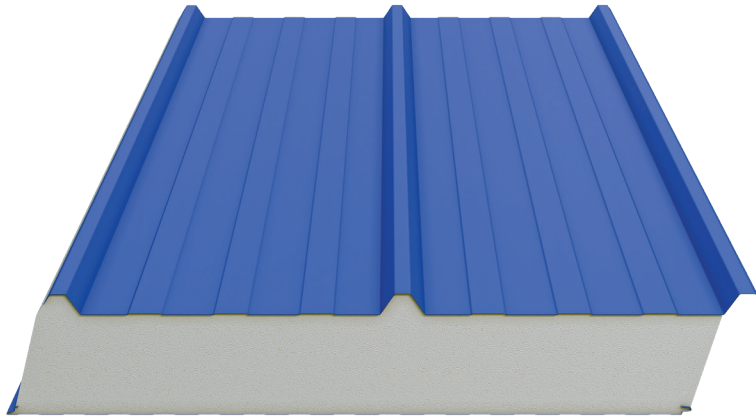


N3-UK Roof and Wall Panel



Product Information

It has 3 ribs which is lateral connected sandwich panel. Its biggest advantage is that it enables fast assembly thanks to lateral connected panel connection. This product enables wide gaps to be passed safely with its indented form. It has a joint detail with angle.

Production Plant

UK

Product Application

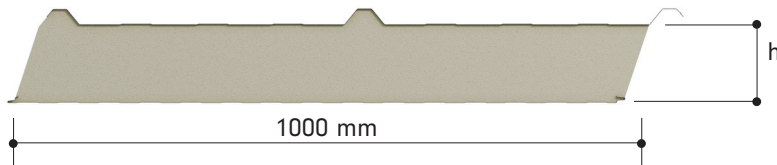
- Industrial Buildings
- Military Buildings
- Public Buildings
- Agricultural Buildings
- Sports Facilities
- Construction Site Buildings
- Silos
- Hypermarkets
- Shopping Centers
- Storehouse Halls
- Administrative Buildings

and all other concrete structures with steel or prefabricated load bearing systems.

Performance Advantages

It has a joint detail with angle.
 Fast and trouble-free installation saves both time and labor.
 It has high performance in sound insulation as well as heat insulation.
 Thanks to its colorful surface, there is no need for additional coatings such as plaster or paint.
 There are surface paint (Polyester, PvdF, Plastisol, PVC) options suitable for the place of use.
 Color selection can be made from the RAL catalogue.
 It does not deteriorate, rot or mold over time.

Measurements



h: 40-50-60-80-100-120-140-160-180-200 mm

Modular Width	1,000 mm
Minimum Length	2 meters
Maximum Length	Depends on transport conditions.

SmartCore – PIR Properties

Density (EN 1602)	PIR: 40 (± 2) kg/m ³ & SmartCore: 41 (± 2) kg/m ³
Thickness	40-50-60-80-100-120-140-160-180-200 mm
Thermal Conductivity (EN 13165)	PIR: 0.022-0.024 & SmartCore: 0.018-0.019 W/mK
Reaction to Fire (13501)	PIR: B-s2,d0 & SmartCore: B-s2,d0

Thermal Conductivity Table for PIR Panels

Panel Thickness	U Thermal Conductivity (W/m ² K)	R Thermal Conductivity (m ² K/W)	R Thermal Conductivity (ft ² °F h/Btu)
40 mm	0,49	2,05	11,63
50 mm	0,40	2,50	14,22
60 mm	0,34	2,96	16,80
80 mm	0,26	3,87	21,96
100 mm	0,21	4,78	27,12
120 mm	0,18	5,69	32,28
140 mm	0,15	6,59	37,44
160 mm	0,13	7,50	42,61
180 mm	0,12	8,41	47,77
200 mm	0,11	9,32	52,93

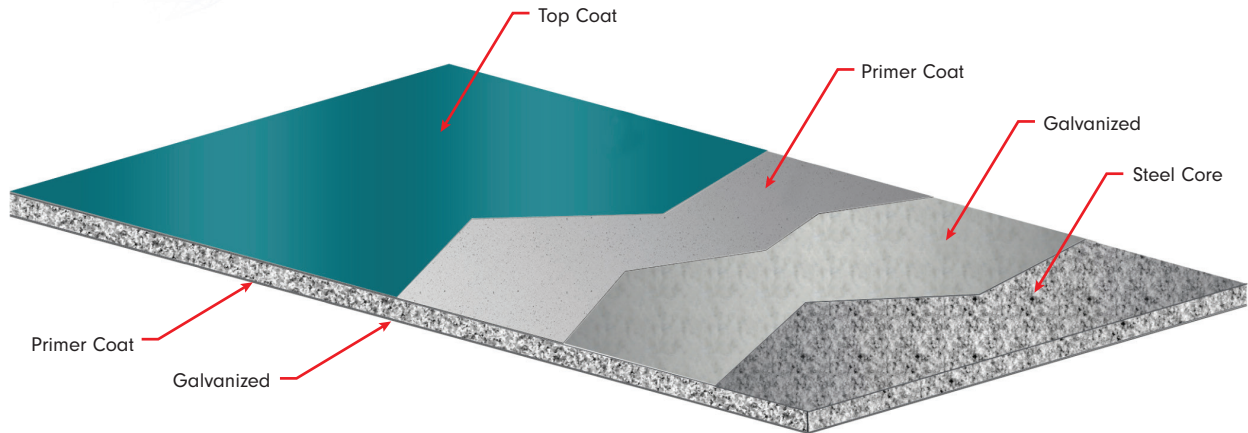
The relevant values were calculated based on a value of 0.022 W/m²K.

Thermal Conductivity Table for SmartCore Panels

Panel Thickness	U Thermal Conductivity (W/m ² K)	R Thermal Conductivity (m ² K/W)	R Thermal Conductivity (ft ² °F h/Btu)
40 mm	0,40	2,47	14,04
50 mm	0,33	3,03	17,20
60 mm	0,28	3,58	20,35
80 mm	0,21	4,70	26,66
100 mm	0,17	5,81	32,97
120 mm	0,14	6,92	39,28
140 mm	0,12	8,03	45,59
160 mm	0,11	9,14	51,90
180 mm	0,10	10,25	58,21
200 mm	0,09	11,36	64,51

The relevant values were calculated based on a value of 0.018 W/m²K.

Metal Surfaces



Prepainted Galvanized Steel Surface

Metal Type	Prepainted Galvanized Steel
External Facing Thickness	0.50-0.80 mm
Internal Facing Thickness	0.40-0.80 mm
Thickness Tolerance (EN 10143)	Nominal
Steel Quality (EN 10327)	Grade (S220GD+Z, S250GD+Z, S280GD+Z, S320GD+Z, S350GD+Z)
Paint Type	Polyester, PvdF, Plastisol

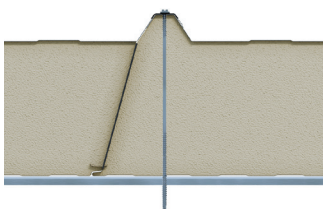
Tolerance Values

Panel Length	Panel Thickness	Panel Cover Width	Rectangularity
If $L \leq 3,000$ mm ± 5 mm If $L > 3,000$ mm ± 10 mm	$D \leq 100$ mm ± 2 mm	± 2 mm for all profiles	$s \leq 0.6\%$ of the nominal cover thickness (w). / (Width x 0.006)

Standard Package

Thickness (mm)	40	50	60	80	100	120	140	160	180	200
Quantity	20	18	14	10	9	8	7	6	5	4

Joint Details

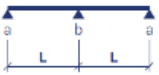


NOVA 4 (PIR) PANEL FOR ROOF LOAD SPAN TABLE

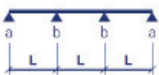
Core Thickness (mm)	Load Type kN/m ²	Span length (L) (m)															
		1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
		a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)
SINGLE SPAN	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	2.39	1.85	1.50	1.25	1.06	0.93	0.81	0.71	0.62	0.49	0.37	-	-	-	-	-
	Suction (kN/m ²)	-3.84	-3.06	-2.36	-1.75	-1.35	-1.08	-0.90	-0.76	-0.65	-0.56	-0.50	-	-	-	-	-
	50	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	2.67	2.11	1.74	1.48	1.27	1.11	0.99	0.88	0.78	0.70	0.58	0.45	0.35	0.27	-	-
	Suction (kN/m ²)	-4.50	-3.67	-2.74	-2.04	-1.59	-1.27	-1.05	-0.89	-0.76	-0.66	-0.58	-0.52	0.00	-0.42	-	-
	60	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	2.95	2.37	1.99	1.71	1.49	1.31	1.16	1.04	0.94	0.85	0.76	0.65	0.53	0.42	0.34	0.27
	Suction (kN/m ²)	-5.19	-4.14	-3.12	-2.33	-1.82	-1.46	-1.21	-1.02	-0.88	-0.76	-0.67	-0.59	-0.53	-0.48	-0.44	-0.40
	80	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.50	2.90	2.49	2.18	1.93	1.73	1.55	1.40	1.26	1.14	1.04	0.96	0.87	0.77	0.65	0.54
	Suction (kN/m ²)	-6.23	-4.85	-3.88	-2.92	-2.28	-1.84	-1.52	-1.28	-1.10	-0.96	-0.84	-0.75	-0.67	-0.60	-0.55	-0.50



Core Thickness (mm)	Load Type kN/m ²	Span length (m)															
		1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
		a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)
DOUBLE SPAN	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	2.39	1.85	1.50	1.18	0.97	0.80	0.67	0.57	0.49	-	-	-	-	-	-	-
	Suction (kN/m ²)	-3.50	-2.60	-2.04	-1.66	-1.35	-1.08	-0.90	-0.76	-0.65	-	-	-	-	-	-	-
	50	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	2.67	2.11	1.60	1.26	1.02	0.86	0.72	0.62	0.53	0.46	-	-	-	-	-	-
	Suction (kN/m ²)	-3.74	-2.81	-2.21	-1.81	-1.52	-1.27	-1.05	-0.89	-0.76	-0.66	-	-	-	-	-	-
	60	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	2.95	2.21	1.68	1.33	1.08	0.91	0.77	0.66	0.57	0.50	-	-	-	-	-	-
	Suction (kN/m ²)	-3.98	-3.01	-2.38	-1.96	-1.65	-1.42	-1.21	-1.02	-0.88	-0.76	-	-	-	-	-	-
	80	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.29	2.39	1.83	1.46	1.19	1.00	0.87	0.75	0.65	0.57	0.50	0.45	-	-	-	-
	Suction (kN/m ²)	-4.43	-3.38	-2.70	-2.23	-1.89	-1.63	-1.43	-1.27	-1.10	-0.96	-0.84	-0.75	-	-	-	-
	100	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.48	2.55	1.98	1.58	1.31	1.10	0.96	0.83	0.72	0.64	0.56	0.50	0.45	-	-	-
	Suction (kN/m ²)	-4.85	-3.73	-3.00	-2.49	-2.11	-1.83	-1.61	-1.43	-1.29	-1.15	-1.01	-0.90	-0.80	-	-	-
	120	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.67	2.71	2.11	1.70	1.41	1.19	1.02	0.90	0.79	0.70	0.62	0.55	0.50	0.45	-	-
	Suction (kN/m ²)	-5.24	-4.06	-3.28	-2.73	-2.32	-2.01	-1.77	-1.58	-1.42	-1.29	-1.18	-1.04	-0.94	-0.85	-	-
	150	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.93	2.94	2.31	1.87	1.56	1.32	1.13	1.00	0.88	0.78	0.70	0.62	0.56	0.51	0.46	0.42
	Suction (kN/m ²)	-5.78	-4.52	-3.67	-3.07	-2.62	-2.28	-2.01	-1.79	-1.61	-1.47	-1.35	-1.24	-1.13	-1.02	-0.93	-0.85
	170	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	4.09	3.08	2.43	1.98	1.65	1.40	1.20	1.05	0.94	0.83	0.74	0.67	0.60	0.54	0.49	0.45
	Suction (kN/m ²)	-6.13	-4.81	-3.92	-3.28	-2.81	-2.44	-2.15	-1.92	-1.74	-1.58	-1.45	-1.34	-1.24	-1.14	-1.03	-0.95



Core Thickness (mm)	Load Type kN/m ²	Span length (m)															
		1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
		a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)	a (mm)
TRIPLE SPAN	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	2.39	1.85	1.50	1.25	1.06	0.93	0.81	0.71	0.62	0.54	0.48	0.42	0.37	0.33	-	-
	Suction (kN/m ²)	-3.84	-3.06	-2.36	-1.75	-1.35	-1.08	-0.90	-0.76	-0.65	-0.56	-0.50	-0.44	-0.40	-0.36	-	-
	50	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	2.67	2.11	1.74	1.48	1.25	1.04	0.90	0.77	0.67	0.59	0.52	0.46	0.41	0.37	-	-
	Suction (kN/m ²)	-4.32	-3.25	-2.58	-2.04	-1.59	-1.27	-1.05	-0.89	-0.76	-0.66	-0.58	-0.52	0.00	-0.42	-	-
	60	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	2.95	2.37	1.99	1.61	1.31	1.10	0.95	0.82	0.71	0.62	0.55	0.49	0.44	0.40	0.36	-
	Suction (kN/m ²)	-4.54	-3.43	-2.74	-2.27	-1.82	-1.46	-1.21	-1.02	-0.88	-0.76	-0.67	-0.59	-0.53	-0.48	-0.44	-
	80	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.50	2.83	2.17	1.73	1.42	1.20	1.02	0.90	0.79	0.70	0.62	0.56	0.50	0.45	0.41	0.37
	Suction (kN/m ²)	-4.95	-3.79	-3.04	-2.53	-2.16	-1.84	-1.52	-1.28	-1.10	-0.96	-0.84	-0.75	-0.67	-0.60	-0.55	-0.50
	100	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	4.06	2.98	2.30	1.85	1.53	1.29	1.11	0.98	0.86	0.76	0.68	0.61	0.55	0.50	0.46	0.41
	Suction (kN/m ²)	-5.34	-4.12	-3.33	-2.78	-2.38	-2.08	-1.84	-1.55	-1.32	-1.15	-1.01	-0.90	-0.80	-0.72	-0.66	-0.60
	120	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	4.25	3.12	2.42	1.96	1.62	1.38	1.19	1.03	0.93	0.83	0.74	0.66	0.60	0.55	0.50	0.45
	Suction (kN/m ²)	-5.71	-4.43	-3.59	-3.01	-2.59	-2.26	-2.01	-1.80	-1.55	-1.34	-1.18	-1.04	-0.94	-0.85	-0.77	-0.70
	150	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	4.48	3.32	2.60	2.11	1.76	1.50	1.30	1.13	1.00	0.91	0.82	0.74	0.67	0.61	0.55	0.51
	Suction (kN/m ²)	-6.23	-4.86	-3.97	-3.34	-2.87	-2.52	-2.24	-2.01	-1.83	-1.64	-1.44	-1.27	-1.13	-1.02	-0.93	-0.85
	170	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	4.64	3.45	2.71	2.21	1.85	1.58	1.36	1.20	1.06	0.96	0.86	0.78	0.71	0.64	0.59	0.54
	Suction (kN/m ²)	-6.56	-5.14	-4.20	-3.54	-3.05	-2.68	-2.38	-2.15	-1.95	-1.79	-1.61	-1.42	-1.27	-1.14	-1.03	-0.95



- Notes:
- Steel thickness ext/int: 0,50/0,40mm
 - Values have been calculated using the method described in EN 14509, for color group 1 (very light colors)
 - Values have been calculated using the limit state method described in EN 14509: 2013. Taking imposed loads, temperature and creep into account.
 - The following deflection limits have been used:
Pressure loading L/200
Suction loading L/200
 - Design criteria Safety factors on loads: ULS 1.5 (variable) 1.35 (permanent) / SLS 1.
Safety factors on material: Wrinkling of face: ULS 1.25 / SLS
1.1. Shear of core: ULS 1.3 / SLS 1.08.
SLS Summer temperature: Outside 55°C / Inside 25°C,
Winter temperature: Outside -20°C / Inside -25°C.
 - In order to conduct the calculations some data from table E6 and rates originating from table E8 stipulated in a standard EN 14509 were applied.
 - The loads calculated in the load-span table are unfactored loads.
 - The actual wind suction resisted by the panel is dependent on the number of fasteners.
 - The fastener calculation should be carried out in accordance with the appropriate standards.
 - For intermediate values linear interpolation may be used.
 - The allowable steelwork tolerance between bearing planes of adjacent supports have to be aligned with EN1090-2.

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NOVA 4 (PIR) WALL PANEL LOAD SPAN TABLE

Core Thickness (mm)	Load Type kN/m ²	Span length (L) (m)													
		1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
40	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.06	2.30	1.85	1.54	1.32	1.15	1.03	0.94	0.85	0.78	0.71	0.63	-	-
50	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.62	2.76	2.22	1.86	1.60	1.41	1.25	1.13	1.03	0.95	0.88	0.80	0.72	0.65
60	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	4.16	3.19	2.59	2.18	1.88	1.65	1.47	1.33	1.21	1.11	1.03	0.97	0.88	0.80
80	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	5.19	4.04	3.30	2.79	2.42	2.13	1.91	1.72	1.57	1.45	1.34	1.25	1.16	1.09
100	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	6.20	4.86	3.99	3.39	2.94	2.60	2.33	2.11	1.93	1.77	1.64	1.53	1.43	1.35
120	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	6.78	5.65	4.68	3.98	3.46	3.07	2.75	2.49	2.28	2.10	1.95	1.81	1.70	1.60
150	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	6.78	5.65	4.84	4.24	3.76	3.39	3.08	2.82	2.60	2.42	2.26	2.12	1.99	1.88
170	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	6.78	5.65	4.84	4.24	3.76	3.39	3.08	2.82	2.60	2.42	2.26	2.12	1.99	1.88

Core Thickness (mm)	Load Type kN/m ²	Span length (m)													
		1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
40	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.06	2.30	1.85	1.54	1.32	1.15	1.03	0.94	0.85	0.78	0.71	0.63	-	-
50	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.62	2.76	2.22	1.79	1.48	1.26	0.91	0.55	0.32	0.18	-	-	-	-
60	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	4.12	3.07	2.40	1.94	1.61	1.37	1.12	0.75	0.46	0.28	0.16	-	-	-
80	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	4.60	3.46	2.73	2.22	1.86	1.59	1.37	1.18	0.82	0.53	0.33	0.20	-	-
100	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	5.05	3.84	3.04	2.49	2.09	1.79	1.55	1.37	1.19	0.86	0.57	0.37	0.23	-
120	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	5.47	4.19	3.34	2.74	2.31	1.98	1.72	1.51	1.35	1.16	0.86	0.59	0.39	0.26
150	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	5.73	4.68	3.75	3.10	2.61	2.24	1.96	1.73	1.54	1.38	1.26	1.26	0.70	0.49
170	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	5.73	4.78	4.01	3.32	2.81	2.41	2.11	1.86	1.66	1.49	1.35	1.22	0.95	0.68

Core Thickness (mm)	Load Type kN/m ²	Span length (m)													
		1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
40	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.06	2.30	1.85	1.54	1.32	1.15	1.03	0.93	0.85	0.78	0.71	0.63	-	-
50	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	3.62	2.76	2.22	1.86	1.60	1.40	1.25	1.13	1.03	0.95	0.88	0.80	0.72	0.65
60	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	4.16	3.19	2.59	2.18	1.88	1.65	1.47	1.33	1.21	1.11	1.03	0.97	0.88	0.80
80	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	5.19	4.04	3.30	2.79	2.42	2.13	1.91	1.72	1.57	1.45	1.34	1.25	1.16	1.09
100	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	6.20	4.86	3.99	3.39	2.94	2.60	2.33	2.11	1.93	1.77	1.64	1.53	1.43	1.35
120	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	6.78	5.65	4.68	3.98	3.46	3.07	2.75	2.49	2.28	2.10	1.95	1.81	1.70	1.60
150	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	6.78	5.65	4.84	4.24	3.76	3.39	3.08	2.82	2.60	2.42	2.26	2.12	1.99	1.88
170	a (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	Pressure (kN/m ²)	6.78	5.65	4.84	4.24	3.76	3.39	3.08	2.82	2.60	2.42	2.26	2.12	1.99	1.88

- Notes:
- Steel thickness ext/int: 0.50/0.40mm
 - Values have been calculated using the method described in EN 14509, for color group 3 (dark colors)
 - Values have been calculated using the limit state method described in EN 14509: 2013. Taking imposed loads, temperature and creep into account.
 - The following deflection limits have been used:
Pressure loading L/100
Suction loading L/100
 - Design criteria Safety factors on loads: ULS 1.5 (variable) 1.35 (permanent) / SLS 1.
Safety factors on material: Wrinkling of face: ULS 1.25 / SLS
1.1. Shear of core: ULS 1.3 / SLS 1.08.
SLS Summer temperature: Outside 55°C / Inside 25°C,
Winter temperature: Outside -20°C / Inside -25°C.
 - In order to conduct the calculations some data from table E6 and rates originating from table E8 stipulated in a standard EN 14509 were applied.
 - The loads calculated in the load-span table are unfactored loads.
 - The actual wind suction resisted by the panel is dependent on the number of fasteners.
 - The fastener calculation should be carried out in accordance with the appropriate standards.
 - For intermediate values linear interpolation may be used.
 - The allowable steelwork tolerance between bearing planes of adjacent supports have to be aligned with EN1090-2

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