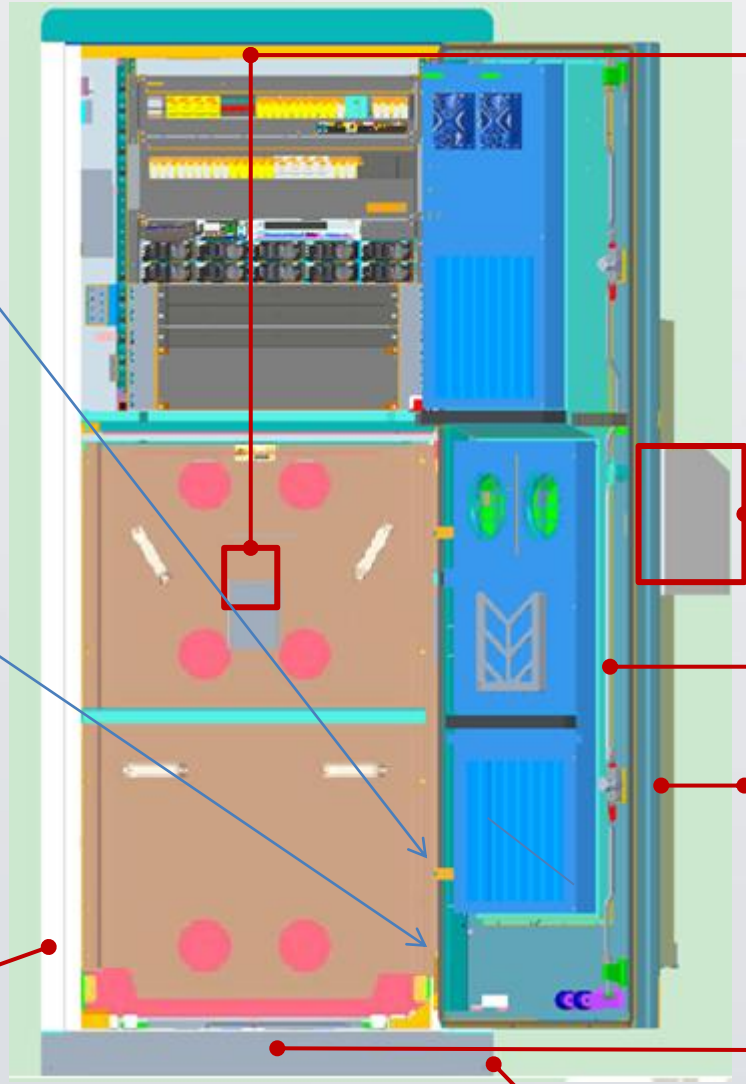
✓3 x Bumper pins



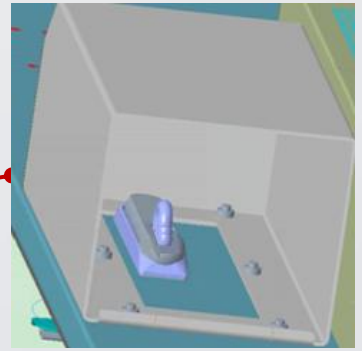
✓4 x Hidden hinges







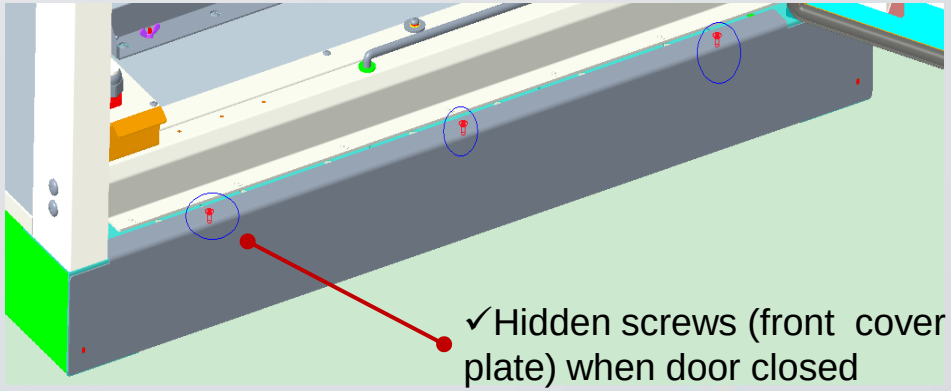
✓12 mm shackle
✓Smart / Glam lock compatible



✓ 2 mm steel lock cover
✓ Lock cover is flush with cabinet side panel when door is closed
✓Cover removable from the inside only
✓Stainless Steel lock with anti-clockwise rotation

✓5-Point Lock

✓2mm steel door



✓Hidden screws (front cover plate) when door closed

✓Internal hidden screws for side cover plates

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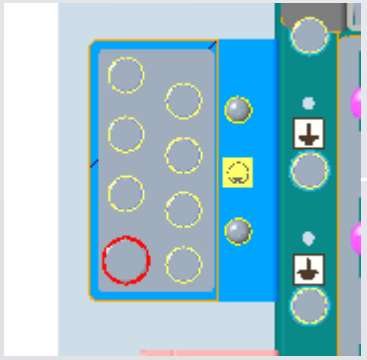
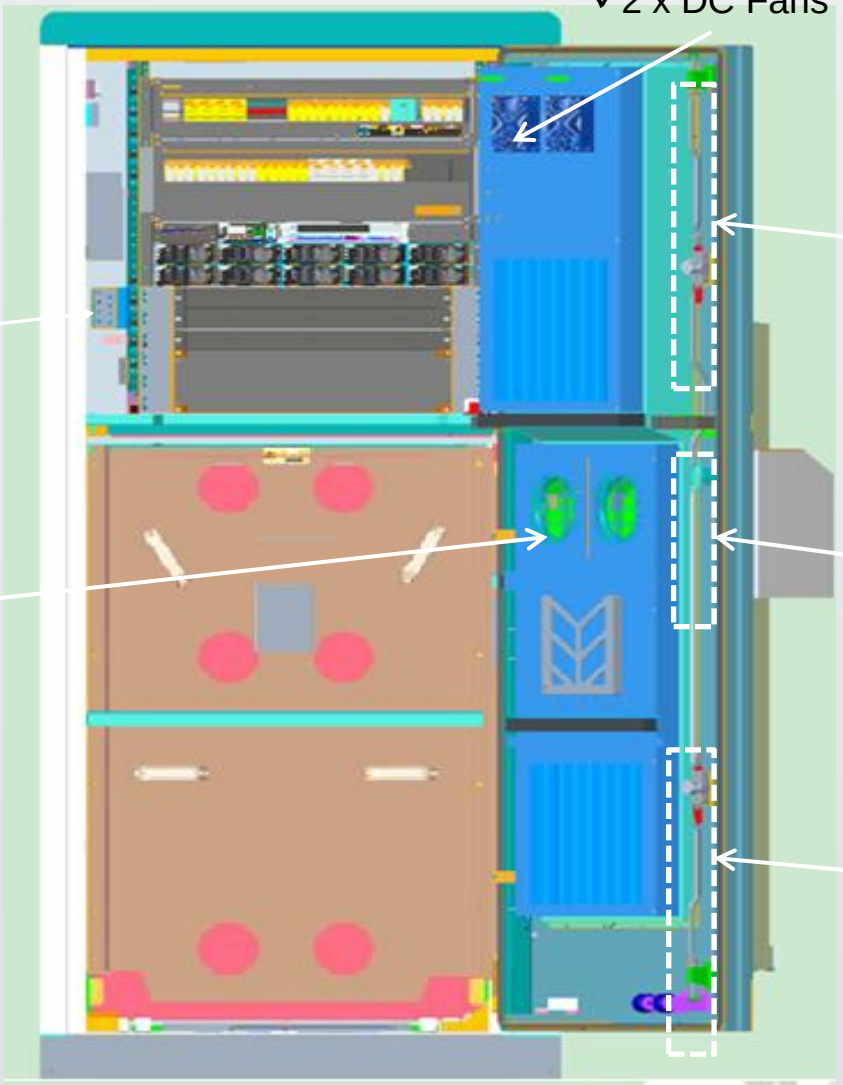
Free Cooling Design Overview



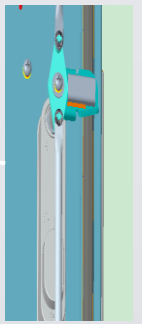
✓Earth bar on left hand side

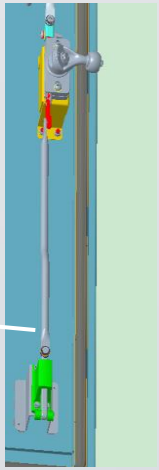
✓2 x DC Fans



✓2 x DC Fans

✓5-Point Lock





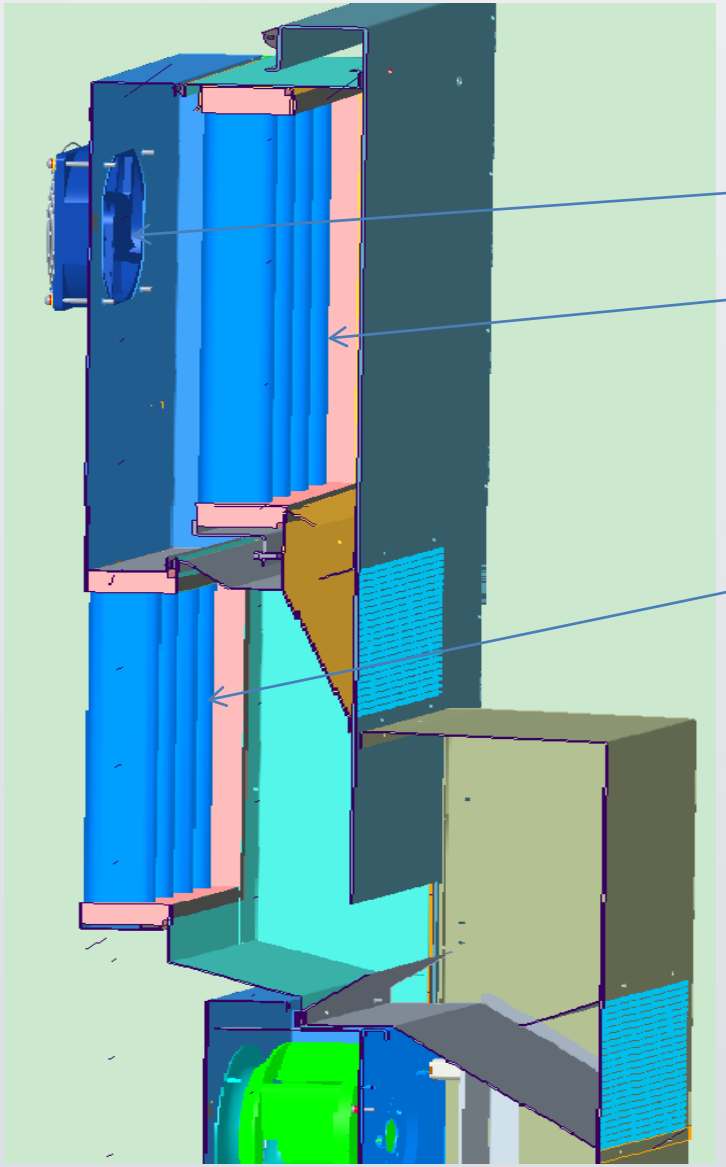
Flexible Cooling Design – AC, HEX and Free Cooling (As per country requirements)

DC Air-conditioner (Envicool)	
Model	PC500D Same as DC05HDNC1A
Rated Voltage	-48V dc
Rated cooling capacity (W)	520 W (L35/L35)
Rated Power consumption (W)	198 W
Temp range	-15°C to +55
Emergency fan	2 x DC Fan provided

HEX	
MODEL	HXC150S
Rated Voltage	-48V dc
Rated cooling capacity (W)	150W/K
Rated Power consumption (W)	85W
Temp range	Temperature: –40°C to +55°C+solar radiation)

Free Cooling	
MODEL	Huawei
Rated Voltage	-48V dc
Rated Power consumption (W)	46W
Δ Temperature	+ 5°C
Temp range	Temperature: –40°C to +55°C+solar radiation)

Free Cooling- Equipment Compartment

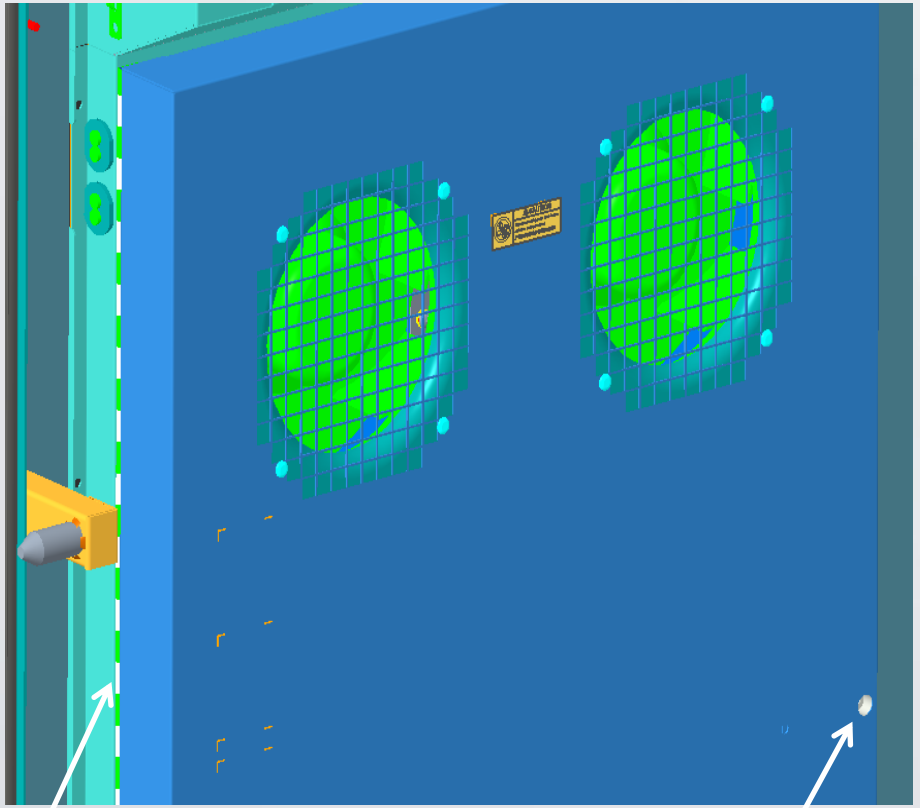


✓2 x DC Fans

✓G4 Filter

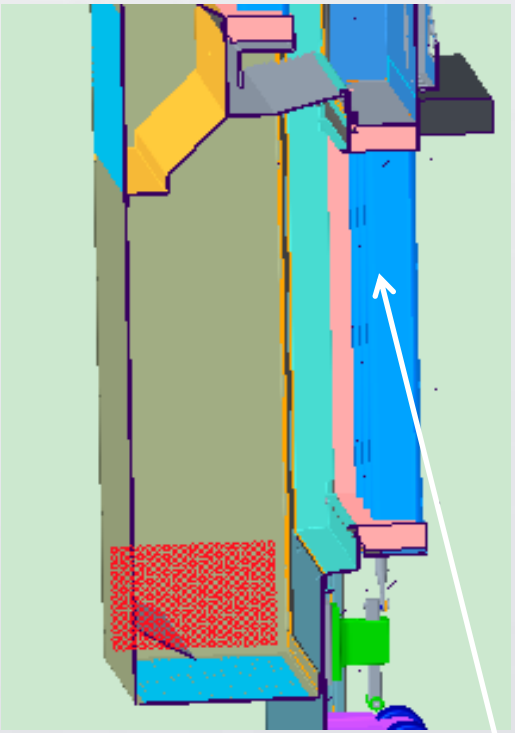
✓F6 Filter
(Equivalent to M5)

Filter Maintenance (7 Easy steps)



Hinge

Integrated screw with flat head to secure hinged front cooling cover



✓Removable filters installed behind hinged front cooling cover

7 Easy steps

Tools required: Screw driver

✓Open cabinet door

✓Identify equipment or battery compartment filters to be maintained

✓Loosen 3 x screws with screw driver

✓Open hinged front cooling cover

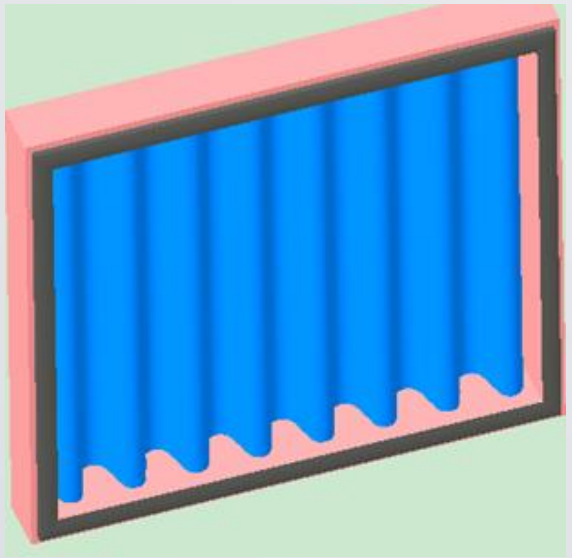
✓Filters are then accessible and can be easily maintained.

✓Close hinged front cooling cover

✓Fasten 3 x screws with screw driver

Note: Complete unit and filters are completely sealed when screws are secured to prevent air leakage

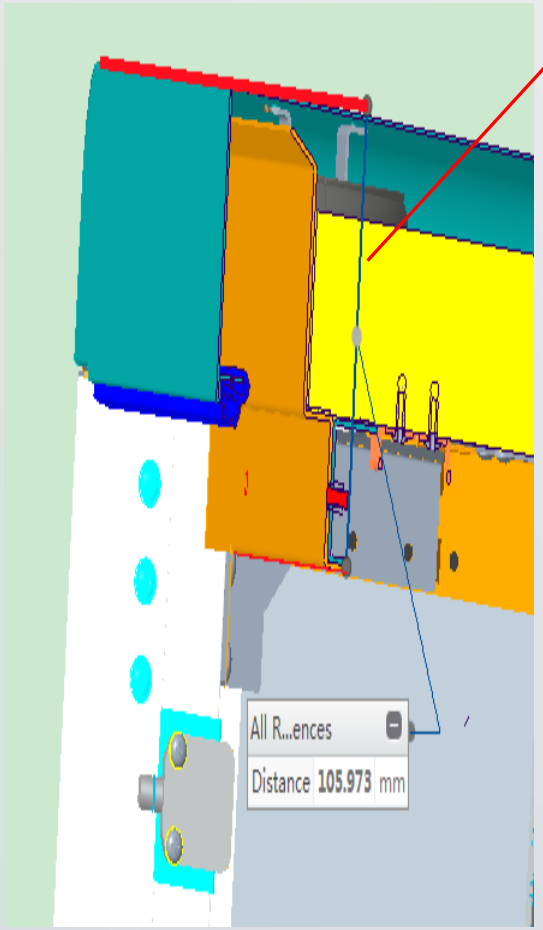
F6 Filter Specification

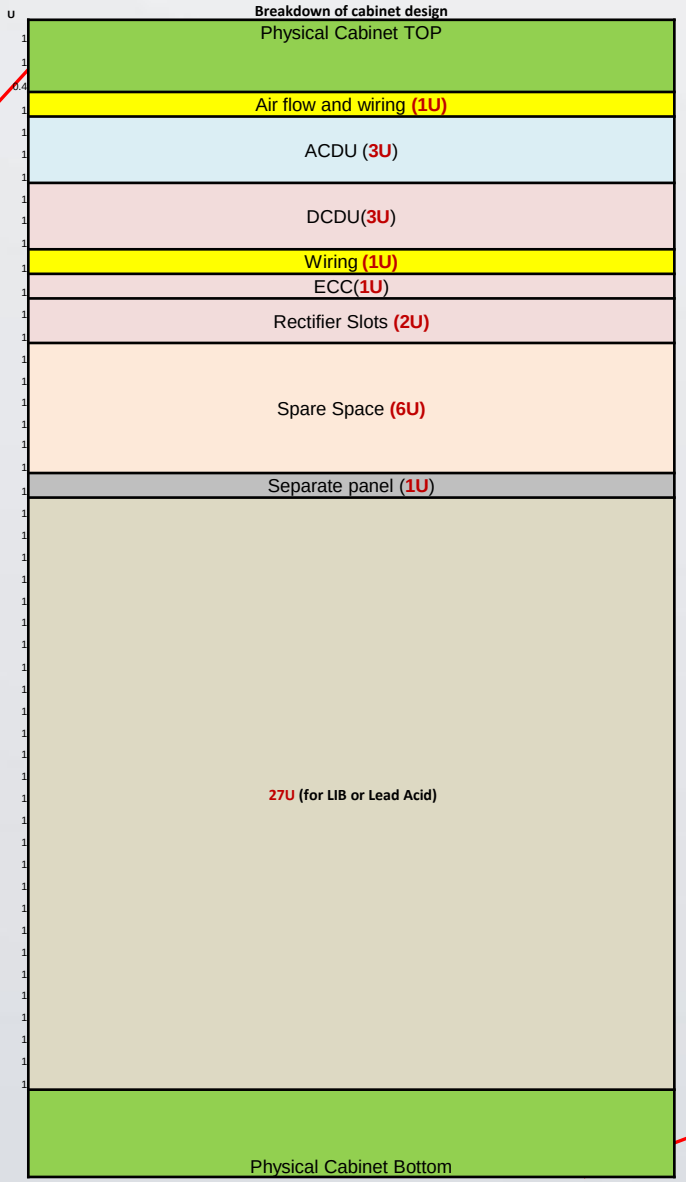


Note: Colour is for illustrative purposes only

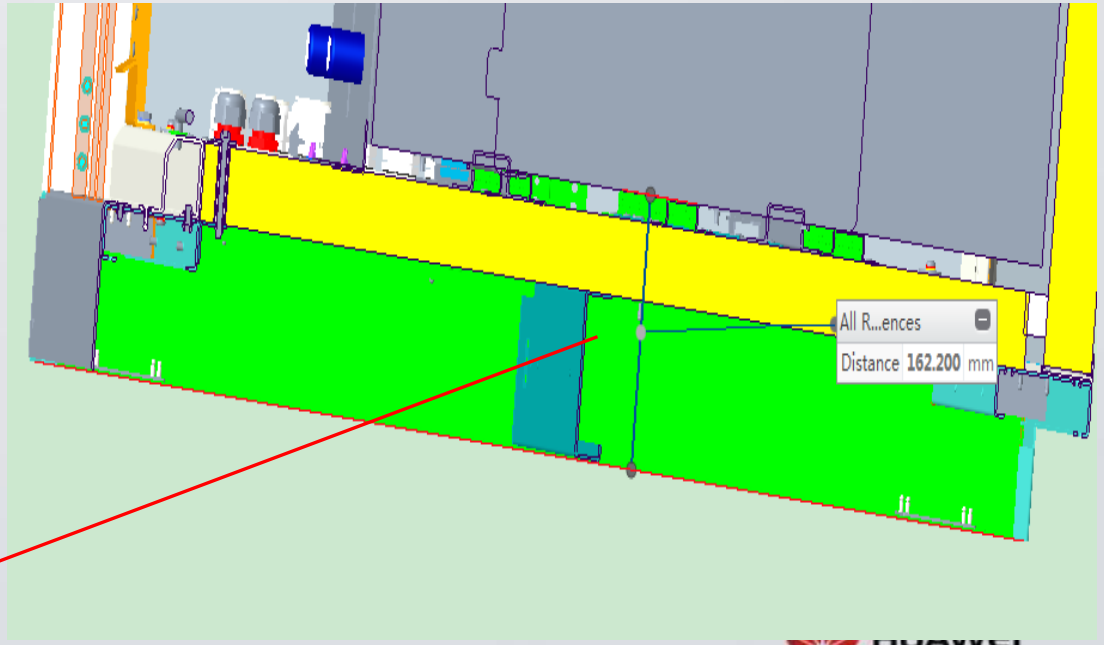
Environment Requirements	Operating temperature range of -40℃～+70℃ and humidity range of 5% ~ 100%.
Filter Media	Glass fibre.
Filter Efficiency	The measurement of the filtration performance applies to filtration efficiency. The filtration performance must meet the F6 (EN779) standard, or the filtration efficiency must not be less than 60% ASHARE52/76.
Mildew Resistance	The mildew resistance of the air filter module meet the IEC 68-2-10 standard.No mildew or corrosion occurs on the air filter module and the functions of the air filter module are not affected after 28 days of the test.
Fire Performance of Air Filter Material	The material of the air filter module meet UL94 V0
Errosion Resistance Properties	The air filter module has a good tolerance for organic solvents, corrosive inorganic acids, and alkalis, complying the corrosive performance protective requirement for the B type outdoor environment.
Color of Filter Material	White.
Color of Frame	Primitive aluminum color

Cabinet Dimensions Breakdown



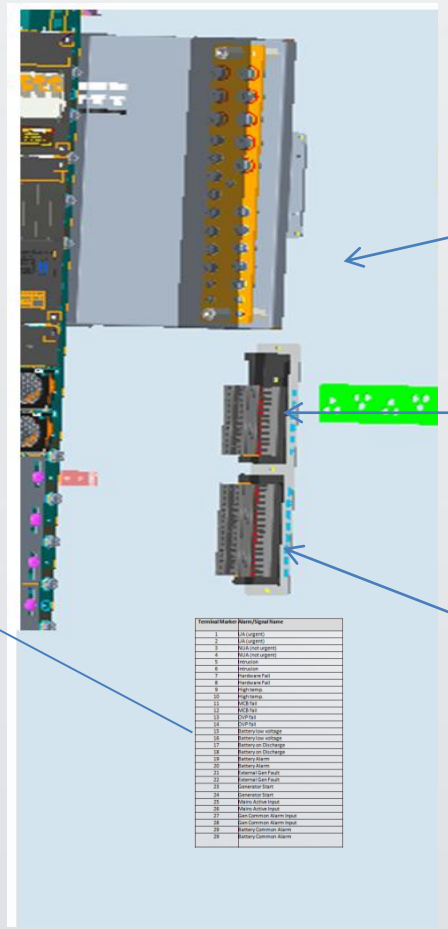


Dimensions	Value
Height	2100 mm
Width	900 mm
Depth	960 mm
Plinth Base	162.2mm



30 x Alarm screw terminal on right hand side of cabinet with label

Input / Output Connections	
Terminal Marker	**Alarm/Signal Name**
1	UA (urgent)
2	UA (urgent)
3	NUA (not urgent)
4	NUA (not urgent)
5	Intrusion
6	Intrusion
7	Hardware Fail
8	Hardware Fail
9	High temp.
10	High temp.
11	MCB fail
12	MCB fail
13	OVP fail
14	OVP fail
15	Battery low voltage
16	Battery low voltage
17	Battery on Discharge
18	Battery on Discharge
19	Battery Alarm
20	Battery Alarm
21	External Gen Fault
22	External Gen Fault
23	Generator Start
24	Generator Start
25	Mains Active Input
26	Mains Active Input
27	Gen Common Alarm Input
28	Gen Common Alarm Input
29	Battery Common Alarm
30	Battery Common Alarm



Right hand side panel

✓1.5 mm DIN rail mount screw terminals
(30 Alarms as per Rev. 11)

✓DIN Rail mounted

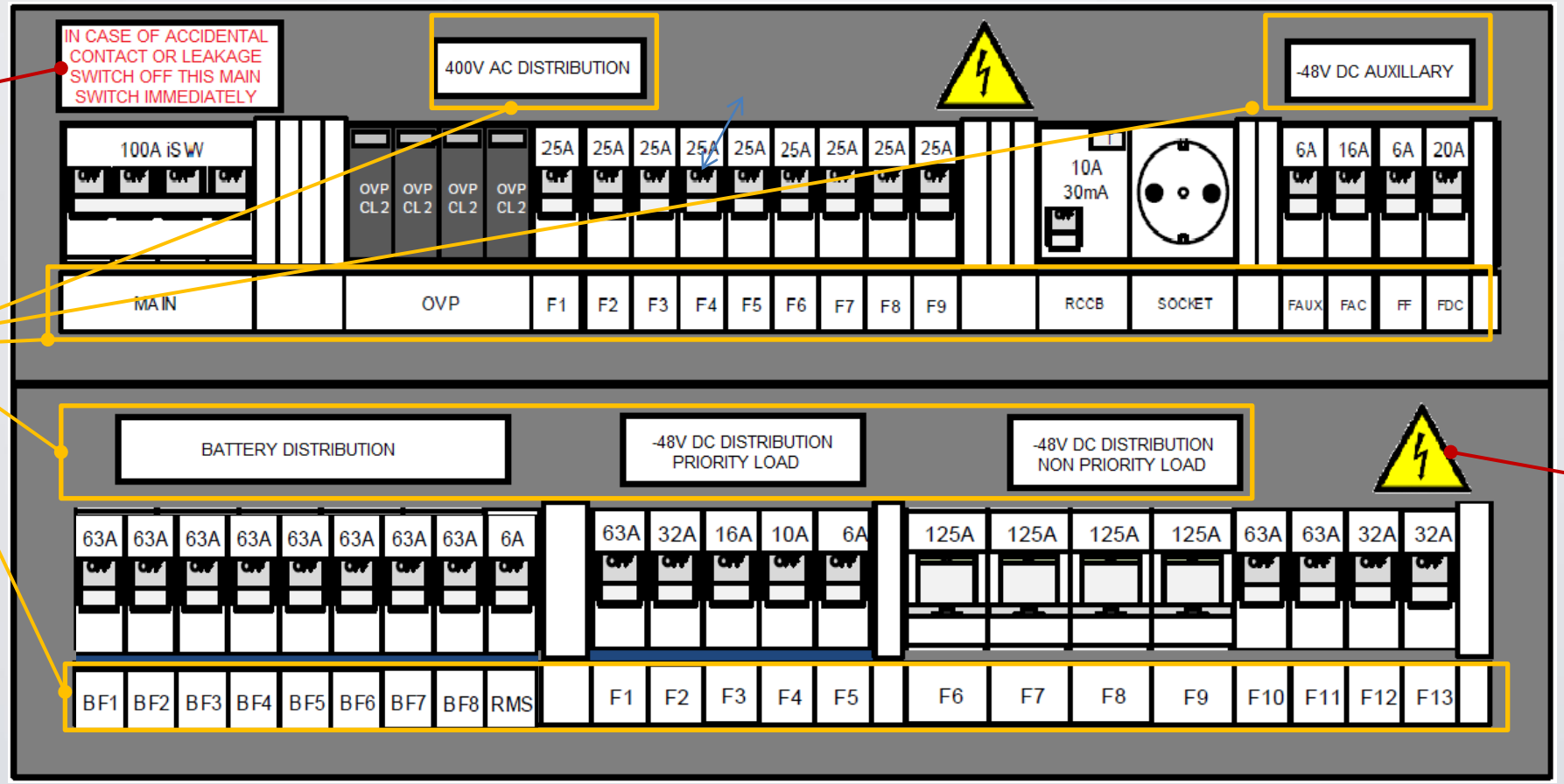
HUAWEI

Electrical Distribution Labeling

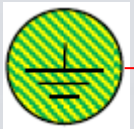
Note: All “black” letters will be silk screening

Consumer Earth terminal **(Vinyl)**

Circuit breakers and other electrical device label **(Silk Screening)**



“General warning of electrical shock hazard” label
(Code WW7, 50 x 50 mm)
(Vinyl)

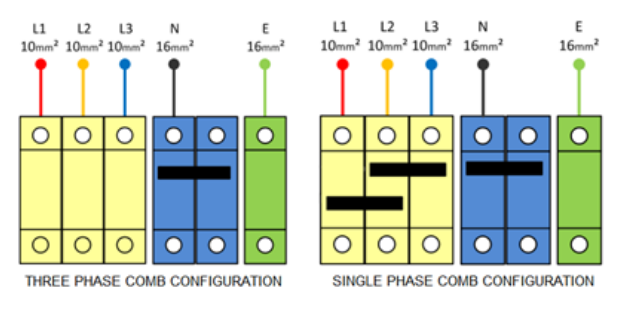


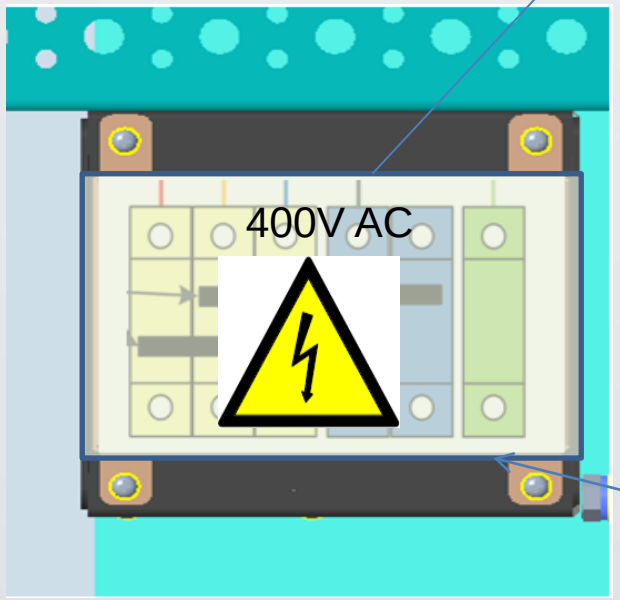
Consumer Earth terminal **(Vinyl)**

Chassis Earth **(Vinyl)**

Incoming AC Termination Labeling

3-Phase and 1-Phase conversion label





✓**IP2X Transparent cover**
✓Bridging combs will be included

✓Electrical Shock hazard label to be provided on transparent cover

Component Specification

No.	Description	Quantity	Model	Supplier	Specification
1	ACDU-SPD(OVP)，4P,A,CLASSⅡ	1	VAL-MS 230IT3+1-FM	Phoenix contact	VAL-MS 230IT3+1-FM
2	ACDU- RCD ，L-N，10A(30mA)	1	iDPNa Vigi+10A	Schneider	Acti9 iDPNa + 10A£¨A9D91610
3	ACDU-Socket,10A	1	M1175	ABB	ABB DIN-Rail socket
4	ACDU-Input Switch，4P,100A,	1	iINT125	Schneider	Schneider-iINT125
5	ACDU-Rectifier MCB，25A	9	iC65N 1P C25A	Schneider	MCB
6	ADCU- Auxiliary MCB,6A	2	iC65N 1P C6A	Schneider	
7	ADCU- Auxiliary MCB,16A	1	iC65N 1P C16A	Schneider	
8	ADCU- Auxiliary MCB,20A	2	iC65N 1P C20A	Schneider	
9	DCDU-Bat MCB，63A	8	iC65N 1P C63A	Schneider	
	DCDU-Bat MCB，6A	1	iC65N 1P C6A	Schneider	
10	DCDU-BLVD MCB，6A	1	iC65N 1P C6A	Schneider	
	DCDU-BLVD MCB，10A	1	iC65N 1P C10A	Schneider	
	DCDU-BLVD MCB，16A	1	iC65N 1P C16A	Schneider	
	DCDU-BLVD MCB，32A	1	iC65N 1P C32A	Schneider	
	DCDU-BLVD MCB，63A	1	iC65N 1P C63A	Schneider	
11	DCDU-LLVD MCB，125A	4	C120H 1P C125A	Schneider	
12	DCDU-LLVD MCB, 32A	2	iC65N 1P C32A	Schneider	
13	DCDU-LLVD MCB，63A	2	iC65N 1P C63A	Schneider	
14	DC air conditioner	1	PC500D	Envicool/Hua Rui	Cooling Capacity L35/L35:600W

Thank You