

# Globe Panels





# Globe Panels

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# Globe Panels

Globe Panels Ltd

**A PRODUCTION  
DEDICATED TO THE HIGHEST  
QUALITY**

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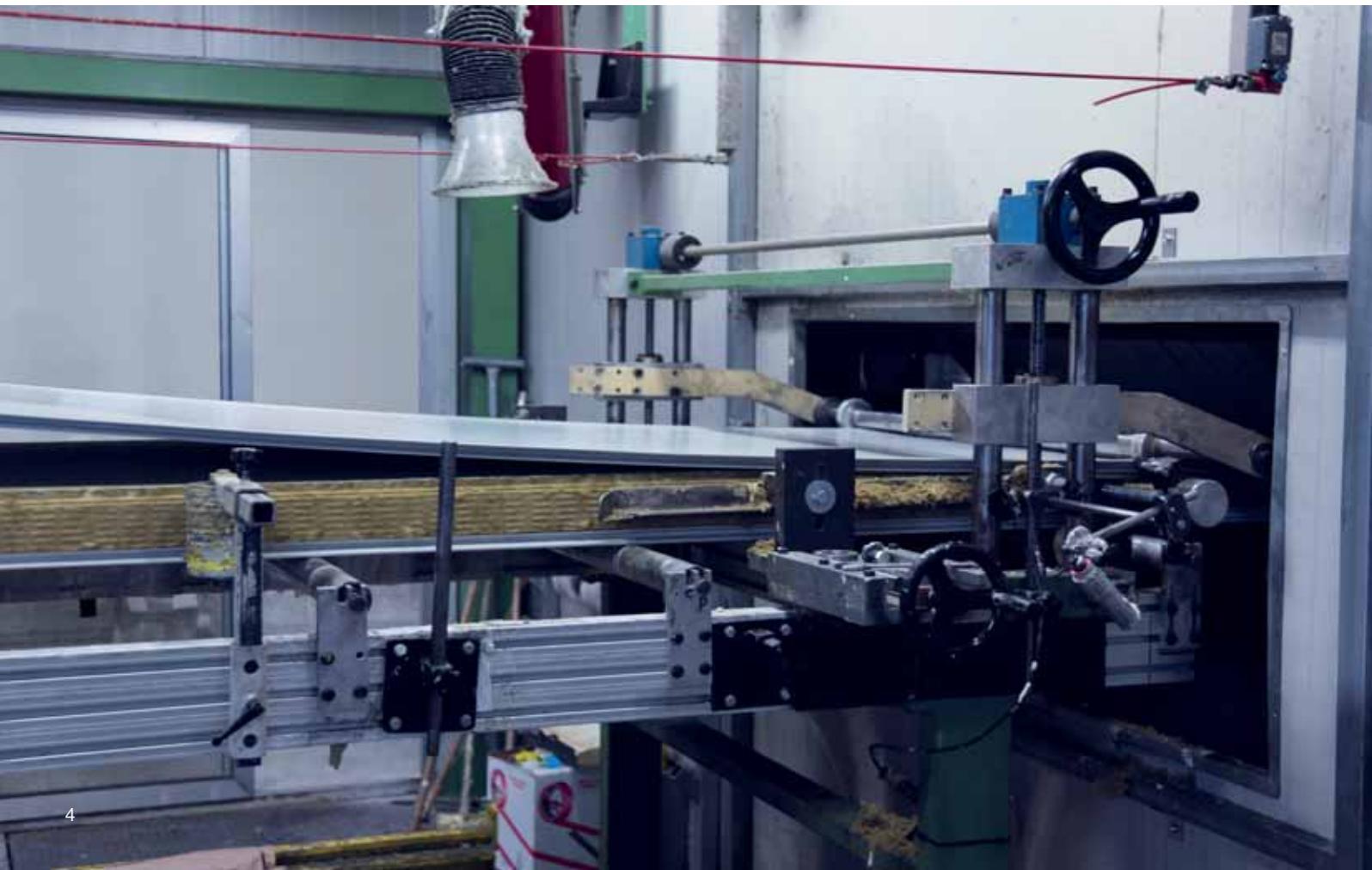
GLOBE PANELS OBSERVES, STUDIES LOOKS AND ASSIMILATES A HERITAGE OF KNOWLEDGE OF INDUSTRIAL CONSTRUCTIONS, AND IS ABLE TO PROPOSE A METHOD OF CONSTRUCTION THAT TAKES ADVANTAGES OF THE POSSIBILITIES OF INDUSTRIALISATION AS MUCH AS POSSIBLE. EVERYTHING IN ITS PRODUCTION PROCESS IS AUTOMATED TO MAKE EVERY COMPONENT OF THE PRODUCT PERFECT, AND TO ALWAYS ENSURE HIGH QUALITY. THANKS TO THE COMPETENCIES AND THE EXPERIENCE OF ITS COLLABORATORS, EACH PROCESSING PHASE IS CAREFULLY FOLLOWED BY ALL TECHNICIANS FROM DESIGN TO PRODUCTION UNTIL DELIVERY.



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FROM PREPAINTED STEEL TO ZINC, COPPER OR ALUMINIUM. THE COATING OF THE PANEL IS ON DEMAND ACCORDING TO THE CLIENT'S REQUIREMENTS. AN IMPORTANT PRODUCTION LINE FOR A CONTINUOUS PROCESSING CYCLE THAT MAKES IT POSSIBLE FOR EACH ORDER TO BE MADE AD HOC. FROM THE STEEL COILS TO THE PACKAGING, EVERYTHING IS MADE BY MAINTAINING THE CONTINUOUS PRODUCTION PACE. THIS SEQUENCE OF PICTURES SHOWS THE

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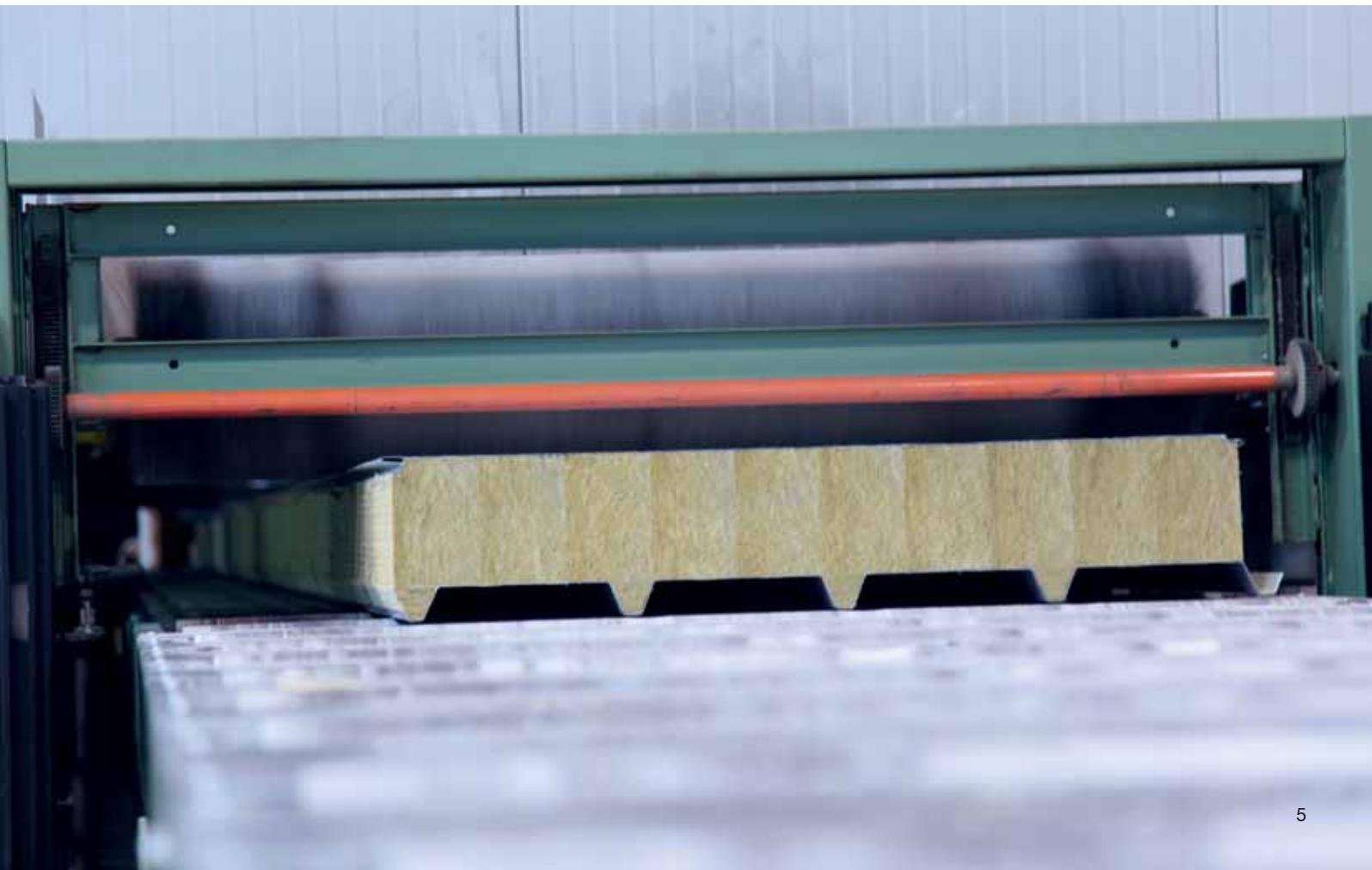


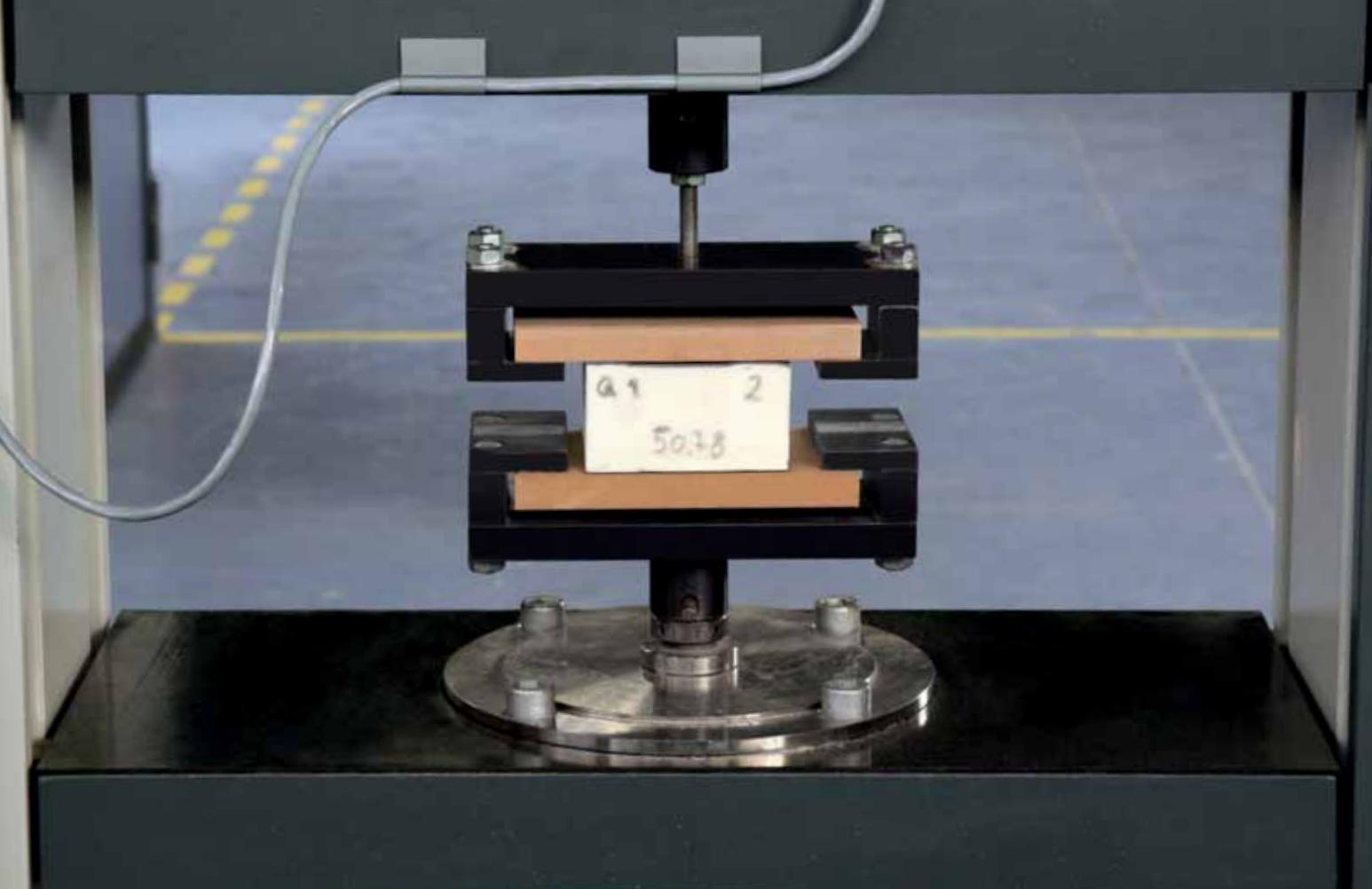


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PRODUCTION OF THE PANEL WITH AN INSULATING CORE MADE OF MINERAL FIBRE; THE ENTIRE PROCESS IS ALSO AUTOMATED: THE FIBRE IS CUT TO MEASURE BEFORE BEING INSERTED IN THE PANEL. THE PASSAGE THROUGH THE DOUBLE HEATED TAPE ACTIVATES THE CHEMICAL COMPONENTS OF THE GLUE TO ENSURE THE BEST COMPOSURE OF THE PANEL.

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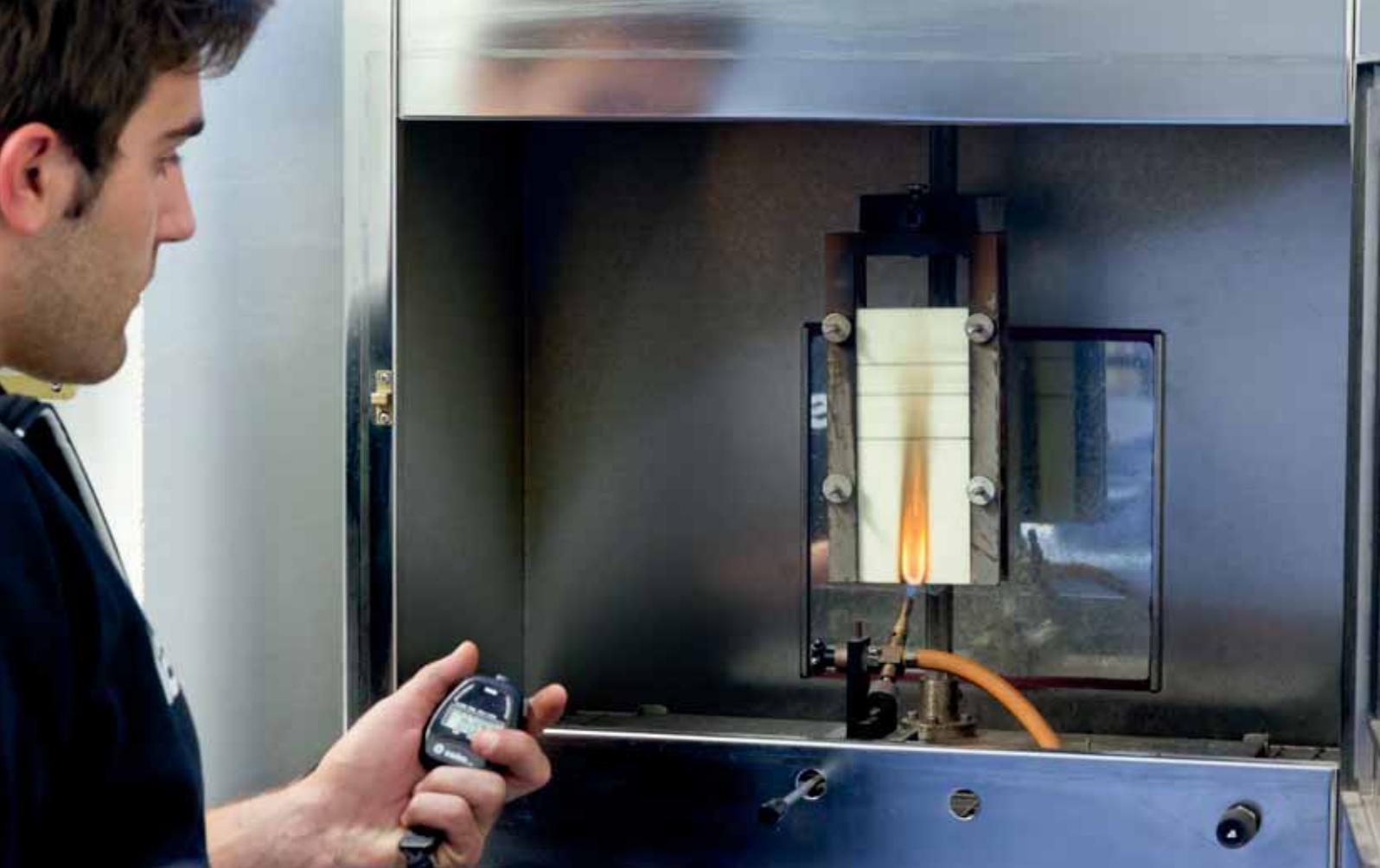


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IN THE LABORATORY, DIFFERENT TESTS ARE PERFORMED TO ASSESS THE MECHANICAL CAPACITIES. IN THE PREVIOUS PAGES IS SHOWN THE BENDING AND SHEAR TEST ON A 6 M SHEET. WITH THE SAME MACHINE, THE SHEAR TEST IS PERFORMED ALWAYS ON A 1M LONG PANEL. WITH ANOTHER TOOL YOU ANALYSE THE TENSILE, COMPRESSION AND BENDING PROPERTIES. IN THE

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LABORATORY YOU ANALYSE ALSO THE FOLLOWING CHARACTERISTICS: DENSITY, DIMENSION ET TRANSMITTANCE. THE REI PANELS ALSO PASS THE DECISIVE TEST OF FIRE FOR THEIR EFFECTIVE CERTIFICATION. EACH ORDER IS PROCESSED TO ALWAYS GUARANTEE EACH QUALITY DETAIL.

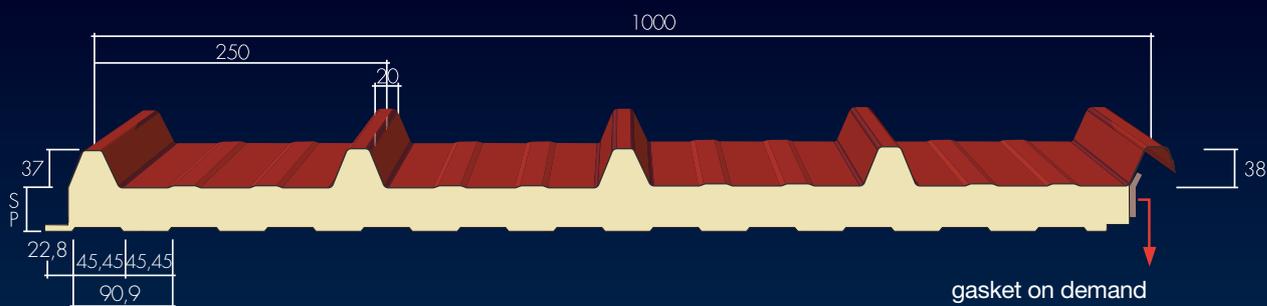
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# Globe Roof

the roof for industrial and civil use

WITH A STRIKING AESTHETIC, PROPOSES A NEW DESIGN FOR INDUSTRIAL AND CIVIL ROOFS. IT HAS 5 RIBS FOR A GOOD STATIC RESISTANCE IS AVAILABLE IN 11 DIFFERENT THICKNESSES RANGE FOR BUILDING ROOFS, TO ENSURE ITS VERSATILITY OF USE.



ROOFS polyurethane

## Standard colours



White grey      Siena red      Chocolate brown

Other colours are available on demand

## Examples of special colours



RAL 9010 White      RAL 9006 Silver grey      RAL 7015 Slate grey      RAL 1015 Ivory white      RAL 6021 Pale green      RAL 6011 Reseda green      RAL 6005 Moss green      RAL 5010 Gentian blue

All colours shown do not faithfully reproduce the corresponding RAL code.



## POLYISOCYANURATE

pueden ser realizados a pedido  
Available upon request (non / not standard)



## Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
30	250	195	105	70							7.79
40	290	200	135	90	65						8.17
50	315	230	160	115	85	65					8.55
60	370	275	195	145	110	85	60				8.93
80	485	360	265	200	155	120	95	70	50		9.69
100	595	445	340	260	200	160	125	105	80	60	10.45
120	710	530	420	320	250	195	160	130	105	85	11.21
150	880	655	520	410	325	260	210	170	145	120	12.35
160	935	700	555	445	350	280	225	185	155	130	12.73
180	975	725	580	480	400	320	260	215	180	150	13.49
200	1000	745	595	495	420	360	295	245	205	170	14.25

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200  $l$

External facing: aluminium 0.6 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
30	260	150	115	80	55						6.15
40	332	196	150	110	80	60					6.53
50	386	245	185	145	105	80	60				6.91
60	435	295	220	180	135	100	75	55			7.29
80	485	360	285	235	195	150	110	85	65	50	8.05
100	600	445	355	295	250	200	155	120	95	75	8.81
120	710	530	420	350	300	250	200	155	125	95	9.57
150	880	660	525	435	370	320	260	215	175	140	10.71
160	940	700	560	460	395	345	280	230	190	155	11.09
180	975	725	580	480	410	355	315	265	220	185	11.85
200	1000	750	595	495	420	365	325	290	250	210	12.61

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200  $l$

## Thermal characteristics

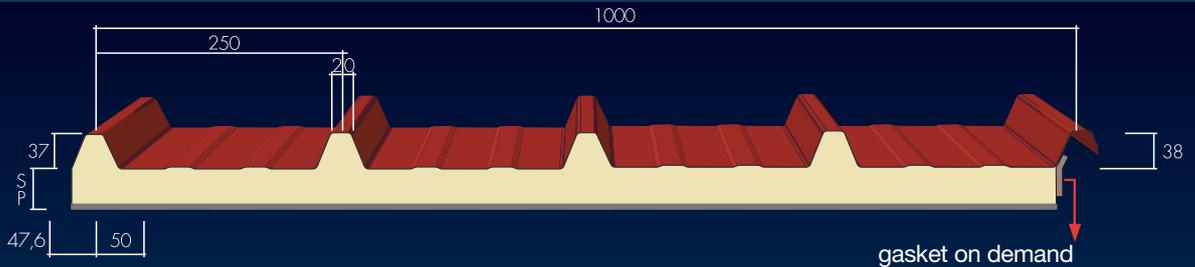
U transmittance	PANEL NOMINAL THICKNESS ( mm )										
	30	40	50	60	80	100	120	150	160	180	200
W/m <sup>2</sup> K	0.718	0.551	0.446	0.375	0.285	0.220	0.193	0.155	0.145	0.129	0.116
Kcal/m <sup>2</sup> h °C	0.619	0.475	0.385	0.324	0.246	0.190	0.166	0.133	0.125	0.111	0.100

# Globe Roof Eco

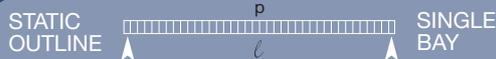
The versatile panel

THE MAIN CHARACTERISTIC OF THIS PANEL IS A LIGHT INTERNAL FINISH MADE OF A FLEXIBLE FACING, CHOOSING FROM ROOFING FELT, CENTESIMAL ALUMINIUM OR A GLASS FILM.

- THE ROOFING FELT IS A SEMI-TRANSPIRING BLACK ASPHALTED PAPER.
- THE CENTESIMAL ALUMINIUM IS OF A NATURAL BRIGHT COLOUR, PAINTED AND EMBOSSED, NON TRANSPIRING.
- THE GLASS FILM, MADE OF A WHITE NON-WOVEN FABRIC, RETAINS A POSSIBLE CREATION OF CONDENSATION.



## Static characteristics (kg/m<sup>2</sup>)



### Steel

SHEET THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	
0.5	125	65				4.90
0.6	175	85				5.95
0.8	280	110	50			7.95
1	345	140	65			10.04

$p = (\text{kg/m}^2)$  uniformly distributed load - Working support width: 10 mm  
Normal deflection limit:  $l/200$

## Static characteristics (kg/m<sup>2</sup>)

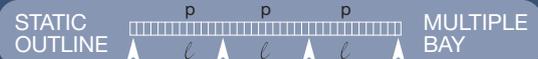


### Steel

SHEET THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	
0.5	125	80	55			4.90
0.6	170	105	75	55		5.95
0.8	250	160	110	75		7.95
1	340	215	150	95	55	10.04

$p = (\text{kg/m}^2)$  uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $l/200$

## Static characteristics (kg/m<sup>2</sup>)



### Steel

SHEET THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	
0.5	155	95	65			4.90
0.6	205	130	85			5.95
0.8	305	195	110	60		7.95
1	415	265	135	70		10.04

$p = (\text{kg/m}^2)$  uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $l/200$

## Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS (mm)										
	30	40	50	60	80	100	120	150	160	180	200
W/m <sup>2</sup> K	0.718	0.551	0.446	0.375	0.285	0.220	0.193	0.155	0.145	0.129	0.116
Kcal/m <sup>2</sup> h °C	0.619	0.475	0.385	0.324	0.246	0.190	0.166	0.133	0.125	0.111	0.100

ROOFS polyurethane



THE PANEL NEEDS STRUCTURAL SUPPORTS SPACED AT A MAXIMUM DISTANCE OF 1 METRE FROM EACH OTHER, IN ADDITION, DUE TO THE CHARACTERISTICS OF THE FLEXIBLE FACINGS, THE JOINT BETWEEN THE PANELS HAS NO PATTERNED TOOTH.  
 THIS PRODUCT IS SUITABLE FOR ETERNIT ROOFS, FOR PITCHES WITH CLAY-CEMENT SLAB OR TO DIRECTLY COVER PREFABRICATED TILES. IT IS SUGGESTED TO USE THE MONOSHEET FOR ROOFS WITH EXPOSED INTERNAL FACE. FOR THE EXTERNAL METAL FACING, THE MONOSHEET PANEL IS AVAILABLE IN THE SAME PROFILES, MATERIALS AND COLOUR RANGE AS **ROOF** , IN THICKNESSES FROM 30 TO 200 MM.



White centesimal aluminium



Roofing felt



Naturel centesimal aluminium

### Static characteristics (kg/m<sup>2</sup>)



#### Aluminium

SHEET THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	
0.5	105					1.68
0.6	125					2.02
0.8	165	60				2.68
1	205	70				3.33

$p = (\text{kg/m}^2)$  uniformly distributed load - Working support width: 40 mm  
Normal deflection limit:  $l/200$

### Static characteristics (kg/m<sup>2</sup>)

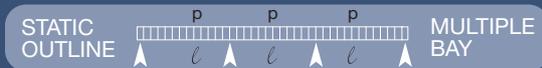


#### Aluminium

SHEET THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	
0.5	120	70				1.68
0.6	155	85	50			2.02
0.8	220	125	65			2.68
1	290	165	80			3.33

$p = (\text{kg/m}^2)$  uniformly distributed load - Working support width: 80 mm  
Normal deflection limit:  $l/200$

### Static characteristics (kg/m<sup>2</sup>)



#### Aluminium

SHEET THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	
0.5	145	70				1.68
0.6	185	85				2.02
0.8	270	115	50			2.68
1	360	140	60			3.33

$p = (\text{kg/m}^2)$  uniformly distributed load - Working support width: 80 mm  
Normal deflection limit:  $l/200$

### Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )										
	30	40	50	60	80	100	120	150	160	180	200
W/m <sup>2</sup> K	0.718	0.551	0.446	0.375	0.285	0.220	0.193	0.155	0.145	0.129	0.116
Kcal/m <sup>2</sup> h °C	0.619	0.475	0.385	0.324	0.246	0.190	0.166	0.133	0.125	0.111	0.100

# Globe Roof Copper

why not combine practicality with beauty and efficiency?

A COPPER ROOF IS SYNONYMOUS WITH RESISTANCE AND DURABILITY, AND IT IS PROBABLY THE MOST VERSATILE MATERIAL ON THE MARKET, A LONG-TERM SOLUTION THAT WILL LAST AS LONG AS YOUR BUILDING.

COPPER ROOFS ARE AMONG THE MOST ANTIQUE TYPES OF MAN-MADE ROOFING IN THE WORLD. FOR CENTURIES, THEY HAVE BEEN THE MOST COMMONLY USED TYPE OF ROOFING, ESPECIALLY FOR IMPORTANT AND PRESTIGIOUS BUILDINGS. DO NOT FORGET THAT EACH OF THE MOST ANTIQUE EUROPEAN BUILDINGS HAVE A COPPER ROOF.

THE MAIN VALUE OF COPPER IS THAT IT TAKES DIFFERENT SHADES OVER TIME ON CONTACT WITH AIR.

EVEN IF IN MOST CASES IT IS A MATTER OF TASTE, COPPER COMES IN COLOR AND THIS PARTICULAR FEATURE GIVES IT AN INTERNATIONALLY RECOGNISED AESTHETIC QUALITY.

COPPER IS A LIVING METAL, THAT, JUST LIKE OTHER MATERIALS, LIKE STONE, WOOD AND A FEW OTHERS, TAKES ON A DIFFERENT HUE AS IT AGES DEPENDING ON THE REGION, LATITUDE, WEATHER AND CLIMATE, RESULTING IN A ROOF FINISH THAT IS COMMONLY CALLED PATINA.

EVEN IF THE INITIAL COST IS MORE IMPORTANT, THE VALUE IS IN ITS DURABILITY: IN FACT, THE MAJOR EXPENSE NECESSARY FOR A COPPER ROOF IS PRACTICALLY AMORTISED OVER TIME, THANKS TO THE ELIMINATION OF THE HANDLING FEES AND POSSIBLE SUBSTITUTION WORK, SOMETHING THAT IS NECESSARY WITH OTHER TYPES OF MATERIALS.

ROOFS COPPER

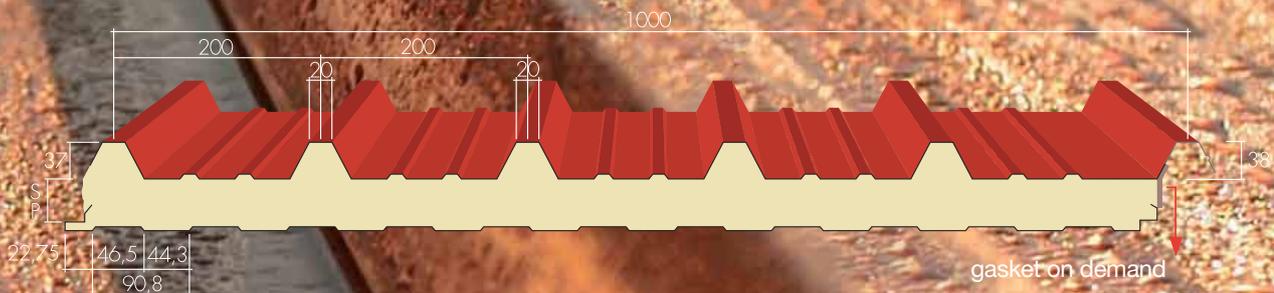
## Thermal characteristics Isocopre

U transmittance	PANEL NOMINAL THICKNESS ( mm )					
	30	40	50	60	80	100
W/m <sup>2</sup> K	0.718	0.551	0.446	0.375	0.285	0.220
Kcal/m <sup>2</sup> h °C	0.619	0.475	0.385	0.324	0.246	0.198

## Thermal characteristics Eurocinque

U transmittance	PANEL NOMINAL THICKNESS ( mm )										
	30	40	50	60	80	100	120	150	160	180	200
W/m <sup>2</sup> K	0.718	0.551	0.446	0.375	0.285	0.220	0.193	0.155	0.145	0.129	0.116
Kcal/m <sup>2</sup> h °C	0.619	0.475	0.385	0.324	0.246	0.190	0.166	0.133	0.125	0.111	0.100

## Examples of static characteristics

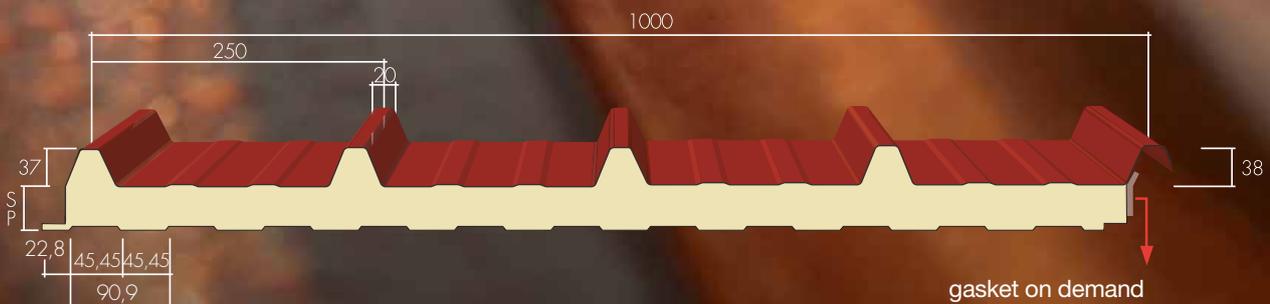


### IGlobe Roof Copper

External facing: copper 0.5 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
30	95										10.64
40	115	80									11.04
50	135	95									11.44
60	155	110	80								11.84
80	195	140	105	80							12.64
100	235	170	125	100	80						13.44

$p = (\text{kg/m}^2)$  uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $\ell$  1/200 - Operating deflection limit:  $\ell$  1/100



### Globe Roof Eco

External facing: copper 0.5 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
30	70										10.36
40	40	90									10.76
50	105	70									11.16
60	120	85									11.56
80	160	110	85								12.36
100	195	140	105	80							13.16
120	230	170	125	95	75						13.96
150	290	210	160	120	95	80					15.16
160	305	225	170	130	105	85	70				15.56
180	345	255	190	150	115	95	75				16.36
200	340	255	205	165	130	105	85	70			17.16

$p = (\text{kg/m}^2)$  uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $\ell$  1/200 - Operating deflection limit:  $\ell$  1/100



The only sandwich panel designed to be installed with any type of photovoltaic module on it, even after the completion of your roof.



Easy and fast installation of the photovoltaic modules of any size.



Do not need to drill the panel for installing the universal fixing system, avoiding water infiltrations.



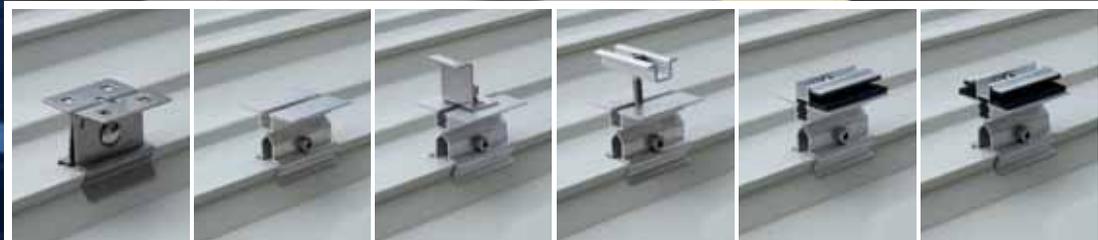
High ventilation, thanks to the 80 mm of air, to increase the production of energy.



Made the way you want: colour, facing, thickness, length.

# Globe Sun Plus

the 5-star support for photovoltaic panels



Stainless steel anchor bracket coupling to the panel

Aluminium anchor bracket coupling to the panel

Aluminium anchor bracket coupling to the panel with ZETA fixing element for photovoltaic modules with frame

Aluminium anchor bracket coupling to the panel with OMEGA fixing element for photovoltaic modules with frame

Aluminium anchor bracket coupling to the panel with simple fixing elements for photovoltaic modules glass/glass

Aluminium anchor bracket coupling to the panel with double fixing elements for photovoltaic modules glass/glass



Aluminium anchor bracket coupling to the panel with simple fixing elements for photovoltaic modules glass/glass

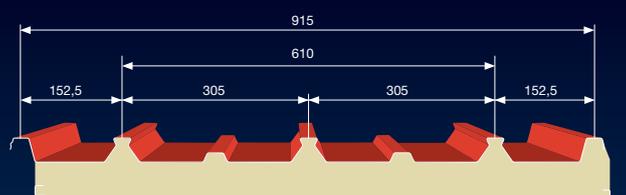
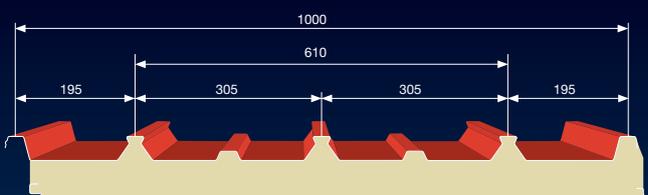
Aluminium anchor bracket coupling to the panel with double fixing elements for photovoltaic modules glass/glass

Anchor bracket for ladder coupling to the panel

Aluminium anchor bracket for snow stopper coupling to the panel

Aluminium structure for slope change (contact our offices for information)

Aluminium anchor bracket for structure coupling to the panel





HERE IS THE COMPLETE SOLUTION SUN PLUS:

- ITS ADVANTAGE: REDUCTION TO THE ESSENTIALS
- NO EXPENSIVE SUPPORTING STRUCTURE
- NO ADDITIONAL GASKET
- NO USE OF UNNECESSARY AND EXPENSIVE ALUMINUM PROFILES
- FAST INSTALLATION OF THE PHOTOVOLTAIC MODULES: THE COMPONENTS ARE FIXED THANKS TO THE JOINTING OF THE FIXING SYSTEM AN ALREADY INSULATED ROOF DOES NOT NEED TO BE DRILLED FOR ASSEMBLING THE LOW WEIGHT OF THE SOLARPAN PLUS® SYSTEM COMPARED TO TRADITIONAL ROOFS HAS HIGHER PERFORMANCE IN ALL ITS APPLICATIONS WITH THE SAVINGS ON MATERIALS AND TIME OF INSTALLATION, SOLARPAN PLUS® PROVIDES A COMPLETE SOLUTION WITH A LOW COST OF REALISATION. MOREOVER THE SYSTEM SOLARPAN PLUS® PROVIDES ALL THE ACCESSORIES TO BE USED FOR THE INSTALLATION OF PHOTOVOLTAIC MODULES. TODAY A SOLARPAN PLUS® ROOF, TOMORROW A PHOTOVOLTAIC SYSTEM.



LOOKING TO THE FUTURE, WE HAVE THOUGHT ABOUT EVERYTHING: TODAY IT IS POSSIBLE TO COVER A ROOF OR A FACADE USING SOLARPAN PLUS® AND THEN, WITH TIME, IT IS POSSIBLE TO DECIDE TO INSTALL A PHOTOVOLTAIC SYSTEM. IDEAL WHEN USED AS A FACADE OR ROOF; ALSO, THROUGH THE USE OF A PITCHED STRUCTURE, YOU CAN INSERT MODULES ON THE SLOPES THAT ARE NOT FACING SOUTH AND THEREFORE ARE NOT NORMALLY USED, THE INSTALLATION TIME IS VERY FAST THANKS TO THE USE OF THE ACCESSORIES, SUCH AS SUPPORT PROFILES, CLAMPS AND JUNCTION TRIANGLES, WHICH CAN ALL BE ATTACHED TO THE ROOF WITHOUT HAVING TO DRILL; THIS POSITIONS THE SOLARPAN PLUS® SYSTEM TO BECOME THE IDEAL SOLUTION FOR ROOFS WITH PHOTOVOLTAIC MODULES.

### Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
30	330	245	175	105	65							9.11
40	420	315	225	145	90	60						9.49
50	510	380	280	190	125	85	60					9.87
60	605	450	335	240	160	110	80	55				10.25
80	785	585	450	340	240	170	125	90	70	50		11.01
100	965	720	570	435	335	240	180	135	100	80		11.77
120	1000	855	680	535	420	320	240	180	140	110		12.53
150	1000	900	715	595	505	435	340	260	205	160		13.67

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 l

External facing: aluminium 0.6 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
30	330	245	155	100	65							6.41
40	420	315	210	135	95	65						6.79
50	515	385	275	180	125	85	65					7.17
60	605	450	340	225	155	110	80	60				7.55
80	785	585	465	325	230	165	125	95	70	55		8.91
100	970	725	575	435	310	225	170	130	100	80		9.07
120	1000	860	685	555	400	295	220	170	135	105		9.83
150	1000	900	715	595	510	405	310	240	190	150		10.97

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 l

### Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )							
	30	40	50	60	80	100	120	150
W/m <sup>2</sup> K	0.718	0.551	0.446	0.375	0.285	0.220	0.193	0.155
Kcal/m <sup>2</sup> h °C	0.619	0.475	0.385	0.324	0.246	0.190	0.166	0.133

# Globe Energy

the ideal panel for photovoltaic module in thin film

IT CAN BE USED FOR ROOFS WHICH ARE NOT SUBJECT TO HEAVY OPERATING CONDITIONS, IS STUDIED TO BE INTEGRATED WITH PHOTOVOLTAIC MODULES IN THIN FILM.

THEREFORE IT IS POSSIBLE TO USE IT AS SIMPLE AND COST EFFECTIVE ROOF, RELIABLE WITH REGARDS TO AESTHETICS AND ROBUSTNESS AS ALL OTHER ROOFS, AND IT IS POSSIBLE TO INTEGRATE IT WITH A PHOTOVOLTAIC SYSTEM IN AMORPHOUS SILICON.

- ROOF SYSTEM FOR LARGE SURFACES, FULLY INTEGRATED WITH PHOTOVOLTAIC MODULES.
- FLEXIBILITY OF DESIGN AND IREALISATION BY SLOPE AND LENGTH.
- RESISTANCE TO ATMOSPHERIC AGENTS.
- EASE OF MAINTENANCE THANKS TO THE ROOF FOOTPATH SYSTEM.
- KG/M<sup>2</sup> RATIO INFERIOR TO TRADITIONAL PHOTOVOLTAIC SYSTEMS.
- EASE OF INSTALLATION AND CHEAPER NET COSTS.
- COMPETITIVENESS IN TERMS OF COST PER KWH OF ENERGY PRODUCED.
- THE IDEAL SOLUTION FOR THE DISPOSAL OF ASBESTOS ROOFS, WITHOUT THE NEED FOR ACTION ON EXISTING STRUCTURES.

Standard colours for external facing:

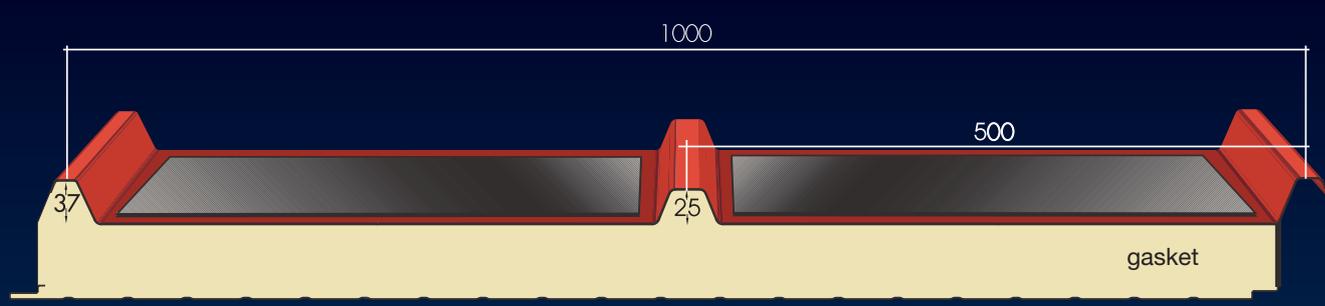


Aluzinc®

Standard colours for internal facing:



White grey



3 ALUZINC® 0.7 mm thick - Internal facing in galv. prepainted steel, 0.5 mm thick.

## Static characteristics (kg/m<sup>2</sup>)



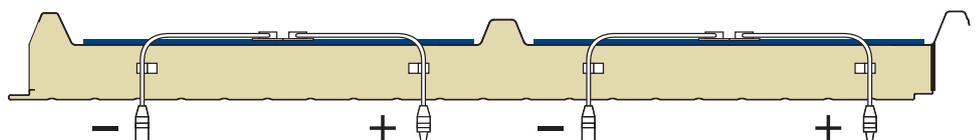
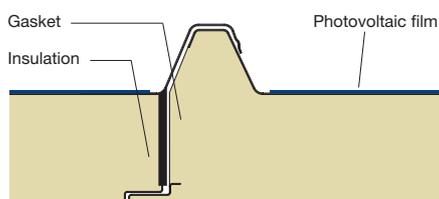
External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
30	190	120	75	45							7.46
40	250	160	105	70							7.84
50	300	205	140	90	65						8.22
60	345	250	170	120	90	65					8.60
80	460	340	240	180	135	100	75				9.36
100	570	410	320	240	185	140	110				10.12

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200  $l$

## Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )					
	30	40	50	60	80	100
W/m <sup>2</sup> K	0.718	0.551	0.446	0.375	0.285	0.220
Kcal/m <sup>2</sup> h °C	0.619	0.475	0.385	0.324	0.246	0.190



# Globe Roof Tiles

the aesthetic roof

IS AN INSULATING PANEL TO BE USED WHEN AESTHETICS MUST ALSO BE TAKEN INTO CONSIDERATION FOR CIVIL BUILDINGS. WHEN THE CONSTRUCTION IS FINISHED, IT HAS THE EFFECT OF A REAL TILE ROOF. THE PRODUCT COMES STANDARD WITH THE SAME COLOUR OF REAL TILES; IT IS ALSO AVAILABLE WITH AN ANTIQUE EFFECT. TTCOPPO® SATISFIES THE BINDING URBANISTIC STANDARDS, AND IT IS ALSO USED IN HISTORICAL CENTERS. GUARANTEED AN EXCELLENT THERMAL INSULATION THANKS TO THE HIGH THICKNESS OF ITS SECTION. **TECHNICAL CHARACTERISTICS**

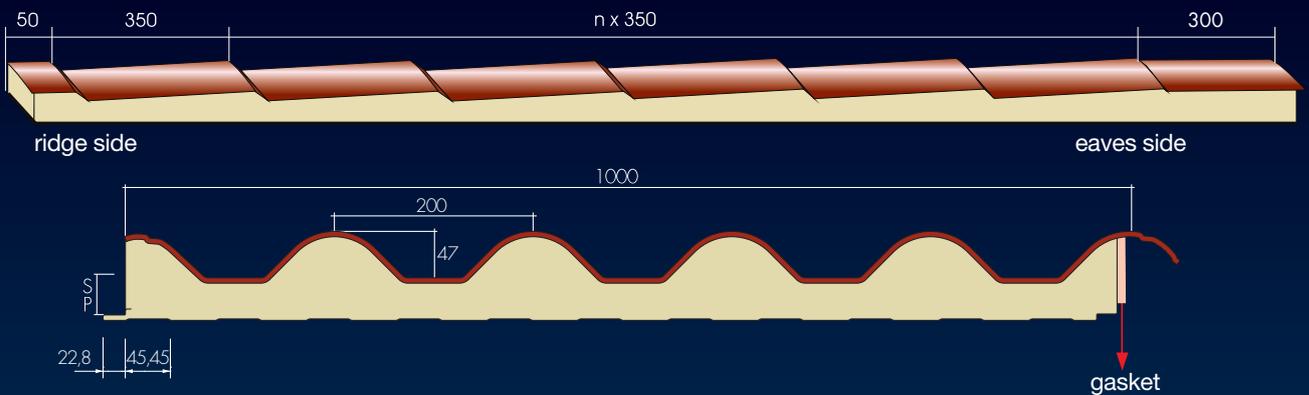
METAL FACED SANDWICH PANEL WITH INSULATING CORE MADE OF EXPANDED POLYURETHANE

WORKING WIDTH: 1.000 MM

EXTERNAL FACING: PREPAINTED GALVANISED STEEL, ALUMINIUM AND COPPER

INTERNAL FACING: PREPAINTED GALVANISED STEEL, OTHER FACINGS AND COLOURS ARE AVAILBALE ON DEMAND.

THE LENGTH OF THE PANEL IS DETERMINED BY THE MODULE GIVEN BY THE TILE DESIGN; SEE THE FIGURE HEREUNDER, WITH A CONSTANT DIMENSION OF 350 MM.



MOULDING OF TILE SHAPE



OVERLAPPING TILE

External facing standard colour



Red tile

Internal facing standard colour



White grey

Internal facing colours available on demand



White centesimal aluminium, natural, cream

Teak

Birch walnut

Cherry

Walnut

DIFFERENT INTERNAL FACINGS IN PLASTICISED STEEL ARE AVAILABLE. FOR FURTHER INFORMATION, PLEASE CONTACT OUR OFFICES

External facing colours available on demand



Red antique tile



Red antique copper



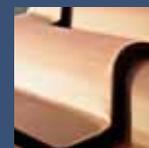
Red antique cream



Antique cream



Antique yellow



Copper



### Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )					
	30	40	50	60	80	100
W/m <sup>2</sup> K	0.712	0.448	0.375	0.299	0.278	0.189
Kcal/m <sup>2</sup> h °C	0.614	0.386	0.323	0.258	0.240	0.163

### Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )					WEIGHT (Kg/m <sup>2</sup> )
	1.50	2.00	2.50	3.00	3.50	
30	271	190	108	47	41	9.1
40	339	249	156	82	58	9.5
50	406	307	202	117	86	9.9
60	472	366	250	153	111	10.3
80	607	487	345	224	178	11.1
100	715	597	440	305	250	12.2

p = (kg/m<sup>2</sup>) uniformly distributed load  
Deflection limit: 1/200 ℓ

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )					WEIGHT (Kg/m <sup>2</sup> )
	1.50	2.00	2.50	3.00	3.50	
30	307	248	196	139	99	9.1
40	366	295	228	162	120	9.5
50	442	342	260	183	141	9.9
60	484	389	293	206	162	10.3
80	629	502	361	253	202	11.1
100	759	710	470	340	260	12.2

p = (kg/m<sup>2</sup>) uniformly distributed load  
Deflection limit: 1/200 ℓ

External facing: aluminium 0.7 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )					WEIGHT (Kg/m <sup>2</sup> )
	1.50	2.00	2.50	3.00	3.50	
30	231	162	82	36	31	6.3
40	253	186	117	64	44	6.7
50	305	231	152	87	64	7.1
60	353	275	187	115	83	7.5
80	455	366	258	168	120	8.3
100	545	446	328	228	170	9.2

p = (kg/m<sup>2</sup>) uniformly distributed load  
Deflection limit: 1/200 ℓ

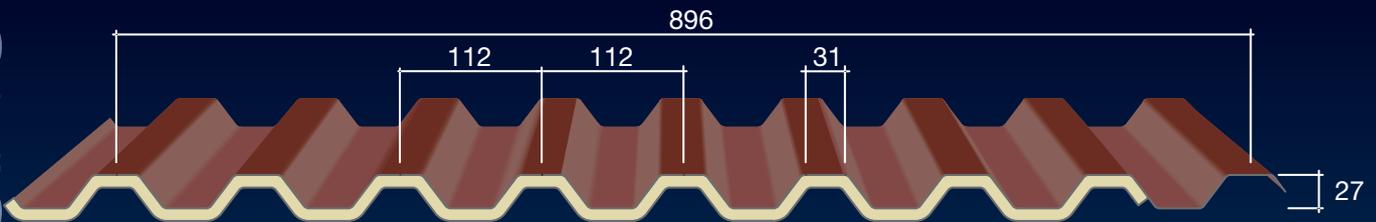
PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )					WEIGHT (Kg/m <sup>2</sup> )
	1.50	2.00	2.50	3.00	3.50	
30	249	185	146	105	74	6.3
40	275	219	171	122	90	6.7
50	318	256	196	136	106	7.1
60	276	293	220	155	121	7.5
80	471	382	276	190	151	8.3
100	570	426	303	235	185	9.2

p = (kg/m<sup>2</sup>) uniformly distributed load  
Deflection limit: 1/200 ℓ

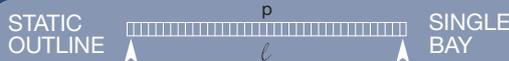
# Globe Ecogrek

ribbed monosheet

CAN BE MADE OF STEEL, ALUMINIUM, COPPER, IN ALL RAL COLOUR. IS IDEAL TO BE INSTALLED ON NEW CONSTRUCTIONS AND CONSTRUCTION REQUALIFICATION, GUARANTEEING A GOOD AESTHETIC ASPECT. THIS PRODUCT GUARANTEES THE WALKABILITY ON THE ROOF, THE NOISE REDUCTION AND COMPARED TO THE TRADITIONAL RIBBED SHEET YOU HAVE THE ELIMINATION OF CONDENSATION THANKS TO ITS LAYER MADE OF POLYURETHANE FOAM.



## Static characteristics (kg/m<sup>2</sup>)



### Prepainted galvanised steel

SHEET THICKNESS (mm)	WEIGHT (kg/m <sup>2</sup> )	J <sub>y</sub> (cm <sup>4</sup> /m)	W <sub>e,inf</sub> (cm <sup>3</sup> /m)	W <sub>e,sup</sub> (cm <sup>3</sup> /m)	W <sub>p</sub> (cm <sup>3</sup> /m)	DISTANCE BETWEEN SUPPORTS (ml)														
						1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5				
0.5	5.09	7.14	5.10	5.10	5.89	495	250	140	85	55										
0.6	6.19	8.63	6.16	6.16	7.16	615	310	175	105	70										
0.8	8.29	11.35	8.11	8.11	9.53	860	435	245	150	95	65									

p = (kg/m<sup>2</sup>) uniformly distributed load - Larghezza efficace d'appoggio: 10 mm  
Normal deflection limit:  $l/200$

## Static characteristics (kg/m<sup>2</sup>)



### Prepainted galvanised steel

SHEET THICKNESS (mm)	WEIGHT (kg/m <sup>2</sup> )	J <sub>y</sub> (cm <sup>4</sup> /m)	W <sub>e,inf</sub> (cm <sup>3</sup> /m)	W <sub>e,sup</sub> (cm <sup>3</sup> /m)	W <sub>p</sub> (cm <sup>3</sup> /m)	DISTANCE BETWEEN SUPPORTS (ml)														
						1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5				
0.5	5.09	7.14	5.10	5.10	5.89	450	305	220	170	125	100	75	55							
0.6	6.19	8.63	6.16	6.16	7.16	595	405	290	225	170	130	90	65	50						
0.8	8.29	11.35	8.11	8.11	9.53	895	605	430	335	255	175	125	90	70	50					

p = (kg/m<sup>2</sup>) uniformly distributed load - Larghezza efficace d'appoggio: 100 mm  
Normal deflection limit:  $l/200$

## Static characteristics (kg/m<sup>2</sup>)



### Prepainted galvanised steel

SHEET THICKNESS (mm)	WEIGHT (kg/m <sup>2</sup> )	J <sub>y</sub> (cm <sup>4</sup> /m)	W <sub>e,inf</sub> (cm <sup>3</sup> /m)	W <sub>e,sup</sub> (cm <sup>3</sup> /m)	W <sub>p</sub> (cm <sup>3</sup> /m)	DISTANCE BETWEEN SUPPORTS (ml)														
						1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5				
0.5	5.09	7.14	5.10	5.10	5.89	550	380	275	175	115	80	55								
0.6	6.19	8.63	6.16	6.16	7.16	725	500	350	215	140	95	70	50							
0.8	8.29	11.35	8.11	8.11	9.53	1095	750	480	300	195	135	95	70	50						

p = (kg/m<sup>2</sup>) uniformly distributed load - Larghezza efficace d'appoggio: 100 mm  
Normal deflection limit:  $l/200$

POLYURETHANE ROOFS

THE STANDARD INTERNAL FACING IS MADE OF EXPOSED POLYURETHANE; IT CAN ALSO BE MADE ON DEMAND WITH WHITE CENTESIMAL ALUMINIUM.

CAN BE SHAPED AND PRESSED ACCORDING TO THE CLIENT'S REQUIREMENTS OR CAN BE ARCHED WITH A RADIUS AS REQUESTED BY THE CLIENT.

SHAPED BY PRESS



ARCHED



Standard colours



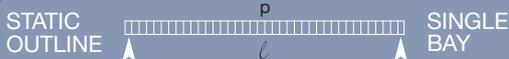
White grey

Siena red

Chocolate brown

Other colours are available on demand

Static characteristics (kg/m<sup>2</sup>)



Prepainted aluminium

SHEET THICKNESS (mm)	WEIGHT (kg/m <sup>2</sup> )	J <sub>y</sub> (cm <sup>4</sup> /m)	W <sub>e,inf</sub> (cm <sup>3</sup> /m)	W <sub>e,sup</sub> (cm <sup>3</sup> /m)	W <sub>p</sub> (cm <sup>3</sup> /m)
0.6	2.08	9.06	6.47	6.47	7.53
0.8	2.78	11.77	8.40	8.40	9.89

DISTANCE BETWEEN SUPPORTS ( ml )

1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5
225	115	65								
300	150	85	50							

p = (kg/m<sup>2</sup>) uniformly distributed load - Larghezza efficace d'appoggio: 40 mm  
Normal deflection limit:  $l/200$

Finishing on demand for the internal facing



White centesimal aluminium

Static characteristics (kg/m<sup>2</sup>)



Prepainted aluminium

SHEET THICKNESS (mm)	WEIGHT (kg/m <sup>2</sup> )	J <sub>y</sub> (cm <sup>4</sup> /m)	W <sub>e,inf</sub> (cm <sup>3</sup> /m)	W <sub>e,sup</sub> (cm <sup>3</sup> /m)	W <sub>p</sub> (cm <sup>3</sup> /m)
0.6	2.08	9.06	6.47	6.47	7.53
0.8	2.78	11.77	8.40	8.40	9.89

DISTANCE BETWEEN SUPPORTS ( ml )

1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5
420	280	160	100	65						
605	370	210	130	85	60					

p = (kg/m<sup>2</sup>) uniformly distributed load - Larghezza efficace d'appoggio: 100 mm  
Normal deflection limit:  $l/200$

Static characteristics (kg/m<sup>2</sup>)



Prepainted aluminium

SHEET THICKNESS (mm)	WEIGHT (kg/m <sup>2</sup> )	J <sub>y</sub> (cm <sup>4</sup> /m)	W <sub>e,inf</sub> (cm <sup>3</sup> /m)	W <sub>e,sup</sub> (cm <sup>3</sup> /m)	W <sub>p</sub> (cm <sup>3</sup> /m)
0.6	2.08	9.06	6.47	6.47	7.53
0.8	2.78	11.77	8.40	8.40	9.89

DISTANCE BETWEEN SUPPORTS ( ml )

1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5
430	220	125	80	50						
565	290	165	105	65						

p = (kg/m<sup>2</sup>) uniformly distributed load - Larghezza efficace d'appoggio: 100 mm  
Normal deflection limit:  $l/200$

# Globe Roof Wave

the roof with a new design

IS AN INSULATING PANEL WITH A NEW DESIGN TO BE USED FOR CIVIL BUILDINGS.

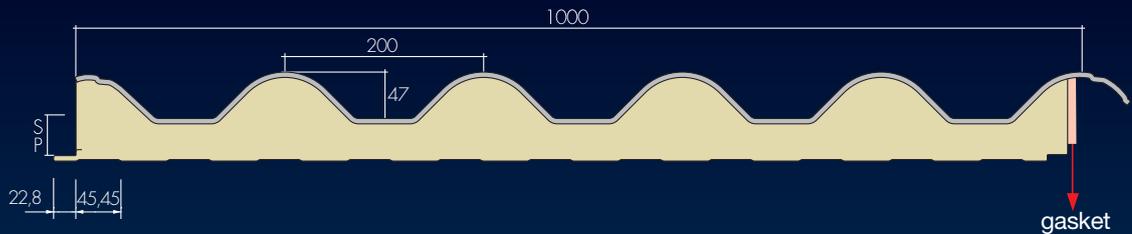
## TECHNICAL CHARACTERISTICS

METAL FACED SANDWICH PANEL WITH INSULATING CORE MADE OF EXPANDED POLYURETHANE

WORKING WIDTH: 1.000 MM

EXTERNAL FACING: PREPAINTED GALVANISED STEEL, PREPAINTED ALUMINIUM AND ALUZINC®.

INTERNAL FACING: PREPAINTED GALVANISED STEEL, ROOFING FELT, CENTESIMAL ALUMINIUM AND ALUTEX.



### Standard colours



White grey



Siena red



Chocolate brown

Other colours are available on demand

### Internal facing colours available



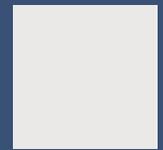
White centesimal aluminium



Roofing felt



Natural centesimal aluminium



Glass-reinforced plastic

### Examples of special colours



RAL 9010  
White



RAL 9006  
Silver grey



RAL 7015  
Slate grey



RAL 1015  
Ivory white



RAL 6021  
Pale green



RAL 6011  
Reseda green

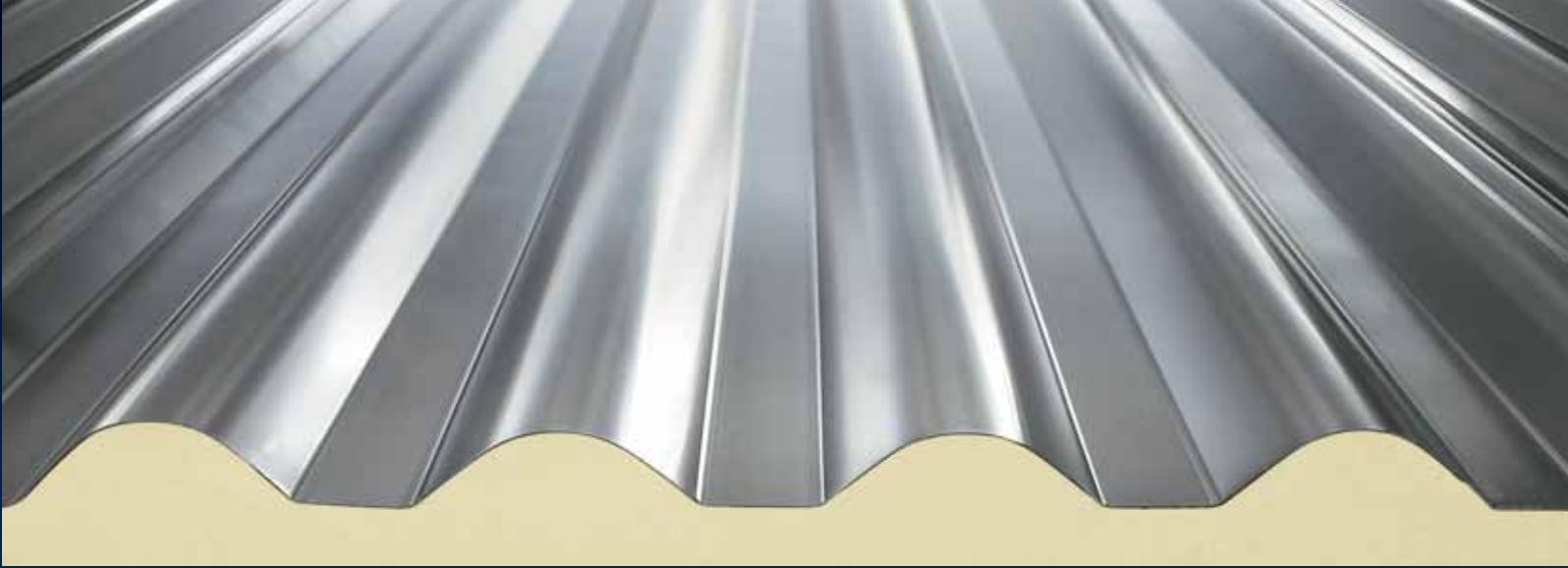


RAL 6005  
Moss green



RAL 5010  
Gentian blue

All colours shown do not faithfully reproduce the corresponding RAL code.



### Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.50	2.00	2.50	3.00	3.50	
30	271	190	108	47	41	9.1
40	339	249	156	82	58	9.5
50	406	307	202	117	86	9.9
60	472	366	250	153	111	10.3
80	607	487	345	224	178	11.1
100	715	597	440	305	250	12.2

p = (kg/m<sup>2</sup>) uniformly distributed load  
Deflection limit: 1/200 ℓ

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.50	2.00	2.50	3.00	3.50	
30	307	248	196	139	99	9.1
40	366	295	228	162	120	9.5
50	442	342	260	183	141	9.9
60	484	389	293	206	162	10.3
80	629	502	361	253	202	11.1
100	759	710	470	340	260	12.2

p = (kg/m<sup>2</sup>) uniformly distributed load  
Deflection limit: 1/200 ℓ

External facing: aluminium 0.6 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.50	2.00	2.50	3.00	3.50	
30	231	162	82	36	31	6.3
40	253	186	117	64	44	6.7
50	305	231	152	87	64	7.1
60	353	275	187	115	83	7.5
80	455	366	258	168	120	8.3
100	545	446	328	228	170	9.2

p = (kg/m<sup>2</sup>) uniformly distributed load  
Deflection limit: 1/200 ℓ

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.50	2.00	2.50	3.00	3.50	
30	249	185	146	105	74	6.3
40	275	219	171	122	90	6.7
50	318	256	196	136	106	7.1
60	276	293	220	155	121	7.5
80	471	382	276	190	151	8.3
100	570	426	303	235	185	9.2

p = (kg/m<sup>2</sup>) uniformly distributed load  
Deflection limit: 1/200 ℓ

### Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS (mm)					
	30	40	50	60	80	100
W/m <sup>2</sup> K	0.712	0.448	0.375	0.299	0.278	0.189
Kcal/m <sup>2</sup> h °C	0.614	0.386	0.323	0.258	0.240	0.163

# Globe Roof Fiberglass

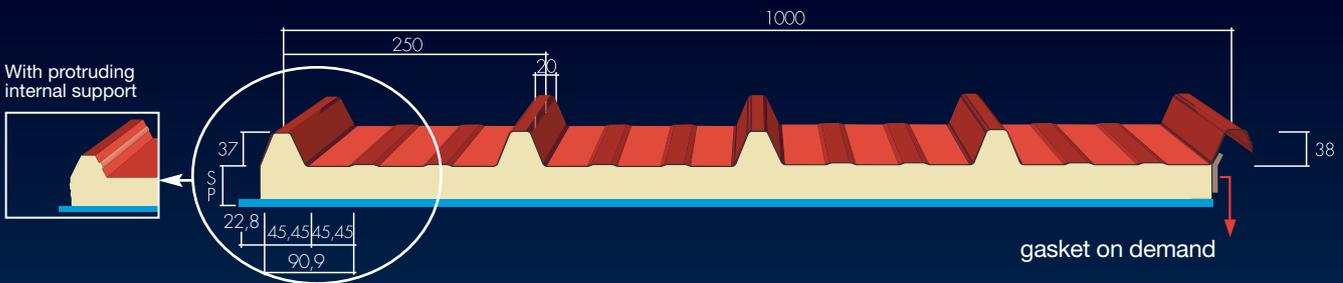
a roof for livestock areas

IS AN INNOVATIVE ROOF CREATED TO PROTECT YOUR INVESTMENT. THE INSULATED ROOF RESOLVES ALL PROBLEMS THANKS TO THE INTERNAL APPLICATION OF A GLASS-REINFORCED PLASTIC SHEET THAT ALLOWS TO:

- ELIMINATE ANY TYPE OF CORROSION
- PREVENT RUST
- BE CLEANED
- LAST OVER TIME

CONSISTS OF FACINGS MADE OF RIGID PREPAINTED STEEL OR ALUMINIUM AND OF AN INSULATING CORE MADE OF HIGH DENSITY CFC FREE EXPANDED POLYURETHANE, WHICH IS THEREFORE ECO-FRIENDLY.

THE GLASS-REINFORCED PLASTIC FACING MAY BE SUBJECT TO COLOUR ALTERATIONS. MAXIMUM PRODUCTION THICKNESS 100 MM.



## Static characteristics (kg/m<sup>2</sup>)



### Prepainted galvanised steel

SHEET THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	
0.5	125	65				4.90
0.6	175	85				5.95
0.8	280	110	50			7.95
1	345	140	65			10.04

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 10 mm  
Normal deflection limit:  $l/200$

## Internal facing made of glass-reinforced plastic



## Static characteristics (kg/m<sup>2</sup>)



### Prepainted galvanised steel

SHEET THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	
0.5	125	80	55			5.11
0.6	170	105	75	55		6.20
0.8	250	160	110	75		8.27
1	340	215	150	95	55	10.44

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $l/200$

## Static characteristics (kg/m<sup>2</sup>)



### Prepainted galvanised steel

SHEET THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (ml)					WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	
0.5	155	95	65			5.11
0.6	205	130	85			6.20
0.8	305	195	110	60		8.27
1	415	265	135	70		10.44

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $l/200$

## Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )					
	30	40	50	60	80	100
W/m <sup>2</sup> K	0.718	0.551	0.446	0.375	0.285	0.220
Kcal/m <sup>2</sup> h °C	0.619	0.475	0.385	0.324	0.246	0.190

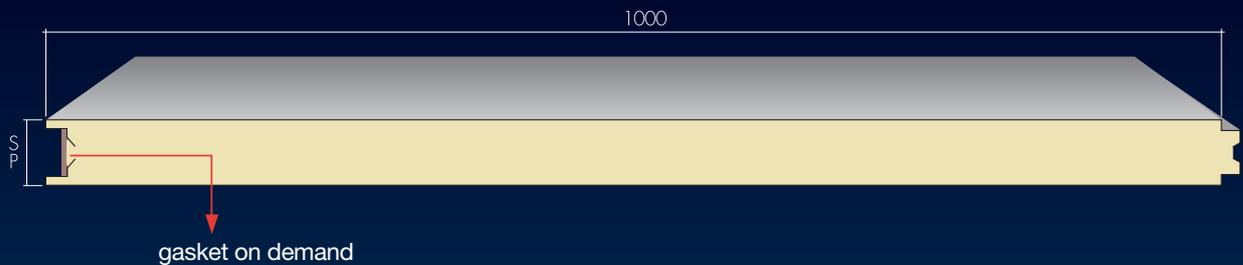


**POLYISOCYANURATE**  
 pueden ser realizados a pedido  
 Available upon request (non / not standard)

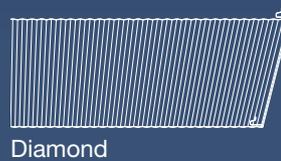
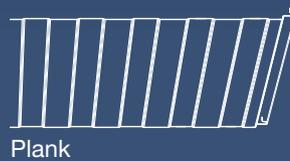
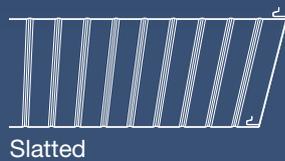
## Globe Wall

insulating panel for walls

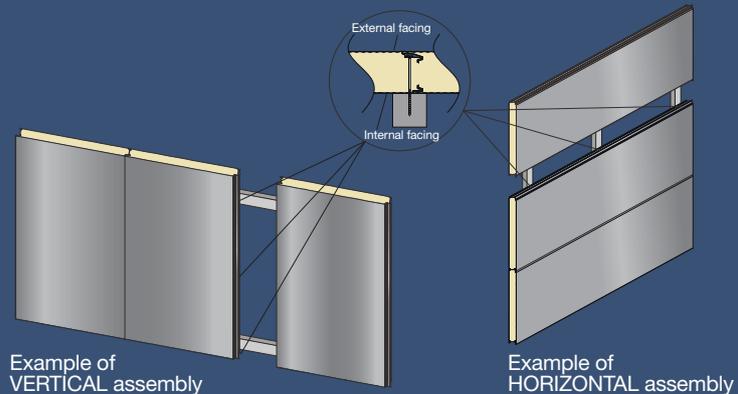
ENERGY SAVING IN CONSTRUCTION IS A TOPIC WHICH IS BECOMING MORE AND MORE IMPORTANT. THE SECTOR'S INTEREST IS THEREFORE FOCUSED ON BUILDING PRODUCTS ALREADY MADE WITH COMPONENTS WITH HIGH INSULATION POWER. IS THE SPECIFIC FLAT PANEL FOR MOBILE WALLS, PREFABRICATED BOXES, REFRIGERATING CELLS, EXHIBITION STANDS, SLIDING DOORS, FALSE CEILINGS AND IT IS AN IDEAL COMPONENT FOR PROJECTS WHERE A LIGHT, SOLID AND INSULATING PRODUCT IS REQUIRED. IN ITS "PLANK", "SLATTED", AND "SMOOTH" AND DIAMOND VERSIONS, CONTRIBUTES TO THE DESIGN OF A NEW ARCHITECTURE: CLEAN, SIMPLE AND REGULAR.



Available facings (to be specified when ordering)



You can request facings with embossed finish



Standard colours



White grey

Examples of special colours



RAL 1037  
Sun yellow



RAL 5011  
Steel blue



RAL 8017  
Chocolate brown



RAL 9010  
White



RAL 9006  
Silver grey



Wood colour

All colours shown do not faithfully reproduce the corresponding RAL code.

WALLS polyurethane STAM



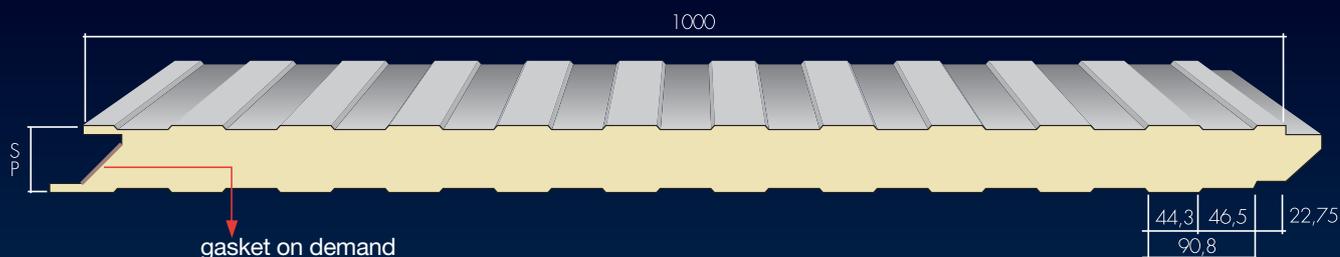
POLYISOCYANURATE

pueden ser realizados a pedido Available upon request (non / not standard)

# Globe Wall hidden fixing

## insulating panel for walls

IN MANY CASES, THE AESTHETIC VALUE OF A WALL IS IMPORTANT. AFTER MUCH METICULOUS RESEARCH, IS ALSO PRESENTED WITH CONCEALED FIXING. THE PANELS ARE FIXED THROUGH A PARTICULAR JOINT AS YOU CAN SEE ON THE FIGURE BELOW. THERE IS ALSO THE BEAUTY OF A WALL MADE WITH THE CONCEALED FIXING. AVAILABLE IN "PLANK", "SLATTED", AND "SMOOTH" VERSIONS.



Available facings (to be specified when ordering)



Slatted



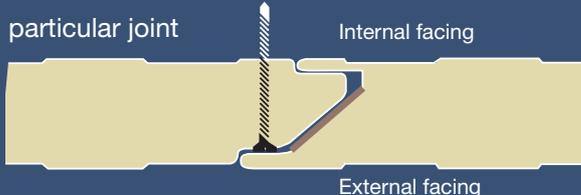
Plank



Smooth

Recommended fixing:

Self-tapping screws 4.8 mm half round head with cross joint.



PANEL THICKNESS	SCREW LENGTH (RECOMMENDED)
TH. 40 mm	Ø 4.8 x 50 mm.
TH. 50 mm	Ø 4.8 x 60 mm.
TH. 60 mm	Ø 4.8 x 70 mm.
TH. 80 mm	Ø 4.8 x 90 mm.
TH. 100 mm	Ø 4.8 x 110 mm.
TH. 120 mm	Ø 4.8 x 130 mm.



RAL 5010  
Gentian blue



RAL 7015  
Slate grey



RAL 1015  
Ivory white



RAL 6021  
Pale green



RAL 6011  
Reseda green



RAL 6005  
Moss green

# Globe Wall

## Static characteristics for Globe Wall and Globe Wall Hidden fixing

### Static characteristics (kg/m<sup>2</sup>)

STATIC  
OUTLINE



SINGLE  
BAY

External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (m)										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
25	165	90	70								7.02
30	190	110	85	65							7.20
35	215	125	100	80	55						7.38
40	236	145	115	90	65	50					7.56
50	297	185	150	115	85	65	50				7.95
60	357	225	180	140	105	80	60	50			8.34
70	370	265	210	165	120	95	75	60			8.73
80	460	305	245	190	140	105	85	65			9.12
100	515	385	305	240	175	135	105	85			9.90
120	620	465	370	290	215	165	130	105			10.68
150	775	580	465	365	270	205	160	130			11.85
180	935	700	560	440	325	245	195	155			13.02
200	1000	780	625	490	360	275	215	175			13.80

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200  $l$

### Static characteristics (kg/m<sup>2</sup>)

STATIC  
OUTLINE



DOUBLE  
BAY

External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (m)										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
25	125	75	55								7.02
30	151	90	70	60	50						7.20
35	170	105	85	70	60						7.38
40	195	125	95	-	65	50					7.56
50	245	160	-	100	80	65	50				7.95
60	295	195	155	125	95	75	-	50			8.34
70	345	230	180	145	110	85	70	55			8.73
80	395	270	210	165	120	95	75	65	50		9.12
100	495	340	265	195	145	115	95	75	65	55	9.90
120	600	415	310	225	170	135	110	90	75	65	10.68
150	735	515	365	270	205	160	130	110	90	80	11.85
180	770	560	415	310	240	190	155	125	105	90	13.02
200	1000	590	450	335	260	205	170	140	115	100	13.80

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200  $l$

### Static characteristics (kg/m<sup>2</sup>)

STATIC  
OUTLINE



MULTIPLE  
BAY

External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS (m)										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
25	125	75	60	50							7.02
30	151	90	70	60	50						7.20
35	170	110	85	70	60	50					7.38
40	195	125	100	80	70	60	50				7.56
50	245	160	125	105	90	75	60	50			7.95
60	295	195	155	125	110	85	70	55	50		8.34
70	345	230	180	150	120	95	80	65	55		8.73
80	395	265	210	170	135	105	85	70	60	50	9.12
100	495	335	265	205	160	125	105	85	75	65	9.90
120	600	410	310	235	180	145	120	100	85	75	10.68
150	735	505	360	275	215	170	140	120	100	90	11.85
180	770	570	410	310	245	200	165	140	120	100	13.02
200	1000	605	445	335	265	215	180	150	130	110	13.80

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200  $l$

## Thermal characteristics

U transmittance W/m <sup>2</sup> K Kcal/m <sup>2</sup> h °C	PANEL NOMINAL THICKNESS ( mm )												
	25	30	35	40	50	60	70	80	100	120	150	180	200
W/m <sup>2</sup> K	0.846	0.718	0.624	0.551	0.447	0.375	0.324	0.285	0.229	0.191	0.153	0.128	0.116
Kcal/m <sup>2</sup> h °C	0.730	0.619	0.538	0.475	0.385	0.324	0.279	0.246	0.197	0.164	0.132	0.111	0.100

## Static characteristics (kg/m<sup>2</sup>)

STATIC  
OUTLINE



SINGLE  
BAY

External facing: aluminium 0.6 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
25	130	185									5.60
30	160	120	100	75							5.78
35	185	140	115	85	65						5.96
40	210	160	130	95	75						6.14
50	265	200	165	115	90	70					6.53
60	315	240	195	140	105	85	70				6.92
70	370	280	225	160	120	95	80	65			7.31
80	420	320	260	185	140	110	90	75			7.70
100	530	400	320	225	170	135	110	90			8.48
120	635	480	385	270	205	160	115	105			9.26
150	790	595	480	335	250	195	155	130			10.43
180	950	715	575	405	300	230	185	155			11.60
200	1000	780	625	430	315	245	200	170			12.38

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 ℓ

## Static characteristics (kg/m<sup>2</sup>)

STATIC  
OUTLINE



DOUBLE  
BAY

External facing: aluminium 0.6 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
25	115	85	65								5.60
30	135	105	75								5.78
35	160	120	85	65							5.96
40	185	135	95	70							6.14
50	230	165	110	80	65						6.53
60	280	190	125	95	75						6.92
70	330	215	145	105	85	65					7.31
80	380	235	160	115	90	70					7.70
100	465	280	185	135	105	85	70				8.48
120	530	320	215	155	120	95	80	70			9.26
150	620	380	255	185	140	115	95	80	70		10.43
180	705	440	300	215	165	130	110	90	80	70	11.60
200	745	480	325	235	180	145	115	110	85	75	12.38

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 ℓ

## Static characteristics (kg/m<sup>2</sup>)

STATIC  
OUTLINE



MULTIPLE  
BAY

External facing: aluminium 0.6 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
25	115	85	65								5.60
30	135	105	75								5.78
35	160	120	85	65							5.96
40	185	135	95	70							6.14
50	230	165	110	80	65						6.53
60	280	190	125	95	75						6.92
70	330	215	145	105	85	65					7.31
80	380	235	160	115	90	70					7.70
100	465	280	185	135	105	85	70				8.48
120	530	320	215	155	120	95	80	70			9.26
150	620	380	255	185	140	115	95	80	70		10.43
180	705	440	300	215	165	130	110	90	80	70	11.60
200	745	480	325	235	180	145	115	110	85	75	12.38

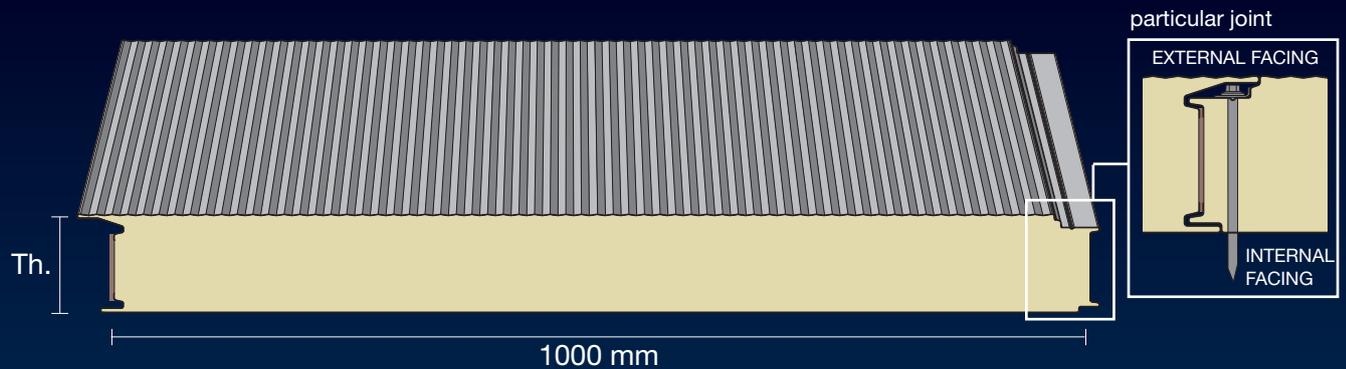
Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 ℓ

# Globe Wall Elegant

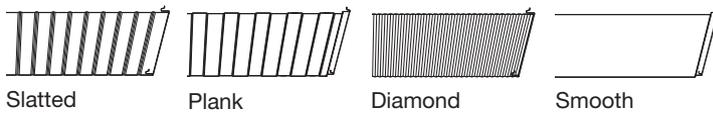
insulating panel with concealed joint

THE AESTHETIC VALUE OF A WALL IS IMPORTANT., IT COMBINES THE BEAUTY OF A WALL MADE WITH CONCEALED FIXING TO THE PRACTICALITY OF A MODULAR CONSTRUCTION. IS MANUFACTURED BY A CONTINUOUS PRODUCTION SYSTEM, IS A SELF-SUPPORTING METAL FACED PANEL MADE OF A MICRO-RIBBED SHEET.

THE LABYRINTH CONFIGURATION AND THE THERMAL CUT JOINT, WITH THE SUITABLE SCREW HOUSING, WILL DETERMINE A HIGH AESTHETIC RESULT THANKS TO THE FULLY CONCEALED FIXING THAT ENSURES A HIGH AIRTIGHTNESS OR PREVENTS THERMAL BRIDGING. IDEAL PRODUCT FOR FALSE CEILINGS AND INSULATING WALLS CLADDING.



Available facings (to be specified when ordering)

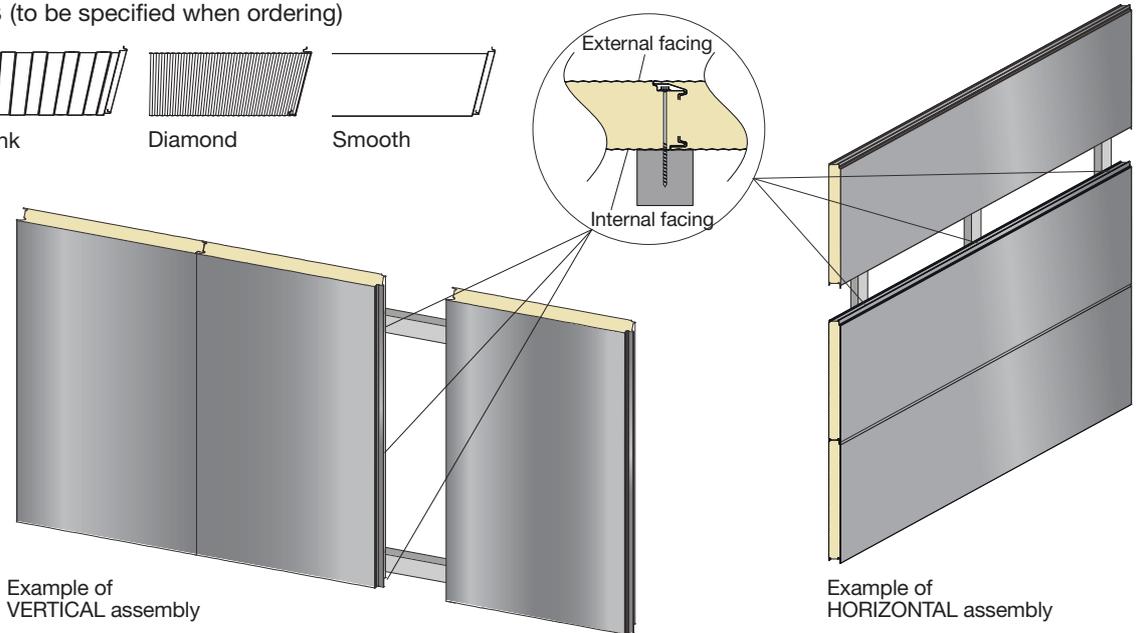


Slatted

Plank

Diamond

Smooth



Example of VERTICAL assembly

Example of HORIZONTAL assembly

Standard colours



White grey

Examples of special colours



RAL 1037  
Sun yellow



RAL 5011  
Steel blue



RAL 8017  
Chocolate brown



RAL 9010  
White



RAL 9006  
Silver grey



Wood colour

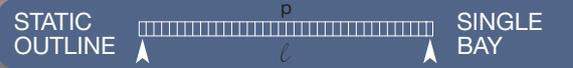
All colours shown do not faithfully reproduce the corresponding RAL code.

WALLS polyurethane

## Thermal characteristics

		PANEL NOMINAL THICKNESS ( mm )								
U transmittance		50	60	70	80	100	120	150	180	200
W/m <sup>2</sup> K		0.447	0.375	0.324	0.285	0.229	0.191	0.153	0.128	0.116
Kcal/m <sup>2</sup> h °C		0.385	0.324	0.279	0.246	0.197	0.164	0.132	0.111	0.100

## Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
50	297	185	150	115	85	65	50	50			7.95
60	357	225	180	140	105	80	60	50			8.34
70	370	265	210	165	120	95	75	60			8.73
80	460	305	245	190	140	105	85	65			9.12
100	515	385	305	240	175	135	105	85			9.90
120	620	465	370	290	215	165	130	105			10.68
150	775	580	465	365	270	205	160	130			11.85
180	935	700	560	440	325	245	195	155			13.02
200	1000	780	625	490	360	275	215	175			13.80

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 ℓ

## Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
50	245	160	-	100	80	65	50	50			7.95
60	295	195	155	125	95	75	-	50			8.34
70	345	230	180	145	110	85	70	55			8.73
80	395	270	210	165	120	95	75	65	50		9.12
100	495	340	265	195	145	115	95	75	65	55	9.90
120	600	415	310	225	170	135	110	90	75	65	10.68
150	735	515	365	270	205	160	130	110	90	80	11.85
180	770	560	415	310	240	190	155	125	105	90	13.02
200	1000	590	450	335	260	205	170	140	115	100	13.80

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 ℓ

## Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
50	245	160	125	105	90	75	60	50			7.95
60	295	195	155	125	110	85	70	55	50		8.34
70	345	230	180	150	120	95	80	65	55		8.73
80	395	265	210	170	135	105	85	70	60	50	9.12
100	495	335	265	205	160	125	105	85	75	65	9.90
120	600	410	310	235	180	145	120	100	85	75	10.68
150	735	505	360	275	215	170	140	120	100	90	11.85
180	770	570	410	310	245	200	165	140	120	100	13.02
200	1000	605	445	335	265	215	180	150	130	110	13.80

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 ℓ



RAL 5010  
Gentian blue



RAL 7015  
Slate grey



RAL 1015  
Ivory white



RAL 6021  
Pale green



RAL 6011  
Reseda green



RAL 6005  
Moss green



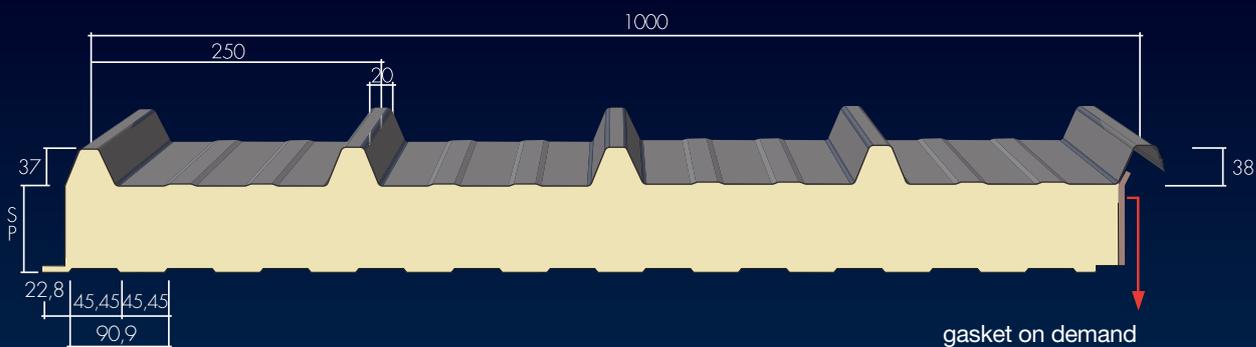
RAL 9007  
Grey aluminium

# Globe Roof EI

resistant to fire roof panel



WITH A STRIKING AESTHETIC, PROPOSES A NEW DESIGN FOR INDUSTRIAL AND CIVIL ROOFS. IT HAS 5 RIBS FOR A GOOD STATIC RESISTANCE. IN POLYISOCYANURATE IS 100 MM THICK.



RESISTANT TO FIRE



## Thermal characteristics

	PANEL NOMINAL THICKNESS ( mm )
<b>U</b> transmittance	<b>100</b>
W/m <sup>2</sup> K	0.220
Kcal/m <sup>2</sup> h °C	0.190

External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
100	595	445	340	260	200	160	125	105	80	60	10.45

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 ℓ

RESISTANT TO FIRE

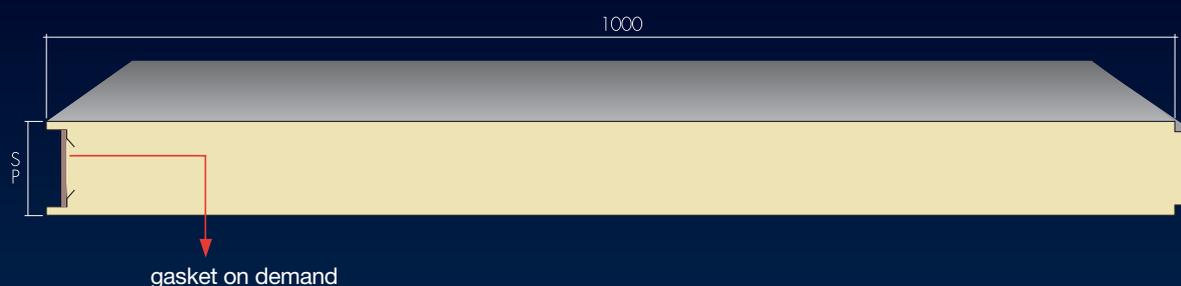


# Globe Wall EI

resistant to fire wall panel



IS THE SPECIFIC FLAT PANEL FOR WALLS IN ITS "PLANK", "SLATTED" AND "SMOOTH" VERSIONS. IN POLYISOCYANURATE IS 100 MM THICK.



## Thermal characteristics

	PANEL NOMINAL THICKNESS ( mm )
<b>U</b>	<b>100</b>
transmittance	
W/m <sup>2</sup> K	0.229
Kcal/m <sup>2</sup> h °C	0.197

External facing: steel 0.4 mm. - Internal facing: steel 0.4 mm.

PANEL THICKNESS ( mm )	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
100	515	385	305	240	175	135	105	85			9.90

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200 ℓ



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# Panel made of mineral fibre

The logo for Globe Panels features a stylized globe composed of interconnected nodes and lines, resembling a molecular or network structure. The globe is light blue and is positioned behind the text.

**Globe Panels**

THE MINERAL FIBRE IS AN INORGANIC MATERIAL THAT MELTS AT TEMPERATURES ABOVE 1.000°C.

THIS NATURAL INSULATION DOES NOT CONTRIBUTE TO DEVELOP AND SPREAD THE FIRE OR THE EMISSION OF TOXIC GASES.



WHEN WE TALK ABOUT FIRE BEHAVIOUR, WE SHOULD CONSIDER REACTION AND RESISTANCE.

AS THE REACTION TO FIRE, PRIMARY IMPORTANCE FOR THE SAFETY OF HUMAN LIFE IN CASE OF FIRE, IS OFTEN UNDERESTIMATED TO A GREATER INTEREST IN THE RESISTANCE TO FIRE. THE NEW EUROPEAN CLASSIFICATION ACCORDING TO THE EUROCLASSES DEFINED IN THE EN 13501-1 STANDARD PROVIDES THE LETTERS **A1, A2, B, C, D** ETC, WITH THE SUFFIXES: **S=SMOKE;**  
**D=DROPPING.**

WITH REGARD TO FIRE RESISTANCE, IT SHOULD BE NOTICED THAT THE MINISTERIAL DECREE 16/02/2007 PROVIDES FOR THE EXECUTION OF LABORATORY TESTS ACCORDING TO THE EUROPEAN TEST METHODS.

REGARDING THE NON-SUPPORTING WALLS, THE TEST STANDARD IS THE UNI EN 1364-1. IN ADDITION TO THE UNI EN 1363-1 GENERAL RULE.

AS YOU CAN SEE, THE REI CODE (**R = LOAD BEARING CAPACITY** = THE AMOUNT OF TIME DURING WHICH THE RELEVANT PART OF THE BUILDING CAN BEAR THE RELEVANT LOAD DURING A NORMAL FIRE , **E = INTEGRITY** = THE AMOUNT OF TIME DURING WHICH THE RELEVANT PART OF THE BUILDING RETAINS ITS TIGHTNESS DURING

A NORMAL FIRE, **I = INSULATION** = THE TIME IT TAKES THE COLD SIDE OF THE RELEVANT PART OF THE BUILDING TO REACH A CERTAIN TEMPERATURE) WILL NOT BE APPLIED ANYMORE TO NON-SUPPORTING ELEMENTS, AS THE SANDWICH PANELS: FOR THE FUTURE WE WILL HAVE TO GET USED TO THE EI 30, EI 60, EI 90 INITIALS FOR ALL THE NON-SUPPORTING CONSTRUCTION SUBDIVISION ELEMENTS LIKE DOORS OR WALLS THAT EVEN THE LAWS HAVE ALWAYS DEFINED AS REI.

THE TESTS MADE ACCORDING TO THE EUROPEAN TEST STANDARDS ARE THE ONLY ONES THAT CAN BE CONSIDERED FOR FIRE PREVENTION. REGARDING THE APPLICATIONS, YOU SHOULD NOTICE THAT, WITH OLD TESTS (THOSE THAT DO CORRESPOND TO THE EUROPEAN STANDARDS), THE PROFESSIONAL WHO CERTIFIES THE REACTION TO FIRE OF THE CONSTRUCTION ELEMENT (SEE THE MINISTERIAL DECREE 04/05/1998 ANNEX II), ASSUMES THE RESPONSIBILITY FOR ANY DIFFERENCES COMPARED TO THE TESTED SAMPLE BUT WITH THE EUROPEAN STANDARDS HE WILL HAVE THE SUPPORT OF THE TECHNICAL DOCUMENTATION GIVEN DIRECTLY BY THE SUPPLIER. THE NEW TEST CONDITIONS ARE MUCH MORE SEVERE, SO OFTEN LOWER PERFORMANCE RESULTS WILL BE OBTAINED COMPARED TO WHICH WE WERE GET USED FOR.

# Globe Roof Mineral

roof panel made of mineral fibre

PANEL WITH REACTION TO FIRE: CLASSE A2-S1. D0

#### DIMENSIONS:

WIDTH: 1.000 MM

LENGTH: CUSTOMISABLE

MAXIMUM LENGTH AVAILABLE: ON DEMAND

THICKNESSES: MM 50, 60, 80, 100, 120, 150, 180, 200

#### INSULATING CORE:

MADE WITH AN INSULATING LAYER COMPOSED OF BIOSOLUBLE MINERAL WOOL STRIPS, PLACED IN A LONGITUDINAL WAY, WITH THE FIBRES BEING SET AT 90 DEGREES TO THE PLANE OF THE TWO FACINGS.

THE RIBS OF THE EXTERNAL FACING ARE FILLED WITH MINERAL FIBRE STRIPS.

DENSITY: 100 KG/M<sup>3</sup> ±10%

DIFFERENT DENSITY AVAILABLE ON DEMAND.

THERMAL-CONDUCTIVITY COEFFICIENT TILL = 0.039 WATT/MK.

#### FACINGS:

PREPAINTED OR PLASTICISED GALVANISED STEEL; NATURAL EMBOSSED OR PREPAINTED ALUMINIUM; STAINLESS STEEL, COPPER.

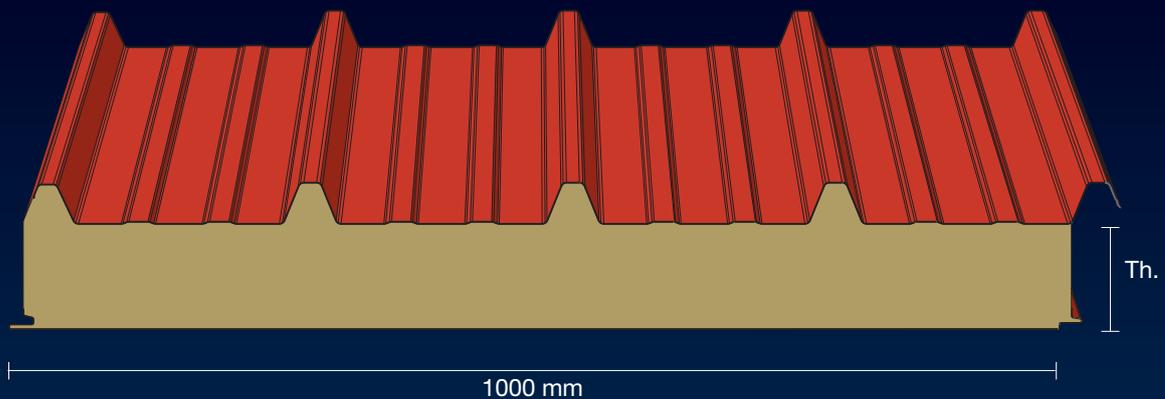
THE STANDARD THICKNESSES OF THE GALVANISED STEEL AND PREPAINTED FACINGS ARE 0.5 MM + 0.5 MM.

OTHER THICKNESSES ARE AVAILABLE ON DEMAND.

#### STANDARD COLOURS:

WHITE, GREY, SIENA RED, CHOCOLATE BROWN

ON DEMAND, ALL RAL COLOURS ARE AVAILABLE.



Available internal facing (to be specified when ordering)



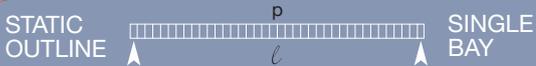
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Plank

## A2-s1,d0

### Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.5 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
50	220	135	85	60								13.92
60	260	155	105	70	50							14.92
80	310	200	140	100	75	55						16.92
100	360	240	175	130	95	75	55					18.92
120	285	210	160	120	90	70	55					20.92
150	350	265	200	155	120	95	75	60				23.92
180	415	320	245	190	150	120	95	75	60	50		26.92
200	460	355	275	215	170	135	110	85	70	55		28.92

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200  $l$

### Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )							
	50	60	80	100	120	150	180	200
W/m <sup>2</sup> K	0.760	0.630	0.470	0.380	0.320	0.250	0.218	0.195
Kcal/m <sup>2</sup> h °C	0.655	0.543	0.405	0.328	0.276	0.216	0.188	0.168

# Globe Panels

# Globe Roof Mineral EI

Wall panel made of a resistant to fire mineral fibre

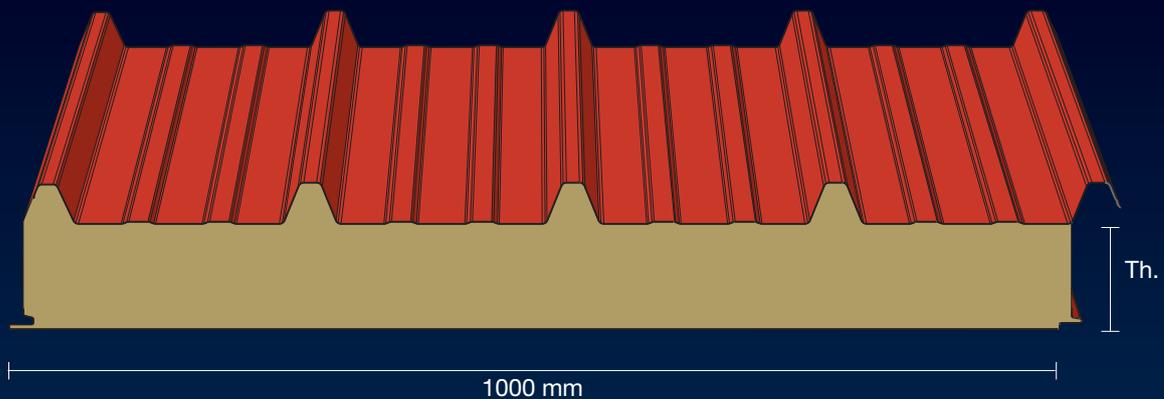
PANEL WITH REACTION TO FIRE: CLASSE A2-S1. D0  
PANEL WITH REACTION TO FIRE:  
REI 30 FOR A 50 MM THICK PANEL  
REI 90 FOR A 80 MM THICK PANEL  
REI 120 FOR A 120 MM THICK PANEL



DIMENSIONS:  
WIDTH: 1.000 MM  
LENGTH: CUSTOMISABLE  
MAXIMUM LENGTH AVAILABLE: ON DEMAND  
THICKNESSES: MM 50, 60, 80, 100, 120, 150

INSULATING CORE:  
MADE WITH AN INSULATION LAYER COMPOSED OF BIOSOLUBLE MINERAL WOOL STRIPS, PLACED IN A LONGITUDINAL WAY, WITH THE FIBRES BEING SET AT 90 DEGREES TO THE PLANE OF THE TWO FACINGS.  
THE RIBS OF THE EXTERNAL FACING ARE FILLED WITH MINERAL FIBRE STRIPS.  
DENSITY: 100 KG/M<sup>3</sup> ±10%. DIFFERENT DENSITY AVAILABLE ON DEMAND.  
THERMAL-CONDUCTIVITY COEFFICIENT TILL  $\lambda=0.039$  WATT/MK.

FACINGS:  
PREPAINTED GALVANISED STEEL; STAINLESS STEEL.  
THE STANDARD THICKNESSES OF THE GALVANISED STEEL AND PREPAINTED FACINGS ARE 0.5 MM + 0.5 MM.  
OTHER THICKNESSES ARE AVAILABLE ON DEMAND.



Available internal facing (to be specified when ordering)



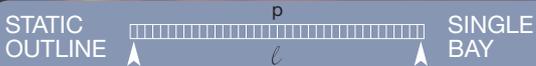
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Plank

**A2-s1,d0**

Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.5 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
50	175	125	100	80	65	55	50					14.47
80	275	200	160	130	110	90	80	70	60	55		17.47
100	305	225	175	140	120	100	90	75	70	60		19.47
120	305	220	175	140	115	100	85	75	65	60		21.47

$p = (\text{kg/m}^2)$  uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $l/200$

Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )			
	50	80	100	120
W/m <sup>2</sup> K	0.760	0.470	0.380	0.320
Kcal/m <sup>2</sup> h °C	0.655	0.405	0.328	0.276

**Globe Panels**

# Globe Wall Mineral

wall panel made of mineral fibre

PANEL WITH REACTION TO FIRE: CLASSE A2-S1. D0

**DIMENSIONS:**

WIDTH: 1.000 MM  
 LENGTH: CUSTOMISABLE  
 MAXIMUM LENGTH AVAILABLE: ON DEMAND  
 THICKNESSES: MM 50, 60, 80, 100, 120, 150, 180, 200

**INSULATING CORE:**

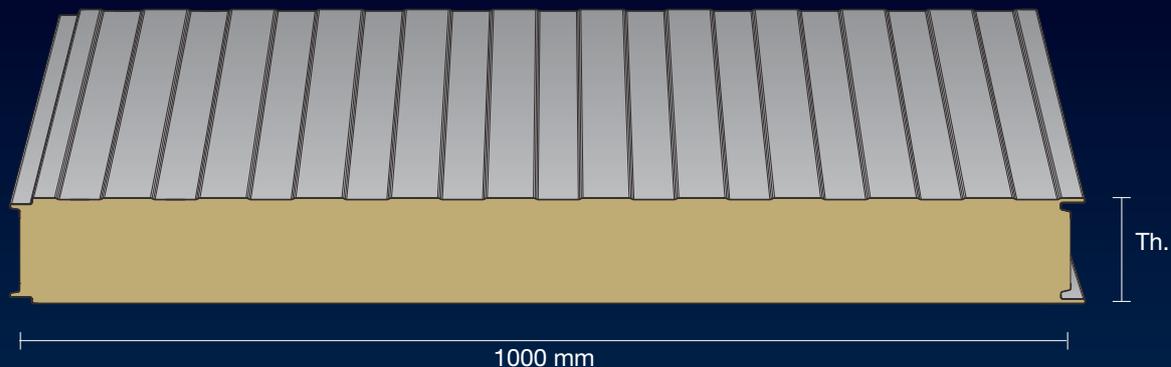
MADE WITH AN INSULATION LAYER COMPOSED OF BIOSOLUBLE MINERAL WOOL STRIPS, PLACED IN A LONGITUDINAL WAY, WITH THE FIBRES BEING SET AT 90 DEGREES TO THE PLANE OF THE TWO FACINGS.  
 DENSITY: 100 KG/M<sup>3</sup> ±10% DIFFERENT DENSITY AVAILABLE ON DEMAND.  
 THERMAL-CONDUCTIVITY COEFFICIENT TILL = 0.039 WATT/MK

**FACINGS:**

PREPAINTED OR PLASTICISED GALVANISED STEEL; NATURAL EMBOSSED OR PREPAINTED ALUMINIUM; STAINLESS STEEL.  
 THE STANDARD THICKNESSES OF THE GALVANISED STEEL AND PREPAINTED FACINGS ARE 0.5 MM + 0.5 MM. OTHER THICKNESSES ARE AVAILABLE ON DEMAND.

**STANDARD COLOURS:**

WHITE, GREY.  
 ON DEMAND, ALL RAL COLOURS ARE AVAILABLE.



mineral fibre

Available internal facing (to be specified when ordering)



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Plank



Smooth

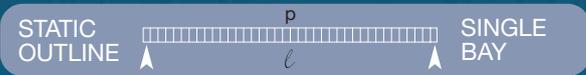
Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )							
	50	60	80	100	120	150	180	200
W/m <sup>2</sup> K	0.760	0.630	0.470	0.380	0.320	0.250	0.218	0.195
Kcal/m <sup>2</sup> h °C	0.655	0.543	0.405	0.328	0.276	0.216	0.188	0.168

WALLS



### Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.5 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
50	165	120	95	80	70	60	50				13.14
60	195	145	115	95	85	70	65	55			14.14
80	265	200	160	130	115	100	85	80	70	55	16.14
100	320	240	190	160	135	120	105	95	85	80	19.86
120	325	240	195	160	135	120	105	95	85	80	21.86
150	325	240	195	160	135	120	105	95	85	80	23.14
180	345	260	205	170	145	130	115	100	90	85	26.14
200	345	260	205	170	145	130	115	100	90	85	28.14

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $l/200$

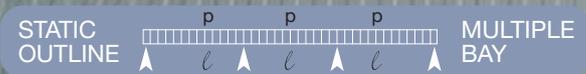
### Static characteristics (kg/m<sup>2</sup>)



PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
50	130	95	75	65	55						13.14
60	160	120	95	75	65	55	50				14.14
80	215	160	125	105	90	80	70	60	55	50	16.14
100	255	190	150	125	110	90	80	70	60	55	19.86
120	260	195	155	130	110	95	80	70	60	55	21.86
150	260	195	155	130	110	95	80	70	60	55	23.14
180	260	195	155	130	110	95	80	70	60	55	26.14
200	260	195	155	130	110	95	80	70	60	55	28.14

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 100 mm  
Normal deflection limit:  $l/200$

### Static characteristics (kg/m<sup>2</sup>)



PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
50	135	100	80	65	55	50					13.14
60	165	120	95	80	70	60	55				14.14
80	220	165	130	110	95	80	70	65	60	55	16.14
100	280	210	165	140	120	105	90	80	70	65	19.86
120	285	215	170	140	120	105	95	80	70	65	21.86
150	285	215	170	140	120	105	95	80	70	65	23.14
180	285	215	170	140	120	105	95	80	70	65	26.14
200	285	215	170	140	120	105	95	80	70	65	28.14

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 100 mm  
Normal deflection limit:  $l/200$

# Globe Wall Mineral EI

wall panel made of a resistant to fire mineral fibre

PANEL WITH REACTION TO FIRE: CLASSE A2-S1. D0

PANEL WITH REACTION TO FIRE:

EI 30 FOR A 50 MM THICK PANEL

EI 60 FOR A 80 MM THICK PANEL

EI 90 FOR A 100 MM THICK PANEL

EI 120 FOR A 120 MM THICK PANEL

## DIMENSIONS:

WIDTH: 1.000 MM

LENGTH: CUSTOMISABLE

MAXIMUM LENGTH AVAILABLE: ON DEMAND

THICKNESSES: MM 50, 60, 80, 100, 120

## INSULATING CORE:

MADE WITH AN INSULATION LAYER COMPOSED OF BIOSOLUBLE MINERAL WOOL STRIPS, PLACED IN A LONGITUDINAL WAY, WITH THE FIBRES BEING SET AT 90 DEGREES TO THE PLANE OF THE TWO FACINGS.

DENSITY: 100 KG/M<sup>3</sup> ±10% DIFFERENT DENSITY AVAILABLE ON DEMAND.

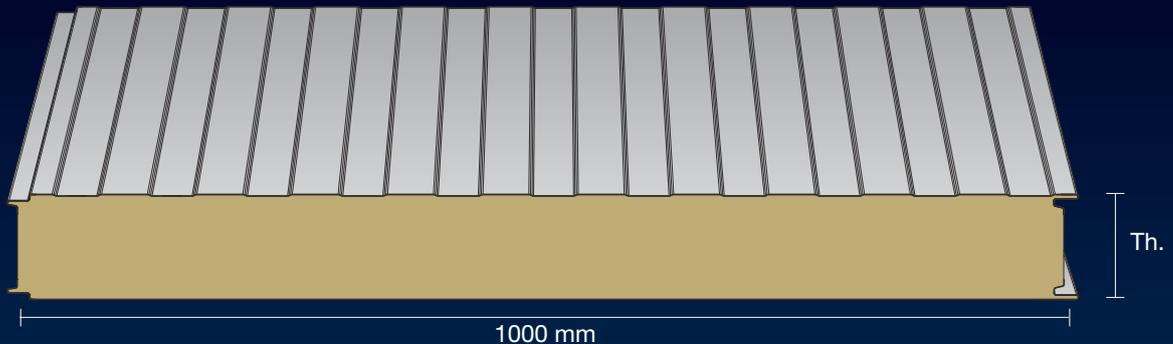
THERMAL-CONDUCTIVITY COEFFICIENT  $\lambda = 0.039$  WATT/MK

## FACINGS:

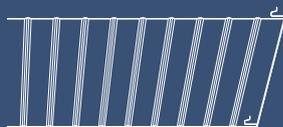
PREPAINTED GALVANISED STEEL.

THE STANDARD THICKNESSES OF THE GALVANISED STEEL AND PREPAINTED FACINGS ARE 0.6 MM + 0.6 MM.

OTHER THICKNESSES ARE AVAILABLE ON DEMAND.



Available facings (to be specified when ordering)



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Plank



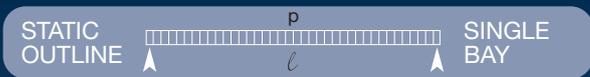
Smooth

Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )			
	50	80	100	120
W/m <sup>2</sup> K	0.760	0.470	0.380	0.320
Kcal/m <sup>2</sup> h °C	0.655	0.405	0.328	0.276



### Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.5 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
50	165	120	95	80	70	60	50					13.14
80	265	200	160	130	115	100	85	80	70	55		16.14
100	320	240	190	160	135	120	105	95	85	80		19.86
120	345	260	205	170	145	130	115	100	90	85		21.86

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $l/200$

### Static characteristics (kg/m<sup>2</sup>)

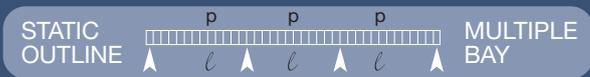


External facing: steel 0.5 mm. - Internal facing: steel 0.5 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
50	130	95	75	65	55							13.14
80	215	160	125	105	90	80	70	60	55	50		16.14
100	255	190	150	125	110	95	80	70	65	55		19.86
120	260	195	155	130	110	95	85	75	65	60		21.86

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 100 mm  
Normal deflection limit:  $l/200$

### Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.5 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
50	135	100	80	65	55	50						13.14
80	220	165	130	110	95	80	70	65	60	55		16.14
100	280	210	165	140	120	105	90	80	75	65		19.86
120	285	215	170	140	120	105	95	85	75	70		21.86

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 100 mm  
Normal deflection limit:  $l/200$

# Globe Roof Mineral Sound

sound-insulating and sound-absorbing roof panel made of mineral fibre

PANEL WITH REACTION TO FIRE: CLASSE A2-S1. D0

## DIMENSIONS:

WIDTH: 1.000 MM

LENGTH: CUSTOMISABLE

MAXIMUM LENGTH AVAILABLE: ON DEMAND

THICKNESSES: MM 50, 60, 80, 100, 120, 150, 180, 200

## INSULATING CORE:

MADE WITH AN INSULATING LAYER COMPOSED OF BIOSOLUBLE MINERAL WOOL STRIPS, PLACED IN A LONGITUDINAL WAY, WITH THE FIBRES BEING SET AT 90 DEGREES TO THE PLANE OF THE TWO FACINGS, WITH A BLACK GLASS FILM INTERPOSED TO THE DRILLED STEEL FACING. THE RIBS OF THE EXTERNAL FACING ARE FILLED WITH MINERAL FIBRE STRIPS.

DENSITY: 100 KG/M<sup>3</sup> ±10%

DIFFERENT DENSITY AVAILABLE ON DEMAND.

THERMAL-CONDUCTIVITY COEFFICIENT TILL = 0.039 WATT/MK.

## SOUND-ABSORPTION:

THICKNESS MM 50: AW = 0.90

THICKNESS MM 80: AW = 0.95

THICKNESS MM 100: AW = 0.95

## SOUND-INSULATION:

THICKNESS MM 50: RW = 31 DB

THICKNESS MM 80: RW = 34 DB

THICKNESS MM 100: RW = 35 DB

## FACINGS:

PREPAINTED OR PLASTICISED GALVANISED STEEL; NATURAL EMBOSSED OR PREPAINTED ALUMINIUM; STAINLESS STEEL, COPPER.

THE STANDARD THICKNESSES OF THE GALVANISED STEEL AND PREPAINTED FACINGS ARE 0.5 MM + 0.6 MM. OTHER THICKNESSES ARE AVAILABLE ON DEMAND.

## DIMENSIONAL TOLERANCES (MM):

LENGTH: ±10

PITCH WORKING WIDTH: ±2

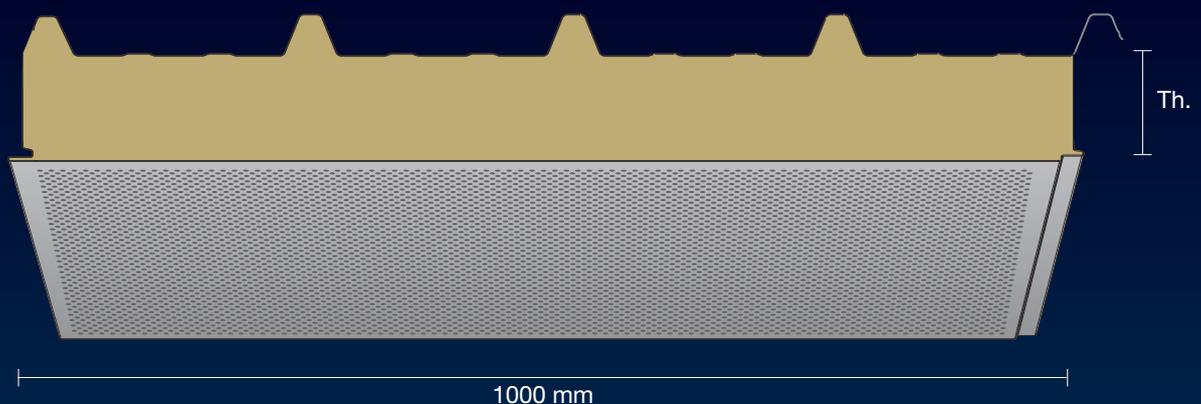
PANEL THICKNESS: ±2

DEVIATION FROM CUTTING LINE SQUARENESS: ±3

## STANDARD COLOURS:

WHITE, GREY.

ON DEMAND, ALL RAL COLOURS ARE AVAILABLE.



Available internal facing (to be specified when ordering)



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Plank



Smooth

ROOFS mineral fibre



### Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.5 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )									
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
50	155	110	75	50						
60	180	130	90	65						
80	240	170	125	90	65	50				
100	295	215	160	120	90	70	55			
120	355	260	195	150	115	90	70	55		
150	435	325	250	195	150	120	95	75	60	50
180	520	385	305	240	190	150	120	100	80	65
200	575	430	335	270	215	170	140	110	90	75

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard  
Deflection limit 1/200  $l$

### Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )							
	50	60	80	100	120	150	180	200
W/m <sup>2</sup> K	0.760	0.630	0.470	0.380	0.320	0.250	0.218	0.195
Kcal/m <sup>2</sup> h °C	0.655	0.543	0.405	0.328	0.276	0.216	0.188	0.168

# Globe Panels

# Globe Wall Mineral Sound

sound-insulating and sound-absorbing wall panel made of mineral fibre

PANEL WITH REACTION TO FIRE: CLASSE A2-S1. D0

**DIMENSIONS:**

WIDTH: 1.000 MM  
 LENGTH: CUSTOMISABLE  
 MAXIMUM LENGTH AVAILABLE: ON DEMAND  
 THICKNESSES: MM 50, 60, 80, 100, 120, 150, 180, 200

**INSULATING CORE:**

MADE WITH AN INSULATION LAYER COMPOSED OF BIOSOLUBLE MINERAL WOOL STRIPS, PLACED IN A LONGITUDINAL WAY, WITH THE FIBRES BEING SET AT 90 DEGREES TO THE PLANE OF THE TWO FACINGS, WITH A BLACK GLASS FILM INTERPOSED TO THE DRILLED STEEL FACING.

DENSITY: 100 KG/M3 ±10%  
 DIFFERENT DENSITY AVAILABLE ON DEMAND.  
 THERMAL-CONDUCTIVITY COEFFICIENT TILL = 0.039 WATT/MK.

**SOUND-ABSORPTION:**

THICKNESS MM 50: AW = 0.90  
 THICKNESS MM 80: AW = 0.95  
 THICKNESS MM 100: AW = 0.95

**SOUND-INSULATION:**

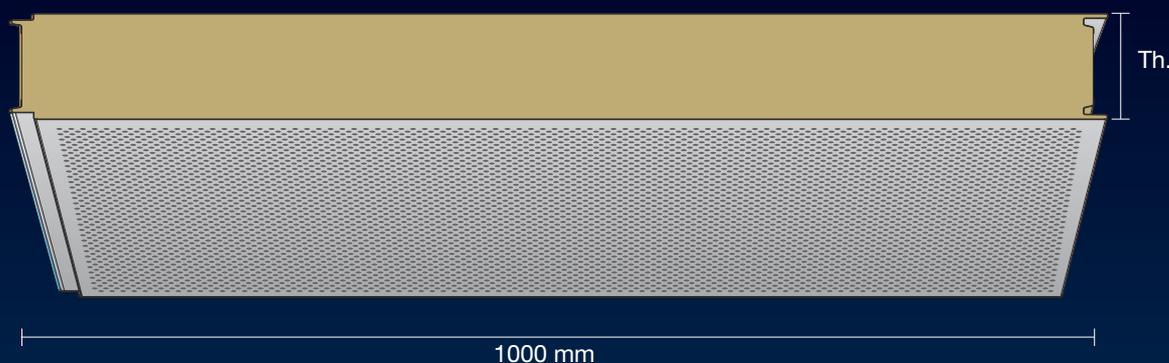
THICKNESS MM 50: RW = 31 DB  
 THICKNESS MM 80: RW = 34 DB  
 THICKNESS MM 100: RW = 35 DB

**FACINGS:**

PREPAINTED OR PLASTICISED GALVANISED STEEL; NATURAL EMBOSSED OR PREPAINTED ALUMINIUM; STAINLESS STEEL.  
 THE STANDARD THICKNESSES OF THE GALVANISED STEEL AND PREPAINTED FACINGS ARE 0.5 MM + 0.6 MM. OTHER THICKNESSES ARE AVAILABLE ON DEMAND.

**STANDARD COLOURS:**

WHITE, GREY. ON DEMAND, ALL RAL COLOURS ARE AVAILABLE.



Available internal facing (to be specified when ordering)



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Plank



Smooth

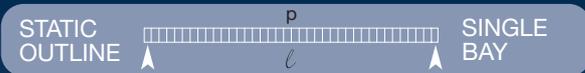
Thermal characteristics

U transmittance	PANEL NOMINAL THICKNESS ( mm )							
	50	60	80	100	120	150	180	200
W/m <sup>2</sup> K	0.760	0.630	0.470	0.380	0.320	0.250	0.218	0.195
Kcal/m <sup>2</sup> h °C	0.655	0.543	0.405	0.328	0.276	0.216	0.188	0.168

WALLS mineral fibre



### Static characteristics (kg/m<sup>2</sup>)



External facing: steel 0.5 mm. - Internal facing: steel 0.6 mm.

PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
50	165	120	95	80	70	60	55					13.83
60	195	145	115	95	85	70	65	55				14.83
80	265	200	160	130	110	100	85	80	70	60		16.83
100	320	240	190	160	135	120	105	95	85	80		18.83
120	325	240	195	160	135	120	105	95	85	80		20.83
150	325	240	195	160	135	120	105	95	85	80		23.83
180	345	260	205	170	145	130	115	100	90	85		26.83
200	345	260	205	170	145	130	115	100	90	85		28.83

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 50 mm  
Normal deflection limit:  $l/200$

### Static characteristics (kg/m<sup>2</sup>)



PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
50	130	95	75	65	55							13.83
60	160	115	95	75	65	55	50					14.83
80	215	160	125	105	90	80	70	60	55			16.83
100	255	190	150	125	110	90	80	70	60	55		18.83
120	260	195	155	130	110	90	80	70	60	55		20.83
150	260	195	155	130	110	90	80	70	60	55		23.83
180	260	195	155	130	110	90	80	70	60	55		26.83
200	260	195	155	130	110	90	80	70	60	55		28.83

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 100 mm  
Normal deflection limit:  $l/200$

### Static characteristics (kg/m<sup>2</sup>)



PANEL THICKNESS (mm)	DISTANCE BETWEEN SUPPORTS ( ml )										WEIGHT (Kg/m <sup>2</sup> )	
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6		
50	135	100	80	65	55	50						13.83
60	165	120	95	80	70	60	55					14.83
80	220	165	130	110	95	80	70	65	60	55		16.83
100	280	210	165	140	120	105	90	80	70	65		18.83
120	285	215	170	140	120	105	95	80	70	65		20.83
150	285	215	170	140	120	105	95	80	70	65		23.83
180	285	215	170	140	120	105	95	80	70	65		26.83
200	285	215	170	140	120	105	95	80	70	65		28.83

p = (kg/m<sup>2</sup>) uniformly distributed load - Working support width: 100 mm  
Normal deflection limit:  $l/200$



# Globe Ductwork

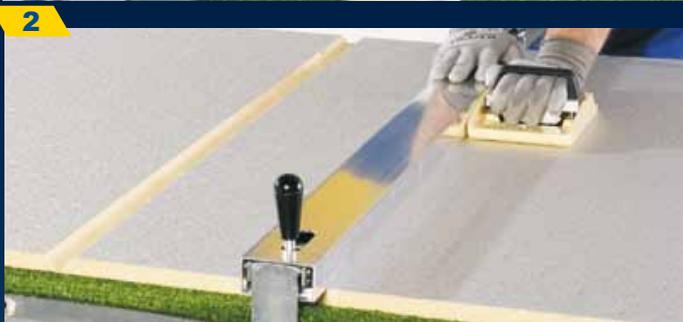
The innovative and revolutionary approach for pre-insulated ductwork

## ADVANTAGES OF A PRE-INSULATED DUCTING SYSTEM :

- QUALITY OF AIR AND EFFICIENCY OF THE SYSTEM. THE INTERNAL SURFACE OF THE DUCT IS ENTIRELY CONSTRUCTED OF ALUMINIUM, WHICH GAANTEES CLEAN AIR FLOW.
- ENERGY SAVINGS AND THERMAL INSULATION. THE RATE OF HEAT TRANSFER (THERMAL CONDUCTIVITY IS VERY LOW, EVEN AT REDUCED THICKNESSES)
- LIGHTWEIGHT
- SOUND AND VIBRATION ABSORPTION
- LONG LASTING: The use of polyurethane and alluminium guarantees a duration for as long as the entire system.
- SIMPLE AND EASY INSTALLATION OF COMPLEX ROUTES OF AIR DISTRIBUTION, AND IF NECESSARY, THE FREEDOM TO MAKE MODIFICATION BASED ON CURRENT NEEDS.
- REDUCED COSTS IF COMPARED OT TRADITIONAL SHEET METAL DUCTS: EASY SHIPMENT AND INSTALLATION



*The cuts allow easy bending of the panels for quick fabrication of ducts.*



1

Using the nylon marking pencil, the dimensions of each duct can be easily traced

2

With the clamping ruler on the table and the handy double-blade jack plane, "V" cuts are made without marking the inferior foil

3

Spreading of the glue inside the cuts

4

Folding of the sides to form a duct

5

The rigid spatula is used to smooth out the edges

6

The aluminium duct tape is applied

7

Aluminium profile are inserted into the ends of the duct for eventual flanging

8

Silicone is applied to further seal the internal bends

9

The self-adhesive gasket is applied to the aluminium profiles prior to joining the two ducts

10

The bayonate joins the ducts

11

The manual bending machine is used to make the bends on the panel for curved ducts.(i.e. elbows)

## Smooth Aluminium



### AI6 E/E 60-60

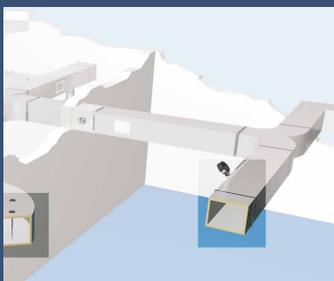
Panel in polyisocyanurate foam, with 60 µ aluminium facing, embossed on both sides. Density: 35 kg/m<sup>3</sup>

### AI8 E/E 80-80

Panel in polyisocyanurate foam, with 80 µ aluminium facing, embossed on both sides. Density: 35 kg/m<sup>3</sup>

Thickness	Size	Pack	
mm	cm	n° panels	m <sup>2</sup>
20	120 x 400	10	48,00

Thickness	Size	Pack	
mm	cm	n° panels	m <sup>2</sup>
20	120 x 400	10	48,00





## Embossed Aluminium

### ALC E/E 80-80

Panel in polyisocyanurate foam, with 80  $\mu$  aluminium facing, embossed on both sides. Density: 48 kg/m<sup>3</sup>

Thickness	Size	Pack	
		n° panels	m <sup>2</sup>
mm	cm		
20	120 x 400	10	48,00
30	120 x 400	8	38,40

### ALL S/E 80-80

Panel in polyisocyanurate foam, with 80  $\mu$  smooth aluminium facing on one side and embossed on the other.

Density: 48 kg/m<sup>3</sup>

Thickness	Size	Pack	
		n° panels	m <sup>2</sup>
mm	cm		
20	120 x 400	10	48,00

### ALE E/E 80-200

Panel in polyisocyanurate foam, with 200  $\mu$  aluminium facing on the external side and 80  $\mu$  on the internal, embossed on both sides. Density: 48 kg/m<sup>3</sup>

Thickness	Size	Pack	
		n° panels	m <sup>2</sup>
mm	cm		
20	120 x 400	10	48,00
30	120 x 400	8	38,40



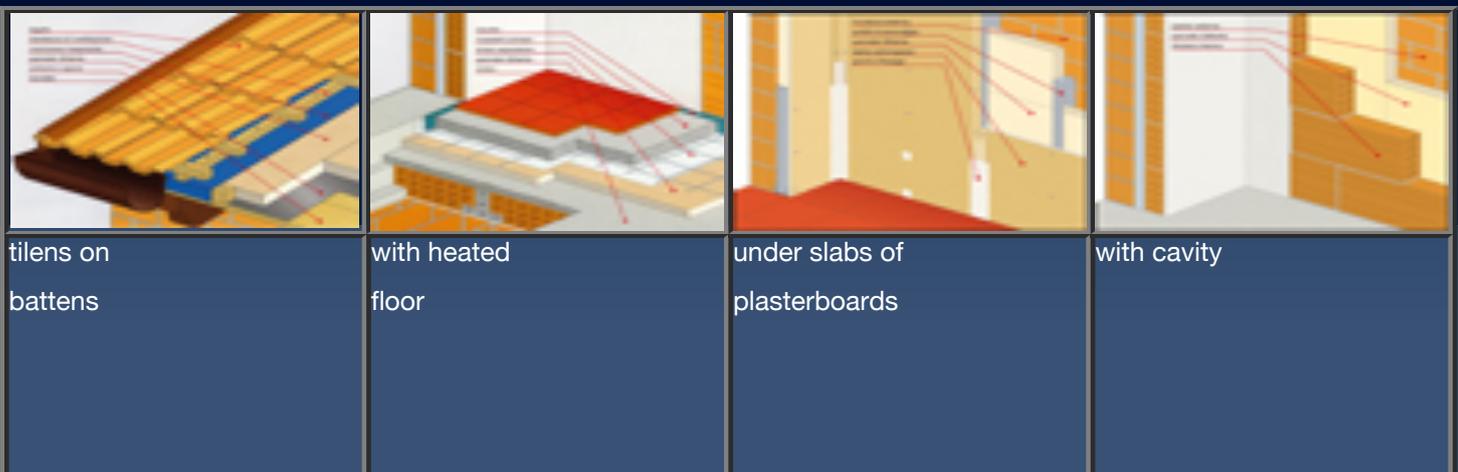
# Globe GT

The GT panel is indicated for roofs, floors and walls, civil and industrial applications

Globe GT is a sandwich panel composed of an insulating component in Polyiso foam, expanded without using CFC or HCFC, coated on both sides with the special covered Duotwin.

The GT panel is indicated for roofs, floors and walls, civil and industrial applications.

## Recommended applications



tiles on  
battens

with heated  
floor

under slabs of  
plasterboards

with cavity

### STANDARD DIMENSIONS

mm 600 x 1200

THICKNESS

mm 30 – 40 – 50 – 60 – 80 – 100

GLOBE GT heat insulating panel specific for the heat insulation of roofs, floors and walls

Declared thermal conductivity:  $\lambda_D = 0.023 \text{ W/mK}$  (EN 13165 Annessi A e C) Weight percentage of recycled material: 3.14 – 2.49 %

Weight percentage of renewable material: 3.66 – 2.87 %

Compressive strength at 10% deformation: **minimum value = ... kPa** (EN 826) Compressive strength at 2% deformation:

**minimum value = ... kg/m<sup>2</sup>** (EN 826) Water vapour diffusion resistance factor for thick 100 mm :  $\mu = 148$  (EN 12086)

Water vapour diffusion resistance:  $Z = \dots \text{ m}^2\text{hPa/mg}$  (EN 12086)

Tensile strength perpendicular to faces:  $\sigma_{mt} > 50 \text{ kPa}$

Flatness after one-sided wetting:  $FW \leq 10 \text{ mm}$  (EN 13165)

Water absorption by total immersion:  $W_{it} < 1 \%$  (EN 12087)

Water absorption by partial immersion:  $W_{sp} < 0.1 \text{ kg/m}^2$  (EN 1609)

Euroclass reaction to fire: **F** (EN 11925-2)

Apparent dynamics stiffness:  $s'_t = \dots \text{ MN/m}^3$  (EN 29052-1)

Environmental product declaration for 80 mm thickness (ISO 14040 and MSR 1999:2)

## Characteristics and performances

### Thermal Insulation

Characteristics [Standard]	Description	Symbol [Units]	Value Some characteristics depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	120
Average initial thermal conductivity [EN 12667]	Value determined at 10 °C	$\lambda_{90/90,1}$ [W/mK]	<b>0,022</b>									
Declared thermal conductivity [UNI EN 13165 annex A e C]	Value determined at 10 °C C	$\lambda_D$ [W/mk]	<b>0,023</b>									
Declared thermal transmittance	$U_D = \lambda_D / d$	$U_D$ [W/m <sup>2</sup> K]	<b>1.15</b>	<b>0.77</b>	<b>0.58</b>	<b>0.46</b>	<b>0.38</b>	<b>0.33</b>	<b>0.29</b>	<b>0.26</b>	<b>0.23</b>	<b>0.19</b>
Declared thermal resistance	$R_D = d / \lambda_D$	$R_D$ [m <sup>2</sup> K/W]	<b>0.87</b>	<b>1.30</b>	<b>1.74</b>	<b>2.17</b>	<b>2.61</b>	<b>3.04</b>	<b>3.48</b>	<b>3.91</b>	<b>4.35</b>	<b>5.22</b>

## Characteristics and performances

Nominal thickness [EN 823]	Description	$d_N$ [mm]	production from 20 to 120 mm									
			150	140	140	140	140	150	130	130	130	130
Compressive strenght [EN 826]	Value determined at 10% deformation	$\sigma_{10} \text{ o } \sigma_m$ [kPa]	150	140	140	140	140	150	130	130	130	130
Compressive strenght [EN 826]	Value determined at 2% deformation	$\sigma_2$ [kPa]	6000	5000	5200	6000	6000	6000	6000	5000	5000	5000
Dimensional stability under specified temperature and umidity [EN 1604]	48h (±1) a 70°C (±2) e 90% RH (±5)	DS(TH) dimensions [%]	1	1	1	1	1	1	1	1	1	1
		[% thickness]	5	4	4	4	4	4	4	4	4	4
	48h (±1) a -20°C (±3)	[% dimensions]	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
		[% thickness]	1	1	1	1	1	1	1	1	1	1
Euroclass reaction to fire [EN 13501-1] [EN 11925 -2] [EN 13823 (SBI)]	Class	Euroclass	F									
Euroclass reaction to fire [EN 11925 -2]	Foam	Euroclass	E									
Specific heat capacity	Value	$C_p$ [J/kg K]	1453									
Acoustic isolation to wall [UNI EN ISO 140-3] [UNI EN ISO 717-1]	Stratigraphy: o 15 mm plaster o Brick from 12 mm o Globe GT from 40 mm o Air from 10 mm o Brick from 8 mm o 15 mm plaster	$R_w$ [dB]	54									
Acoustic isolation to wall [UNI EN ISO 140-3] [UNI EN ISO 717-1]	Stratigraphy: o 15 mm plaster o Brick from 12 mm o Globe GT from 50 mm o Brick from 12 mm o 15 mm plaster	$R_w$ [dB]	53									
Apparent dynamics stiffness [UNI EN ISO 29052-1]	value	$s^t$ [MN/m <sup>3</sup> ]	68 (thickness 20 mm)									
			59 (thickness 20 mm)									
Reduction of transmitted impact noise [UNI EN ISO 140-8] [UNI EN ISO 717-2]	Stratigraphy: o floor coverings o Globe GT from 20 mm o heavyweight standard floor from 100 kg/m <sup>2</sup>	$\Delta L_w$ [dB]	18									

## Characteristics and performances

Water vapor diffusion resistance factor [EN 12086]	Value For 100 mm of thick	$\mu$ (MU)	148 ± 24
Water vapor diffusion resistance [EN 12086]	The variation depends on the thickness	Z [m <sup>2</sup> hPa/mg]	82 – 21
Tensile strength perpendicular to faces [EN 1607]	Value	$\sigma_{mt}$ [kPa]	More than 50
Pull through [EN 16382]	Value	[N]	> 800
Flatness after one-sided wetting [EN 13165]	Value	FW [mm]	≤ 10
Water absorption [EN 12087]	Total immersion for 28 days	$W_{it}$ [%]	Less than 1% <sub>w</sub>
Water absorption [EN 1609]	Partial immersion	$W_{ip}$ [kg/m <sup>2</sup> ]	Less than 0.1
Water absorption [EN 12088]	By diffusion for 28 days	$W_{dv}$ [%]	2.1 (thickness 20 mm)
		$W_{dv}$ [%]	0.3 (thickness 120 mm)
		$W_{dp}$ [kg/m <sup>2</sup> ]	0.43 (thickness 20 mm)
		$W_{dp}$ [kg/m <sup>2</sup> ]	0.41 (thickness 120 mm)
Weight percentage of recycled material	The variation depends on the thickness	%	3.14 – 2.49
Weight percentage of renewable material	The variation depends on the thickness	%	3.66 – 2.87

## Tolerances and notes

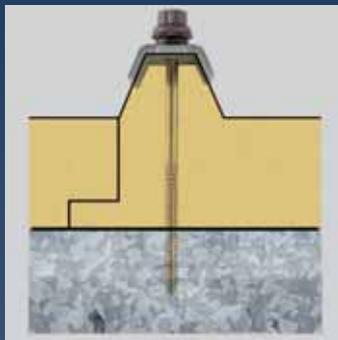
Tolerances [UNI EN 13165]	Thickness	T2 [mm]	<50 ±2 mm		from 50 to 75 ±3 mm	>75 +5 /-2 mm
	Dimensions		< 1000 ±5 mm	from 1000 to 2000 ±7,5 mm	from 2000 to 4000 ±10 mm	> 4000 ±15 mm
Notes	stability to the temperature	GT panels are used in a range of continuous temperatures normally included between -40 °C e +110 °C. During short time they can resist also to temperatures till + 200 °C, or corresponding to the temperature of fused, without particular problems. Long exposures to the temperatures could cause deformations to the foam or to the coats, but without causing sublimation or fusion. and some other reactions to fire are characteristics connected with the kind of used panel.				
	Resistance to the torch for bituminous membrane application	The board is not usable for directly torch. For torch application use Stiferite GT3, GT4 and GT5.				
	Aspect	Any possible little areas of non-adhesion between coats and foam are originated by the production process and don't prejudice in any way the physical-mechanical properties of the panels.				

# Instructions of fixing

## for ribbed roof and wall panels

IN ORDER TO CORRECTLY USE THE INSULATED PANELS, IT IS NECESSARY TO IDENTIFY THE MOST SUITABLE FIXING SYSTEM. THE SYSTEM MUST BE CHOSEN ON THE BASIS OF THE TYPE OF SUPPORT STRUCTURE, AND IS ESSENTIAL FOR GUARANTEEING SAFETY, STABILITY AND WATERTIGHTNESS. THE FIXING SYSTEM IS GENERALLY SUBDIVIDED INTO TWO CATEGORIES: STRUCTURAL FIXING AND NONSTRUCTURAL FIXING.

THE FIRST ONES FIX THE ROOF OR WALL PANEL TO THE SUPPORTING STRUCTURE OF THE BUILDING AND MUST GUARANTEE THE CAPACITY TO SUPPORT THE APPLIED LOADS. THE SECOND ONES, ON THE OTHER HAND, ONLY FIX THE TINSMITHERY SYSTEMS OR THE PANEL SHEETS TOGETHER. THE PLACE AND NUMBER OF THE ROOF STRUCTURAL FIXING ELEMENTS IS ESTABLISHED ON THE BASIS OF THE NUMBER OF SUPPORTS, THE SLOPE OF THE PITCH AND THE WINDINESS, BUT MUST NOT HOWEVER BE LESS THAN 3 FOR EVERY M<sup>2</sup>. ON THE RIDGE ON THE ROOF, THE EAVES AND EVENTUAL FRONT OVERLAPPING, THE FIXING GROUPS MUST BE APPLIED ON ALL THE PANEL RIBS.



### STRUCTURAL FIXING OF ROOF PANELS ON STEEL SUPPORT STRUCTURE

FIXING GROUPS WITH SELF-TAPPING SCREWS FOR STEEL, WITH A COLOURED NYLON HEAD, 6.3 MM DIAMETER AND VARIABLE LENGTH, DEPENDING ON THE THICKNESS OF THE PANEL.

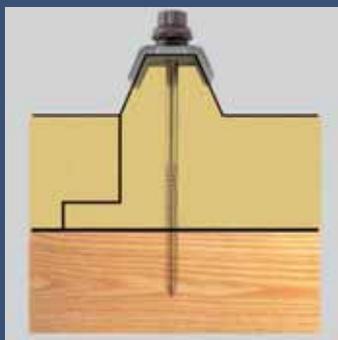
PREPAINTED METAL OR ALUMINIUM CAPPING WITH PREASSEMBLED EXPANDED ELEMENT UNDERNEATH, AND SEALING WASHER IN PVC.

#### PANEL THICKNESS

TH. 30 mm.  
TH. 40 mm.  
TH. 50 mm.  
TH. 60 mm.  
TH. 80 mm.  
TH. 100 mm.

#### SCREW LENGTH (RECOMMENDED)

DIAM. 6.3 x 100 mm.  
DIAM. 6.3 x 110 mm.  
DIAM. 6.3 x 120 mm.  
DIAM. 6.3 x 130 mm.  
DIAM. 6.3 x 150 mm.  
DIAM. 6.3 x 170 mm.



### STRUCTURAL FIXING OF ROOF PANELS ON WOOD SUPPORT STRUCTURE

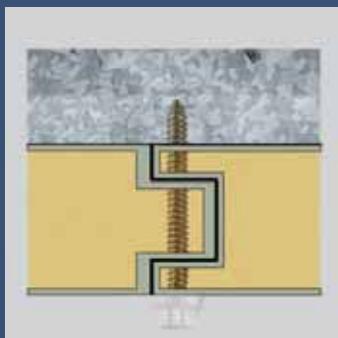
FIXING GROUPS WITH SELF-TAPPING SCREWS FOR WOOD, WITH A COLOURED NYLON HEAD, 6.35 MM DIAMETER AND VARIABLE LENGTH, DEPENDING ON THE THICKNESS OF THE PANEL. PREPAINTED METAL OR ALUMINIUM CAPPING WITH PREASSEMBLED EXPANDED ELEMENT UNDERNEATH.

#### PANEL THICKNESS

TH. 30 mm.  
TH. 40 mm.  
TH. 50 mm.  
TH. 60 mm.  
TH. 80 mm.  
TH. 100 mm.

#### SCREW LENGTH (RECOMMENDED)

DIAM. 6.5 x 110 mm.  
DIAM. 6.5 x 120 mm.  
DIAM. 6.5 x 130 mm.  
DIAM. 6.5 x 140 mm.  
DIAM. 6.5 x 160 mm.  
DIAM. 6.5 x 180 mm.



### STRUCTURAL FIXING FOR

#### GLOBE WALLS PANELS ON STEEL STRUCTURE

FIXING GROUPS WITH SELF-TAPPING SCREWS FOR STEEL, WITH A WHITE/ GREY NYLON HEAD, 6.3 MM DIAMETER AND VARIABLE LENGTH, DEPENDING ON THE THICKNESS OF THE PANEL.

#### PANEL THICKNESS

TH. 30 mm.  
TH. 40 mm.  
TH. 50 mm.  
TH. 60 mm.  
TH. 80 mm.  
TH. 100 mm.  
TH. 120 mm.

#### SCREW LENGTH (RECOMMENDED)

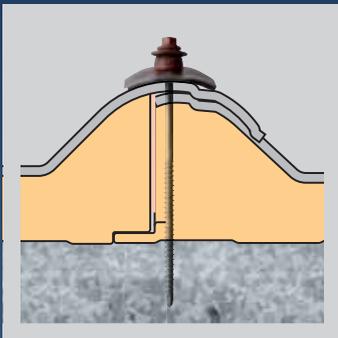
DIAM. 6.3 x 60 mm.  
DIAM. 6.3 x 60 mm.  
DIAM. 6.3 x 80 mm.  
DIAM. 6.3 x 80 mm.  
DIAM. 6.3 x 100 mm.  
DIAM. 6.3 x 120 mm.  
DIAM. 6.3 x 140 mm.

# Instructions of fixing

for

IN ORDER TO CORRECTLY USE THE INSULATED PANELS, IT IS NECESSARY TO IDENTIFY THE MOST SUITABLE FIXING SYSTEM. THE SYSTEM MUST BE CHOSEN ON THE BASIS OF THE TYPE OF SUPPORT STRUCTURE, AND IS ESSENTIAL FOR GUARANTEEING SAFETY, STABILITY AND WATERTIGHTNESS. THE FIXING SYSTEM IS GENERALLY SUBDIVIDED INTO TWO CATEGORIES: STRUCTURAL FIXING AND NONSTRUCTURAL FIXING.

THE FIRST ONES FIX THE ROOF OR WALL PANEL TO THE SUPPORTING STRUCTURE OF THE BUILDING AND MUST GUARANTEE THE CAPACITY TO SUPPORT THE APPLIED LOADS. THE SECOND ONES, ON THE OTHER HAND, ONLY FIX THE TINSMITHERY SYSTEMS OR THE PANEL SHEETS TOGETHER. THE PLACE AND NUMBER OF THE ROOF STRUCTURAL FIXING ELEMENTS IS ESTABLISHED ON THE BASIS OF THE NUMBER OF SUPPORTS, THE SLOPE OF THE PITCH AND THE WINDINESS, BUT MUST NOT HOWEVER BE LESS THAN 3 FOR EVERY M<sup>2</sup>. ON THE RIDGE ON THE ROOF, THE EAVES AND EVENTUAL FRONT OVERLAPPING, THE FIXING GROUPS MUST BE APPLIED ON ALL THE PANEL WAVES.



## STRUCTURAL FIXING OF ROOF PANELS ON STEEL SUPPORT STRUCTURE

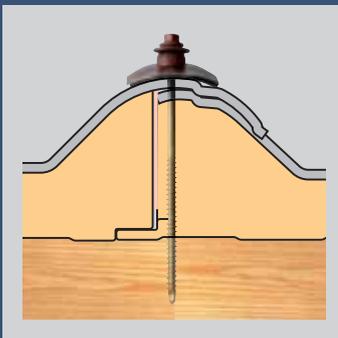
FIXING GROUPS WITH SELF-TAPPING SCREWS FOR STEEL, WITH A COLOURED NYLON HEAD OR COLOURED STEEL HEXAGONAL HEAD, 6.3 MM DIAMETER AND VARIABLE LENGTH, DEPENDING ON THE THICKNESS OF THE PANEL. PREPAINTED METAL OR ALUMINIUM CAPPING WITH PREASSEMBLED EXPANDED ELEMENT UNDERNEATH, AND SEALING WASHER IN PVC.

### PANEL THICKNESS

TH. 30 mm.  
TH. 40 mm.  
TH. 50 mm.  
TH. 60 mm.  
TH. 80 mm.  
TH. 100 mm.

### SCREW LENGTH (RECOMMENDED)

DIAM. 6.3 x 110 mm.  
DIAM. 6.3 x 120 mm.  
DIAM. 6.3 x 130 mm.  
DIAM. 6.3 x 140 mm.  
DIAM. 6.3 x 160 mm.  
DIAM. 6.3 x 180 mm.



## STRUCTURAL FIXING OF ROOF PANELS ON WOOD SUPPORT STRUCTURE

FIXING GROUPS WITH SELF-TAPPING SCREWS FOR WOOD, WITH A COLOURED NYLON HEAD OR COLOURED STEEL HEXAGONAL HEAD, 6.5 MM DIAMETER AND VARIABLE LENGTH, DEPENDING ON THE THICKNESS OF THE PANEL. PREPAINTED METAL OR ALUMINIUM CAPPING WITH PREASSEMBLED EXPANDED ELEMENT UNDERNEATH, AND SEALING WASHER IN PVC.

### PANEL THICKNESS

TH. 30 mm.  
TH. 40 mm.  
TH. 50 mm.  
TH. 60 mm.  
TH. 80 mm.  
TH. 100 mm.

### SCREW LENGTH (RECOMMENDED)

DIAM. 6.5 x 120 mm.  
DIAM. 6.5 x 130 mm.  
DIAM. 6.5 x 140 mm.  
DIAM. 6.5 x 150 mm.  
DIAM. 6.5 x 170 mm.  
DIAM. 6.5 x 190 mm.

# Accessories

for fixing of roof and wall panels



## CAP NUT

AVAILABLE IN DIFFERENT COLOURS AND MATERIALS, DEPENDING ON THE CLIENT'S REQUIREMENTS.



## FIXING SYSTEM

SELF-DRILLING SCREWS, EPDM WASHER, CAP NUT.



## SCREW FOR ROOF PANEL

SELF-TAPPING SCREW FOR WOOD AND STEEL IN STANDARD COLOURS.



## SCREW FOR WALL PANEL

SELF-TAPPING SCREW FOR WOOD AND STEEL IN STANDARD COLOURS.



## METHACRYLATE SCREW

SELF-TAPPING AND SELF-DRILLING SCREW WITH A COMPLETELY COVERED HEAD IN PLASTIC MATERIAL - METHACRYLATE.



## SCREW

SELF-TAPPING SCREW FOR WOOD AND STEEL, COLOURS ON REQUEST. (FOR MINIMUM QUANTITIES, PLEASE CONTACT OUR OFFICES).



## STAINLESS WASHER WITH EPDM GASKET

STAINLESS WASHER WITH GASKET FOR THE PERFECT WATERTIGHTNESS OF THE FIXING.



## WASHER AND COLOURED EPDM GASKET

WASHER AND EPDM GASKET WITH THE COLOUR DEPENDING ON THE ROOF COLOUR. (FOR MINIMUM QUANTITIES, PLEASE CONTACT OUR OFFICES).

# Globe Panels



**CAP NUT FOR GLOBE ROOF TILES AND GLOBE ROOF WAVE**  
AVAILABLE IN DIFFERENT COLOURS AND MATERIALS, DEPENDING ON THE CLIENT'S REQUIREMENTS.



**SCREW FOR GLOBE ROOF TILES AND GLOBE ROOF WAVE**  
SELF-TAPPING SCREW FOR WOOD OR STEEL WITH EDPM GASKET AND CAP NUT.



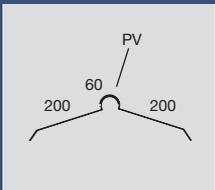
**SCREW WITH EDPM GASKET FOR GLOBE ROOF TILES AND GLOBE ROOF WAVE**  
SELF-TAPPING SCREW FOR WOOD OR STEEL WITH EDPM GASKET.



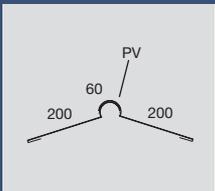
**THREADED INSERT WITH METRIC SCREW**  
SPECIAL FIXING ELEMENT IN STEEL THAT ALLOWS TO PUT A THREAD ON THE PARTICULAR ELEMENTS WITH LOW THICKNESS. REALLY FAST AND EASY TO APPLY, IT HAS ALSO A HIGH RESISTANCE.



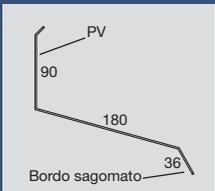
**FLOWER RIVET**  
THIS RIVET IS ADAPTED FOR FIXING OF ANY STUFFS, THE BUSHING OF THE FASTENER OPENS IN MORE PARTS DURING ASSEMBLING THEREBY ENSURING AN EXCELLENT FIXING.



**SHAPED RIDGE FOR GLOBE ECOGREK**  
DOUBLE HINGED RIDGE, SHAPED AS THE EXTERNAL PANEL PROFILE.



**SMOOTH RIDGE FOR GLOBE ECOGREK**  
DOUBLE HINGED ELEMENT



**FRONT FLASHING FOR GLOBE ECOGREK**  
FRONT FLASHING FOR G9 TO BE USED IN CASE OF JOINT BETWEEN THE ROOF MADE OF PANELS AND A EXISTING WALL, PLACED IN FRONTAL POSITION.

# Accessories

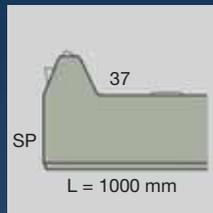
finishing components for ribbed roof and wall panels

SERIE OF FINISHING ELEMENTS FOR ROOF PANEL, ABLE TO SATISFY ALL DESIGN REQUIREMENTS.

**MATERIAL:** 0.5 MM THICK PREPAINTED STEEL. OR ON DEMAND, 0.6 MM PREPAINTED ALUMINIUM. OR ON DEMAND, 0.6 MM NATURAL COPPER.

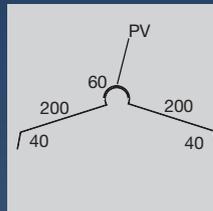
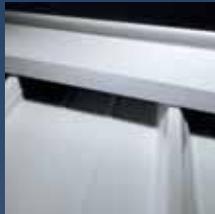
**COLOUR:** WHITE GREY, CHOCOLATE BROWN, SIENA RED, OTHER COLOURS ON DEMAND

**DIMENSIONS:** STANDARD LENGTH 3 M



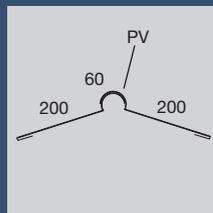
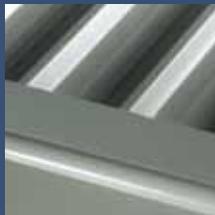
## SILUETTE

CLOSING ELEMENT FOR THE HEAD OF ROOF PANELS UP TO 50 MM THICK, WHICH ENSURES EXCELLENT AESTHETIC APPEARANCE AND BETTER PROTECTION. AVAILABLE IN PREPAINTED STEEL.



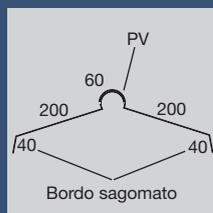
## RIDGE CAP TO BE SHAPED

HINGED CAP TO BE SHAPED DURING INSTALLATION, DESIGNED FOR THE EXTERNAL JOINT OF PITCHED ROOFS.



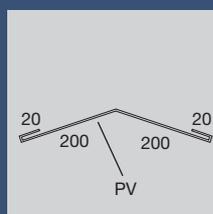
## SMOOTH RIDGE CAP

DOUBLE HINGED ELEMENT.



## SHAPED RIDGE CAP

DOUBLE HINGED ELEMENT.



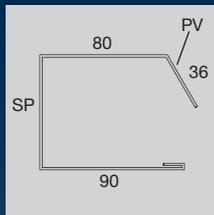
## SUBRIDGE

ESSENTIAL ELEMENT DESIGNED FOR THE INTERNAL JOINT OF THE PITCHES ON STEEL CONSTRUCTIONS.



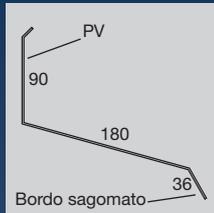
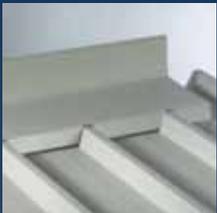
## SUBRIDGE CAP LINING

THIS IS A SPONGY LINING TO BE APPLIED UNDER THE METAL RIDGE CAP; IT IS PRIMARILY RECOMMENDED FOR SLIGHTLY SLOPING PITCHES, IN ORDER TO PREVENT INFILTRATION CAUSED BY STRONG WIND.



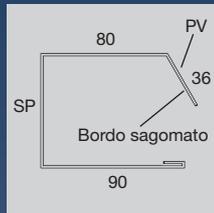
### SIDE FLASHING

TO COVER THE SIDE EDGE OF THE PANEL, CAN BE USED FOR BOTH THE FULL RIB AND THE OVERLAPPING RIB.



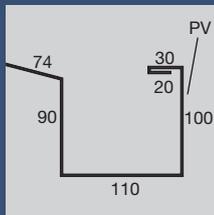
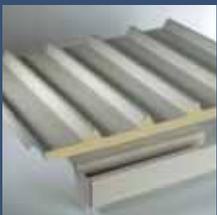
### FRONT FLASHING

TO BE USED IN CASE OF JOINT BETWEEN THE ROOF MADE OF PANELS AND AN EXISTING WALL, PLACED IN FRONTAL POSITION.



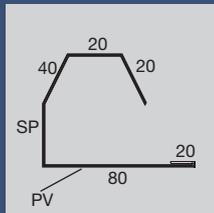
### TAIL FLASHING

TO COVER THE UPPER EDGE OF THE PANELS, TO BE USED IN SINGLE PROTRUDING SINGLE PITCH ROOFS.



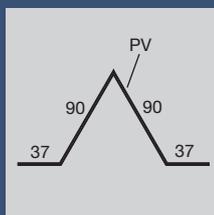
### EAVES

USEFUL COMPLEMENTARY ELEMENT FOR ROOFS AND PORCHES WITH SHORT PITCHES; SIDE HEADS AND FASTENING RODS CAN BE SUPPLIED ON REQUEST.



### SIDE SUPPORT PROFILE

TO BE USED AS A SUPPORT UNDER THE EMPTY OVERLAPPING RIB, IN COMBINATION WITH FIXED ROOFLIGHTS. WE RECOMMEND TO FIT A SPONGY LINING IN THE CAVITY IN ORDER TO PREVENT ANY CONDENSATION.



### SNOW STOPPER

NECESSARY FOR A COMPLETE AND SAFE ROOF.



### TOUCH UP PAINT

THIS IS A SPECIAL SPRAY PAINT FOR TOUCHING UP THE PANELS IN THE CASE OF SURFACE SCRATCHES OR ACCIDENTAL DENTS. THE AVAILABLE COLOURS ARE WHITE, GREY, SIENA RED, DARK BROWN AND RED TILE, OTHER COLOURS ARE AVAILABLE ON DEMAND.

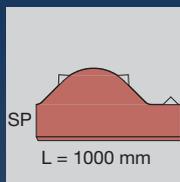
## Accessories

ACCESSORIES FINISHINGS COMPONENTS ABLE TO SATISFY ALL DESIGN REQUIREMENTS.

**MATERIAL:** 0.5 MM THICK PREPAINTED STEEL. OR ON DEMAND  
0.6 MM THICK PREPAINTED ALUMINIUM. OR ON DEMAND  
0.6 MM THICK NATURAL COPPER.

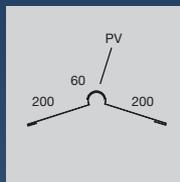
**COLOUR:** STANDARD TILE RED, OTHER COLOURS ON DEMAND.

**DIMENSIONS:** STANDARD LENGTH 3 M.



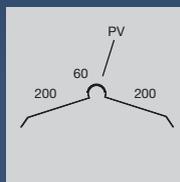
### SILUETTE

CLOSING ELEMENT FOR THE HEAD OF GLOBE ROOF TILES PANELS UP TO 50 MM THICK, WHICH ENSURES EXCELLENT AESTHETIC APPEARANCE AND BETTER PROTECTION. AVAILABLE IN PREPAINTED STEEL FOR 30, 40 AND 50 MM THICK PANELS. DIFFERENT THICKNESSES ON DEMAND.



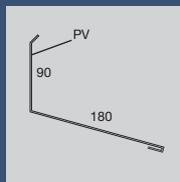
### SMOOTH RIDGE CAP

DOUBLE HINGED RIDGE, SHAPED AS THE EXTERNAL PANEL PROFILE.



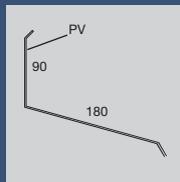
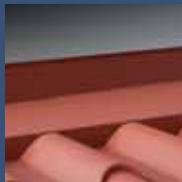
### SMOOTH RIDGE CAP

DOUBLE HINGED ELEMENT, WITHOUT SHAPED FINIDG



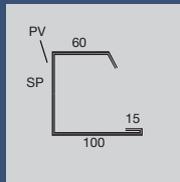
### FRONT FLASHING

TO BE USED IN CASE OF JOINT BETWEEN THE ROOF MADE OF PANELS AND A EXISTING WALL, PLACED IN FRONTAL POSITION.



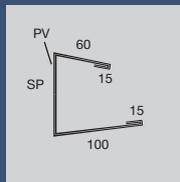
### FRONT SHAPED FLASHING

SHAPED ELEMENT, SHAPED AS THE EXTERNAL PANEL PROFILE. TO BE USED IN CASE OF JOINT BETWEEN THE ROOF MADE OF PANELS AND A EXISTING WALL, PLACED IN FRONTAL POSITION.



### SIDE FLASHING

TO COVER THE SIDE EDGE OF THE PANEL, CAN BE USED FOR BOTH THE FULL RIB AND THE OVERLAPPING RIB.



### TAIL FLASHING

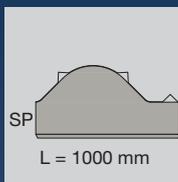
TO COVER THE UPPER EDGE OF THE PANELS.

# Accessories

## finishing components for Globe Roof Rounded

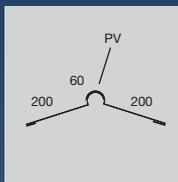
SERIE OF FINISHING ELEMENTS ABLE TO SATISFY ALL DESIGN RE-QUIREMENTS.

- MATERIAL:** 0.5 MM THICK PREPAINTED STEEL. OR ON DEMAND  
 0.6 MM THICK PREPAINTED ALUMINIUM. OR ON DEMAND  
 0.6 MM THICK NATURAL COPPER.
- COLOUR:** STANDARD WHITE GREY, OTHER COLOURS ON DEMAND.
- DIMENSIONS:** STANDARD LENGTH 3 M.



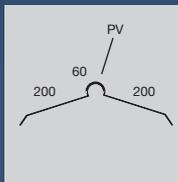
### SILUETTE

CLOSING ELEMENT FOR THE HEAD OF PANELS UP TO 50 MM THICK, WHICH ENSURES EXCELLENT AESTHETIC APPEARANCE AND BETTER PROTECTION. AVAILABLE IN PREPAINTED STEEL FOR 30, 40 AND 50 MM THICK PANELS. DIFFERENT THICKNESSES ON DEMAND.



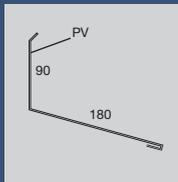
### SMOOTH RIDGE CAP

DOUBLE HINGED RIDGE, SHAPED AS THE EXTERNAL PANEL PROFILE.



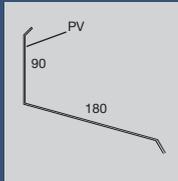
### SHAPED RIDGE

DOUBLE HINGED RIDGE, SHAPED AS THE EXTERNAL PANEL PROFILE.



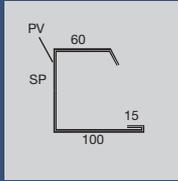
### FRONT FLASHING

TO BE USED IN CASE OF JOINT BETWEEN THE ROOF MADE OF PANELS AND A EXISTING WALL, PLACED IN FRONTAL POSITION.



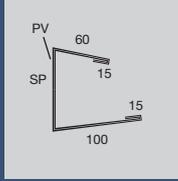
### FRONT SHAPED FLASHING

SHAPED ELEMENT, SHAPED AS THE EXTERNAL PANEL PROFILE. TO BE USED IN CASE OF JOINT BETWEEN THE ROOF MADE OF PANELS AND A EXISTING WALL, PLACED IN FRONTAL POSITION.



### SIDE FLASHING

TO COVER THE SIDE EDGE OF THE PANEL, CAN BE USED FOR BOTH THE FULL RIB AND THE OVERLAPPING RIB.

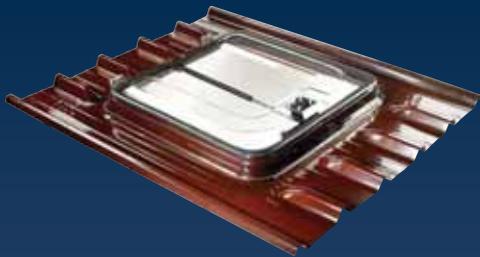


### TAIL FLASHING

TO COVER THE UPPER EDGE OF THE PANELS.

## Accessories

technical components



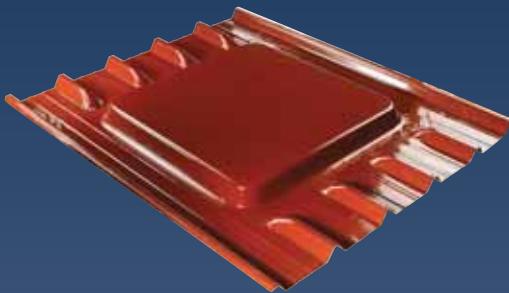
### OPENABLE ROOFLIGHT

IT IS A PRACTICAL AND SOLID MODEL OF WINDOW, USEFUL FOR ROOFS WITH A MANSARD AND FOR EXITS ON THE ROOF, AND IT GUARANTEES LUMINOSITY TO THE ROOM BELOW.

THE ROOFLIGHT IS MADE BY A BASE WITH A 10/10 THICK PREPAINTED STEEL BORDER THAT PERFECTLY ADAPTS TO THE SIX RIBS OF THE PANEL, AND BY A SMALL DOME IN UNBREAKABLE TRANSPARENT POLYCARBONATE REGULATED BY A GAS OPERATED SYSTEM.

THE OPENING OF THE ROOFLIGHT IS OF MANUAL TYPE AND THE STANDARD SIZES OF THE OUTLET IS 600X600 MM.

IT IS AVAILABLE IN WHITE-GREY, SIENA RED AND DARK BROWN COLOURS.



### GUTTER

IT CONSISTS OF A 10/10 THICK PREPAINTED STEEL BASE, MADE BY A SHAPED BORDER TO BE APPLIED TO THE PANEL AND BY A FLAT PART (STANDARD SIZES 600X600 MM) TO CUT ACCORDING TO THE EXTERNAL SIZES OF THE ELEMENT TO JOIN.

IT IS ADVISED TO PROVIDE A SUITABLE BORDER AND SEAL THE EDGES.

IT IS AVAILABLE IN WHITE-GREY, SIENA RED AND DARK BROWN COLOURS.



### TURRET

IT IS AN ACCESSORY CONCEIVED TO COVER EXHAUST VENTS ON THE ROOF, GUARANTEEING THE CONNECTION WITH THE SIX RIBS PANELS.

THE MAXIMUM DIAMETER OF THE EXHAUST VENT MUST BE 120 MM AND IT CAN BE ADAPTED TO THE VARIOUS ROOF SLOPES.

IT IS AVAILABLE IN PREPAINTED ALUMINIUM IN WHITE-GREY, SIENA RED AND DARK BROWN COLOURS.



### PORTHOLE

THE INDUSTRIAL BUILDING SECTOR REQUIRES INTEGRATED SYSTEMS AND INNOVATIVE PRODUCTS.

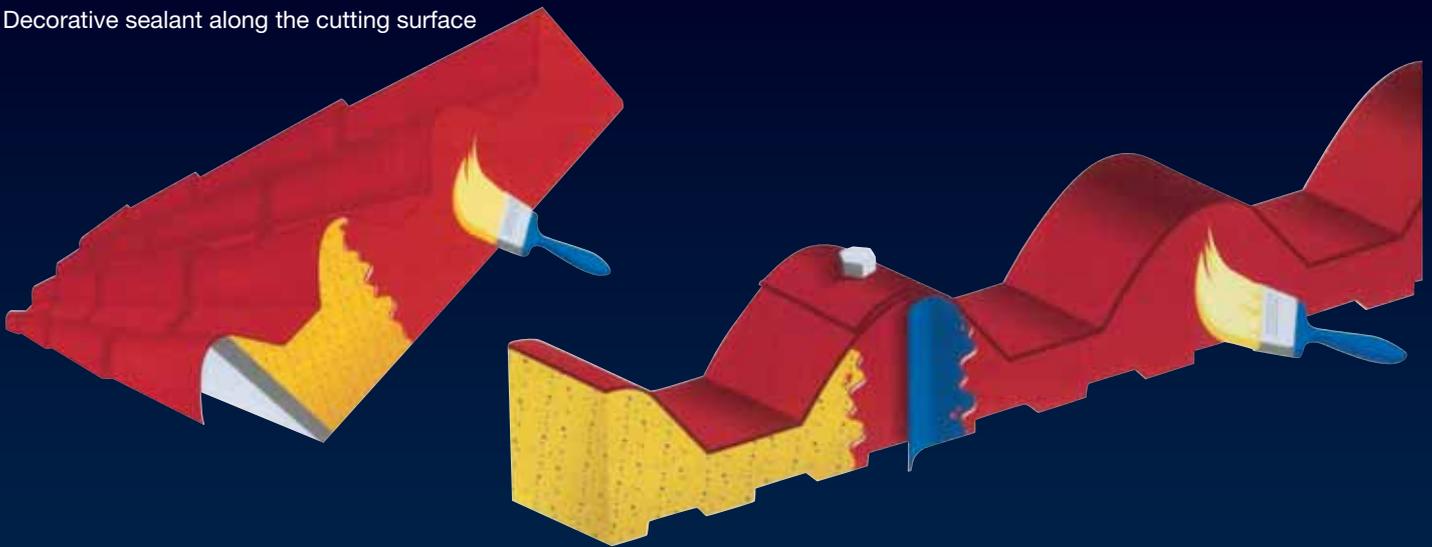
THE PRE-INSTALLED PORTHOLE IN INSULATED PANELS, WITH SIZES ON DEMAND AND WITH THE USE OF MATERIALS LIKE UNBREAKABLE TEMPERED CRYSTAL, DOUBLE GLASS AND POLYCARBONATE IS ABLE TO CONSIDERABLY OPTIMIZE THE DESIGN TIMES AND THE INSTALLATION COSTS.

IT IS AVAILABLE FOR 30 TO 60 MM THICK PANELS.

## Sealing

protective and decorative sealant for insulating panels

Decorative sealant along the cutting surface



IT IS A PRODUCT READY TO APPLY THROUGH BRUSH, ROLL AND SPRAY TO SEAL, PROTECT, WATERPROOF AND QUICKLY DECORATE THE INSULATING PANELS. IT IS A SYNTHETIC, READY TO USE PRODUCT, FREE OF SOLVENTS, EXTREMELY ELASTIC, FULLY WATERPROOF, RESISTANT TO LOW TEMPERATURES AND ATMOSPHERIC AGENTS, TO BE USED OUTDOORS AND INDOORS AND ON ALL GEOMETRIC SURFACES, EVEN THE MOST COMPLEX ONES. THANKS TO ITS SELF-LEVELLING AND FILLING POWER, IT IS ABLE TO LEVEL AND SATURATE THE MICRO-PORES OF THE INSULATING MATERIAL. THANKS TO THE EXTREMELY STRONG ADHERENCE AND ELASTICITY THAT DEVELOPS ONCE DRY, IT IS ABLE TO:

- PROTECT THE POLYURETHANE RESINS OF INSULATING PANELS FROM THE UV DEGRADATION;
- QUICKLY WATERPROOF THE METAL PANELS JOINED WITH DIFFERENT INSULATING CORES (POLYURETHANE RESINS, MINERAL FIBRES) ALONG THE CUTTING SURFACE, THUS PREVENTING HARMFUL CRACKS AND WATER INFILTRATIONS;
- QUICKLY SEAL THE CUTTING AND CONTACT SURFACE BETWEEN METAL-INSULATING CORE WITH AN ELASTIC FILM;
- SEAL SMALL HOLES, INTERSTICES, AND CRACKS IN THE INSULATING CORE OR ALONG THE INSULATING CORE-METAL CONNECTION;
- ABSORB DIMENSIONAL VARIATIONS OF COMPOSITE MATERIALS;
- QUICKLY DECORATE THE CUTTING SURFACE, HARMONISING IT TO THE SAME COLOUR OF THE METAL;
- ACT AS DECORATIVE FINISH THANKS TO A COLOURED FILM WITH HIGH COVERING PROPERTIES, RESISTANT TO ATMOSPHERIC AGENTS AND AVAILABLE IN DIFFERENT SHADES;
- ACT AS DECORATIVE-PROTECTIVE FINISH WITH VERY HIGH COVERING PROPERTIES, TO APPLY ON THE INSULATING CORE OR METAL SURFACE, EVEN INSIDE;
- AVAILABLE IN PACK OF 1 KG;
- KG = 1 M<sup>2</sup> = APPROXIMATELY 10 LINEAR METERS OF EDGE, FOR A 40 MM THICK PANEL;

### Standard colours

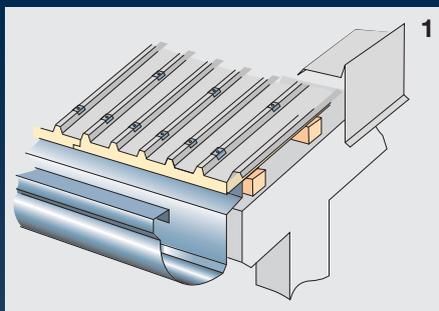


White grey

Siena red

Chocolate brown

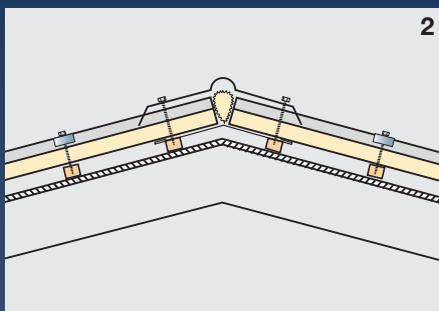
# Applications



## CIVIL ROOFS

### 1) TWO REGULAR PITCHES

FOR THIS TYPE OF COMMON ROOFS, THE ROOF PANELS ARE SUPPLIED IN THE LENGTH OF THE PITCH. THE LENGTH IS ESTABLISHED CONSIDERING THE FRONT POSITION COMPARED TO THE EAVES GUTTER MODEL USED (DRAWING 1). THE PANEL IS GENERALLY INSTALLED ON A FRAME CONSISTING OF HORIZONTALLY POSITIONED WOOD STRIPS. THE POSITION OF THE FIRST STRIP (WHERE THE EAVES GUTTER FIN WILL BE HOOKED TO) AND OF THE LAST STRIP (POSITIONED AT LEAST 20 CM FROM THE RIDGE CAP LINE, IS VERY IMPORTANT, SO AS TO ALLOW THE SIMULTANEOUS FIXING OF SHAPED RIDGE CAP-PANEL-STRIP) (DRAWING 2). GENERAL RULES ADVISE TO FIT FIXING GROUPS ON ALL THE PANEL RIBS ON THE TWO SUPPORTS. THE USE OF THE SILUETTE PROFILES IS ALSO RECOMMENDED TO PROTECT THE PANEL HEADS FROM ATMOSPHERIC AGENTS AND GUARANTEE THE ROOF DURABILITY.



### 2) FOUR REGULAR PITCHES

THIS TYPE OF ROOF FASTENING IS THE SAME AS FOR TWO-PITCHES ROOFS BUT REQUIRES PANELS WITH A SLANTED CUT (THAT CAN BE OBTAINED USING A SUITABLE CUTTING TOOL). ALL PANELS ARE SUPPLIED IN THE MEASURE CORRESPONDING TO THE MAXIMUM HEIGHT OF THE PITCH (DRAWING 3). EACH PANEL WILL THEN BE CUT DIAGONALLY FOLLOWING THE RIDGE CAP LINE AND THE EXCESS PIECE WILL BE USED FOR THE OPPOSITE SIDE OF THE NEXT PITCH (DRAWING 4). USING THIS METHOD THE PRODUCTION WASTE IS REDUCED TO THE MINIMUM. WE RECOMMEND TO CARRY OUT THE DIAGONAL CUTS ON THE GROUND RATHER THAN ON THE ROOF, IN ORDER TO AVOID DAMAGING THE PANELS THAT HAVE ALREADY BEEN INSTALLED. THE RIDGE CAP LINES WILL THEN BE COVERED WITH A SPECIFIC METAL RIDGE CAP, NOT SHAPED OR TO BE SHAPED DURING INSTALLATION, SINCE THE SHAPING VARIES DEPENDING ON THE SLOPE OF THE PITCHES.



### 3) IRREGULAR PITCHES

FOLLOW THE INDICATIONS DESCRIBED FOR THE TWO CASES ABOVE. THE DIFFERENCE CONSISTS IN THE DIMENSION AND METHOD OF INSTALLING THE PANELS: IN CASE OF IRREGULAR TRIANGULAR PITCHES, A RANGE OF PROGRESSIVE DIMENSIONS WILL BE ESTABLISHED FOR THE PANELS, TO BE CUT DIAGONALLY (DRAWING 5). WITH THIS METHOD THE EXCESS PIECE WILL UNLIKELY BE USED FOR OTHER PITCHES AND WILL THEREFORE BE DISCARDED. ALSO IN THIS CASE THE METAL JOINT RIDGE CAP MUST BE SPECIFICALLY PREPARED. IS GENERALLY ADVISABLE TO ORDER AT LEAST ONE OR TWO ADDITIONAL SHEETS OF THE MAXIMUM LENGTH, IN ORDER TO BE SURE TO COMPLETE THE ROOF ALSO IN CASE OF A CUTTING ERROR DURING INSTALLATION.

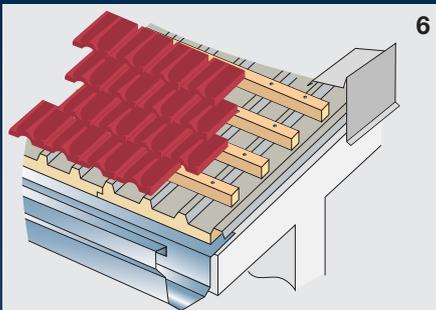


### 4) SUB TILE

THANKS TO ITS THERMAL INSULATION PROPERTIES, THE ROOF PANEL CAN ALSO BE USED IN BRICK ROOF SYSTEMS, PARTICULARLY AS A SUB-TILE ELEMENT. AS REGARDS THE MODEL, WE RECOMMEND THE USE OF A PANEL WITH THE EXTERNAL RIBBED METAL FACING AND THE INTERNAL FACING MADE OF ROOFING FELT, TO BE APPLIED DIRECTLY TO THE SLAB. THERE ARE TWO RECOMMENDED INSTALLATION METHODS:



- EITHER INSTALL THE ROOF PANEL ON WHICH A FRAME OF WOOD STRIPS MUST BE FITTED IN ORTHOGONAL DIRECTION TO FIX THE STANDARD TILES (DRAWING 6), OR EXPLOIT THE PITCH OF THE PANEL RIBS TO FIT THE TRADITIONAL TILES DIRECTLY TO THIS, FOLLOWING THE CONCAVE-CONVEX SYSTEM (DRAWING 7). IN THIS CASE IT IS NECESSARY TO ADD A METAL TILE STOP PROFILE ON THE STARTING SIDE, OR IN ANY CASE GUARANTEE SUITABLE FASTENING. THE SILUETTE PROFILE MUST BE USED ALSO IN THIS CASE.



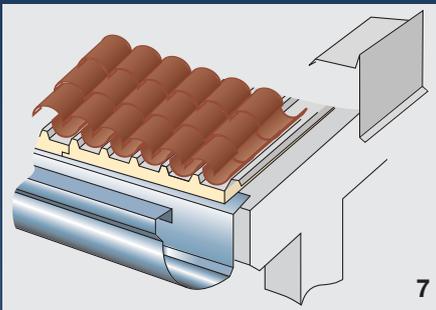
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## INDUSTRIAL ROOF

### 1) TWO PITCHES- STEEL STRUCTURE

FOR THIS TYPE OF ARCHITECTURAL STRUCTURE IT IS ADVISABLE TO USE ROOF PANELS WITH ESTERNA AND INTERNAL STEEL FACINGS. IT IS A GOOD RULE TO SELECT ALUMINIUM FOR THE EXTERNAL FACING ONLY IF THE LENGTH OF THE PITCHES DOES NOT EXCEED 10 METRES, IN ORDER TO PREVENT ANY COMPLICATIONS DUE TO METAL THERMAL EXPANSION. FOR ALL PITCHES LONGER THAN 13 METRES, IT IS ADVISABLE TO PROVIDE AN OVERLAPPING ELEMENT ON A CENTRAL SUPPORT (DRAWING 8).

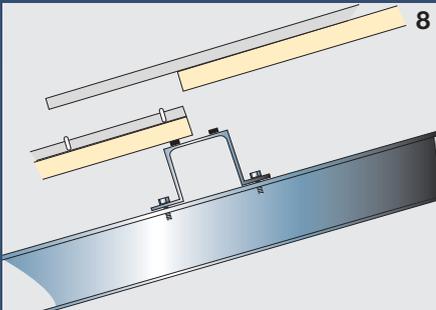
HERE ARE THE MAIN INDICATIONS FOR THIS TYPE OF WORK: APPLY A SUITABLE LINEAR SEAL LINING ON THE PANEL JOINTS IN ORDER TO PREVENT ANY CONDENSATION (DRAWING 9); WHEN INSTALLING THE RIDGE CAP, APPLY THE RIBBED SPONGE SEAL LINING, AVAILABLE ON REQUEST AND BEND THE FLAT END PART OF THE PANEL WITH A PAIR OF PLIERS WHERE IT MEETS THE RIDGE CAP, IN ORDER TO PREVENT INFILTRATION CAUSED BY STRONG WIND; APPLY A METAL SUB RIDGE CAP, SO AS TO CLOSE THE RIDGE CAP LINE BETWEEN THE TWO PITCHES AND INJECT POLYURETHANE FOAM BETWEEN THE PANELS (DRAWING 10).



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### 2) SHED ROOF

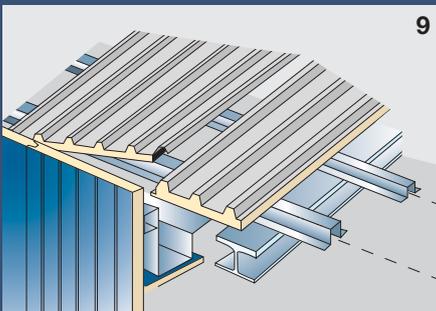
THIS KIND OF ROOF DOES NOT REQUIRE PARTICULAR TECHNIQUES, SINCE IN GENERAL THE VERY STEEP PITCH GUARANTEES A GOOD WATER FLOW. IN ORDER TO FIND A GOOD JOINING SOLUTION BETWEEN THE SLOPING PITCH MADE OF PANELS AND THE VERTICAL GLAZED STRUCTURE, WE RECOMMEND THE CREATION OF A SPECIAL CLOSURE FLASHING ACCORDING TO THE CUSTOMER'S DESIGN, AND SHAPED TO BE COMBINED WITH THE RIBBED PANEL (DRAWING 11).



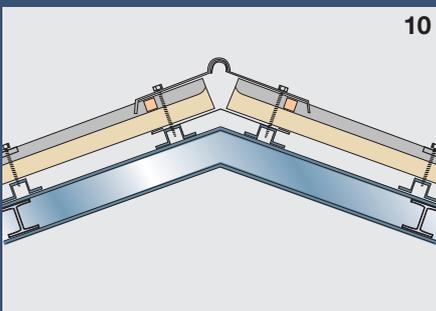
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### 3) ROOF FOR PREFABRICATED STRUCTURE

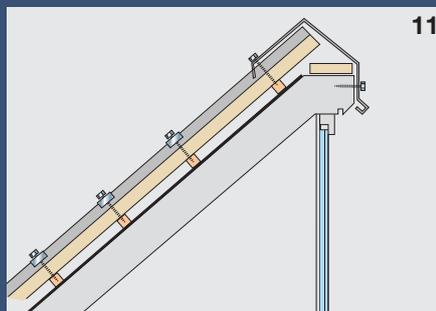
IN THE FIELD OF CONCRETE PREFABRICATED BUILDING CONSTRUCTION THE INSULATING PANEL CAN BE USED AS AN ALTERNATIVE TO CURVED CONNECTION PANELS BETWEEN "Y" BEAMS, WITH CONSIDERABLE SAVING (DRAWING 12) OR TO COVER THE WHOLE ROOF, OFTEN IN COMBINATION WITH FIXED POLYCARBONATE OR GLASS-REINFORCED PLASTIC ROOFLIGHTS. IN THE LATTER CASE, IT MAY BE NECESSARY TO BEND THE PANEL SLIGHTLY TO ADAPT IT TO THE STRUCTURE OF THE PREFABRICATED BUILDING TILED ROOF. IT IS THEREFORE POSSIBLE TO EXPLOIT THE ELASTIC CHARACTERISTICS OF THE PANEL COMPONENTS AND ADAPT IT TO THE SLIGHT BEND OF THE TILED ROOF, REMEMBERING THAT THE POLYURETHANE FOAM SHOULD NOT HAVE A THICKNESS OF OVER 40 MM. IF THE PANEL HAS TO BE FIXED DIRECTLY TO THE TILED ROOF, ITS LOWER SUPPORT MUST BE MADE OF CENTESIMAL ALUMINIUM OR ROOFING FELT (DRAWING 13), WHILE IF IT HAS TO BE FIXED TO A METAL STRUCTURE OR COMBINED WITH FIXED ROOFLIGHTS, ITS LOWER SUPPORT MUST BE MADE OF STEEL. IN THESE TWO CASES THE NUMBER OF FIXING GROUPS MUST BE INCREASED AND THE RULES FOR THE LENGTH OF THE PANELS MUST BE COMPLIED WITH AS WELL. IF



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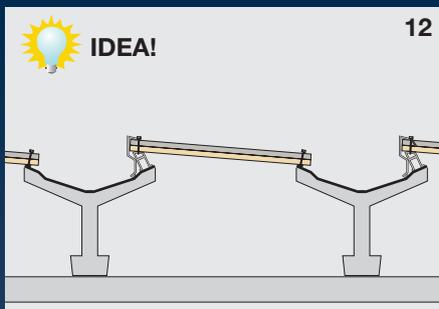


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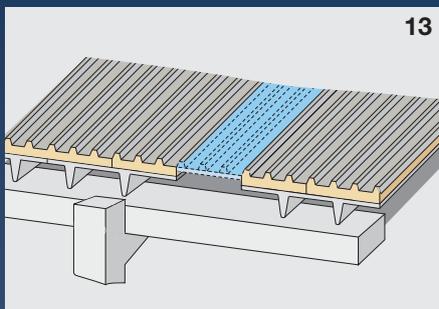


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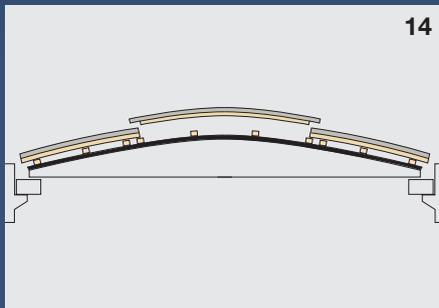
# Applications



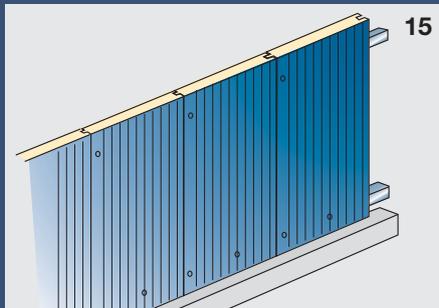
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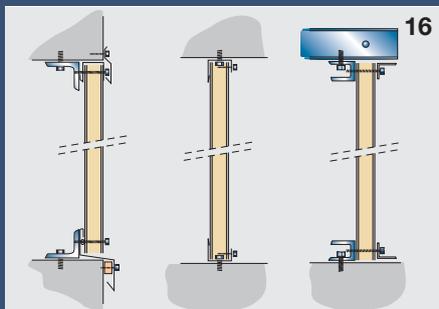
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16

OVERLAPPING OPERATIONS HAVE TO BE CARRIED OUT, AS OCCURS FREQUENTLY IN THESE CASES, IT IS A GOOD RULE TO SUBDIVIDE THE TOTAL LENGTH INTO THREE, IN ORDER NOT TO HAVE ANY OVERLAPPING AT THE HIGHEST POINT (DRAWING 14). ON THE OTHER HAND, IT IS NOT ADVISABLE TO USE THE PANEL WITH NARROWER BENDING RADIUS, SINCE THE EXTERNAL AND INTERNAL METAL FACING COULD BE SCRATCHED AND THE POLYURETHANE FOAM WOULD LOOSE CONTINUITY.

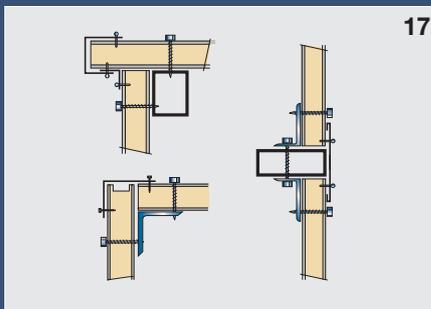
## EXTERNAL CLADDING

### 1) ASSEMBLY INSTRUCTIONS

THE ASSEMBLY OF A WALL PANELS FORESEES THE APPLICATION OF SELF-TAPPING SCREWS APPLIED FROM THE EXTERIOR TOWARDS THE INTERIOR. IN GENERAL, THE SCREW MUST JOIN THE TWO FINS OF THE FEMALE SCREW AND THE MALE SCREW OF TWO CONTIGUOUS PANELS, AND MORE OVER, IN PROXIMITY OF END (EXTERNAL AND INTERNAL) SUPPORTS, IT IS SUGGESTED TO ALSO APPLY A SAFETY SCREW AT THE CENTRE (DRAWING 15). PARTICULAR ATTENTION MUST BE PAID TO THE POWER OF THE ELECTRIC SCREWER, BECAUSE AN EXCESSIVE FORCE TOWARDS THE INTERIOR COULD SCRATCH THE PANEL EXTERNAL SURFACE. REGARDLESS THE PANEL THICKNESS, THE SUPPORT STRUCTURE MUST ANYHOW FORESEE HORIZONTAL CURRENTS LOCATED AT A MAXIMUM DISTANCE OF 3.5 M IN CASE OF POSSIBLE CUTS TO PERFORM DURING THE INSTALLATION, THE BORDERS MUST BE PROPERLY CLEANED FROM OFF-CUTS IN ORDER TO AVOID FOLLOWING DEGRADATION PHENOMENA. THESE OPERATIONS ARE OFTEN FORESEEN WHEN A CONNECTION AT AN ORTHOGONAL ANGLE MUST BE MADE BETWEEN THE WALLS.

### 2) FINISHING

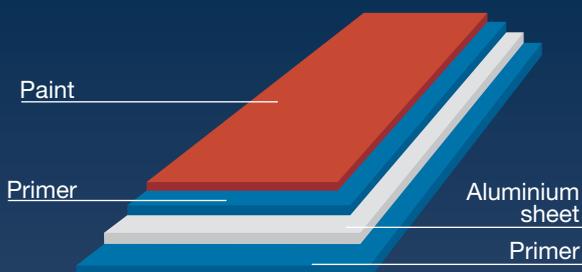
THE USE OF THE WALL PANEL FORESEES A SERIES OF FINISHES THAT MUST BE CARRIED OUT IN ORDER TO RENDER THE COVERING WORK FUNCTIONAL AND AESTHETIC. THESE FINISHES, MADE WITH PREPAINTED STEEL OR ALUMINIUM PROFILES (NOT NECESSARILY OF THE SAME COLOUR OF THE PANEL) ARE OF TWO TYPES. THE FIRST ONE INCLUDES SUPPORT STRUCTURAL PROFILES, SUCH AS HORIZONTAL ELEMENTS ON THE GROUND AND ON TOP (WITH "U", "L", OR "Z" SHAPE ACCORDING TO THE DESIGN) OR INTERNAL VERTICAL ELEMENTS (IN GENERAL WITH "U" OR "L" SHAPE); THESE PROFILES ARE GENERALLY OF HIGH THICKNESS, OF 8/10 OR 10/10 ACCORDING TO THE SELECTED MATERIAL, AND THEY FORESEE AN ANCHORING TO THE PANEL OR TO THE BUILDING STRUCTURE THROUGH SELF-TAPPING SCREWS (DRAWING 16). THE SECOND TYPE INCLUDES PROFILES WITH NO STRUCTURAL FUNCTION, BUT THEY ARE NEEDED TO COVER THE JOINTS BETWEEN THE ANGULAR WALLS OR SPECIAL JOINTS, AND THEY ARE GENERALLY 5/10 THICK AND THEY ARE ONLY ANCHORED TO THE PANEL WITH STEEL RIVETS (DRAWING 17).



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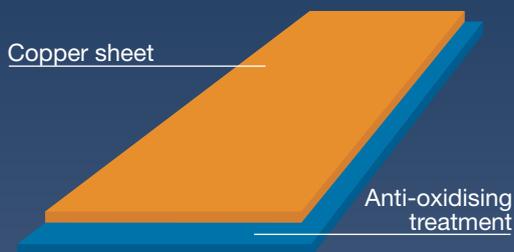
# Sheets composition

## METAL FACINGS



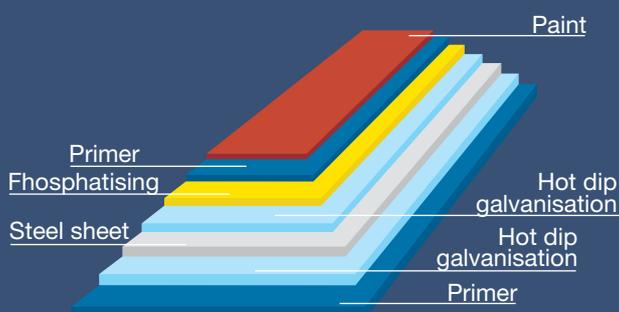
### ALUMINIUM

- 1) ALUMINIUM ALLOY SHEET.
- 2) PAINTING CONSTITUTED BY A LAYER OF PRIMER AND BY A FILM OF ACRYLIC PAINT (OR PVDF) ON THE EXTERNAL SURFACE AND A LAYER OF PRIMER THAT FAVOURS THE ADHERENCE OF THE POLYURETHANE ON THE INTERNAL SURFACE.



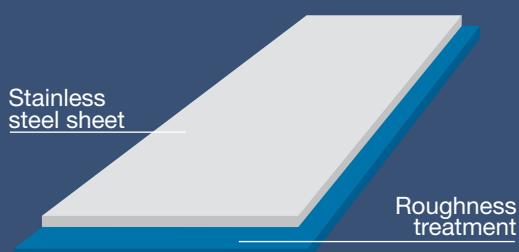
### COPPER

- 1) COPPER SHEET.
- 2) ANTI-OXIDISING TREATMENT MECHANICALLY PERFORMED ON THE INTERNAL SURFACE TO INCREASE THE ADHERENCE OF THE POLYURETHANE.



### STEEL

- 1) HOT DIP GALVANISED STEEL SHEET.
- 2) PHOSPHATION TREATMENT FOR A BETTER PROTECTION AGAINST OXIDATION.
- 3) PAINTING CONSTITUTED BY A LAYER OF PRIMER AND BY A FILM OF ACRYLIC PAINT (OR PVDF) ON THE EXTERNAL SURFACE AND A LAYER OF PRIMER THAT FAVOURS THE ADHERENCE OF THE POLYURETHANE ON THE INTERNAL SURFACE.



### STAINLESS STEEL

- 1) AISI 304 OR 316 STAINLESS STEEL SHEET.
- 2) TREATMENT OF THE INTERNAL SURFACE WITH A SPECIAL MECHANICAL PROCEDURE WHICH FAVOURS THE ADHERENCE OF THE POLYURETHANE.

### PREPAINTED STAINLESS STEEL

- 1) STAINLESS STEEL SHEET.
- 2) PAINTING CONSTITUTED BY A LAYER OF PRIMER AND BY A FILM OF ACRYLIC PAINT (OR PVDF) ON THE EXTERNAL SURFACE AND A LAYER OF PRIMER THAT FAVOURS THE ADHERENCE OF THE POLYURETHANE ON THE INTERNAL SURFACE.

### **EXPANDED POLYURETHANE FOAM (PUR)**

THE TERM POLYURETHANE COVERS A WIDE FAMILY OF THERMOSETTING POLYMERS IN WHICH THE POLYMER CHAIN IS MADE OF URETHANE LINKAGES. POLYURETHANES ARE BASICALLY OBTAINED BY THE REACTION OF A DIISOCYANATE (AROMATIC OR ALIPHATIC) AND A POLYOL (TYPICALLY A POLYESTER OR POLYETHYLENE GLYCOL), TO WHICH IS ADDED A CATALYST TO IMPROVE THE REACTION YIELD AND OTHER ADDITIVES CONFERRING SPECIFIC CHARACTERISTICS TO THE MATERIAL TO OBTAIN, IN PARTICULAR: "SURFACTANTS" TO CHANGE THE SURFACE ASPECT, FLAME RETARDANTS, AND/OR BLOWING AGENTS (TO PRODUCE FOAMS).

THE RIGID POLYURETHANE FOAM IS A THERMOSETTING CROSS-LINKED POLYMER PRODUCED BY THE REACTION OF TWO MAIN COMPONENTS - POLYOLS AND POLYISOCYANATES - IN THE PRESENCE OF A BLOWING AGENT (TYPICALLY HYDROCARBONS, CO<sub>2</sub> OR OTHER MIXTURES) AND OTHER ADDITIVES SUCH AS CATALYSTS, SILICONES, FLAME RETARDANTS, ETC... THE REACTION IS EXOTHERMAL AND THE HEAT THAT IS GENERATED LEADS TO THE BOILING OF THE BLOWING AGENT THAT REMAINS ENCAPSULATED IN THE RESULTING CELL STRUCTURE. DURING THE REACTION LEADING THE RAW MATERIALS FROM THE LIQUID TO THE SOLID STATE OF THE FINAL POLYMER, THE FOAM SHOWS HIGH ADHERENCE PROPERTIES TO ALMOST ANY KIND OF SUPPORTS, A FEATURE THAT IS ESSENTIAL PRECISELY FOR THE DEVELOPMENT AND INDUSTRIALISATION OF THE INSULATING PANELS WITH FLEXIBLE COATINGS.

- POLYURETHANE FOAM (PUR) APPLIED CONTINUOUSLY.
- DENSITY "WITH SKIN": 40 KG/M<sup>3</sup>
- DENSITY "SKINLESS": 36-38 KG/M<sup>3</sup>
- WORKING THERMAL-CONDUCTIVITY: 0.023 W/MK.
- COMPRESSIVE STRENGTH AT 10% DEFORMATION: 1.2 KG/CM<sup>2</sup>
- VALUES OF ADHERENCE TO THE FACINGS: 1 KG/CM<sup>2</sup>

### **POLYISOCYANURATE (PIR)**

THE POLYISOCYANURATE FOAMS HAVE A HIGHER CONCENTRATION OF METHYLENE DIPHENYL DIISOCYANATE COMPARED TO POLYURETHANE AND THEY THEREFORE HAVE A BETTER RESISTANCE AND GOOD PHYSICAL PROPERTIES AT HIGHER DENSITIES, PROVIDING THERMAL INSULATION, MECHANICAL STRENGTH AND THE TOTAL MONOLITHICITY OF THE PANEL.

### **ROCK WOOL**

ROCK WOOL, ALSO KNOWN AS MINERAL WOOL, IS AN AMORPHOUS SILICATE OBTAINED BY FUSION OF ITS MINERAL COMPONENT (BASALT, A VOLCANIC ROCK COMPOSED OF PLAGIOCLASE, PYROXENE AND OLIVINE) AND THEIR RE-SOLIDIFICATION INTO FIBRES THAT ARE OFTEN MAINTAINED TOGETHER BY AN ASSOCIATED BINDER OF THERMOSETTING RESINS.

ROCK WOOL ACTS AS AN INSULATING CORE AND IS MADE OF MINERAL WOOL STRIPS BEING SET AT 90 DEGREES TO THE PLANE OF THE SUPPORTS.

- REACTION TO FIRE: INCOMBUSTIBILITY, THE ROCK WOOL PROVIDES AN EFFECTIVE PROTECTION AGAINST FIRE, WITH A MELTING POINT GREATER THAN 1.000 °C.
- SOUND INSULATION PROPERTIES: ROCK WOOL HAS THE ABILITY TO ABSORB AND REDUCE HIGH NOISE LEVELS.
- THERMAL INSULATION PROPERTIES: UP TO: 0.041 W/MK
- PERMEABILITY TO WATER VAPOUR: THANKS TO ITS FIBRE STRUCTURE, THE ROCK WOOL IS PERMEABLE TO WATER VAPOUR
- WATERTIGHTNESS: FIBRES HAVE A PERMANENT WATERTIGHTNESS
- NON HARMFUL TO HUMAN HEALTH AND ENVIRONMENT
- RESISTANCE TO MICROORGANISMS

### **THERMAL INSULATION**

THAT REDUCE THE THERMAL FLUX EXCHANGED BETWEEN TWO ENVIRONMENTS WITH DIFFERENT TEMPERATURES. SPEAKING OF THERMAL INSULATION MEANS TO STUDY THE THERMAL CONDUCTIVITY OF A MATERIAL, GIVEN BY  $\lambda$  OR  $U$  AND GIVEN AS THE RATIO, IN STATIONARY CONDITIONS, BETWEEN THE OBSERVED THERMAL FLUX AND THE TEMPERATURE GRADIENT WHICH CAUSES THE PASSAGE OF HEAT. IN OTHER WORDS, THE THERMAL CONDUCTIVITY IS A MEASURE OF THE ATTITUDE OF A SUBSTANCE TO TRANSMIT HEAT AND IT DEPENDS ONLY ON THE NATURE OF THE MATERIAL, RATHER THAN ITS FORM.

### **SOUND INSULATION**

THE SOUND INSULATION OF A MATERIAL IS GIVEN BY ITS ABILITY TO REDUCE THE PASSAGE OF SOUND ENERGY BETWEEN TWO ENVIRONMENTS. IN THE FIELD OF SOUND INSULATION IN CONSTRUCTION, WE APPLY THE LAW OF MASS THAT EXPRESSED THAT THE COEFFICIENT OF TRANSMISSION OF THE SOUND POWER INCREASES WITH THE DECREASING OF THE MASS OF THE WALL PER AREA UNIT AND THE SOUND FREQUENCY.

THE SOUND ABSORPTION, THAT IS TO SAY THE MATERIAL ABILITY TO ABSORB THE SOUND ENERGY, ASSUMES DIFFERENT MECHANISMS THAT DEPEND ON THE POROSITY, THE RESISTANCE OF THE FLOW AND OF THE MATERIAL ABILITY TO ABSORB THE AIR VIBRATION (ACOUSTIC TRANSPARENCY). A SOUND ABSORBING MATERIAL SHOULD HAVE BOTH A HIGH ACOUSTIC TRANSPARENCY (IE LOW FLOW RESISTANCE) AND A GOOD ENERGY DISSIPATION PENETRATED (I.E. A HIGH RESISTANCE TO FLOW): CONTRASTING PROPERTIES. A GOOD ACOUSTIC PANEL, THEREFORE, IS TYPICALLY FORMED OF A SURFACE AT HIGH ACOUSTIC TRANSPARENCY AND FILLED WITH PORES ARRANGED IN A DIFFERENT DIRECTION FROM THE FLUX.

### **STATIC PROPERTIES**

THE STATIC PROPERTIES IN THIS CATALOGUE ARE ONLY INDICATIVE FOR THE CLIENT.

TO VERIFY THE STATIC PROPERTIES OF EACH INDIVIDUAL PROJECT, THE APPLICABLE LEGISLATION PROVIDES THAT YOU CONTACT A QUALIFIED TECHNICIAN.

### **FIRE CHARACTERISTICS**

REACTION TO FIRE IS THE DEGREE OF PARTICIPATION OF A MATERIAL AT THE COMBUSTION. COMPARED WITH THIS ATTITUDE, AT THE MATERIALS IT ASSIGNS AN EUROCLASS (FROM A TO F), WHICH INCREASES WITH THE DEGREE OF PARTICIPATION IN THE COMBUSTION.

FIRE RESISTANCE IS THE ATTITUDE OF A BUILDING ELEMENT TO MAINTAIN ITS MECHANICAL STABILITY, NOT TO SPREAD THE FLAME AND KEEP THE

THERMAL INSULATION FOR A WHILE.

FIRE RESISTANCE IS EXPRESSED IN MINUTES, START FROM HEATING PERIOD UNTIL THE TEST COMPONENT CEASES TO MEET THE CRITERIA THAT IT MUST COMPLY WITH.

#### **TYPICAL PARAMETERS FOR FIRE REACTION**

THE REACTION TO FIRE OF A MATERIAL IS A VERY COMPLEX PHENOMENON THAT DEPENDS ON VARIOUS PARAMETERS, THE MAIN ARE:

- FLAMMABILITY: CONSIDERED AS A MATERIAL ABILITY TO ENTER AND REMAIN IN A STATE OF COMBUSTION, WITH EMISSION OF FLAME AND / OR DURING EXPOSURE TO HEAT.

- SPEED OF PROPAGATION OF THE FLAME: UNDERSTOOD AS SPEED WITH WHICH THE FLAME FRONT PROPAGATES IN A MATERIAL.

- DRIP: UNDERSTANDING AS THE CAPACITY OF A MATERIAL TO EMIT DROPLETS OF MOLTEN MATERIAL FROM AND / OR DURING EXPOSURE TO HEAT.

- POST-INCANDESCENT: PRESENCE OF INCANDESCENT AREAS AFTER THE EXTINCTION OF THE FLAME (COALS) THAT COULD START A FIRE AGAIN WITH

DEVELOPMENT OF HEAT AFTER SOME TIME: UNDERSTOOD AS THE AMOUNT OF HEAT EMITTED BY UNIT OF TIME BY A MATERIAL CAPABLE OF BURNING.

- PRODUCTION OF SMOKE: UNDERSTOOD AS THE ABILITY OF A MATERIAL TO EMIT A SET OF SOLID PARTICLES VISIBLE AND / OR LIQUID SUSPENDED IN

THE AIR, RESULTING FROM INCOMPLETE COMBUSTION UNDER DEFINED CONDITIONS AND PRODUCTION OF HARMFUL SUBSTANCES: UNDERSTOOD AS THE ABILITY TO EMIT GASES AND / OR FUMES UNDER DEFINED COMBUSTION CONDITIONS.

REFERENCE STANDARD: UNI EN 13501-1:2009

THE EUROPEAN STANDARD UNI EN 13501-1 REGULATES THE FIRE CLASSIFICATION OF BUILDING PRODUCTS AND BUILDING COMPONENTS. EVEN WITH THE EUROPEAN CLASSIFICATION, IN ITALY THE NATIONAL REGISTRATION IS REQUIRED, EXCEPT FOR PRODUCTS FOR WHICH THERE IS A EUROPEAN STANDARD, SO WITH THE REQUIREMENT OF CE MARKING. IN THIS CASE, MATERIALS ARE CLASSIFIED ACCORDING TO THE EUROCLASSES A1, A2, B, ..., F. THE MATERIALS CLASSIFIED A1 AND A2 ARE INCOMBUSTIBLE AND THOSE CERTIFIED BY B TO F BURN IN ASCENDING ORDER.

HOWEVER, THE MINISTERIAL DECREE OF THE 15 MARCH 2005 INTRODUCED A CHART THAT COMPARES THE ITALIAN CLASSES WITH THOSE IN EUROPE, IN ORDER TO ENFORCE LAWS REQUIRING SPECIFIC REACTION TO FIRE.

THE EUROPEAN CLASSIFICATION ALSO PROVIDES FOR THE CLASSIFICATION OF SMOKE AND DRIPPING. EXAMPLE: B-S1, D0. WHERE "S" INDICATES "SMOKE" AND "D" INDICATES "DROPS". THE CLASSIFICATION RANGES FROM 0 (ABSENT) TO 3 (HIGH).

#### **CHARACTERISTICS PARAMETERS OF FIRE RESISTANCE**

FIRE RESISTANCE IS THE ABILITY OF A BUILDING, PART OF IT OR PART OF THE CONSTRUCTION TO KEEP FOR A PRESET TIME:

- THE RESISTANCE R: ATTITUDE TO MAINTAIN THE MECHANICAL STRENGTH UNDER THE ACTION OF FIRE;

- THE TIGHTNESS E: ATTITUDE TO LET NOT PASS, OR PRODUCE, IF SUBJECTED TO THE ACTION OF FIRE ON ONE SIDE, FLAMES, STEAM OR HOT GASES

ON THE UNEXPOSED SIDE;

- THE THERMAL INSULATION I: ATTITUDE TO REDUCE THE TRANSMISSION OF HEAT.

GIVEN THE ABOVE:

BY THE SYMBOL REI (FOLLOWED BY A "N" NUMBER) WE IDENTIFY A STRUCTURAL ELEMENT THAT MUST BE KEPT FOR A SPECIFIED PERIOD "N" MECHANICAL STRENGTH, TIGHTNESS FLAMES AND HOT GASES, THERMAL INSULATION. THE NUMBER "N" INDICATES THE CLASS OF FIRE RESISTANCE. FOR THE CLASSIFICATION OF NON-SUPPORTING ELEMENTS, THE CRITERION R IS AUTOMATICALLY SATISFIED WHEN E AND I CRITERIA ARE MET. FOR SUPPORTING ELEMENTS, THE VERIFICATION OF FIRE IS CONDUCTED BY CONTROLLING THAT THE MECHANICAL STRENGTH IS MAINTAINED DURING THE PERIOD CORRESPONDING TO THE CLASS OF FIRE RESISTANCE OF THE STRUCTURE WITH REFERENCE TO THE NOMINAL CURVE OF FIRE. THE CERTIFICATES OBTAINED BY THE OLD RULES ARE VALID IF OBTAINED 5 YEARS AFTER 1995 AND THEY REMAIN VALID ONLY IN ITALY. CURRENTLY, UNDER THE MINISTERIAL DECREE OF 16 FEBRUARY 2007, THE NEW PRODUCTS AND BUILDING ELEMENTS MUST BE CERTIFIED UNDER THE NEW RULES THAT REFER TO UNI EN 13501. THE NEW EUROPEAN CLASSIFICATION, WHICH APPLIES TO NON-LOAD BEARING ELEMENTS OF CLOSURE, PROVIDES FOR THE ELIMINATION OF THE LETTER R AND THE ADDITION OF A NEW PARAMETER: W ON THE ISSUE OF ENERGY. A FIRE-RESISTANT ELEMENT CAN BE CLASSIFIED: E - EW - EI



# Organic Coated Steel

## Estetic Clean for Indoor

Coatings for indoor building, general industry and domestic appliances

By ArcelorMittal



# Organic Coated Steel

## Estetic Clean for Outdoor

Coatings for outdoor building applications (cladding, roofing, accessories)

By ArcelorMittal



# Comparative Table

			U	K		R		
Inches/Pulgadas	mm	W / ( m <sup>2</sup> ·K)	Kcal/m <sup>2</sup> h C°	kcal/h m <sup>2</sup> C°	W/m <sup>2</sup> C°	m <sup>2</sup> ·K/W	h m <sup>2</sup> C°/kcal	m <sup>2</sup> C°/W
0,3937	10	2,1	1,806	1,804	2,100	0,476	0,554	0,476
1,1811	30	0,7	0,602	0,601	0,700	1,429	1,663	1,429
1,5748	40	0,53	0,456	0,455	0,530	1,887	2,196	1,887
1,9685	50	0,43	0,370	0,369	0,430	2,326	2,707	2,326
2,3622	60	0,36	0,310	0,309	0,360	2,778	3,234	2,778
3,1496	80	0,27	0,232	0,232	0,270	3,704	4,312	3,704
3,937	100	0,22	0,189	0,189	0,220	4,545	5,292	4,545
4,7244	120	0,18	0,155	0,155	0,180	5,556	6,467	5,556
6	152,4	0,16	0,138	0,120	0,140	6,250	8,330	7,140
7	160	0,14	0,120	0,120	0,140	7,143	8,315	7,143

1 W/m<sup>2</sup> k = 0,86 kCal/h m<sup>2</sup> C°

# Conversion Table

Conversion Caliber/mm	Nominal Thickness (inches)	Max Thickness (inches)	Min Thickness (inches)	Nominal Thickness (mm)	Max Thickness (mm)	Min Thickness (mm)
24	0,0254	0,0294	0,0214	0,645	0,745	0,0545
26	0,0194	0,0224	0,0164	0,493	0,593	0,393
28	0,0164	0,0194	0,0134	0,417	0,517	0,317

# Globe Panels Ltd



We operate in 84 countries around the world, especially in Northern, Central and South America, in West and Central Africa and in some European countries

**GLOBE PANELS Ltd**  
Kemp House  
152-160 City Road  
EC1V 2NX London  
United Kingdom

[info@globepanels.com](mailto:info@globepanels.com)  
[sales@globepanels.com](mailto:sales@globepanels.com)  
[www.globepanels.com](http://www.globepanels.com)