

DRAWING MANUAL PROLIGHT VERSION

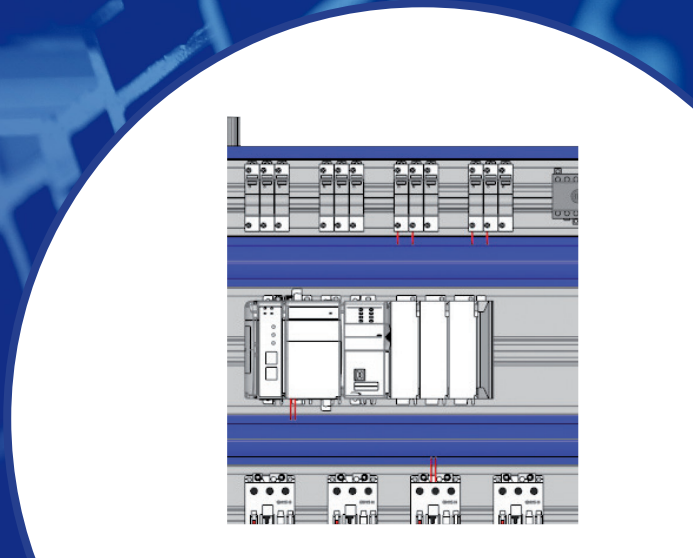


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THIS MANUAL IS A GUIDE TO HELP YOU DRAW SATIE PANELS WITH THE PROLIGHT SOLUTION. YOU WILL FIND BELOW IMPORTANT INFORMATION TO HELP YOU DEFINE THE PROFILE SELECTION AS WELL AS THEIR LENGTH.

1. Frame

1.1 Enclosure or box with mounting studs

In order to design the Satie frame and choose the proper length of profile and pillars for your cabinet you need to get the horizontal and vertical studs spacing of your enclosure (**Fig. 1 and 2**).

Vertical studs spacing = V

Horizontal studs spacing = H

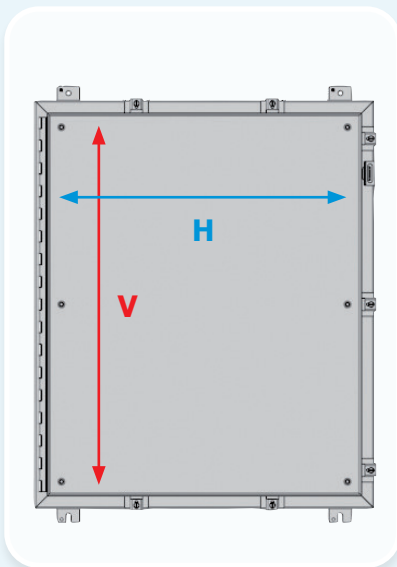


Figure 1

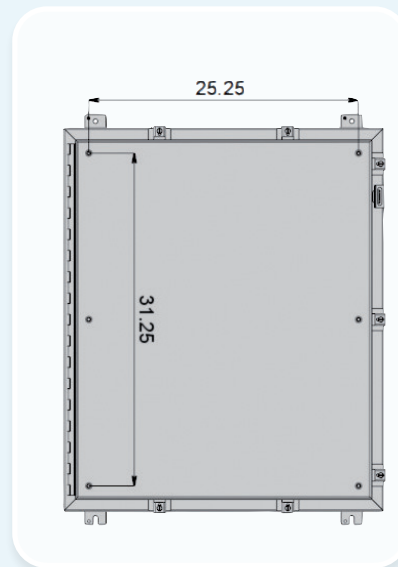


Figure 2

In our example:

V: 31.25 in

H: 25.25 in

1.1.1 Calculation of the pillar length

Horizontal pillars are used to catch the studs inside the enclosure and secure the frame in the box. The vertical pillars are used to mount the profiles.

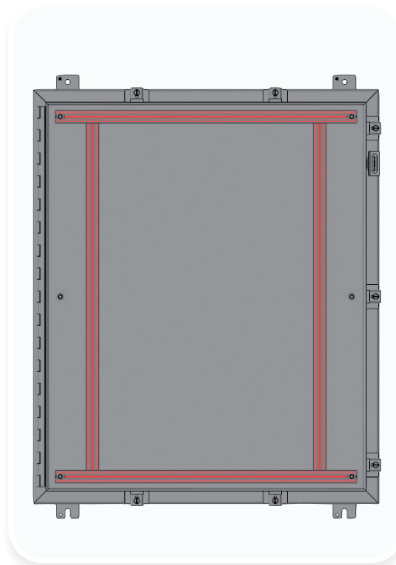


Figure 3

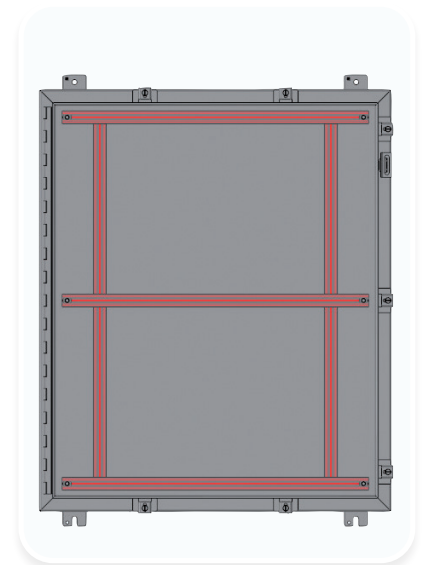


Figure 4

For enclosure over 36 inches in height there is a center stud in the panel. If the weight of the components requires, you can add a third horizontal pillar to increase the support by catching the center studs.



Figure 4.2

Horizontal pillars are mounted above the vertical pillars. This way, the vertical pillars use the space that is usually wasted below the shoulder (around 1 inch).

Horizontal length pillars = $H + 7/8$ in (22 mm)

Vertical length pillars = $V + 35/32$ in (28 mm)

In our example:

Horizontal length pillars = $25.25 + 7/8$ in
= 26.125 in

Vertical length pillars = $31.25 + 35/32$ in
= 32.35 in

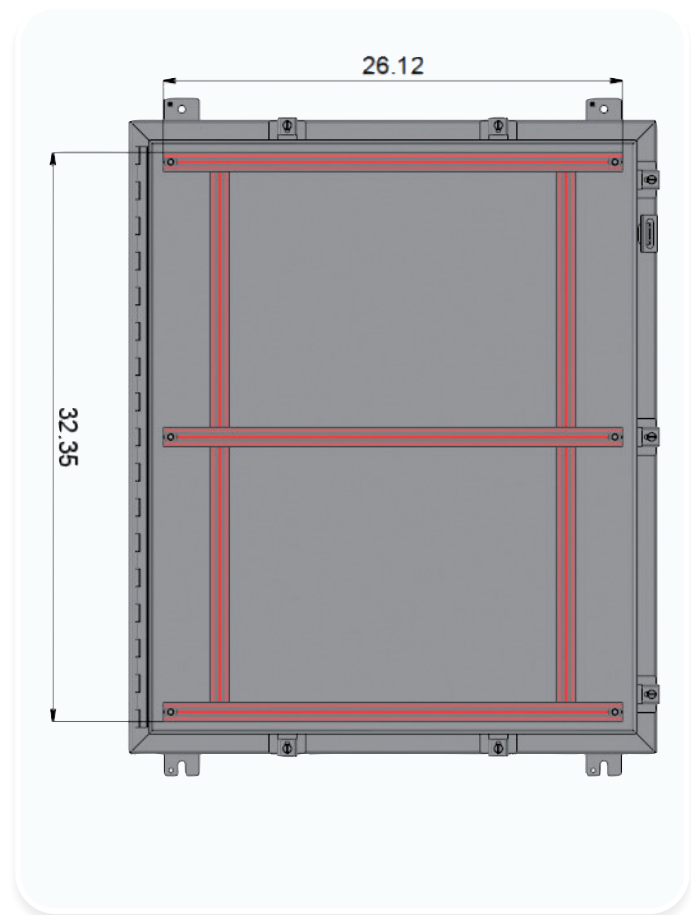


Figure 5

1.1.2 Calculation of the profile length

Profile length \leq Width of the standard back panel
 In most cases, the length of the profile is equal to the length of the horizontal pillars.

Example:

Profile length = 26.125 in

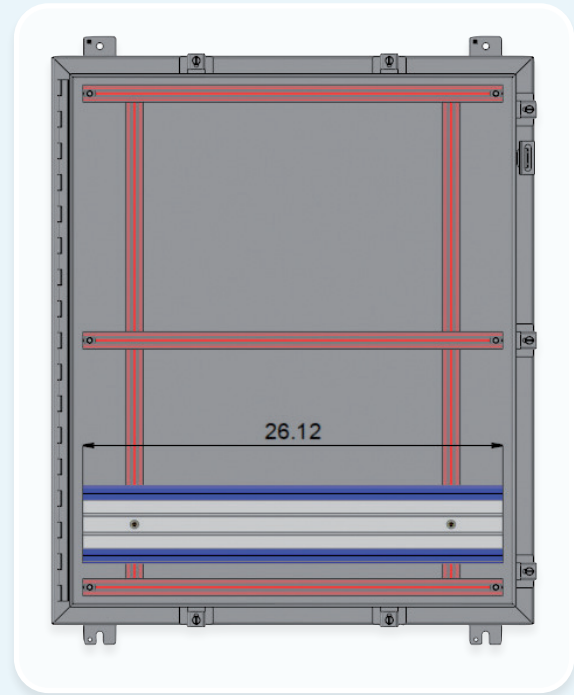


Figure 6

2. Profile selection

You have the choice between two types of profiles (PPA and PP) to mount your components. The heights of the profile (**h**) should be bigger than the heights of the largest component (**c**) (when the device is mounted on one profile).

$$h \geq c$$

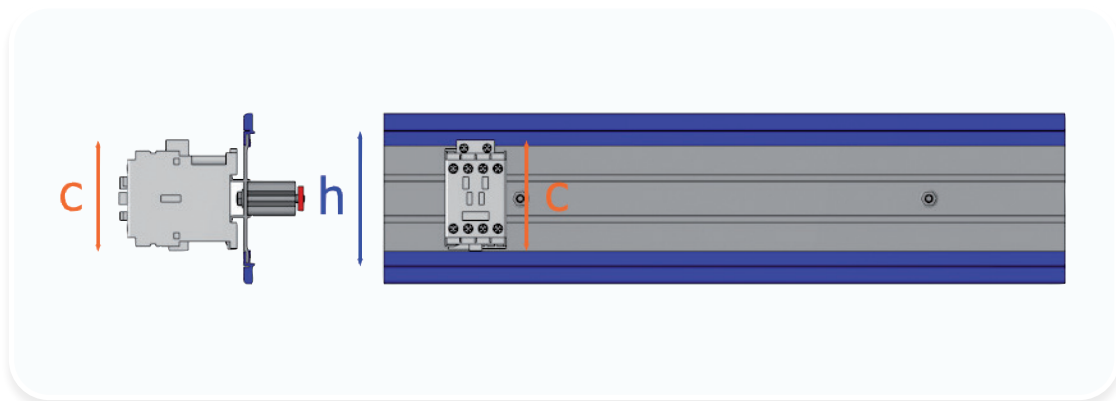


Figure 7

2.1 Profile selection for DIN rail mountable components

For Din Rail mountable component the profile can be selected from the PPE family (Profile with built in Din rail) (Fig. 8).

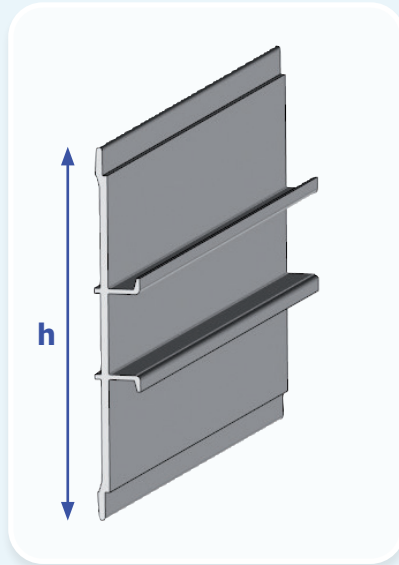


Figure 8

References		h in
PPE	h	imperial
PPE	55	2.16
PPE	75	2.95
PPE	95	3.74
PPE	115	4.53
PPE	155	6.1

An extension R20 can be added on either side of the PPE to extend it. It is also used for non symmetrical components. (Fig 9 and 10).

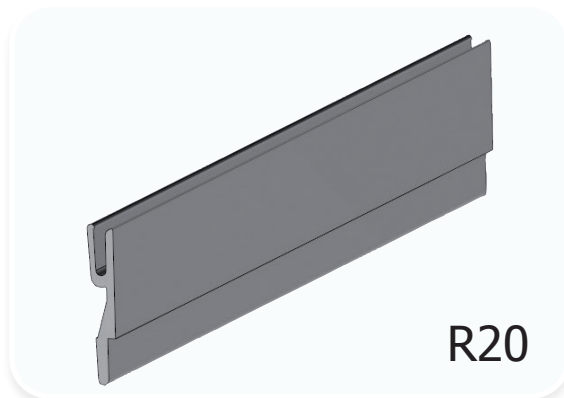


Figure 9

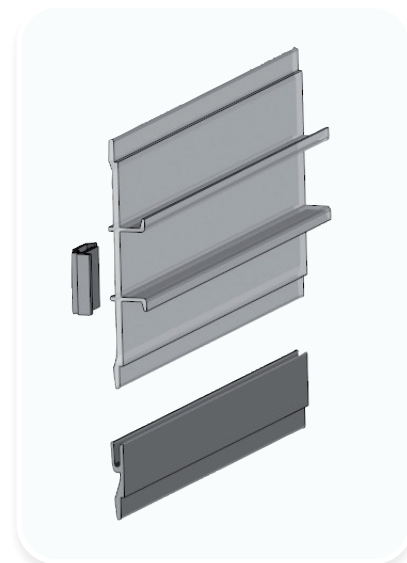


Figure 10

2.2 Profile selection for screw mount components

To fasten panel mount components use the flat profile PP (**Fig. 11**). These come in different sizes in height (h) and have a groove in the center to accommodate the ER and EA nuts.

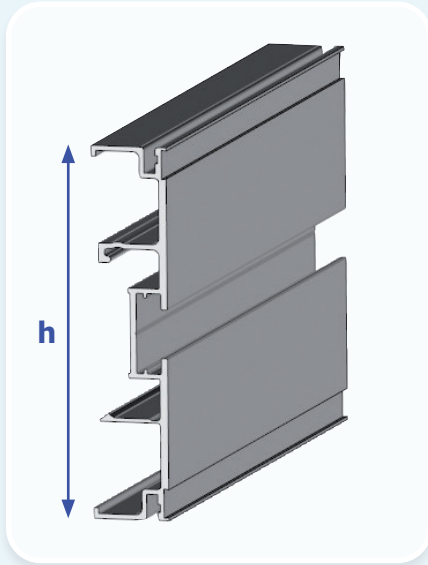


Figure 11

References		h in
PP	h	imperial
PP	55	2.16
PP	75	2.95
PP	95	3.74
PP	115	4.53
PP	135	5.32
PP	155	6.1
PP	175	6.89

Alternatively the PPE55P can replace the PP55 (**Fig. 12**).

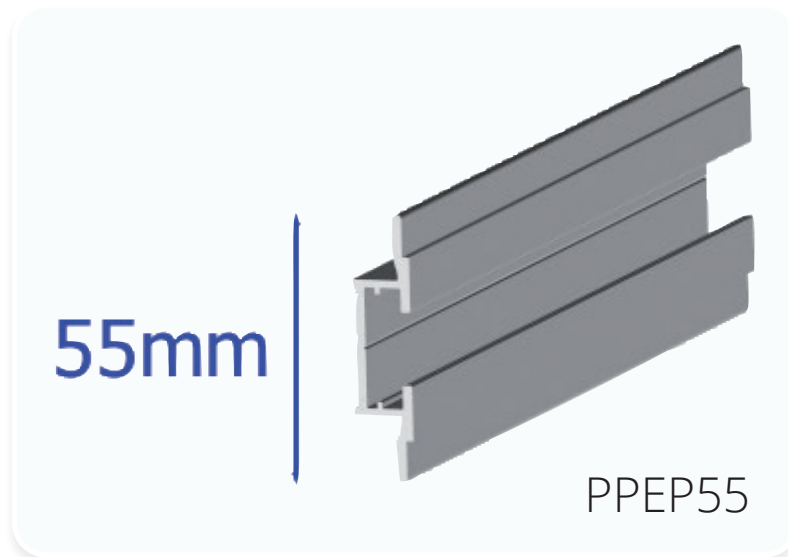


Figure 12

The screw mount components can be mounted in between two profiles using the rectangular nut ER or EA. **(Fig.13 and 14).**

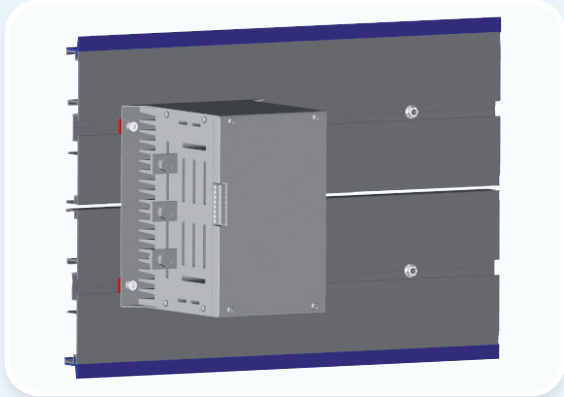


Figure 13

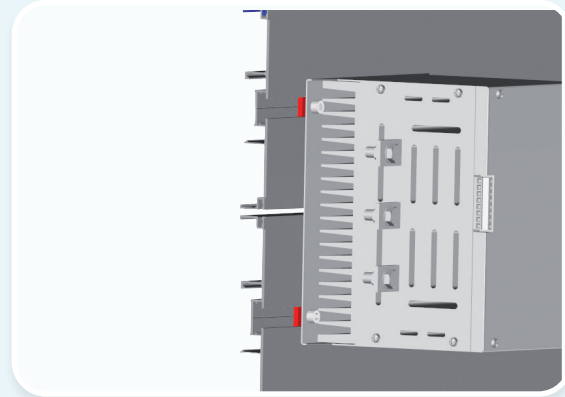


Figure 14

They can also be mounted directly on the top profile and drilled and tapped at the bottom **(Fig.15 and 16).**

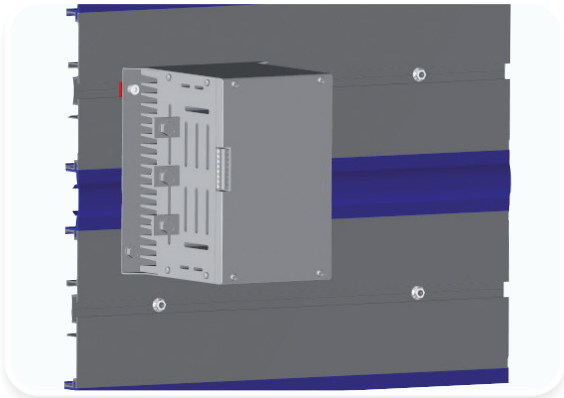


Figure 15

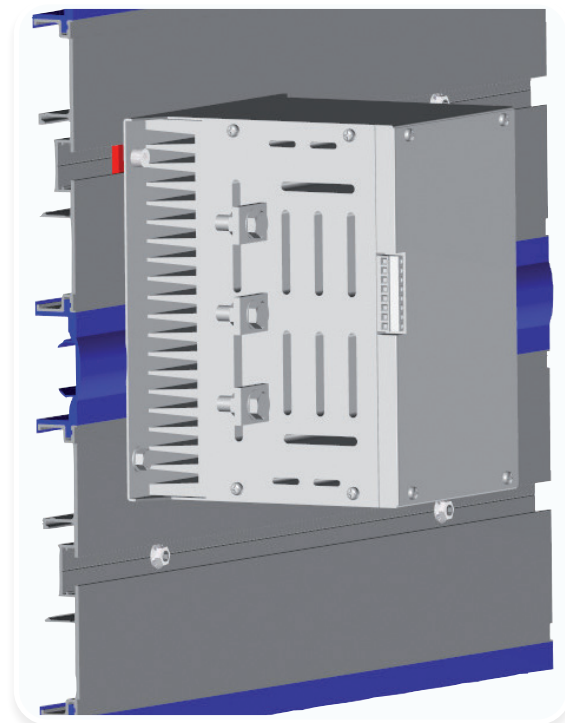


Figure 16



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A Snap in Din rail PS35 can be used with the PP profile to extended the flexibility (**Fig. 17**) and allow you to mount Din rail and screw mount components on the same profile (**Fig. 19**). A DIN35 rail will be preferred for heavier devices.

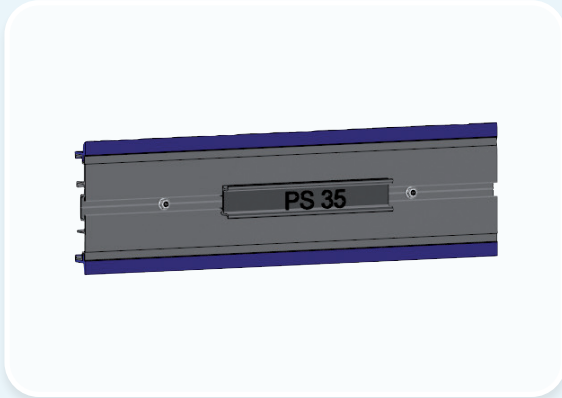


Figure 17

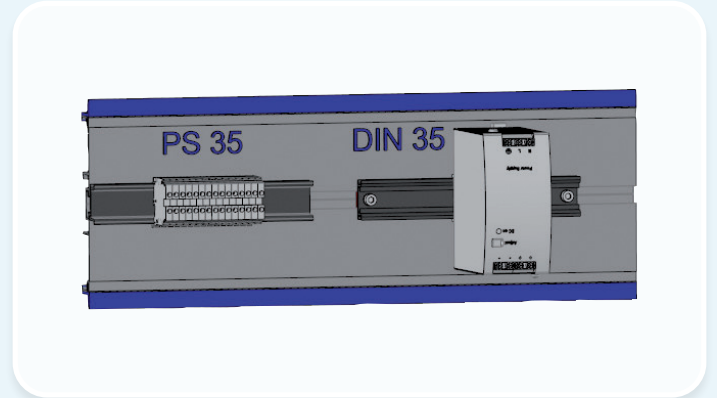


Figure 17.2

The screw mount devices can also be mounted using the PM50 (**Fig. 17**) mounting profiles. Using a PP Profile the PM50 can be attached in the center (**Fig. 18**) using the ER or EA nuts.

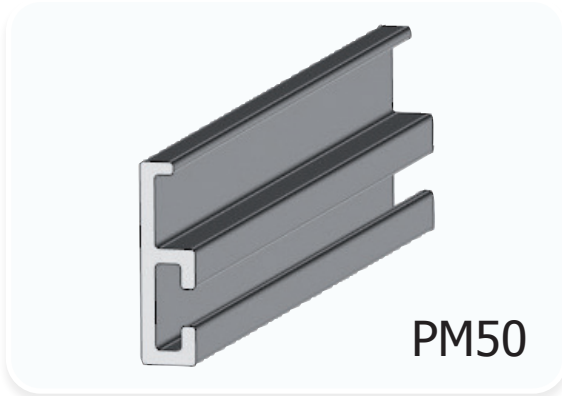


Figure 18

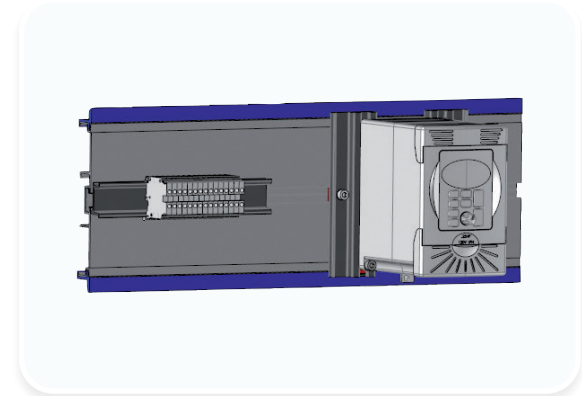


Figure 19

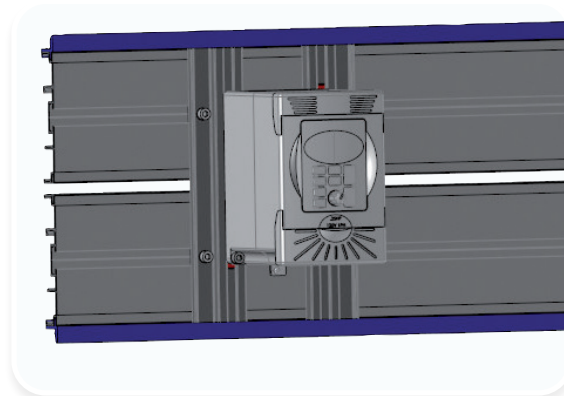


Figure 20

3. Depth selection EMSF's

With the Prolight solution the frame heights can be adjusted with the length of the standoffs (**EMSF Fig. 21**). The length of the standoff varies between 15mm (19/32 in) and 60 mm (19/8in) in increments of 5mm (3/16 in).

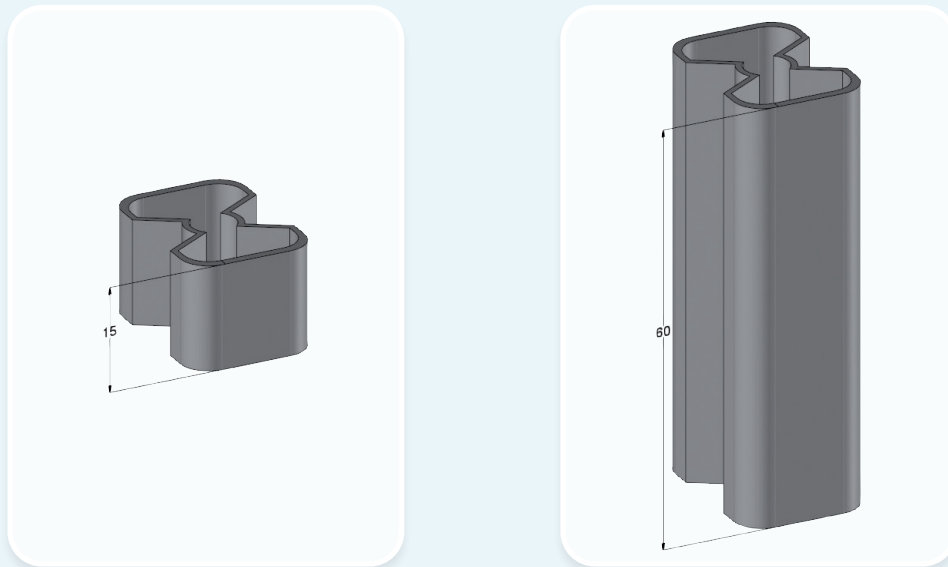
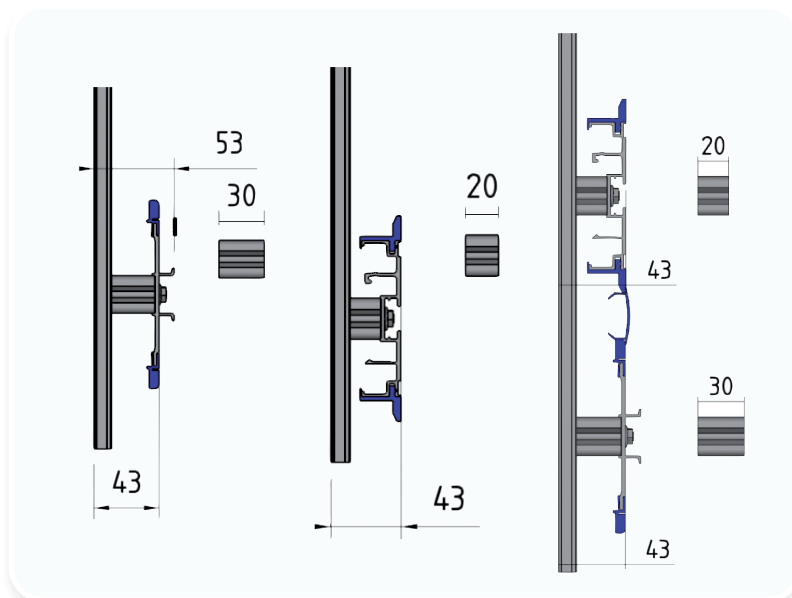


Figure 21

Frame depth = standoff length + 29/32 in + (23mm) **With PPE Profiles**

Frame depth = standoff length + 1/2 in + (13mm) **With PP Profiles**



In order to keep the same depth the PP profiles will use standoffs 10mm shorter than the standoffs for the PPE profiles (**Fig. 22**).

Figure 22

4. Cover selection CPF's

As a standard cover the CPF20 (20mm wide 0.79 inches) can be used.

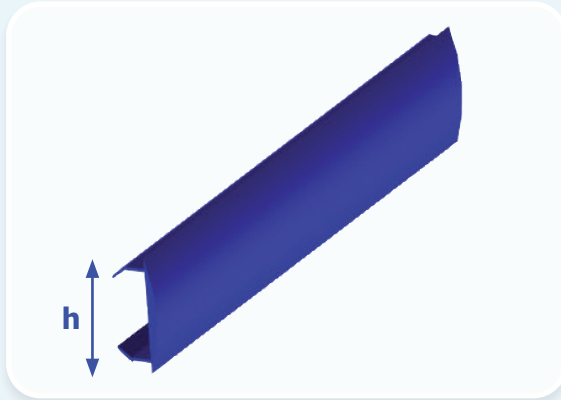


Figure 23

References h in		
CPF	h	imperial
CPF	15	2.16
CPF	20	2.95
CPF	25	3.74
CPF	30	4.53
CPF	35	5.32
CPF	50	6.1

The width of a comb is 15 mm (0.59") and as per **(Fig. 23)** there are 6 different sizes of cover that can be used between two profiles. The space in between two profiles is adjustable as per **(Fig. 24)**.

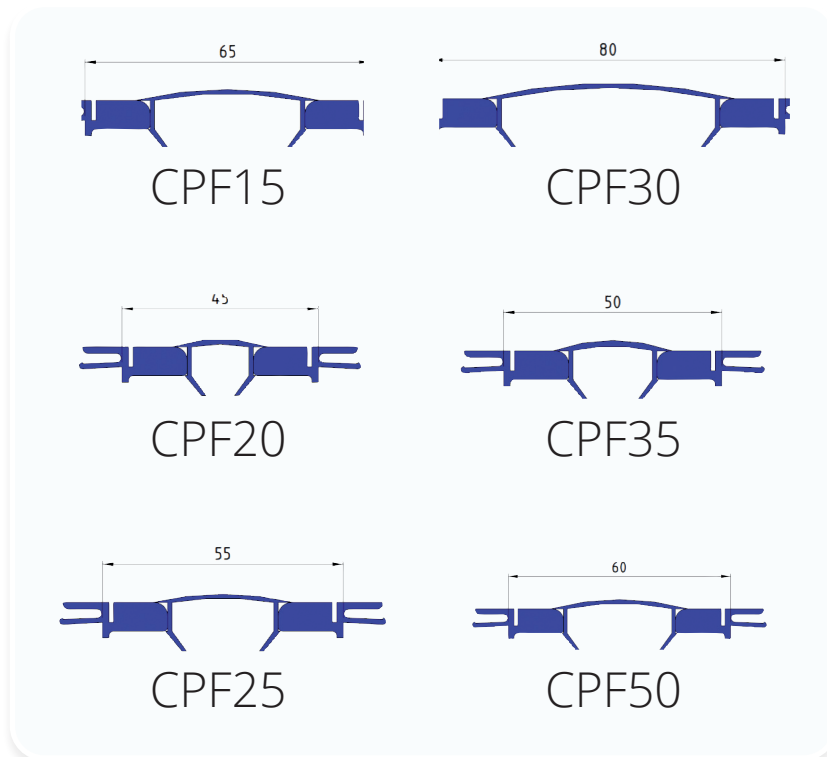


Figure 24

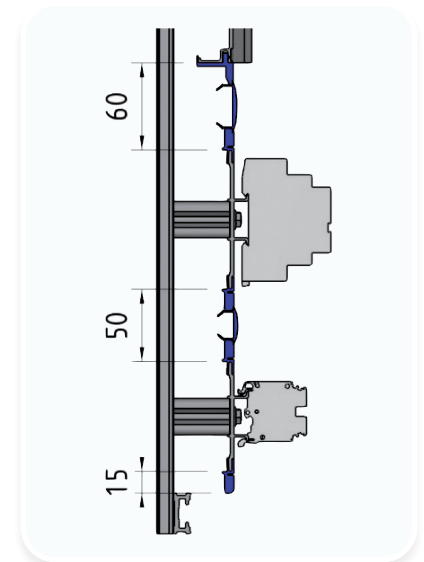


Figure 25

5. Assembly example

5.1 Profiles position on pillars

To create the complete assembly you have to start at the top or the bottom with a minimum clearance of 15mm ($\frac{3}{4}$ inches) (Fig. 26) from the top (or bottom) or the pillar to the first comb.

5.2 Example of an assembled frame

In order to design the complete assembly you have to start with a profile that is wider than the largest component on the row (Din or Flat), choose the size of cover you like to use and go to the next profile until your panel is completed (Fig. 27).

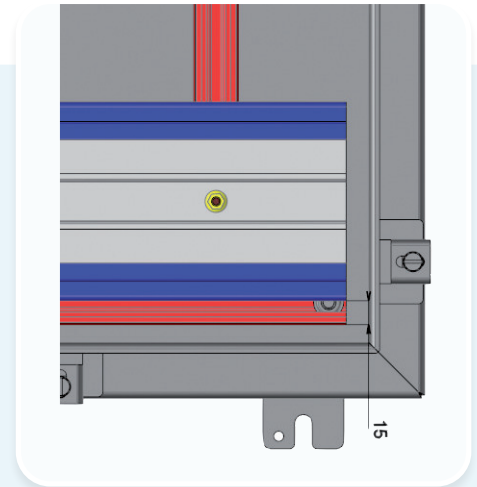


Figure 26

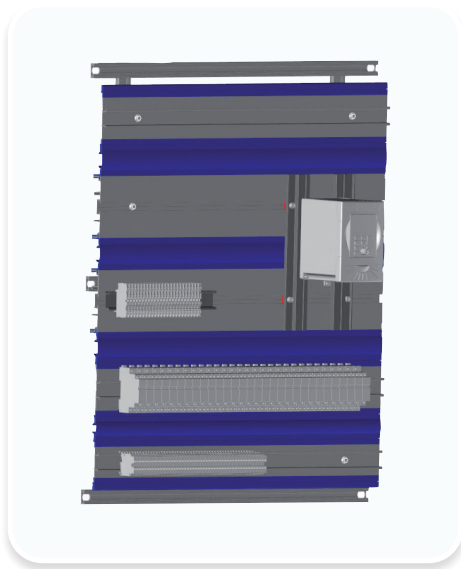


Figure 27

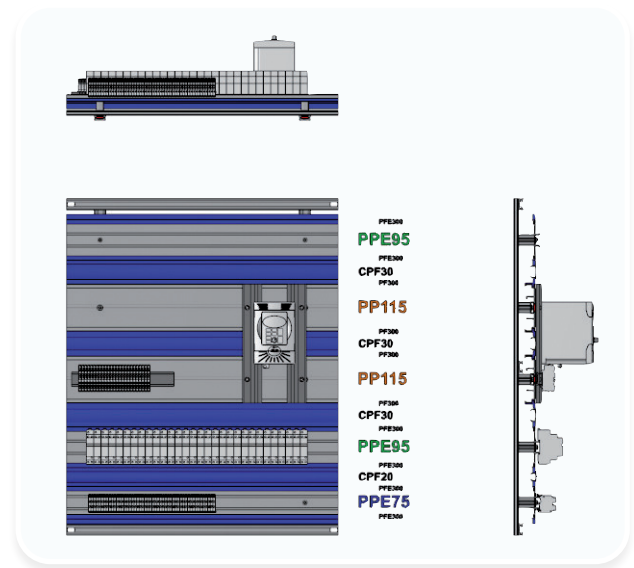


Figure 27

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