Save 25% of power Enjoy Nav System



DRY ARCHITECTURE ENGINEERING

NAV SYSTEM

PROTECTIVE CELL





Save 25% of power Enjoy Nav System

We are pleased to present 60 years of history dedicated to drywall engineering

Thanks to our know-how, we are able to realise even the most complex projects. For 60 years, Nav System has been internationally recognised for its reliability and concreteness, but above all for being an Italian excellence in the sector of industrial insulation. Nav System has a typically Italian history, which tells the story of the success of a classic company model, which focuses its objectives primarily on research and innovation, to the point of becoming a European benchmark for speciPc insulation systems for cold rooms and warehouses. Passion, commitment, values and attention to the customer have been the same since 1962, without however renouncing innovation, so as to be able to satisfy new requirements. NAV SYSTEM

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The headquarters of Cesena

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Save 25% of power Enjoy Nav System



Our highly professional staff is able to meet the most demanding requirements and develop suitable solutions to meet market needs.

We produce panels with internal polyurethane and polyisocyanurate insulation partly derived from the PET recycling process and free of CFCs and HCFCs, making the product environmentally friendly, ozone-friendly and easy to dispose of. The metal substrates are also recyclable. Our commitment to environmental protection has led us to study the life cycle of our products, enabling us to obtain the Environmental Product Declaration EPD, and environmental sustainability allows those who use our panels to obtain credits

Our innovation is taken as an example

ILEARNING RESPECT FOR THE ENVIRONMENT IS THE GREATEST GIFT FUTURE GENERATIONS CAN RECEIVE



according to the LEED V.4 system. Thanks to our Qualified Research Laboratory, accredited by the M.I.U.R. (Ministry of Education, University and Research and published in the Official Gazette year 141 number 285 of 06/12/2000), we have been able to obtain increasingly high-performance panels, which have enabled us to obtain numerous certifications.



25% energy savings, with Nav System's PIR **Supreme** you can!

Being able to perfectly define the insulation of a building allows you to reduce energy consumption. PIR **Supreme** was developed precisely to improve building insulation and reduce energy consumption and thus costs. In fact, PIR **Supreme** offers:



Thermal efficiency, the best on the market 2.

Continuous performance and benefits over time, with an aged lambda value of 0.018 W/m.K



Dynamism,

we can use a lighter and thinner panel with the same thermal transmittance coefficient as a much thicker and bulkier traditional one



Reaction to fire, class B-s1, d0 Fire resistance, up to REI 30 for roof and EI 90 for wall



5.

Eco friendly, with smaller HVCA dimensions and lower CO₂ emissions

The PIR **Supreme** can be used on the entire NAV-SYSTEM product range. These researches are sparks that ignite our passion for innovation and generate revolutionary solutions by making the most of technology.

Rain 5

The roofing panel designed to meet the multiple requirements of civil and industrial construction with maximum versatility and tightness



Designed to meet the multiple requirements of civil and industrial construction, RAIN 5 is the self-supporting corrugated metal panel intended for sloping roofs with a slope of not less than 7%. The outer side has 5 frets and micro-frets on the flat parts that increase its load-bearing capacity, while the inner side can be made with a slatted or smooth finish. The flap of the hollow fret that surmounts the solid fret is very long and reinforced by a final rib that improves the tightness.



WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.



At the top of the full corrugation of the joint there is a gorge which interrupts any rising water by capillarity. Ă "safety" drainage channel has been created on the internal side of the panel joint which leads to any water from condensation or due to capillarity infiltration to the gutter. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.

CERTIFICATIONS

CE EN 14509 EPD UNI ISO 14025 PUR B-roof (t3) / PUR B-roof (t2) PIR B-roof PIR B-s2,d0 / PIR B-s1,d0 PIR REI30 PIR Zulassung Nr.Z-10.49-589 PIR VKF 5.3 LEED PIR CLASSE 0 BS476: Part 6 BS476: Part 7

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better insulation. Supreme achieves a thermal conductivity coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.



USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 20-30-40-50-60-80-100-120-150

Nominal sheet thickness
EXTERNAL façade:
Copper 0.5 mm
INTERNAL façade:
Steel 0.4 mm

STATIC PROPERTIES			SINGLE F	PITCH			l=	m	<u> </u>													
Nominal sheet thickness			THICK PANEL	NESS (mm)	1.	.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.	0	5.5	6.0	6.5	7.0		PANEL	WEIGH [*] (Kg/m ²
EXTERNAL façade:			20		29	90	190	140	85	50												8.34
Steel 0.5 mm			30		4	10	270	170	115	70	40											8.73
Steel 0.4 mm			40		53	30	310	205	145	90	60	40										9.06
			50		60	05	350	240	175	120	80	55	30									9.43
			60		6	50	395	280	210	145	100	70	50	30)							9.80
			80		7	50	480	350	270	200	145	105	80	6)	35						10.54
			100		83	35	565	430	340	260	195	145	110	8	5	65	50					11.28
USUAL SUPPORTS			120		93	30	645	505	405	325	245	185	145	11	5	90	70	60				12.02
			150		10	00	775	615	505	415	320	250	200	16	0	130	105	85	70			13.13
Nominal sheet thickness			THICK PANEL	NESS (mm)	1.	.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.	0	5.5	6.0	6.5	7.0		PANEL	WEIGH (Kg/m²
EXTERNAL façade:			20		29	90	190	140	95	55	30											9.32
Steel 0.6 mm			30		4	10	270	195	130	80	50											9.7
Steel 0.4 mm			40		53	30	345	235	160	100	65	50	30									10.04
			50		64	45	395	270	195	130	90	60	45									10.4
			60		74	45	440	310	230	155	110	80	55	4)							10.78
			80		84	40	530	390	300	215	155	115	85	6	5	50						11.52
			100		93	35	615	465	370	275	205	155	120	9	5	75	55					12.20
USUAL SUPPORTS			120		10	00	700	545	445	340	255	200	155	12	5	100	80	65				13.0
			150		10	00	830	635	505	420	335	265	210	17	0	140	110	90	75			14.1
Nominal sheet thickness			THICK PANEL	NESS (mm)	1.	.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.	0	5.5	6.0	6.5	7.0		PANEL	WEIGH (Kg/m ²
EXTERNAL façade:			20		28	80	170	100	65													5.79
Iominal sheet thickness XTERNAL façade: Juminium 0.6 mm NTERNAL façade: teel 0.4 mm			30		39	90	225	140	95	65	50											6.1
Steel 0.4 mm			40		49	95	285	185	130	90	65											6.50
JSUAL SUPPORTS MIDTH 100 mm 120 10 150 10 150 10 150 10 Nominal sheet thickness THICKNESS PANEL (mm) 1 EXTERNAL façade: 20 2 Aluminium 0.6 mm 30 3 INTERNAL façade: 40 4 50 5 60 60 6 80 7	80	350	230	165	120	85	60										6.8					
			60		63	30	410	280	200	150	105	80	60									7.24
			80		74	40	545	385	280	210	145	115	85	6	5	55						7.98
			100		90	00	625	465	360	270	200	155	120	9	5	75	60					8.72
JSUAL SUPPORTS WIDTH 100 mm			120		93	30	650	485	385	320	255	195	150	12	0	95	75					9.40
			150		10	00	685	510	405	335	285	250	205	16	5	130	110					10.5
Nominal sheet thickness			THICK	NESS (mm)	1.	.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.	0	5.5	6.0	6.5	7.0		PANEL	WEIGH (Kg/m ²
Copper 0.5 mm			20		30	00	195	120	65													9.49
NTERNAL façade:			30		4	10	260	165	95	55												9.8
Steel 0.4 mm			40		53	30	315	210	125	80	50											10.2
			50		60	05	370	250	160	105	70	50										10.58
			60		6	50	425	300	195	130	90	65										10.95
			80		75	50	535	390	275	190	135	100	75	5	5							11.69
ISLIAL SUPPORTS			100		83	35	620	465	355	255	185	140	105	8)	60						12.43
WIDTH 100 mm			120		95	50	645	480	380	315	240	180	140	10	5	85	65	50				13.1
			150		10	00	680	510	405	335	285	245	195	15	0	120	95	80				14.28
PUR / PIR										S	UPREME											
Transmittance	20	30	40	50	60	80	100	120	150	T	ransmitta	ance		20	30	40	50	60	80	100	120	150
(U) EN 14509 = W/m ² K	0.97	0.69	0.53	0.43	0.36	0.27	0.22	0.19	0.15	(เ	J) EN 1450	09 = W/m	n²K	0.79	0.56	0.43	0.35	0.29	0.22	0.18	0.15	0.12
(U) EN 14509 = Kcal/m ² h°C	0.83	0.59	0.45	0.37	0.31	0.24	0.19	0.16	0.13	(L	J) EN 1450	9 = Kcal/	/m²h°C	0.68	0.48	0.37	0.30	0.25	0.19	0.15	0.13	0.10

P= kg/m²

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient Δ T=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

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Rain Mono

The lightweight insulating roof panel for use where excessive loads are not required



RAIN MONO is the economical variant of the RAIN 5 panel, suitable for roofs with a minimum slope of 7% and where the loads involved are low. Rain mono is suitable where installation is on a slab, or on almost continuous supports. The external face of the panel can be made of galvanised steel, stainless steel, aluminium or other metals, with a wide range of colours that allow for different aesthetic solutions,

WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as determined by laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

INTERNAL FINISH



the internal support is made of a flexible material (aluminium foil and feltboard).

Due to the flexibility of the internal support, we do not recommend using it on roofs with a visible inner side, as the aesthetic perfection of the inner side cannot be guaranteed.

NAV System insulation panels can be produced with metal

cladding in galvanised steel, Aluzinc steel, stainless steel,

aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester,

polyurethane, polyamide, plastisol or PVDF paint products.

In addition to the standard colours available, custom colours

CERTIFICATIONS PUR B-roof (t2) LEED

METAL CLADDING

can be made to order.



USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 10-20-30-40-50-60-80-100-120-150

STATIC I	PROPERTIES
kg/m²	

Nominal thickness Steel support

USUAL SUPPORTS

WIDTH 100 mm

1.0

0.5 0.6 0.7

0.8

1.0

THICKNESS SHEET (mm)

SINGLE PITCH

THICKNESS SHEET (mm)

0.4 0.5 0.6

0.7

0.8

P = ka/m

Nominal thickness Aluminium support

USUAL SUPPORTS WIDTH 100 mm

WEIGHT TABLE kg/m²

THICKNESS SHEET (m

0.5 steel + aluminium 0.6 aluminium + alum

PUR / PIR U Trar (U) E (U) E



NAV SYSTEM



	l∕=m	_						
1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
250	130	100	70					
460	230	150	110	80	60	50		
640	410	210	150	100	65	55		
830	520	290	180	110	75	60	50	
950	610	330	205	130	85	65	55	50
1000	750	420	250	170	140	100	85	70

1.00	1.25	1.50	1.75	2.00
170	100	80	50	
280	170	120	70	40
320	200	130	80	50
370	230	150	100	60
450	260	170	120	80

	THIC	KNESS PA	NEL (mm	I)								
ım)	10	20	30)	40	50	60	80	100	120	150	
foil	5.3	5.7	6.	1	6.4	6.8	7.2	8.0	8.6	9.4	10.5	
inium foil	2.8	3.1	3.	5	3.9	4.3	4.6	5.4	6.1	6.9	8.1	
nsmittance		10	20	30	40	50	60	80	100	120	150	
EN 14509 = W/m ²	²K	1.57	0.95	0.68	0.52	0.42	0.36	0.27	0.22	0.18	0.15	-
EN 14509 = Kcal/r	n²h°C	1.35	0.82	0.58	0.45	0.36	0.31	0.23	0.19	0.16	0.13	

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient Δ T=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Rain Deck

The ideal panel for roofs to be waterproofed on site



RAIN DECK is the ideal insulated panel for waterproofing, designed for application on flat pitched roofs or roofs with a slope of less than 7% and available in multiple versions for the application of traditional and synthetic polyolefin-based sheaths. The panel is made with the corrugated element on the intrados and with the flat external surface covered with a bituminous feltboard suitable for receiving the bituminous sheathing afterwards.



USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 10-20-30-40-50-60-80-100-120-150 STATIC PROPERTIES kg/m²

Nominal thickness Steel support

WEIGHT TABLE

PUR / PIR

kg/m²

	P= kg/	/m ²					
SINGLE PITCH	ℓ=n	n					
THICKNESS SHEET (mm)	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.5	190	145	100	70	50		
0.6	230	185	135	100	65		
0.7	280	195	145	110	70	50	
0.8	315	235	170	125	80	55	
1.0	420	270	200	160	110	85	55
-							



WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as determined by laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

EXTERNAL FINISH



METAL CLADDING

CERTIFICATION

LEED

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

For more information see nav-system.it

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	тніскі	THICKNESS PANEL (mm)												
THICKNESS SHEET (mm)	10	20	30	40	50	60	80	100	120	150				
0.5 steel + feltboard	5.39	5.77	6.11	6.48	6.85	7.22	7.95	8.70	9.44	10.55				

U Transmittance	10	20	30	40	50	60	80	100	120	150
(U) EN 14509 = W/m ² K	1.62	0.98	0.68	0.53	0.43	0.36	0.27	0.22	0.18	0.15
(U) EN 14509 = Kcal/m²h°C	1.40	0.84	0.59	0.45	0.37	0.31	0.23	0.19	0.16	0.13

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient ΔT=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Rain Farm

The ideal corrugated panel in the livestock roofing sector



RAIN FARM is a self-supporting metal panel designed to meet all the requirements of the livestock sector for the construction of roofs with a minimum slope of 7%. It is resistant to the organic acid substances present in the atmosphere of livestock farms, thanks to the use of an internal fibreglass support.



WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as determined by laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

METAL CLADDING

CERTIFICATIONS

BROOF LEED

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

The RAIN FARM panel can be made with the inner side in metal pre-coated with a highly durable antibacterial plastic

film to maintain maximum protection and hygiene, should

special capacity requirements be required.



USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 20-30-40-50-60-80-100-120-150

STATIC PROPERTIES kg/m²

Nominal thickness Steel support

Nominal thickness

WEIGHT TABLE

kg/m²

Aluminium support

	P = Kg/	111-					
SINGLE PITCH	Ĺ=n	n 📥					
THICKNESS SHEET (mm)	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.5	145	110	80	60	50		
0.6	195	140	100	65	55		
0.7	270	175	105	75	60	50	
0.8	310	195	130	85	65	55	50
1.0	400	230	160	140	100	85	70

THICKNESS SHEET (mm) 0.5 0.6 0.7 0,8 1,0

THICKNESS SHEET (m

0.5 steel + fibreglass 0.6 aluminium + fibre

PUR υ Tran (U) E _____

INTERNAL FINISH



NAV SYSTEM



1.00	1.25	1.50	1.75	2.00
170	100	80	50	-
280	170	120	70	40
320	200	130	80	50
370	230	150	100	60
450	260	170	120	80

	THICKNESS PANEL (mm)												
nm)	20	30	40	50	60	80	100	120	150				
	6.15	6.50	6.84	7.21	7.58	8.32	9.06	9.80	10.91				
glass	3.59	3.95	4.28	4.65	5.02	5.76	6.50	7.24	8.35				

U Transmittance	20	30	40	50	60	80	100	120	150
(U) EN 14509 = W/m²K	0.95	0.68	0.52	0.42	0.36	0.27	0.22	0.18	0.15
(U) EN 14509 = Kcal/m²h°C	0.82	0.58	0.45	0.36	0.31	0.23	0.19	0.16	0.13

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient Δ T=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Rain Garden

Designed for all low-slope residential or flat industrial roofs



Designed to meet the multiple requirements of civil and industrial construction, RAIN GARDEN is the self-supporting corrugated metal panel intended for flat roofs or those with a slope of less than 7%.

The panel is made with double steel support, the outer side has a flat steel surface to which a PVC synthetic membrane is applied, the inner side is made of corrugated steel.

The Rain Garden panel guarantees a perfect waterproof covering and excellent thermal insulation thanks to the welding of the PVC edge on site by specialised personnel.



USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 20-30-40-50-60-80-100-120-150

STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

P= kg/m²

INGLE PITCH	4	l=	=m	<u> </u>											
HICKNESS PANEL (mm)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0		PANEL WEIGH ⁻ (Kg/m²
20	300	195	130	80	50										11.(
0	350	230	145	95	55										11.3
10	535	300	200	140	90	60									11.7
0	580	340	230	170	120	80	55	· · · · ·							12.1
60	625	380	270	205	145	100	70	50							12.5
80	705	460	335	265	205	150	110	85	65						13.2
00	710	465	340	270	215	170	150	115	90	70	65				14.(
20	715	470	345	275	220	180	160	135	120	95	75	60			14.8
50	720	475	350	280	225	190	165	145	130	115	105	90	75		15.9
HICKNESS ANEL (mm)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	I	PANEL WEIGH ⁻ (Kg/m ²
20	290	190	135	85	50										12.0
0	405	260	165	115	70										12.3
10	520	300	200	145	95	65		· · · · ·							12.7
0	580	340	235	175	125	85	60								13.1
60	625	380	275	210	150	105	75	55							13.5
80	715	465	350	275	210	155	115	85	65	50					14.2
00	805	550	420	340	270	200	155	120	95	75	55				15.0
20	895	630	470	370	305	255	195	155	125	100	80	65			15.7
50	970	645	480	380	315	265	230	205	170	140	115	95	75		16.9
HICKNESS PANEL (mm)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	I	PANEL WEIGH ⁻ (Kg/m ²
20	270	175	130	85	50										14.(
0	385	255	170	115	70			· · · · ·							14.3
10	505	300	205	150	95	65									14.7
0	585	345	240	180	125	85	60								15.0
60	630	385	275	215	155	110	80	60							15.4
80	715	465	350	280	215	155	115	90	60	50					16.2
00	805	550	430	350	275	205	160	120	100	75	60				17.(
20	890	630	505	415	340	260	200	160	135	100	85	70			17.7
50	1000	755	620	520	435	340	270	215	175	145	120	95	75		18.8
HICKNESS PANEL (mm)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0		PANEL WEIGH (Kg/m²
20	255	165	120	85	50										16.0
0	375	245	170	120	70										16.2
10	490	305	205	150	100	65									16.6
0	585	345	240	180	125	85	60								17.0
60	630	385	280	215	155	110	80	65							17.4
80	715	470	355	285	215	160	120	90	65	55					18.2
00	810	555	435	355	280	210	165	125	105	80	65				18.9
20	890	635	510	425	345	265	205	165	140	105	90	75			19.7
50	1000	760	625	530	440	345	275	220	180	150	125	100	80		20.
UR / PIR	U Transmi	ittance		20		30	40	50		60	80	100		120	150
	(U) EN 14	4509 = V	V/m²K	0.97	().69	0.53	0.43		0.36	0.27	0.22		0.19	0.15
	(U) EN 14	4509 = Ko	cal/m²h°C	0.83	().59	0.45	0.37		0.31	0.24	0.19		0.16	0.13

USUAL SUPPORTS WIDTH 100 mm

USUAL SUPPORTS WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm

INTERNAL façade:

Steel 0.6 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL facade: Steel 0.8 mm

USUAL SUPPORTS

Nominal sheet thickness

EXTERNAL façade:

INTERNAL façade:

WIDTH 100 mm

Steel 0.5 mm

Steel 1.0 mm

USUAL SUPPORTS WIDTH 100 mm

SINGLE PITCH	4	l	=m												
THICKNESS PANEL (mm)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	F	PANEL WEIGH (Kg/m ²
20	300	195	130	80	50										11.(
30	350	230	145	95	55										11.3
40	535	300	200	140	90	60									11.7
50	580	340	230	170	120	80	55								12.
60	625	380	270	205	145	100	70	50							12.5
80	705	460	335	265	205	150	110	85	65						13.2
100	710	465	340	270	215	170	150	115	90	70	65				14.0
120	715	470	345	275	220	180	160	135	120	95	75	60			14.8
150	720	475	350	280	225	190	165	145	130	115	105	90	75		15.9
THICKNESS PANEL (mm)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	F	PANEL WEIGH (Kg/m ²
20	290	190	135	85	50										12.0
30	405	260	165	115	70										12.3
40	520	300	200	145	95	65									12.
50	580	340	235	175	125	85	60								13.
60	625	380	275	210	150	105	75	55						-	13.5
80	715	465	350	275	210	155	115	85	65	50					14.2
100	805	550	420	340	270	200	155	120	95	75	55				15.0
120	895	630	470	370	305	255	195	155	125	100	80	65			15.7
150	970	645	480	380	315	265	230	205	170	140	115	95	75		16.9
THICKNESS PANEL (mm)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	F	PANEL WEIGH (Kg/m²
20	270	175	130	85	50										14.(
30	385	255	170	115	70										14.3
40	505	300	205	150	95	65									14.
50	585	345	240	180	125	85	60			·					15.0
60	630	385	275	215	155	110	80	60							15.4
80	715	465	350	280	215	155	115	90	60	50					16.2
100	805	550	430	350	275	205	160	120	100	75	60				17.0
120	890	630	505	415	340	260	200	160	135	100	85	70			17.
150	1000	755	620	520	435	340	270	215	175	145	120	95	75		18.8
THICKNESS PANEL (mm)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	F	PANEL WEIGH (Kg/m ²
20	255	165	120	85	50										16.0
30	375	245	170	120	70										16.2
40	490	305	205	150	100	65									16.6
50	585	345	240	180	125	85	60								17.(
60	630	385	280	215	155	110	80	65							17.4
80	715	470	355	285	215	160	120	90	65	55					18.2
100	810	555	435	355	280	210	165	125	105	80	65				18.9
120	890	635	510	425	345	265	205	165	140	105	90	75			19.
150	1000	760	625	530	440	345	275	220	180	150	125	100	80		20.
PUR / PIR	U Transmi	ittance		20		30	40	50		60	80	100		120	150
	(U) EN 14	4509 = V	V/m²K	0.97	7 (0.69	0.53	0.43	(0.36	0.27	0.22		0.19	0.15
	(U) EN 14	4509 = K	cal/m²h°C	0.83	3 ().59	0.45	0.37		0.31	0.24	0.19		0.16	0.13

IR	U Trai
	(U)
	(U) I

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient ΔT=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).



WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

EXTERNAL FINISH



For more information see nav-system.it

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

CE EN 14509 I FFD

CERTIFICATIONS

NAV SYSTEM



Rain Garden Mono

Designed for all low-slope residential or flat industrial roofs



Designed to meet the multiple requirements of civil and industrial construction, RAIN Garden Mono is the selfsupporting corrugated metal panel intended for flat roofs or those with a slope of less than 7%. The panel is made with a flat outer side to which a PVC

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as determined by

laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

synthetic membrane is applied, the inner side made of corrugated steel. The Rain Garden Mono panel guarantees perfect waterproofing thanks to the welding of the PVC edge on site by specialised personnel.

CERTIFICATIONS

METAL CLADDING

I FFD



USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 20-30-40-50-60-80-100-120-150

STATIC PROPERTIES kg/m²

Nominal thickness Steel support

Nominal thickness

Aluminium support

		P= kg/m-	_						
SINGLE PITCH	4	ℓ=m	-						
THICKNESS SHEET (mm)	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.4	250	130	100	70					
0.5	460	230	150	110	80	60	50		
0.6	640	410	210	150	100	65	55		
0.7	830	520	290	180	110	75	60	50	
0.8	950	610	330	205	130	85	65	55	50
1.0	1000	750	420	250	170	140	100	85	70

THICKNESS SHEET (mm) 0.5 0.6 0.7 0.8 1.0

WEIGHT TABLE kg/m²

THICKNESS SHEET (m

0.5 steel + PVC 0.6 steel + PVC



EXTERNAL FINISH

0.020-0.023 W/mk.

WITH PUR INSULATION

WITH PIR INSULATION



Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient Δ T=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

NAV SYSTEM



1.00	1.25	1.50	1.75	2.00
170	100	80	50	-
280	170	120	70	40
320	200	130	80	50
370	230	150	100	60
450	260	170	120	80

-	THICKNE	SS PANEL (I	mm)							
nm)	20	30		40	50	60	80	100	120	150
	7.2	7.5		7.9	8.3	8.7	9.5	10.2	11.0	12.1
	8.2	8.6		8.9	9.3	9.7	10.4	11.2	12.0	13.1
nsmittance		20	30	40	50	60	80	100	120	150
EN 14509 = W/m	1²K	0.99	0.70	0.53	0.43	0.36	0.27	0.22	0.19	0.15
EN 14509 = Kcal/	m²h°C	0.85	0.60	0.46	0.37	0.31	0.23	0.19	0.16	0.13





Rain Garden / Twister

Cortex

The panel is characterised by its external profile in the shape of a tile and is particularly suitable for civil roofs



CORTEX is a self-supporting metal panel with a tile-shaped finish, intended for civil roofs that require performance in terms of thermal insulation, load-bearing capacity, resistance to climatic agents, but also functionality and aesthetic value, especially in the case of landscape constraints.



WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as determined by

laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s2, d0. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

FINISHES Smooth Slatted 111.

The different thicknesses of the metal surfaces, made of galvanised steel and aluminium, help to meet the load-bearing capacity and resistance requirements of the application, while the wide range of painting and finishing systems that can be adopted on CORTEX panels allow for a variety of aesthetic solutions. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.

CERTIFICATIONS

EPD UNI ISO 14025 PUR BRoof (t2) PIR B-s2, d0 LEED

METAL CLADDING

can be made to order.

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better

NAV System insulation panels can be produced with metal

cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them

is produced by selected steel mills and painted using the

polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours

coil coating method in order to give suitable durability guarantees using simple or high durability polyester,

insulation. Supreme achieves a thermal conductivity coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).



MAXIMUM LENGTH 13650 mm

AVAILABLE PANEL THICKNESSES 40-50-60-80-100-120

STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

80 100 120 PUR / PI

SINGLE PITCH

THICKNESS PANEL (mm)

40

50

60

80 100

120

40

50

60

THICKNESS PANEL (mm)

 $D = k \alpha / m^2$

U Transmittance	40	50	60	80	100	120
(U) EN 14509 = W/m²K	0.43	0.36	0.30	0.24	0.20	0.17
(U) EN 14509 = Kcal/m²h°C	0.37	0.31	0.26	0.21	0.17	0.15

SUPREME	U Transmittance	40	50	60	80	100	120
	(U) EN 14509 = W/m ² K	0.40	0.33	0.28	0.21	0.17	0.15
	(U) EN 14509 = Kcal/m²h°C		0.28	0.24	0.18	0.15	0.13

For more information see nav-system.it

NAV SYSTEM



						1 = kg/111	
					<u> </u>	l=m	4
PANEL WEIGHT (Kg/m²)	4.5	4.0	3.5	3.0	2.5	2.0	1.5
10.0			50	80	145	180	245
10.4		40	60	95	160	210	305
10.8		50	80	120	190	250	370
11.5	50	75	105	155	220	300	430
12.3	80	100	140	190	260	350	500
13.1	105	130	175	230	310	400	570

1.5	2.0	2.5	3.0	3.5	4.0	4.5	PANEL WEIGHT (Kg/m²)
250	185	150	90	60			11.2
310	215	165	105	70	50		11.6
375	255	200	130	90	60		11.9
435	305	225	165	115	85	60	12.7
555	355	265	200	150	110	90	13.5
575	405	320	240	185	140	115	14.2

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient $\Delta T=0$, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Save 25% of power Enjoy Nav System

Cortex Mono

The roofing panel characterised by its external profile in the shape of a tile and is particularly suitable in residential areas



CORTEX MONO is an economical metal panel with a tileshaped footprint and is particularly suitable in areas where civil constructions must comply with special landscape constraints, and also where the panels are supported on a board or slab, or where



WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as determined by laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, as per laboratory test. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

the supports are almost continuous. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.

Due to the flexibility of the internal support, we do not recommend using it on roofs with a visible inner side, as the aesthetic perfection of the inner side cannot be guaranteed.

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.





USEFUL WIDTH

MAXIMUM LENGTH

40-50-60-80-100-120

CERTIFICATIONS

PUR BRoof (t2)

LEED

AVAILABLE PANEL THICKNESSES

1000 mm

13300 mm

WEIGHT TABLE kg/m²	THICKNESS SHEET (mm)	40	50	60	80	100	120
	0.5 steel + feltboard	6.96	7.34	7.72	8.50	9.20	10.0
	0.5 steel + aluminium foil	6.88	7.25	7.63	8.39	9.15	9.91
	0.5 aluminium + feltboard	4.06	4.44	4.82	5.58	6.34	7.10
	0.5 aluminium + aluminium foil	3.97	4.35	4.73	5.49	6.25	7.01
PUR / PIR	U Transmittance	40	50	60	80	100	120
	(U) EN 14509 = W/m²K	0.43	0.36	0.30	0.24	0.20	0.17
	(U) EN 14509 = Kcal/m²h°C	0.37	0.31	0.26	0.21	0.17	0.15

Cortex Farm

intended for use in the livestock sector



The CORTEX FARM panel features a curved external profile and is ideal for meeting the aesthetic and above all functional requirements of livestock farms, designed to resist the organic acid substances present inside livestock farms thanks to the use



WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as determined by laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

	TH	ICKNESS PANEL					
WEIGHT TABLE ka/m ²	THICKNESS SHEET (mm)	40	50	60	80	100	120
	0.5 steel + fibreglass	7.32	7.70	8.08	8.84	9.60	10.35
	0.5 aluminium + fibreglass	4.42	4.80	5.18	5.94	6.70	7.46
PUR	U	40	50	60	80	100	120
	Transmittance	10	50			100	120
	(U) EN 14509 = W/m ² K	0.43	0.36	0.30	0.24	0.20	0.17
	(U) EN 14509 = Kcal/m ² h°C	0.37	0.31	0.26	0.21	0.17	0.15

For more information see nav-system.it

NAV SYSTEM



The roofing panel characterised by its external tile-shaped profile

of an internal fibreglass support. CORTEX FARM is a panel suitable when laid on an almost continuous support. It can also be produced in a two-sided version if there are special load-bearing requirements. In this case, the inner side of the panel is made of metal pre-coated with a highly durable antibacterial plastic film that allows for maximum protection and hygiene. Its use is indicated in environments where the following types of bacteria are present: Escherichia Coli, Klebsiella pneumoniae, Staphylococcus aureus, Salmonella typhimurium, Listeria monocytogenes, Legionella pneumophila. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

FINISHES





USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13300 mm

AVAILABLE PANEL THICKNESSES 40-50-60-80-100-120

CERTIFICATIONS PUR BRoof (t2)

Wave

The Wave profile roof panel suitable for civil or industrial applications



WITH PUR INSULATION

12667): 0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR),

it has an approximate density of 35-40 kg/m³, as for CE

Coefficient of thermal conductivity at 10°C (UNI EN

Made of CFC- and HCFC-free polyisocyanurate with

Choose a panel with PIR Supreme insulation for better insulation. Supreme achieves a thermal conductivity

coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

an approximate density of 35-40 kg/m³, as for CE

declaration of conformity and laboratory tests.

Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

WITH PIR SUPREME INSULATION

declaration of conformity and laboratory tests.

The WAVE panel is a self-supporting metal panel ideal for the roofing of residential and office buildings, as well as commercial and industrial buildings. It is particularly suitable when you want to combine insulation performance with functionality and aesthetic value. The different thicknesses of the metal surfaces, made of galvanised steel, aluminium or other metals, help to meet the requirements of load-bearing capacity and resistance, while a wide range of painting and finishing systems allow for a wide variety of aesthetic solutions. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.



FINISHES



Wave Mono

The WAVE MONO panel has a special wave pattern and is recommended in areas where buildings must comply with special landscape constraints. The natural and antiqued external finish is obtained with a special coil-coating technology that guarantees the aesthetic performance and durability of the panel over time. The internal finish of the panel is offered with an embossed aluminium cladding in natural colour or white lacquer (on request), PVC or bitumised feltboard. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.

Due to the flexibility of the internal support, we do not recommend using it on roofs with a visible inner side, as the aesthetic perfection of the inner side cannot be guaranteed.

FINISHES





USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 40-50-60-80-100-120

CERTIFICATIONS EPD UNI ISO 14025

CE EN 14509 LEED

CERTIFICATION

LEED

STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mn INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

PUR / PIR

SUPREME

kg/m²

PUR / PIR

Transmittance (U) EN 14509 = W/m²k

(U) EN 14509 = Kcal/m

SINGLE PITCH

THICKNESS PANEL (mm)

40

50

60 80 100

120

40

50

60

80

100

120

U

THICKNESS PANEL (mm)

U Transmittance

(U) EN 14509 = W/m²k

THICKNESS SHEET (m

(U) EN 14509 = Kcal/m

WEIGHT TABLE

0.5 steel + feltboard 0.5 steel + aluminium 0.5 aluminium + feltbo

0.5 aluminium + alum

U Transmittance

(U) EN 14509 = W/m²K

(U) EN 14509 = Kcal/m

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient ΔT=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

NAV SYSTEM



P=	kg/m²						
l	=m						
1.5	2.0	2.5	3.0	3.5	4.0	4.5	PANEL WEIGHT (Kg/m²)
245	180	145	80	50			10.0
305	210	160	95	60	40		10.4
370	250	190	120	80	50		10.8
430	300	220	155	105	75	50	11.5
500	350	260	190	140	100	80	12.3
570	400	310	230	175	130	105	13.1
						-	
1.5	2.0	2.5	3.0	3.5	4.0	4.5	PANEL WEIGHT (Kg/m²)
250	185	150	90	60			11.2
310	215	165	105	70	50		11.6
375	255	200	130	90	60		11.9
435	305	225	165	115	85	60	12.7
555	355	265	200	150	110	90	13.5
575	405	320	240	185	140	115	14.2
	40	50		60	80	100	120
<	0.43	0.36		0.30	0.24	0.20	0.17
²h°C	0.37	0.31		0.26	0.21	0.17	0.15
	40	50		60	80	100	120
<	0.35	0.29		0.25	0.20	0.16	0.14
²h°C	0.30	0.25		0.22	0.17	0.14	0.12
m)	40	50		60	80	100	120
	6.96	7.34		7.72	8.50	9.20	10.0
foil	6.88	7.25		7.63	8.39	9.15	9.91
ard	4.06	4.44		4.82	5.58	6.34	7.10
nium foil	3.97	4.35		4.73	5.49	6.25	7.01
	40	50		60	80	100	120
<	0.43	0.36		0.30	0.24	0.20	0.17
²h°C	0.37	0.31		0.26	0.21	0.17	0.15

Insulating metal panels for roofs and walls PIR SUPREME PIR PUR



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Eliosystem Photovoltaic module installation system with aluminium profile. The system consists of a custom-designed metal plate to be fixed across two frets of the insulation panels. This technical solution, which does not require expensive substructures, makes installation quick and easy. The position of the module can also be adjusted after installation, allowing adequate ventilation between the panel and the photovoltaic module. Eliosystem can be mounted on the panels :

Rain 5 Rain Farm, Rain Mono Cortex, Cortex Farm, Cortex Mono Wave Wave Mono Thunder Sun Sun Climax Coppo Climax Greca



Rain 5 In this installation on the outskirts of Rome, we see the Rain 5 panel being installed on a residential complex of considerable impact. Chosen in a red tile and aluminium grey finish. When the work is finished, the photovoltaic modules will be installed above the panel.



Wind Insulation panel for wall or interior infills

WIND is an insulated metal panel for walls, designed for both external and internal industrial vertical infills and for internal false ceilings. Easy to install and extremely functional, it satisfies the multiple requirements of the civil and industrial sector. The panel can be made with a smooth or ribbed finish (slatted, box or diamond-coated) and in different widths.

WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests.

Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

INTERNAL FINISHES

The panel joint, in a slightly conical shape, is designed to facilitate the perfect closing of the joint during installation and to guarantee the continuity of the insulation. In addition, a special gasket positioned in the joint ensures a further tightness.

CERTIFICATIONS

CE EN 14509 EPD UNI ISO 14025 PIR B-s2, d0 / PIR B-s1, d0 PIR Zulassung Nr.Z-10.49-589 PIR VKF 5.3 PIR CLASSE 0-2 AS/NZS 1530.3-1999 PIR GROUP NUMBER 2 ISO 9702 LEED

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better insulation. Supreme achieves a thermal conductivity coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

USEFUL WIDTH 1000 mm (1155/1185 on request)

MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 25-30-40-50-60-80-100-120

lominal sheet thickness XTERNAL façade:
teel 0.4 mm
NTERNAL façade:
teel 0.4 mm

Nominal sheet thickness EXTERNAL façade:	
Steel 0.6 mm	
INTERNAL façade:	
Steel 0.5 mm	

RTS n			

			P=	kg/m²													
SINGLE PITCH	п		l	=m													
THICKNES	SS m)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.	5	8.0	PANE	L WEIGHT (Kg/m²)
25		60															6.00
30		75															6.20
40		100	65	35													6.50
50		125	80	55	30												6.90
60		155	95	65	50												7.20
80		205	130	90	65	50											8.00
100		260	165	115	85	65	50										8.70
120		310	200	135	100	75	60	50									9.50
THICKNES PANEL (m	SS im)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.	5	8.0	PANEI	. WEIGHT (Kg/m²)
25		100	65														6.80
30		115	75	50													7.00
40		160	100	70	50												7.40
50		200	125	90	65	50											7.80
60		240	155	105	75	60											8.10
80		325	205	145	105	80	60	50									8.80
100		410	260	180	130	100	80	65	50								9.60
120		485	315	215	160	120	95	75	65	50							10.30
THICKNES	SS im)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.	5	8.0	PANEI	. WEIGHT (Kg/m²)
25		120	75	50													8.50
30		145	105	70													8.70
40		200	160	110	80	55			-								9.00
50		250	200	140	105	80	60	50									9.42
60		305	245	170	125	95	75	60	50								9.75
80		410	325	230	170	130	100	80	65	55							10.50
100		515	410	290	210	160	125	100	85	70	60	50					11.40
120		545	435	345	255	195	155	125	100	85	70	60	50)			12.20
THICKNES	SS m)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.	5	8.0	PANEI	. WEIGHT (Ka/m²)
25	,	130	85	55													9.30
30		150	115	75	55												9.50
40		205	165	120	85	65	50										9.90
50		255	205	150	110	85	65	55									10.30
60		310	250	185	135	100	80	65	55	50							10.60
80		415	330	245	180	140	110	85	70	60	50						11.30
100		520	415	310	225	175	135	110	90	75	65	55					12.30
120		550	440	365	275	210	165	135	110	90	80	65	60)	50		13.00
						çı	IPREME										
40	50	60	80	100	120	U Tra	ansmitta	ance		25	30	40	50	60	80	100	120
-															-		

						P=	kg/m²													
STATIC PROPERTIES kg/m ²		S	INGLE PITC	H	4	l	=m	_												
Nominal sheet thickness		1 F	HICKNE PANEL (m	SS nm)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.	0 7	7.5	8.0	PANEL	WEIGHT (Kg/m²)
EXTERNAL façade:		2	25		60															6.00
INTERNAL facade:		3	0		75															6.20
Standard steel mm		4	10		100	65	35													6.50
		5	0		125	80	55	30												6.90
		6	60		155	95	65	50												7.20
		8	80		205	130	90	65	50											8.00
		1	00		260	165	115	85	65	50										8.70
WIDTH 100 mm		1	20		310	200	135	100	75	60	50									9.50
Nominal sheet thickness		1 F	HICKNE ANEL (m	SS nm)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	07	.5	8.0	PANEL	WEIGHT (Kg/m²)
EXTERNAL façade:		2	25		100	65														6.80
INTERNAL facade:		3	0		115	75	50													7.00
Steel 0.4 mm		4	10		160	100	70	50												7.40
		5	0		200	125	90	65	50											7.80
		6	50		240	155	105	75	60											8.10
		8	80		325	205	145	105	80	60	50									8.80
		1	00		410	260	180	130	100	80	65	50								9.60
WIDTH 100 mm		1	20		485	315	215	160	120	95	75	65	50							10.30
Nominal sheet thickness		T	HICKNE ANEL (m	SS 1m)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	07	.5	8.0	PANEL	WEIGHT (Kg/m²)
EXTERNAL façade:		2	25		120	75	50													8.50
Steel 0.5 mm		3	0		145	105	70													8.70
Steel 0.5 mm		- 4	10		200	160	110	80	55											9.00
		5	0		250	200	140	105	80	60	50									9.42
		-	50		305	245	170	125	95	75	60	50								9.75
		8	80		410	325	230	170	130	100	80	65	55							10.50
		-	00		515	410	290	210	160	125	100	85	70	60	50)				11.40
USUAL SUPPORTS WIDTH 100 mm		1	20		545	435	345	255	195	155	125	100	85	70	60) [50			12.20
Nominal sheet thickness		Ĩ	HICKNE ANEL (m	SS 1m)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	07	.5	8.0	PANEL	WEIGHT (Ka/m²)
EXTERNAL façade:		2			130	85	55													9.30
Steel 0.6 mm		3	0		150	115	75	55												9.50
Stool 0.5 mm		-4	10		205	165	120	85	65	50										9.90
Steel 0.5 min		-	0		255	205	150	110	85	65	55									10.30
		-	50		310	250	185	135	100	80	65	55	50							10.60
		8	80		415	330	245	180	140	110	85	70	60	50						11 30
		1	00		520	415	310	225	175	135	110	90	75	65	50					12 30
USUAL SUPPORTS WIDTH 100 mm		1	20		550	440	365	275	210	165	135	110	90	80	65	5 6	50	50		13.00
PUR / PIR									S	UPREME										
U Transmittance	25	30	40	50	60	80	100	120	U Ti	ansmitta	ance		25	30	40	50	60	80	100	120
(U) EN 14509 = W/m ² K	0.86	0.73	0.56	0.45	0.38	0.28	0.23	0.19	(L	J) EN 1450)9 = W/n	n²K	0.71	0.60	0.45	0.36	0.30	0.23	0.18	0.15
(U) EN 14509 = Kcal/m ² h°C	0.74	0.63	0.48	0.39	0.32	0.24	0.20	0.16	(L	J) EN 1450	9 = Kcal/	/m²h°C	0.61	0.51	0.39	0.31	0.26	0.20	0.16	0.13

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient ΔT=0, light colours and normal deflection limit 1/100. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

For more information see nav-system.it

Twister

Ideal wall insulation panel where the aesthetics of the building need to be taken care of by having concealed fixing

TWISTER is the insulating panel designed to achieve high aesthetic value for prestigious building façades, thanks to the variety of surface finishes combined with the quality of the panel with hidden fixing. In fact, the panel joint adopts an interlocking system that conceals the fixing while maintaining the tightness. The TWISTER panel allows the designer to choose between different external and internal finishes.

Nav-System recommends, during the installation phase, the use of a suitable steel plate to distribute the stresses involved in fixing. The most appropriate number and position of the plates must be defined during the design phase and must be such as to guarantee the best distribution of the load due to the stresses acting on the wall panel, stresses induced by both compression and depression exerted on the structure.

WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

INTERNAL FINISHES

For the exterior, there is a choice of a wide or narrow diamond point finish, lightly corrugated or perfectly smooth and flat. For the interior, on the other hand, you can choose a slatted pattern in two types, or perfectly smooth and flat. These finishes create shading effects on the façade surfaces, enlivening the surface and enhancing its architectural value.

CERTIFICATIONS

CE EN 14509 EPD UNI ISO 14025 PIR B-s2, d0 / PIR B-s1, d0 PIR Zulassung Nr.Z-10.49-589 PIR VFK 5.3 PIR CLASSE 0 BS476: Part 6 Part 7 LEED

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better insulation. Supreme achieves a thermal conductivity coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 40-50-60-80-100-120-150

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

STATIC PROPERTIE	S
kg/m ²	

Nominal sheet thickness EXTERNAL façade:

Steel 0.5 mm INTERNAL façade:

Steel 0.5 mm

USUAL SUPPORTS

WIDTH 100 mm

THICKNESS

SINGLE PITCH

120

150

40

50

150

THICKNESS PANEL (mm)

THICKNESS PANEL (mm)	2.0
40	200
50	250
60	305
80	410
100	515

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS
WIDTH 100 mm

60 310 415 80 520 100 550 120

PUR / PIR U Tran (U) I

SUPREME	U Transmittance	40	50	60	80	100	120	150
	(U) EN 14509 = W/m²K	0.52	0.41	0.34	0.24	0.19	0.16	0.13
	(U) EN 14509 = Kcal/m ² h°C	0.45	0.35	0.29	0.21	0.16	0.14	0.11

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient ∆T=0, light colours and normal deflection limit 1/100. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

EXTERNAL FINISHES 111. Smooth Slatted Box 40 40 Diamond pitch 100 pitch 15

NAV SYSTEM

	P=	kg/m²													
<u> </u>		l=m													
2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	PANEL WEIGH (Kg/m²
200	160	110	80	55											9.30
250	200	140	105	80	60	50									9.60
305	245	170	125	95	75	60	50								10.00
410	325	230	170	130	100	80	65	55							10.80
515	410	290	210	160	125	100	85	70	60	50					11.40
545	435	345	255	195	155	125	100	85	70	60	55				12.20
580	460	385	320	245	190	155	130	105	90	80	70	60	50		13.30

2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	PANEL WEIGHT (Kg/m ²)
205	165	120	85	65	50										10.10
255	205	150	110	85	65	55									10.50
310	250	185	135	100	80	65	55	50							10.90
415	330	245	180	140	110	85	70	60	50						11.70
520	415	310	225	175	135	110	90	75	65	55					12.30
550	440	365	275	210	165	135	110	90	80	65	60	50			13.10
585	465	390	330	260	205	165	140	115	100	85	75	65	55	50	14.20

U Transmittance	40	50	60	80	100	120	150
(U) EN 14509 = W/m²K	0.64	0.51	0.42	0.30	0.23	0.20	0.16
(U) EN 14509 = Kcal/m²h°C	0.55	0.44	0.36	0.26	0.20	0.17	0.14

An optimal range of insulation boards for refrigerated buildings

OT I

FISH&PIX

Frost / Rain 5

37

Frost

The panel for cold stores with high thermal insulation performance

FROST is the insulated metal panel designed for the construction of industrial cold stores for low and medium temperatures. The thermal insulation performance achieved by the panel is the result of a long and careful design matured by our experience in 60 years of projects in the refrigeration sector. The FROST panel is the evolution of industrial

WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

11L

Slatted

0.020-0.023 W/mk.

FINISHES Box

refrigeration as it allows to combine very high thermal insulation values with the simplicity of dry panel assembly. All panel surfaces can be made of steel, stainless steel and other metals, and all painting systems are available to protect the panel faces.

CERTIFICATIONS

METAL CLADDING

can be made to order.

Diamond

pitch 15

CE EN 14509 EPD UNI ISO 14025

PIR VKF 5.3

LEED

PIR Zulassung Nr.Z-10.49-589

PIR B-s2, d0 / PIR B-s1, d0

PIR EI30 / PIR EI45 / PIR EI60 / PIR EI90

PIR **B-s1, d0** Avis technique 2/15-1684 PIR CLASSE 0-2 AS/NZS 1530.3-1999

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better

NAV System insulation panels can be produced with metal

cladding in galvanised steel, Aluzinc steel, stainless steel,

aluminium, copper or other special metals. Each of them

is produced by selected steel mills and painted using the

polyurethane, polyamide, plastisol or PVDF paint products.

In addition to the standard colours available, custom colours

Smooth

coil coating method in order to give suitable durability guarantees using simple or high durability polyester,

insulation. Supreme achieves a thermal conductivity

coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

Complies with FDA regulations for contact with food

USEFUL WIDTH 1150 mm (965/1092 su richiesta) MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 150-180-200-220-240-300 mm.

VERTICAL INSTALLATION	
STATIC PROPERTIES kg/m ²	

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mn INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

CEILING INSTALLATION STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS

Nominal sheet thickness

EXTERNAL façade:

INTERNAL façade:

WIDTH 100 mm

Steel 0.6 mm

Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

		P	= kg/m·	-														
SINGLE PITCH			ℓ=m		_													
THICKNESS PANEL (mm)	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANEL WEIGHT (Kg/m²)
150	580	460	385	320	245	190	155	130	105	90	80	70	60	50				13.40
180	610	485	405	345	295	230	185	155	130	110	95	80	70	65	55			14.52
200	630	505	420	360	315	260	210	170	145	120	105	90	80	70	65	55	50	15.28
220	650	520	435	370	325	285	230	190	160	135	115	100	90	80	70	60	55	16.04
240	675	540	450	385	335	300	250	205	175	145	125	110	95	85	75	70	60	16.80
300	735	590	490	420	365	325	295	260	220	185	160	140	120	105	95	85	75	19.20
THICKNESS PANEL (mm)	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANEL WEIGHT (Kg/m²)
150	585	465	390	330	260	205	165	140	115	100	85	75	65	55	50			14.20
180	615	490	410	350	305	250	200	165	140	120	100	90	75	70	60	55	50	15.37
200	635	510	430	365	320	275	225	185	155	130	115	100	85	75	65	60	55	16.13
220	650	520	435	370	325	290	245	205	170	145	125	110	95	85	75	65	60	16.89
240	680	545	455	390	340	310	270	220	185	160	135	120	105	90	80	75	65	17.65
300	740	595	495	425	370	330	300	265	235	200	170	150	130	115	105	90	85	20.10
THICKNESS PANEL (mm)	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANEL WEIGHT (Kg/m²)
150	565	450	375	290	230	180	145	115	95	75	60	50						13.40
180	595	475	395	335	290	240	195	155	130	105	90	75	60	50				14.52
200	620	490	405	345	300	265	225	185	155	130	105	90	75	60	50			15.28
220	640	505	420	355	310	275	245	210	175	145	125	105	90	75	65	55		16.04
240	660	525	435	370	320	285	255	230	190	160	135	115	100	85	75	65	55	16.80
300	710	560	465	395	340	305	270	240	220	200	170	150	125	110	95	85	75	19.20
THICKNESS PANEL (mm)	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANEL WEIGHT (Kg/m²)
150	570	455	380	305	240	195	155	125	105	85	70	55						14.20
180	600	480	405	340	300	250	205	170	140	115	95	80	65	55				15.37
200	625	500	410	350	310	275	235	200	165	140	115	100	85	70	60	50		16.13
220	645	510	425	360	315	280	250	220	195	165	135	115	100	85	70	60	50	16.89
240	665	530	440	375	325	290	260	235	205	185	160	135	115	100	85	70	60	17.65
300	720	570	470	400	350	310	275	250	225	205	190	175	165	145	125	110	95	20.10
PUR / PIR U Transmittance		15	50 1	80	200	220	240	300		SUPF U Trans	REME mittar	nce		150	180	200) 220	240 300

PUR / PIR U Transmittance
(U) EN 14509 = W/m
(U) EN 14509 = Kcal/

TECHNICAL NOTE: During the installation of FROST panels for cold rooms, it is necessary to apply a special sealant in the grooves of the joint sheets to obtain a vapour barrier. For more information see nav-system.it

111.

Calculation performed in accordance with Annex E of Standard UNI EN 14509. Wind action on external face, thermal gradient ∆T=0, light colours, normal deflection limit 1/100 for vertical installation, 1/200 for ceiling installation. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

150	180	200	220	240	300	U Transmittance	150	180	200	220	240	300
0.15	0.12	0.11	0.10	0.09	0.07	(U) EN 14509 = W/m ² K	0.120	0.100	0.090	0.082	0.075	0.060
0.13	0.11	0.10	0.09	0.08	0.06	(U) EN 14509 = Kcal/m ² h°C	0.103	0.086	0.077	0.070	0.065	0.052
	150 0.15 0.13	150 180 0.15 0.12 0.13 0.11	150 180 200 0.15 0.12 0.11 0.13 0.11 0.10	150 180 200 220 0.15 0.12 0.11 0.10 0.13 0.11 0.10 0.09	150 180 200 220 240 0.15 0.12 0.11 0.10 0.09 0.13 0.11 0.10 0.09 0.08	150 180 200 220 240 300 0.15 0.12 0.11 0.10 0.09 0.07 0.13 0.11 0.10 0.09 0.08 0.06	150 180 200 220 240 300 U Transmittance 0.15 0.12 0.11 0.10 0.09 0.07 U) EN 14509 = W/m²K 0.13 0.11 0.10 0.09 0.08 0.06 U) EN 14509 = Kcal/m²h°C	U U U Transmittance 150 0.15 0.12 0.11 0.10 0.09 0.07 (U) EN 14509 = W/m²K 0.120 0.13 0.11 0.10 0.09 0.06 (U) EN 14509 = Kcal/m²h°C 0.103	150 180 200 220 240 300 Main and the state of the	U U Transmittance 150 180 200 200 0.15 0.12 0.11 0.10 0.09 0.07 U EN 14509 = W/m²K 0.120 0.100 0.090 0.13 0.11 0.10 0.09 0.08 0.06 U) EN 14509 = K/cal/m²h°C 0.103 0.086 0.077	U U U Transmittance 150 180 200 220 240 300 0.15 0.12 0.11 0.10 0.09 0.07 (U) EN 14509 = W/m²K 0.120 0.100 0.090 0.082 0.13 0.11 0.10 0.09 0.08 0.06 (U) EN 14509 = Kcal/m²h°c 0.103 0.086 0.077 0.070	150 180 200 220 240 300 Main Fransmittance 150 180 200 220 240 0.15 0.12 0.11 0.10 0.09 0.07 (U) EN 14509 = W/m²K 0.120 0.100 0.090 0.082 0.075 0.13 0.11 0.10 0.09 0.08 0.06 (U) EN 14509 = Kcal/m²h°C 0.103 0.086 0.077 0.070 0.055

Storm

The ideal panel for self-supporting cold stores. Concealed fixing

STORM is the insulated metal panel designed for the construction of refrigerated structures and self-supporting warehouses at low and medium temperatures, where a high aesthetic result of the project is required. The very high thermal insulation values are combined with the simplicity of dry assembly and concealed fixing.

The special milling of the joint of the insulation layer allows for maximum precision in the geometry of the joint, which is also enhanced by the double labyrinth of the sheets. This special interlocking is the result of long and careful design work gained over 60 years in the industry.

Complies with FDA regulations for contact with food

WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests.

Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

111.

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0.020-0.023 W/mk.

FINISHES Box

CERTIFICATIONS CE EN 14509 PIR B-s1, d0 PIR EI 45 / PIR E 60 PIR REI 60 / PIR RE 90 LEED

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better insulation. Supreme achieves a thermal conductivity coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

METAL CLADDING

Diamond pitch 15

or 100 mm

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

50 100

Smooth

USEFUL WIDTH 1000 mm MAXIMUM LENGTH 15000 mm

Micro corrugated

180-200-220-240 mm.

AVAILABLE PANEL THICKNESSES

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade:

WIDTH 100 mm

180 610 66

PUR / PIR U Transmittance
(U) EN 14509 = W/n
(II) EN 14509 - Kcal

(U) EN 14509 = Kcal/n

Nav System recommends the use of a steel plate during assembly to distribute the fixing force involved. The most appropriate number and position of the plates must be defined during the design phase and must be such as to guarantee the best distribution of the load due to the stresses acting on the wall panel, the stresses due to compression and the depression exerted on the structures.

TECHNICAL NOTE: During the installation of STORM panels for cold rooms, it is necessary to apply a special sealant in the grooves of the joint sheets to obtain a vapour barrier, For more information see nav-system.it

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Calculation performed in accordance with Annex E of Standard UNI EN 14509. Wind action on external face, thermal gradient ∆T=0, light colours, normal deflection limit 1/100 for vertical installation, 1/200 for ceiling installation. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Steel 0.6 mm USUAL SUPPORTS

VERTICAL INSTALLATION

STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade:

Steel 0.5 mm INTERNAL façade:

Steel 0.6 mm

USUAL SUPPORTS

Nominal sheet thickness EXTERNAL façade:

INTERNAL façade:

WIDTH 100 mm

Steel 0.6 mm

Steel 0.6 mm

USUAL SUPPORTS WIDTH 100 mm

CEILING INSTALLATION

Nominal sheet thickness

EXTERNAL façade:

Steel 0.5 mm INTERNAL façade:

Steel 0.6 mm

USUAL SUPPORTS

WIDTH 100 mm

STATIC PROPERTIES kg/m²

SINGLE PITCH

THICKNESS PANEL (mm)

180

200

220

240

180

200

220

240

180

200

220

240

THICKNESS PANEL (mm)

THICKNESS PANEL (mm)

THICKNESS PANEL (mm)

62 200 220 64 240

		P= kg/	/m²	_															
		ℓ=n	n	_	-														
2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	PANEL WEIGHT (Kg/m²)
610	485	405	345	305	270	220	185	155	130	110	95	85	75	65	60	55	50		16.20
630	505	420	360	315	280	245	205	170	145	125	110	95	85	75	65	60	55	50	17.00
650	520	435	370	325	290	260	225	190	160	140	120	105	90	80	75	65	60	55	17.70
670	535	445	385	335	295	265	245	205	175	150	130	115	100	90	80	70	65	60	18.50
												_							PANEL WEIGHT
2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	(Kg/m ²)
620	500	420	360	320	280	240	200	165	140	120	105	90	80	70	65	60	50	50	17.10
640	520	430	370	330	290	255	220	185	155	135	115	105	90	80	70	65	60	55	17.80
660	530	445	380	340	300	270	235	205	175	150	130	115	100	90	80	70	65	60	18.60
680	645	455	395	345	305	275	255	220	190	165	140	125	110	95	85	80	70	65	19.40
2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	PANEL WEIGHT (Kg/m²)
595	475	390	335	290	245	200	165	135	110	95	75	65	55						16.20
615	490	405	345	300	265	235	190	155	130	110	95	80	65	55					17.00
635	505	420	355	310	275	245	210	175	145	125	105	90	80	70	60	50			17.70
655	520	430	370	320	280	250	230	190	160	135	115	100	85	75	65	55	50		18.50
								_		-		0	0 5	٩	95	10	10 5	11	PANEL WEIGHT
2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	1	7.5	0	0.5	5	5.5	10	10.5	•••	(Kg/m²)
2 610	2.5 485	3 400	3.5 345	4 300	4.5 255	5 215	5.5 175	6 145	6.5 120	100	7.5 85	o 70	60	50	5.5	10	10.5		(Kg/m²) 17.10
2 610 625	2.5485500	3 400 415	3.5 345 355	4 300 310	4.5 255 275	5 215 245	5.5 175 205	6 145 175	6.5 120 145	7 100 125	7.5 85 105	o 70 90	60 75	50 65	5.5	10	10.0		(Kg/m-) 17.10 17.80
2 610 625 645	2.5485500515	3 400 415 430	3.5345355365	4 300 310 320	4.5255275285	5 215 245 255	5.5175205220	6 145 175 200	6.5120145170	7 100 125 145	7.5 85 105 120	o 70 90 105	60 75 90	50 65 75	55 65	55			(kg/m ⁻) 17.10 17.80 18.60
2 610 625 645 665	2.5485500515530	 3 400 415 430 440 	 3.5 345 355 365 380 	4 300 310 320 330	4.5255275285290	5 215 245 255 260	 5.5 175 205 220 240 	6 145 175 200 205	6.5120145170190	7 100 125 145 165	7.585105120140	 70 90 105 120 	 60 75 90 105 	50 65 75 90	55 65 75	55 65	55	50	(kg/m ⁻) 17.10 17.80 18.60 19.40

	180	200	220	240	SUPREME U Transmittance	180	200	220	240
к	0.13	0.11	0.10	0.09	(U) EN 14509 = W/m ² K	0.10	0.09	0.08	0.08
ı²h℃	0.11	0.10	0.09	0.08	(U) EN 14509 = Kcal/m²h°C	0.09	0.08	0.07	0.07

Ice A joint to be injected on site provides maximum insulation performance

ICE is the insulated metal panel designed for low-temperature and controlled- atmosphere cold rooms.

The special system designed by NAV System of the "joint to be injected on site" guarantees guality and robustness of the tightness of joints and their fixing, for a product capable of superior insulation performance.

The "joint to be injected on site" system of the ICE panel

WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s2, d0, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

FINISHES

allows for concealed fixings with thermal break, which is essential for the construction of self-supporting lowtemperature warehouses and for applications where an intermediate wall fixing is required for bracing. The ICE panel is synonymous of highest quality, the result of 60 years' experience in the design and construction of cold stores.

CERTIFICATIONS CE EN 14509 EPD UNI ISO 14025 PIR B-s2, d0 PIR EI30 / PIR EI60 PIR VKF 5.3 LEED

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better insulation. Supreme achieves a thermal conductivity coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

Complies with FDA regulations for contact with food

USEFUL WIDTH 1260 mm USEFUL WIDTH 1220 mm MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 100-120-150-180-200-220-240-260 mm.

VERTICAL INSTALLATION STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

USUAL SUPPORTS

Nominal sheet thickness

EXTERNAL façade:

INTERNAL façade:

Steel 0.6 mm

Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

WIDTH 100 mm

CEILING INSTALLATION STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

SINGLE PITCH			1 = kg/1																
THICKNESS			ℓ=m		_						_							PANF	I WEIGHT
PANEL (mm)	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10		(Kg/m ²)
100	51	5 410	290	210	160	125	100	85	70	60	50								11.10
120	54	5 435	345	255	195	155	125	100	85	70	60	55							11.90
150	58	0 460	385	320	245	190	155	130	105	90	80	70	60	50					13.10
180	61) 485	405	345	295	230	185	155	130	110	95	80	70	65	55	50			14.20
200	63	0 505	420	360	315	260	210	170	145	120	105	90	80	70	65	55	50		15.00
220	65	0 520	435	370	325	285	230	190	160	135	115	100	90	80	70	60	55		15.70
240	67	5 540	450	385	335	300	250	205	175	145	125	110	95	85	75	70	60		16.50
260	69	5 555	460	395	345	305	270	225	190	160	140	120	105	90	80	75	65		17.30
THICKNESS PANEL (mm)	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANE	L WEIGHT (Kg/m²)
100	52	0 415	310	225	175	135	110	90	75	65	55								11.90
120	55	0 440	365	275	210	165	135	110	90	80	65	60	50						12.70
150	58	5 465	390	330	260	205	165	140	115	100	85	75	65	55	50				13.80
180	61	5 490	410	350	305	250	200	165	140	120	100	90	75	70	60	55	50		15.00
200	63	5 510	430	365	320	275	225	185	155	130	115	100	85	75	65	60	55		15.80
220	65	0 520	435	370	325	290	245	205	170	145	125	110	95	85	75	65	60		16.50
240	68	0 545	455	390	340	310	270	220	185	160	135	120	105	90	80	75	65		17.30
260	70	0 560	465	400	350	310	275	240	200	170	150	130	115	100	90	80	70		18.10
100	41	5 295	215	160	120	95	70	55		0.5		1.5		0.5					(Kg/m²) 11.10
100	41	5 295	215	160	120	95	70	55											11.10
120	51	5 375	280	210	160	125	100	80	60	50									11.90
150	56	5 450	375	290	230	180	145	115	95	75	60	50							13.10
180	59	5 475	395	335	290	240	195	155	130	105	90	75	60	50					14.20
200	62	0 490	405	345	300	265	225	185	155	130	105	90	75	60	50				15.00
220	64	0 505	420	355	310	275	245	210	175	145	125	105	90	75	65	55			15.70
240	66	0 525	435	370	320	285	255	230	190	160	135	115	100	85	75	65	55		16.50
260	68	0 540	445	380	330	290	260	235	210	175	150	125	110	95	85	70	65		17.30
THICKNESS PANEL (mm)	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANE	EL WEIGHT (Kg/m²)
100	42	5 305	225	170	130	100	80	60											11.90
120	52	5 385	290	225	175	135	105	85	70	55									12.70
150	57	0 455	380	305	240	195	155	125	105	85	70	55							13.80
180	60	0 480	405	340	300	250	205	170	140	115	95	80	65	55					15.00
200	62	5 500	410	350	310	275	235	200	165	140	115	100	85	70	60	50			15.80
220	64	5 510	425	360	315	280	250	220	195	165	135	115	100	85	70	60	50		16.50
240	66	5 530	440	375	325	290	260	235	205	185	160	135	115	100	85	70	60		17 30
260	68	5 545	450	385	335	295	265	240	215	195	180	155	135	115	100	85	75		18.10
							SUI	REWE											
0 150	180	200	220	240	260		U	nsmitta	ince		100	12	20	150	180	200	220	240	260
0.15	0.12	0.11	0.10	0.09	0.08		(U) E	EN 1450	9 = W/	m²K	0.177	0.14	48 (0.119	0.099	0.089	0.081	0.075	0.069
0.13	0.11	0.10	0.09	0.08	0.07		(U) E	N 1450	9 = Kca	l/m²h°C	0.152	0.12	27 (0.102	0.085	0.077	0.070	0.064	0.059
						_													

PUR / PIR U Transmittance	100	120	1
(U) EN 14509 = W/m ² K	0.22	0.18	0
(U) EN 14509 = Kcal/m ² h°C	0.19	0.16	0

Calculation performed in accordance with Annex E of Standard UNI EN 14509. Wind action on external face, thermal gradient ΔT=0, light colours, normal deflection limit 1/100 for vertical installation, 1/200 for ceiling installation. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Wet Ideal for dairies or environments where moisture barriers are required

WET is the metal panel designed to guarantee high technical performance: maximum thermal insulation, moisture and condensation barrier, best fire reaction class and fire resistance. Designed in particular for the refrigeration sector with air-conditioned and controlled atmosphere environments

and in the prefabrication sector for the realisation of house walls and housing modules, the WET panel finds an important field of use in the realisation of climatic chambers and where there are strong thermal changes.

Complies with FDA regulations for contact with food

WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

CERTIFICATIONS PIR Zulassung Nr.Z-10.49-589 CE EN 14509 EPD UNI ISO 14025 PIR **B-s2, d0** / PIR **B-s1, d0** PIR EI 30 / PIR EI 45 PIR VKF 5.3 PIR **B-s1, d0** Avis technique 2/15-1684 PIR CLASSE 0-2 AS/NZS 1530.3-1999 LEED

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better insulation. Supreme achieves a thermal conductivity coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

USEFUL WIDTH 1150 mm (965/1092 su richiesta) MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 50-60-80-100-120-150-180-200-220-240 mm.

VERTICAL INSTALLATION STATIC PROPERTIES kg/m²

Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm

INTERNAL façade:

Steel 0.5 mm

USUAL SUPPORTS

WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade:

			P= kg/	m²																
INGLE PITCH	_		l=m	1																
HICKNESS	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANEL WEIGHT
50	510	340	250	200	140	105	80	60	50											9.60
50	615	410	305	245	170	125	95	75	60	50										10.00
30	825	550	410	325	230	170	130	100	80	65	55									10.70
100	1000	685	515	410	290	210	160	125	100	85	70	60	50							11.50
20	1000	730	545	435	345	255	195	155	125	100	85	70	60	55						12.20
150	1000	770	580	460	385	320	245	190	155	130	105	90	80	70	60	50				13.40
80	1000	815	610	485	405	345	295	230	185	155	130	110	95	80	70	65	55	50		14.52
200	1000	840	630	505	420	360	315	260	210	170	145	120	105	90	80	70	65	55	50	15.28
220	1000	870	650	520	435	370	325	285	230	190	160	135	115	100	90	80	70	60	55	16.04
240	1000	900	675	540	450	385	335	300	250	205	175	145	125	110	95	85	75	70	60	16.80
THICKNESS PANEL (mm)	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANEL WEIGHT (Kg/m²)
50	515	345	255	205	150	110	85	65	55											10.40
50	620	415	310	250	185	135	100	80	65	50										10.80
30	830	555	415	330	245	180	140	110	85	70	60	50								11.60
100	1000	690	520	415	310	225	175	135	110	90	75	65	55							12.30
120	1000	735	550	440	365	275	210	165	135	110	90	80	65	65	50					13.10
150	1000	770	585	465	390	330	260	205	165	140	115	100	85	75	65	55	50			14.20
180	1000	815	615	490	410	350	305	250	200	165	140	120	100	90	75	70	60	55	50	15.37
200	1000	840	635	510	430	365	320	275	225	185	155	130	115	100	85	75	65	60	55	16.13
220	1000	870	650	520	435	370	325	290	245	205	170	145	125	110	95	85	75	65	60	16.89
240	1000	900	000	545	455	390	340	310	270	220	100	160	155	120	105	90	60	/5	00	17.03
THICKNESS PANEL (mm)	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANEL WEIGHT (Kg/m²)
50	455	260	165	105	70	50											-			9.60
50	560	330	210	140	100	70	50													10.00
30	770	470	310	215	155	115	85	60	-			-								10.70
100	985	610	415	295	215	160	120	95	70	55										11.50
20	1000	720	515	375	280	210	160	125	100	80	60	50								12.20
150	1000	760	565	450	375	290	230	180	145	115	95	75	60	50						13.40
180	1000	800	595	475	395	335	290	240	195	155	130	105	90	75	60	50				14.52
200	1000	830	620	490	405	345	300	265	225	185	155	130	105	90	75	60	50			15.28
220	1000	855	640	505	420	355	310	275	245	210	175	145	125	105	90	75	65	55		16.04
240	1000	885	660	525	435	370	320	285	255	230	190	160	135	115	100	85	75	65	55	16.80
THICKNESS PANEL (mm)	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	PANEL WEIGHT (Kg/m²)
50	460	270	170	115	75	55														10.40
50	565	335	220	150	105	75	55													10.80
30	775	475	320	225	165	120	90	65	50											11.60
100	990	615	425	305	225	170	130	100	80	60										12.30
20	1000	725	525	385	290	225	175	135	105	85	70	55								13.10
150	1000	760	570	455	380	305	240	195	155	125	105	85	70	55						14.20
80	1000	800	600	480	405	340	300	250	205	170	140	115	95	80	65	55				15.37
200	1000	825	625	500	410	350	310	275	235	200	165	140	115	100	85	70	60	50		16.13
220	1000	855	645	510	425	360	315	280	250	220	195	165	135	115	100	85	70	60	50	16.89
240	1000	880	665	530	440	375	325	290	260	235	205	185	160	135	115	100	85	70	60	17.65
80 100 12	00 15	0 10	0 20	0 2	20 2	40		SUF U	PREMI	E		-				100	120	150	100	200 200 240

CEILING INSTALLATION STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

Nominal sheet thickness
EXTERNAL façade:
Steel 0.6 mm
INTERNAL façade:
Steel 0.5 mm

USUAL SUPPORTS

WIDTH 100 mm

PUR / PIR	SUPREME																				
J ransmittance	50	60	80	100	120	150	180	200	220	240	U Transmittance		60	80	100	120	150	180	200	220	240
U) EN 14509 = W/m²K	0.43	0.36	0.28	0.22	0.18	0.15	0.12	0.11	0.10	0.09	(U) EN 14509 = W/m ² K	0.36	0.30	0.22	0.18	0.15	0.12	0.10	0.09	0.08	0.07
U) EN 14509 = Kcal/m²h°C	0.38	0.32	0.24	0.19	0.16	0.13	0.11	0.10	0.09	0.08	(U) EN 14509 = Kcal/m ² h°C	0.31	0.26	0.19	0.15	0.13	0.10	0.08	0.08	0.07	0.06

Calculation performed in accordance with Annex E of Standard UNI EN 14509. Wind action on external face, thermal gradient ΔT=0, light colours, normal deflection limit 1/100 for vertical installation, 1/200 for ceiling installation. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

TECHNICAL NOTE: During the installation of WET panels for cold rooms, it is necessary to apply a special sealant in the grooves of the joint sheets to obtain a vapour barrier. For more information see nav-system.it

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Ultra Wet

The ideal solution for the mushroom growing market

ULTRA WET is the insulated metal panel designed for all external or internal wall and curtain wall constructions requiring high technical performance, particularly for the mushroom growing sector.

Designed to guarantee thermal insulation, moisture and condensation barrier, better fire reaction class and fire

WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

resistance, the ULTRA WET panel offers maximum mechanical performance by adhering the sheets to the insulation up to three times higher by means of the special "ultra" treatment, designed to prevent detachment during temperature changes.

CERTIFICATIONS PIR Zulassung Nr.Z-10.49-589 CE EN 14509 EPD UNI ISO 14025 PIR **B-s2, d0** / PIR **B-s1, d0** PIR EI 30 / PIR EI 45 PIR VKF 5.3 PIR CLASSE 0-2 AS/NZS 1530.3-1999 LEED

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better insulation. Supreme achieves a thermal conductivity coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

Complies with

FDA regulations for

contact with food

AVAILABLE PANEL THICKNESSES 50-60-80-100-120-150-180-200-220-240 mm.

VERTICAL INSTALLATION STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS

WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade: INTERNAL façade:

USUAL SUPPORTS

CEILING INSTALLATION

Nominal sheet thickness Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS

WIDTH 100 mm

SINGLE PITCH	\mathbf{A}		l=m	1																		
THICKNESS PANEL (mm)	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10		PANEL V	VEIGH (Kg/m
50	510	340	250	200	140	105	80	60	50													9.
60	615	410	305	245	170	125	95	75	60	50												10.
30	825	550	410	325	230	170	130	100	80	65	55											10.
00	1000	685	515	410	290	210	160	125	100	85	70	60	50									11.
20	1000	730	545	435	345	255	195	155	125	100	85	70	60	55								12.
50	1000	770	580	460	385	320	245	190	155	130	105	90	80	70	60	50						13.
80	1000	815	610	485	405	345	295	230	185	155	130	110	95	80	70	65	55	50				14.
200	1000	840	630	505	420	360	315	260	210	170	145	120	105	90	80	70	65	55	50			15.
220	1000	870	650	520	435	370	325	285	230	190	160	135	115	100	90	80	70	60	55			16.
240	1000	900	675	540	450	385	335	300	250	205	175	145	125	110	95	85	75	70	60			16.
HICKNESS PANEL (mm)	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10		PANEL V	VEIGI (Kg/r
50	515	345	255	205	150	110	85	65	55													10.
50	620	415	310	250	185	135	100	80	65	50												10.
30	830	555	415	330	245	180	140	110	85	70	60	50										11.
100	1000	690	520	415	310	225	175	135	110	90	75	65	55									12.
120	1000	735	550	440	365	275	210	165	135	110	90	80	65	65	50							13
50	1000	770	585	465	390	330	260	205	165	140	115	100	85	75	65	55	50					14.
80	1000	815	615	490	410	350	305	250	200	165	140	120	100	90	75	70	60	55	50			15.
200	1000	840	635	510	430	365	320	275	225	185	155	130	115	100	85	75	65	60	55			16
220	1000	870	650	520	435	370	325	290	245	205	170	145	125	110	95	85	75	65	60			16.
240	1000	900	680	545	455	390	340	310	270	220	185	160	135	120	105	90	80	75	65			17
50	455	260	165	105	70	50	_															9.
50	560	330	210	140	100	70	50															10.
30	770	470	310	215	155	115	85	60														10
100	985	610	415	295	215	160	120	95	70	55												11
20	1000	720	515	375	280	210	160	125	100	80	60	50			_							12
50	1000	760	565	450	375	290	230	180	145	115	95	75	60	50								13.
80	1000	800	595	475	395	335	290	240	195	155	130	105	90	75	60	50						14
200	1000	830	620	490	405	345	300	265	225	185	155	130	105	90	75	60	50					15.
220	1000	855	640	505	420	355	310	275	245	210	175	145	125	105	90	75	65	55				16.
240	1000	885	660	525	435	370	320	285	255	230	190	160	135	115	100	85	75	65	55			16.
HICKNESS PANEL (mm)	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10		PANEL V	VEIG (Kg/r
50	460	270	170	115	75	55																10.
0	565	335	220	150	105	75	55					_										10
30	775	475	320	225	165	120	90	65	50													11
00	990	615	425	305	225	170	130	100	80	60												12
20	1000	725	525	385	290	225	175	135	105	85	70	55										13
50	1000	760	570	455	380	305	240	195	155	125	105	85	70	55								14
80	1000	800	600	480	405	340	300	250	205	170	140	115	95	80	65	55						15
00	1000	825	625	500	410	350	310	275	235	200	165	140	115	100	85	70	60	50				16
20	1000	855	645	510	425	360	315	280	250	220	195	165	135	115	100	85	70	60	50			16
240	1000	880	665	530	440	375	325	290	260	235	205	185	160	135	115	100	85	70	60			17
80 100	120 15	0 18	80 20	00 23	20 24	40		SUF U Trar	PREMI nsmitt	E ance		5	50 (60	80	100	120	150	180	200	220	24
.28 0.22	0.18 0.1	5 0.1	12 0.	11 0.	10 0.	09		(U) I	EN 145	09 = W	//m²K	0.3	36 0.	30 0	.22 ().18	0.15	0.12	0.10	0.09	0.08	0.

PUR / PIR U Transmittance	50	60	80	100	120	150	180	200	220	240
(U) EN 14509 = W/m ² K	0.43	0.36	0.28	0.22	0.18	0.15	0.12	0.11	0.10	0.09
(U) EN 14509 = Kcal/m ² h°C	0.38	0.32	0.24	0.19	0.16	0.13	0.11	0.10	0.09	0.08

Calculation performed in accordance with Annex E of Standard UNI EN 14509. Wind action on external face, thermal gradient ΔT=0, light colours, normal deflection limit 1/100 for vertical installation, 1/200 for ceiling installation. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

TECHNICAL NOTE: During the installation of ULTRA WET panels for cold rooms, it is necessary to apply a special sealant in the grooves of the joint sheets to obtain a vapour barrier For more information see nav-system.it

Steel 0.6 mm Steel 0.5 mm

WIDTH 100 mm

STATIC PROPERTIES kg/m²

EXTERNAL façade:

USUAL SUPPORTS

P= kg/m²

NAV SYSTEM

(U) EN 14509 = Kcal/m²h^oC 0.31 0.26 0.19 0.15 0.13 0.10 0.08 0.08 0.07 0.06

Wind-Frigo Ideal for positive temperature cold room walls

CERTIFICATIONS

EPD UNI ISO 14025

METAL CLADDING

can be made to order.

CE EN 14509

PIR VKF 5.3

LEED

PIR Zulassung Nr.Z-10.49-589

PIR B-s2, d0 / PIR B-s1, d0

PIR CLASSE 0-2 AS/NZS 1530.3-1999 PIR GROUP NUMBER 2 ISO 9702

WITH PIR SUPREME INSULATION

Choose a panel with PIR Supreme insulation for better

NAV System insulation panels can be produced with metal

cladding in galvanised steel, Aluzinc steel, stainless steel,

aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the

polyurethane, polyamide, plastisol or PVDF paint products.

In addition to the standard colours available, custom colours

coil coating method in order to give suitable durability

guarantees using simple or high durability polyester,

insulation. Supreme achieves a thermal conductivity

coefficient at 10°C. of 0.018 W/ mk. (UNI EN 12667).

WIND-FRIGO is an insulated metal panel for walls, designed for both external and internal industrial vertical infills and for internal false ceilings.

Easy to install and extremely functional, it satisfies the multiple requirements of the civil and industrial sector. The panel can be made with a smooth or ribbed finish (slatted,

box or diamond-coated) and in different widths.

WITH PUR INSULATION

Made of CFC- and HCFC-free polyurethane resins (PUR), it has an approximate density of 35-40 kg/m³, as for CE declaration of conformity and laboratory tests.

Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

WITH PIR INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests. Coefficient of thermal conductivity at 10°C (UNI EN 12667):

0.020-0.023 W/mk.

The panel joint, in a slightly conical shape, is designed to facilitate the perfect closing of the joint during laying and to guarantee the continuity of the insulation. In addition, a special sealing gasket positioned in the joint ensures a further guarantee of cold tightness.

Complies with FDA regulations for contact with food

USEFUL WIDTH 1000 mm (1155/1185 su richiesta) MAXIMUN LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 80-100-120 mm.

Nominal sheet thickness

EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.5 mm

VERTICAL INSTALLATION

STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mn

INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

USUAL SUPPORTS

WIDTH 100 mm

80 8 100 100 120 100

SINGLE PITCH

THICKNESS PANEL (mm)

80

100

120

THICKNESS PANEL (mm)

P-ka/m

CEILING INSTALLATION STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

80 77 100 0.0 120 100

THICKNESS PANEL (mm)

THICKNESS PANEL (mm)

80

USUAL SUPPORTS WIDTH 100 mm

Nominal sheet thickness
EXTERNAL façade:
Steel 0.6 mm
INTERNAL façade:
Steel 0.5 mm

USUAL SUPPORTS

WIDTH 100 mm

100 90 100 120

PUR / PIR U Transmittance
(U) EN 14509 = W/m ²
(U) EN 14509 = Kcal/m

Calculation performed in accordance with Annex E of Standard UNI EN 14509. Wind action on external face, thermal gradient ∆T=0, light colours, normal deflection limit 1/100 for vertical installation, 1/200 for ceiling installation. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

												<u> </u>	=m	l	
PANEL WEIGHT (Kg/m²)	8	7.5	7	6.5	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1
10.50					55	65	80	100	130	170	230	325	410	550	825
11.40			50	60	70	85	100	125	160	210	290	410	515	685	1000
12.20		55	60	70	85	100	125	155	195	255	345	435	545	730	1000
PANEL WEIGHT (Kq/m²)	8	7.5	7	6.5	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1
11.30				50	60	70	85	110	140	180	245	330	415	555	830
12.30			55	65	75	90	110	135	175	225	310	415	520	690	1000
13.10	50	65	65	80	90	110	135	165	210	275	365	440	550	735	1000
PANEL WEIGHT	0	7.5	7	6.5	6		F	4.5	4	25	2	25	2	15	1
(Kg/m²)	8	7.5	1	0.5	0	5.5	<u>с</u>	4.5	4	3.5	5	2.5	2	1.5	
10.50								60	85	115	155	215	310	470	770
11.40						55	70	95	120	160	215	295	415	610	985
12.20				50	60	80	100	125	160	210	280	375	515	720	1000
PANEL WEIGHT (Kg/m²)	8	7.5	7	6.5	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1
11.30							50	65	90	120	165	225	320	475	775
12.30						60	80	100	130	170	225	305	425	615	990
13.10				55	70	85	105	135	175	225	290	385	525	725	1000

	80	100	120	SUPREME U Transmittance	80	100	120	
к	0.28	0.23	0.19	(U) EN 14509 = W/m ² K	0.23	0.18	0.15	
ı²h°C	0.24	0.20	0.16	(U) EN 14509 = Kcal/m²h°C	0.20	0.16	0.13	

Save 25% of power Enjoy Nav System

magazzini frigoriferi

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Frost / Rain 5

Climax PIR Insulating Metal Roof and Wall Panels

Choose PIR Climax for greater stability performance

Static efficiency, increased adhesion between steel and insulation ensure stability and compactness of the panel where you need it.

Reaction to fire, class B-s1, d0

Free insurance: 1 year against fire 10 years against oxidation and perforation of substrates

30 years on thermal insulation performance

Climax Greca

The roofing panel designed to meet the multiple requirements of civil and industrial construction with maximum versatility and tightness

CLIMAX GRECA is the self-supporting corrugated metal panel intended for sloping roofs with a slope of not less than 7%. The outer side has 5 frets and micro-frets on the flat parts that increase its load-bearing capacity, while the inner side can be made with a slatted finish.

The flap of the hollow fret that surmounts the solid fret is very long and reinforced by a final rib that improves the tightness.

WITH PIR CLIMAX INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests.

Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

On the top of the solid fret of the joint there is a groove that stops any water rising up by capillarity. The inner side of the joint has an additional rib that not only reinforces the joint but also improves its aesthetics and creates a "safety" drainage channel that carries any water and condensation that has entered the joint to the eaves. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.

CERTIFICATIONS CE EN 14509 EPD UNI ISO 14025 PIR B-s1, d0 LEED

METAL CLADDINGNAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 40-50-60-80-100-120-150

STATIC	PROPERTIES
kg/m ²	

Nominal sheet thickness EXTERNAL façade: Steel 0.4 mm INTERNAL façade: Steel 0.4 mm

USUAL SUPPORTS WIDTH 100 mm

SINGLE PITCH

THICKNESS PANEL (mm)

40

Nominal sheet thickness
XTERNAL façade:
iteel 0.5 mm
NTERNAL façade:
iteel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

THICKNESS PANEL (mm)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7,5	PANEL WEIGHT (Kg/m²)
40	525	315	210	150	115	85	65	55							9.9
50	615	360	245	180	140	110	85	70	55						10.2
60	660	400	285	215	165	130	105	85	70	60	50				10.6
80	755	485	360	280	220	180	145	120	100	85	70	60	50		11.4
100	845	570	435	345	280	230	190	155	130	110	95	80	70	60	12.1
120	935	655	510	410	340	280	230	195	165	140	120	105	90	80	12.8
150	1000	780	625	505	420	355	300	250	215	185	160	135	120	105	13.9

PIR CLIMAX	U Transmittance	40	50	60	80	100	120	150
	(U) EN 14509 = W/m ² K	0.53	0.43	0.36	0.27	0.22	0.19	0.15
	(U) EN 14509 = Kcal/m²h°C	0.45	0.37	0.31	0.24	0.19	0.16	0.13

For more information see nav-system.it

NAV SYSTEM

	P= kg/m ²												
	ℓ=m		<u> </u>										
1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	PANEL WEIGH (Kg/m ²
488	278	184	131	89	58								8.
536	320	220	158	116	79	53							8.5
588	362	257	189	142	100	68	53						8.8
688	452	331	252	194	147	105	79	58					9.6
788	541	410	315	252	194	147	110	84	63	53			10.3
887	630	483	383	305	247	189	147	116	89	68	58		11.(
1034	761	599	478	389	315	257	205	163	126	105	84	68	12.2

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient Δ T=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Climax Coppo The roofing made with the external profile in the shape of a tile to meet landscape constraints and enhance the aesthetics of civil roofing.

CLIMAX COPPO is a self-supporting metal panel intended for residential roofs with a slope of no less than 7%, which require high performance in terms of thermal insulation, load-bearing capacity and resistance to climatic agents without sacrificing functionality and aesthetic value. The external side can be made with different types of finishes obtained with coil-coating paint that preserves it over time, even the internal side.

WITH PIR CLIMAX INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests.

Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

Thanks to the wide range of finishes and colours available, it lends itself to visible exposure. The joint guarantees high thermal and mechanical tightness and the interruption of any rising water thanks to the special "NAV System ribbing", which not only stiffens and aesthetically improves the joint but also creates a "safety" drainage channel that carries any condensation that may form due to capillarity to the eaves. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.

NAV System insulation panels can be produced with metal

cladding in galvanised steel, Aluzinc steel, stainless steel,

aluminium, copper or other special metals. Each of them

is produced by selected steel mills and painted using the

coil coating method in order to give suitable durability

guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours

CERTIFICATIONS

EPD UNI ISO 14025 PIR B-s2, d0 LEED

METAL CLADDING

can be made to order.

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13650 mm

AVAILABLE PANEL THICKNESSES 40-50-60-80-100-120

STATIC PROPERTIES kg/m²

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 100 mm

SINGLE PITCH

THICKNESS PANEL (mm)

40

50

60 80 100

120

PIR CLIMAX U Trar (U) I (U) I

FINISHES Smooth Slatted 111.

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient $\Delta T=0$, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

For more information see nav-system.it

NAV SYSTEM

1	P= kg/m ²	_						
	ℓ=m	-						
1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	PANEL WEIGH (Kg/m [:]
300	257	189	152	84	53			10.
360	320	221	168	100	63	42		10.4
420	389	263	200	126	84	53		10.
480	452	315	231	163	110	79	53	11.
515	505	355	270	200	147	105	85	12.
585	575	405	315	235	180	135	110	13.
1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	PANEL WEIGH (Kg/m ²
310	263	194	158	95	63			11.1
370	326	226	173	110	74	53		11.
430	394	268	210	137	95	63		11.
480	457	320	236	173	121	89	63	12.
590	583	373	278	210	158	116	95	13.
615	604	425	336	252	194	147	121	14.
		40	50		50	80	100	120

nsmittance	40	50	60	80	100	120
EN 14509 = W/m²K	0.43	0.36	0.30	0.24	0.20	0.17
EN 14509 = Kcal/m ² h°C	0.37	0.31	0.26	0.21	0.17	0.15

Climax Parete

Insulation panel for façade or interior curtain walling

CLIMAX PARETE is an insulated metal panel for civil and industrial vertical curtain walls, designed for both external and internal industrial vertical curtain walls and internal false ceilings. Made with a slatted finish, it has a joint designed in a slightly conical shape to facilitate the perfect closing of the

WITH PIR CLIMAX INSULATION

Made of CFC- and HCFC-free polyisocyanurate with an approximate density of 35-40 kg/m³, capable of achieving fire reaction class B-s1, d0, as for CE declaration of conformity and laboratory tests.

Coefficient of thermal conductivity at 10°C (UNI EN 12667): 0.020-0.023 W/mk.

CERTIFICATIONS

CE EN 14509 EPD UNI ISO 14025 PIR B-s1, d0 LEED

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 15000 mm

AVAILABLE PANEL THICKNESSES 40-50-60-80-100-120

STATIC PROPERTIE	S
kg/m²	

Nominal sheet thickness EXTERNAL façade: Steel 0.4 mm INTERNAL façade: Steel 0.4 mm

USUAL SUPPORTS WIDTH 100 mm

SINGLE PITCH

THICKNESS PANEL (mm)

40

Iominal sheet thickness	
XTERNAL façade:	
teel 0.6 mm	
NTERNAL façade:	
teel 0.5 mm	

USUAL SUPPORTS WIDTH 100 mm

60 80 82 100 100 120 100

50

THICKNESS PANEL (mm)

40

50

PIR CLIMAX U Tran (U) I ____ (U) I

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient Δ T=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

NAV SYSTEM

P= kg/m ²											
	ℓ=m										
1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	PANEL WEIGHT (Kg/m²)
417	278	165	103	72	52						7.4
520	345	206	129	93	67	52					7.8
628	417	247	160	108	77	62					8.1
845	561	335	211	149	108	82	62	52			8.8
963	644	422	268	185	134	103	82	67	52		9.6
1004	670	500	324	221	165	124	98	77	67	52	10.3

0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	(Kg/m ²)
00	265	200	160	125	90	65	50								9.90
)5	335	250	200	160	115	90	70	55							10.30
10	405	305	240	195	140	105	85	70	55						10.60
20	545	410	325	260	190	145	115	90	75	65	55				11.30
00	685	515	410	325	240	185	145	115	95	80	70	60	50		12.30
00	730	545	435	365	290	220	175	140	115	95	80	70	60	55	13.00

nsmittance	40	50	60	80	100	120	
EN 14509 = W/m²K	0.56	0.45	0.38	0.28	0.23	0.19	
EN 14509 = Kcal/m²h°C	0.48	0.39	0.32	0.24	0.20	0.16	

Insulating metal panels for roofs and walls MINERAL WOOL

Choose **Stone wool** for fire and noise resistance

Fire resistance

With stands temperatures above 1000 °C. Stone wool is a brilliant solution to the challenge of providing safe residences. Reaction to fire: A2-s1,d0 Fire resistance up to REI 120, and EI 180 according to European tests and national standards.

properties

Maintaining temperature can significantly reduce heating, air conditioning and ventilation costs and limit a building's carbon footprint. Thermal transmittance up to: $U = 0.20 \text{ W/m}^2\text{K}$ $U = 0.17 \text{ Kcal/m}^2 \text{ h }^{\circ}\text{C}$ Heat output up to: $0.14 \text{ Kcal/m}^2 \text{ h }^{\circ}\text{C}$

Acoustic performances

Nav System products have a high density, a characteristic that makes them extremely excellent for sound absorption and noise reduction, making even the noisiest rooms quieter. Sound absorption aw: up to 1.00 (Class A) Sound insulation up to RW = 38 dB

Silent / Thunder

61

Sun

Rock wool panel for roofs requiring excellent sound insulation and fire protection. Certified up to REI 120.

SUN is the self-supporting corrugated metal panel with rock wool insulation, intended for sloping roofs with a slope of not less than 7%. The panel joint is designed to ensure maximum tightness. The flap of the hollow fret that surmounts the solid fret is very long and reinforced by a final rib that improves the tightness. On the top of the solid fret of the joint there is a groove that stops any water rising up by capillarity.

WITH MINERAL WOOL INSULATION (MW)

Rock wool guarantees excellent results in thermal and acoustic insulation, as well as achieving fire reaction classification A2-s1,

d0 in accordance with EN 13501-1. The insulation material is made of mineral fibre slats staggered longitudinally and with the fibres oriented at 90° to the plane of the substrates

Density of 100Kg/m³ ± 10% and thermal conductivity coefficient of up to 0.041 W/mk.

On the inner side of the panel joint, a 'safety' drainage channel has been created that carries any water from condensation or capillary infiltration to the eaves. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.

CERTIFICATIONS CE EN 14509 EPD UNI ISO 14025 A2-s1, d0 Rw=30 dB REI 45 / REI 90 / REI 120 LEED

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 50-60-80-100-120-150

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 120 mm

Steel 0.6 mm INTERNAL façade:

Steel 0.6 mm

Nominal sheet thickness EXTERNAL façade:

THICKNESS PANEL (mm)

THICKNESS PANEL (mm)
50
60
80
100
120
150

MW

USUAL SUPPORTS WIDTH 120 mm

> U Trar (U) I

NAV SYSTEM

1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	PANEL WEIGHT (Kg/m²)
385	250	185	135	100	75	55									13.8
455	300	220	160	120	90	70	55								14.8
530	345	255	200	165	130	100	80	65	50						16.8
580	380	280	220	180	150	130	115	100	75	60					18.8
595	390	290	225	185	155	135	115	105	90	80	65	50			20.8
625	410	300	235	190	160	140	120	105	95	85	75	70	60	50	23.8

1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	PANEL WEIGHT (Kg/m²)
405	265	195	150	115	90	70	50								15.6
480	315	230	180	140	110	85	65	50							16.6
610	400	295	230	190	150	120	95	80	60	40					18.6
630	410	305	240	195	165	140	125	110	90	70	55				20.6
650	425	315	245	200	170	145	125	110	100	90	75	60	50		22.6
680	445	325	255	210	175	150	130	115	105	90	85	75	70	60	25.6

U Transmittance	50	60	80	100	120	150
(U) EN 14509 = W/m²K	0.73	0.62	0.48	0.39	0.33	0.26
(K) EN ISO 6946 = W/m ² K	0.63	0.53	0.41	0.33	0.28	0.23

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient Δ T=0, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Thunder

Rock wool panel for sound-absorbing, protective and fire-resistant roofing. Certified up to REI 180.

THUNDER is the self-supporting corrugated metal panel with rock wool insulation, intended for sloping roofs with a slope of not less than 7%. Aesthetically, the panel has an external corrugated surface with 5 frets and micro frets on the flat parts that increase its load-bearing capacity; the internal surface of the panel has a micro-perforated metal support (3 mm diameter hole with 5 mm pitch) and is perfectly smooth and flat, which increases the panel's sound-absorbing performance. THUNDER is characterised, like all NAV System panels, by an excellent tightness and a specific drainage system.

WITH MINERAL WOOL INSULATION (MW)

Rock wool guarantees excellent results in thermal and acoustic insulation, as well as achieving fire reaction classification A2-s1, d0 in accordance with EN 13501-1

The insulation material is made of mineral fibre slats staggered longitudinally and with the fibres oriented at 90° to the plane of the substrates.

Density of 100Kg/m³ \pm 10% and thermal conductivity coefficient of up to 0.041 Ŵ/mk.

INTERNAL FINISH

The flap of the hollow fret that surmounts the solid fret is very long and reinforced by a final rib that improves the tightness. On the top of the solid fret of the joint there is a groove that stops any water rising up by capillarity. On the inner side of the panel joint, a 'safety' drainage channel has been created that carries any water from condensation or capillary infiltration to the eaves. Today it is possible to offer this option with Eliosystem for the installation of photovoltaic modules.

CERTIFICATIONS EPD UNI ISO 14025 A2-s1, d0 RE 190 - REI 180 Rw = 33 dB

aw= 0,95 LEED

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 50-60-80-100-120-150

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.6 mm

USUAL SUPPORTS WIDTH 120 mm

THICKNESS PANEL (mm)

50

60

80

100

120

150

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.6 mm

USUAL SUPPORTS WIDTH 120 mm

U

MW

NAV SYSTEM

PANEL WEIGHT (Kg/m²)	8.0	7.5	7.0	6.5	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.5
13.4									48	65	87	117	161	218
14.4								48	61	78	104	139	191	261
16.4						44	57	70	87	113	144	174	222	300
18.4					52	65	87	100	113	131	157	191	244	331
20.4			44	57	70	78	91	100	117	135	161	196	252	339
23.4	44	52	61	65	74	83	91	104	122	139	165	204	261	357

(Kg/m ²)	8.0	7.5	7.0	6.5	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.5	1.0
14.3								43	60	77	98	128	166	225	344
15.3							43	55	72	94	119	153	196	268	408
17.3					34	51	68	81	102	128	162	196	251	340	519
19.3				47	60	77	94	106	119	140	166	204	259	349	536
21.3		43	51	64	77	85	94	106	123	145	170	208	268	361	553
24.3	51	60	64	72	77	89	98	111	128	149	178	217	276	378	578

U Transmittance	50	60	80	100	120	150
(U) EN 14509 = W/m²K	0.73	0.62	0.48	0.39	0.33	0.26
(K) EN ISO 6946 = W/m ² K	0.63	0.53	0.41	0.33	0.28	0.23

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient $\Delta T=0$, light colours and normal deflection limit 1/200. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

- Tak

Sun / Fire Class

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ST

E

Fire Fire resistant wall panel. Up to EI 120.

CERTIFICATIONS

EPD UNI ISO 14025

METAL CLADDING

can be made to order.

EI30 / EI60 / EI90 / EI120

CE EN 14509

Rw=30-31 dB

A2-s1, d0

LEED

FIRE is the self-supporting metal panel insulated with mineral wool created to improve all the technical characteristics that a wall panel can offer in the realisation of curtain walls and ceilings, with an eye to safety. In fact, the FIRE panel is designed for all external and internal wall and curtain wall constructions that require high performance in terms of reaction and fire resistance. Indeed, the special double

WITH MINERAL WOOL INSULATION (MW)

Rock wool guarantees excellent results in thermal and acoustic insulation, as well as achieving fire reaction classification A2-s1, d0 in accordance with EN 13501-1.

The insulation material is made of mineral fibre slats staggered longitudinally and with the fibres oriented at 90° to the plane of the substrates.

Density of 100Kg/m³ ± 10% and thermal conductivity coefficient of up to 0.041 W/mk.

INTERNAL FINISHES

interlocking joint with the labyrinth made of sheet metal, combined with the mineral wool insulation, gives the product a perfect tightness for high reaction and fire resistance performance.

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel,

aluminium, copper or other special metals. Each of them

is produced by selected steel mills and painted using the coil coating method in order to give suitable durability

polyurethane, polyamide, plastisol or PVDF paint products.

In addition to the standard colours available, custom colours

guarantees using simple or high durability polyester,

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 50-60-80-100-120-150-200

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 120 mm

THICKNESS PANEL (mm)

THICKNESS PANEL (mm)

50

60

80

100

120

150

200

50

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.6 mm

USUAL SUPPORTS WIDTH 120 mm

MW	U Tra
	(U
	(K)

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient Δ T=0, light colours and normal deflection limit 1/100. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

For more information see nav-system.it

NAV SYSTEM

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	Sec. 1	1
		/

1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	PANEL WEIGHT (Kg/m²)
255	170	125	100	80	60										13.4
310	205	155	120	95	70	55									13.7
415	275	205	165	130	95	70	55								15.7
520	345	260	205	165	120	90	70	55							17.7
625	415	310	250	195	145	110	85	70	55						19.7
700	465	350	280	230	180	140	110	85	70	60	50				22.7
755	505	375	300	250	215	185	145	115	95	80	70	60	50		27.7

1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	PANEL WEIGHT (Kg/m²)
270	180	135	105	90	70	50									14.3
325	215	160	130	105	85	65	50								15.4
435	290	215	170	145	115	85	70	55							17.4
545	365	270	215	180	145	110	85	70	55		-				19.4
655	435	325	260	215	170	130	105	85	70	55	50				21.4
715	475	355	285	235	200	165	130	105	85	70	60	50			24.4
770	515	385	305	255	220	190	170	140	115	95	80	70	60	55	29.4

nsmittance	50	60	80	100	120	150	200
EN 14509 = W/m²K	0.75	0.63	0.48	0.39	0.33	0.26	0.20
EN ISO 6946 = W/m²K	0.64	0.54	0.41	0.34	0.28	0.22	0.17

Silent

Sound-absorbing wall panel that reacts and resists fire. Up to EI 60.

SILENT is the rock wool insulated metal panel specifically for applications requiring special sound absorbing and soundproofing performance, as well as high reaction and fire resistance performance. The designer can choose from a variety of surface finishes; the external support can have a slatted, 15 mm pitch, or smooth and flat finish. The internal surface made with a micro-perforated flat metal support (3 mm diameter hole with 5 mm pitch), is able

WITH MINERAL WOOL INSULATION (MW)

Rock wool guarantees excellent results in thermal and acoustic insulation, as well as achieving fire reaction classification A2-s1, d0 in accordance with EN 13501-1.

The insulation material is made of mineral fibre slats staggered longitudinally and with the fibres oriented at 90° to the plane of the substrates.

Density of $100 \text{Kg/m}^3 \pm 10\%$ and thermal conductivity coefficient of up to 0.041 W/mk.

INTERNAL FINISHES

EXTERNAL FINISHES

to increase the panel's soundproofing performance; furthermore, the special double joint with the labyrinth made of sheet metal, combined with the rock wool insulation, gives the product a perfect tightness and excellent reaction and fire resistance performance, as well as excellent soundproofing. The panel can be made with both micro-perforated, flat and smooth metal supports.

CERTIFICATIONS EPD UNI ISO 14025 Rw=32-33 dB $\alpha w = 0,95-1,00$ EI60 LEED

METAL CLADDING

NAV System insulation panels can be produced with metal cladding in galvanised steel, Aluzinc steel, stainless steel, aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester, polyurethane, polyamide, plastisol or PVDF paint products. In addition to the standard colours available, custom colours can be made to order.

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 50-60-80-100-120-150-200

Nominal sheet thickness EXTERNAL façade: Steel 0.5 mm INTERNAL façade: Steel 0.6 mm

50 209 60 254 80 340 100 426 513 120

150

200

50

60

80

THICKNESS PANEL (mm)

THICKNESS PANEL (mm)

USUAL SUPPORTS WIDTH 120 mm

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.6 mm

USUAL SUPPORTS WIDTH 120 mm

U MW Trar ____ (U) I (K) E

NAV SYSTEM

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1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	PANEL WEIGHT (Kg/m²)
209	139	103	82	66	49										12.3
254	168	127	98	78	57	45									13.3
340	226	168	135	107	78	57	45								15.3
426	283	213	168	135	98	74	57	45							17.3
513	340	254	205	160	119	90	70	57	45						19.3
574	381	287	230	189	148	115	90	70	57	49	41				22.3
619	414	308	246	205	176	152	119	94	78	66	57	49	41		27.3

1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	PANEL WEIGHT (Kg/m²)
224	149	112	87	75	58	42									13.1
270	178	133	108	87	71	54	42								14.1
361	241	178	141	120	95	71	58	46							16.1
452	303	224	178	149	120	91	71	58	46						18.1
544	361	270	216	178	141	108	87	71	58	46	42				20.1
593	394	295	237	195	166	137	108	87	71	58	50	42			23.1
639	427	320	253	212	183	158	141	116	95	79	66	58	50	46	28.1

nsmittance	50	60	80	100	120	150	200
EN 14509 = W/m²K	0.75	0.63	0.48	0.39	0.33	0.26	0.20
EN ISO 6946 = W/m²K	0.64	0.54	0.41	0.34	0.28	0.22	0.17

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient ΔT=0, light colours and normal deflection limit 1/100. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Fire Class

Panel with concealed fixing, fire resistant. Up to EI 180.

CERTIFICATIONS

EPD UNI ISO 14025

METAL CLADDING

can be made to order.

CE EN 14509

A2-s1, d0

EI180

LEED

FIRE CLASS is the self-supporting insulated panel with an architectural finish, designed to offer excellent fire and noise protection without sacrificing the aesthetic result of the project, thanks to the fact that the panels can be installed vertically or horizontally. The panel joint adopts an interlocking system that conceals the fixing, maintaining all the tightness performances of NAV System panels.

WITH MINERAL WOOL INSULATION (MW)

Rock wool guarantees excellent results in thermal and acoustic insulation, as well as achieving fire reaction classification A2-s1, d0 in accordance with EN 13501-1.

The insulation material is made of mineral fibre slats staggered longitudinally and with the fibres oriented at 90° to the plane of the substrates.

Density of 100Kg/m³ ± 10% and thermal conductivity coefficient of up to 0.041 W/mk.

INTERNAL FINISHES

On an aesthetic level, the FIRE CLASS panel allows the designer to choose between different surface finishes; the external support can have a slatted finish, a 15 mm pitch diamond point finish, or smooth and flat. The wide choice of finishes makes it possible to obtain shading effects on the façade surfaces, which enliven the flatness of the surface and enhance its architectural value.

NAV System insulation panels can be produced with metal

cladding in galvanised steel, Aluzinc steel, stainless steel,

aluminium, copper or other special metals. Each of them

is produced by selected steel mills and painted using the coil coating method in order to give suitable durability

polyurethane, polyamide, plastisol or PVDF paint products.

In addition to the standard colours available, custom colours

guarantees using simple or high durability polyester,

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 50-60-80-100-120-150-200

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.5 mm

USUAL SUPPORTS WIDTH 120 mm

THICKNESS PANEL (mm)

50

60

80

100

120

150

200

MW

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.6 mm

USUAL SUPPORTS WIDTH 120 mm

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NAV SYSTEM

1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	PANEL WEIGHT (Kg/m²)
180	135	105	80	60										13.7
215	160	130	100	75	55									14.7
290	215	175	135	100	75	60								16.7
365	270	215	170	125	95	75	60	50						18.7
435	325	260	205	150	115	90	70	60	50					20.7
465	350	280	230	190	145	110	90	75	60	55				23.7
505	375	300	250	215	185	145	115	95	80	70	60			28.7

1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	PANEL WEIGHT (Kg/m²)
270	180	135	105	90	70	50									14.6
325	215	160	130	105	85	65	50								15.6
435	290	215	170	145	115	85	70	55							17.6
545	365	270	215	180	145	110	85	70	55		-				19.6
655	435	325	260	215	170	130	105	85	70	55	50				21.6
715	475	355	285	235	200	165	130	105	85	70	60	50			24.6
770	515	385	305	255	220	190	170	140	115	95	80	70			29.5

nsmittance	50	60	80	100	120	150	200
EN 14509 = W/m²K	0.85	0.72	0.52	0.41	0.34	0.27	0.20
EN ISO 6946 = W/m²K	0.73	0.62	0.45	0.35	0.29	0.23	0.18

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient ΔT=0, light colours and normal deflection limit 1/100. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Silent Class

The sound-absorbing wall panel with concealed fixing

SILENT CLASS is the insulated panel designed to offer excellent protection against noise and fire without sacrificing the aesthetic result of the project, thanks to the fact that the panels can be installed vertically or horizontally. The panel joint adopts an interlocking system that conceals the fixing while maintaining all the tightness performances typical of NAV System panels, while the internal surface with a flat micro-perforated metal support (3 mm diameter hole, 5 mm pitch) is able to increase the panel's sound absorption

WITH MINERAL WOOL INSULATION (MW)

Rock wool guarantees excellent results in thermal and acoustic insulation, as well as achieving fire reaction classification A2-s1,

d0 in accordance with EN 13501-1. The insulation material is made of mineral fibre slats staggered longitudinally and with the fibres oriented at 90° to the plane of the substrates.

Density of 100Kg/m³ ± 10% and thermal conductivity coefficient of up to 0.041 W/mk.

INTERNAL FINISHES

EXTERNAL FINISHES

performance. On an aesthetic level, the SILENT CLASS panel allows the designer to choose between different surface finishes; the external support can have a slatted finish, a 15 mm pitch diamond point finish, or smooth and flat. The wide choice of finishes makes it possible to obtain shading effects on the façade surfaces, which enliven the flatness of the surface and enhance its architectural value.

NAV System insulation panels can be produced with metal

cladding in galvanised steel, Aluzinc steel, stainless steel,

aluminium, copper or other special metals. Each of them is produced by selected steel mills and painted using the coil coating method in order to give suitable durability guarantees using simple or high durability polyester,

polyurethane, polyamide, plastisol or PVDF paint products.

In addition to the standard colours available, custom colours

CERTIFICATIONS EPD UNI ISO 14025

A2-s1, d0 Rw=32-33 dB $\alpha w = 0,95-1,00$ LEED

METAL CLADDING

can be made to order.

USEFUL WIDTH 1000 mm

MAXIMUM LENGTH 13500 mm

AVAILABLE PANEL THICKNESSES 50-60-80-100-120-150-200

Nominal sheet thickness EXTERNAL façade: Steel 0.6 mm INTERNAL façade: Steel 0.6 mm

USUAL SUPPORTS WIDTH 120 mm

THICKNESS PANEL (mm)

50

MW

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1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	PANEL WEIGHT (Kg/m²)
224	149	112	87	75	58	42								13.3
270	178	133	108	87	71	54	42							14.3
361	241	178	141	120	95	71	58	46						16.3
452	303	224	178	149	120	91	71	58	46					18.3
544	361	270	216	178	141	108	87	71	58	46	42			20.3
593	394	295	237	195	166	137	108	87	71	58	50	42		23.3
639	427	320	253	212	183	158	141	116	95	79	66	58		28.3

nsmittance	50	60	80	100	120	150	200
EN 14509 = W/m²K	0.85	0.72	0.52	0.41	0.34	0.27	0.20
EN ISO 6946 = W/m ² K	0.73	0.62	0.45	0.35	0.29	0.23	0.18

Calculated in accordance with Annex E of Standard UNI EN 14509. Operating load uniformly distributed on the external face, thermal gradient ΔT=0, light colours and normal deflection limit 1/100. The data in the tables are to be considered indicative, subject to printing errors or omissions. For up-to-date data please refer to www.nav-system.it. It remains the responsibility of the designer to verify the values according to individual applications. For anything not specified, please refer to the AIPPEG standards (www.aippeg.it).

Save 25% of power Enjoy Nav System

	PANEL MODELS																										
	Rain 5	Rain Garden	Rain mono	Rain garden mono	Rain Deck	Rain Farm	Cortex	Cortex mono	Cortex farm	Wave	Wave mono	Wind / Wind frigo	Twister	Wet	Ultra Wet	Frost	Storm	lce	Climax Parete	Climax Coppo	Climax Greca	Sun	Thunder	Fire	Silent	Fire class	Silent class
CE Marking	\checkmark	\checkmark								\checkmark		\checkmark	√	\checkmark	✓	\checkmark	\checkmark	\checkmark	\checkmark		✓	\checkmark		\checkmark		\checkmark	
A2-s1, d0																						\checkmark	\checkmark	\checkmark	✓	\checkmark	√
PIR B-s1, d0	✓											✓	✓	√	✓	✓	✓		✓		✓						
PIR B-s2, d0	✓						✓					✓	✓	TH. ≥ 80 mm	TH. ≥ 80 mm	✓		✓		✓							
EI-REI	PIR REI 30 TH. ≥ 100 mm													PIR EI 30 TH. ≥ 100 mm EI 45 TH. ≥ 120 mm EI 45 TH. ≥ 100 mm with plasterboar insert in joint	PIR EI 30 TH. ≥ 100 mm EI 45 TH. ≥ 120 mm EI 45 TH. ≥ 120 mm ei 45 TH. ≥ 100 mm in better 100 mm	PIR EI 30 EI 45 for all thicknesses EI 60 TH. ≥ 200 mm d EI 90 TH. ≥ 300 mm	PIR EI 45 E 60 TH. ≥ 200 mm for walls REI 60 RE 90 TH. ≥ 200 mm for ceilings	PIR EI 60 TH. ≥ 220 mm for walls EI 30 TH. ≥ 220 mm for suspended ceiling installation	1			REI 45 TH. ≥ 50 mm REI 90 TH. ≥ 80 mm REI 120 TH. ≥ 100 mm	REI 90 TH. ≥ 100 mm REI 180 TH. 150 mm	EI 30 TH ≥ 50 mm EI 90 TH ≥ 80 mm EI 120 TH ≥ 100 mm	EI 60 TH. ≥ 100 mm	EI 90 TH. ≥ 100 mm EI 60 TH. ≥ 100 mm with horizontal installation EI 180 TH. 200 mm with horizontal installation	
BROOF	\checkmark		✓			✓	✓	\checkmark	√												\checkmark	✓					
ACOUSTIC INSULATION																						30 dB TH. ≥ 100 mm	33 dB for TH. 100 mm 38 dB for TH. 100 mm 0,70+0,5 perforated	30 dB for TH. 50 mm 31 dB for TH. 100 mm	32 dB for TH. 50 mm 33 dB for TH. 100 mm		
Sound Absorption																							0,95 αw for TH. 100 mm		0,95 αw for TH. 50 mm 1 αw for TH. 100 mm		
EPD UNI ISO 14025	\checkmark						\checkmark			\checkmark		\checkmark	√	✓	\checkmark	✓		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	✓	\checkmark	\checkmark
PIR Zulassung Nr. Z-10.49-589	\checkmark											✓	√	✓		\checkmark											
PIR VKF 5.3	✓											✓	✓	√	✓	✓		✓									
PIR B-s1, d0 Avis technique 2/15-1684														√		✓											
PIR CLASSE 0 BS476: Part 6 BS476: Part 6	✓ TH. 50 mm												✓ TH, 40 mm and 60 mm														
AS/NZS 1530.3 1999												CLAS 0-2 TH. 25 mm and 40 mm		CLASS 0-2 TH. 100 mm	CLASS 0-2 TH. 100 mm	CLASS 0-2 TH. 240 mm											
PIR GROUP NUMBER 2 ISO 9702	2											TH. 25 mm															
LEED mapping	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	1	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
	PANEL MO	DDELS																									

Product Certifications

	Rain 5.1	Twister.1	Wet.1	Frost.1	Storm.1	Sun.1	Fire.1	Fire class.1
FM APPROVED	4471	4880 - 4881	4880 - 4881	4880 - 4881	4880 - 4881	4471	4880 - 4881	4880 - 4881

	Climax Parete	Climax Coppo	Climax Greca	Sun	Thunder	Fire	Silent	Fire class	Silent class
	\checkmark		\checkmark	\checkmark		\checkmark		\checkmark	
				\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
	\checkmark		\checkmark						
		\checkmark							
. 60 220 mm Is				REI 45 TH. ≥ 50 mm	REI 90 TH. ≥ 100 mm	EI 30 TH. ≥ 50 mm	EL 60	EI 90 TH. ≥ 100 mm EI 60 TH. ≥ 100 mm	

NAV SYSTEM

PROTECTIVE CELL