

TOPANEL[®]
INSULATED PANELS



www.topanel.ro



Topanel, an 8 million Euro Romanian investment, represents the most modern insulated panels manufacturing unit in Romania.

Strategically positioned in the center of the country, the new manufacturing unit ensures an ideal cost for the finished product, being the logical choice in this respect.

Topanel manufactures the entire range of steel panels with polyurethane, mineral wool and polystyrene insulation.

State of the art PU.MA-Italy machinery ensures an exquisite quality for the Topanel thermo-insulated panels.

Topanel provides adequate and well documented solutions for nearly any type of application, using either sandwich elements, conventional elements or combined products.

Topanel proposes the best products for any type of application.

Thus, Topanel provides:

- one of the widest ranges of environmentally friendly products and which can be recycled for the construction of industrial buildings
- close-to-market manufacturing bases, thus ensuring a prompt delivery
- well motivated and qualified personnel which can provide specialized consultancy
- top quality products at attractive prices

TOPANEL PANELS TRADING is currently present in the country's major cities through representative offices (in Bucharest, Cluj, Constanta, Iasi, Timisoara) where trained staff can provide expert advice to all potential clients.

TOPANEL has a large network of distribution partners who can ensure all our products nationwide.

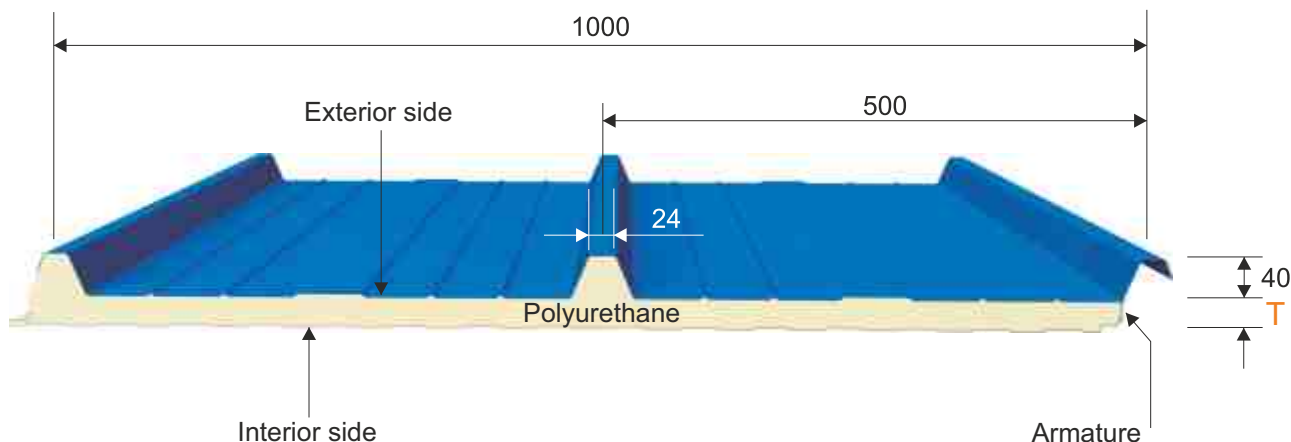
TOPANEL TRADING PANELS is present with subsidiaries in Ukraine, Serbia, Republic of Moldova, Bulgaria and Hungary.

TOPANEL also exported significant quantities of sandwich panels by major companies partner in Germany, Belgium and France.

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Self-supporting steel insulated panel from polyurethane, equipped with 3 folds, designed for tilted roofs with a minimum inclination of 7%.



Upon request, thermo-insulated panels of polyisocyanurate (PIR) foam, with a fire resistance of 30 min. may be manufactured.

Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.5 mm thick steel exterior side, and a 0.4 mm thick steel interior side, subject to uniformly distributed loads (p).

T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
30	3,70	3,20	2,80	2,55	2,30	2,00	1,75	1,60
40	3,95	3,45	3,10	2,80	2,50	2,15	1,95	1,70
50	4,20	3,60	3,20	2,95	2,65	2,30	2,00	1,80
60	4,40	3,80	3,45	3,10	2,75	2,40	2,15	1,95
80	4,85	4,15	3,85	3,50	3,05	2,70	2,40	2,15
100	5,30	4,95	4,25	3,95	3,45	3,10	2,80	2,55

T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
30	4,15	3,60	3,20	2,90	2,55	2,20	2,00	1,80
40	4,40	3,85	3,45	3,10	2,80	2,40	2,15	2,00
50	4,65	4,05	3,60	3,30	2,95	2,55	2,30	2,10
60	4,95	4,25	3,85	3,50	3,10	2,70	2,40	2,25
80	5,45	4,65	4,20	3,85	3,50	2,95	2,70	2,45
100	6,20	5,80	5,25	4,85	4,25	3,55	3,15	2,90

Table of admissible loads *

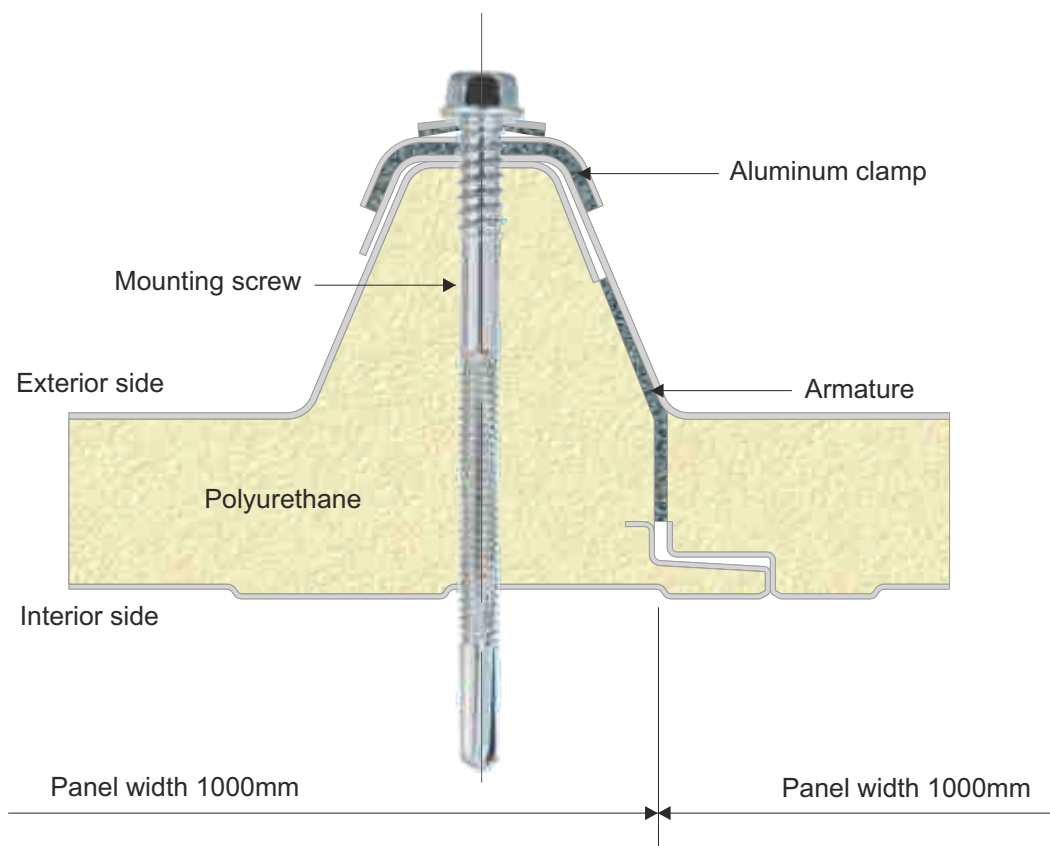
Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.6 mm thick aluminum exterior side, and a 0.5 mm thick aluminum interior side, subject to uniformly distributed loads (p).

T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
30	2,80	2,40	2,15	1,95	1,75	1,55	1,35	1,15
40	3,05	2,70	2,40	2,20	1,95	1,75	1,55	1,35
50	3,45	3,00	2,70	2,45	2,20	1,90	1,70	1,51
60	3,85	3,30	3,00	2,70	2,40	2,10	1,80	1,65
80	4,60	3,95	3,55	3,15	2,85	2,50	2,10	1,82
100	5,00	4,65	4,05	3,65	3,10	2,85	2,35	2,00

T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
30	3,10	2,70	2,40	2,20	1,95	1,75	1,55	1,35
40	3,45	3,00	2,70	2,45	2,20	1,90	1,70	1,50
50	3,85	3,35	3,00	2,75	2,45	2,15	1,90	1,67
60	4,20	3,75	3,30	3,00	2,70	2,40	2,10	1,78
80	5,00	4,40	3,95	3,60	3,20	2,85	2,50	2,20
100	5,80	5,20	4,80	4,00	3,50	3,10	2,75	2,25

*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.

Roof panel



STEEL - STEEL PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T	M	K	
(mm)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
30	9,15	0,50	0,58
40	9,53	0,39	0,46
50	9,91	0,32	0,38
60	10,29	0,28	0,33
80	11,05	0,22	0,25
100	11,81	0,17	0,19

ALUMINUM - STEEL PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T	M	K	
(mm)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
30	7,35	0,50	0,58
40	7,73	0,39	0,46
50	8,11	0,32	0,38
60	8,49	0,28	0,33
80	9,25	0,22	0,25
100	10,01	0,17	0,19

Admissible loads*

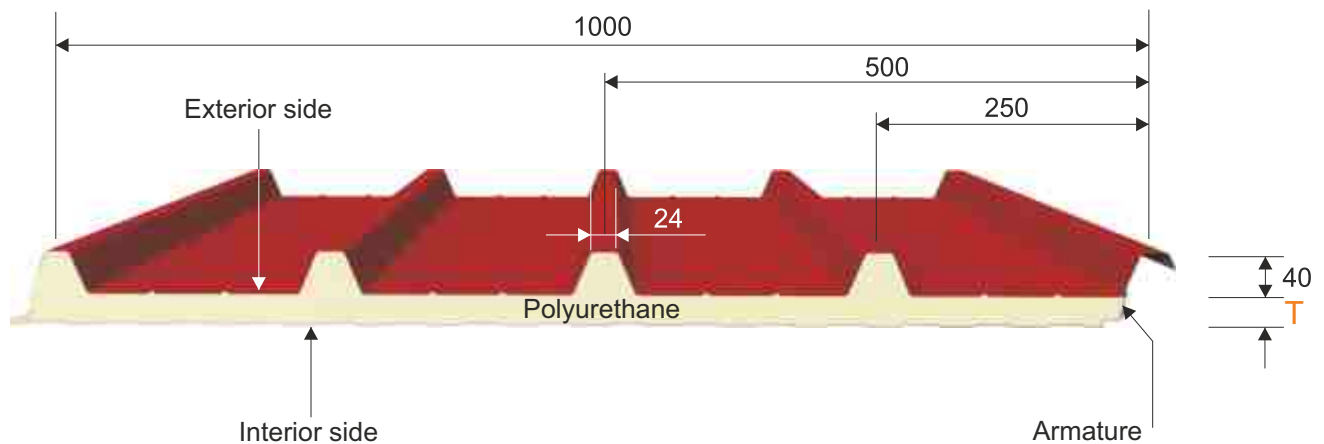
The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*/200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the value of lambda thermal conductivity (measured at 10°C) of 0.021 W/mK (0.017 kcal/mhC), according to EN 12667:2002.

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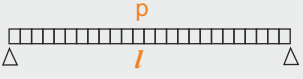
Self-supporting steel insulated panel from polyurethane, equipped with five folds, designed for tilted roofs with a maximum inclination of 7%.



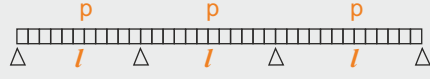
Upon request, thermo-insulated panels of polyisocyanurate (PIR) foam, with a fire resistance of 30 min. may be manufactured.

Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.5 mm thick steel exterior side, and a 0.4 mm thick steel interior side, subject to uniformly distributed loads (p).



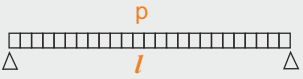
T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
30	4,50	3,90	3,40	3,10	2,80	2,40	2,15	1,95
40	4,80	4,15	3,75	3,40	3,05	2,60	2,35	2,10
50	5,10	4,40	3,90	3,60	3,20	2,80	2,45	2,20
60	5,35	4,60	4,15	3,80	3,35	2,95	2,60	2,35
80	5,90	5,05	4,70	4,25	3,70	3,25	2,95	2,60
100	6,45	5,60	5,10	4,65	4,10	3,60	3,15	2,85
120	7,00	6,15	5,50	5,05	4,50	3,95	3,35	3,05
150	7,55	6,70	5,90	5,45	4,90	4,30	3,55	3,25



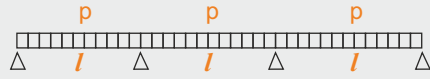
T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
30	5,05	4,40	3,90	3,55	3,10	2,70	2,40	2,20
40	5,35	4,70	4,15	3,80	3,40	2,95	2,60	2,40
50	5,65	4,90	4,40	4,00	3,60	3,10	2,80	2,60
60	6,00	5,20	4,65	4,25	3,80	3,25	2,95	2,75
80	6,65	5,65	5,15	4,65	4,25	3,60	3,25	3,00
100	7,35	6,30	5,65	5,15	4,65	3,95	3,60	3,35
120	8,04	6,95	6,15	5,65	5,05	4,30	3,95	3,60
150	8,70	7,60	6,65	6,15	5,45	4,65	4,30	3,85

Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.6 mm thick aluminum exterior side, and a 0.5 mm thick aluminum interior side, subject to uniformly distributed loads (p).



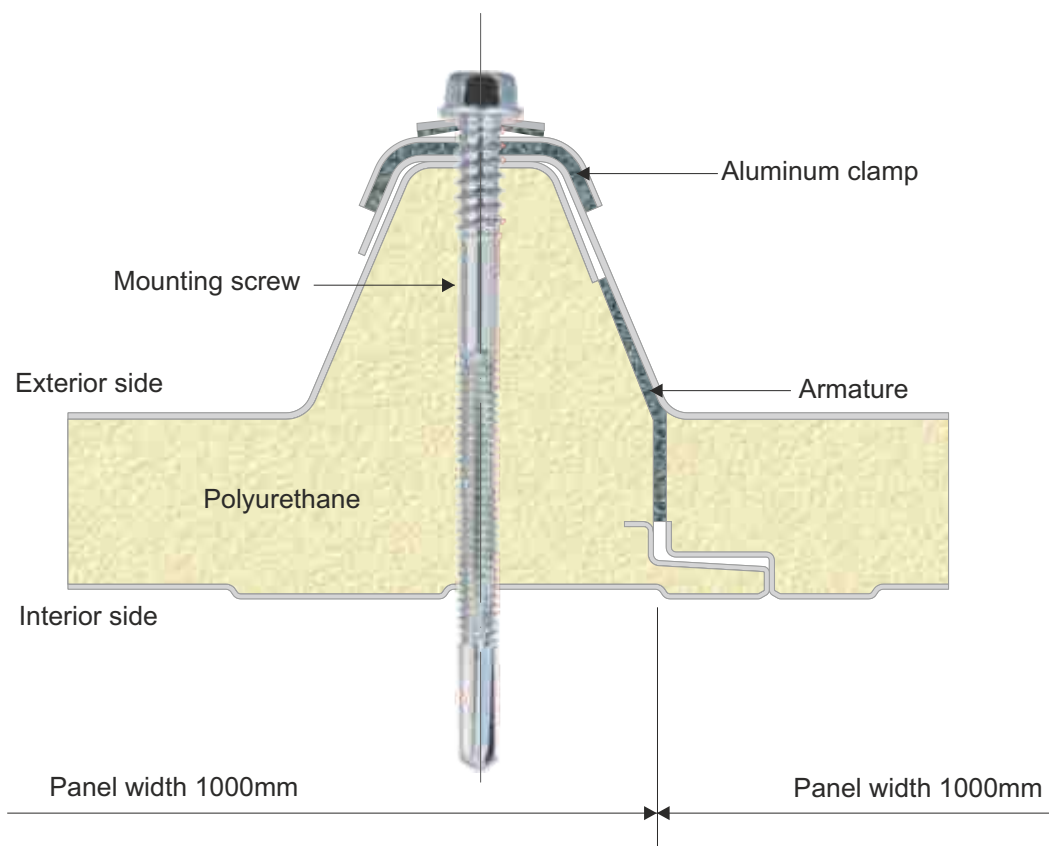
T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
30	3,05	2,65	2,40	2,15	1,95	1,70	1,50	1,30
40	3,40	2,95	2,65	2,45	2,20	1,90	1,70	1,51
50	3,80	3,30	2,95	2,70	2,45	2,10	1,85	1,52
60	4,25	3,65	3,30	2,95	2,65	2,30	2,00	1,69
80	5,10	4,35	3,90	3,50	3,15	2,75	2,35	1,95
100	5,73	5,20	4,75	4,20	3,70	3,20	2,85	2,40



T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
30	3,45	2,95	2,65	2,45	2,15	1,90	1,70	1,50
40	3,80	3,30	2,95	2,70	2,45	2,10	1,85	1,62
50	4,25	3,70	3,35	3,00	2,70	2,40	2,10	1,78
60	4,65	4,15	3,65	3,35	2,95	2,65	2,35	2,05
80	5,50	4,90	4,35	4,00	3,50	3,10	2,75	2,51
100	6,20	5,60	5,15	4,65	4,15	3,45	3,00	2,65

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Roof panel



STEEL - STEEL PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T	M	K	
(mm)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
30	9,53	0,47	0,54
40	9,91	0,37	0,43
50	10,29	0,31	0,36
60	10,67	0,26	0,32
80	11,43	0,21	0,24
100	12,19	0,17	0,19
120	12,93	0,15	0,17
150	13,66	0,14	0,15

ALUMINUM - STEEL PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T	M	K	
(mm)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
30	7,57	0,47	0,54
40	7,95	0,37	0,43
50	8,33	0,31	0,36
60	8,71	0,26	0,32
80	9,47	0,21	0,24
100	10,23	0,17	0,19

Admissible loads*

The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*/200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the value of lambda thermal conductivity (measured at 10°C) of 0.021 W/mK (0.017 kcal/mhC), according to EN 12667:2002.

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Self-supporting insulated steel panel from Polyurethane, equipped with 3 folds, designed for plane and tilted roofs about to be sealed. The exterior side of the panel is made from bitumen cardboard in order to facilitate subsequent sealing.

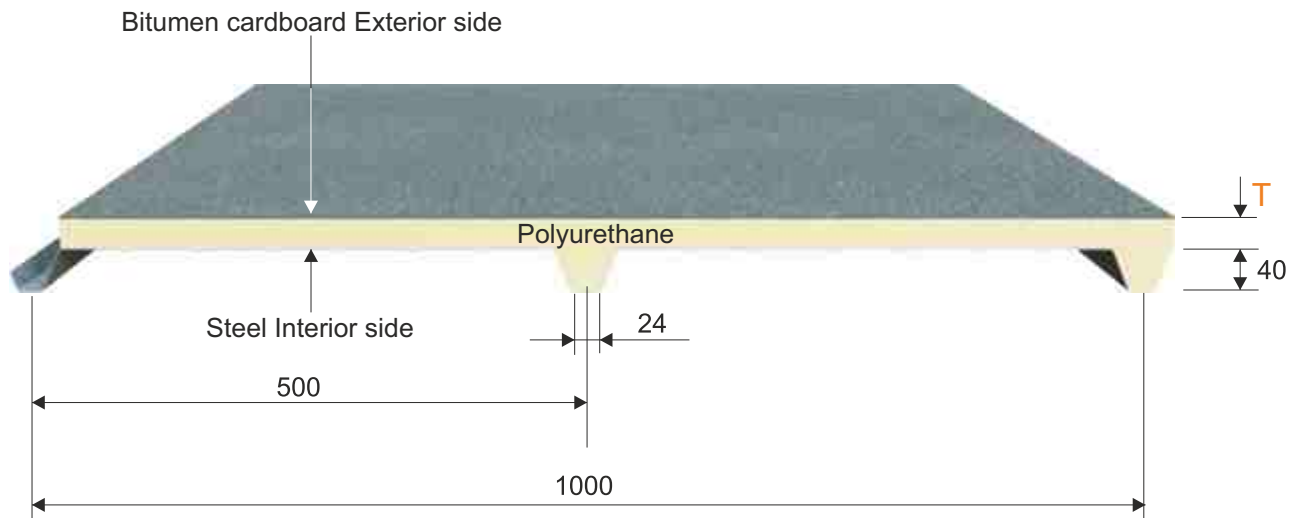


Table of admissible loads *

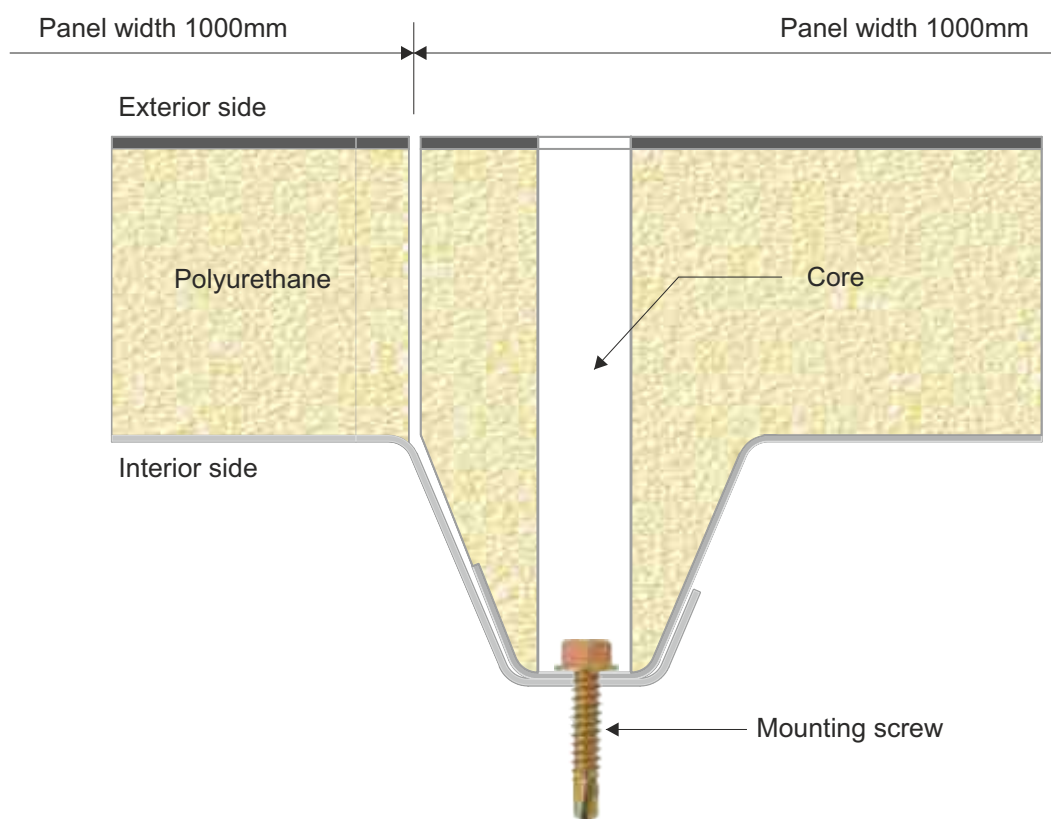
The sizes/in meters corresponding to the uniformly distributed p overload (daN/m²), were calculated so as to guarantee an $f < l/200$ arrow even considering the sheet as a solid section (polyurethane support was not considered) according to European norms. The values indicated for the 0.5 sheet thickness resulted from the laboratory tests.

T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
0,5	1,59	1,44	1,34	1,24	1,16	1,03		
0,6	1,72	1,56	1,45	1,38	1,26	1,16	1,06	
0,8	1,95	1,77	1,66	1,56	1,45	1,32	1,22	1,14
1,0	2,17	1,97	1,83	1,72	1,61	1,46	1,36	1,26

T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
0,5	1,95	1,76	1,65	1,55	1,44	1,29	1,17	1,07
0,6	2,12	1,93	1,79	1,69	1,57	1,42	1,31	1,22
0,8	2,41	2,19	2,03	1,92	1,77	1,63	1,49	1,41
1,0	2,67	2,43	2,24	2,13	1,97	1,79	1,67	1,57

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Roof panel



BITUMEN CARDBOARD - STEEL PANEL WEIGHT			K THERMAL TRANSFER COEFFICIENT	
T	M(0,5 mm)	M(1,0 mm)	K	
(mm)	(kg/m ²)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
30	5,64	10,04	0,67	0,78
40	6,02	10,42	0,53	0,62
50	6,40	10,80	0,44	0,51
60	6,78	11,18	0,37	0,43
80	7,54	11,94	0,29	0,34
100	8,26	12,70	0,21	0,26
120	8,98	13,46	0,15	0,19

Admissible loads*

The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*/200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the value of lambda thermal conductivity (measured at 10°C) of 0.021 W/mK (0.017 kcal/mhC), according to EN 12667:2002.

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Self-supporting insulated steel panel from Polyurethane, equipped with 5 folds, designed for plane and tilted roofs about to be sealed. The exterior side of the panel is made from bitumen cardboard in order to facilitate subsequent sealing.

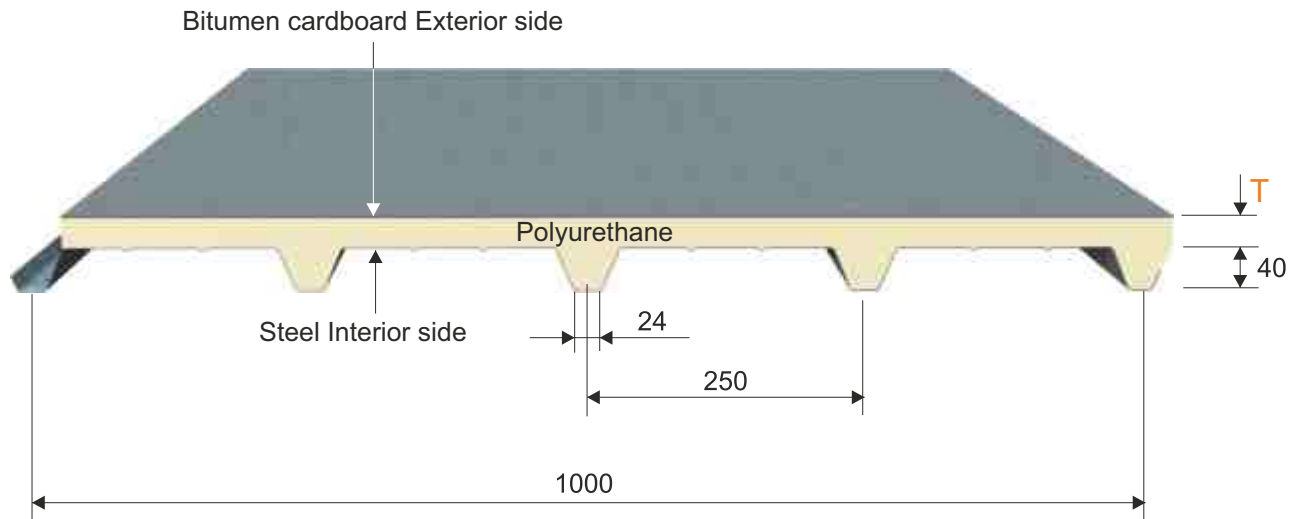


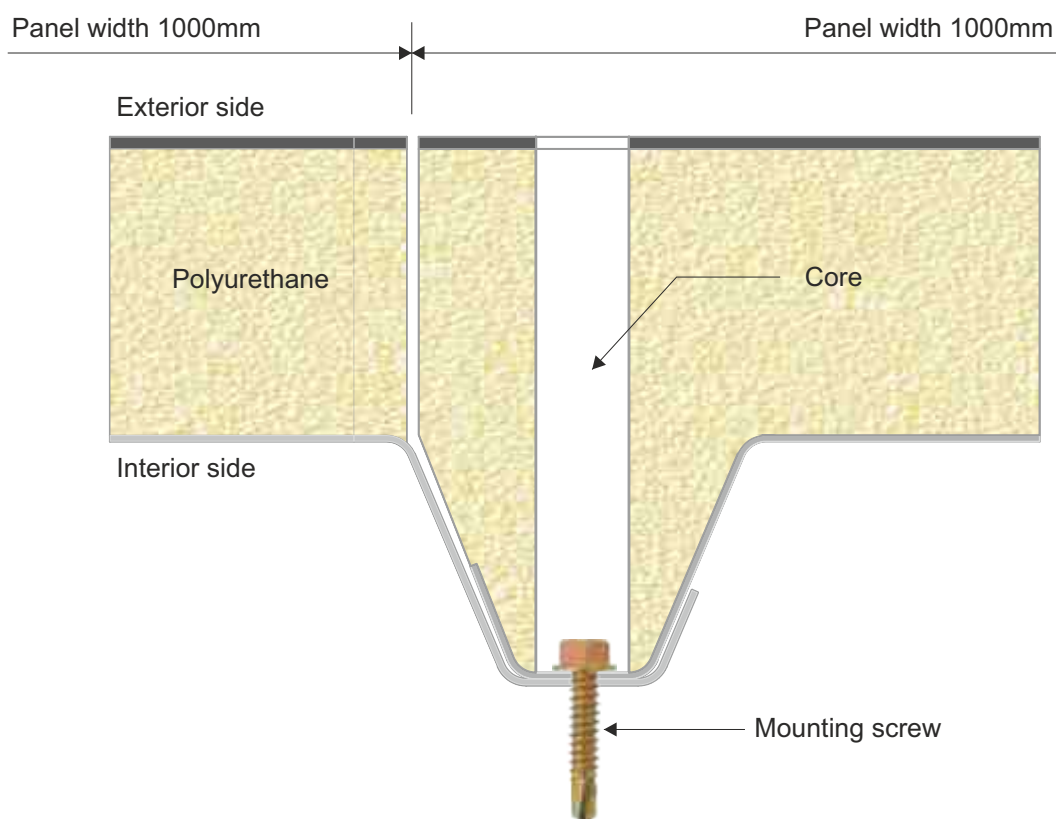
Table of admissible loads *

The sizes/in meters corresponding to the uniformly distributed p overload (daN/m²), were calculated so as to guarantee an $f < l/200$ arrow even considering the sheet as a solid section (polyurethane support was not considered) according to European norms. The values indicated for the 0.5 sheet thickness resulted from the laboratory tests.

T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
0,5	2,08	1,89	1,74	1,65	1,52	1,40	1,29	1,20
0,6	2,22	2,02	1,89	1,76	1,65	1,49	1,40	1,31
0,8	2,49	2,26	2,11	1,98	1,85	1,68	1,56	1,47
1,0	2,71	2,47	2,29	2,16	2,00	1,83	1,70	1,60

T (mm)	Load (daN/m ²)							
	60	80	100	120	150	200	250	300
0,5	2,51	2,32	2,16	2,03	1,89	1,70	1,52	1,40
0,6	2,74	2,49	2,32	2,18	2,02	1,89	1,69	1,55
0,8	3,08	2,80	2,60	2,45	2,27	2,07	1,92	1,80
1,0	3,37	3,06	2,83	2,67	2,47	2,24	2,10	1,98

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BITUMEN CARDBOARD - STEEL PANEL WEIGHT			K THERMAL TRANSFER COEFFICIENT	
T	M(0,5 mm)	M(1,0 mm)	K	
(mm)	(kg/m ²)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
30	6,14	10,93	0,64	0,74
40	6,52	11,31	0,50	0,58
50	6,90	11,69	0,42	0,49
60	7,28	12,07	0,36	0,42
80	8,04	12,83	0,28	0,33
100	8,80	13,52	0,20	0,25
120	9,56	14,22	0,15	0,19

Admissible loads*

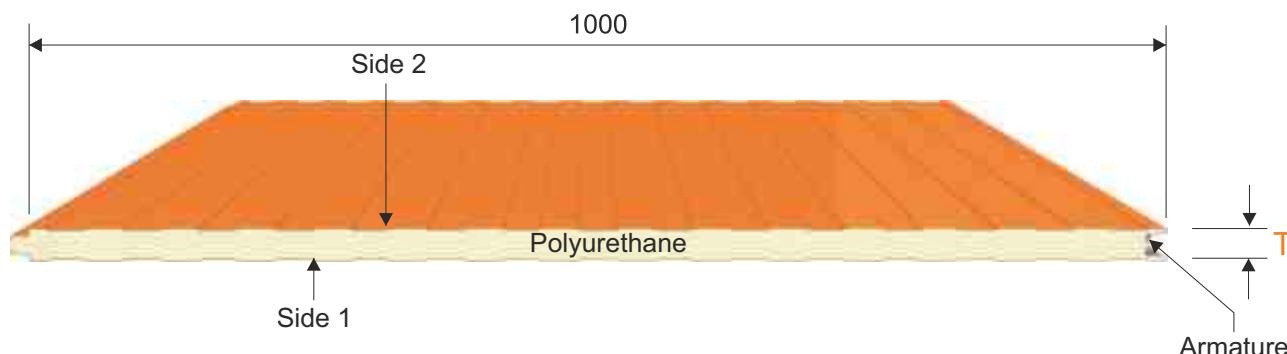
The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*/200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the value of lambda thermal conductivity (measured at 10°C) of 0.021 W/mK (0.017 kcal/mhC), according to EN 12667:2002.

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Self-supporting steel insulated panel from polyurethane, designed for industrial and commercial buildings as well as partitioning in general.



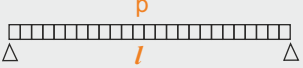
Side 2 profiling variants:



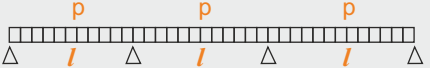
Upon request, thermo-insulated panels of polyisocyanurate (PIR) foam, with a fire resistance of 30 min. may be manufactured.

Table of admissible loads*

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.4 mm thick steel exterior side, and a 0.4 mm thick steel interior side, subject to uniformly distributed loads (p).



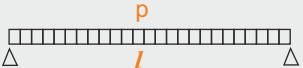
T (mm)	Load (daN/m ²)				
	60	80	100	120	150
30	2,25	2,10	1,90	1,80	1,65
40	3,10	2,90	2,70	2,50	2,20
50	3,45	3,20	2,95	2,75	2,40
60	3,80	3,55	3,30	3,00	2,60
80	4,50	4,00	3,70	3,35	2,90



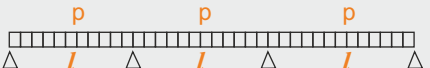
T (mm)	Load (daN/m ²)				
	60	80	100	120	150
30	2,60	2,45	2,30	2,05	1,85
40	3,40	3,20	3,00	2,80	2,50
50	3,90	3,65	3,40	3,10	2,75
60	4,40	4,10	3,75	3,45	3,00
80	5,20	4,65	4,25	3,90	3,35

Table of admissible loads*

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.6 mm thick aluminum exterior side, and a 0.5 mm thick aluminum interior side, subject to uniformly distributed loads (p).

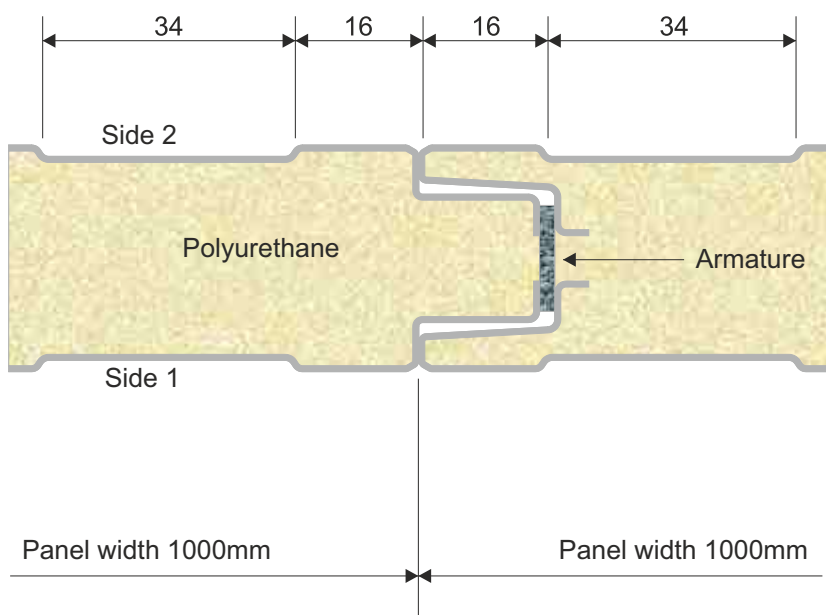


T (mm)	Load (daN/m ²)				
	60	80	100	120	150
100	6,35	5,70	5,25	4,90	4,60
120	7,15	6,40	5,90	5,50	5,00
150	7,90	7,00	6,40	5,90	5,30
180	8,45	7,40	6,70	6,10	5,40
200	8,70	7,65	6,90	6,25	5,45



T (mm)	Load (daN/m ²)				
	60	80	100	120	150
100	7,25	6,55	6,05	5,65	5,35
120	8,05	7,35	6,80	6,35	5,85
150	9,05	8,05	7,40	6,85	6,25
180	9,75	8,65	8,00	7,35	6,50
200	10,35	9,20	8,55	7,75	6,75

*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.



STEEL - STEEL PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T (mm)	M (kg/m ²)	K	
		(kcal/m ² h °C)	(W/m ² K)
30	7,89	0,56	0,65
40	8,27	0,43	0,50
50	8,65	0,35	0,41
60	9,03	0,29	0,34
80	9,79	0,22	0,26
100	12,10	0,18	0,21
120	12,90	0,15	0,18
150	13,70	0,12	0,14
180	14,50	0,10	0,12
200	15,30	0,09	0,11

Admissible loads *

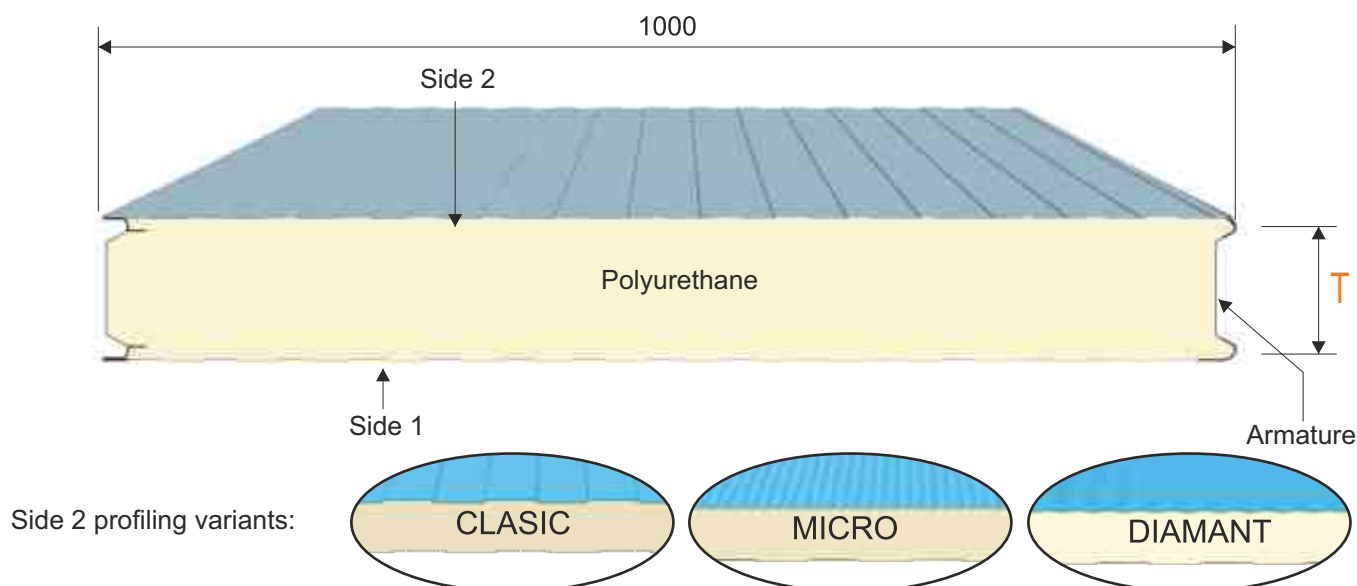
The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*/200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the value of lambda thermal conductivity (measured at 10°C) of 0.021 W/mK (0.017 kcal/mhC), according to EN 12667:2002.

*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.

Self-supporting steel insulated panel from polyurethane with **labyrinth joinery**, designed for the construction of warehouses and cold storage rooms. The joinery system for this panel ensures excellent performances, substantially contributing to the reduction of thermal losses.



Upon request, thermo-insulated panels of polyisocyanurate (PIR) foam, with a **fire resistance of 30 min.** may be manufactured.

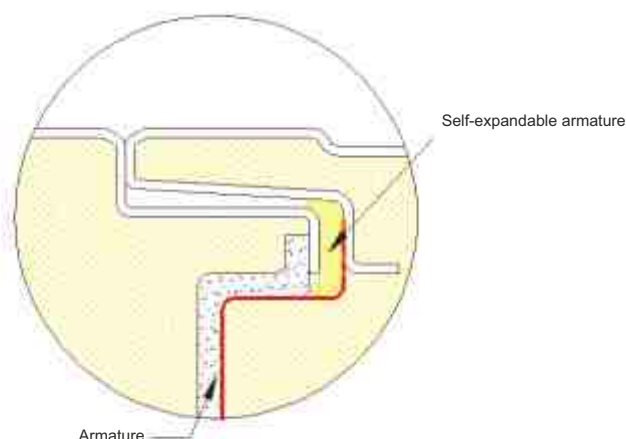
Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.5 mm thick steel exterior side, and a 0.5 mm thick steel interior side, subject to uniformly distributed loads (p).

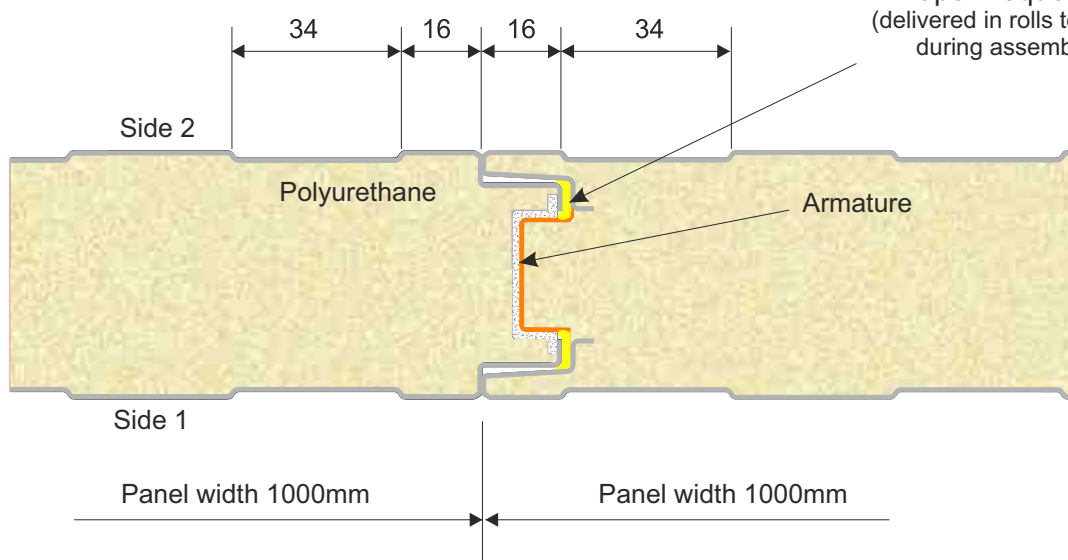
T (mm)	Sarcină (daN/m ²)				
	60	80	100	120	150
120	7,15	6,40	5,90	5,50	5,00
150	7,90	7,00	6,40	5,90	5,30
200	8,70	7,65	6,90	6,25	5,45

T (mm)	Sarcină (daN/m ²)				
	60	80	100	120	150
120	8,05	7,35	6,80	6,35	5,85
150	9,05	8,05	7,40	6,85	6,25
200	10,35	9,20	8,55	7,75	6,75

A self-expandable armature for increasing the sealing capacity of panel joinery may be delivered optionally.



*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.



STEEL - STEEL PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T	M	K	
(mm)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
120	12,90	0,15	0,18
150	13,70	0,12	0,14
200	15,30	0,09	0,11

Admissible loads *

The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*/200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the value of lambda thermal conductivity (measured at 10°C) of 0.021 W/mK (0.017 kcal/mhC), according to EN 12667:2002.

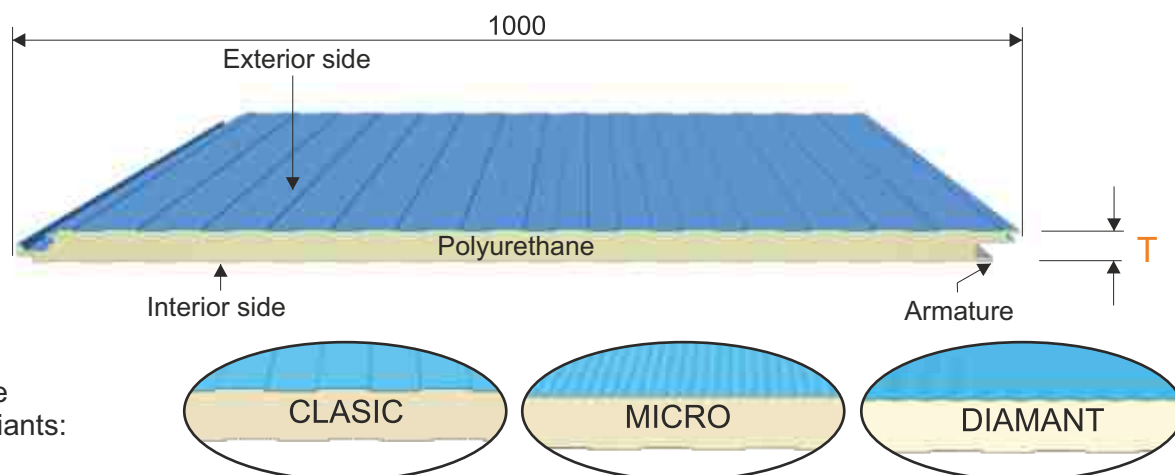
*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.

SUPER TOP - WALL



Wall panel with hidden anchorage

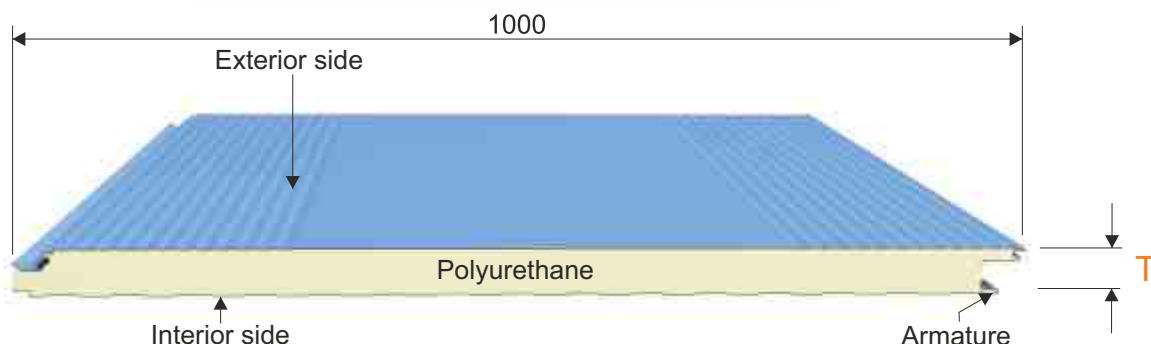
Self-supporting steel insulated panel from polyurethane cu with hidden anchorage, designed for industrial and commercial buildings, which due to their anchorage method provide exquisite aesthetics and reliability. The articulation of this type of panel provides the possibility of both vertical as well as horizontal installation.



Upon request, thermo-insulated panels of polyisocyanurate (PIR) foam, with a fire resistance of 30 min. may be manufactured.

SUPER TOP - WALL

Arhitectural



Self-supporting steel insulated panel from polyurethane with an architectural model hidden anchorage, providing exquisite aesthetics. The articulation of this type of panel provides the possibility of both vertical as well as horizontal installation.

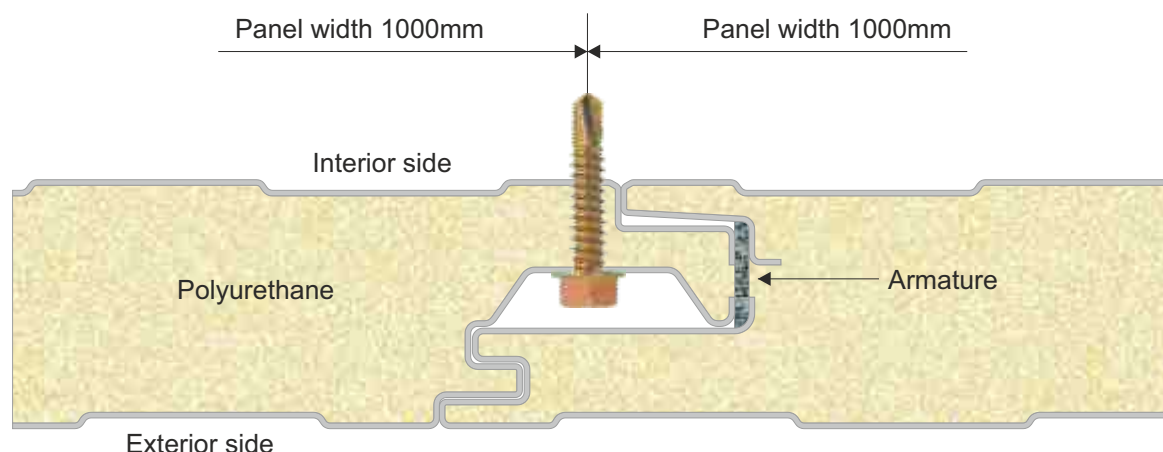
Table of admissible loads for both types of panels *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.5 mm thick steel exterior side, and a 0.4 mm thick steel interior side, subject to uniformly distributed loads (p).

T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,45	3,20	2,95	2,75	2,40
60	3,80	3,55	3,30	3,00	2,60
80	4,50	4,00	3,70	3,35	2,90
100	4,90	4,45	4,10	3,75	3,20

T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,90	3,65	3,40	3,10	2,75
60	4,40	4,10	3,75	3,45	3,00
80	5,20	4,65	4,25	3,90	3,35
100	5,80	5,15	4,75	4,30	3,70

*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.



STEEL - STEEL PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T (mm)	M (kg/m ²)	K	
		(kcal/m ² h °C)	(W/m ² K)
50	9,65	0,35	0,41
60	10,03	0,29	0,34
80	10,79	0,22	0,26
100	11,56	0,18	0,21

ALUMINUM - STEEL PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T (mm)	M (kg/m ²)	K	
		(kcal/m ² h °C)	(W/m ² K)
50	5,43	0,35	0,41
60	5,81	0,29	0,34
80	6,57	0,22	0,26
100	7,35	0,18	0,21

Admissible loads *

The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*/200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

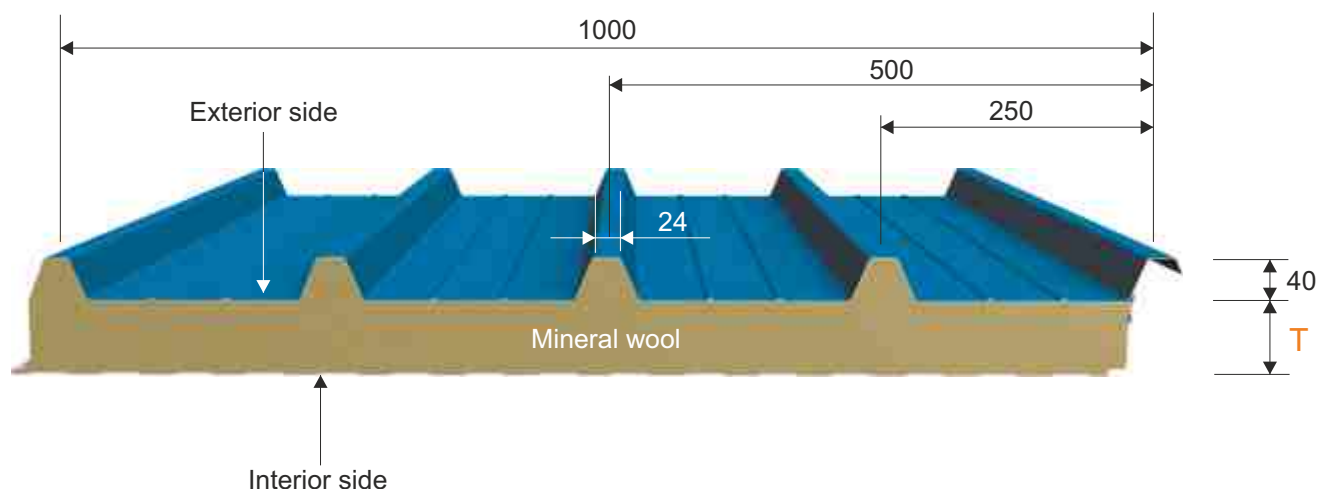
Thermal transfer coefficients

The values were determined in an authorized laboratory, using the value of lambda thermal conductivity (measured at 10°C) of 0.021 W/mK (0.017 kcal/mhC), according to EN 12667:2002.

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Roof panel

Self-supporting steel insulated panel from mineral wool, equipped with 5 folds, designed for tilted roofs with a maximum inclination of 7%. The use of this type of panel is recommended when a higher degree of fire resistance is required.



Depending on the thickness of the insulation, the panel fire resistance may be:

- REI 60 min
- REI 120 min
- REI 180 min

Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.5 mm thick steel exterior side, and a 0.5 mm thick steel interior side, subject to uniformly distributed loads (p).

T (mm)	Load (daN/m ²)						
	80	100	120	150	200	250	300
50	3,05	2,58	2,24	1,85	1,49	1,22	1,02
60	3,41	2,95	2,57	2,11	1,65	1,35	1,11
80	4,12	3,69	3,23	2,63	1,97	1,61	1,30
100	4,70	4,07	3,40	2,75	2,10	1,70	1,41
120	5,33	4,45	3,73	3,03	2,28	1,84	1,52
150	5,96	4,83	4,06	3,31	2,46	1,98	1,63

T (mm)	Load (daN/m ²)						
	80	100	120	150	200	250	300
50	3,52	2,97	2,60	2,15	1,70	1,40	1,17
60	3,93	3,40	2,97	2,43	1,90	1,55	1,29
80	4,75	4,25	3,70	3,00	2,30	1,85	1,54
100	5,45	4,70	3,95	3,21	2,45	1,98	1,65
120	6,15	5,15	4,30	3,50	2,70	2,15	1,80
150	6,85	5,60	4,65	3,79	2,95	2,32	1,95

Table of admissible loads *

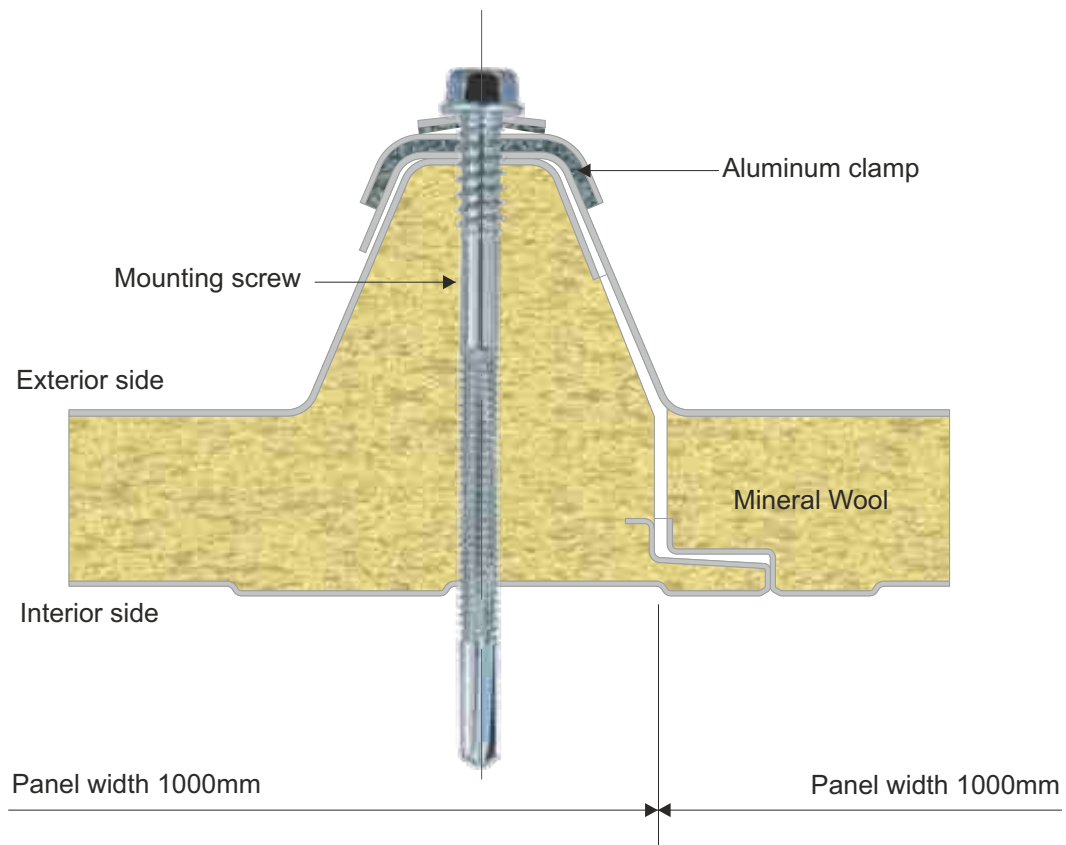
Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.6 mm thick steel exterior side, and a 0.6 mm thick steel interior side, subject to uniformly distributed loads (p).

T (mm)	Load (daN/m ²)						
	80	100	120	150	200	250	300
50	3,97	3,64	3,22	2,64	2,00	1,65	1,30
60	4,36	4,03	3,65	3,08	2,35	1,93	1,57
80	5,13	4,80	4,50	3,95	3,05	2,48	2,10
100	5,65	5,27	4,95	4,58	3,74	3,03	2,57
120	6,14	5,70	5,38	4,96	4,37	3,58	3,03
150	6,75	6,28	5,92	5,45	4,81	3,95	3,32

T (mm)	Load (daN/m ²)						
	80	100	120	150	200	250	300
50	4,55	3,77	3,22	2,64	2,00	1,65	1,30
60	5,02	4,36	3,75	3,08	2,35	1,93	1,57
80	5,95	5,55	4,82	3,95	3,05	2,48	2,10
100	6,05	5,75	5,45	4,82	3,74	3,03	2,57
120	6,11	5,86	5,63	5,27	4,45	3,58	3,03
150	6,70	6,43	6,20	5,80	4,83	3,95	3,32

*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.

Roof panel



STEEL (0.5 mm) – STEEL (0.5 mm) PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T (mm)	M (kg/m ²)	K	
		(kcal/m ² h °C)	(W/m ² K)
50	13,50	0,64	0,72
60	14,46	0,56	0,63
80	16,40	0,38	0,44
100	18,50	0,32	0,36
120	20,40	0,26	0,30
150	23,20	0,22	0,25

ALUMINUM (0.6 mm) – STEEL (0.6 mm) PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T (mm)	M (kg/m ²)	K	
		(kcal/m ² h °C)	(W/m ² K)
50	15,50	0,64	0,72
60	16,43	0,56	0,63
80	18,30	0,38	0,44
100	20,20	0,32	0,36
120	22,30	0,26	0,30
150	25,30	0,22	0,25

Admissible loads *

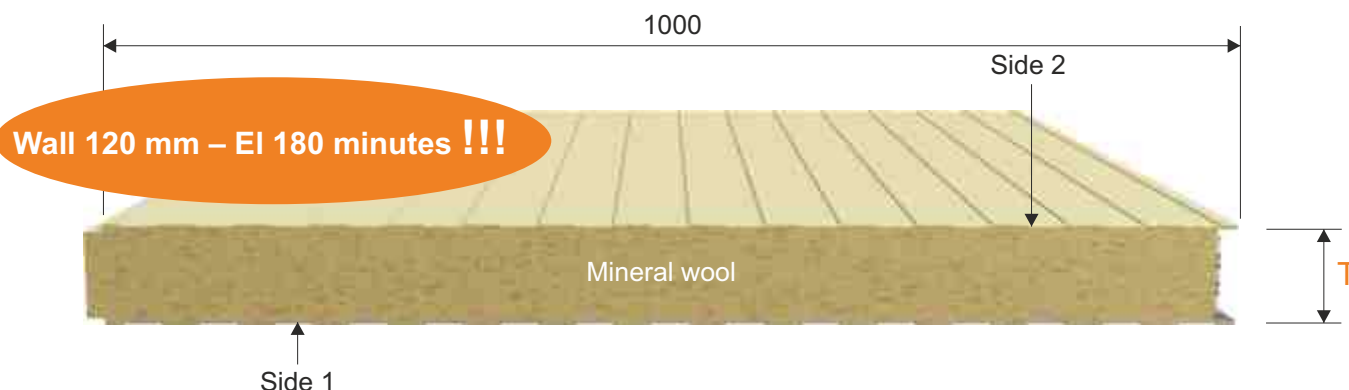
The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*/200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

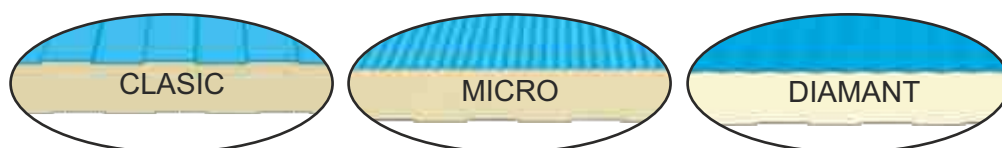
The values were determined in an authorized laboratory, using the thermal conductivity value lambda (measured at 10°C) of 0.041 W/mK for basaltic mineral wool with a horizontal fiber orientation, according to EN 12667:2002.

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Self-supporting steel insulated panel from mineral wool, equipped with 5 folds, designed for industrial and commercial buildings in general. The use of this type of panel is recommended when a higher degree of fire resistance is required.



Side 2 profiling variants:



Depending on the thickness of the insulation, the panel fire resistance may be:

-REI 60 min
-REI 120 min
-REI 180 min

Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.5 mm thick steel exterior side, and a 0.5 mm thick steel interior side, subject to uniformly distributed loads (p).

T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,20	2,46	1,96	1,64	1,31
60	3,48	2,81	2,35	1,97	1,58
80	4,05	3,51	3,14	2,64	2,11
100	4,50	3,93	3,51	3,21	2,64
120	4,97	4,30	3,85	3,51	3,14
150	5,44	4,67	4,19	3,81	3,40

T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,58	2,73	2,18	1,82	1,45
60	3,89	3,13	2,62	2,19	1,75
80	4,53	3,93	3,50	2,92	2,35
100	5,07	4,38	3,94	3,59	2,93
120	5,55	4,81	4,30	3,93	3,51
150	6,03	5,24	4,66	4,27	4,10

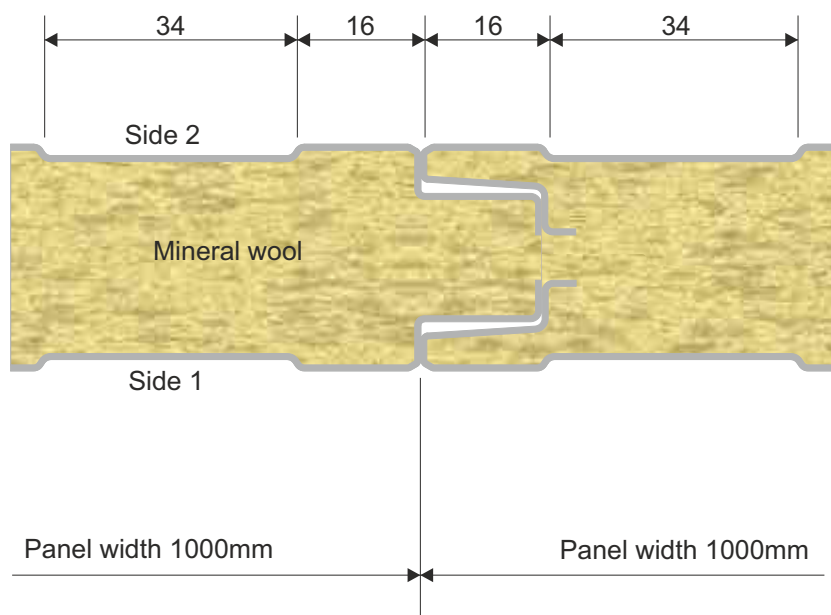
Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.6 mm thick steel exterior side, and a 0.6 mm thick steel interior side, subject to uniformly distributed loads (p).

T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,75	2,84	2,31	1,94	1,57
60	4,17	3,35	2,72	2,32	1,87
80	5,00	4,38	3,65	3,08	2,48
100	5,64	4,60	4,38	3,82	3,09
120	6,17	5,34	4,58	4,00	3,40
150	6,88	5,96	5,15	4,66	3,77
200	7,18	6,26	5,45	4,96	4,02

T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,97	3,33	2,67	2,24	1,81
60	4,41	3,72	3,09	2,67	2,17
80	5,30	4,51	3,91	3,54	2,88
100	6,00	5,38	4,60	3,99	3,56
120	6,40	5,65	4,68	4,20	3,92
150	7,00	6,08	5,34	4,87	4,34
200	7,30	6,38	5,64	5,12	4,54

*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.



STEEL (0.5 mm) – STEEL (0.5 mm) PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T	M	K	
(mm)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
50	12,80	0,67	0,75
60	13,70	0,59	0,66
80	15,50	0,44	0,50
100	17,30	0,35	0,40
120	19,50	0,30	0,33
150	22,70	0,24	0,27

ALUMINUM (0.6 mm) – STEEL (0.6 mm) PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T	M	K	
(mm)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
50	14,50	0,67	0,75
60	15,40	0,59	0,66
80	17,20	0,44	0,50
100	19,00	0,35	0,40
120	21,40	0,30	0,33
150	24,40	0,24	0,27
200	31,10	0,18	0,21

Admissible loads*

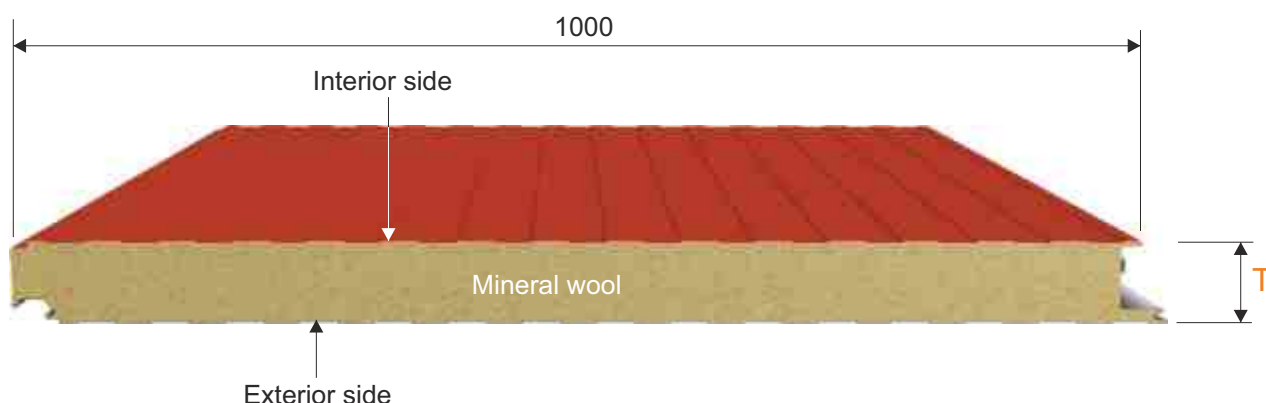
The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*//200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the thermal conductivity value lambda (measured at 10°C) of 0.041 W/mK for basaltic mineral wool with a horizontal fiber orientation, according to EN 12667:2002.

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Self-supporting steel insulated panel from mineral wool with hidden anchorage, designed for industrial and commercial buildings, which due to their anchorage method provide exquisite aesthetics and reliability. The articulation of this type of panel provides the possibility of both vertical as well as horizontal installation. The use of this type of panel is recommended when a higher degree of fire resistance is required.

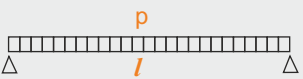


Exterior profiling variants:

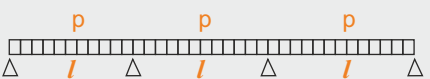


Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.5 mm thick steel exterior side, and a 0.5 mm thick steel interior side, subject to uniformly distributed loads (p).



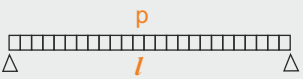
T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,20	2,46	1,96	1,64	1,31
60	3,48	2,81	2,35	1,97	1,58
80	4,05	3,51	3,14	2,64	2,11
100	4,50	3,93	3,51	3,21	2,64



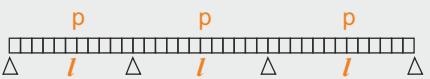
T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,58	2,73	2,18	1,82	1,45
60	3,89	3,13	2,62	2,19	1,75
80	4,53	3,93	3,50	2,92	2,35
100	5,07	4,38	3,94	3,59	2,93

Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.6 mm thick steel exterior side, and a 0.6 mm thick steel interior side, subject to uniformly distributed loads (p).

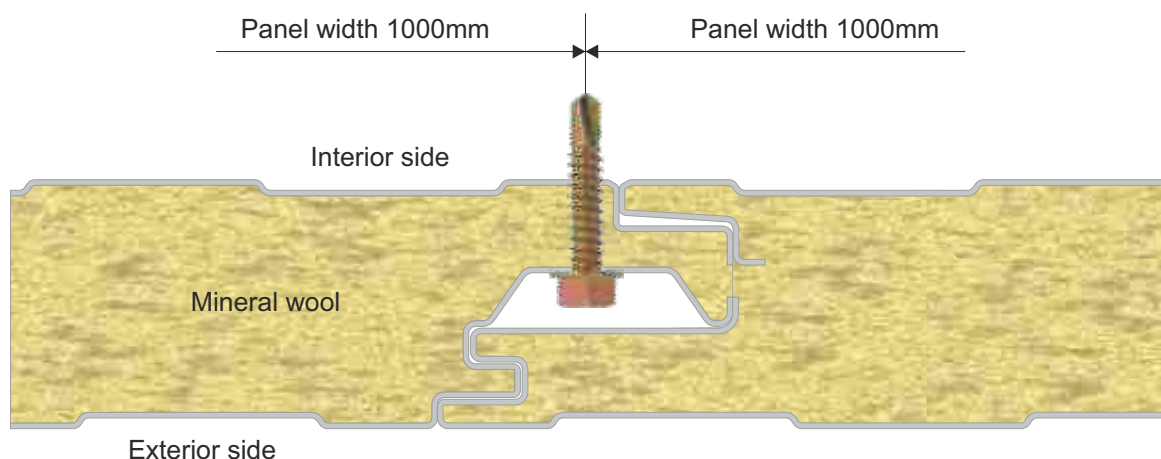


T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,75	2,84	2,31	1,94	1,57
60	4,17	3,35	2,76	2,32	1,87
80	5,00	4,38	3,65	3,08	2,48
100	5,64	4,60	4,38	3,82	3,09



T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	3,97	3,33	2,67	2,24	1,81
60	4,41	3,72	3,09	2,67	2,17
80	5,30	4,51	3,91	3,54	2,88
100	6,00	5,38	4,60	3,99	3,56

*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.



STEEL (0.5 mm) – STEEL (0.5 mm) PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T	M	K	
(mm)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
50	14,78	0,65	0,75
60	13,70	0,59	0,66
80	17,77	0,42	0,49
100	19,77	0,34	0,40

ALUMINUM (0.6 mm) – STEEL (0.6 mm) PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T	M	K	
(mm)	(kg/m ²)	(kcal/m ² h °C)	(W/m ² K)
50	16,51	0,65	0,75
60	15,40	0,59	0,66
80	19,36	0,42	0,49
100	21,36	0,34	0,40

Admissible loads *

The table contains the free admissible sizes (*l*) in meters, corresponding to each uniformly distributed load (*p*), calculated based on experimental data, so as to guarantee a maximum arrow (*f*) less (no more than) than *l*/200, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the thermal conductivity value lambda (measured at 10°C) of 0.041 W/mK for basaltic mineral wool with a horizontal fiber orientation, according to EN 12667:2002.

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Self-supporting steel insulated panel from mineral wool, designed for industrial and commercial buildings as well as partitioning in general. The use of this type of panel is recommended when a higher degree of fire resistance is required.

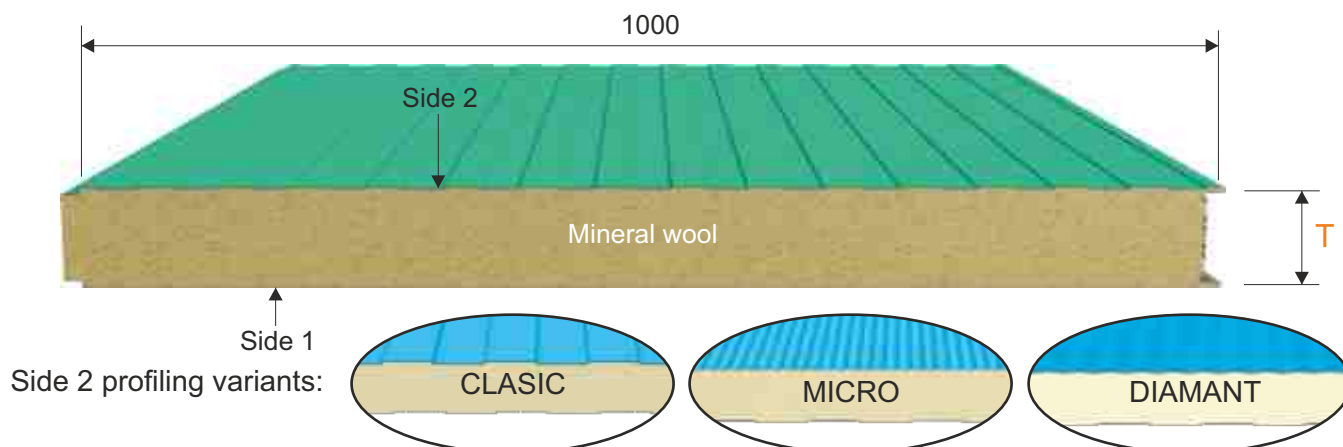


Table of admissible loads*

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.6 mm thick steel exterior side, and a 0.6 mm thick steel interior side, subject to uniformly distributed loads (p).

T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	2,07	1,93	1,76	1,64	1,43
60	2,28	2,08	1,91	1,76	1,53
80	2,70	2,39	2,20	2,00	1,73
100	2,93	2,66	2,45	2,25	1,91
120	4,60	3,85	3,55	3,15	2,55
150	4,80	3,90	3,73	3,30	2,68

T (mm)	Load (daN/m ²)				
	60	80	100	120	150
50	2,34	2,20	2,03	1,85	1,66
60	2,59	2,39	2,20	2,01	1,77
80	3,10	2,78	2,55	2,33	2,00
100	3,48	3,08	2,84	2,57	2,20
120	5,10	4,60	3,90	3,60	3,31
150	5,20	4,80	4,00	3,74	3,49



STEEL (0.6 mm) – STEEL (0.6 mm) PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T (mm)	M (kg/m ²)	K (kcal/m ² h °C)	K (W/m ² K)
50	12,90	0,65	0,75
60	13,80	0,57	0,63
80	15,50	0,42	0,49
100	17,40	0,34	0,40
120	19,72	0,30	0,33
150	22,80	0,23	0,27

Admissible loads*

The table contains the free admissible sizes (l) in meters, corresponding to each uniformly distributed load (p), calculated based on experimental data, so as to guarantee a maximum arrow (f) less (no more than) than $l/200$, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the thermal conductivity value lambda (measured at 10°C) of 0.041 W/mK for basaltic mineral wool with a horizontal fiber orientation, according to EN 12667:2002.

*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.

Roof panel

Self-supporting steel insulated panel from mineral wool, equipped with 5 folds, designed for tilted roofs with a maximum inclination of 7%. The use of this type of panel is recommended when a higher degree sound-proofing is required.

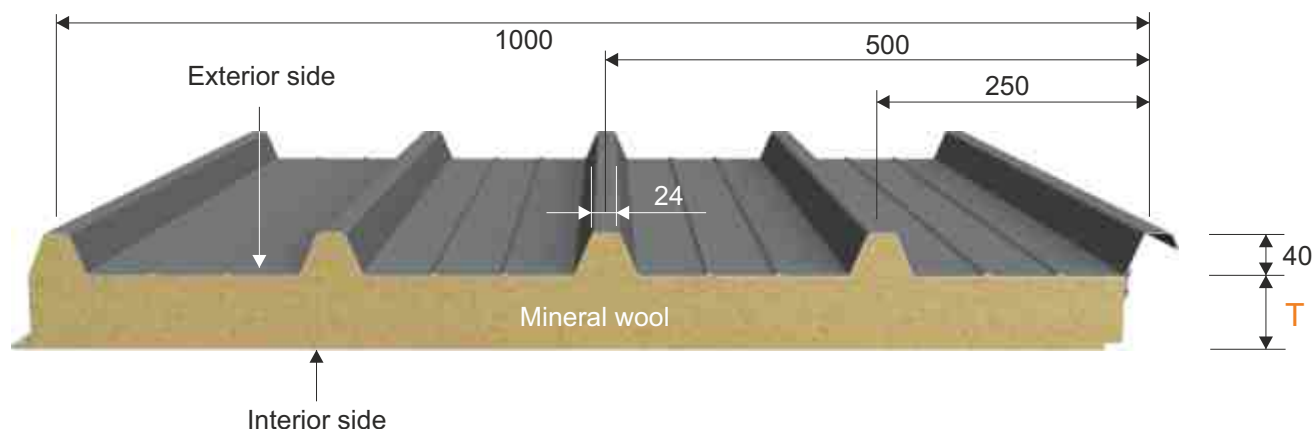
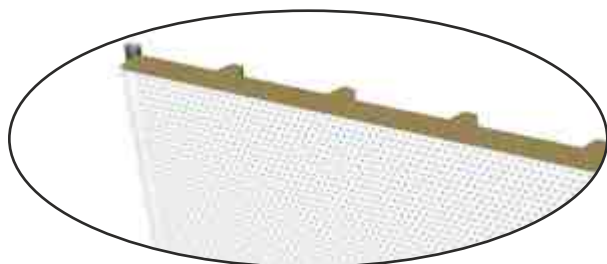


Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a panel with a 0.6 mm thick steel exterior side, and a 0.6 mm thick steel interior side, subject to uniformly distributed loads (p).

T (mm)	Load (daN/m ²)					
	80	100	120	150	200	300
50	2,40	2,35	2,25	1,90	1,65	1,35
60	2,76	2,60	2,46	2,16	1,86	1,60
80	3,50	3,10	2,90	2,70	2,30	2,10
100	3,80	3,65	3,45	3,05	2,75	2,27
120	3,95	3,90	3,65	3,20	2,90	2,33
150	4,04	4,00	3,80	3,25	3,05	2,40

T (mm)	Load (daN/m ²)					
	80	100	120	150	200	300
50	3,25	3,15	3,05	2,60	1,95	1,30
60	3,46	3,35	3,25	2,90	2,35	1,60
80	3,90	3,75	3,65	3,48	3,15	2,34
100	4,35	4,05	3,85	3,75	3,45	2,54
120	4,70	4,20	4,10	3,85	3,60	2,80
150	5,00	4,35	4,20	3,98	3,80	3,00



Admissible loads *

The table contains the free admissible sizes (l) in meters, corresponding to each uniformly distributed load (p), calculated based on experimental data, so as to guarantee a maximum arrow (f) less (no more than) than $l/200$, considering a safety coefficient (upon breaking stress when bending) greater than or equal to 3.

Thermal transfer coefficients

The values were determined in an authorized laboratory, using the thermal conductivity value lambda (measured at 10°C) of 0.041 W/mK for basaltic mineral wool with a horizontal fiber orientation, according to EN 12667:2002.

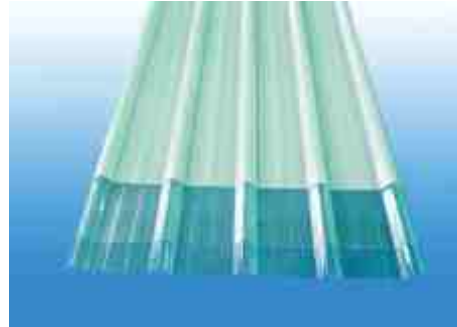
STEEL (0.6 mm) – STEEL (0.6 mm) PANEL WEIGHT		K THERMAL TRANSFER COEFFICIENT	
T (mm)	M (kg/m ²)	K	
		(kcal/m ² h °C)	(W/m ² K)
50	13,80	0,60	0,70
60	14,80	0,58	0,64
80	16,70	0,41	0,47
100	18,50	0,33	0,39
120	20,70	0,26	0,30
150	23,70	0,23	0,27

*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.

TOP PLAST

Alveolar polycarbonate luminary panels

Alveolar polycarbonate luminary panel folded in the shape of TOP ROOF thermo-insulating panels, with UV outer protection, ensuring a good ratio between lighting and thermal transfer.



PANEL SECTION

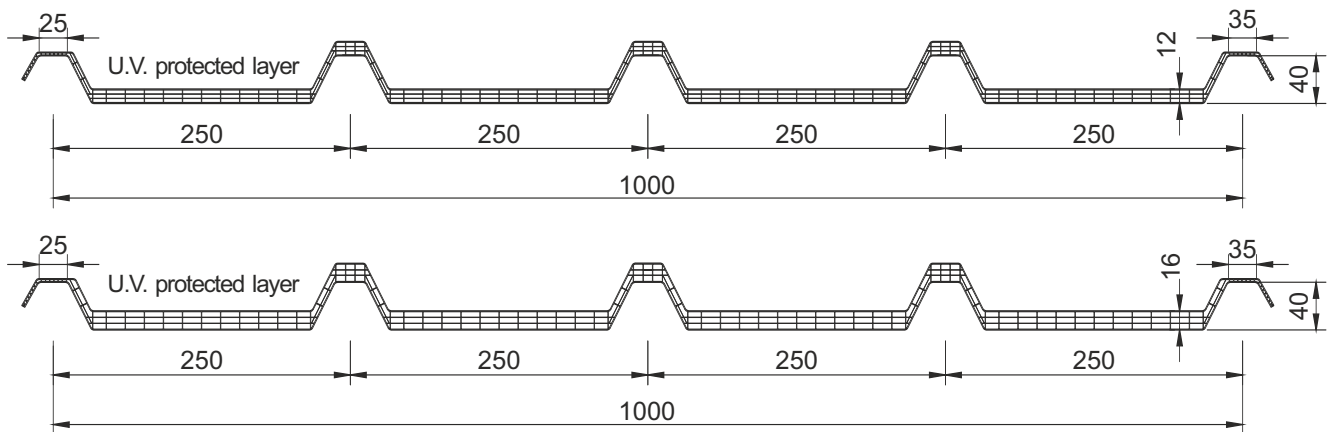
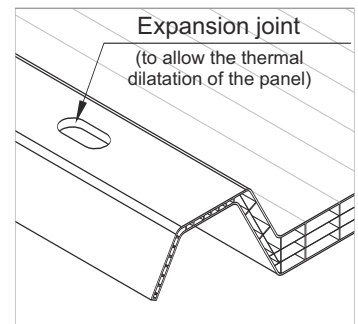
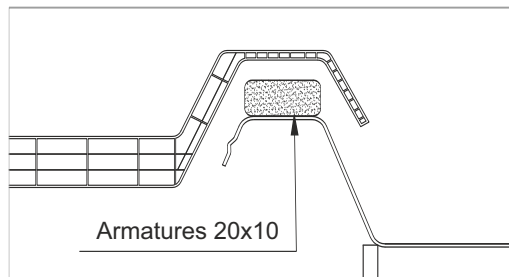
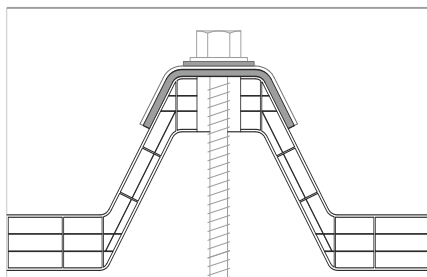


Table of admissible loads *

Maximum values guaranteed for the distances (l), between two supports for a luminary panel, from alveolar polycarbonate, installed between two steel exterior side panels

T (mm)	Load (daN/m ²)						
	70	80	100	120	150	180	200
12	2,80	2,60	2,40	2,20	2,00	1,80	1,60

CORE ANCHORAGE



*The company reserves the right to make the necessary modifications or improvements to its products, at any time, without being subject to prior notice.

TOP EVAC

Smoke evacuators

The systems are designed for hall and industrial building roofs, according to European fire safety norms. For any industrially designed building, the smoke and heat evacuators (E.F.C.) shall mandatorily cover between 1% and 5% of the area.



The NINZ doors are fire resistant steel doors, approved in Romania: REI 30', REI 60' and REI 120'. Used in offices, administrative areas, industrial halls. The ranges is varied, both from the perspective of product multitude as well as from a color perspective.



TOPANEL

INSULATED PANELS

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