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Compute Summit
January 28–29, 2014San Jose

Engineering Workshop

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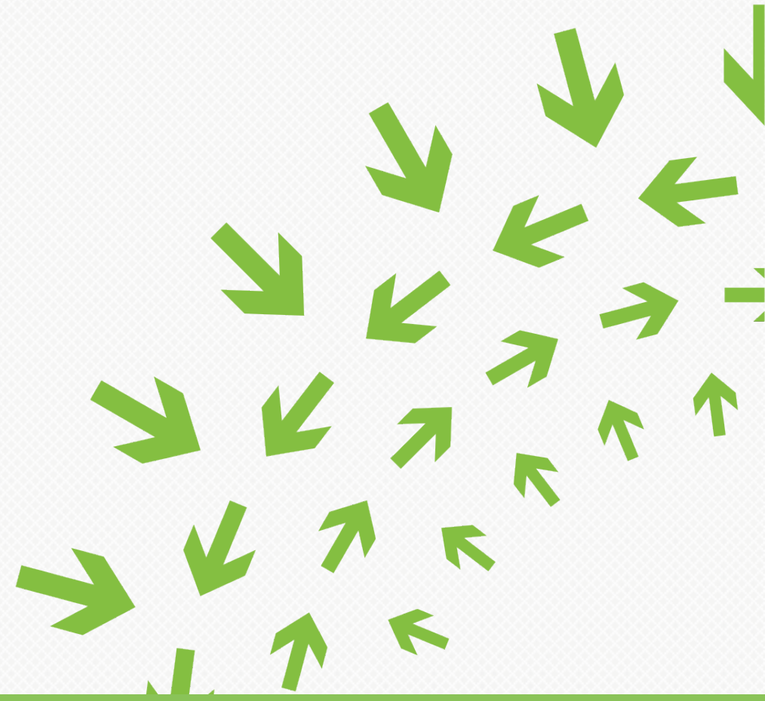
Open Rack Workshop

Matt Corddry
Facebook
Project Chair



Schedule

2:00	Introduction
2:10	OpenRack Standard Update
2:40	Facebook OpenRack v2 Overview
3:25	Facebook OpenRack v2 Mechanicals
3:40	Fidelity OpenRack
4:10	Break
4:25	Rittal OpenRack
4:55	Delta OpenRack
5:25	PowerOne OpenRack
5:55	Wrap Up

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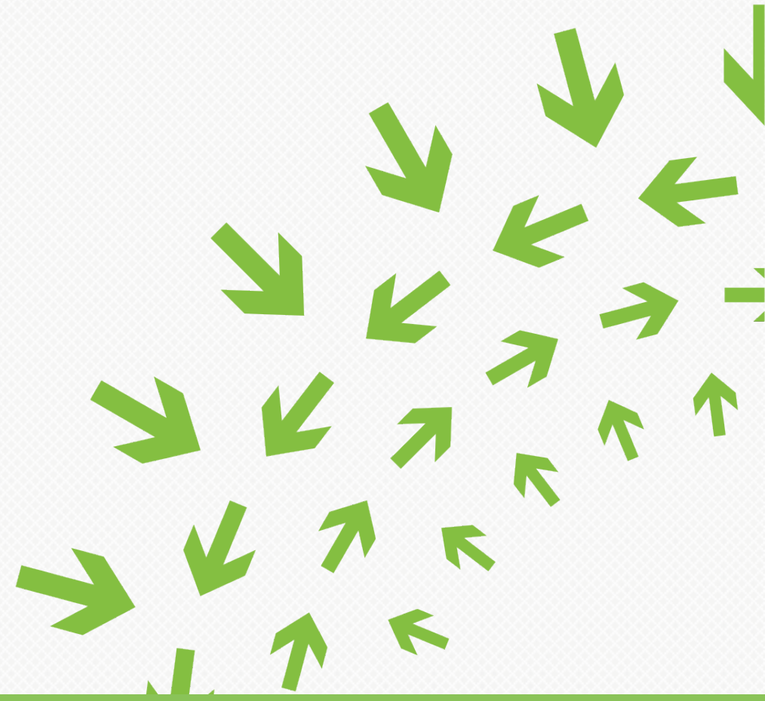
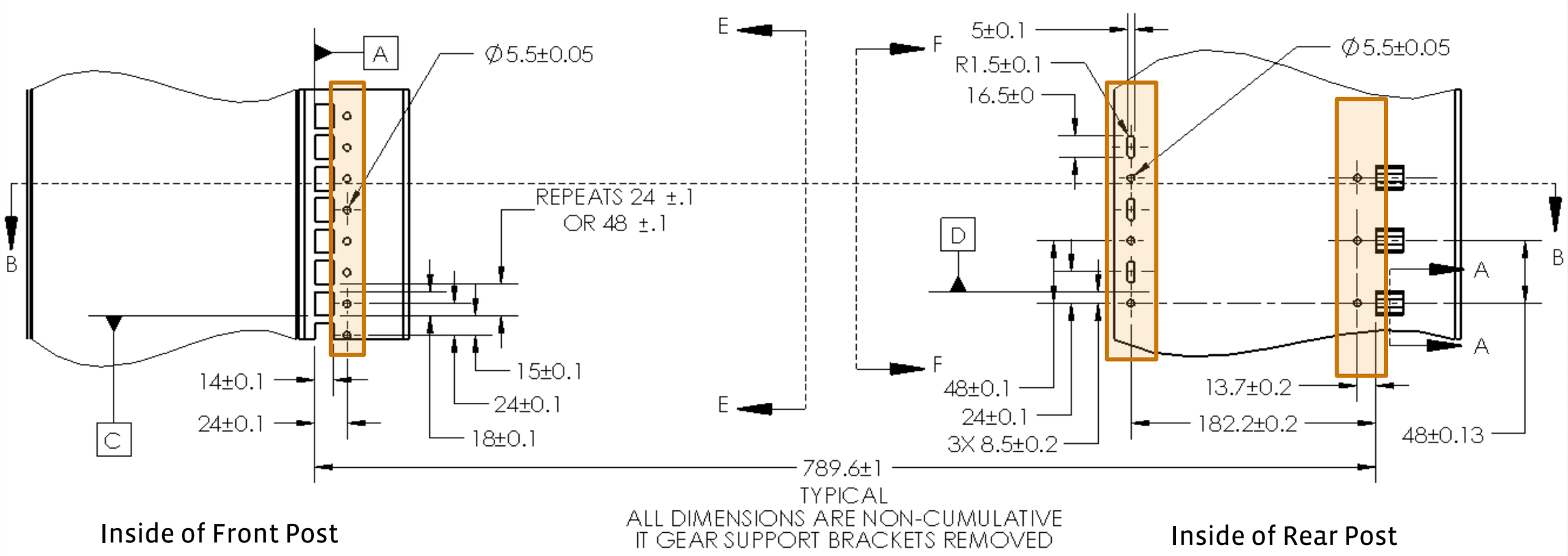
Open Rack Standard Update V1.1



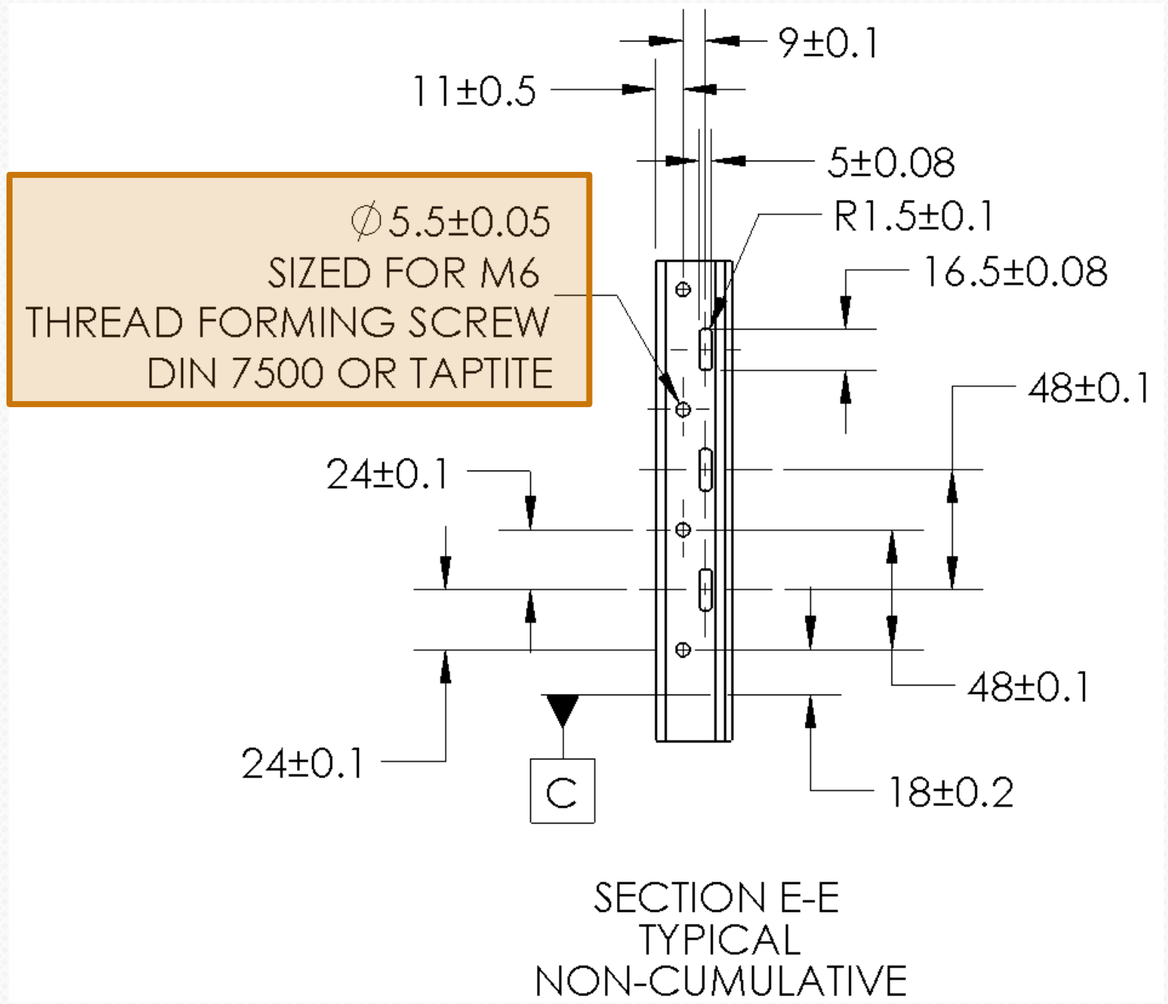
Standard: ADD Holes to Vertical Posts



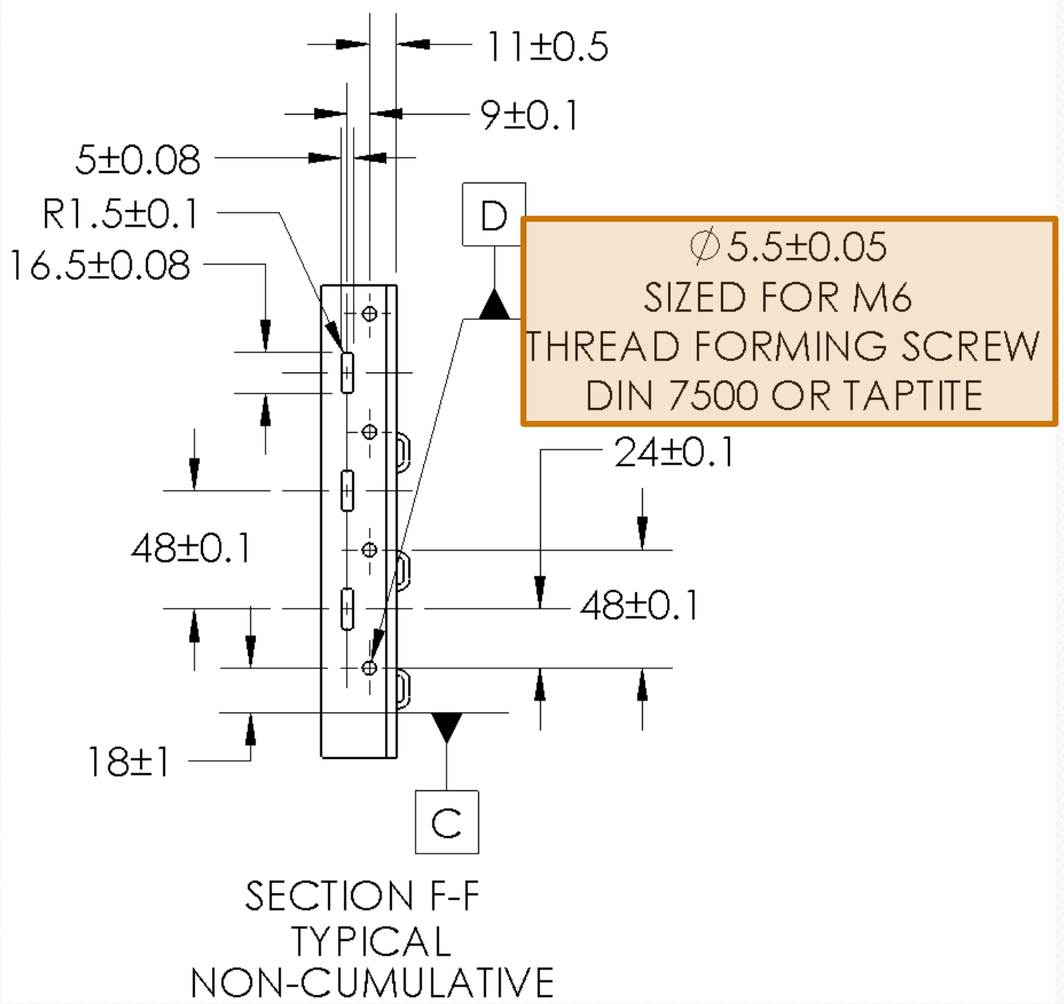
Inside of Front Post

Inside of Rear Post

Standard: Change hole diameter from 5.42 to 5.5

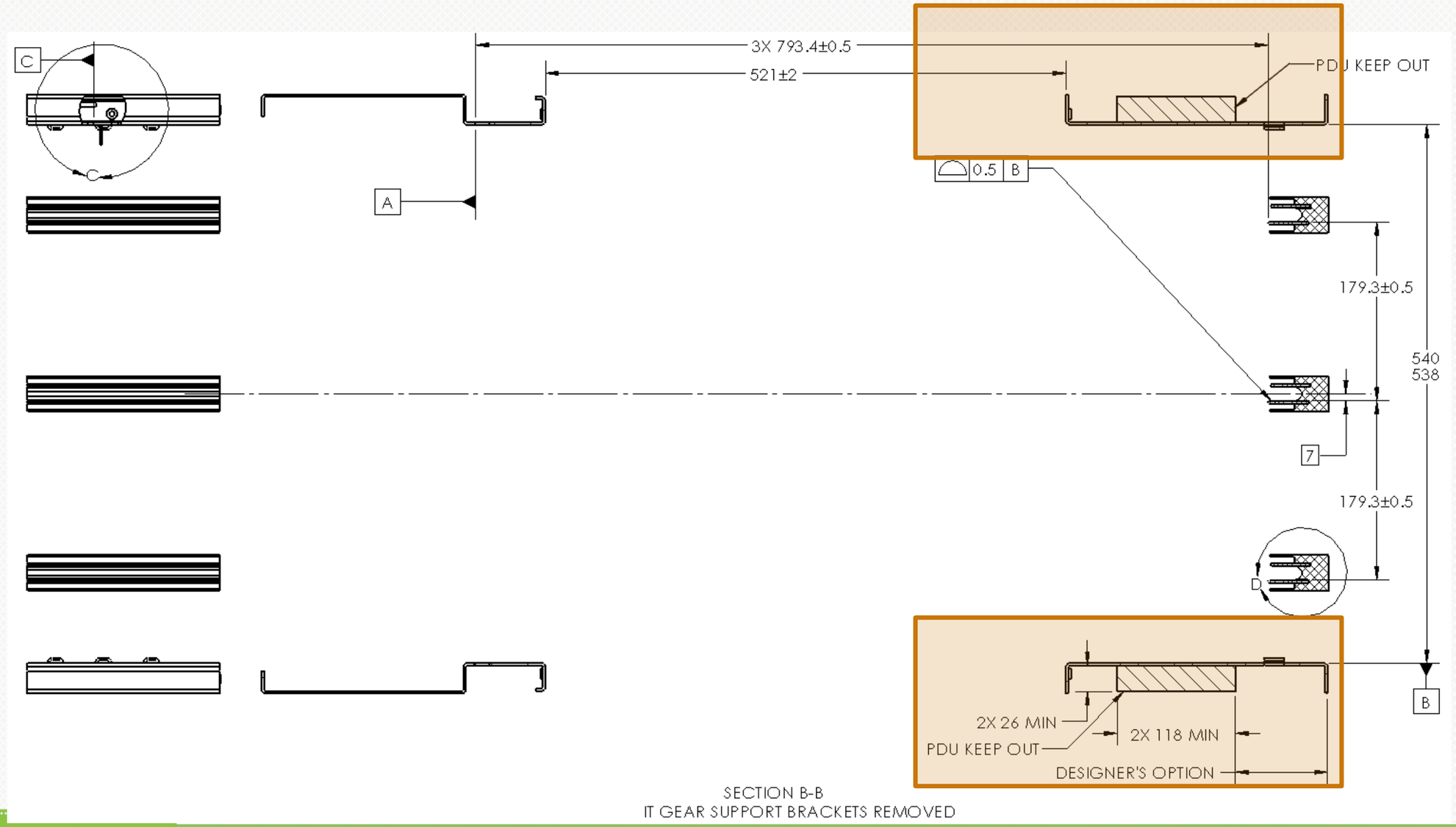


Front Post



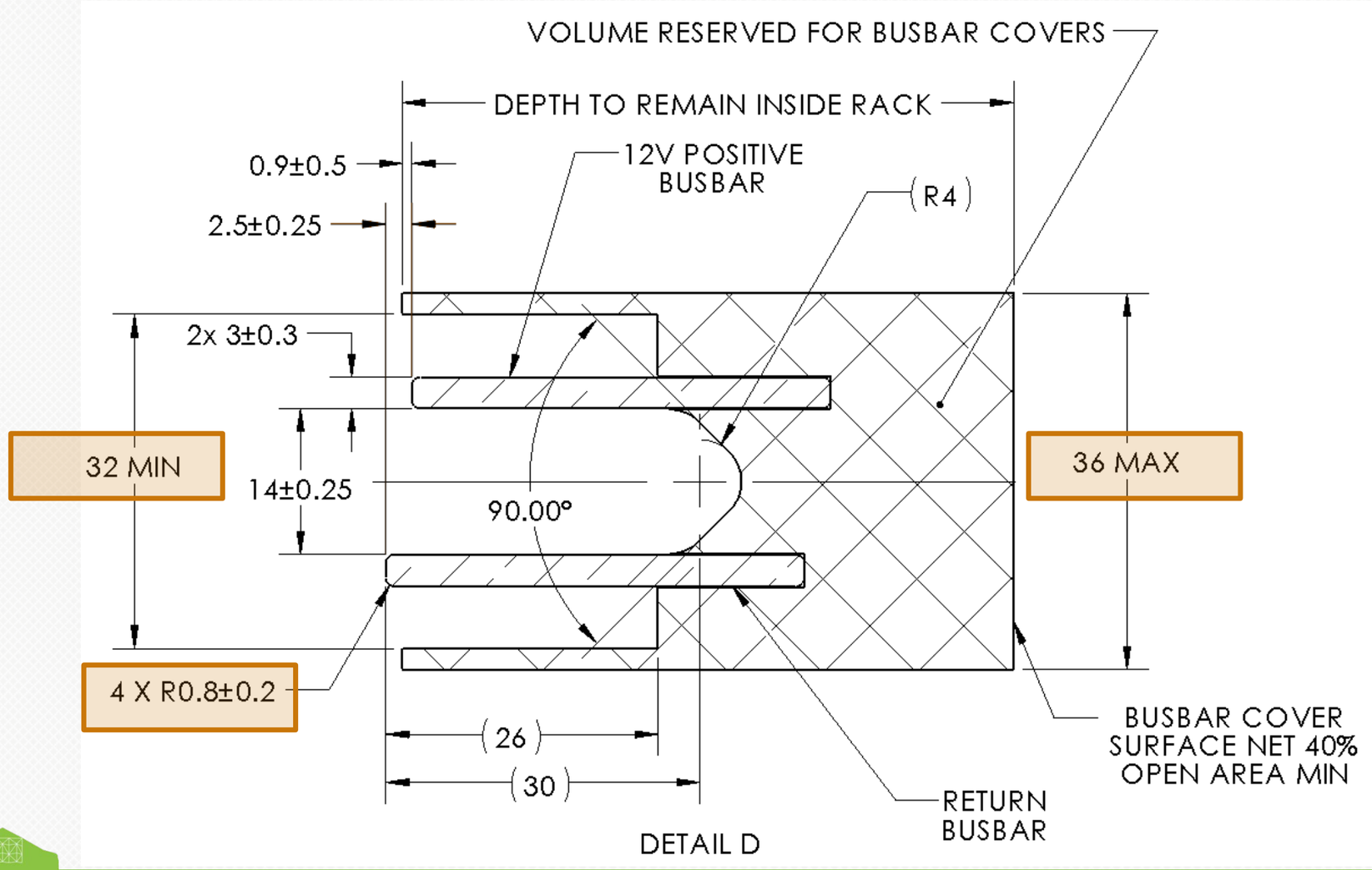
Rear Post

Standard: Reserve PDU Volume



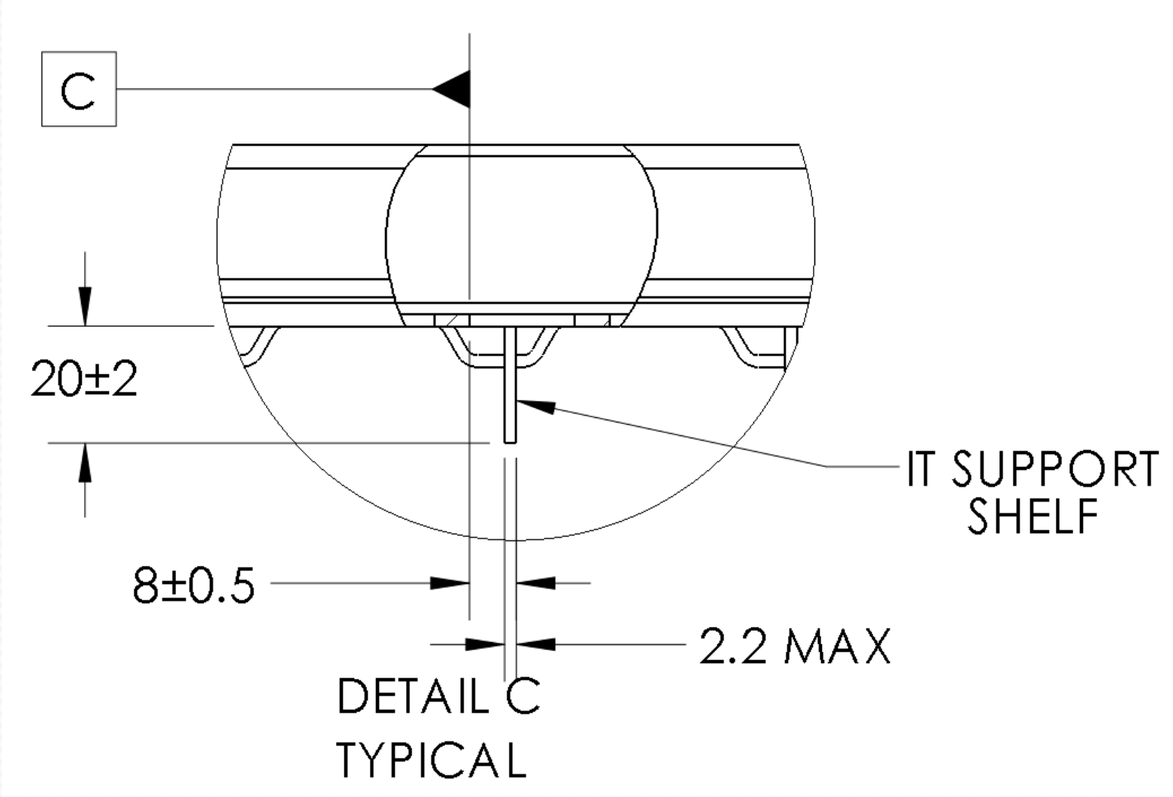
SECTION B-B
IT GEAR SUPPORT BRACKETS REMOVED

Standard: Control Leading Radius on Busbar



Standard: IT Support Brackets

- Conform to the shape shown in Detail C (Figure 7). If the IT Support Bracket is continuous along the entire width of the rack instead of two Support Brackets, than the 20mm bracket length in Detail C may be ignored.
- IT load changed to 700N per set



Standard: Marking for Re-use

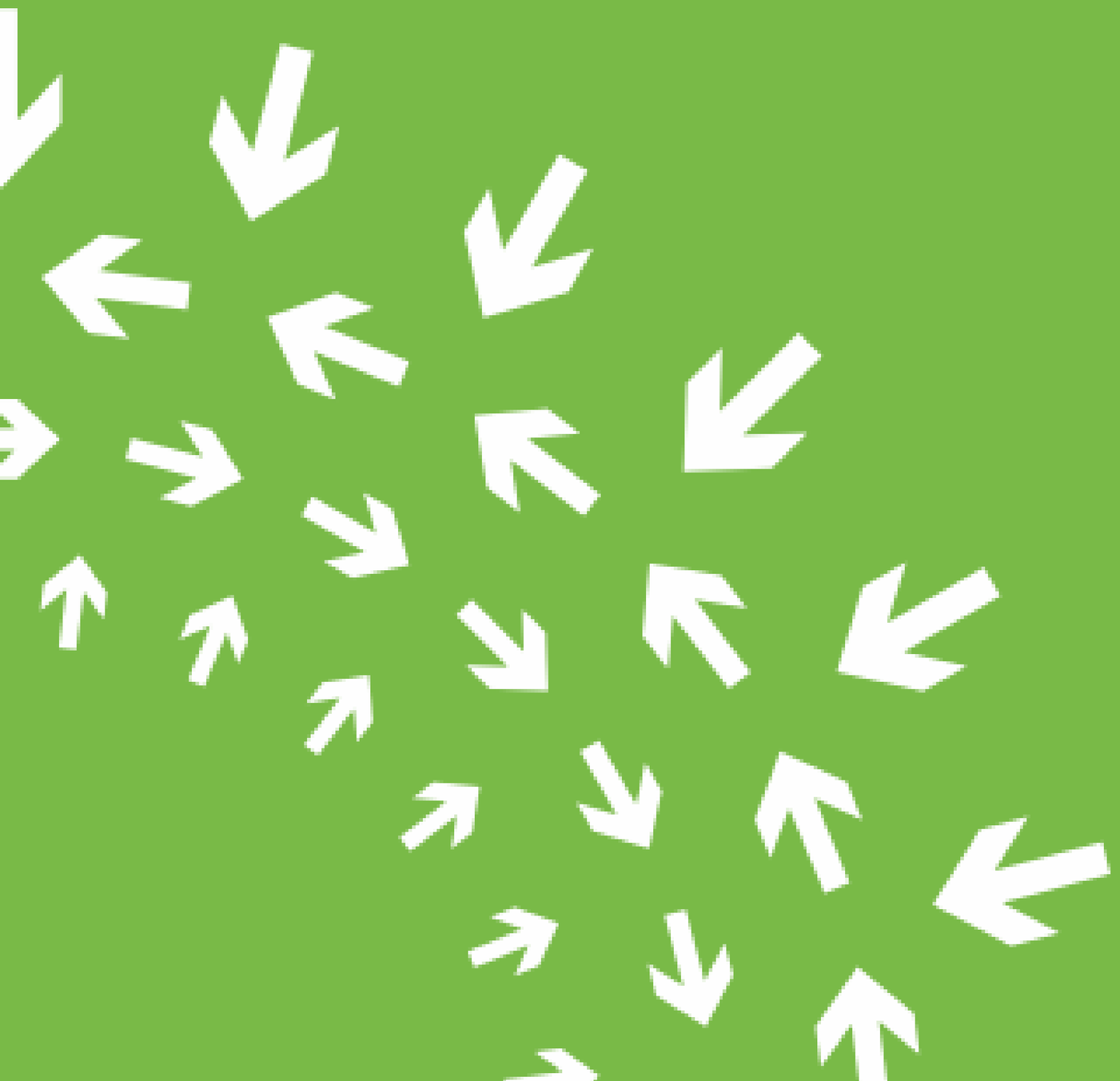
- The rack SHALL be marked:

  In a permanent and legible manner with the maximum load mass (in kilograms)

- With the latest revision number of the standard for which the rack is compliant in either of the following formats:
  - OPEN RACK STANDARD REVXX.X
  - ORS REVXX.X

Standard: Marking for Re-use

- Add to section:
  - For purposes of qualification testing, the total mass used for determining the frame load rating SHALL be evenly distributed within the entirety of the equipment bay.



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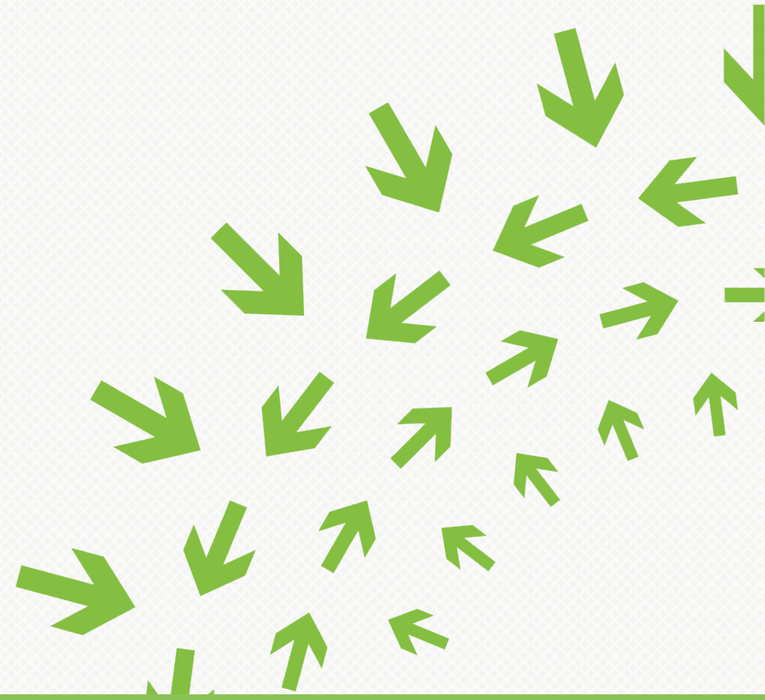
Facebook Open Rack V2 Overview



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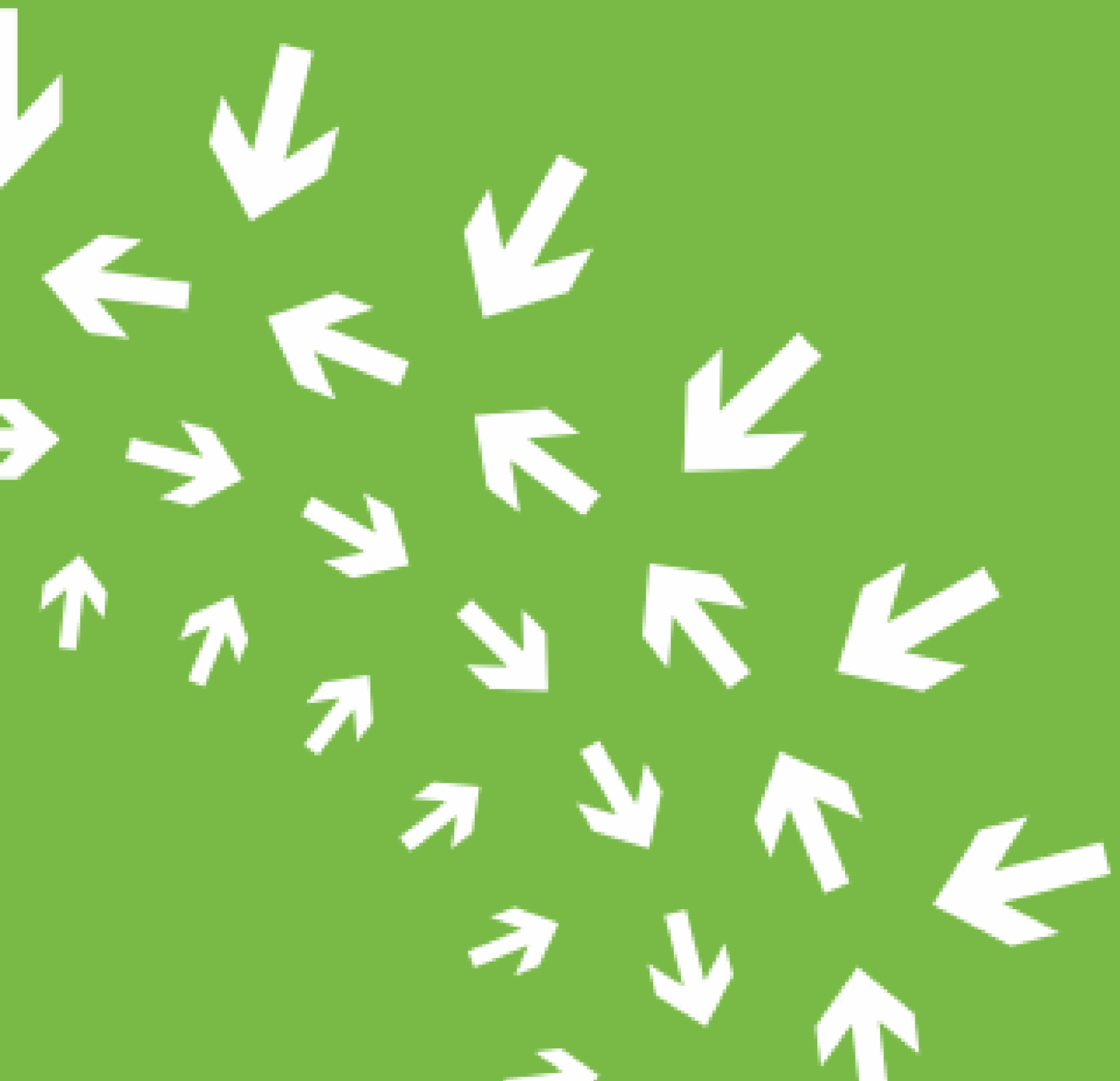

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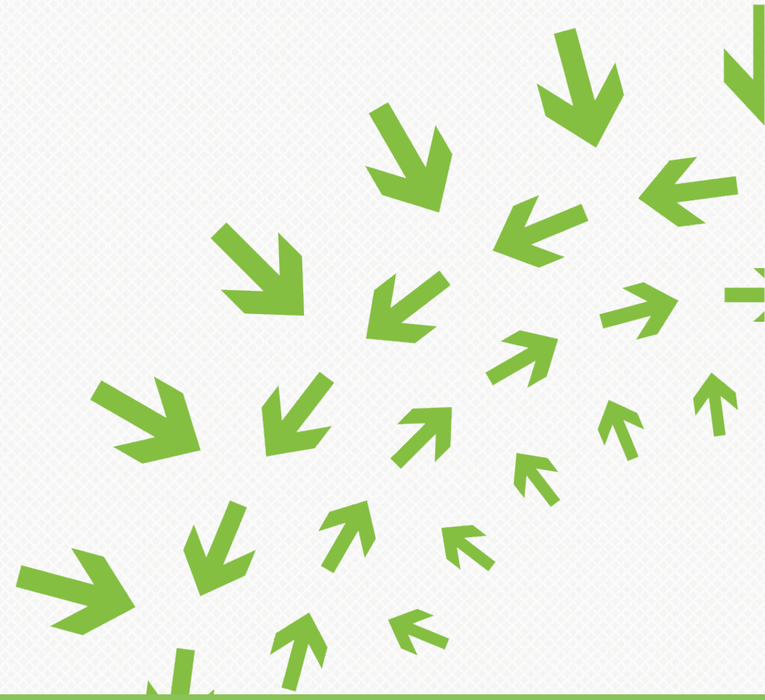
Facebook Open Rack V2 Mechanical



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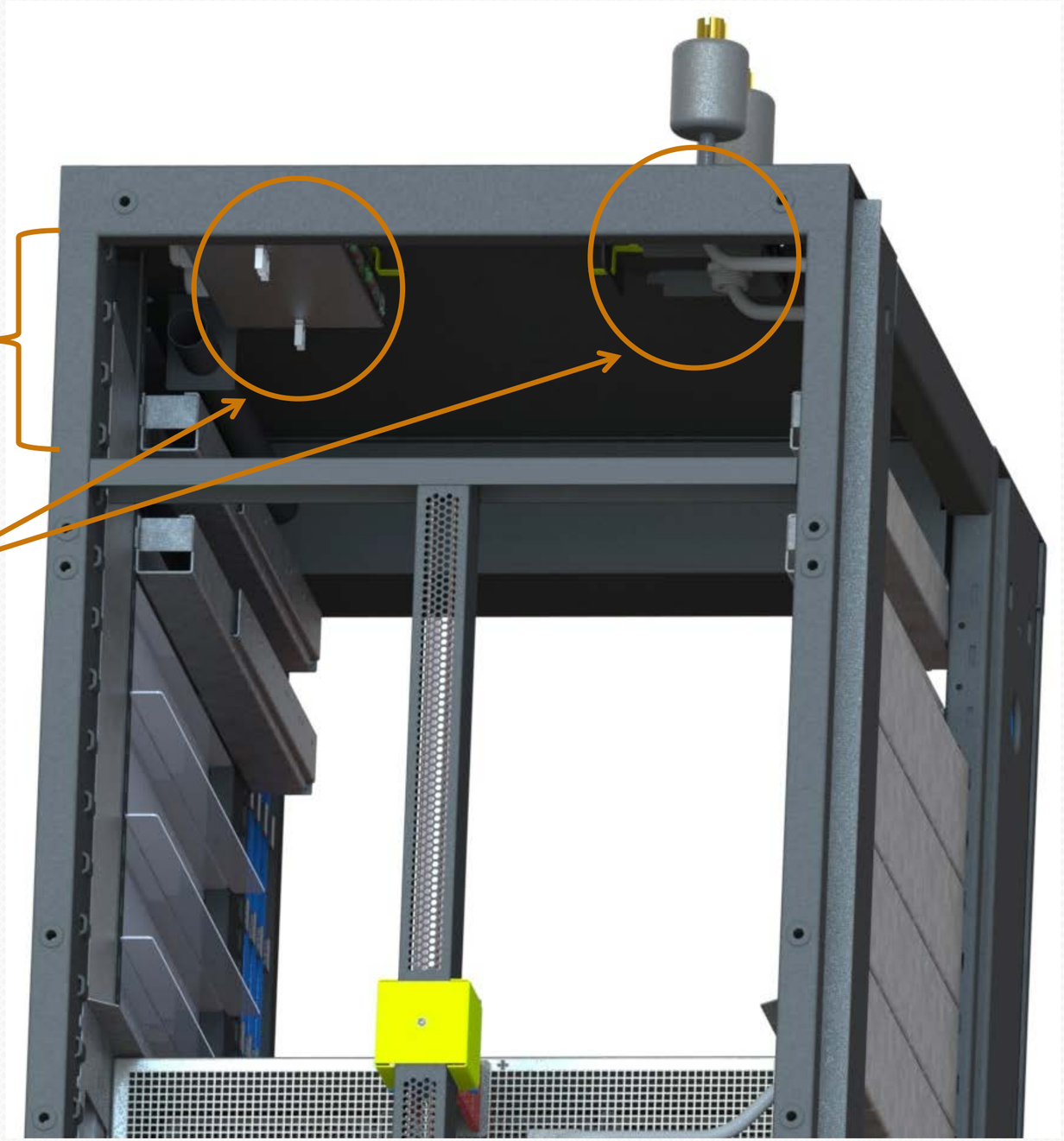
Facebook Open Rack V2

- Complies with Open Rack Standard
- Backwards compatible with all Open Rack V1 IT Gear
- Increased Max IT Gear mass from 950kg → 1250kg)
- Increased height from 2100 (82.6”) to 2210mm (87”)

Rear View

- Switch Service area is larger and now supports 3 switches
- PDUs are located in the back under the canopy
- Designed to support 3 busbars but FB plans to populate only 1 at production

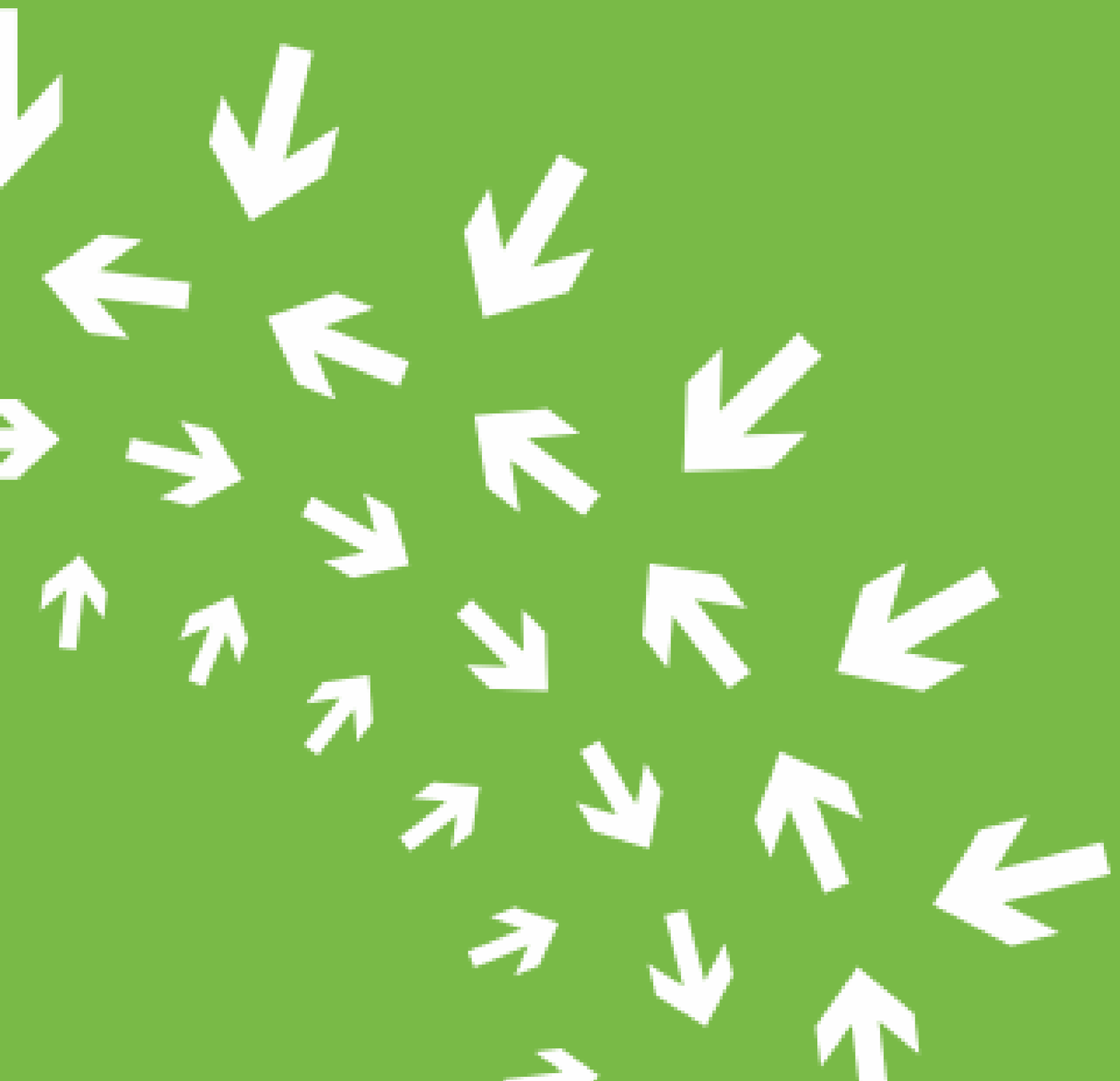


Rear View

- Power Shelves can be located within any U in the rack
- Power shelf deeper to improve service
- Levelling feet are accessible with power tools to speed deployment at Data Center

Rack Monitor Inside Frame

- Rack monitoring server moved from top of cabinet to area under canopy



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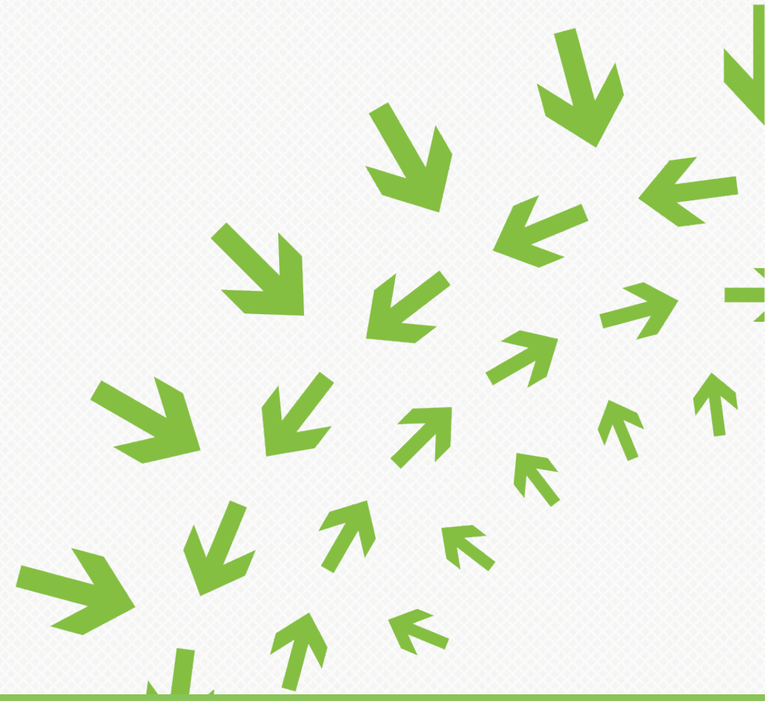
Open Bridge Rack
Fidelity Investments



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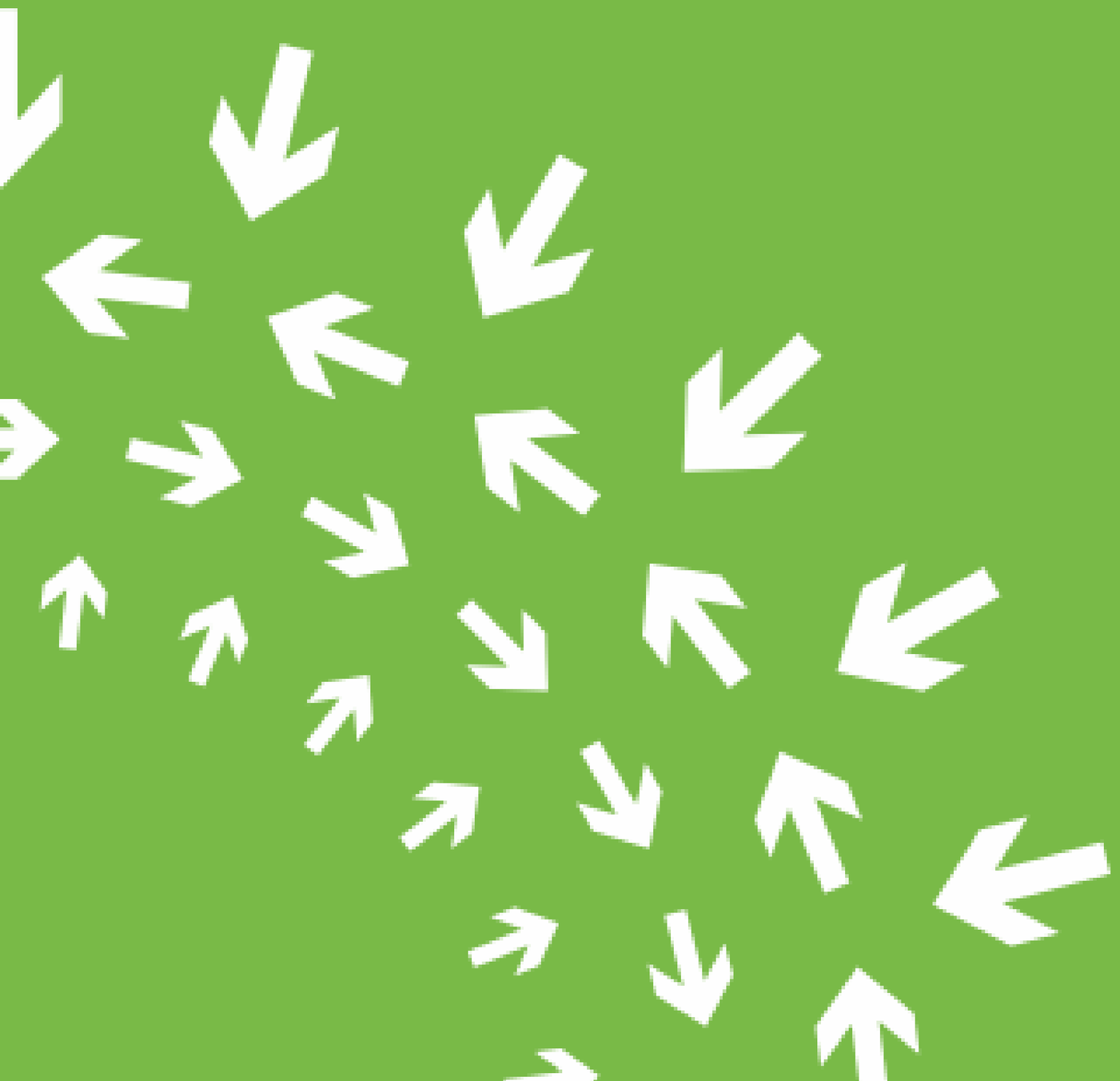

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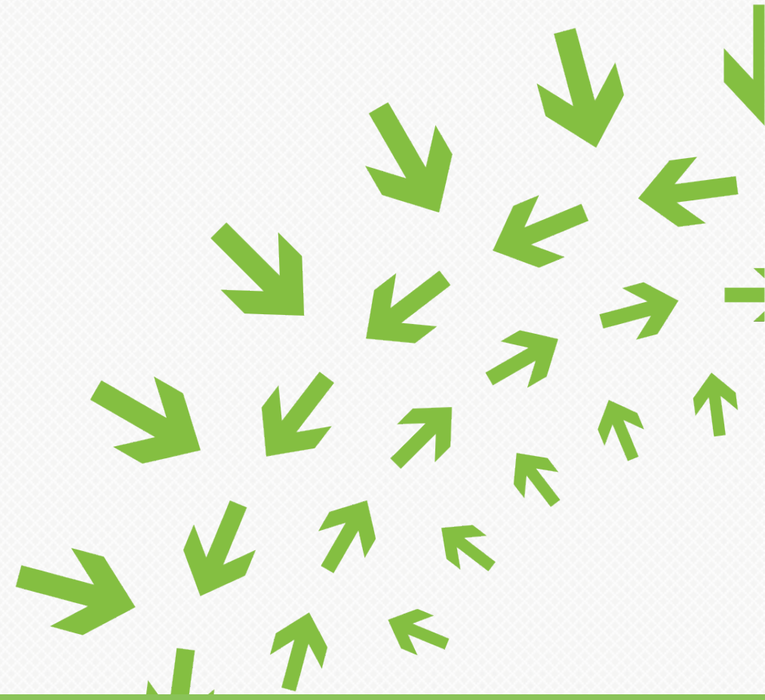
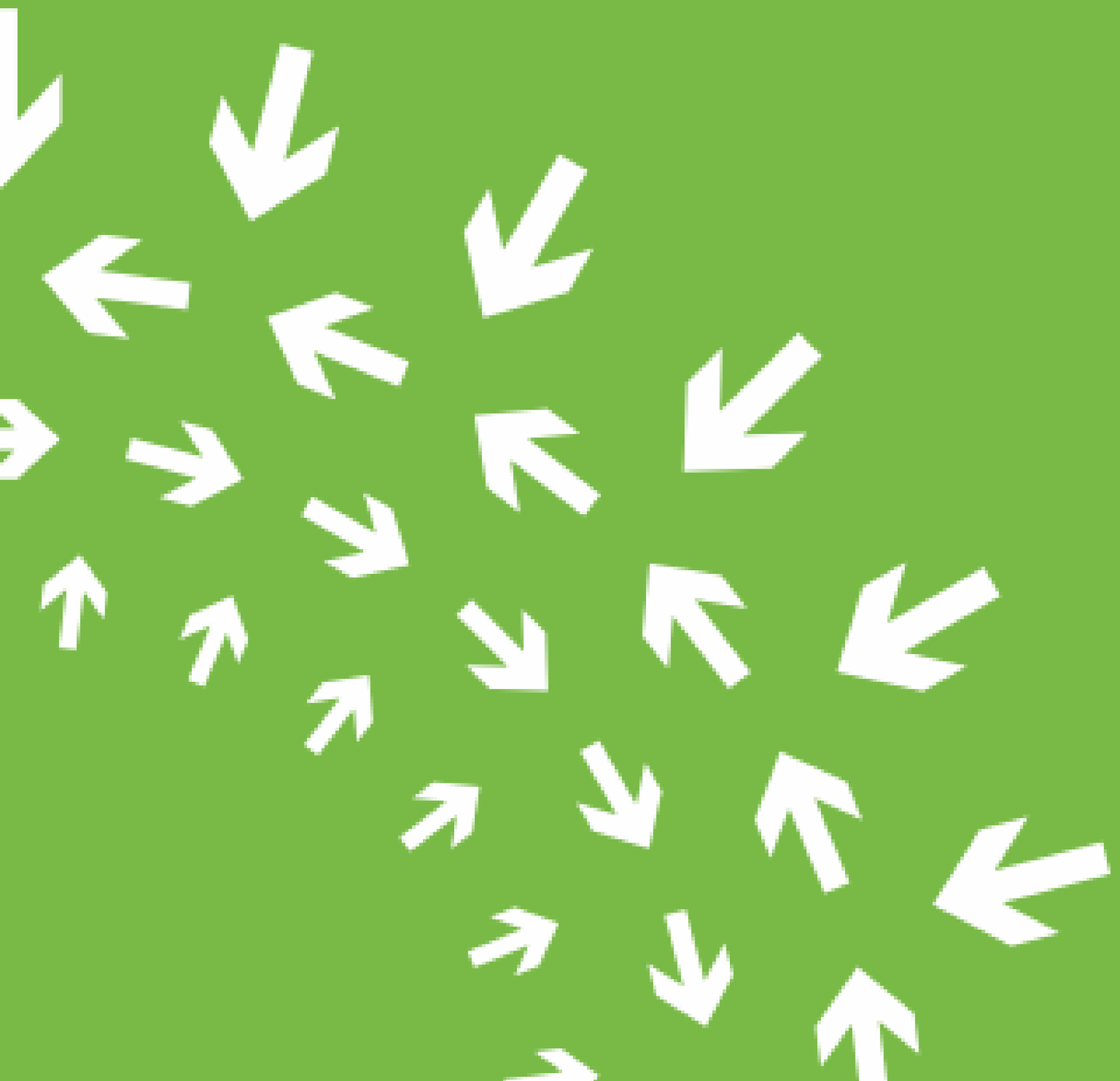
Break Time





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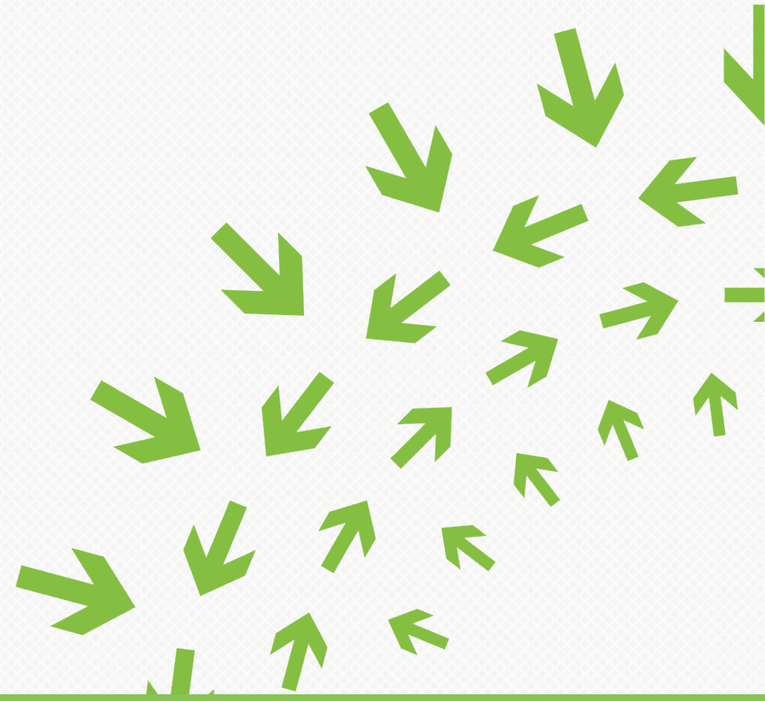
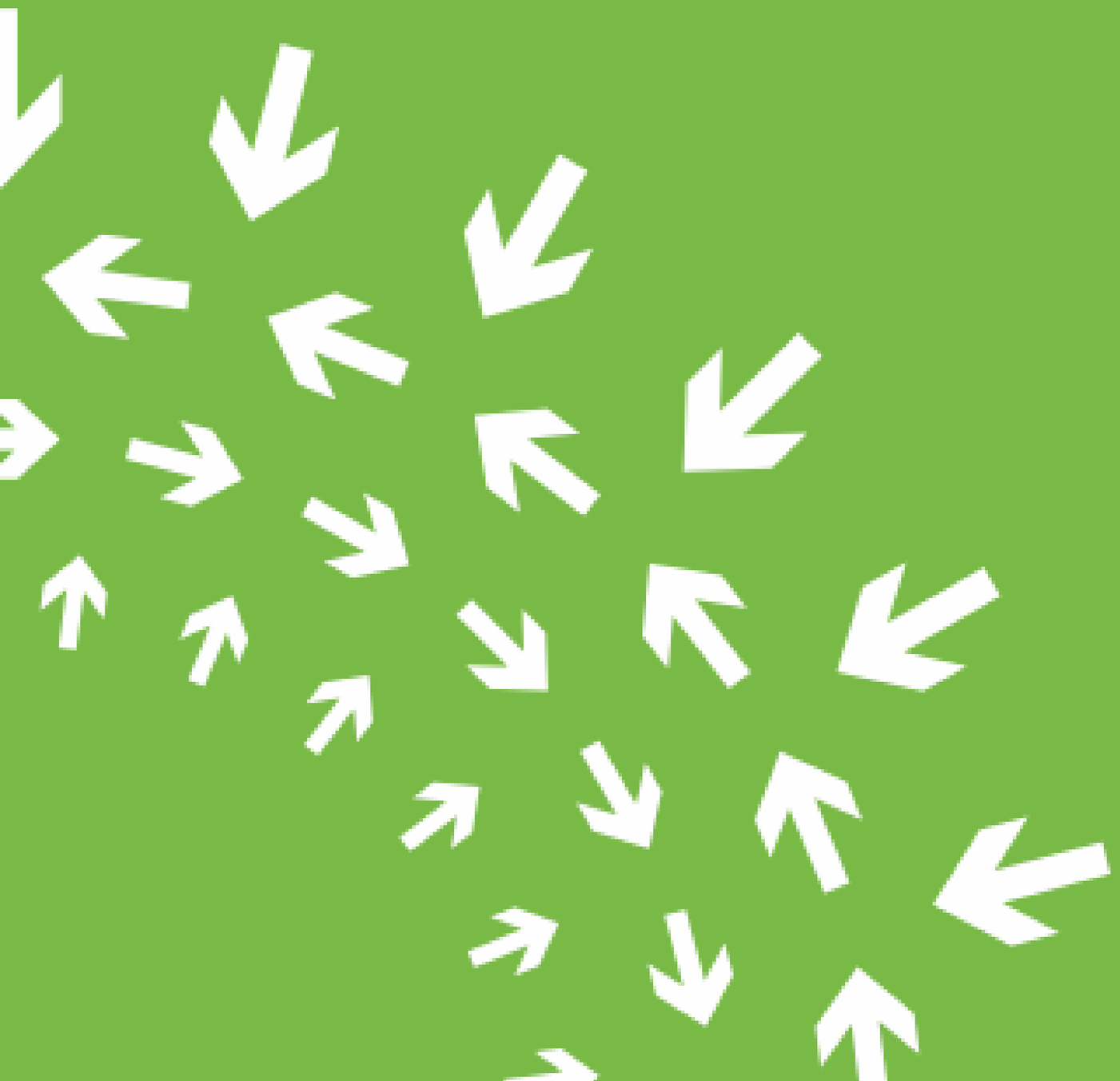
Rittal Open Rack Update





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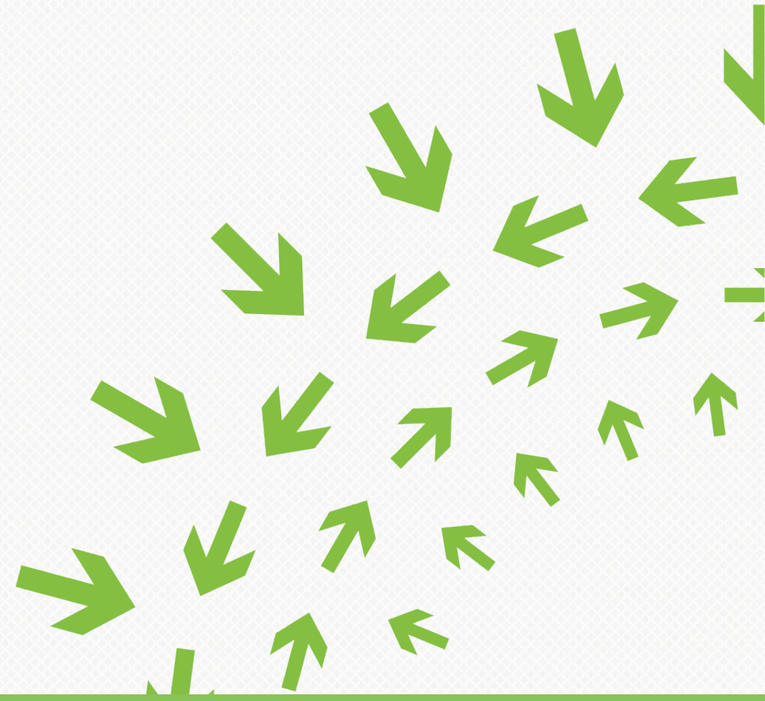
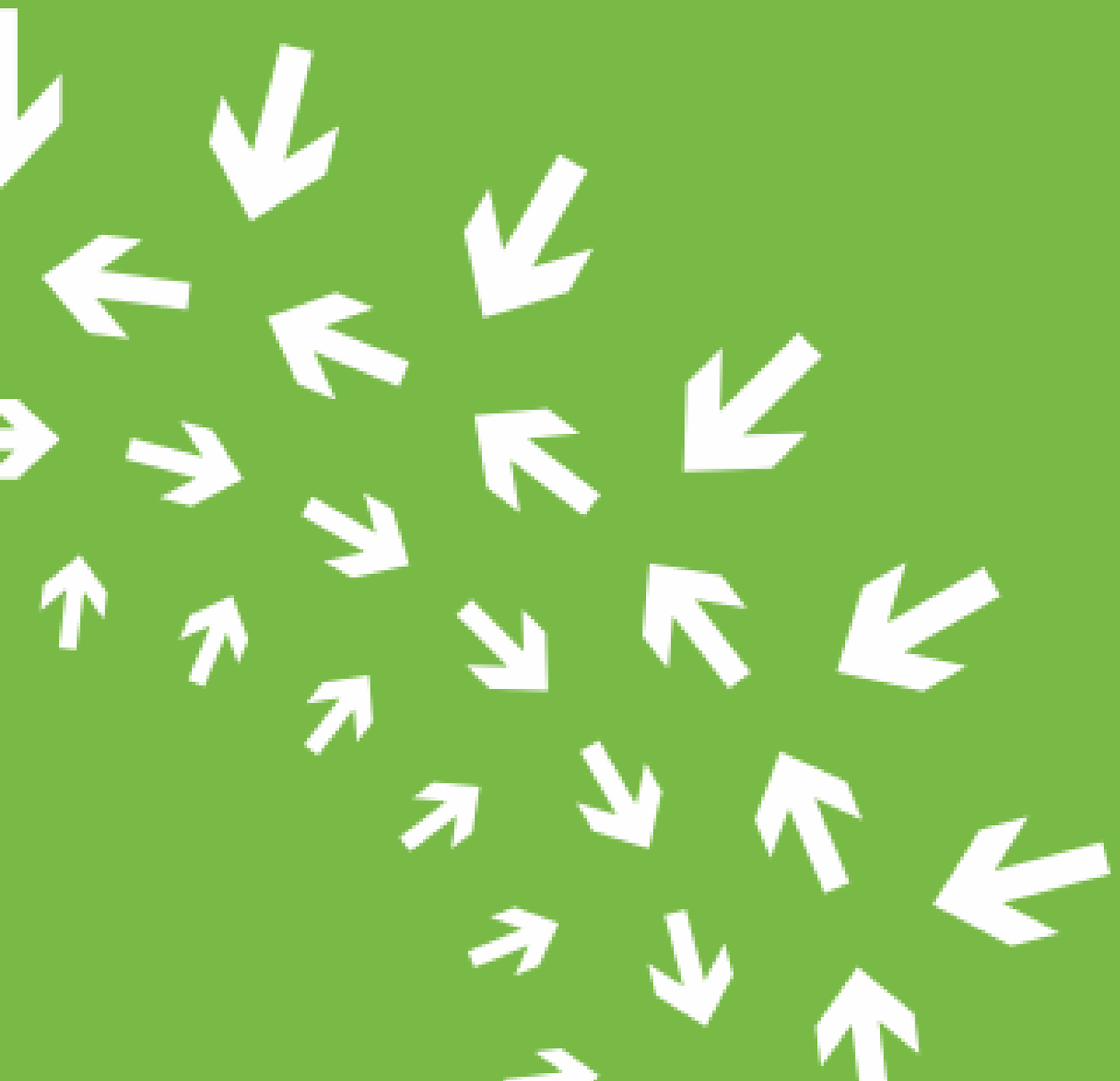
Delta OpenRack Update





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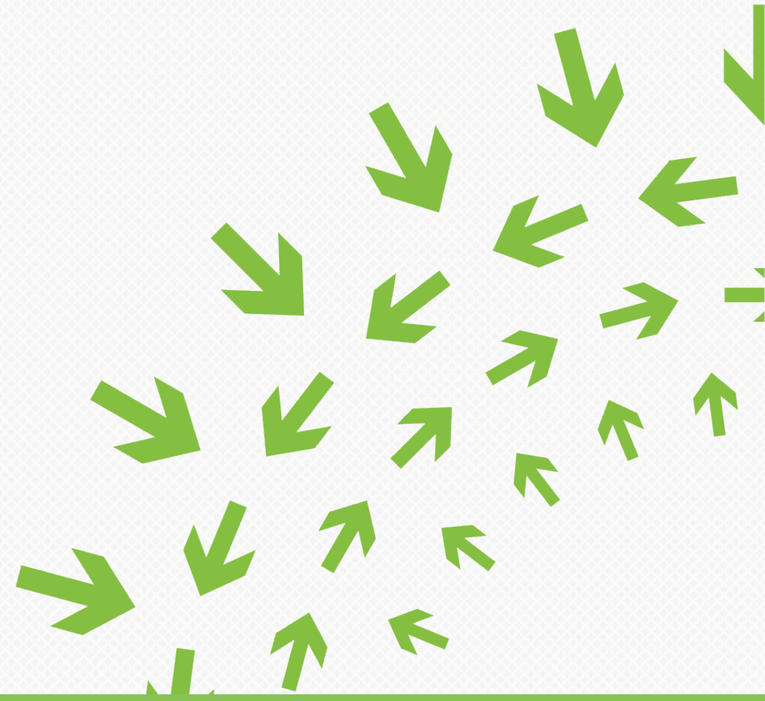
PowerOne OpenRack Update



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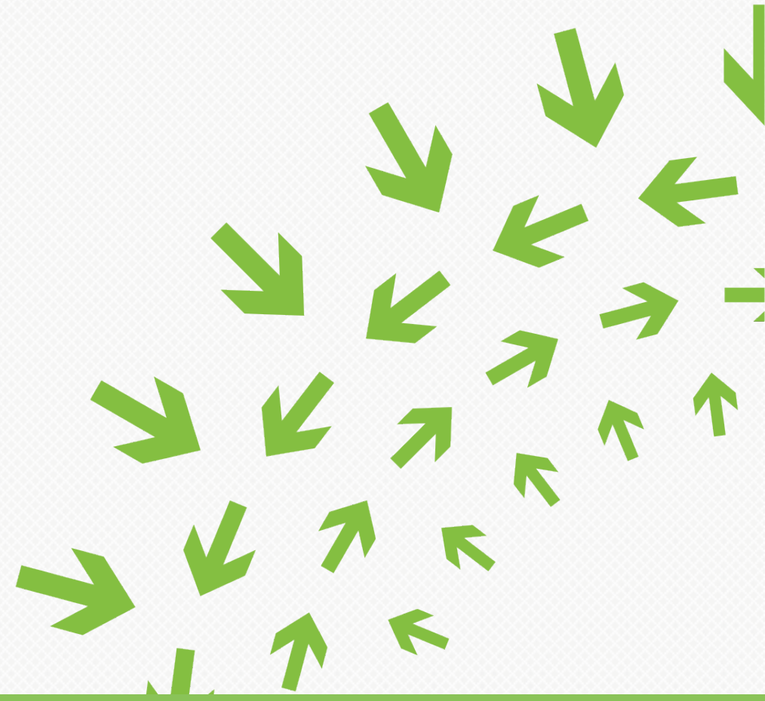

Schedule

1:00	Kick Off and Open Topics
1:15	Proposed Changes for Open Rack Standard V1.2
2:00	Q&A and Hands-on with Delta, Facebook, Fidelity, PowerOne, and Rittal

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Proposed Changes for OpenRack Standard V1.2

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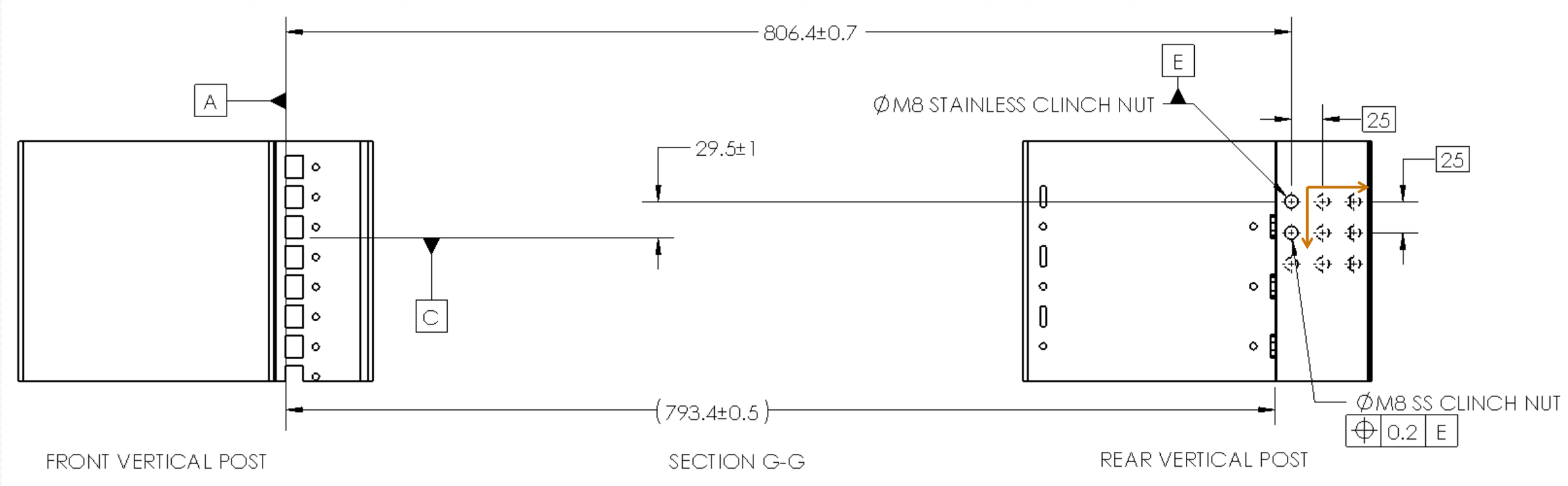
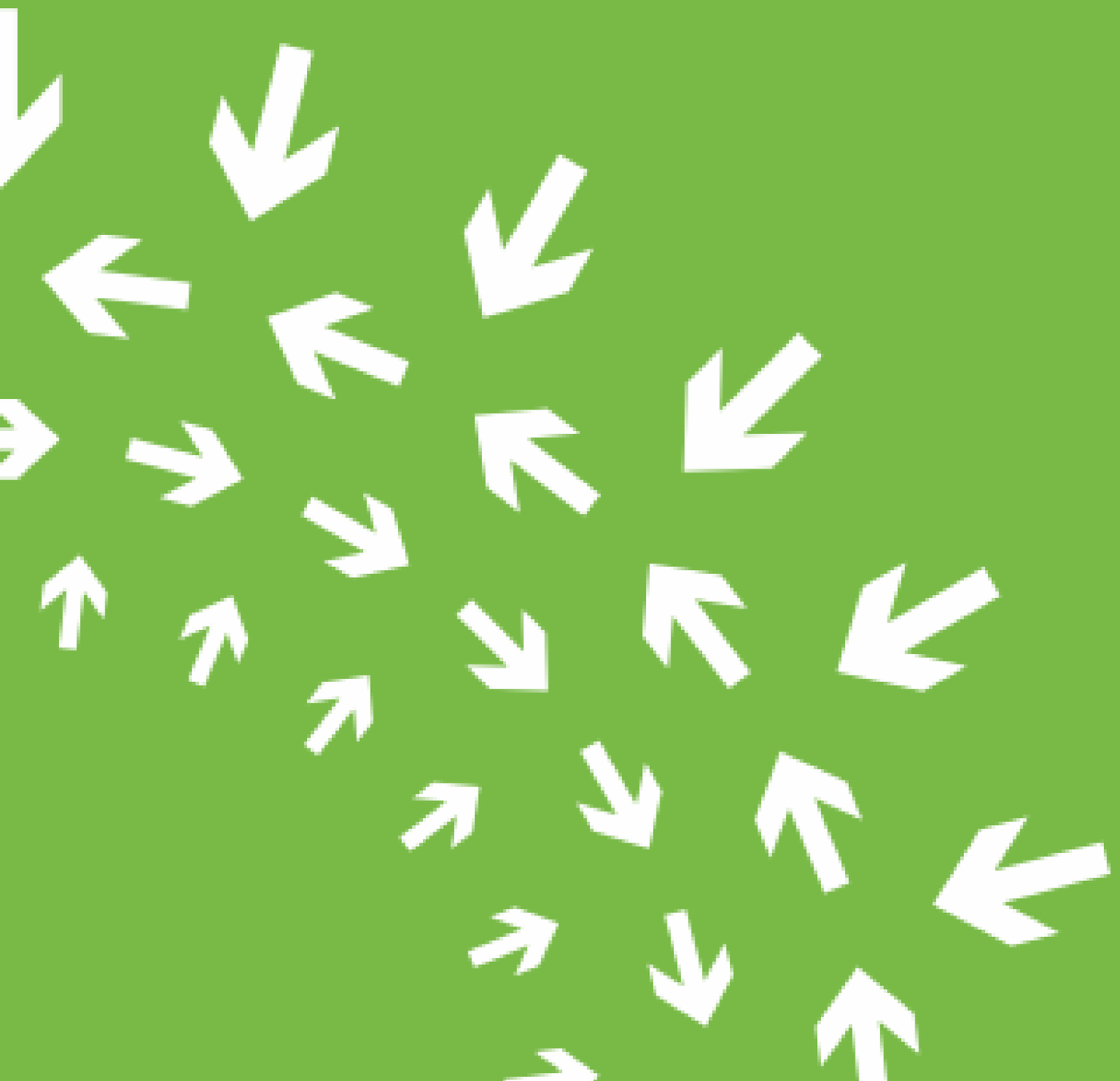
Add connection for Power Shelf to Rack Busbar



Start with Hole at Datum E and add holes to the busbar in a 25x25 array



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Q&A and Hands-on with Delta, Facebook, Fidelity, PowerOne, and Rittal