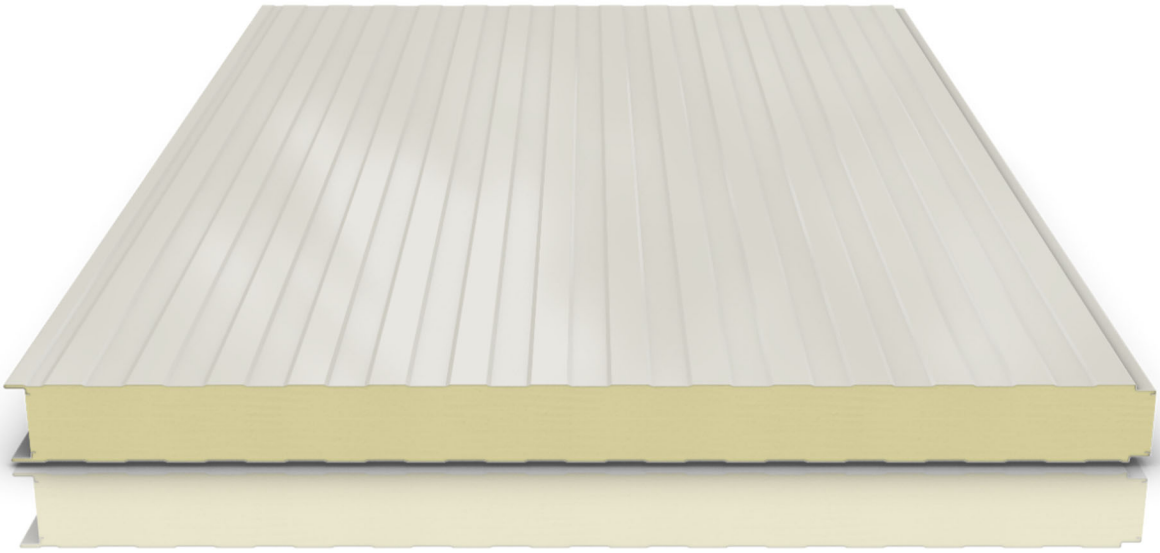
TECHNOPANEL by FORMATT

Technical Data Sheet

TFACE T PU



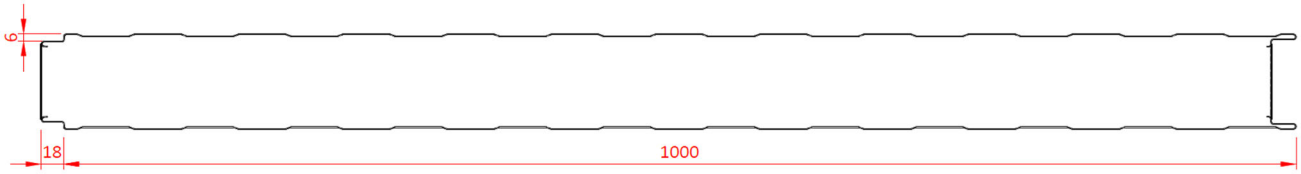
Description:

Facade sandwich panel, insulation core of polyurethane and finishing outer and inner sheet of galvanized sheet. Suitable for both vertical and horizontal mounting. The overall tightness of the joints between TFACE T panels ensures their high efficiency and makes them extremely suitable for refrigerator chambers and rooms with high demands to the thermal insulation properties.
Manufactured according to BDS EN 14509:2013

density of the instalation	37 kg/m3 *others on request

	external sheet	internal sheet
material	galvanized steel sheet, INOX, Aluminum	galvanized steel sheet, INOX, Aluminum
coating	PES, PVDF, Plastisol, Other special coating	
thickness	0.4 mm standard, other thickness on request	0.4 mm standard, other thickness on request

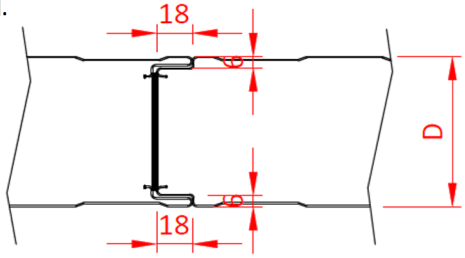
Geometry:

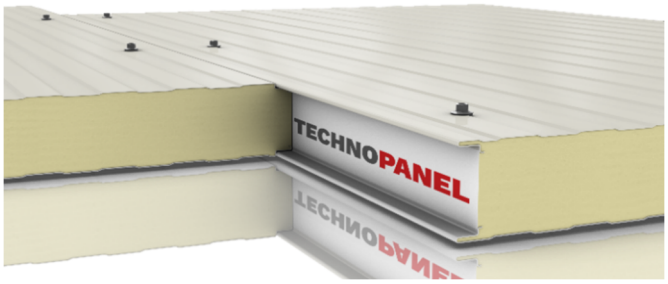


thicknesses	25, 30, 40, 50, 60, 80, 100, 120, 140, 150, 160, 180, 200 mm
lenghts	from 3000 to 16000 mm
covering width	1000 mm

Assembly:

The joint between the TFACE T wall panels is achieved through the tongue - groove method.





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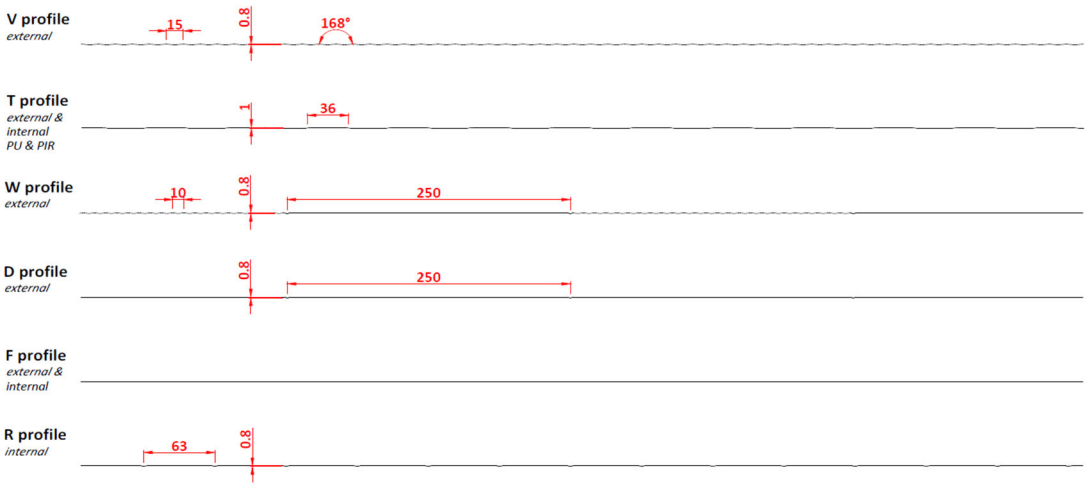
Profile:



Weight and standard packing:

D, mm	25	30	40	50	60	80	100	120	140	150	160	180	200
weight *with sheet metal 0.4/0.4, kg/m^2	7,58	7,76	8,13	8,5	8,87	9,61	10,35	11,09	11,83	12,2	12,57	13,31	14,05
standard packing, pcs/package	28	24	28	22	18	14	11	9	7	7	6	6	5

Thermotechnical characteristics:

D, mm	25	30	40	50	60	80	100	120	140	150	160	180	200
thermal conductivity coefficient, W/mK	λ = 0,022 W/mK												
thermal transmitance coef. U, W/m^{2}K	0,75	0,64	0,49	0,4	0,34	0,26	0,21	0,17	0,15	0,14	0,13	0,12	0,11
thermal transmitance coef. $U_{d,S}$, W/m2K	-	-	0,58	0,46	0,37	0,28	0,22	0,18	0,16	0,15	0,14	0,12	0,11

**U, W/m2K - coefficient of thermal transmitance regardless of joint types*

**Ud,S, W/m2K - coefficient of thermal transmittance with consideration of the types of joints according to p.A.10.4 of BDS EN 14509:2013*

Sound insulation characteristics:

The calculated weighted air sound insulation index according to BDS EN ISO 717-1:2013 for a TFACE T PU 100 panel with an outer sheet metal 0.40 mm and with an inner sheet metal 0.40 mm is Rw(C;Ctr) = 26 (-3; -5) dB

Fire resistance and reaction to fire:

D, mm	25	30	40	50	60	80	100	120	140	150	160	180	200
class of reaction to fire	Ds3, d0												
fire resistance, min	-	-	-	-	-	E20	E20	E20	E20	E20	E20	E20	E20

Size of self - tapping screw F 5.5/6.3 x L with washer V16/3 for installation on metal construction:

D, mm	25	30	40	50	60	80	100	120	140	150	160	180	200
min recommended lenght, mm	62	62	80	95	95	115	135	155	175	195	195	235	235

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Load capacity in kN/m²:

Panel thickness:	Static scheme:					
	L = 3,0m	L = 4,0m	L = 5,0m	L = 6,0m	L = 7,0m	L = 8,0m
TFACE PU 25 0,5/0,4	0,14	0,12	0,05	0,03	0,02	0,01
TFACE PU 30 0,5/0,4	0,60	0,27	0,32	0,10	0,04	0,03
TFACE PU 40 0,5/0,4	1,69	0,83	0,42	0,24	0,15	0,10
TFACE PU 50 0,5/0,4	2,21	1,24	0,73	0,42	0,26	0,18
TFACE PU 60 0,5/0,4	2,73	1,53	0,98	0,61	0,38	0,26
TFACE PU 80 0,5/0,4	3,76	2,12	1,36	0,93	0,64	0,43
TFACE PU 100 0,5/0,4	4,80	2,70	1,73	1,19	0,87	0,62
TFACE PU 120 0,5/0,4	5,55	3,12	2,00	1,38	1,01	0,78
TFACE PU 140 0,5/0,4	6,31	3,55	2,27	1,57	1,15	0,89
TFACE PU 150 0,5/0,4	6,69	3,77	2,41	1,67	1,23	0,94
TFACE PU 160 0,5/0,4	7,07	3,98	2,55	1,77	1,30	0,99
TFACE PU 180 0,5/0,4	7,82	4,40	2,82	1,96	1,44	1,10
TFACE PU 200 0,5/0,4	8,58	4,83	3,09	2,15	1,58	1,21

Panel thickness:	Static scheme:					
	L = 3,0m	L = 4,0m	L = 5,0m	L = 6,0m	L = 7,0m	L = 8,0m
TFACE PU 25 0,5/0,4	0,42	0,21	0,11	0,07	0,04	0,03
TFACE PU 30 0,5/0,4	1,39	0,62	0,32	0,21	0,11	0,08
TFACE PU 40 0,5/0,4	2,30	1,28	0,81	0,56	0,37	0,25
TFACE PU 50 0,5/0,4	2,61	1,53	0,97	0,67	0,49	0,38
TFACE PU 60 0,5/0,4	2,93	1,77	1,12	0,78	0,57	0,44
TFACE PU 80 0,5/0,4	3,56	2,26	1,44	0,99	0,73	0,56
TFACE PU 100 0,5/0,4	4,19	2,75	1,75	1,21	0,89	0,68
TFACE PU 120 0,5/0,4	4,73	3,23	2,13	1,47	1,08	0,83
TFACE PU 140 0,5/0,4	5,27	3,71	2,51	1,73	1,27	0,97
TFACE PU 150 0,5/0,4	5,55	3,95	2,70	1,87	1,37	1,05
TFACE PU 160 0,5/0,4	5,82	4,19	2,88	2,00	1,47	1,12
TFACE PU 180 0,5/0,4	6,36	4,67	3,26	2,26	1,66	1,26
TFACE PU 200 0,5/0,4	6,91	5,16	3,64	2,52	1,85	1,41

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Panel thickness:	Static scheme:			
	L = 3,0m	L = 4,0m	L = 5,0m	L = 6,0m
TFACE PU 25 0,5/0,4	0,42	0,21	0,11	0,07
TFACE PU 30 0,5/0,4	1,39	0,62	0,32	0,21
TFACE PU 40 0,5/0,4	2,70	1,49	0,95	0,59
TFACE PU 50 0,5/0,4	2,97	1,78	1,15	0,80
TFACE PU 60 0,5/0,4	3,25	2,08	1,36	0,94
TFACE PU 80 0,5/0,4	3,80	2,67	1,76	1,22
TFACE PU 100 0,5/0,4	4,35	3,26	2,17	1,50
TFACE PU 120 0,5/0,4	4,91	3,68	2,59	1,83
TFACE PU 140 0,5/0,4	5,47	4,10	3,02	2,16
TFACE PU 150 0,5/0,4	5,76	4,31	3,23	2,32
TFACE PU 160 0,5/0,4	6,04	4,52	3,44	2,48
TFACE PU 180 0,5/0,4	6,60	4,94	3,87	2,81
TFACE PU 200 0,5/0,4	7,17	5,37	4,30	3,14

Notes:

*The specified values are obtained on the basis of experimental tests from accredited laboratory and according the procedures described in standard EN14509

*Values in red color indicate loads for which the deflection limit fu=L/100 is reached.

*Values in blue color indicate loads obtained from shear work.

*The values of the allowable additional loads refer to panels installed under specified static systems and uniformly distributed load simulating respectively at roof panels - from snow, for facade panels - wind load.

*The values in the tables do not take into consideration the thermal effect. In cases where a detailed check is needed, as well as in cases different from those described in the load capacity tables, it is necessary to contact the Technopanel's Engineering Department.

*Construction calculations are the responsibility of the designer.

*The width of the supports of the sandwich panel construction shouldn't be less than 60mm.

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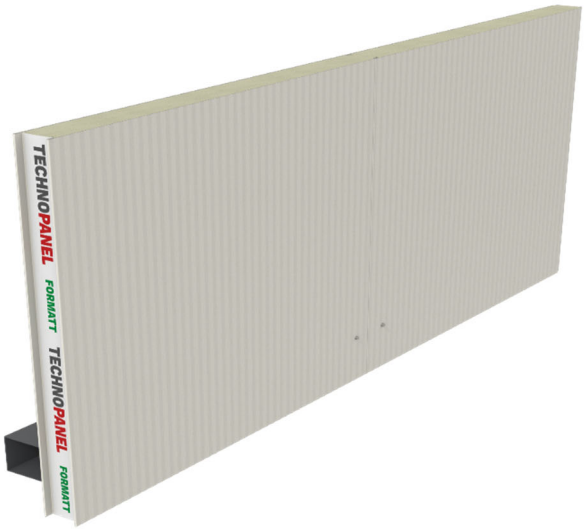
Main recommendations and details:

• Cutting tools must ensure a clear and easy cut, without damages to the panel surface. Fine-tooth jigsaws are considered most suitable for cutting purposes. Circular saws can only be used, if they can provide accurate and clear cut. Angle grinders equipped with cutting discs are not suitable due to the overheating and formation of surface rust.

• During installation, special attention shall be paid to the air tightness of joints. No air gap shall be left in the vertical joint between two adjacent panels.

• For the panels' installation, the use of self - tapping screws with a washer is recommended. The type of screws shall depend on the thickness of the panel and the supporting structure. The recommended length of the screw is indicated in the table above "Size of self - tapping screw F 5.5/6.3 x L with washer V16/3 for installation on metal construction". Short drill screws are suitable for installation in steel up to 6mm. Those with a long drill are for steel with a thickness of up to 16mm. In order to ensure adequate attachment of the panel to the structure, it is essential to keep the screws perpendicular to the panel surface while driving them into the panel.

• Detail Vertical Joint

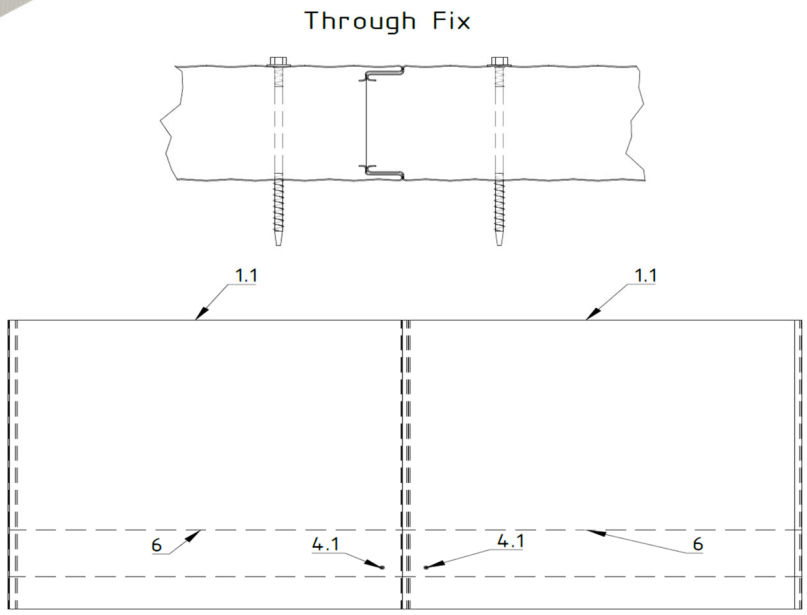


Legend:

1.1 - Wall Sandwich Panel

4.1 - Self tapping screw

6 - Structure



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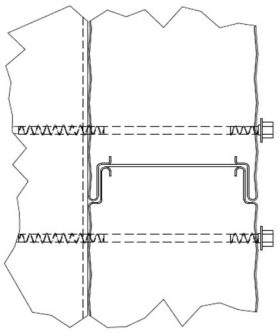
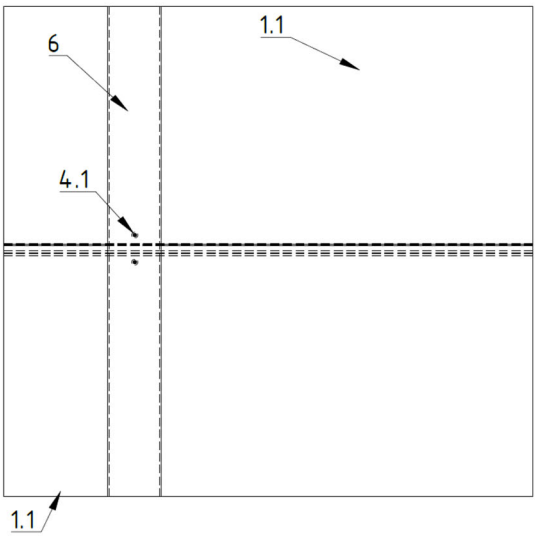
• Detail Horisontal Joint



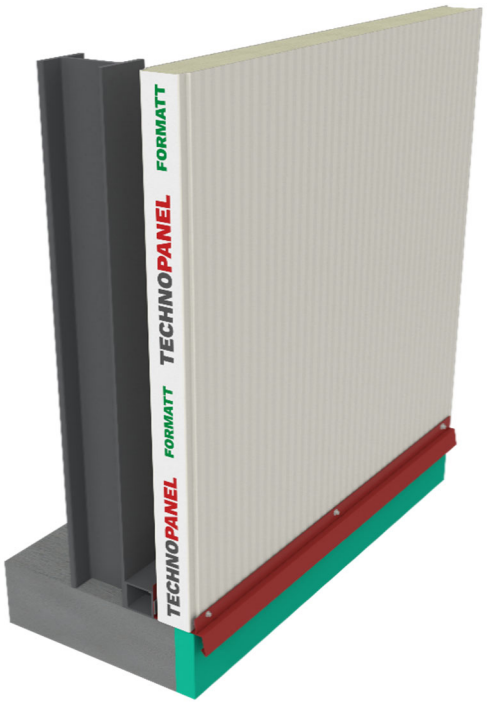
Through Fix



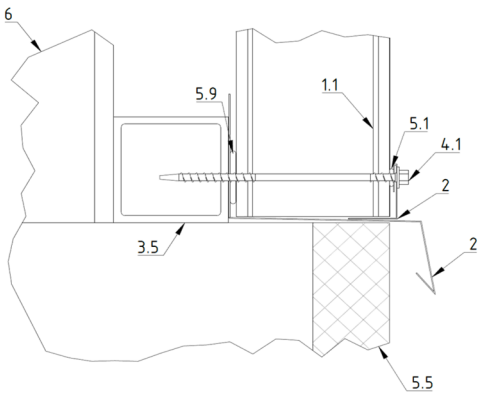
Legend:

1.1 - Wall Sandwich Panel
4.1 - Self tapping screw
6 - Structure

• Standard Detail Sill



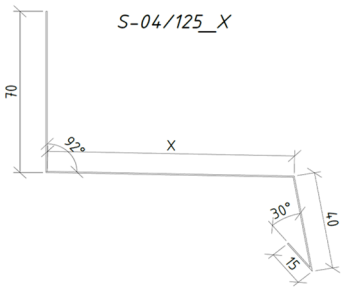
SVH-2503



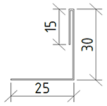
Legend:

1.1 - Wall Sandwich Panel
2 - Flashing
3.5 - □ profile
4.1 - Self tapping screw
5.1 - Butyl tape
5.5 - Insulation
5.9 -Polyethylene gasket PE
6 - Structure

S-04/125_X



C-04/70



*npuemo/accepted: x=D+20+y

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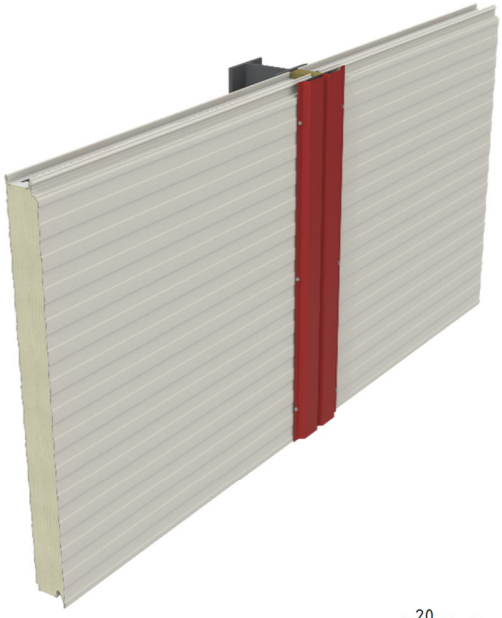
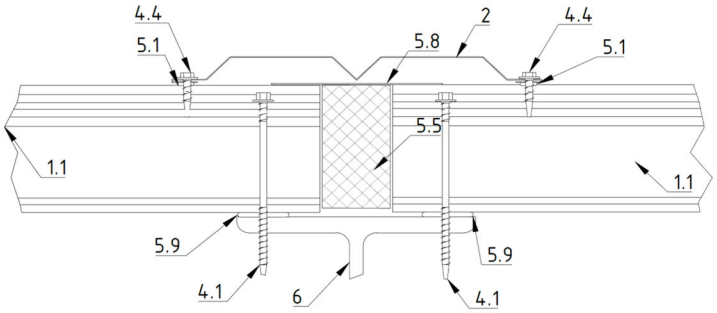
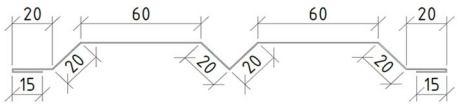
• Standard Detail Extension Joint



EVH - 2501



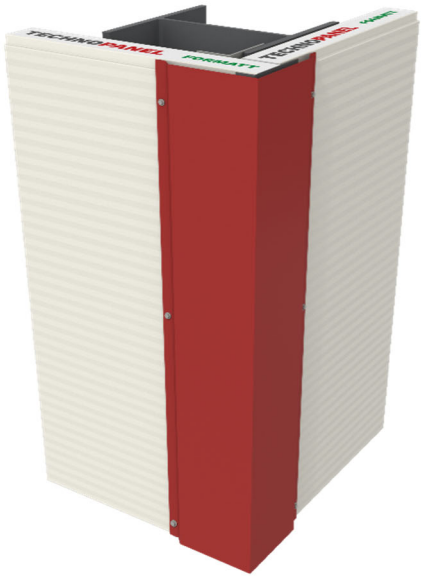
J-12/270



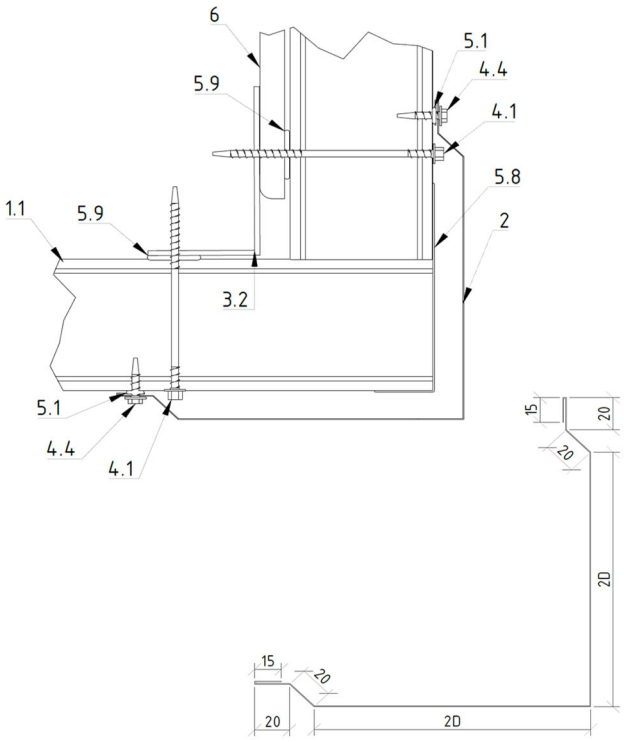
Legend:

1.1 - Wall Sandwich Panel
2 - Flashing
3.1 - U profile
4.1 - Self tapping screw
4.4 - Screw
5.1 - Butyl tape
5.5 - Insulation
6 - Structure

• Standard Detail External Corner



CVH-2502



Legend:

1.1 - Wall Sandwich Panel
2 - Flashing
3.2 - L profile
4.1 - Self tapping screw
4.4 - Screw
5.1 - Butyl tape
5.5 - Insulation
5.8 - ALU BRICO
5.9 -Polyethylene gasket PE
6 - Structure

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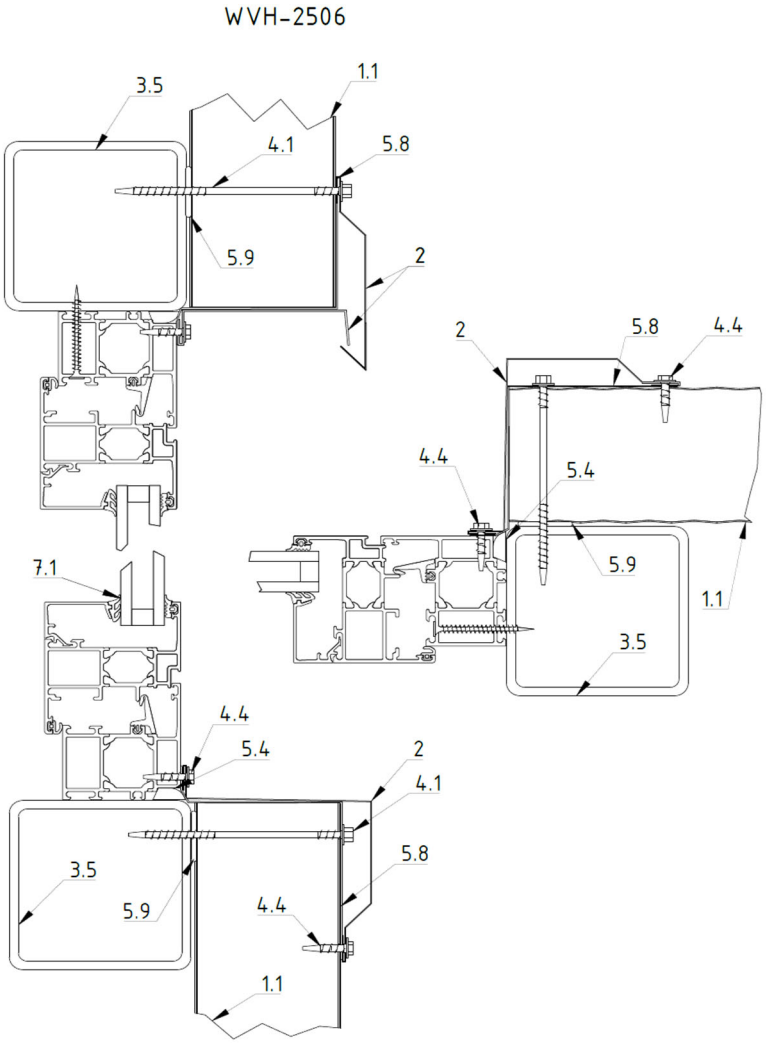
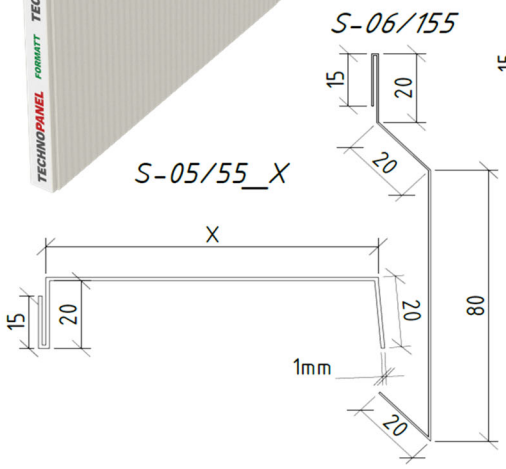
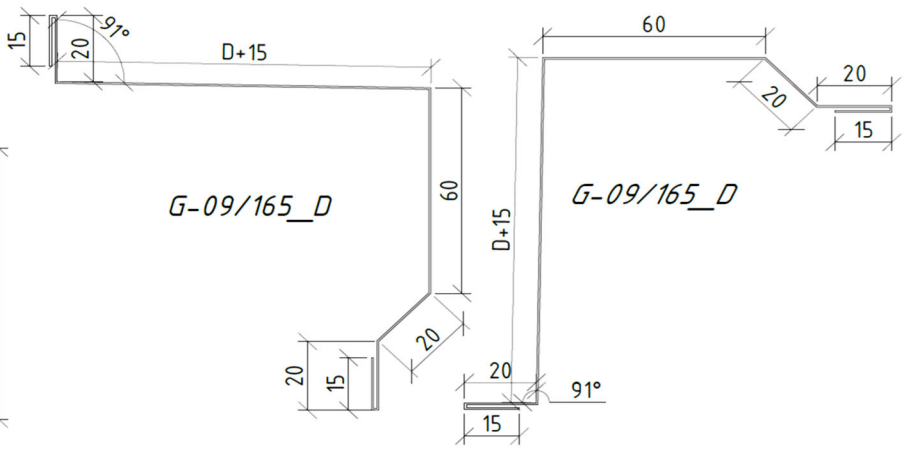
• Standard detail window - top, sides and bottom







Legend:

1.1 - Wall Sandwich Panel
2 - Flashing
3.5 - □ profile
4.1 - Self tapping screw
4.4 - Screw
5.4 - Silicone gasket
5.8 - ALU BRICO
5.9 -Polyethylene gasket PE
7.1 - Window

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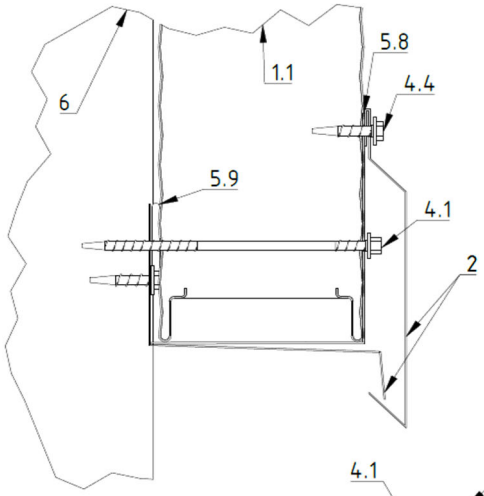
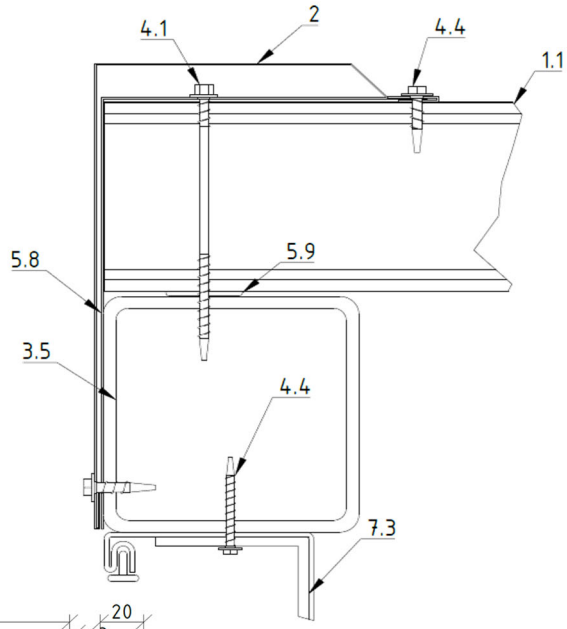
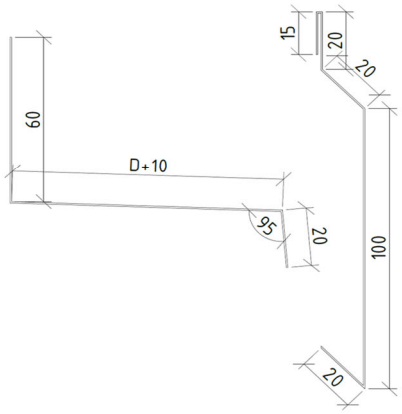
• Standard Detail Door

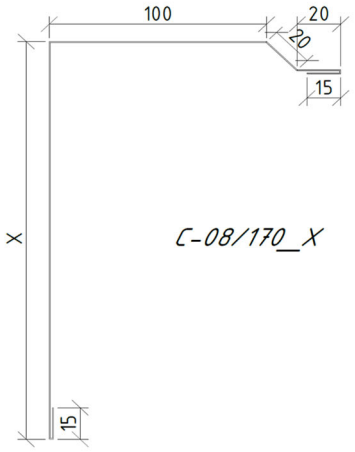




S-03/90_D



S-06/175



C-08/170_X

Legend:

1.1 - Wall Sandwich Panel
2 - Flashing
3.5 - □ profile
4.1 - Self tapping screw
4.4 - Screw
5.8 - ALU BRICO
5.9 -Polyethylene gasket PE
7.3 - Roller shutter door

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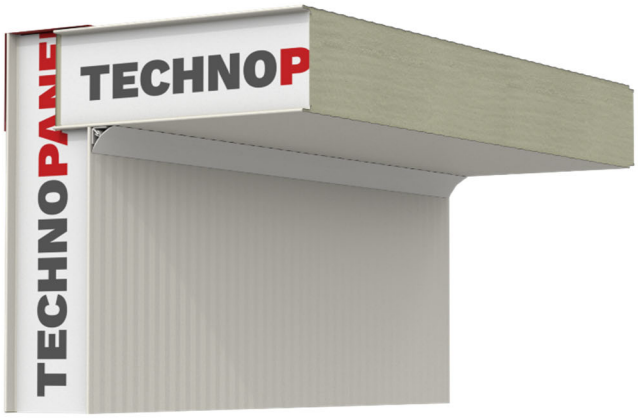
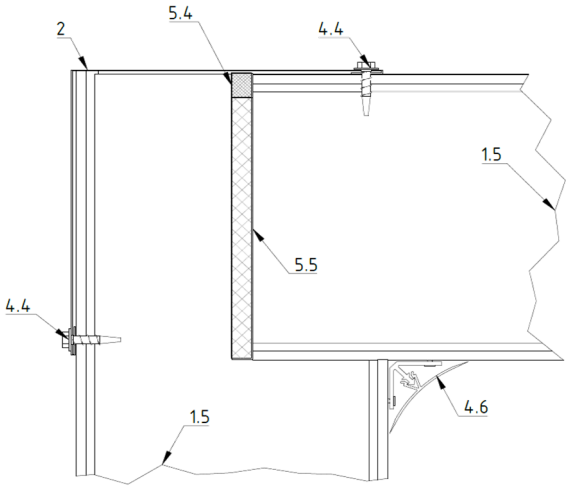
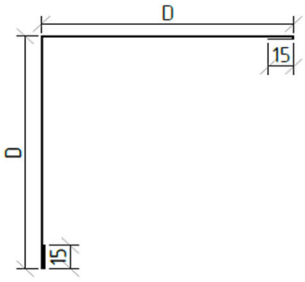
• Standard Detail Frigopanels Corner



CF-2502



C-06/30_2D

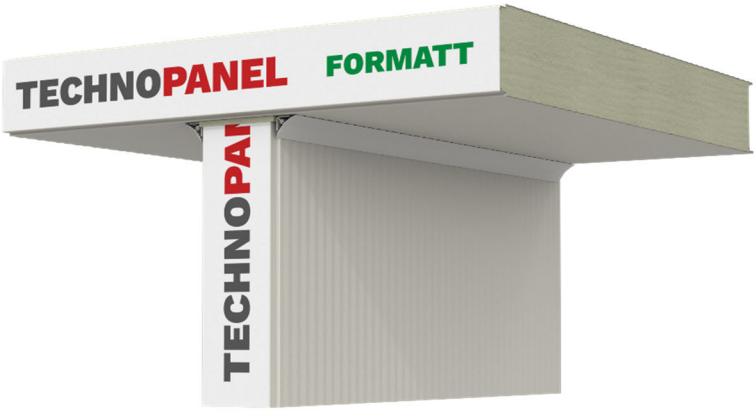


PVC Profiles

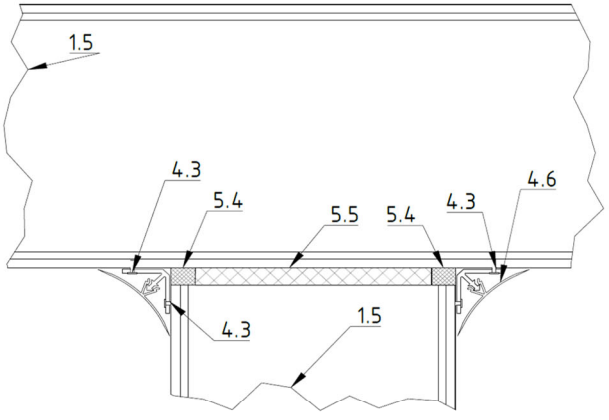
Legend:

1.5 - Frigopanels
2 - Flashing
4.4 - Screw
4.6 - PVC profile
5.5 - Insulation PU
5.4 - Silicone gasket

• Standard Detail Frigopanels Partition Walls



PF(c)-2501



PVC Profiles

Legend:

1.5 - Frigopanels
4.3 - Rivet
4.6 - PVC профил
5.5 - Insulation PU
5.4 - Silicone gasket

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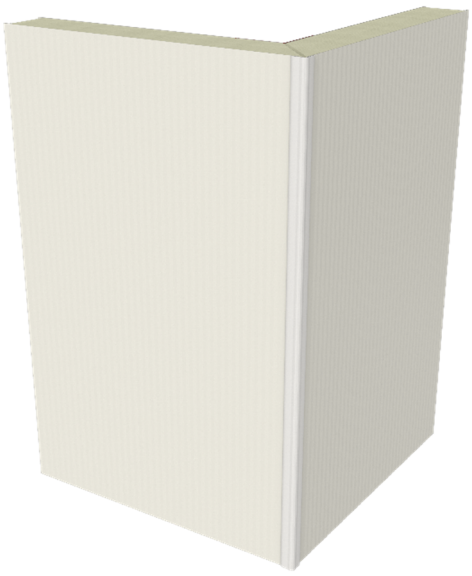
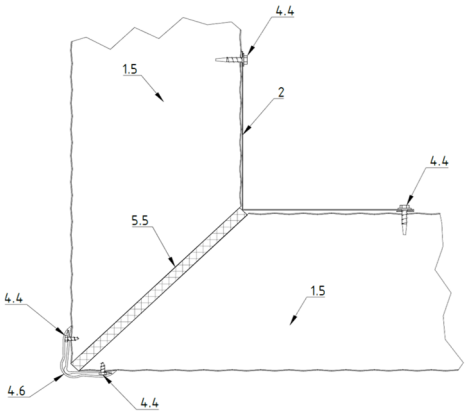
• Standard Detail Frigopanels Corner

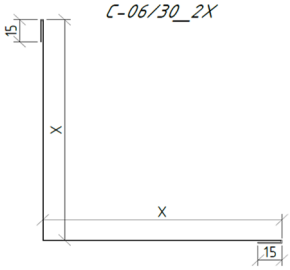


CF-2503



PVC Profiles

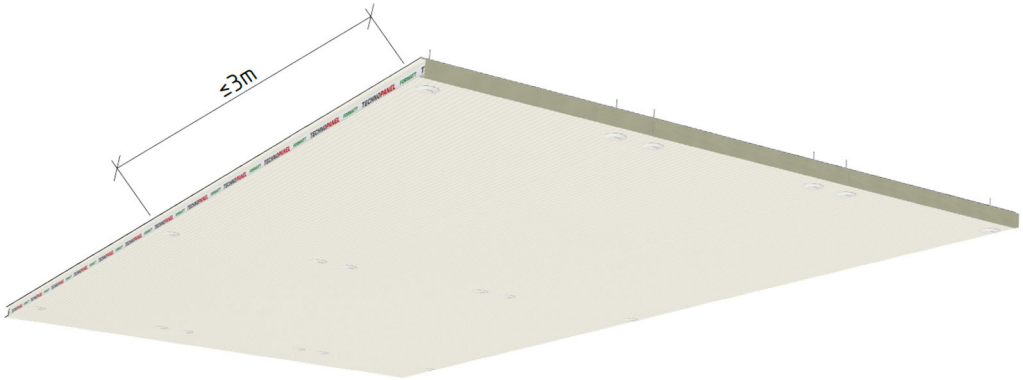
C-06/30_2X

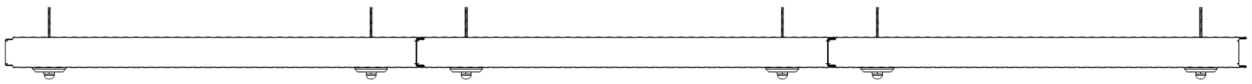


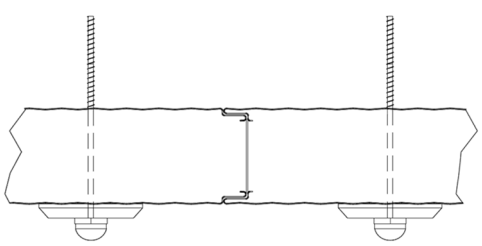
Legend:

1.5 - Frigopanels
2 - Flashing
4.4 - Screw
4.6 - PVC profile
5.5 - Insulation PU

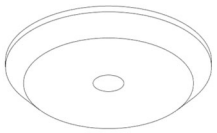
• Standard Detail Frigopanels PVC Washer and Fixture







polyamide washer
d 80, t 6mm



polyamide closed nut

Polyamide stud

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• Standard color range for TFACE T PU

Grey White RAL 9002 group I	White Aluminium RAL 9006 group II	Pure White RAL 9010 group I
e: F, W, L, R *i: F, W, L, R*	*e: F, W, L, R* *i: F, W, L, R*	*e: W* *i: F, W, R*

Legend:

e: outer metal sheet
i: inner metal sheet

F: TFACE S facade panels
W: TFACE T wall panels

R: TTOP roof panels
L: double labyrinth joint panels

· The described colours should be interpreted as approximate.

· No guarantee for identic color shades on partial or additional deliveries due to the possibility of using different coils.

· In order to avoid nuance differences, complete information should be provided when ordering.

· Larger shade differences are possible with PVDF coatings.

· Additional panels in reserve should be calculated when ordering specific colours.

· Large temperature differences may occur between the internal and the sun exposed external sheet of the sandwich panels. As a result of the high coefficient of thermal expansion of the sheet, bending and tension stresses can be obtained in the cross-section of the panels. Special attention should be paid in this direction for colours of II and III colour group, and particularly for sandwich panels with PIR insulation core.

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