



# OCP

## Open Bridge Rack > OBR

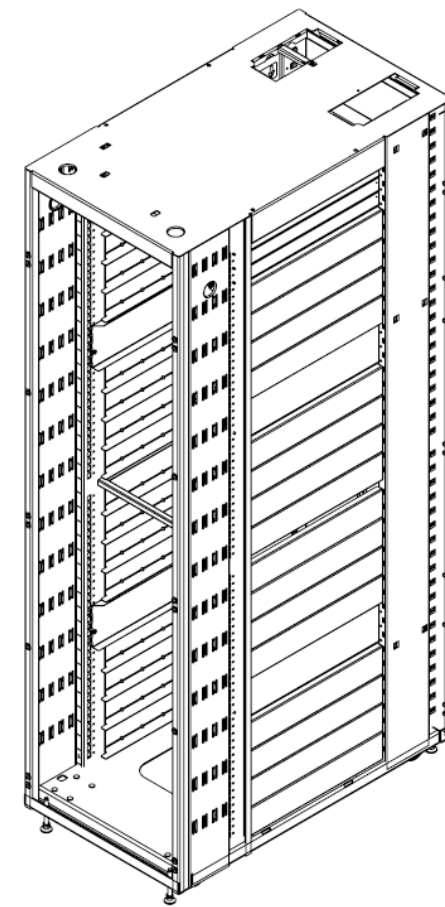
### Design considerations

Denis Blouin, Eng.

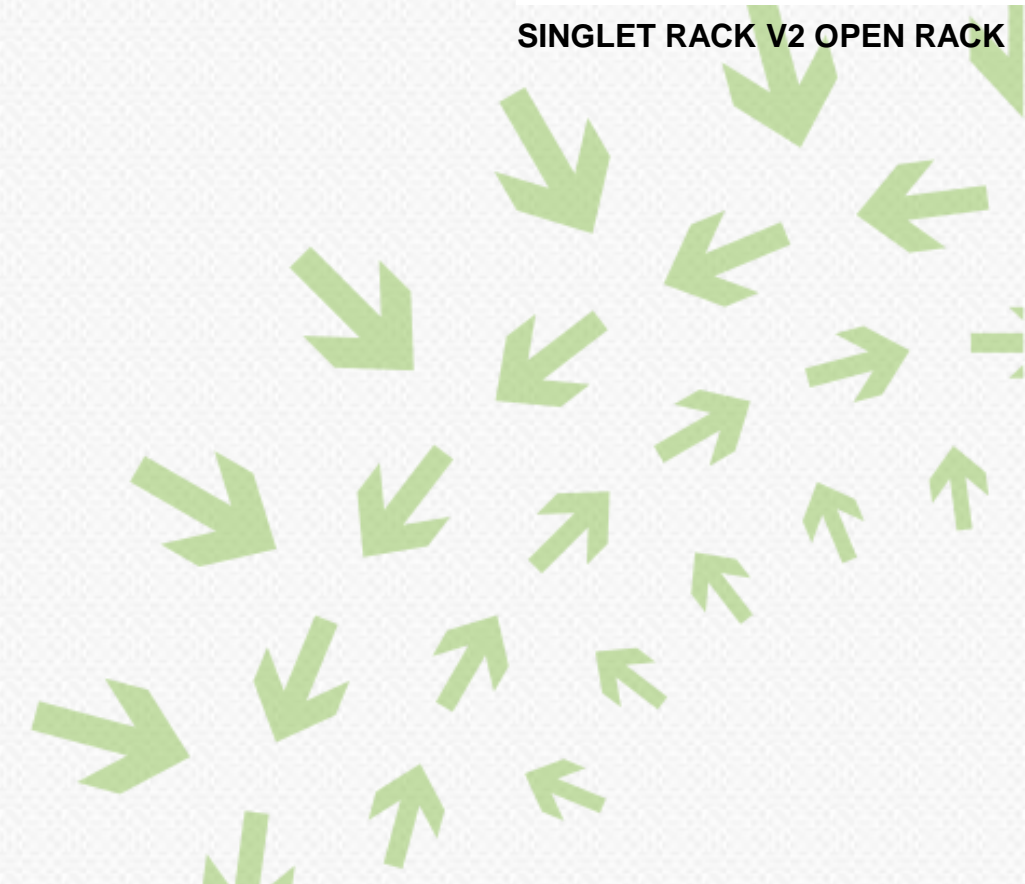
Belden

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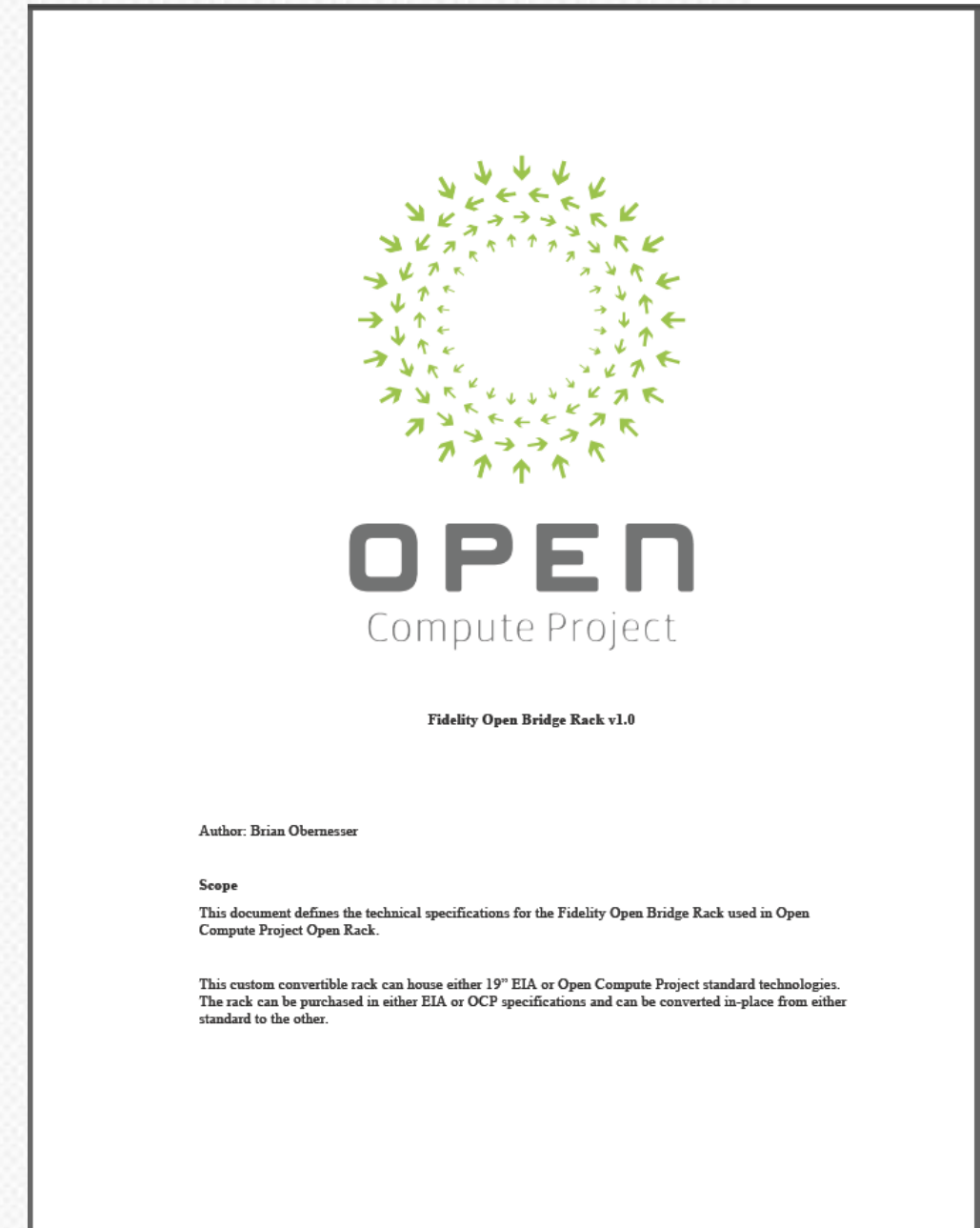
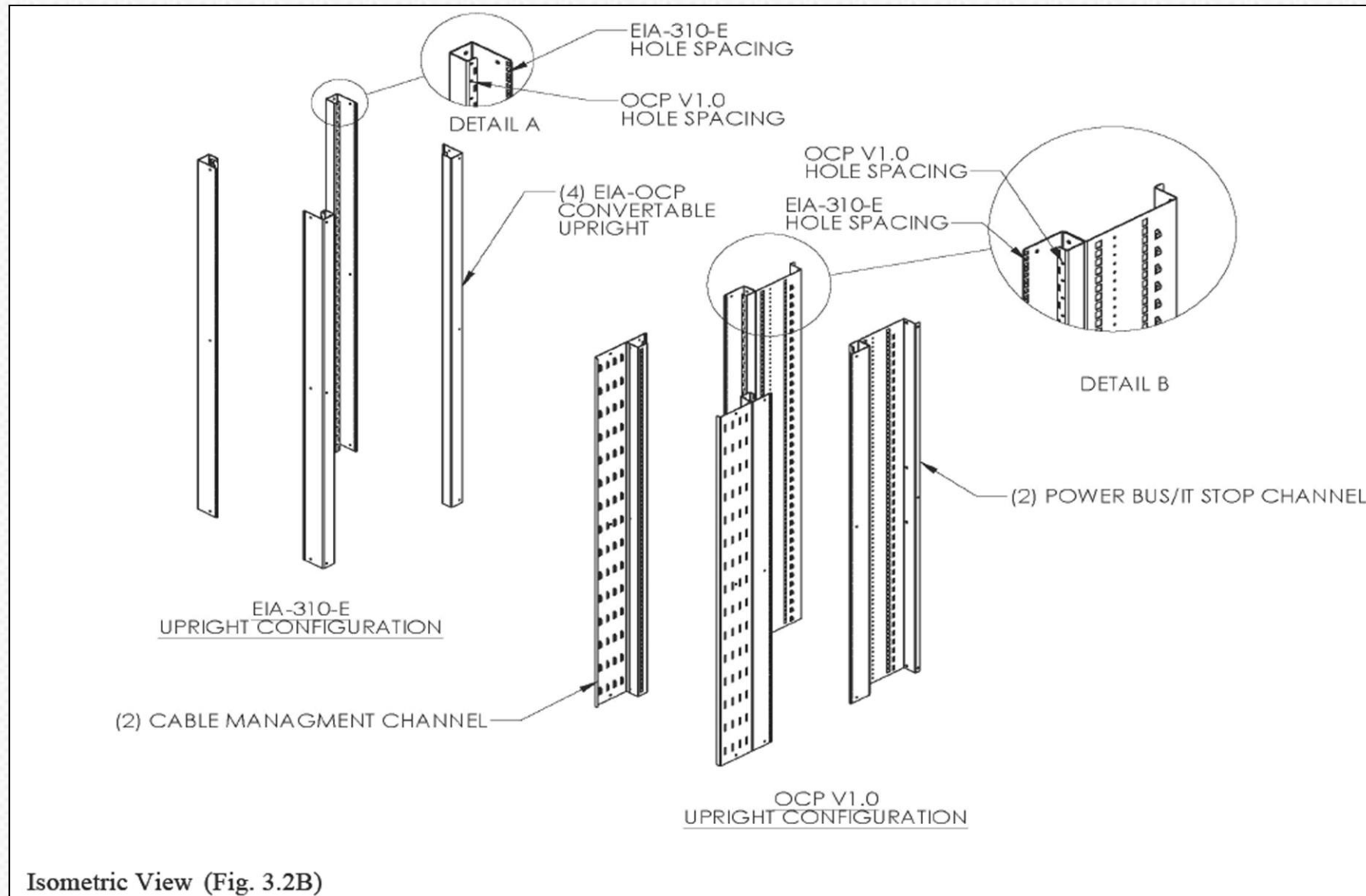
SINGLET RACK V2 OPEN RACK



# What is OBR ...

Equipment Rack compatible with both EIA and OCP gears

- Field conversion EIA>OCP





# Why OBR> Open Compute outside hyper scale DC

- Enterprise DC, Colocation DC...
  - Bridge from EIA to OCP ... when needed
  - Mixed environment, EIA and OCP
- Complying to security regulation
  - Cabinet level access control
    - Doors, side panels



# Belden OBR

Two height:

- 28"W x 48"D x 82"H (40 OU – 44 RU)
- 28"W x 48"D x 89"H (44 OU – 48 RU)

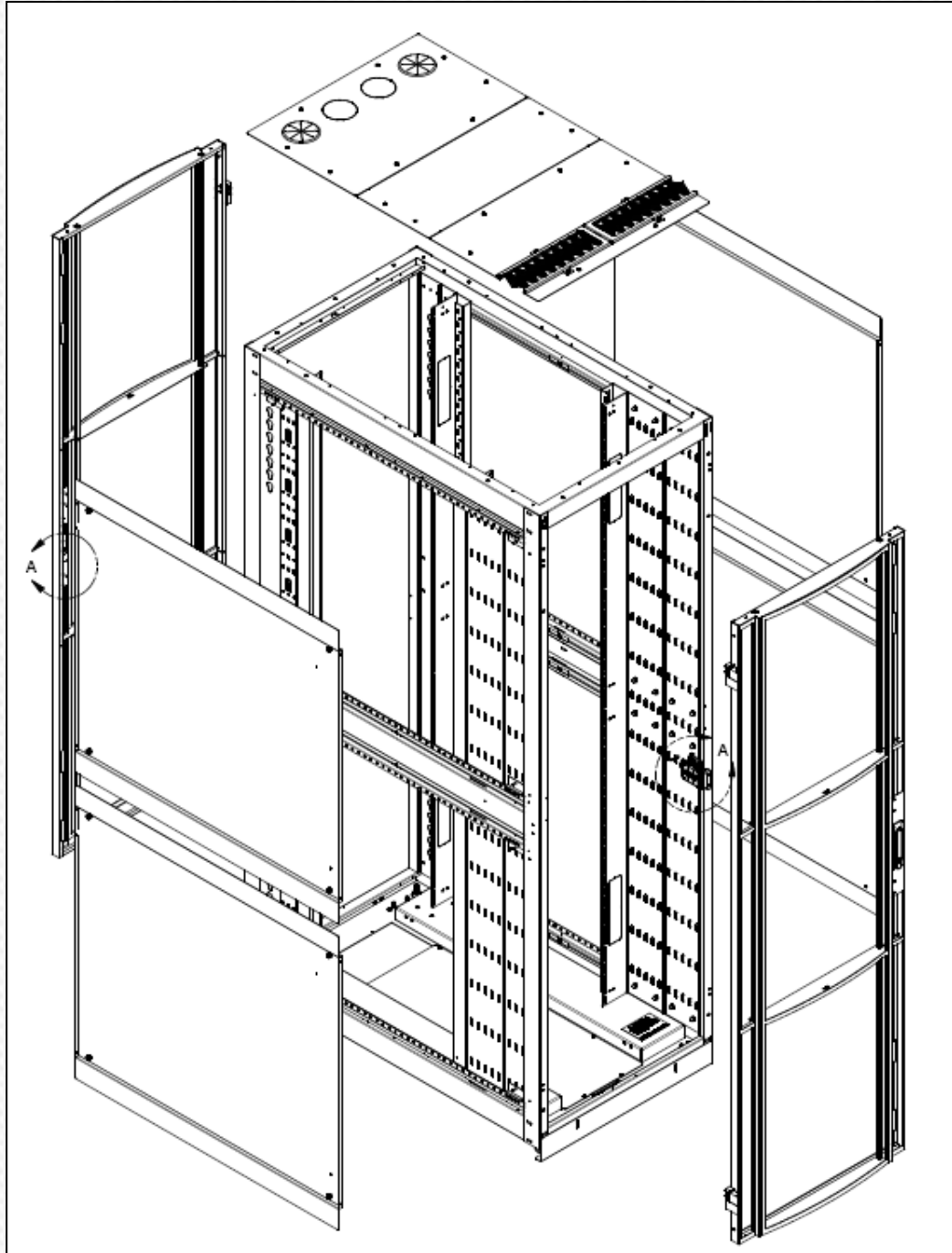
Three configurations:

- Networking
- Server
- OCP

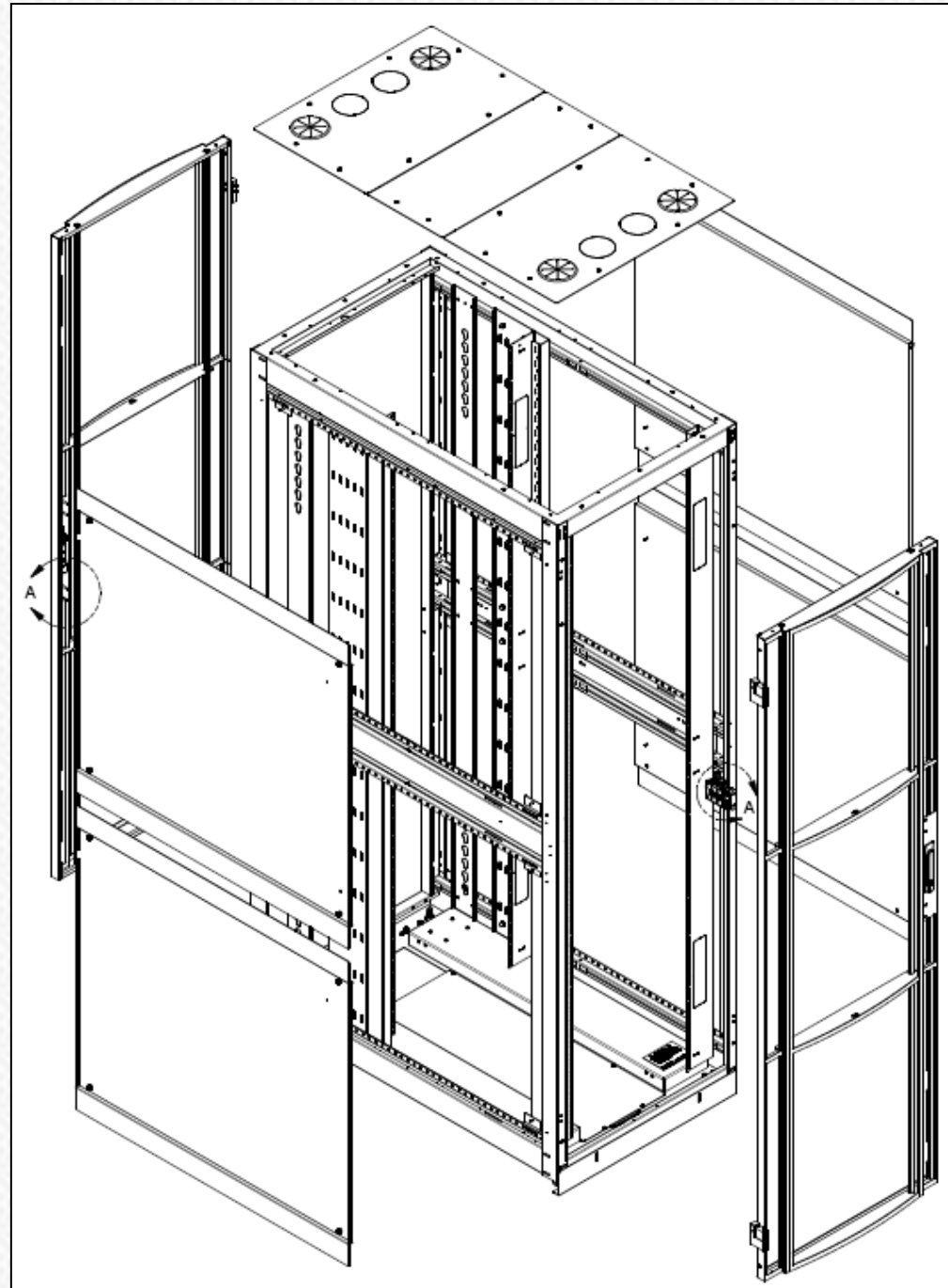




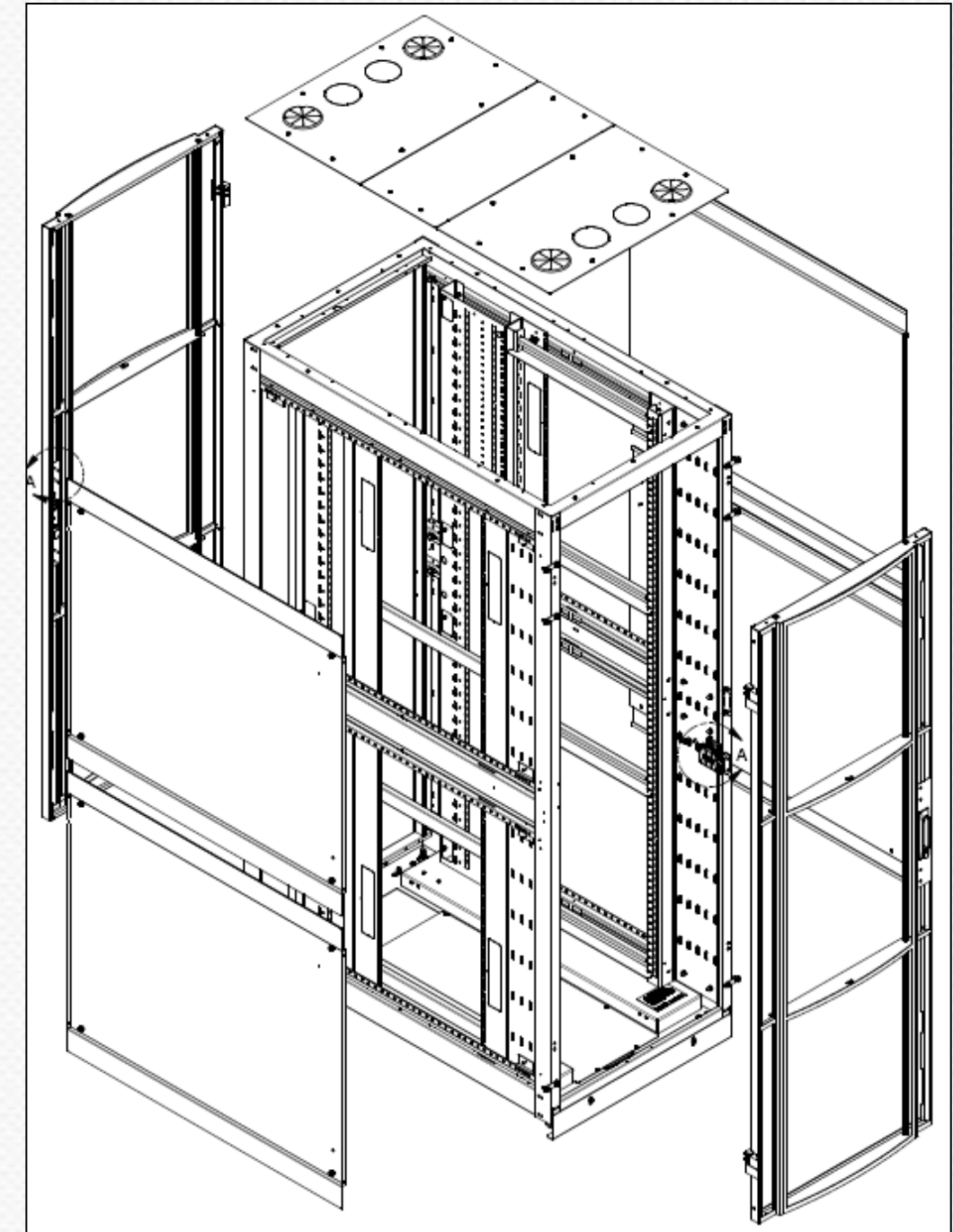
# Networking



# Server



# OCP

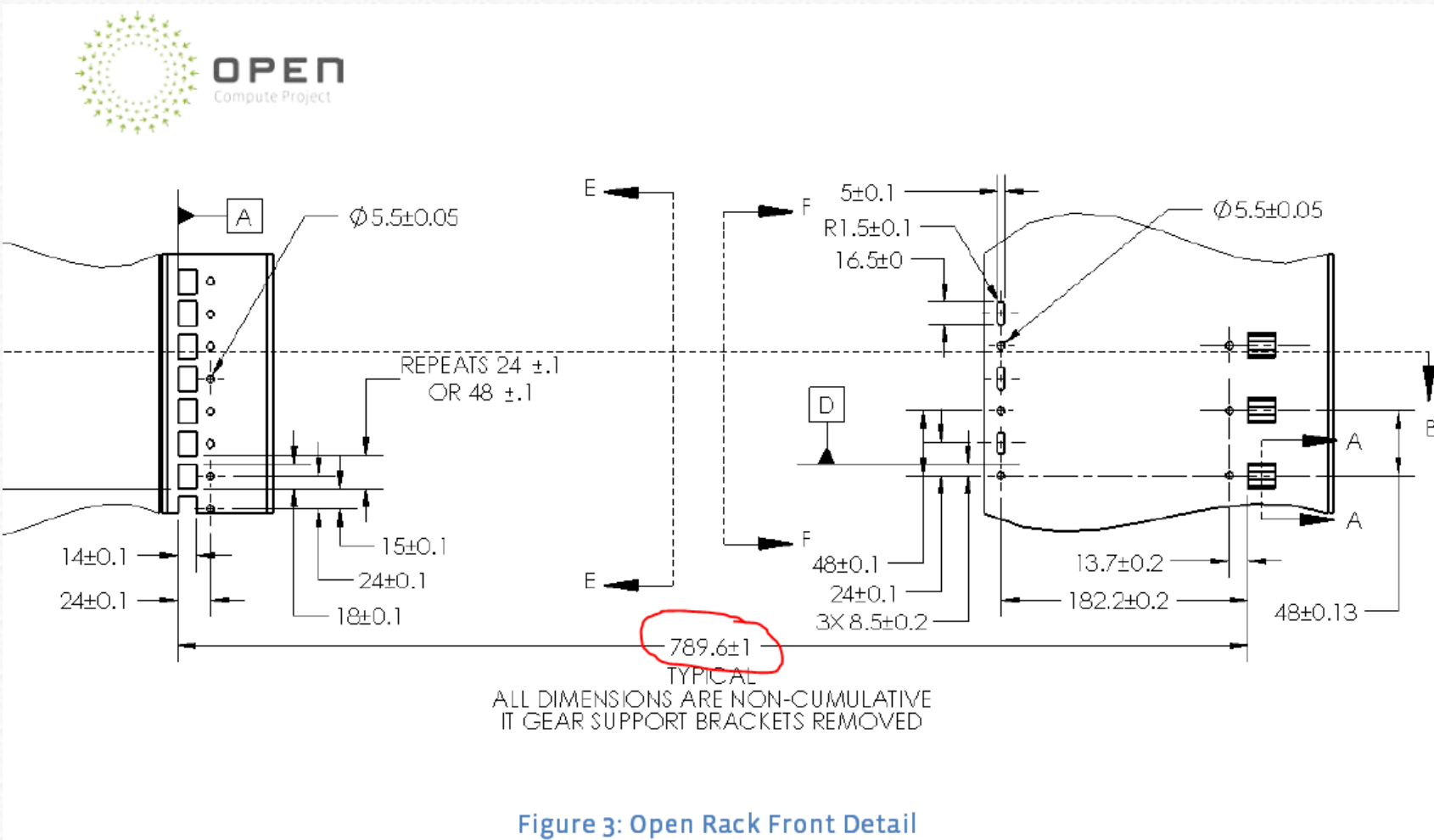


# Key OCP dimensions...

Front to rear rail positioning critical, major difference to EIA-310-E

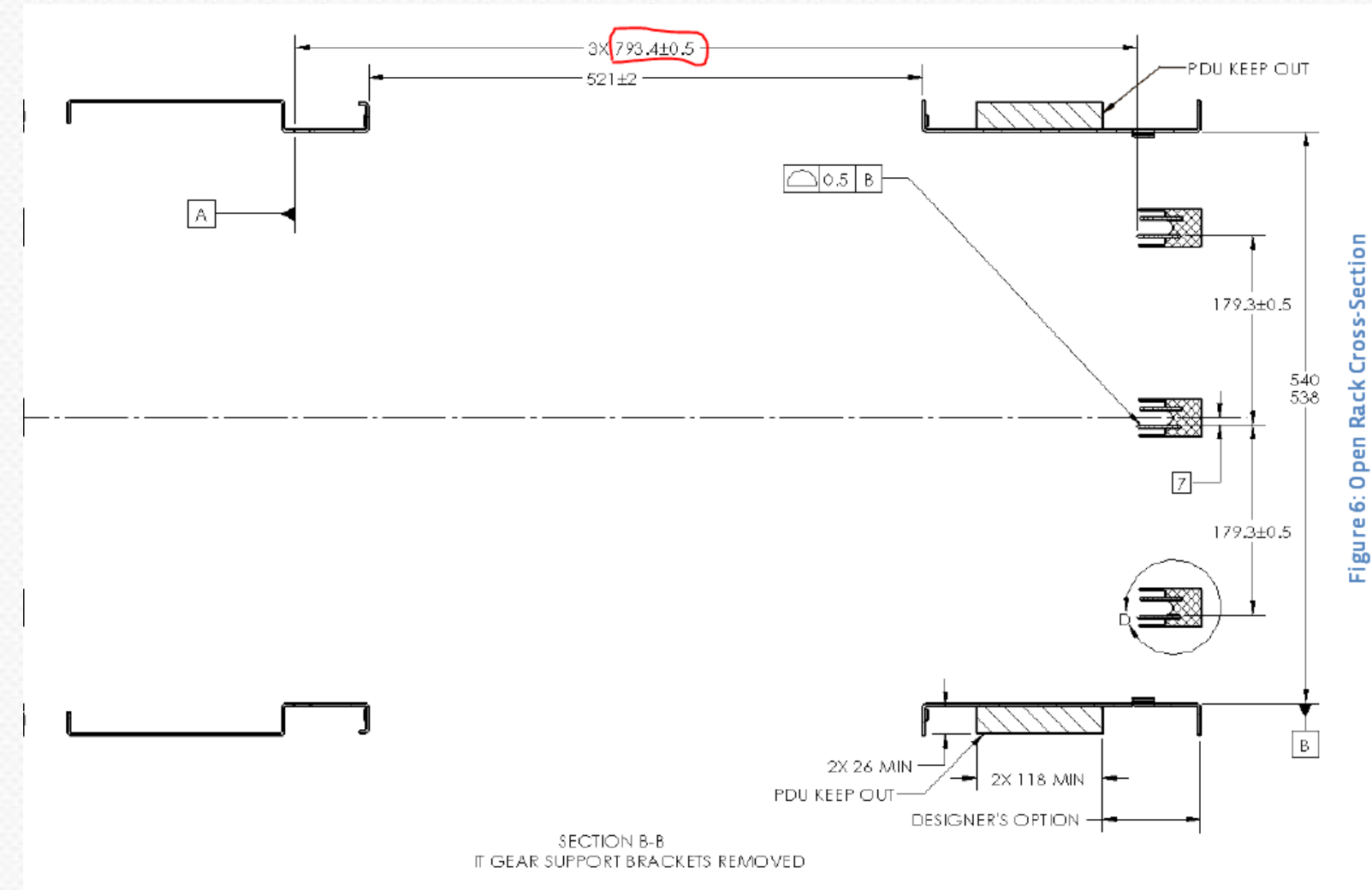
## Rack Columns

Ref. Open Rack Standard V1.2,  
p.6 Figure 3: Open Rack Front Detail



## Open Rack Cross Section

Ref. Open Rack Standard V1.2,  
p.8 Figure 6: Open Rack Cross-Section





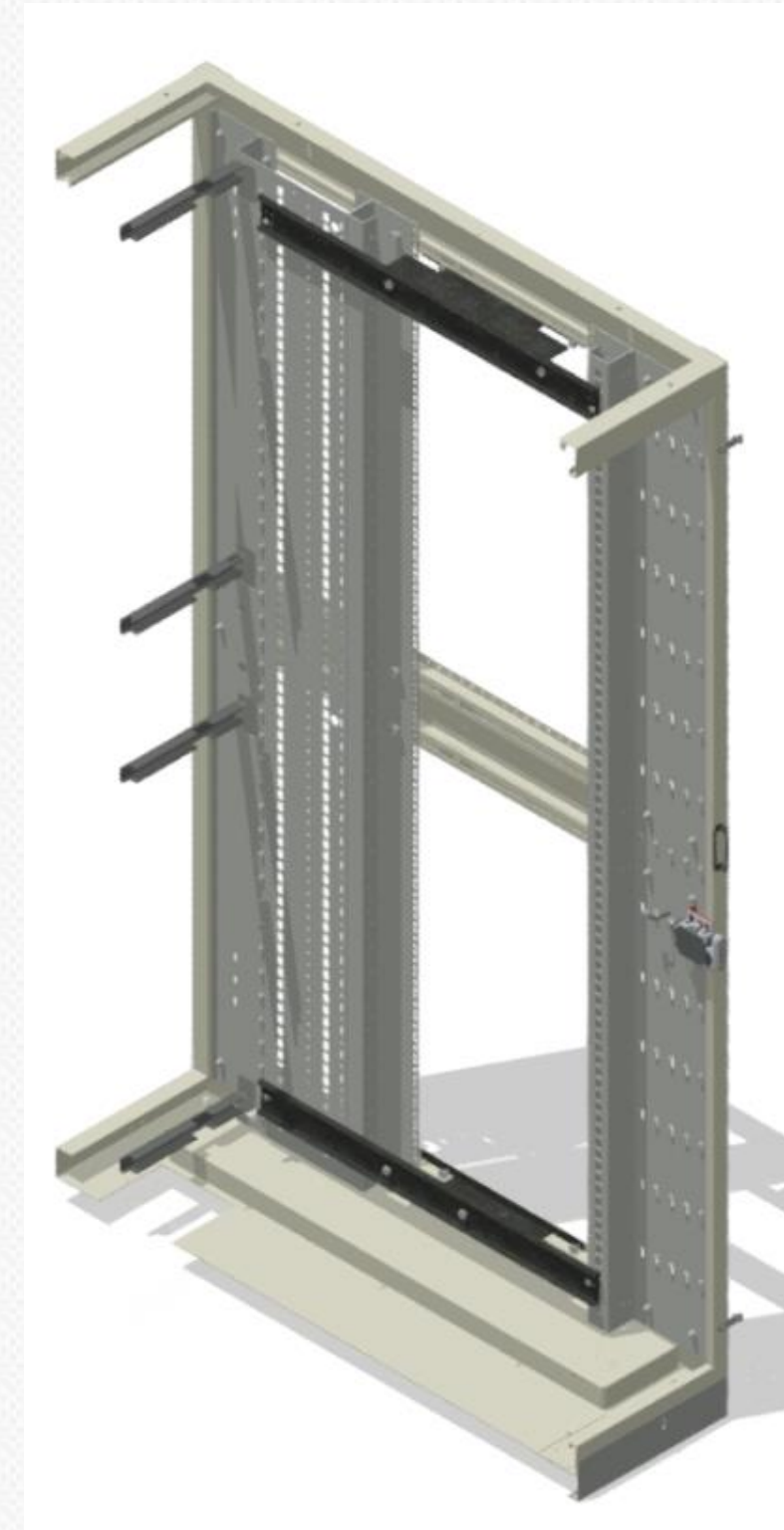
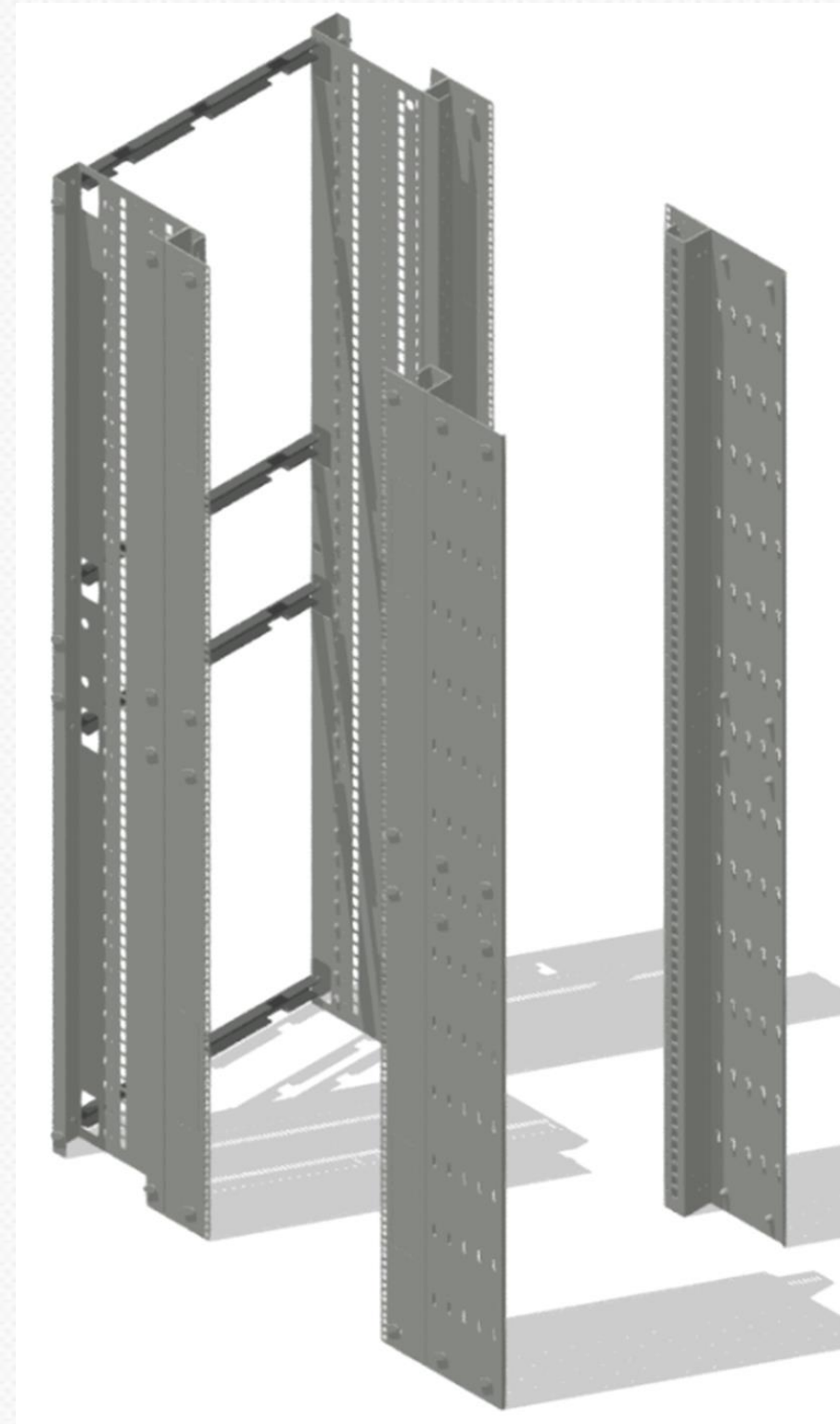
# Key: Positioning-Squaring of rails to rear OCP blocker panel

## Rail Positioning Tool:

- Pair, top and bottom
- Usable from inside, ganged OBR
- Reusable, couple per location

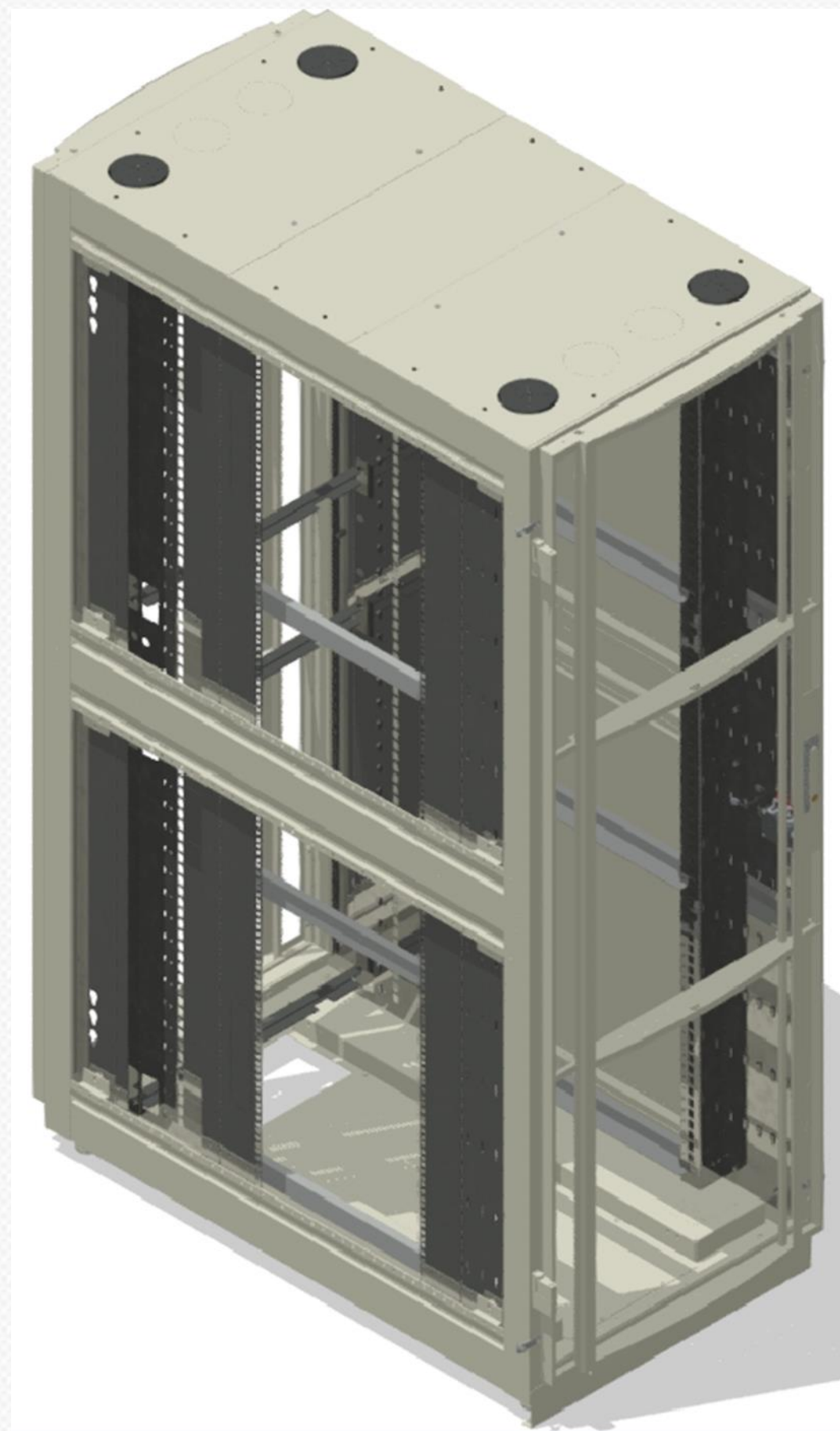
## Purpose:

- Precise positioning of front OCP rails in relation to rear OCP blocker panel ...  $789.6 \pm 1\text{mm}$
- Precise squaring of front to rear OCP rails ...  $48 \pm 0.1\text{mm}$  OU accross complete rack height



# OBR design considerations ...

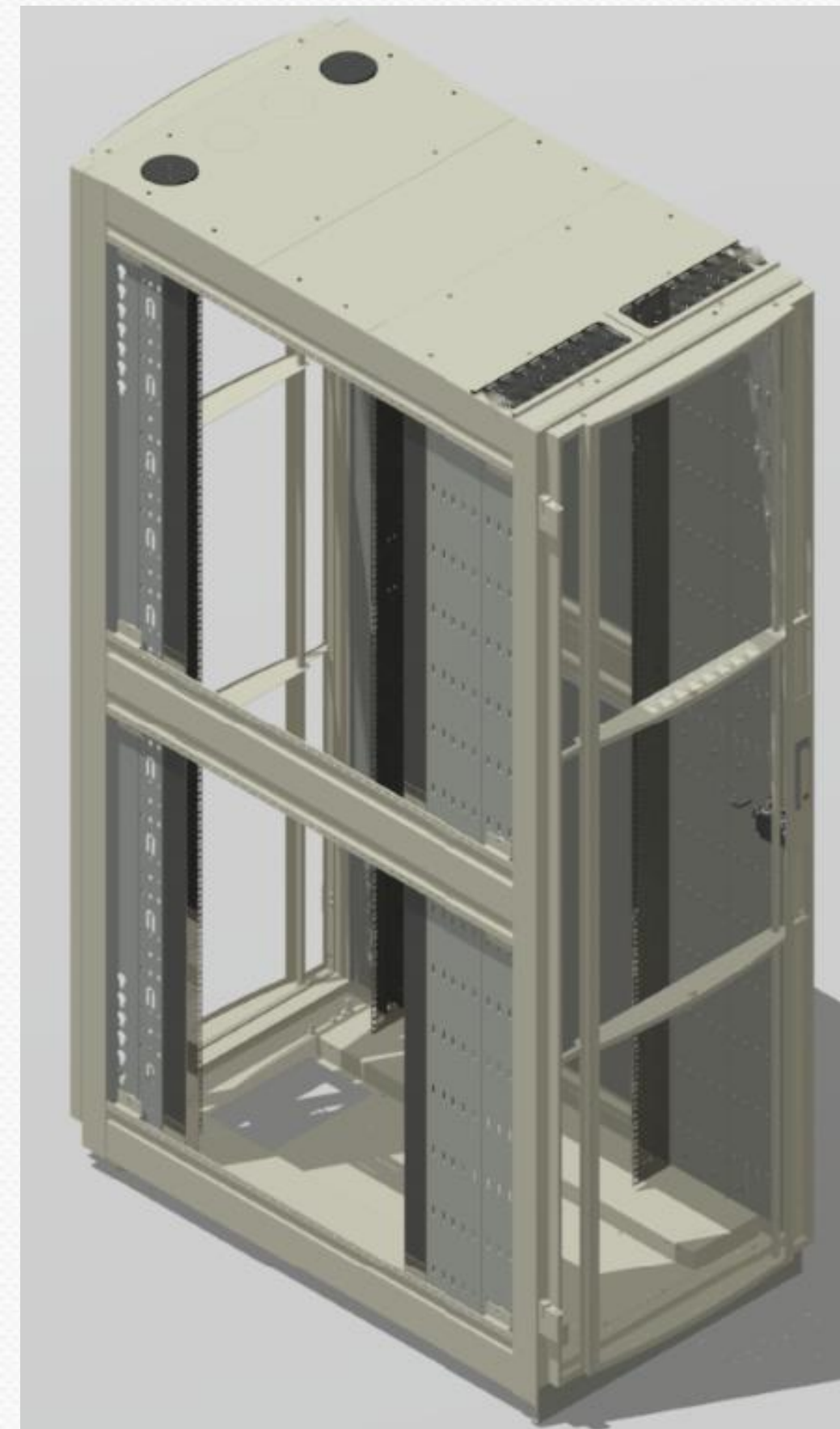
#	Design Considerations	Group
1	Frame and door compatibility, mounting provision for smart access control	Door
2	Low air flow resistance front and rear doors Secured hinge for OBR door.	Door
3	No access to hardware from outside Ease of door removal for gear mounting	Door
4	Door provision for environmental monitoring, wiring routing	Door
5	Frame Ganging position > compatible accross suppliers	Frame
6	Front cable management panel flush with frame	Frame
7	Leveler access, capacity and swivel base	Frame
8	High capacity casters, 1000 lbs per	Frame
9	Flush side panel allowing ganging side against side	Frame





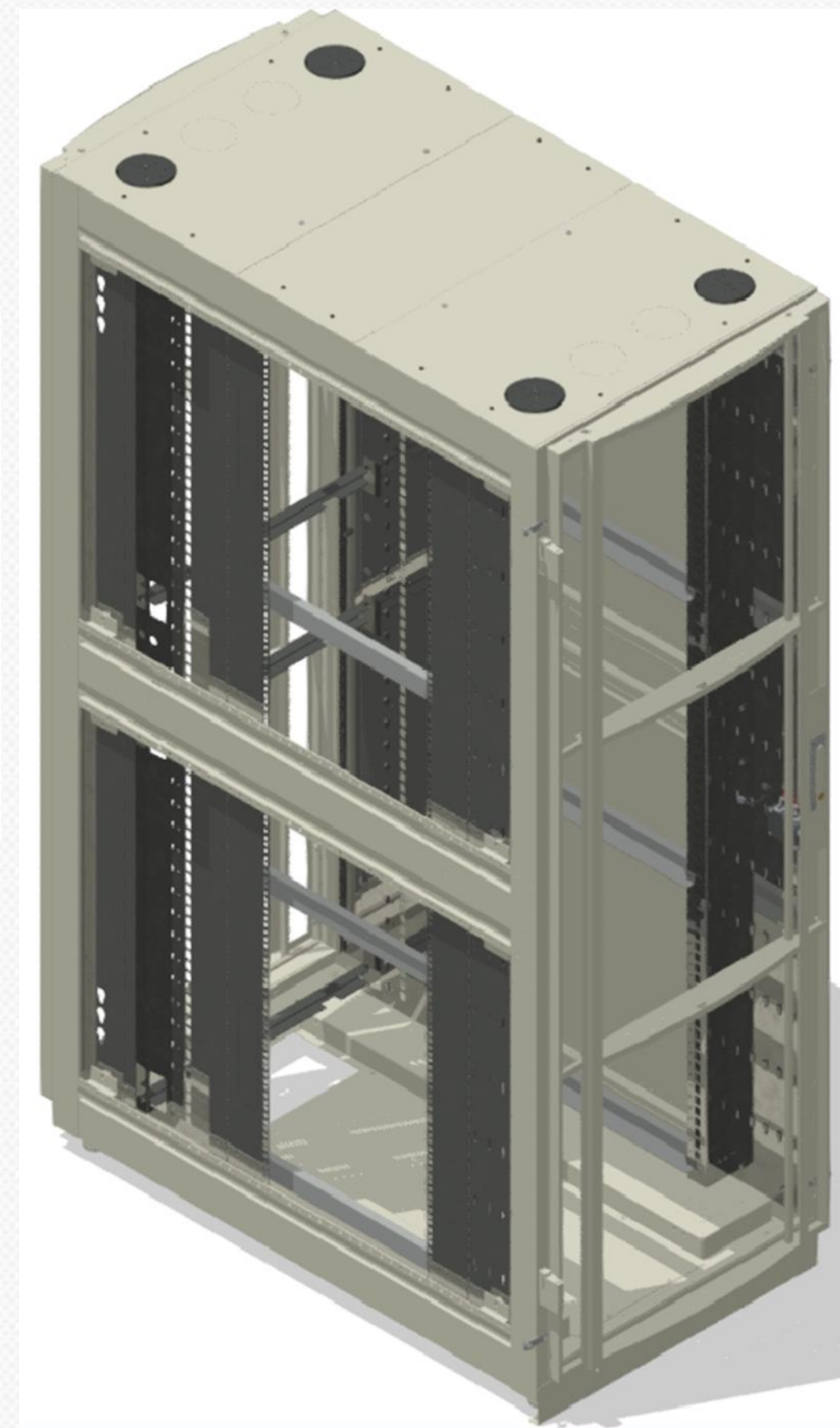
# OBR design considerations ...

#	Design Considerations	Group
10	Skid design, smooth surface	Handling
11	Unload ramp	Handling
12	Frame provision for anchoring of OBR to skid, transport	Handling
13	Access to bus bar securing nut	OCP panel
14	EAI to OCP conversion kit, rear OCP stopper panel pair	OCP panel
15	Bottom access for power cord plug front to rear base structure channels	Power
16	OBR mounting bracket, secured only front side Staying away from rear power side	Power
17	OCP panel compatibility with both V1 and V2 power bus	Power



# OBR design considerations ...

#	Design Considerations	Group
	Rail marking RU, OBR	
18	OU alignment Common marking type OU, RU	Rails
19	All OBR OU position usable, 1 & 40, 1 & 44	Rails
20	Locking side panel option	Sides
21	Modular top panel, allowing multiple configuration of the OBR. Symetrical top panel for added flexibility	Top





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