

Vahab Engineering Service

Design & Production of Electronic Enclosures

www.vahab-case.com

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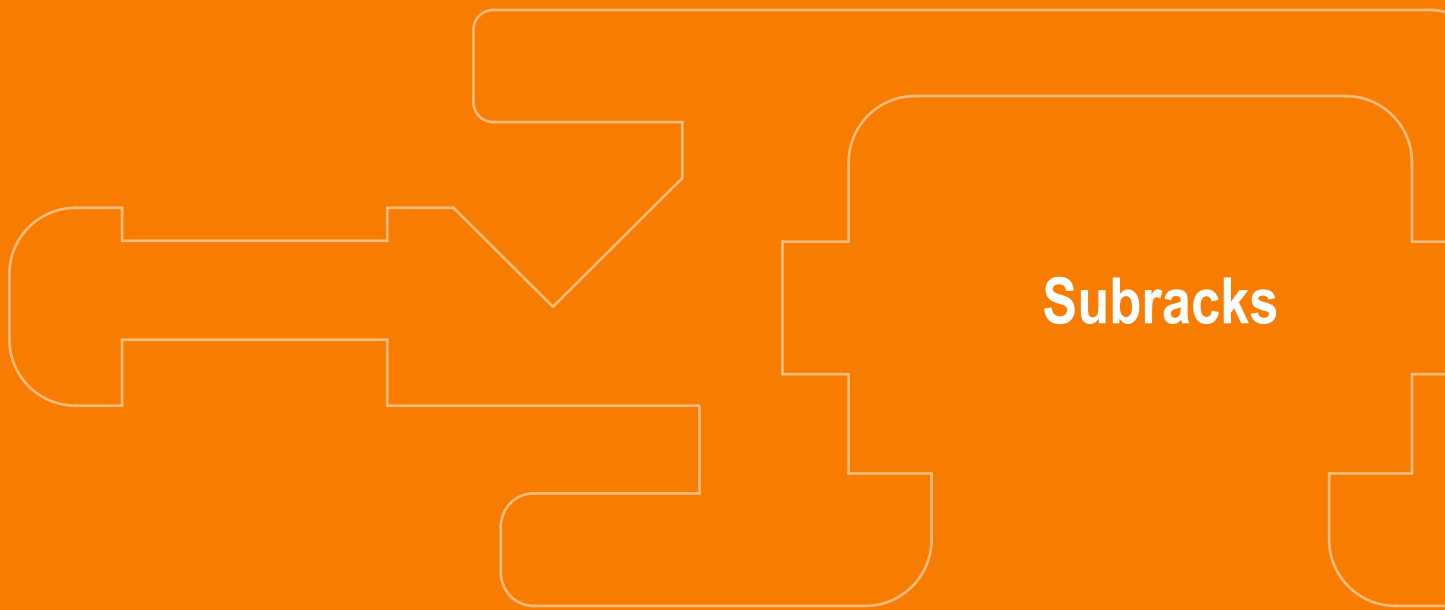
8

Command panel Coming Soon
Consol

9

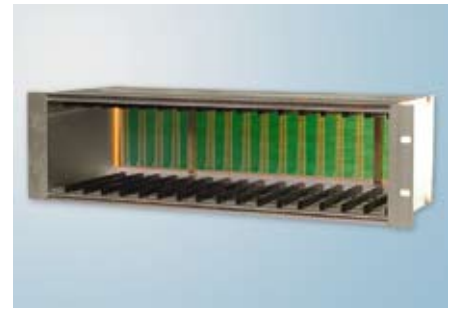
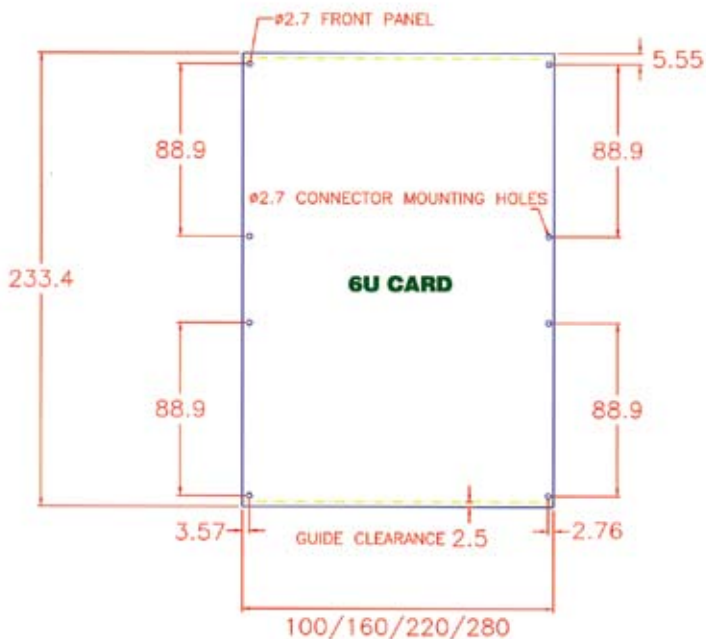
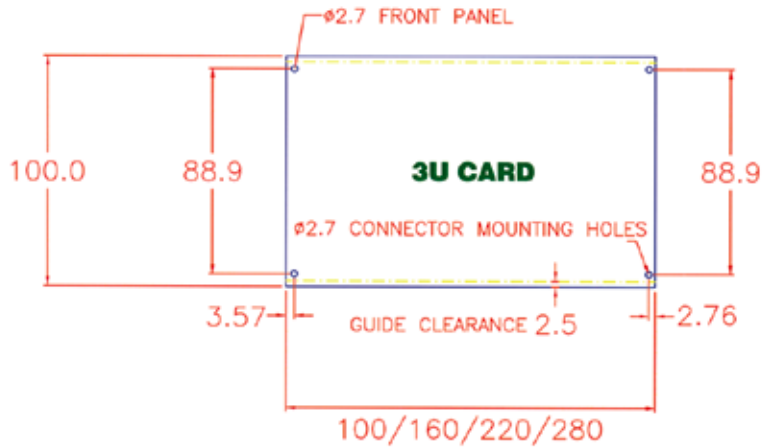
Modular assembly system Coming Soon
Profile *Fastener*
Modular

10



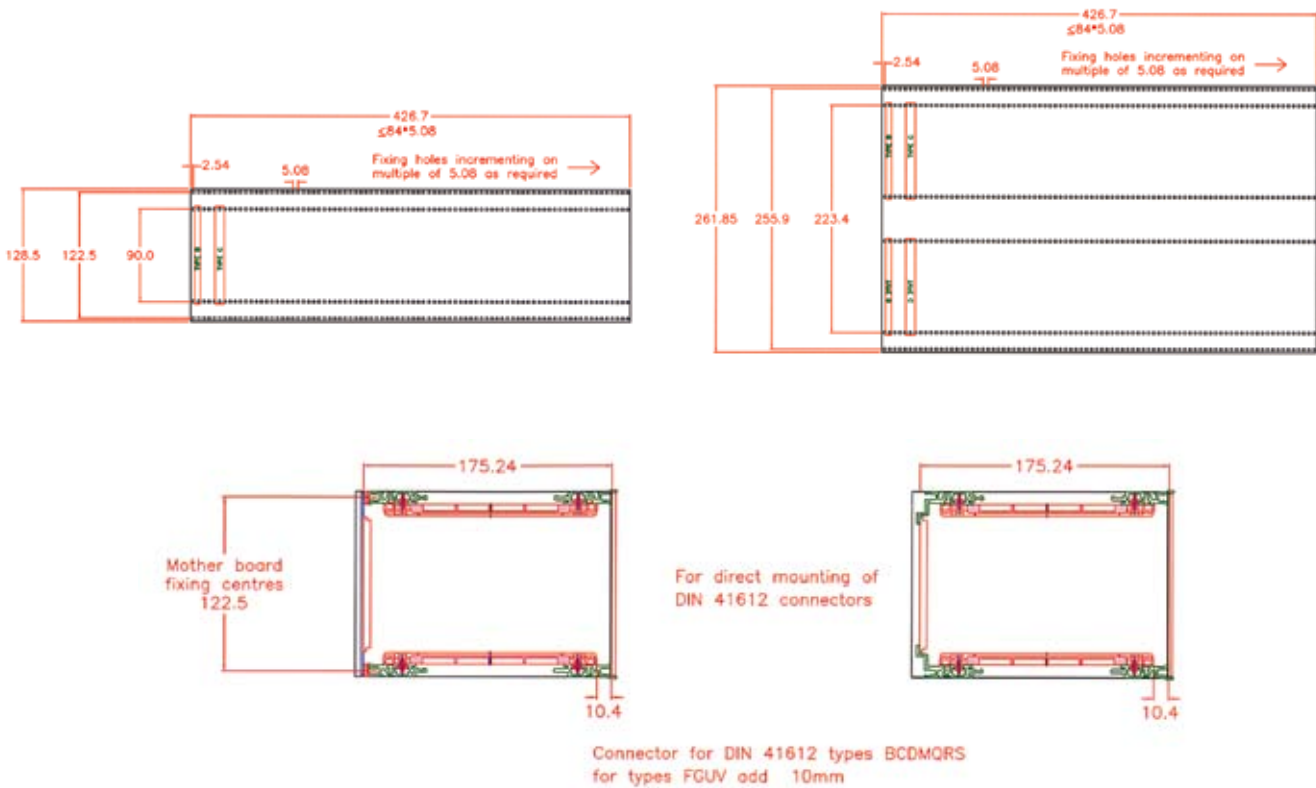
● MOUNTING DIMENSION:

- The subrack system is fully compatible with IEC 297 section 3.
- All plug-in units are modular in concept and based on the first card position being 3.27 from the left hand datum line of working aperture; subsequent card positions are on multiples of 5.08 mm(1HP) from the first card position.
- To allow for a uniform working clearance between front panels the physical overall width of front panels is 0.4 mm less than the nominal HP x 5.08 mm dimensions quoted.
- The system is designed to accommodate indirect connector manufactured to the IEC 130-4 , DIN 41612, and VG 95324.



● **EUROCARDS- CRITICAL DIMENSIONS:**

- As with the rest of the system the printed circuit boards sizes are standardized .
- All PCBs should be of euro card size and conform to the layout shown below.
- A 2.5 mm wide border is necessary at the top and bottom of printed circuit boards to allow clearance for guides and for mounting into plug-in unit guide rails.
- On the double height Eurocard, owing to the overall size and position of the connectors, it is recommended that when fitting components to the front panels the grid as laid out below is adopted. This will allow consistency between 3U and 6U height front panels if mixed configurations are utilized.

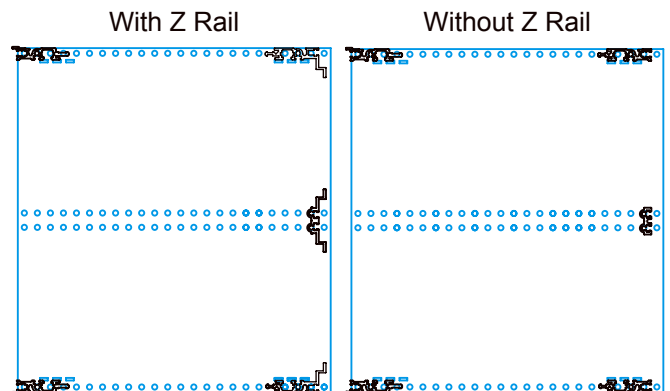


Subracks

Subracks

U	Installation Width(HP)	Installation Width(HP)	Without z rail Order No.	With z rail Order No.
2	42	100		
		160		
		220		
		280		
2	63	100		
		160		
		220		
		280		
2	84	100		
		160		
		220		
		280		
3	42	100		
		160		
		220		
		280		
3	63	100		
		160		
		220		
		280		
3	84	100		
		160		
		220		
		280		
4	42	100		
		160		
		220		
		280		
4	63	100		
		160		
		220		
		280		
4	84	100		
		160		
		220		
		280		
5	42	100		
		160		
		220		
		280		
5	63	100		
		160		
		220		
		280		
5	84	100		
		160		
		220		
		280		

U	Installation Width(HP)	Installation Width(HP)	Without z rail Order No.	With z rail Order No.
6	42	100		
		160		
		220		
		280		
6	63	100		
		160		
		220		
		280		
6	84	100		
		160		
		220		
		280		
7	42	100		
		160		
		220		
		280		
7	63	100		
		160		
		220		
		280		
7	84	100		
		160		
		220		
		280		
9	42	100		
		160		
		220		
		280		
9	63	100		
		160		
		220		
		280		
9	84	100		
		160		
		220		
		280		



● Side panels for subrack

Material:
2.5 mm aluminum plate
A= height
B= depth

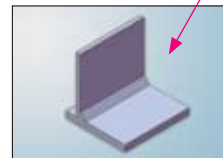
U	A	B	Order no.
3	130.5	180	
		240	
		300	
4	175	180	
		240	
		300	
5	219.4	180	
		240	
		300	
6	263.9	180	
		240	
		300	



● Mounting flanges

For front or rear fitting to the side panel
material: extruded aluminum

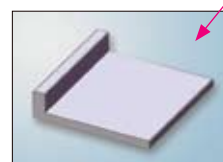
U	H (mm)	order no. without handle hole	order no. with handle hole
2	88		
3	132.5		
4	177		
5	221.4		
6	265.9		



● Cover trim

As an 84 HP trim section on the rear of the subrack or at the front in place of the mounting flanges.

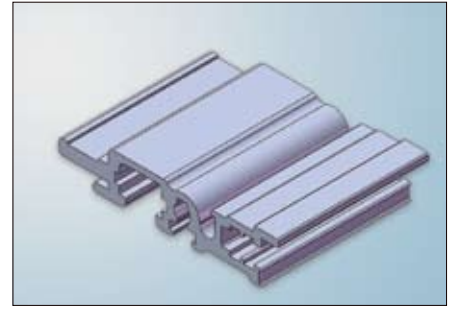
U	H (mm)	order no.
2	88	
3	132.5	
4	177	
5	221.4	
6	265.9	
7	310.4	
9	399.2	



● Cross rail, front

- Extruded aluminum section
- Printed HP details
- M4 thread at both end
- Special HP strips must be inserted in order to position the card guides.

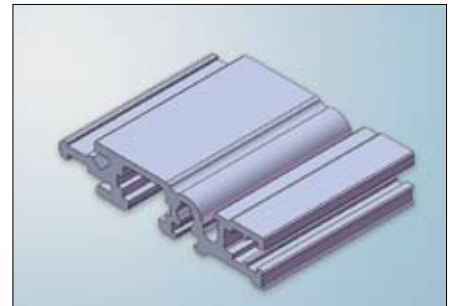
Usable with	Order No.
42HP	
63HP	
84HP	
1m	



● Cross rail, rear

- Extruded aluminum section
- Printed HP details
- M4 thread at both end
- Special HP strips must be inserted in order to position the card guides.

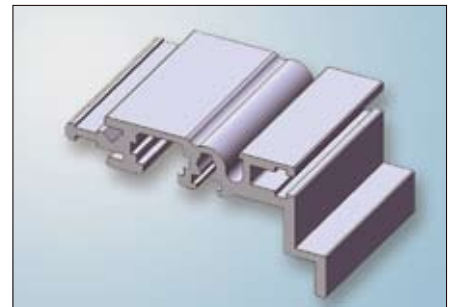
Usable with	Order No.
42HP	
63HP	
84HP	
1m	



● Cross rail, rear with integrated Z rail for connectors to DIN 416112

- Extruded aluminum section
- Printed HP details
- M4 thread at both end
- Special HP strips must be inserted in order to position the card guides
- Tapped hole M2.5.

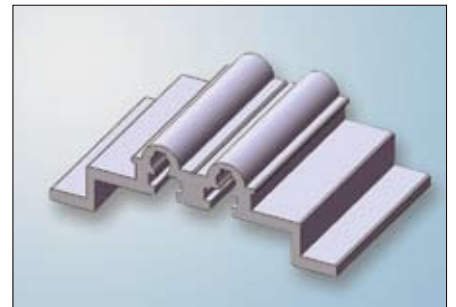
Usable with	Order No.
42HP	
63HP	
84HP	
1m	



● Cross rail, rear with integrated Z rail for connectors to DIN 416112

- Extruded aluminum section
- M4 thread at both ends
- Tapped hole M2.5.

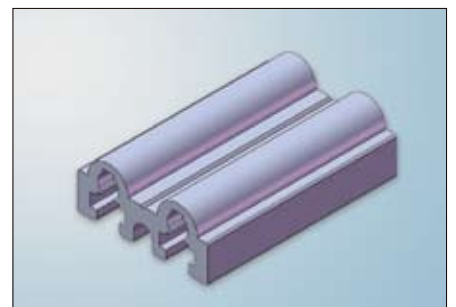
Usable with	Order No.
42HP	
63HP	
84HP	
1m	



● Center cross rail

- Extruded aluminum section
- M4 thread at both end

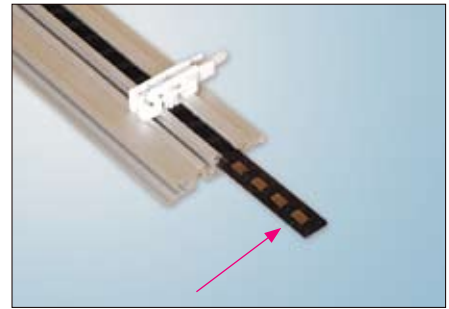
Usable with	Order no.
42HP	
63HP	
84HP	
1m	



● **TE Strips**

For positioning the card guides in the cross rails in the 1 HP pitch pattern

Usable with	Order no.
42HP	
63HP	
84HP	
1m	



● **Tapped Strips**

With tapped holes M2.5 in 1 HP pitch

Usable with	Order no.
42HP	
63HP	
84HP	



● **Insulating Strips**

For fixing back plane on the card frame
With holes in 1 HP pitch

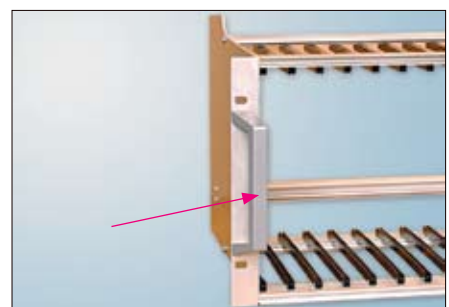
Usable with	Order no.
42HP	
63HP	
84HP	



● **Handle for subrack**

Diecast aluminum, spray finished

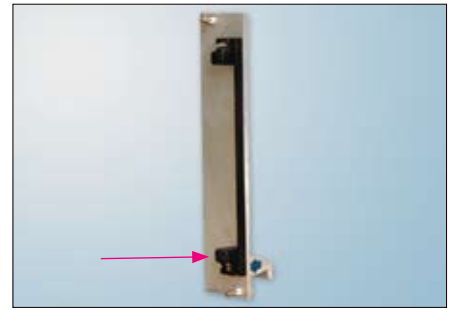
Usable for	Order no.
3U, 4U, 5U, 6U	



● **Card holder on front panel**

Material: polyamid
For securing PCBs to aluminum front panels.

Order no.

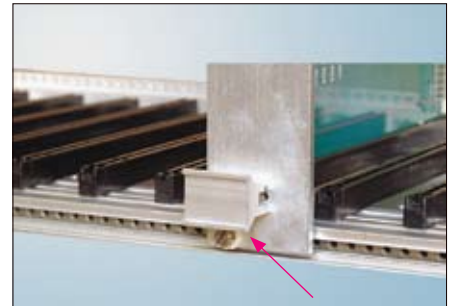


● **Type I handle**

Material: Aluminum
Surface finish: Anodised

HP	order no.
3	
4	
5	
6	
7	
8	
10	

HP	order no.
12	
14	
21	
28	
42	
84	
1m	

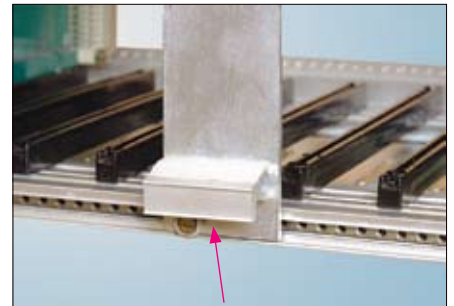


● **Type II handle**

Material: Aluminum
Surface finish: Anodised

HP	order no.
3	
4	
5	
6	
7	
8	
10	

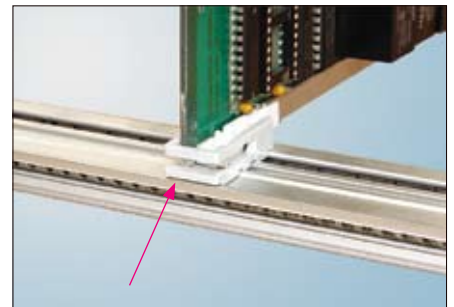
HP	order no.
12	
14	
21	
28	
42	
84	
1m	



● **Card Retainer**

For retaining individual PCBs in place, without front panels

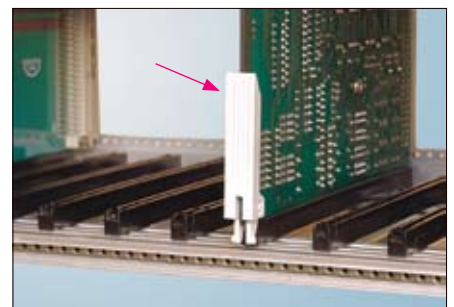
Order no.



● **Card Ejector**

For retaining individual PCBs in place, without front panels

Order no.



● **Card guides**

made of plastic in one piece

For PCBs	Order no.
160 mm	
220 mm	



● **Card guides**

With aluminum center part, three-pieces

For PCBs	Order no.
100 mm	
280 mm	



● **End pieces**

End pieces for 3-part card guides

Order no.



● **Center pieces**

Center pieces for 3-part card guides

For PCBs	Order no.
100 mm	
280 mm	
1 mm	



● **Card guides**

Screw fixed with thread on the cross rail.

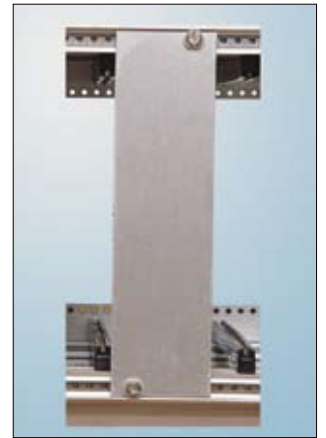
For PCBs	Order no.
100	
160	
220	



● **Partial front plates as covers only**

covers only
natural anodized

	3U	6U
HP	Order	No.
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
20		
21		
40		
42		
60		
63		
84		



● **Partial front plates with handle and card retainr**

Front plate 2.5 mm aluminum
natural anodized

	3U	6U
HP	Order	No.
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
20		
21		



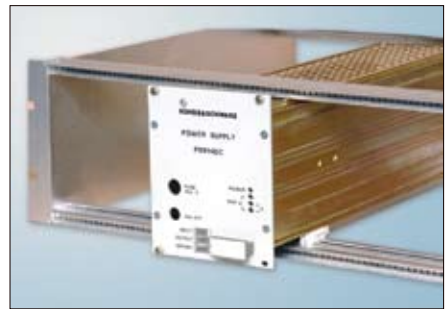
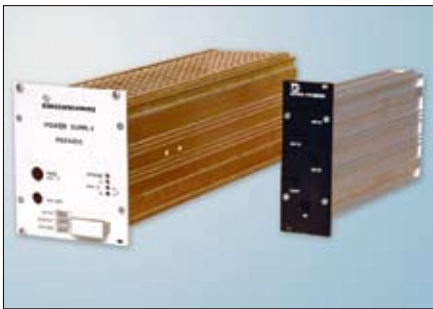
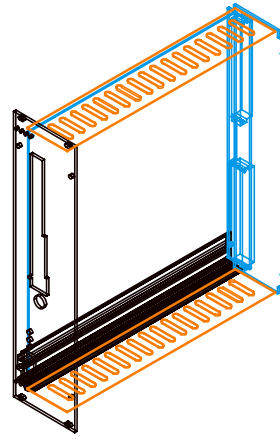
● **Front plate, hinged horizontally / vertically**

	3U	6U
HP	Order	No.
3/42		
3/63		
3/84		
6/42		
3/63		
3/84		



● **Insert module for subrack**

Modules are suitable for accommodating PCBs on standard format and depth of 160/220 mm. They can be installed in all subracks depending on the application in question, various versions are available.



Card depth 160 mm

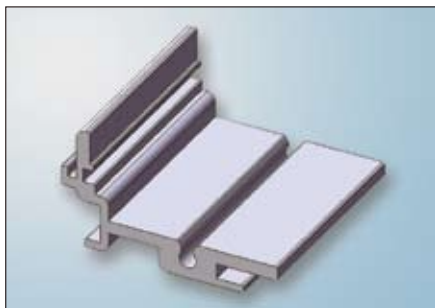
3U type I 3U type II 6U type II

HP	order no	order no	order no
6			
8			
10			
12			
14			
21			
28			
42			

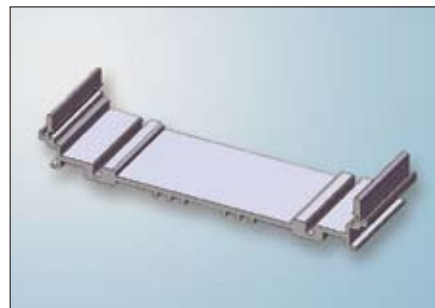
Card depth 220 mm

3U type I 3U type II 6U type II

HP	order no	order no	order no
6			
8			
10			
12			
14			
21			
28			
42			



Type I



Type II





● Din - Modular case



96x96



72x144



144x144

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	

Supply includes:

Extruded aluminum case
 front base (polyamide) snap-in front frame (ABS)
 rear panel (aluminum) screw clamps fixing screws

- Special depth possible, on request
- Any punching, drilling, milling is possible on your request
- Cases manufactured in accordance with DIN 43700

- Horizontal and vertical guide ridges for internal PCB mounting
- Especially suitable for measuring, control technology & remote control
- Large variety of applications possible due to different types of constructions and accessories
- Screw clamp permit fitting in control panel or switch cabinet to meet your requirements.

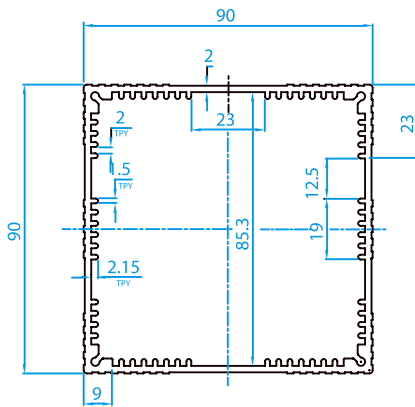
● Din - Modular case

Accessories:

Order no.	Description
	front base 96x96 (PA)
	snap-in front frame 96x96 (ABS)
	rear panel 96x96 (aluminium)
	front base 72x144 (PA)
	snap-in front frame 72x144 (ABS)
	rear panel 72x144 (aluminium)
	front base 144x144 (PA)
	snap-in front frame (ABS)
	rear panel 144x144 (aluminium)
	screw clamp (heavy)
	fixing screws M3x8
	screw clamp (light)

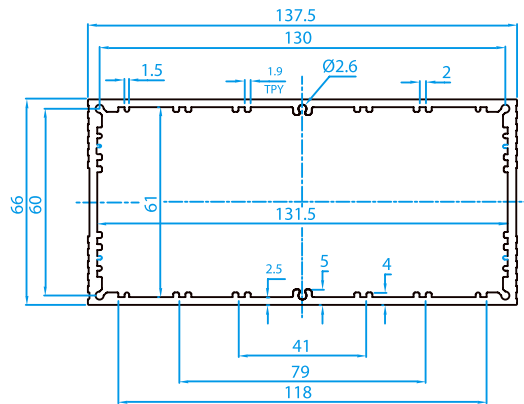
Technical information:

96x96



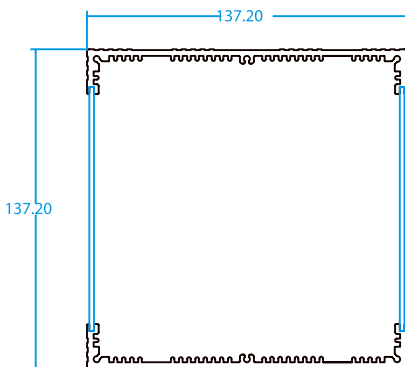
Cut-out to DIN 43700 92X92

72x144

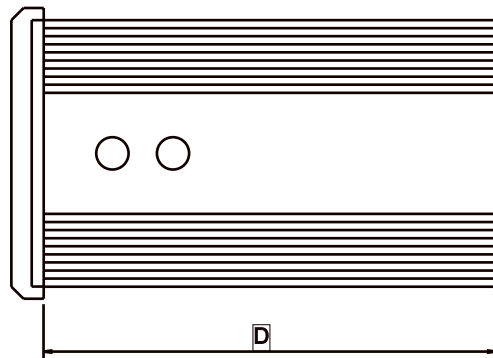


Cut-out to DIN 43700 68x138

144x144



Cut-out to DIN 43700 138X138



● Extruded assembled case

- Material: aluminum profile and sheet (2 mm thick)
- The extrusion have internal guide slots for P.C.B or similar components
- Packing: as kit
- Assembly time: 1-2 minutes
- Drilling and printing of the covers on request
- Special dimensions and surface treatments on request



Order No.		Dimension(mm)		
without strap	with strap	A	B	C
		40	90	104
		40	90	144
		40	90	184
		90	90	104
		90	90	144
		90	90	184

1002



688



154



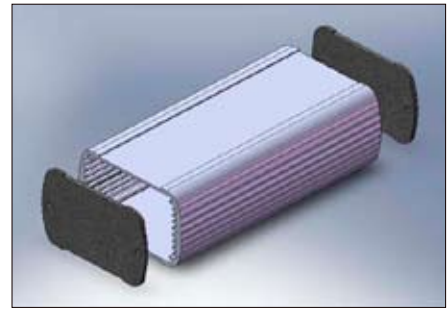
1001



● Extruded Box

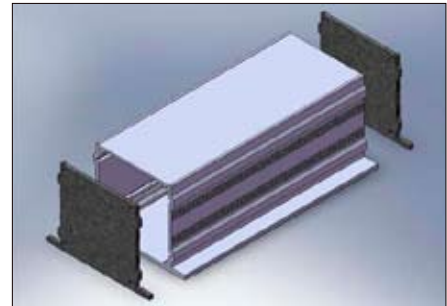
EB-1013

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



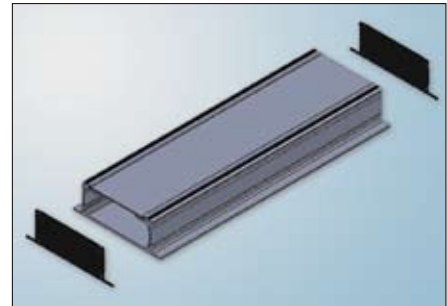
EB-1004

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



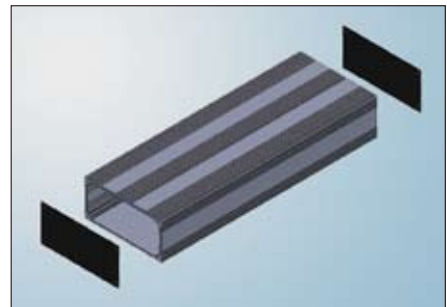
EB-1127

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



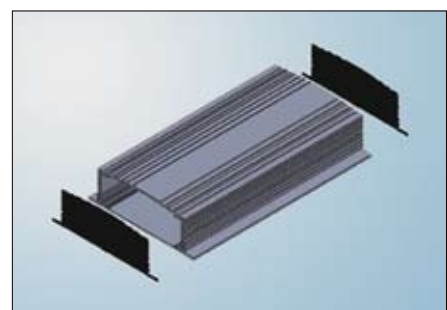
EB-1000

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



EB-1203

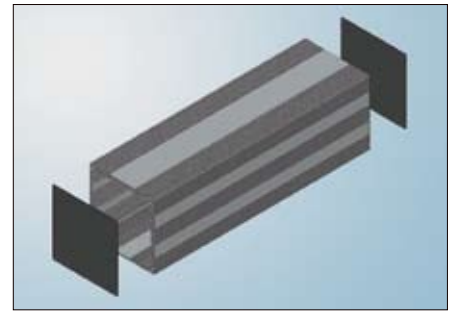
Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



Small Enclosure

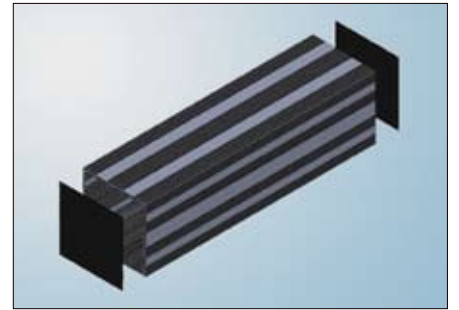
EB-670

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



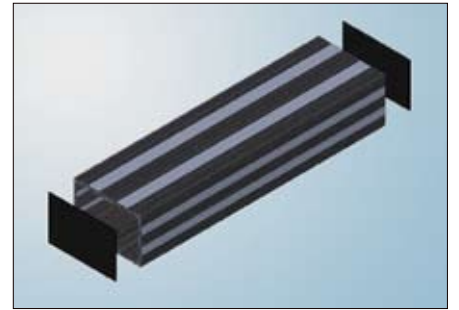
EB-1310

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



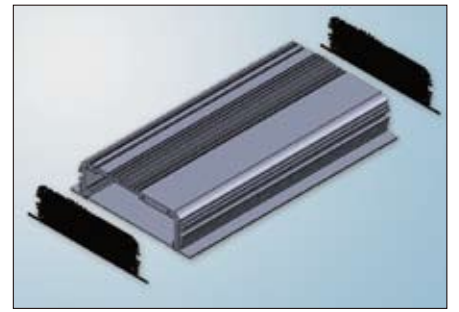
EB-910

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



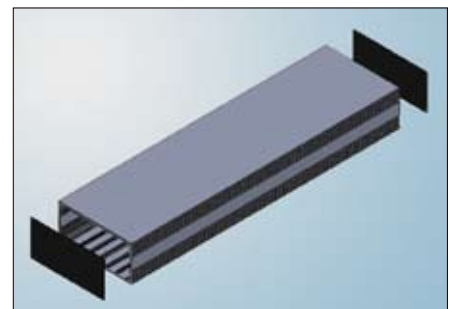
EB-1201

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



EB-492

Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



EB-1228

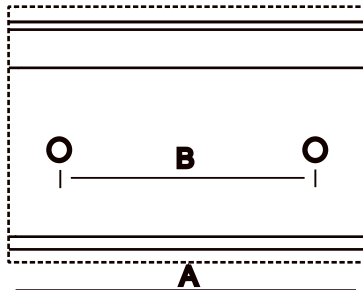
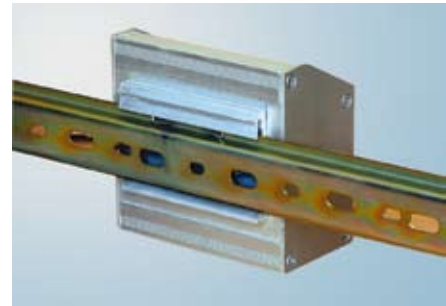
Depth (mm)	Order no.
50	
75	
100	
125	
150	
175	
200	



● **Universal rail adaptor aluminum**

Clip fasten for 35 mm mounting rail

- Universal clip fasten, suitable for all 35 mm mounting rail
- Fasten and simple assembly of combination cases, heatsink etc. by means of snapping them onto the mounting rail.
- Secure hold due to a stable extruded profile with integral spring
- special lengths and drilling on request



Order no.	A (mm)	B (mm)
	50	30
	75	55
	100	70

● **Universal rail adaptor plastic**

- Universal rail adaptor for 35mm mounting rail for holding printed circuit board, 8mm wide for 2.2mm screw.



● **DIN-rail case**

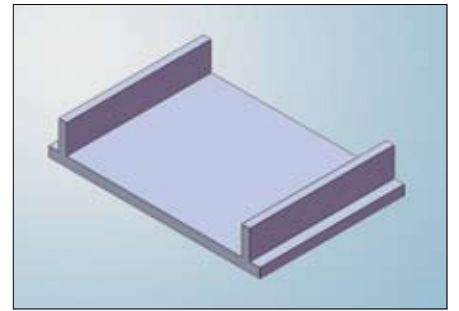
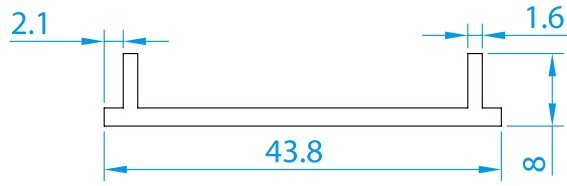
DIN enclosures are ideal for housing electrical, electronic devices including relays, sensing and monitoring devices, timers, transducers, printed circuit boards and more.



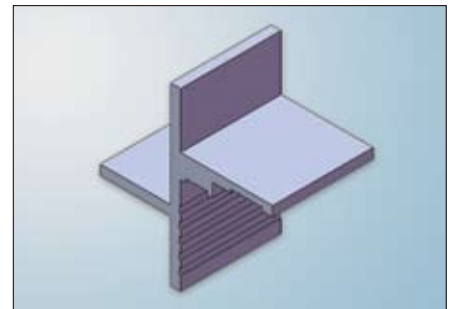
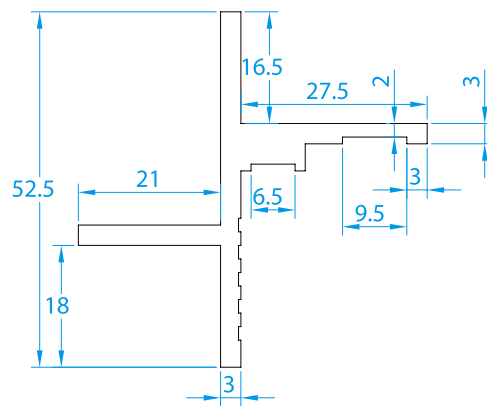


Extruded Profiles

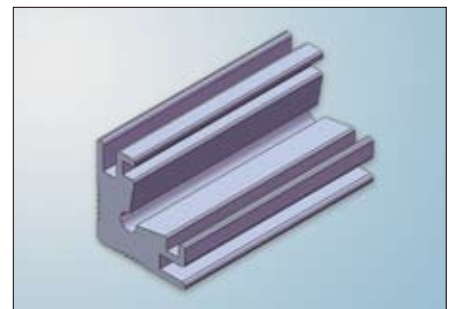
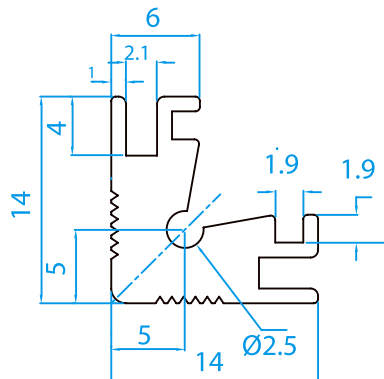
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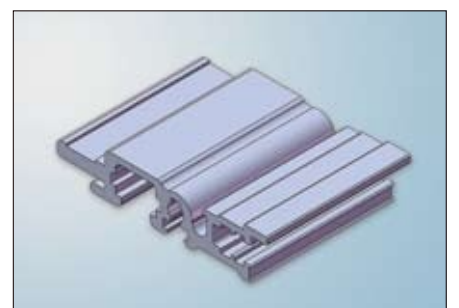
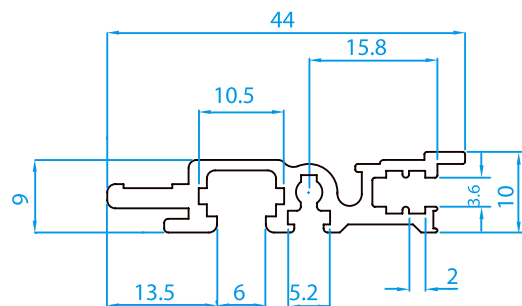
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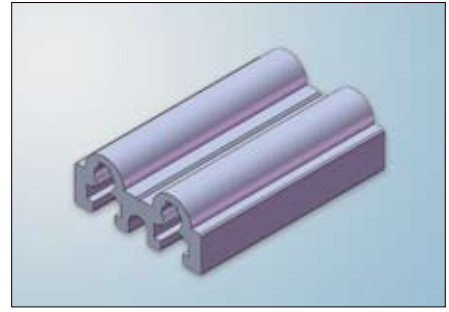
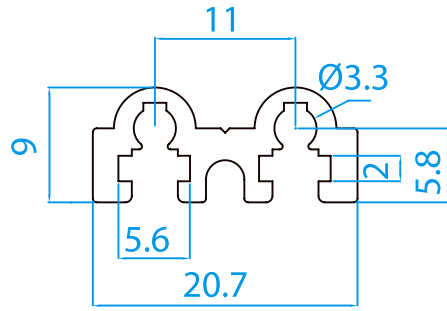
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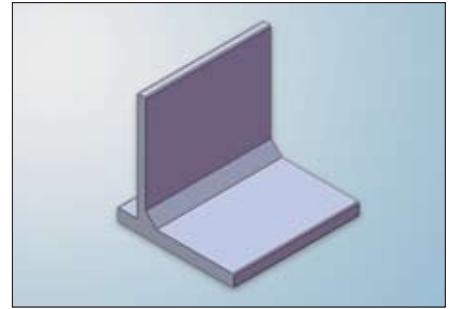
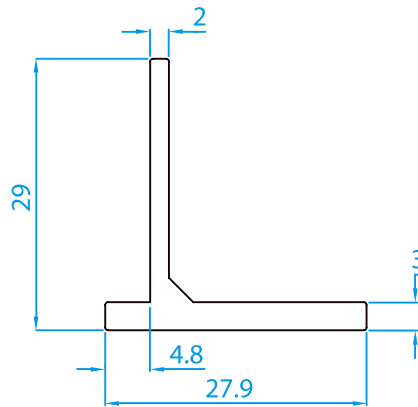
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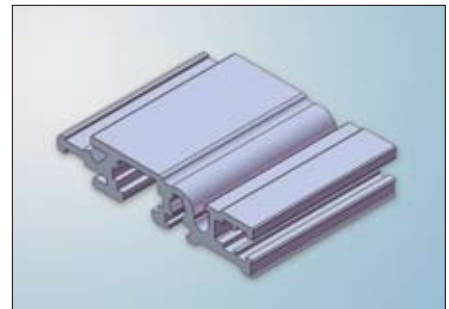
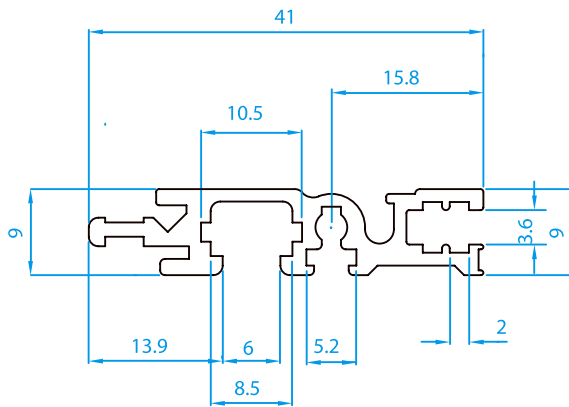
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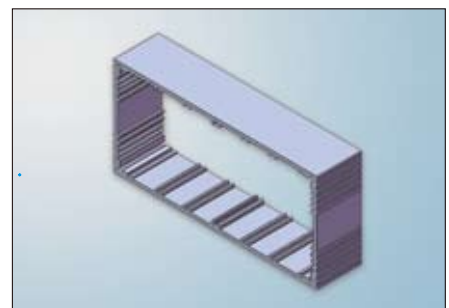
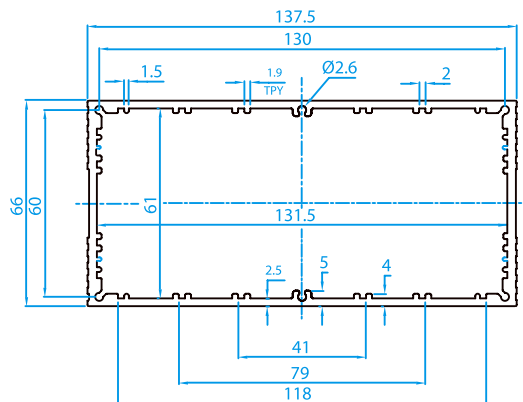
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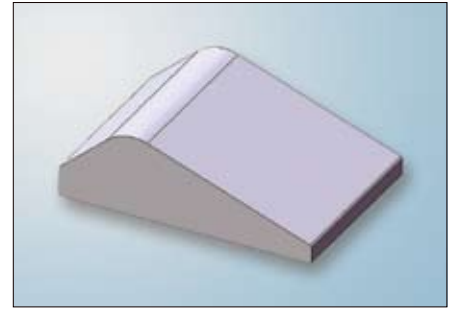
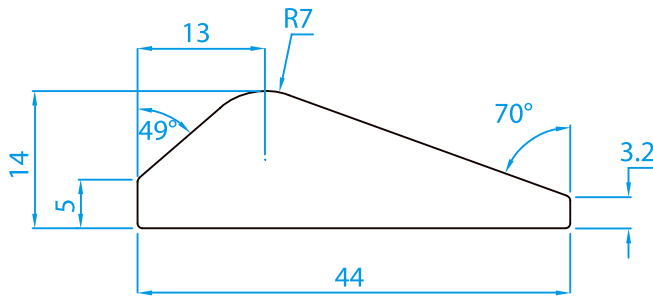
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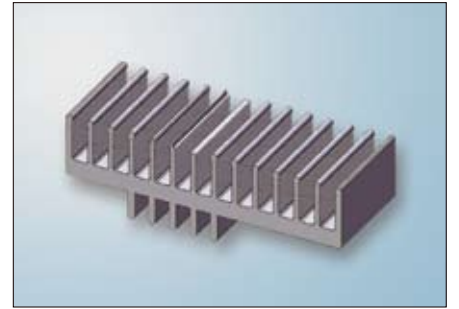
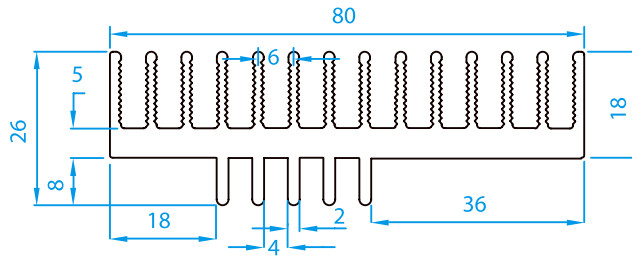
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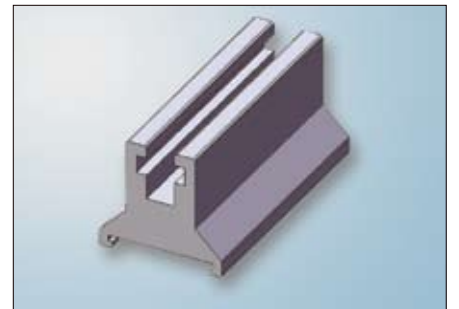
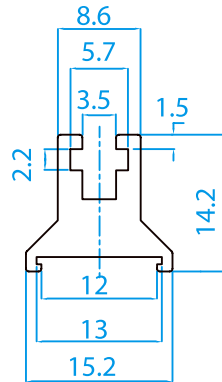
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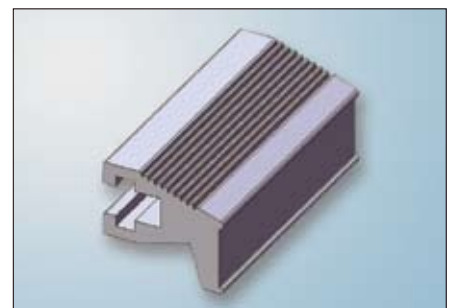
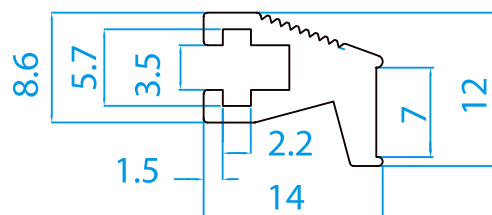
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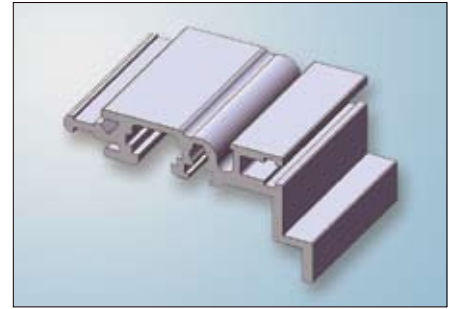
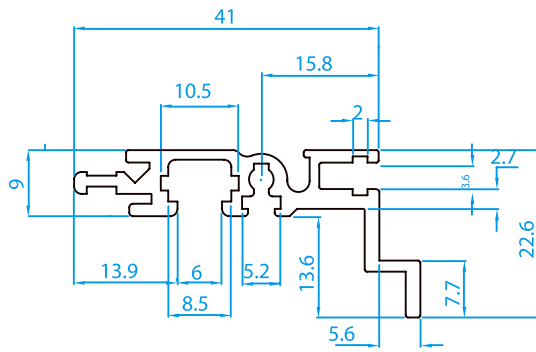
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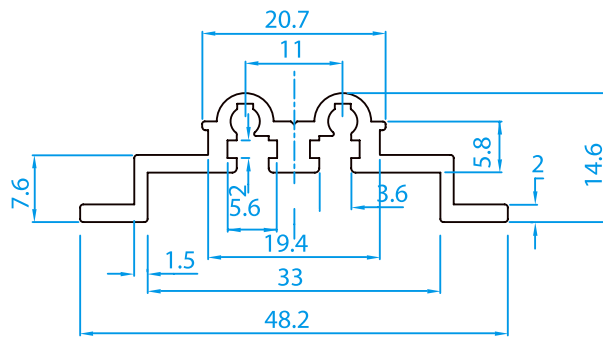
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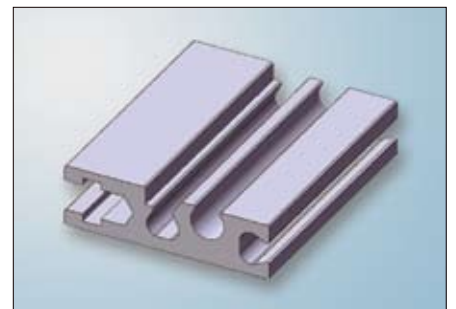
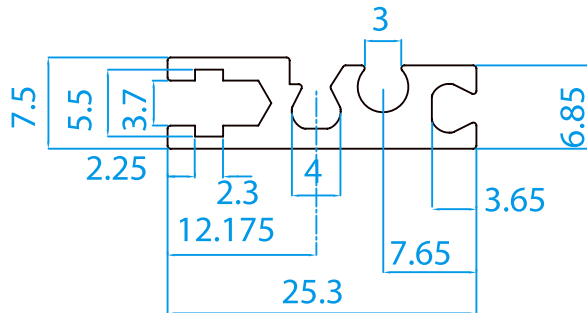
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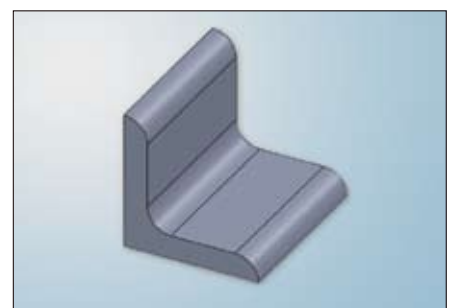
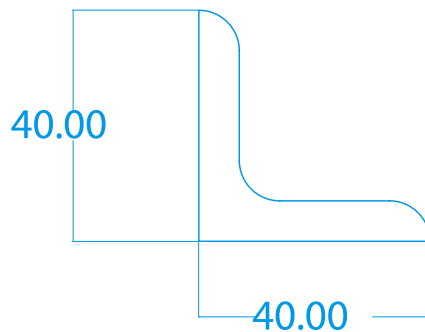
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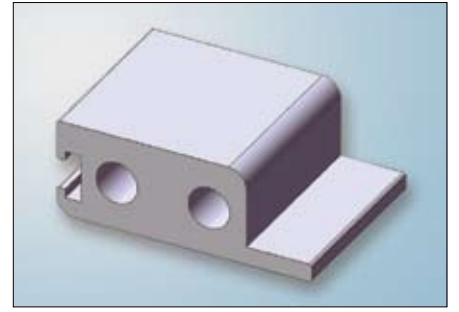
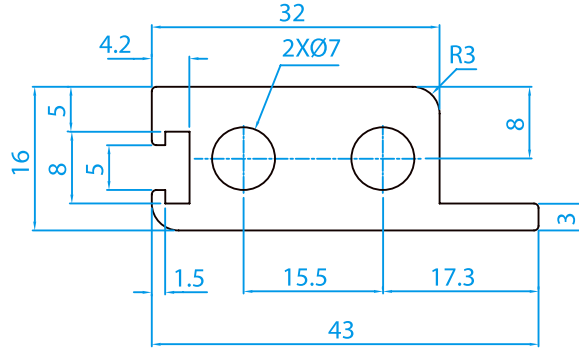
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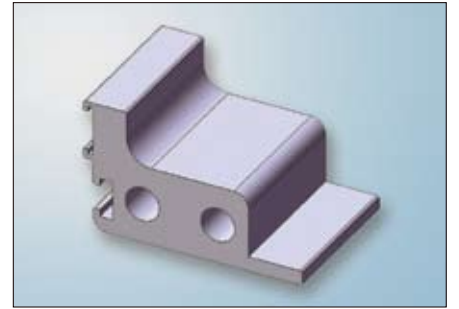
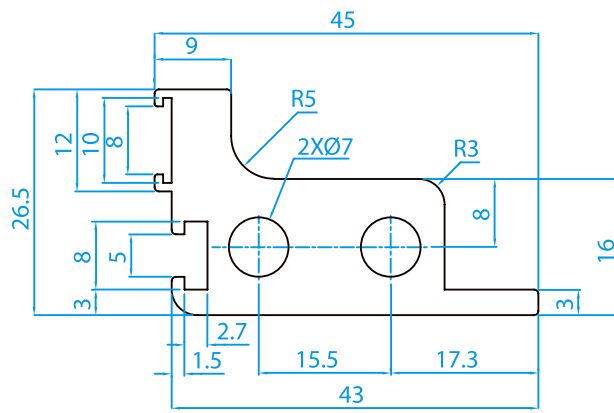
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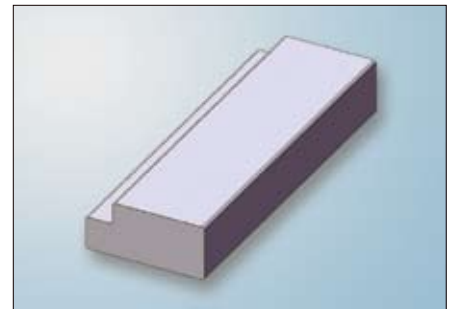
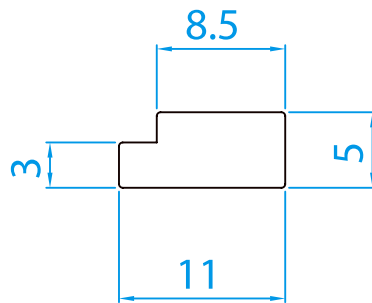
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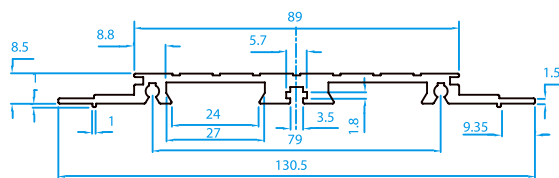
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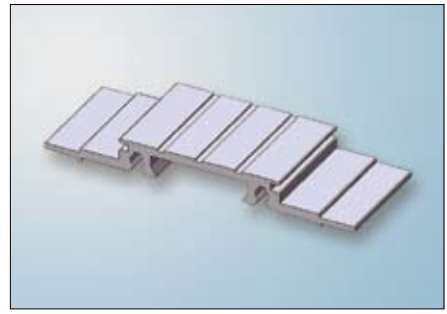
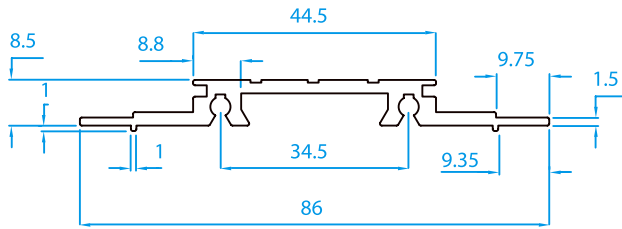
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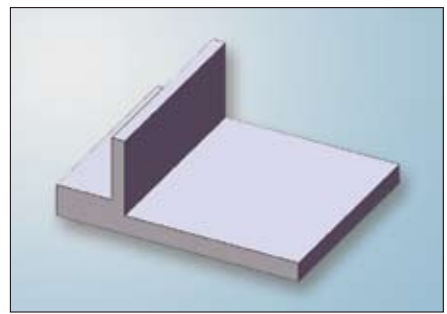
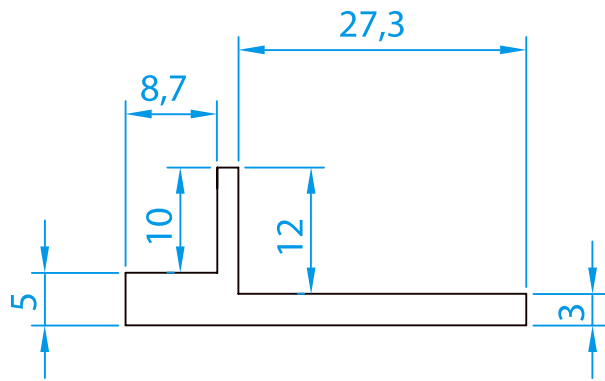
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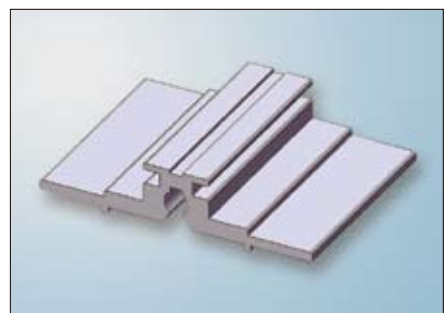
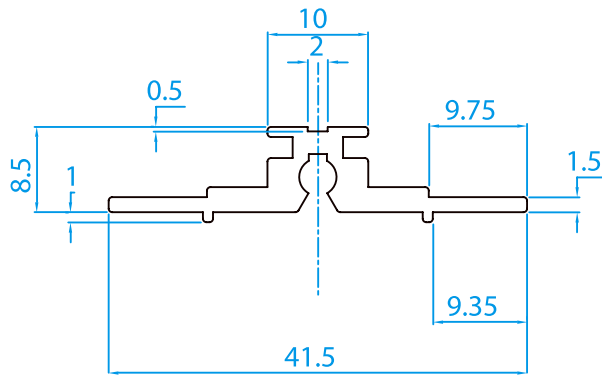
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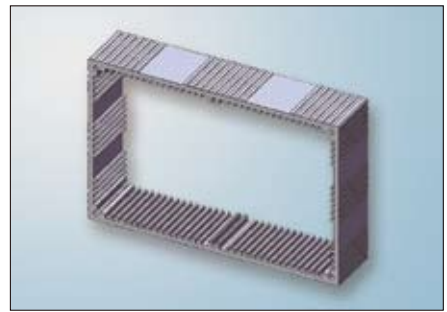
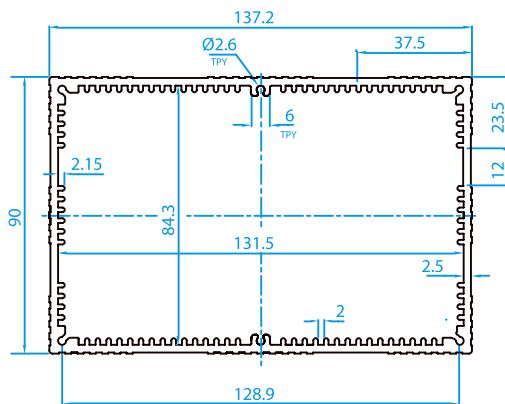
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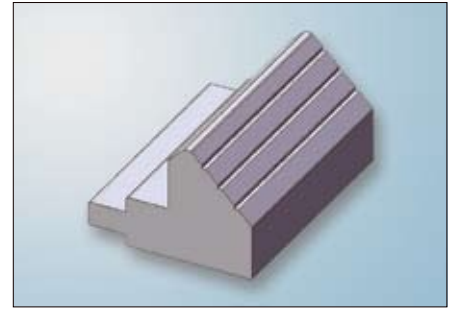
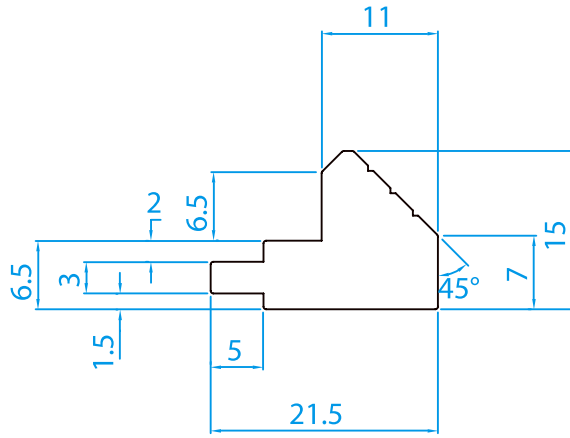
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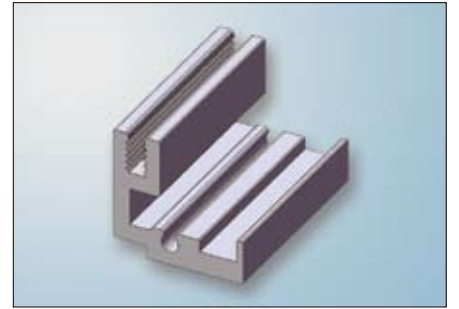
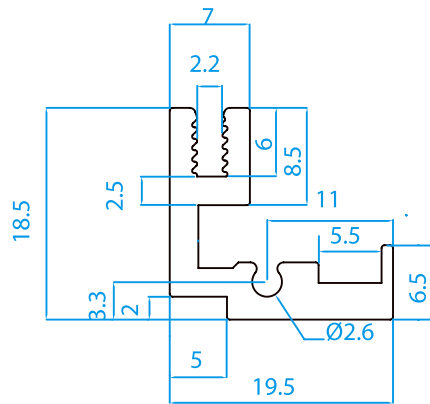
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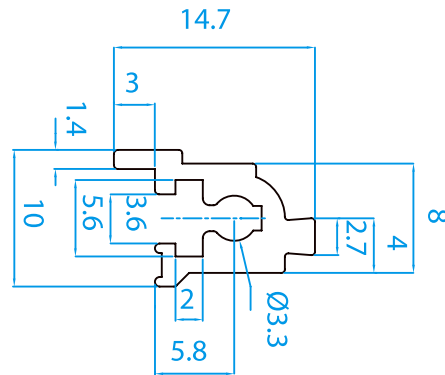
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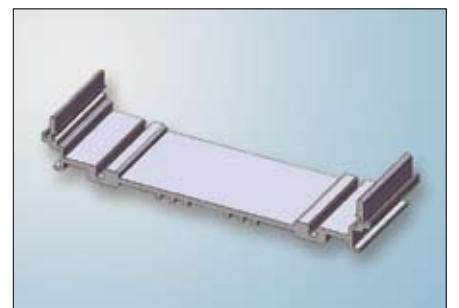
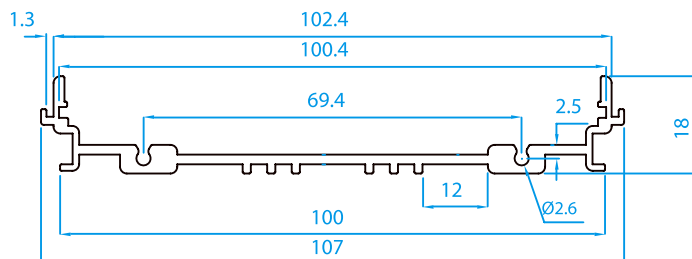
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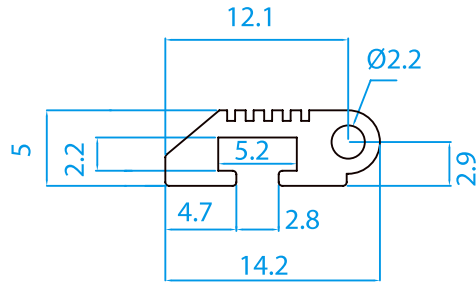
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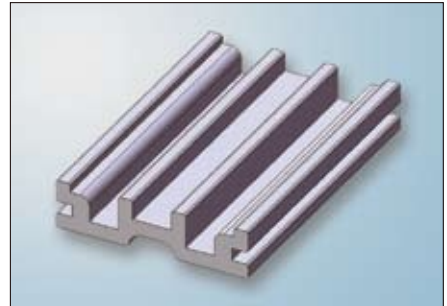
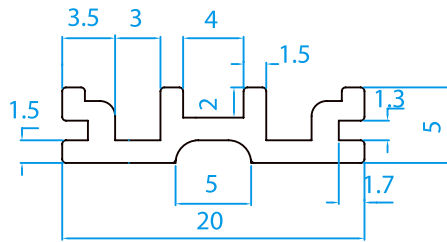
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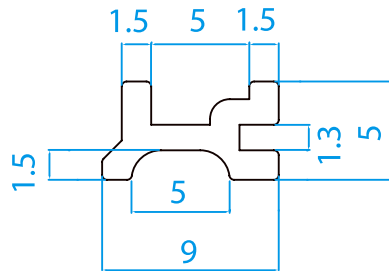
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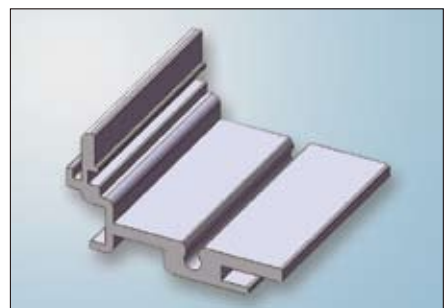
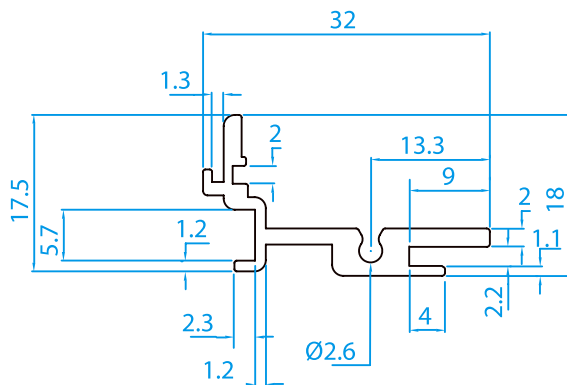
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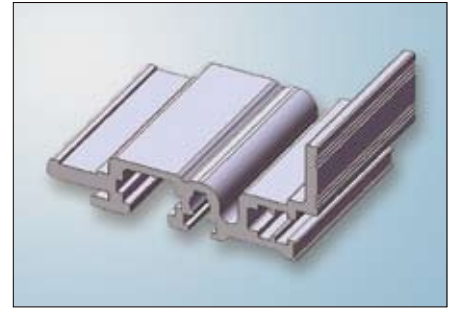
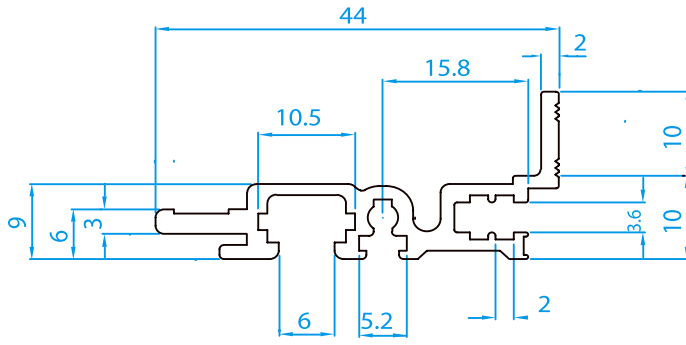
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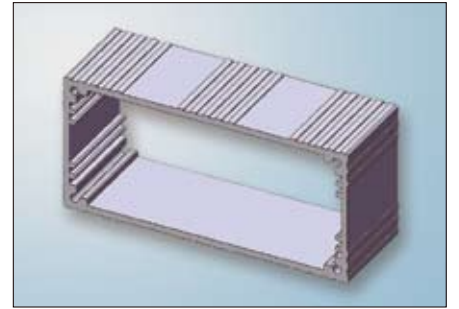
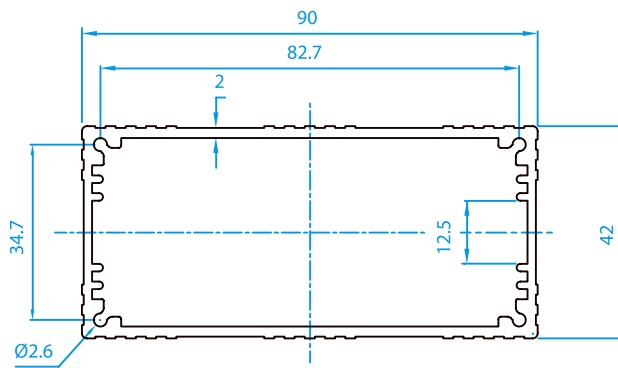
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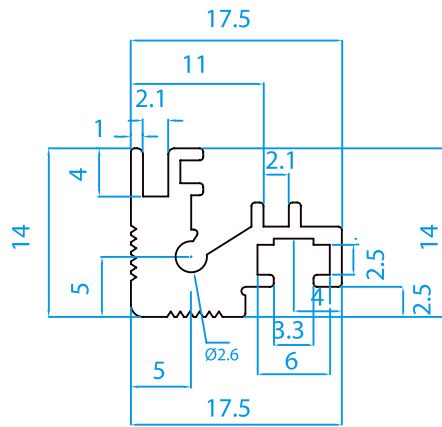
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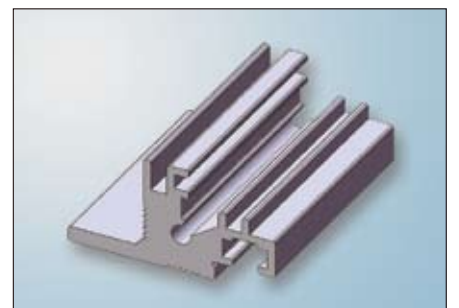
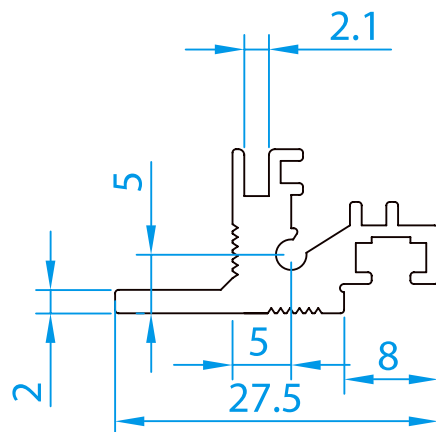
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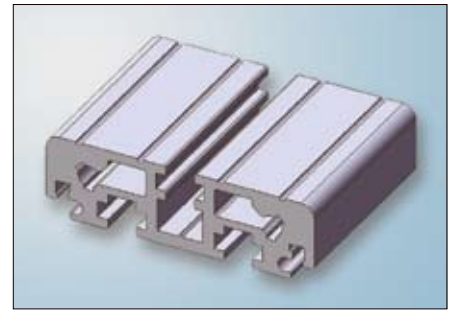
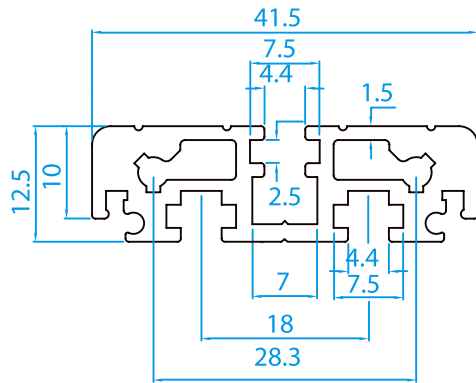
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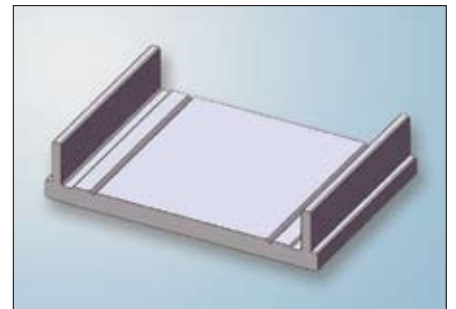
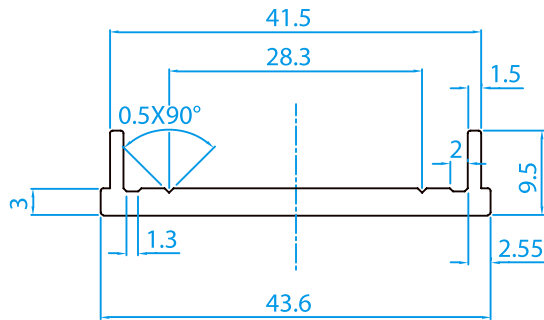
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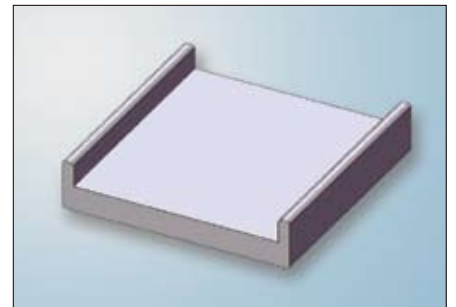
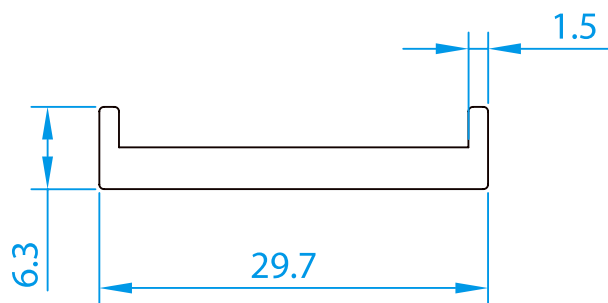
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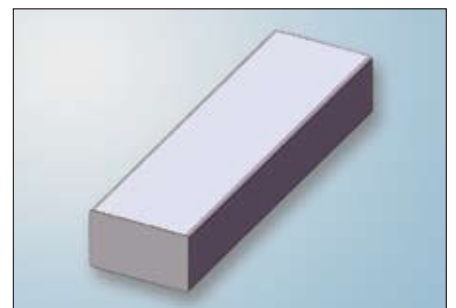
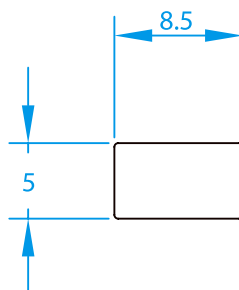
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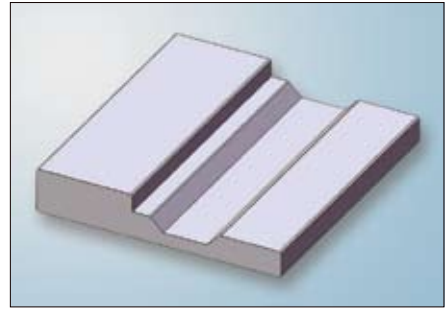
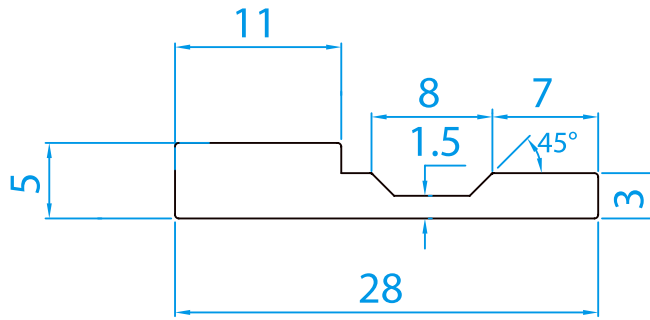
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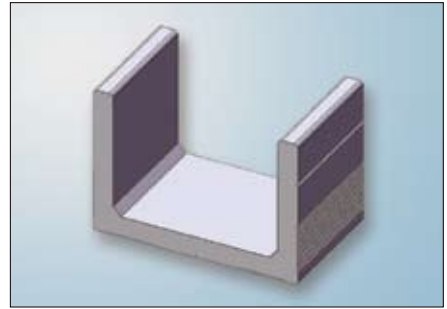
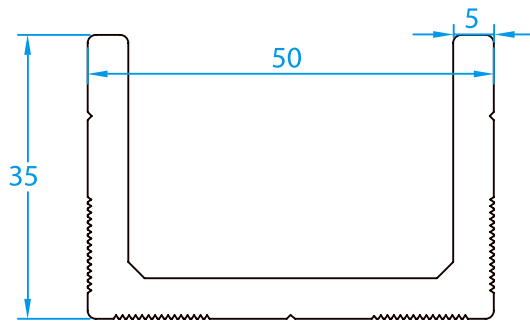
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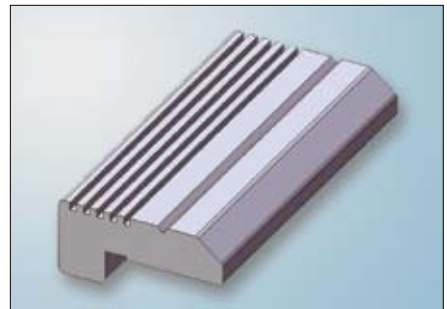
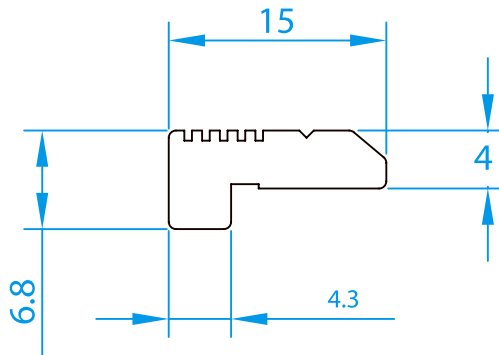
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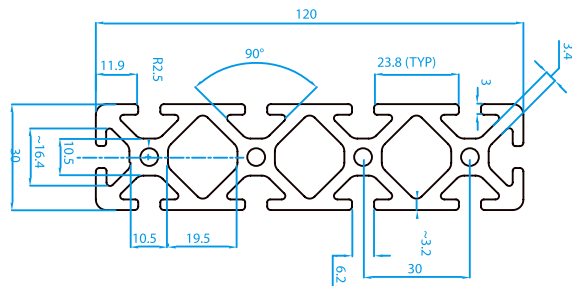
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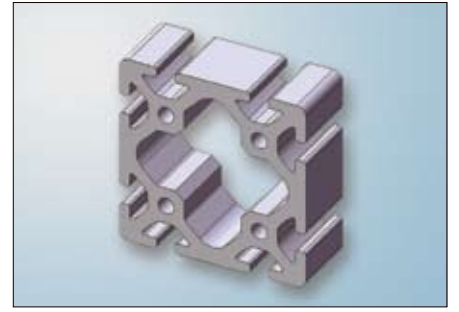
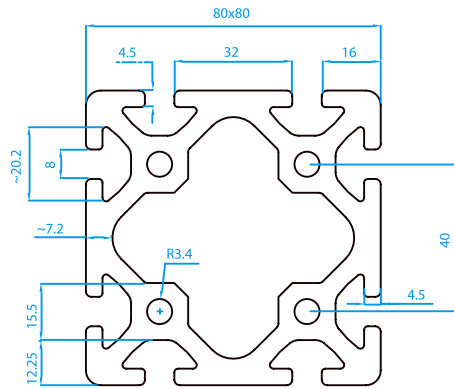
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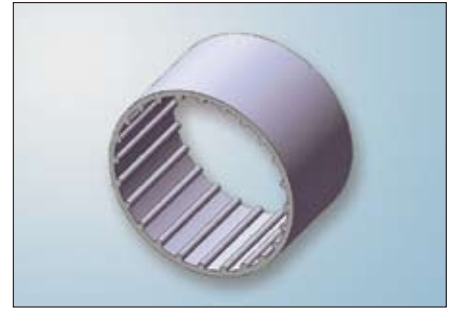
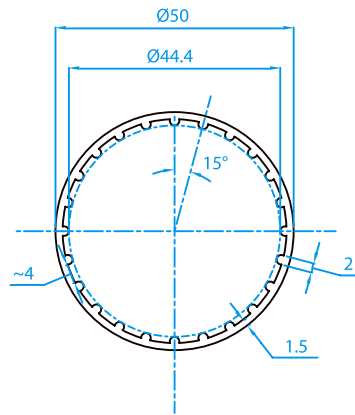
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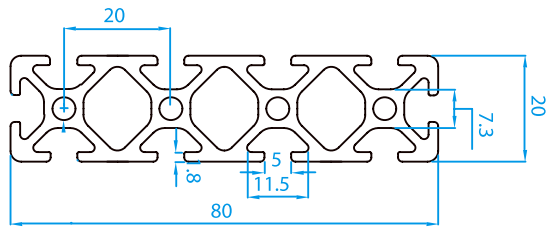
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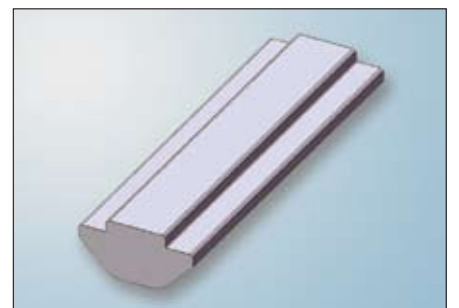
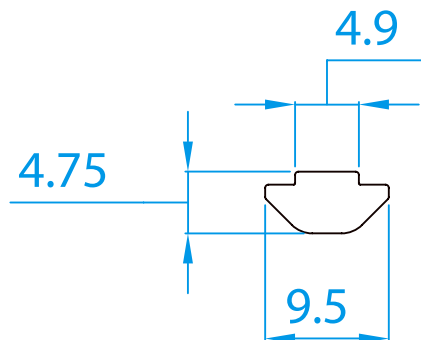
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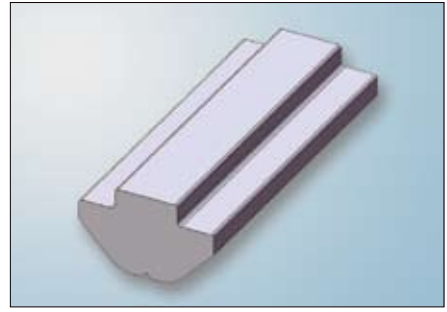
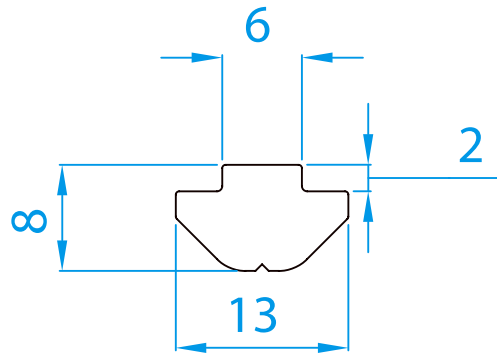
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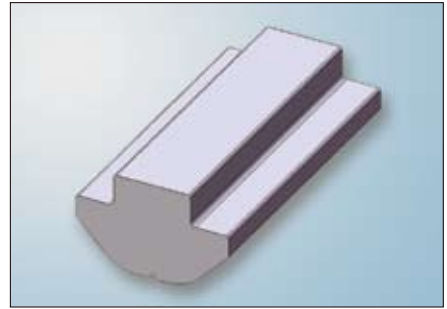
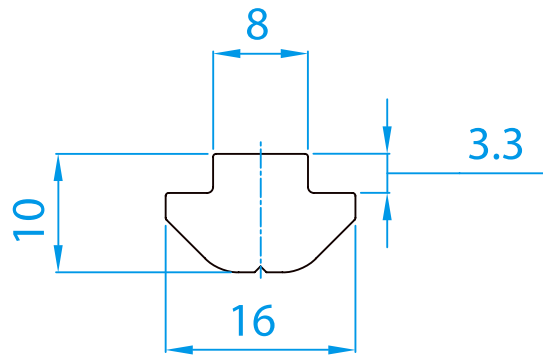
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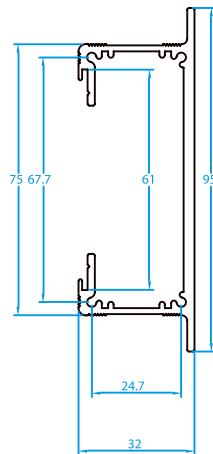
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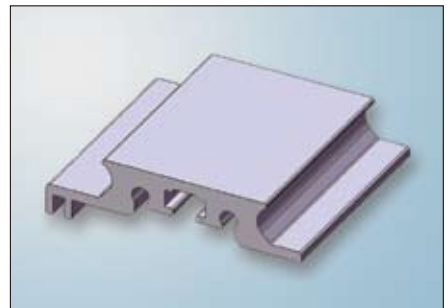
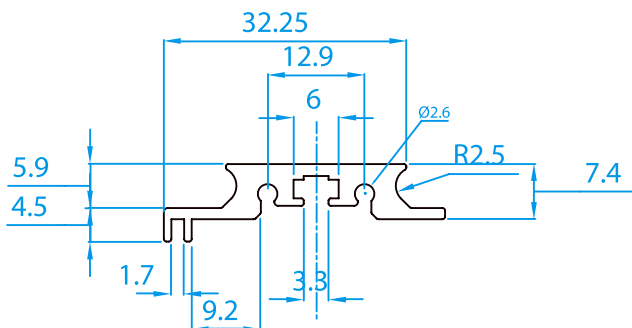
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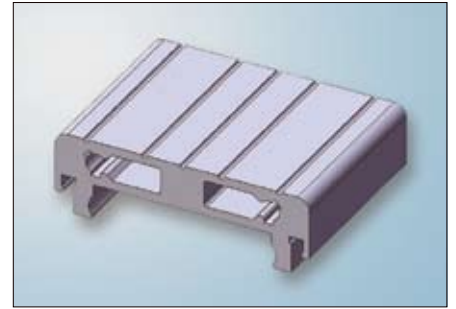
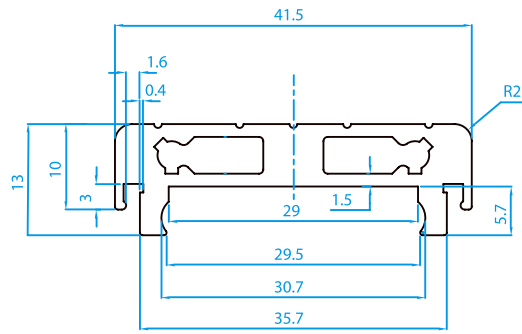
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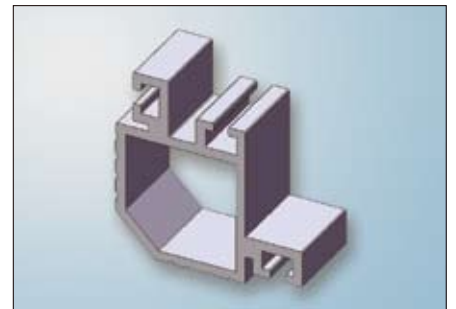
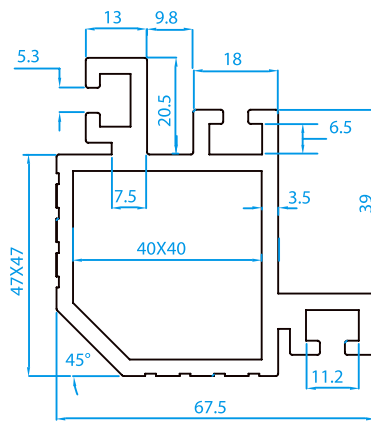
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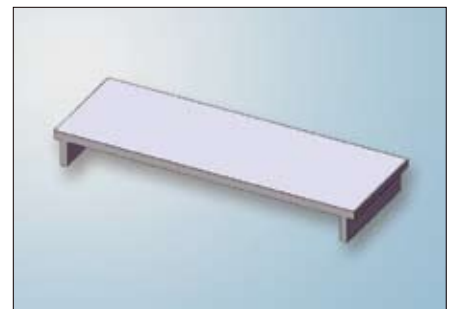
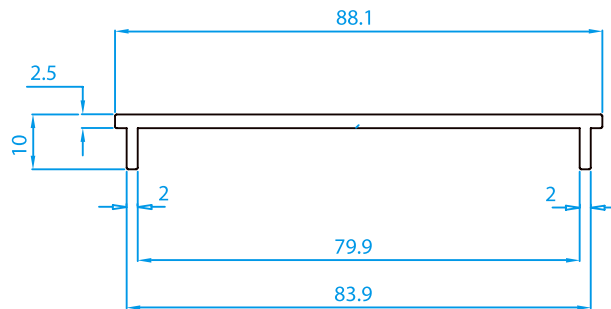
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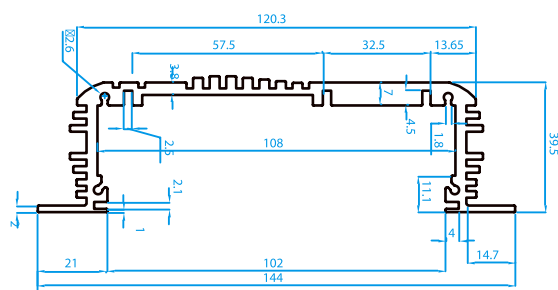
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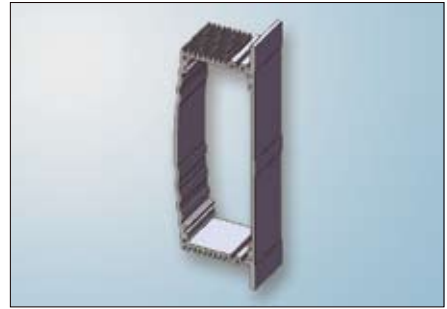
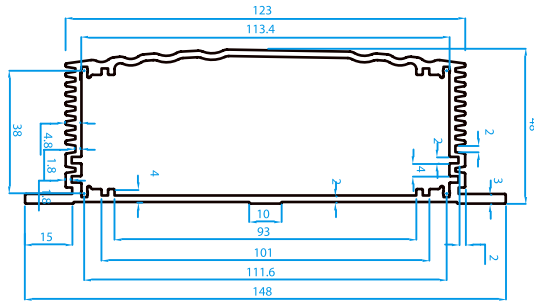
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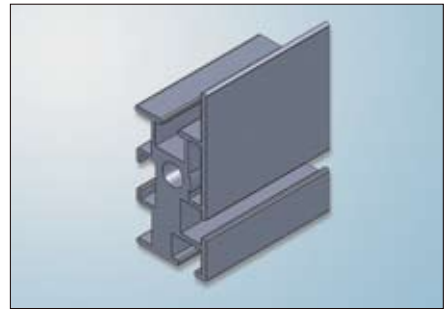
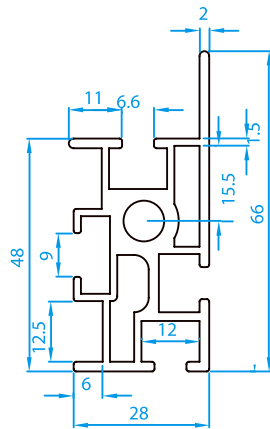
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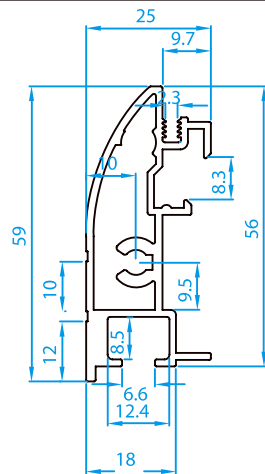
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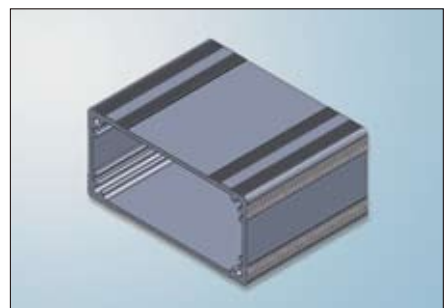
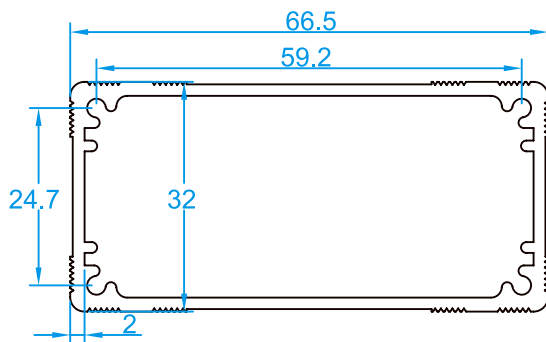
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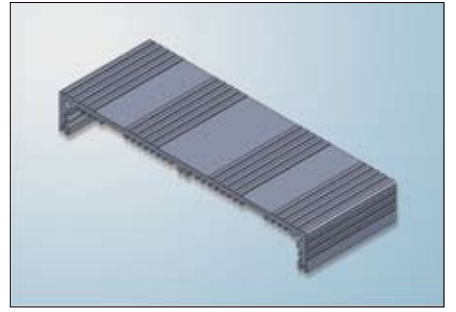
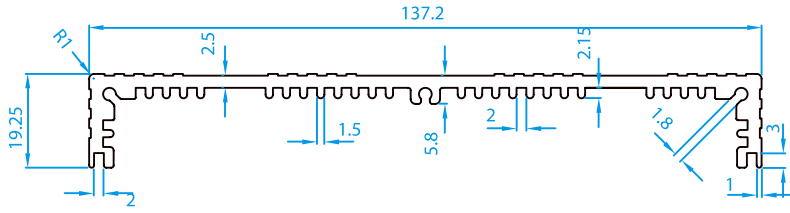
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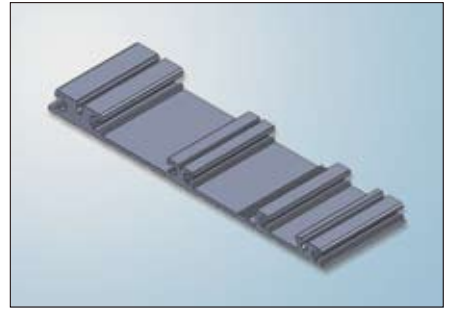
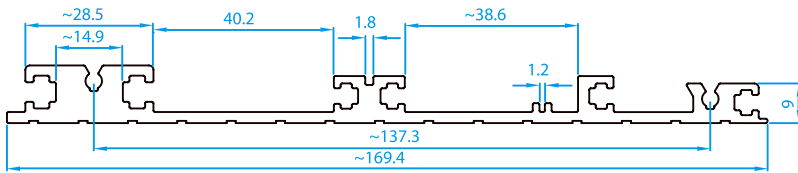
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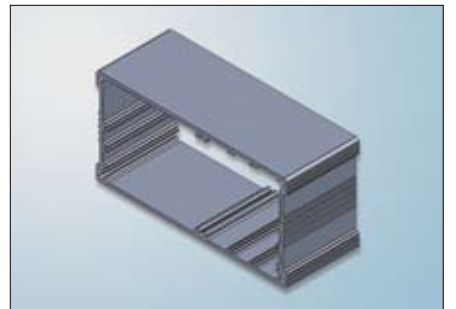
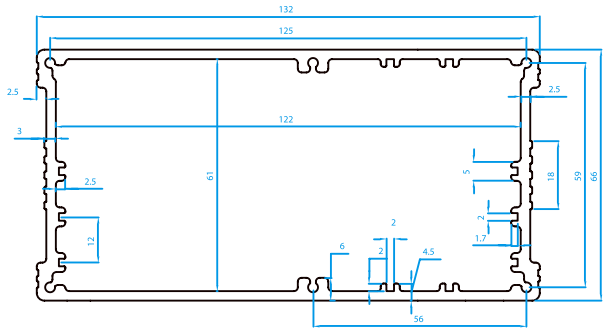
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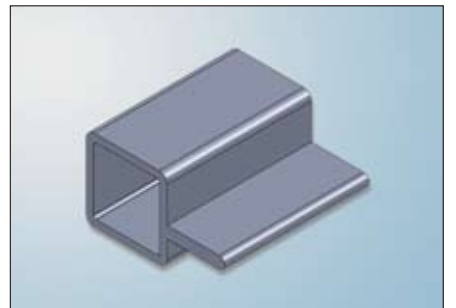
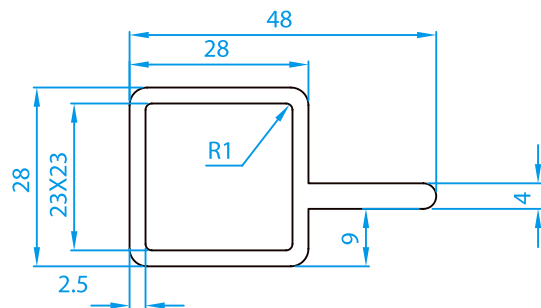
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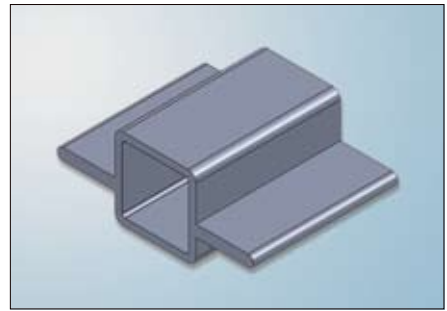
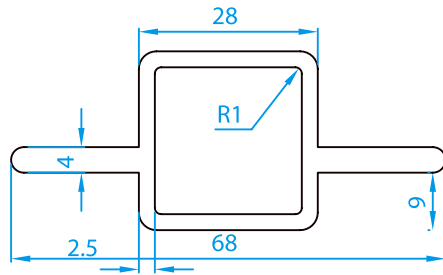
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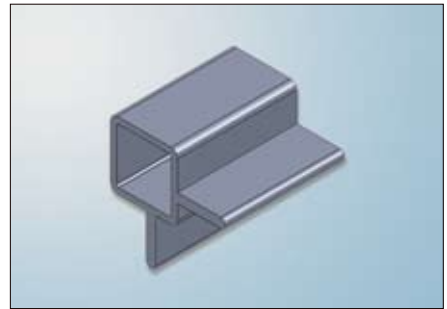
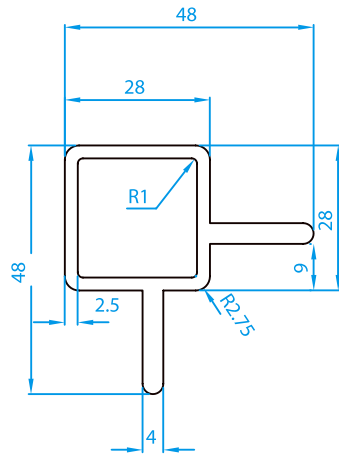
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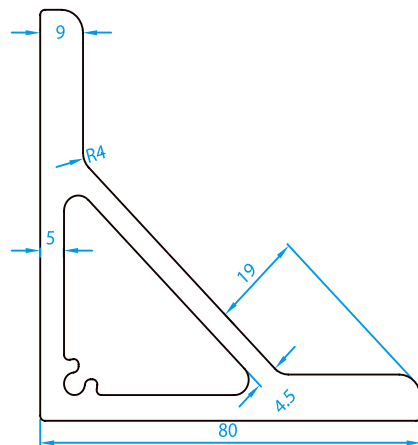
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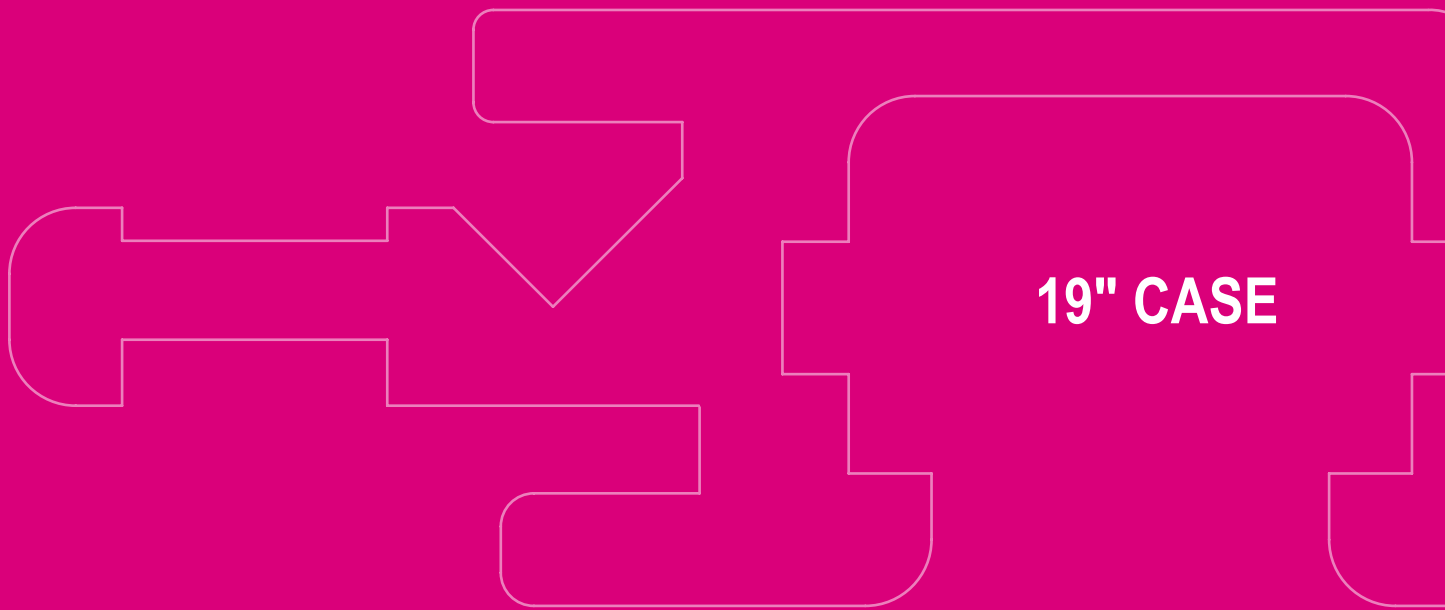


951



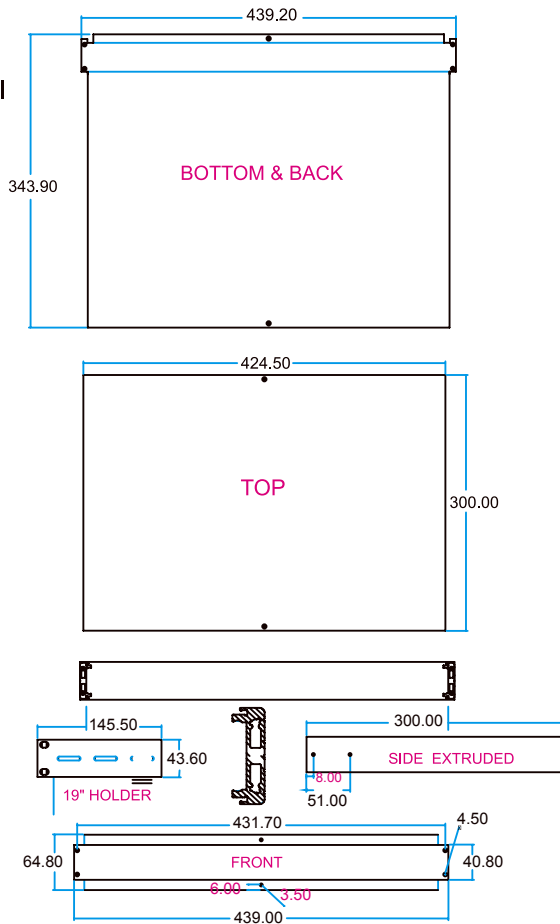
1288





19" CASE

TYPE I



● Cases

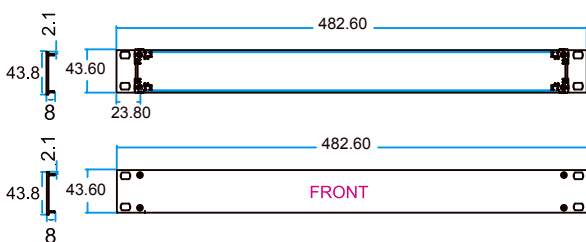
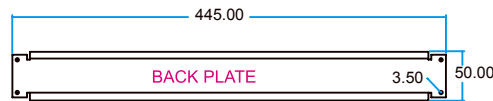
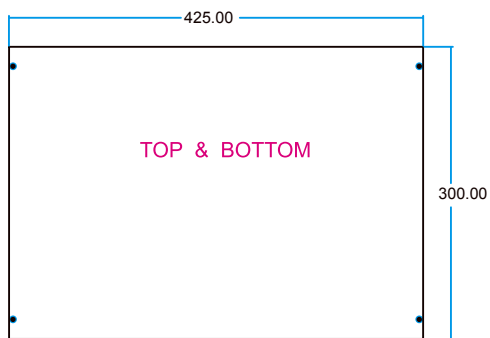
May be used as a rack mounted unit or instrument case.

Side panels: extruded aluminum section
Installation dimensions for plug in assemblies to IEC297-3

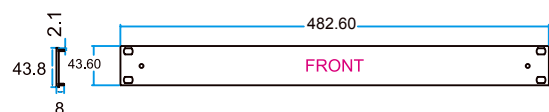
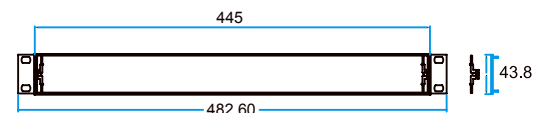
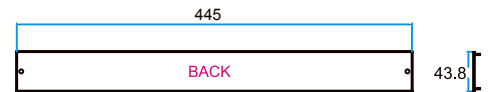
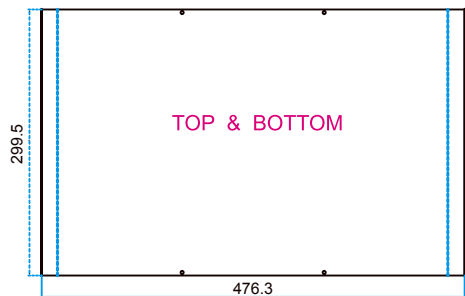
3-1) 1U



TYPE II

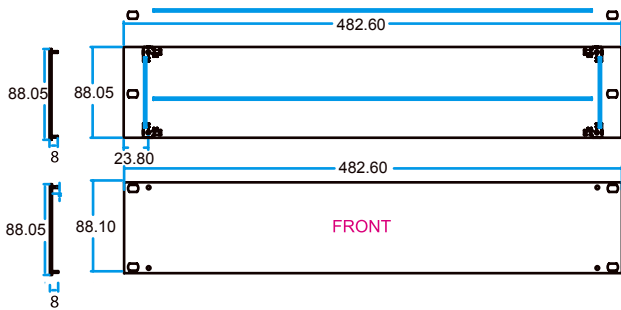
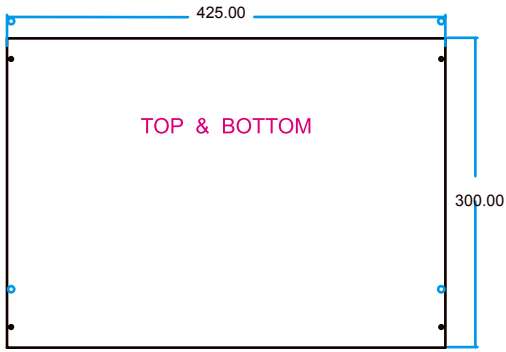


TYPE III

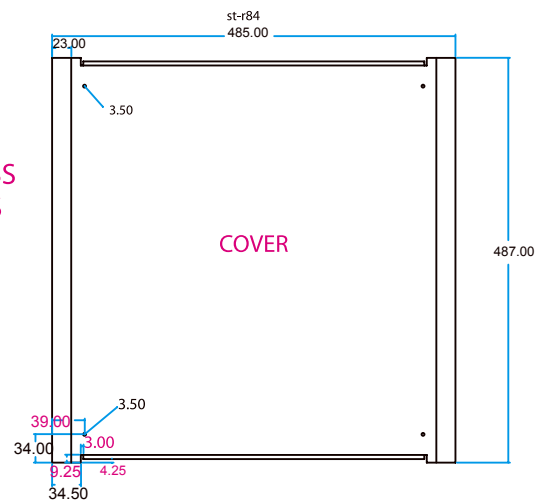
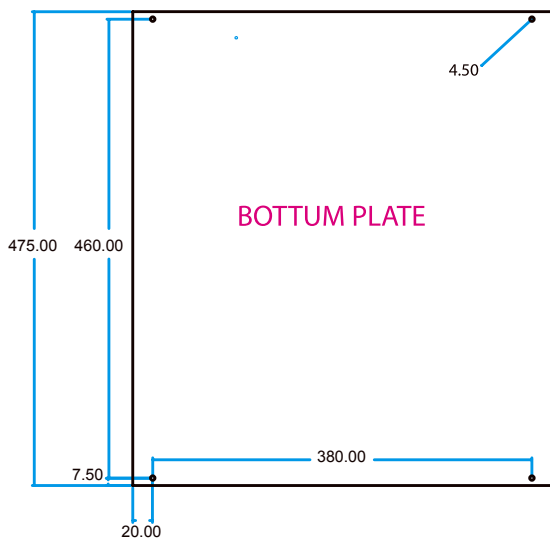
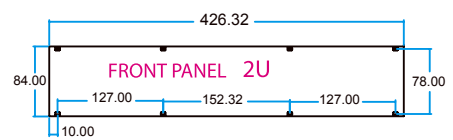
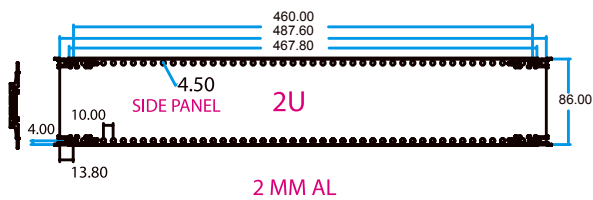


3-2) 2U

TYPE I



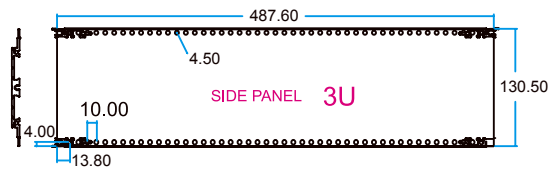
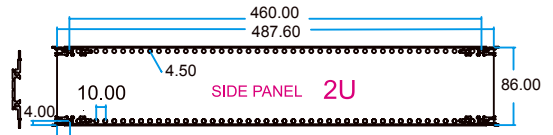
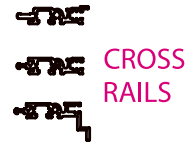
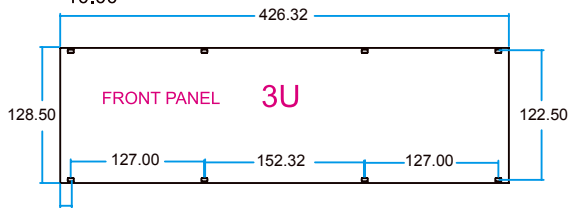
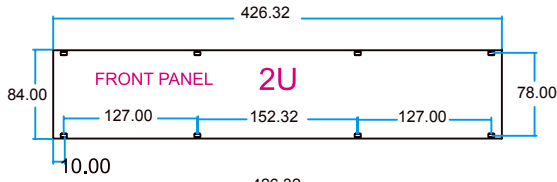
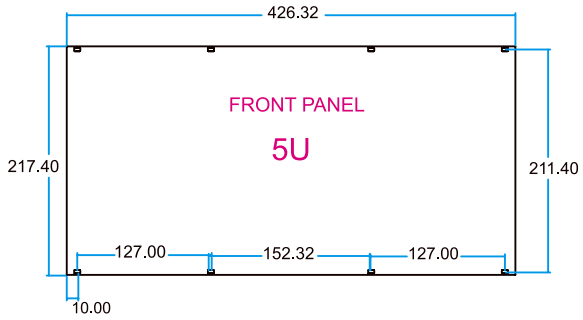
TYPE II



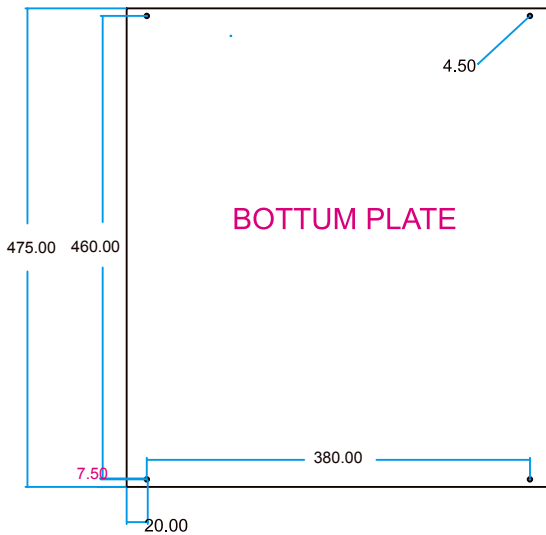
3-3) 3U... 9U



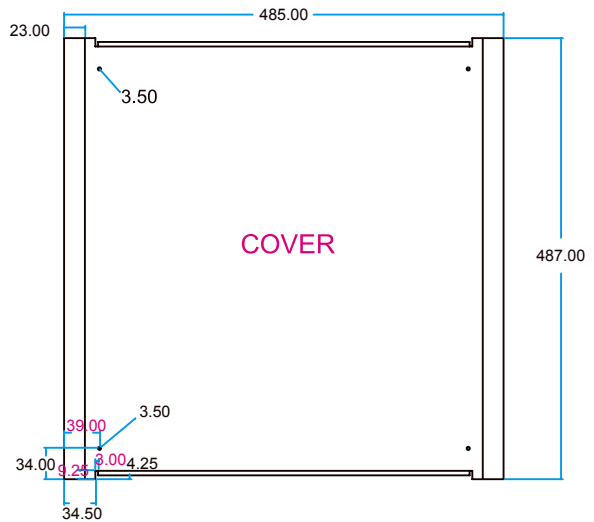
19" CASES



2 MM AL



st-r84



U	Installation Width(HP)	Installation Width(HP)	Order No.	Order No.
1	42	500		
		450		
		350		
		300		
1	63	500		
		450		
		350		
		300		
1	84	500		
		450		
		350		
		300		
2	42	500		
		450		
		350		
		300		
2	63	500		
		450		
		350		
		300		
2	84	500		
		450		
		350		
		300		
3	42	500		
		450		
		350		
		300		
3	63	500		
		450		
		350		
		300		
3	84	500		
		450		
		350		
		300		
4	42	500		
		450		
		350		
		300		
4	63	500		
		450		
		350		
		300		
4	84	500		
		450		
		350		
		300		

U	Installation Width(HP)	Installation Width(HP)	Order No.	Order No.
5	42	500		
		450		
		350		
		300		
5	63	500		
		450		
		350		
		300		
5	84	500		
		450		
		350		
		300		
6	42	500		
		450		
		350		
		300		
6	63	500		
		450		
		350		
		300		
6	84	500		
		450		
		350		
		300		
7	42	500		
		450		
		350		
		300		
7	63	500		
		450		
		350		
		300		
7	84	500		
		450		
		350		
		300		
8	42	500		
		450		
		350		
		300		
8	63	500		
		450		
		350		
		300		
8	84	500		
		450		
		350		
		300		





Row	Description	Order no
1	Top cover	
2	Cross rails	
3	Back panel	
4	Trim	
5	Front panel	
6	Cross rails	
7	Handle	
8	Mounting flanges	
9	Side panel extruded	
10	Cross rails	
11	Bottom cover	

