

CATALOGUE #2018

**laTtonedil** MILANO  
INSULATES AND PROTECTS OVER TIME



# 10 PRODUCTION PLANTS. LATTONEDIL GROWS EVERY DAY WITH YOU



FOUNDED IN 1969 IN BRIANZA, A LAND CHARACTERISED BY AN OUTSTANDING CULTURE OF WORK AS SOCIAL VALUE, LATTONEDIL GREW OVER THE YEARS TO BECOME AN INFLUENTIAL GROUP, CURRENTLY COUNTING 10 MANUFACTURING PLANTS: SIX IN ITALY, ONE IN GERMANY, ONE IN SPAIN, ONE IN BOSNIA-HERZEGOVINA AND ONE UPCOMING IN FRANCE. THE PLANT IN CARIMATE (CO) EXTENDS OVER A TOTAL AREA OF 126,000 SQUARE METRES NESTLED IN THE SEVESO VALLEY.

IT FEATURES THREE PRODUCTION LINES THANKS TO WHICH IT CAN MEET THE DEMAND OF THE NORTHERN ITALY MARKET FOR SANDWICH PANELS. THE COMPANY'S SHOWROOM IS LOCATED AT THE PLANT IN CANTÙ (CO), SPECIALISED IN THE ASSEMBLY OF SPECIAL PANELS FINISHED IN STONE, ASSEMBLY OF STONE-FINISHED AND PORCELAIN OR CASED GRES-FINISHED SPECIAL PANELS. THE MANUFACTURING PLANT IN VENZONE (UD) IS SPECIALISED IN THE PRODUCTION OF PANELS

WITH MINERAL FIBRE AND GLASS WOOL INSULATION, WHILE THE PLANT IN CROTONE, IN THE EASTERN PART OF CALABRIA, SUPPLIES PANELS FOR INDUSTRIAL ARCHITECTURE DESTINED TO MEDITERRANEAN MARKETS. IN SOUTHERN ITALY, LATTONEDIL IS ALSO PRESENT IN BATTIPAGLIA (SA) WITH A PLANT THAT PRODUCES SHEETS IN POLYCARBONATE. WHILE AT ITS NEW PLANT IN FROSINONE, IT MANUFACTURES BENT PANELS. THE PLANT IN DINKELSBÜHL, GERMANY, IS DEDICATED TO THE PRODUCTION OF PANELS FOR THE NORTHERN EUROPEAN MARKET, WHILE THE PLANT IN HUERTA SALAMANCA, SPAIN, IS LATTONEDIL'S OUTLET TOWARDS THE SPANISH AND PORTUGUESE MARKETS. WITH THE INAUGURATION OF THE PLANT IN NOVA TOPOLA, IN BOSNIA-HERZEGOVINA, AND THE OPENING OF THE PLANT IN FRANCE IN THE NEAR FUTURE, LATTONEDIL ASSERTS ITSELF AS ONE OF THE MAJOR GROUPS MANUFACTURING SANDWICH PANELS AT THE EUROPEAN LEVEL.





VENZONE



DINKELSBÜHL



CROTONE



FROSINONE



HUERTA SALAMANCA



CANTÙ



BATTIPAGLIA



NOVA TOPOLA







# MANUFACTURING ACCORDING TO THE HIGHEST QUALITY STANDARDS

LATTONEDIL® OBSERVES, STUDIES AND ACQUIRES KNOWLEDGE FROM THE RESIDENTIAL AND INDUSTRIAL CONSTRUCTION SECTOR, TO OFFER MANUFACTURING METHODS THAT TAKE FULL ADVANTAGE OF THE OPPORTUNITIES OFFERED BY INDUSTRIALISATION. ITS MANUFACTURING PROCESS IS FULLY AUTOMATED TO GUARANTEE PERFECT PRODUCTS AND UTMOST QUALITY AND GUARANTEE THE UTMOST QUALITY. LATTONEDIL ALSO PLACES GREAT IMPORTANCE ON PEOPLE, AS IT IS THANKS TO SKILLED AND EXPERIENCED STAFF THAT EVERY STEP OF THE MANUFACTURING PROCESS IS CAREFULLY MONITORED BY THE KEEN AND EXPERT EYES OF TECHNICAL STAFF FROM THE DESIGN STAGE ALL THE WAY TO MANUFACTURING AND DELIVERY, FROM THE DESIGN STAGE THROUGH TO PRODUCTION AND DELIVERY.





FROM PREPAINTED STEEL, ALUMINIUM, COPPER OR PORCELAIN STONEWARE ALL THE WAY TO STONE: ALL PANELS ARE FINISHED TO MEET THE DESIGNER AND CLIENT'S NEEDS. EVERY ORDER CAN BE PROCESSED QUICKLY AND AD-HOC THANKS TO A VOLUME PRODUCTION LINE AND CONSTANT WORK CYCLE. MANUFACTURING OCCURS AT A CONSTANT PACE, FROM THE STEEL COILS TO PACKAGING.



PRODUCTION OF PANELS WITH A MINERAL FIBRE INSULATION SYSTEM. THE ENTIRE PROCESS IS AUTOMATED. THE FIBRE IS CUT TO SIZE BEFORE BEING INSERTED INTO THE PANEL, WHICH IS THEN PASSED THROUGH A HEATED DOUBLE BELT THAT ACTIVATES THE CHEMICAL COMPONENTS IN THE GLUE TO ENSURE UTMOST PRODUCT COMPACTNESS.







# TESTING LABORATORY

LATTONEDIL PAYS GREAT ATTENTION TO PRODUCT CHARACTERISTICS. THE QUALITY OF THE RAW MATERIALS USED LEADS TO THE HIGH AESTHETIC VALUE DISTINGUISHING ITS PRODUCTION. HIGH QUALITY STANDARDS ARE ALSO UPHELD BY QUALITY CONTROL TESTS. LATTONEDIL BOASTS AN IN-HOUSE LABORATORY, CREATED TO TEST PRODUCT QUALITY ON A CONTINUOUS BASIS. FOR EACH ORDER, WE ARE ABLE TO CERTIFY EVEN THE SMALLEST DEVIATION FROM THE DECLARED VALUES: CAPACITY, INSULATION DEGREE, AND AIR OR WATER-PROOFING. THE CERTIFICATION SUPPLIED WITH THE PRODUCT (IN ACCORDANCE WITH THE EC STANDARD AND OTHER NON-EUROPEAN CERTIFICATIONS) CONFIRMS ALL OF THE TESTS PERFORMED BY THE LAB.



# LATTONEDIL'S CUSTOM PRODUCTS. TAILOR-MADE TO THE CENTIMETRE.

WE CREATED THE LARGEST CUSTOM LABORATORY IN ITALY, READY TO TRANSFORM EACH SINGLE LATTONEDIL'S PRODUCT IN AN EXTREMELY CARED FOR PRODUCT, GUARANTEED TO MEET EVERY CUSTOM NEED OF YOUR PROJECT.



STEEL WITH HIGH PERFORMANCE  
AGAINST CORROSION



CUSTOM MANUFACTURING



BIM DESIGN



COLOURS AND FINISHES MADE  
ACCORDING TO YOUR DESIGN



CUSTOM WORKS



INTEGRATION OF PANELS  
AND NATURAL LIGHT OPENINGS



SUPERVISION DURING THE ASSEMBLY PHASE



ENGINEERING OF THE INSTALLATION SYSTEM



PRODUCT WARRANTY

# SARTORIA

TAILOR MADE PROJECT



THE FOLLOWING IMAGES EXPLAIN THE CUSTOM WORK  
OFFERED BY LATTONEDIL.





LIVORNO:  
BENETTI SHIPYARD  
26,420 sq.m.

ROOF PANELS:  
EUROCINQUE HP  
10,420 sq.m.

WALLS  
ISOPARFIRE ELEGANT  
16,000 sq.m.

BUILDING SIZE:  
130 x 60 m  
95 x 70 m

NO. OF  
CUSTOM PIECES:  
4,550





LIVORNO:  
GIGAYACHT  
SHIPYARD  
16,900 sq.m.

ROOFS:  
ISOPARFIRE  
ELEGANT

CORNERS:  
30°, 45°, 60°  
AND 90°





LOGISTICS  
CENTRE  
107,000 sq.m.

WALL PANELS:  
ISOPAR ELEGANT  
15,591 sq.m.

THE PANELS WERE  
MADE IN CUSTOM  
COLOURS

NO. OF  
CUSTOM PIECES:  
2,370





BRITAIN:  
ARCHITECTURE,  
DESIGN, HIGH-TECH  
CORNER

ROOF PANELS:  
TTACK  
305 sq.m.

WALLS  
ISOPAR ELITE  
DOGA 500  
496 sq.m.

BUILDING SIZE:  
16 x 16 m

NO. OF  
CUSTOM PIECES:  
187



YORKSHIRE:  
ARCHITECTURE,  
DESIGN, GRES  
FINISH

WALL PANELS:  
GIANO  
192 sq.m.

BUILDING SIZE:  
15 x 17 m

NO. OF  
CUSTOM PIECES:  
120





BORGOTARO:  
SHEET PLANT  
65,000 sq.m.

PANELS:  
EUROCINQUE HP,  
THERMO G5;  
VELARIO

BUILDING SIZE:  
420 m x 55 m  
160 m x 65 m

CUSTOM DESIGN  
AND BUILT  
THINSMITHERY

NO. OF  
CUSTOM PIECES:  
34,000





MILAN:  
RELIGIOUS  
BUILDING  
3,000 sq.m.

PANELS:  
WAPSTONE

BUILDING SIZE:  
22 m x 14 m

CUSTOM DESIGN  
AND BUILT  
THINSMITHERY

NO. OF  
CUSTOM PIECES:  
220



EXPANDED POLYURETHANE AND ALL OF ITS INSULATING PROPERTIES  
OFFERING EXCELLENT RESULTS AT THE RIGHT PRICE

# CHAPTER 1

## POLYURETHANE SANDWICH PANELS





## THE FIRST AND ONLY PANEL IN THE WORLD FOR FLAT ROOF COVERINGS

Position the first roof panel

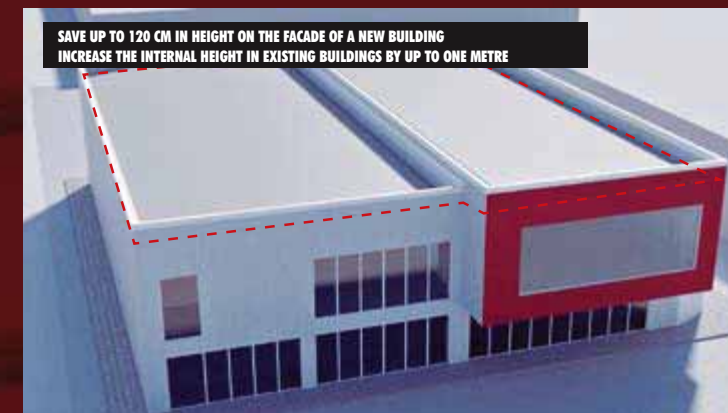


Fasten in place using a fixing bracket, which allows the expansion joints to slide with the possibility of choosing between lateral or upper fastening. For upper fastening, the panel is equipped with a channel to house the bolt.

Position the second panel and slide it into place until it is fully attached to the first panel



The "clack" sound indicates that the panels are connected



## ALL THE ADVANTAGES OF TTACK:

### REDUCTION IN STRUCTURAL COSTS

BY CHANGING THE ROOF COVERING FROM SLOPED TO FLAT, OR INCREASING INTERNAL VOLUME

### MAKING USE OF THE MAXIMUM HEIGHT

ALLOWED BY PLANNING REGULATIONS

### SAVE ENERGY

BY RECLAIMING UNUSED SPACE

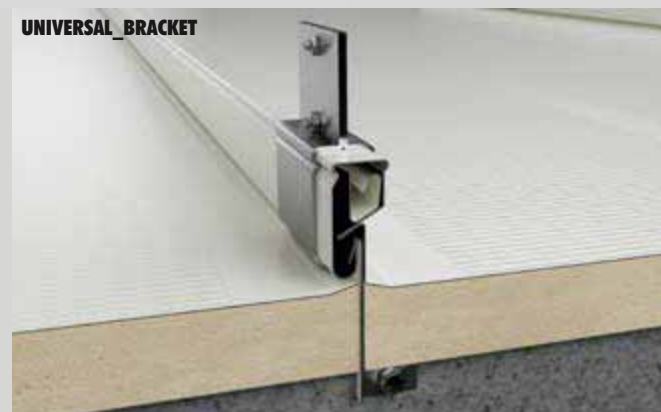
### SAVE TIME

THANKS TO THE EASE OF INSTALLATION WITH THE SPECIAL INTERLOCKING JOINT SYSTEM



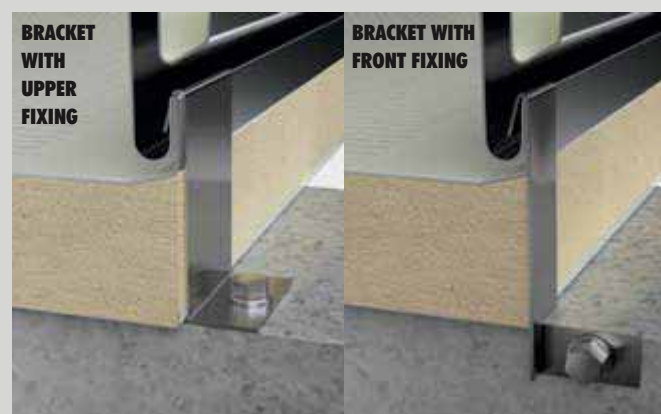
## IT PERFORMS INCREDIBLY WELL WITH WATER.

THE SPECIAL "TTACK" INTERLOCKING SYSTEM CREATES TWO NATURAL SAFETY CHANNELS TO DRAIN AWAY EXCESS WATER.



The accessories of Tack: from brackets to hold and tighten the panel, up to the service ones for mounting photovoltaic modules.

The decision to opt for a frontal rather than an upper connection also determines the choice of the Tack panel. See drawings on the following pages.

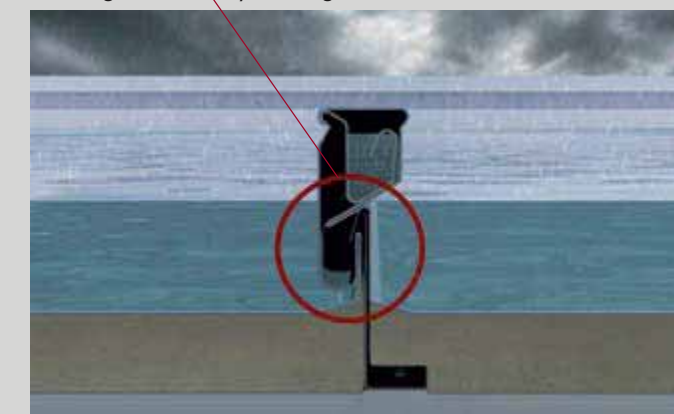
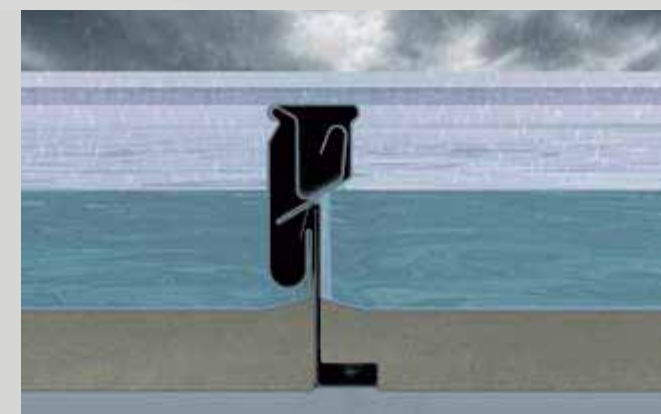


Under intense rain, the water level could reach the top part of the rib on a tack panel

①

For increased safety, a **SECOND CHANNEL** has been added to ensure the roof covering remains fully watertight.

③



The pressure of the water seals the rib. If the rain persists, it may filter in due to water capillarity, in which case the water would be collected in the **FIRST SAFETY CHANNEL**.

②

Water drains away through the channels into the gutter as soon as the water flow allows.

④







# TTACK<sup>®</sup>

THE ONLY PANEL IN THE WORLD FOR FLAT ROOF COVERINGS

## Metallic coatings

Hot dip and galvanized steel, SENDZIMIR system (UNI EN 10346) pre-painted on continuous lines with cycles based on polyester resins, high resistance polyester, PVDF (polyvinylidene fluorides), on the exposed side. A primer is applied to the underside of the panel.

## Insulation

Composed of rigid polyurethane foam that complies with European regulations concerning reaction to fire.

- Composition of polyurethane resin type formula (PUR, PUR B2 or PIR on request)
- Thermal conductivity coefficient  $\lambda = 0.023 \text{ W/Mk}$
- Average density  $40 \text{ kg/m}^3 \pm 10\%$
- Compressive strength  $\geq 0.11 \text{ MPa}$  (at 10% deformation)
- Tensile strength  $\geq 0,1 \text{ Mpa}$
- Shear strength  $\geq 0,1 \text{ Mpa}$
- Non-hygroscopic since more than 95% of it features closed cells
- Adherence to support surfaces  $1 \text{ kg/cm}^2$
- U-value thermal transmittance coefficient in accordance with EN14509

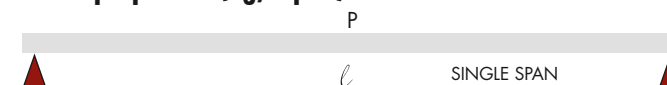
## Joint

The TTACK panel joint is designed to prevent any kind of leakage and thermal bridges. A continuous gasket is inserted during the production process.

## Static features

Clack panels are classified as self-supporting in accordance with the definition established by the UNI EN 14509 regulation "... a panel capable of supporting, by virtue of its materials and shape, its own weight and in case of panels fixed to spaced structural supports, all applied loads (snow, wind, air pressure), and transmitting these loads to the supports." The loads vary depending on the supports and are defined in LATTONEDIL's catalogue. The load values refer to panels installed horizontally and subject to a distributed load, without taking into consideration thermal effects, which are verified by the designer. The creep effect for insulating material, caused by accidental overloads, is taken into account in the static calculation.

## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.6 mm  
**INTERNAL facing:**  
Steel 0.5 mm

| PANEL THICKNESS (mm)                                                                                                            | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-------------------|
| 50                                                                                                                              | 260 | 195 | 155 | 105 | 75  |     | 10.84             |
| 80                                                                                                                              | 415 | 315 | 255 | 205 | 155 | 120 | 12.04             |
| 100                                                                                                                             | 520 | 390 | 315 | 260 | 215 | 170 | 12.84             |
| 120                                                                                                                             | 625 | 470 | 380 | 310 | 265 | 220 | 13.64             |
| 150                                                                                                                             | 785 | 590 | 470 | 390 | 335 | 290 | 14.84             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $l$ |     |     |     |     |     |     |                   |

**EXTERNAL facing:**  
Steel 0.8 mm  
**INTERNAL facing:**  
Steel 0.5 mm

| PANEL THICKNESS (mm)                                                                                                            | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-------------------|
| 50                                                                                                                              | 275 | 210 | 169 | 131 | 90  |     | 13.23             |
| 80                                                                                                                              | 435 | 325 | 269 | 215 | 170 | 135 | 14.43             |
| 100                                                                                                                             | 540 | 410 | 335 | 275 | 230 | 185 | 15.23             |
| 120                                                                                                                             | 645 | 485 | 395 | 335 | 285 | 235 | 16.03             |
| 150                                                                                                                             | 795 | 605 | 485 | 410 | 345 | 310 | 17.23             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $l$ |     |     |     |     |     |     |                   |

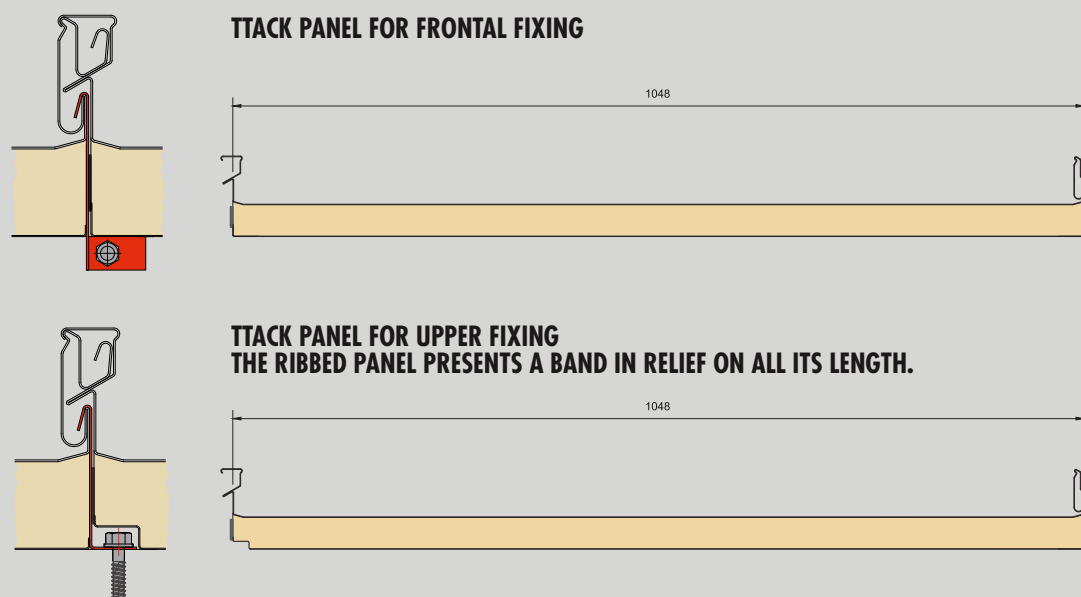
| U Transmittance | 50   | 80   | 100  | 120  | 150  |
|-----------------|------|------|------|------|------|
| W/sq.m. K       | 0.44 | 0.28 | 0.22 | 0.19 | 0.15 |
| Kcal/sq.m. h °C | 0.38 | 0.24 | 0.19 | 0.16 | 0.13 |

## TOLERANCES (See UNICMI standards)

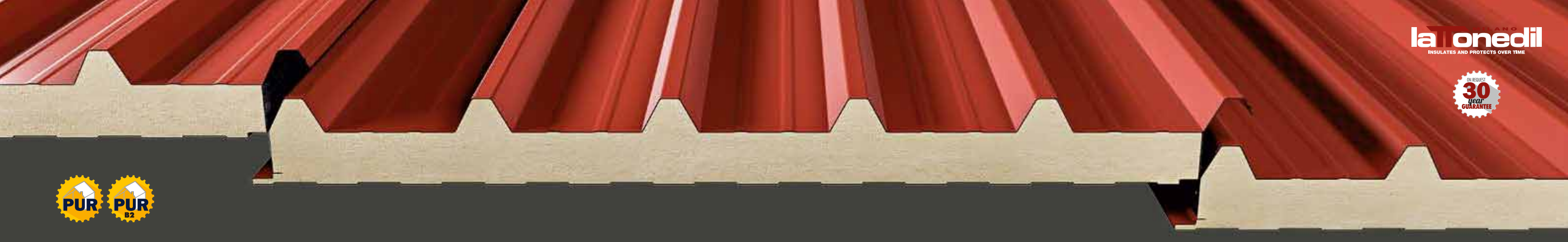
Coating thickness: according to reference standards for the products used.  
Length: if  $\leq 3000 \text{ mm} \pm 5 \text{ mm}$ ; if  $> 3000 \text{ mm} \pm 10 \text{ mm}$   
Panel thickness: if  $\leq 100 \text{ mm} \pm 2 \text{ mm}$ ; if  $> 100 \text{ mm} \pm 2\%$   
Perpendicularity deviation: so = horizontal deviation  
so  $\leq 0.6\%$  of the nominal width covered  
Not perpendicular: max 3 mm

## METALLIC COATINGS PROTECTION

All the panels made with the pre-painted metal materials mentioned above are supplied upon request with a protective polyethylene adhesive film to prevent damage to the painted layer. If the material is supplied without a protective film, LATTONEDIL is not responsible for any damage on the painting. The protective film must be completely removed during the panel installation and, in any case, within a maximum of thirty days from the delivery of the materials. The panels, still covered by the protective film, must not be exposed to direct sunlight for long periods of time.





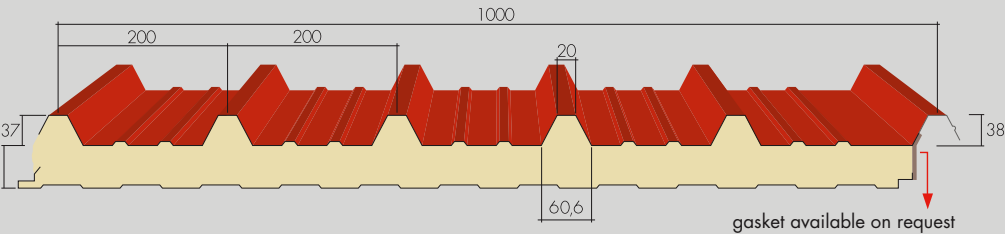


# ISOCOPRE®

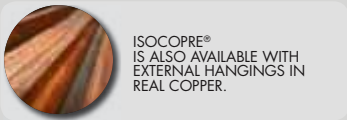
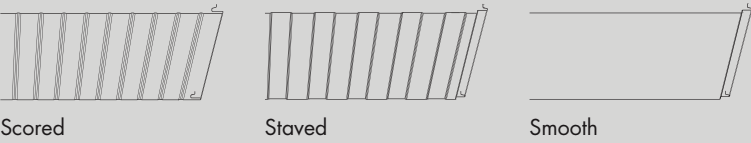
THE COST EFFECTIVE ROOF PANEL

Insulating roof panels have become an important component in the world of contemporary construction. Designers demand panels that are solid, have good thermal insulation, are easy to install and have a good appearance. ISOCOPRE®, the result of advanced technology, interprets these values, condensing them into a single formula: six ribs, one metre wide. It is no coincidence then that this is one of the most popular

models with operators in the residential and industrial construction industry. ISOCOPRE® is composed of rigid facings in prepainted steel or aluminium with an insulating core of high-density expanded polyurethane, which is free from CFC and therefore environmentally friendly. The range of thicknesses and facings available on request make it possible to meet a variety of design requirements.



Micro-veining of the LOWER side of the panel (to be specified when ordering)



## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
| 30                                                                                                                            | 260 | 205 | 120 | 85  | 55  |     |     |     |     |    | 7.62              |
| 40                                                                                                                            | 315 | 225 | 150 | 110 | 80  | 50  |     |     |     |    | 8.00              |
| 50                                                                                                                            | 380 | 270 | 190 | 135 | 100 | 75  | 50  |     |     |    | 8.38              |
| 60                                                                                                                            | 450 | 320 | 225 | 165 | 125 | 95  | 65  | 50  |     |    | 8.76              |
| 80                                                                                                                            | 580 | 425 | 305 | 225 | 175 | 135 | 105 | 80  | 60  |    | 9.52              |
| 100                                                                                                                           | 710 | 530 | 390 | 290 | 225 | 175 | 140 | 115 | 85  | 65 | 10.28             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |    |                   |

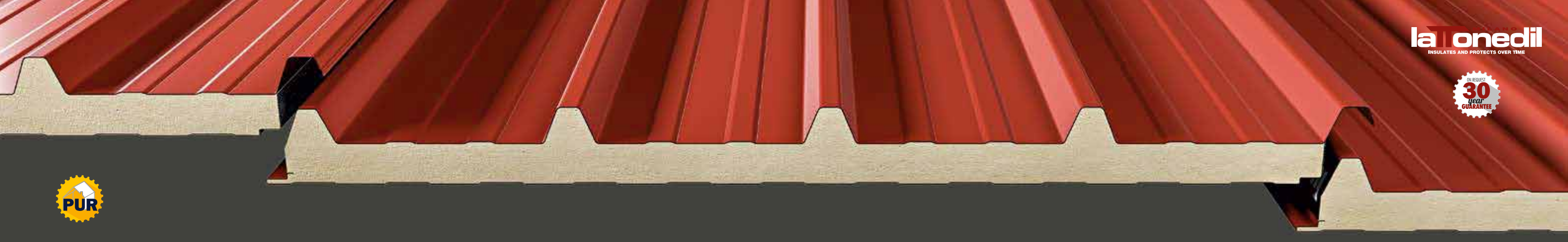
**EXTERNAL facing:**  
Aluminium 0.6 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
| 30                                                                                                                            | 270 | 185 | 140 | 100 | 70  |     |     |     |     |    | 6.05              |
| 40                                                                                                                            | 342 | 235 | 185 | 130 | 95  | 65  | 50  |     |     |    | 6.43              |
| 50                                                                                                                            | 396 | 285 | 225 | 170 | 125 | 90  | 65  | 50  |     |    | 6.81              |
| 60                                                                                                                            | 450 | 335 | 265 | 210 | 155 | 110 | 80  | 60  |     |    | 7.19              |
| 80                                                                                                                            | 580 | 435 | 345 | 285 | 220 | 165 | 120 | 95  | 70  | 55 | 7.95              |
| 100                                                                                                                           | 715 | 535 | 425 | 350 | 285 | 220 | 170 | 130 | 100 | 80 | 8.18              |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |    |                   |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |

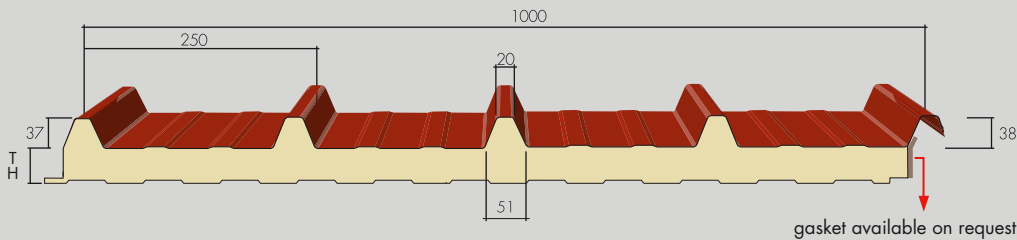
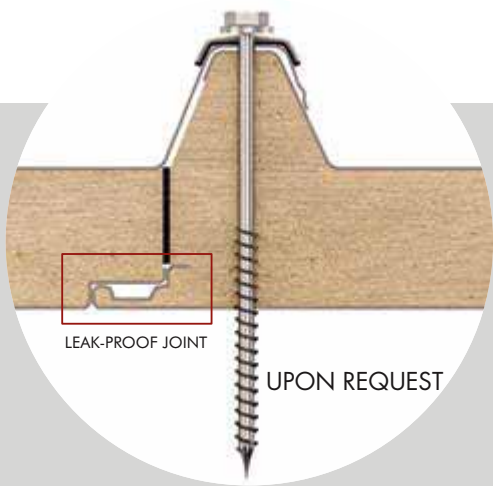




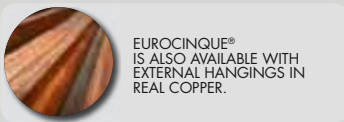
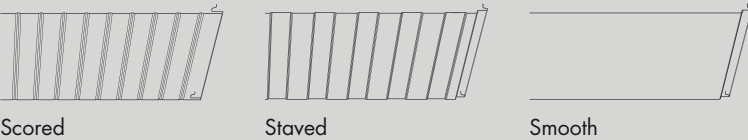
# EURO CINQUE®

ROOF PANELS FOR RESIDENTIAL AND INDUSTRIAL USE

EURO CINQUE® is a roof panel suitable for both residential and industrial buildings. It has five ribs and is composed of a layer of insulating polyurethane sandwiched between two sheet metal facings. It has a distinctive appearance and good static resistance, resulting in excellent load performance. We are proud to say that its versatility of use and pleasing appearance has made it the best selling and most sought after panel on the market.



Micro-veining of the LOWER SIDE Of the panel (to be specified when ordering)



EURO CINQUE® IS ALSO AVAILABLE WITH EXTERNAL HANGINGS IN REAL COPPER.

## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| 30                                                                                                                            | 250  | 195 | 105 | 70  |     |     |     |     |     |     | 7.42              |
| 40                                                                                                                            | 290  | 200 | 135 | 90  | 65  |     |     |     |     |     | 7.80              |
| 50                                                                                                                            | 315  | 230 | 160 | 115 | 85  | 65  |     |     |     |     | 8.18              |
| 60                                                                                                                            | 370  | 275 | 195 | 145 | 110 | 85  | 60  |     |     |     | 8.56              |
| 80                                                                                                                            | 485  | 360 | 265 | 200 | 155 | 120 | 95  | 70  | 50  |     | 9.32              |
| 100                                                                                                                           | 595  | 445 | 340 | 260 | 200 | 160 | 125 | 105 | 80  | 60  | 10.08             |
| 120                                                                                                                           | 710  | 530 | 420 | 320 | 250 | 195 | 160 | 130 | 105 | 85  | 10.84             |
| 150                                                                                                                           | 880  | 655 | 520 | 410 | 325 | 260 | 210 | 170 | 145 | 120 | 11.98             |
| 160                                                                                                                           | 935  | 700 | 555 | 445 | 350 | 280 | 225 | 185 | 155 | 130 | 12.36             |
| 180                                                                                                                           | 975  | 725 | 580 | 480 | 400 | 320 | 260 | 215 | 180 | 150 | 13.12             |
| 200                                                                                                                           | 1000 | 745 | 595 | 495 | 420 | 360 | 295 | 245 | 205 | 170 | 13.88             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |      |     |     |     |     |     |     |     |     |     |                   |

**EXTERNAL facing:**  
Aluminium 0.6 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| 30                                                                                                                            | 260  | 150 | 115 | 80  | 55  |     |     |     |     |     | 5.88              |
| 40                                                                                                                            | 332  | 196 | 150 | 110 | 80  | 60  |     |     |     |     | 6.26              |
| 50                                                                                                                            | 386  | 245 | 185 | 145 | 105 | 80  | 60  |     |     |     | 6.64              |
| 60                                                                                                                            | 435  | 295 | 220 | 180 | 135 | 100 | 75  | 55  |     |     | 7.02              |
| 80                                                                                                                            | 485  | 360 | 285 | 235 | 195 | 150 | 110 | 85  | 65  | 50  | 7.78              |
| 100                                                                                                                           | 600  | 445 | 355 | 295 | 250 | 200 | 155 | 120 | 95  | 75  | 8.54              |
| 120                                                                                                                           | 710  | 530 | 420 | 350 | 300 | 250 | 200 | 155 | 125 | 95  | 9.30              |
| 150                                                                                                                           | 880  | 660 | 525 | 435 | 370 | 320 | 260 | 215 | 175 | 140 | 10.44             |
| 160                                                                                                                           | 940  | 700 | 560 | 460 | 395 | 345 | 280 | 230 | 190 | 155 | 10.82             |
| 180                                                                                                                           | 975  | 725 | 580 | 480 | 410 | 355 | 315 | 265 | 220 | 185 | 11.58             |
| 200                                                                                                                           | 1000 | 750 | 595 | 495 | 420 | 365 | 325 | 290 | 250 | 210 | 12.34             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |      |     |     |     |     |     |     |     |     |     |                   |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 160  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.14 | 0.12 | 0.11 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.12 | 0.11 | 0.10 |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



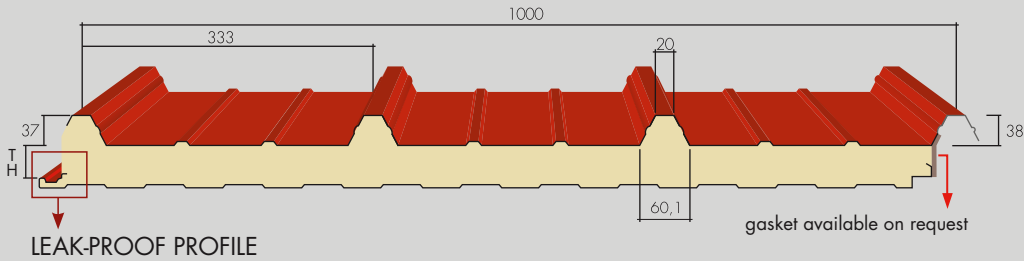


# EUROCOPRE®

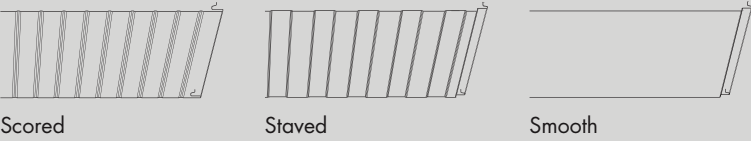
INSULATING PANELS FOR INDUSTRIAL CONSTRUCTION

The industrial construction industry selects products that offer a successful balance of quality and price. To meet these needs, Lattonedil® has created EUROCOPE®<sup>®</sup>, an insulating panel with four ribs that can be used as a roof

covering for both residential and industrial buildings and on the walls of industrial buildings. EUROCOPE® is available in the same range of thicknesses and facings as the ISOCOPRE® panel, confirming its versatility.



Micro-veining of the LOWER SIDE of the panel (to be specified when ordering)



## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
| 30                                                                                                                            | 205 | 135 | 90  | 60  |     |     |     |     |     |    | 7.26              |
| 40                                                                                                                            | 265 | 175 | 120 | 85  | 60  |     |     |     |     |    | 7.64              |
| 50                                                                                                                            | 315 | 220 | 155 | 110 | 80  | 60  |     |     |     |    | 8.02              |
| 60                                                                                                                            | 360 | 265 | 190 | 140 | 105 | 80  | 55  |     |     |    | 8.40              |
| 80                                                                                                                            | 475 | 355 | 255 | 195 | 150 | 115 | 90  | 70  | 50  |    | 9.16              |
| 100                                                                                                                           | 585 | 435 | 335 | 255 | 200 | 155 | 125 | 100 | 80  | 60 | 9.92              |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |    |                   |

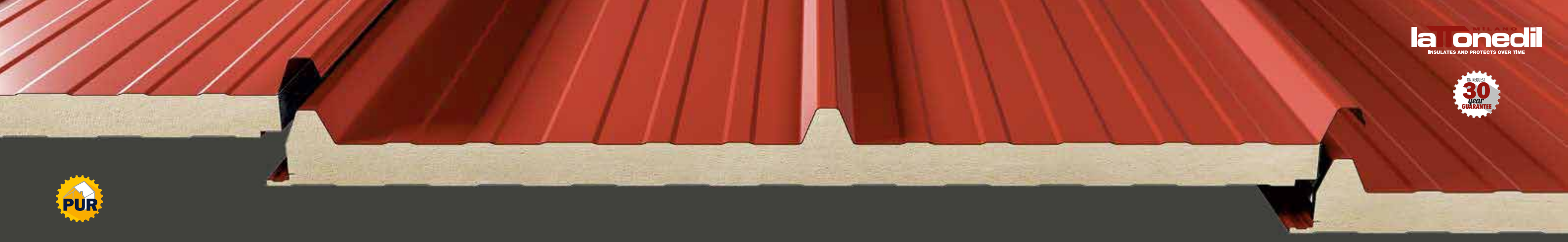
**EXTERNAL facing:**  
Aluminium 0.6 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
| 30                                                                                                                            | 210 | 155 | 100 | 70  | 50  |     |     |     |     |    | 5.79              |
| 40                                                                                                                            | 270 | 186 | 145 | 100 | 75  | 55  |     |     |     |    | 6.17              |
| 50                                                                                                                            | 330 | 235 | 175 | 135 | 100 | 75  | 55  |     |     |    | 6.55              |
| 60                                                                                                                            | 390 | 290 | 210 | 170 | 125 | 95  | 70  | 55  |     |    | 6.93              |
| 80                                                                                                                            | 510 | 350 | 275 | 225 | 185 | 145 | 110 | 80  | 65  | 50 | 7.69              |
| 100                                                                                                                           | 595 | 435 | 345 | 285 | 240 | 195 | 150 | 115 | 90  | 70 | 8.45              |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |    |                   |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |



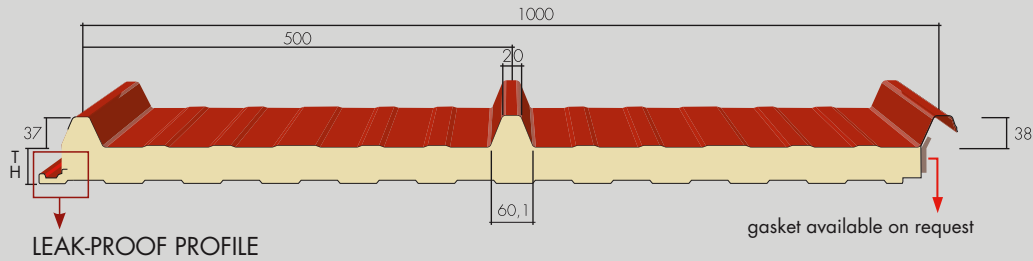


# EUROTRE®

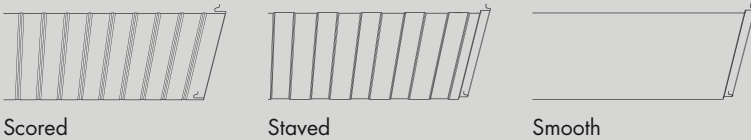
THE COST EFFECTIVE ROOF PANEL

Lattonedil's EUROTRE® panel has three ribs, is available in six different thicknesses to guarantee versatility of application and offers good aesthetic performance and reliability in terms of strength.

The main benefit offered by EUROTRE® is that it is extremely cost effective and affordable, making it ideal for use in situations where severe operating conditions are not expected.



Micro-veining of the LOWER SIDE Of the panel (to be specified when ordering)



## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5 | 5.5 | 6 | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|---|-----|---|-------------------|
| 30                                                                                                                            | 190 | 120 | 75  | 45  |     |     |     |   |     |   | 7.09              |
| 40                                                                                                                            | 250 | 160 | 105 | 70  |     |     |     |   |     |   | 7.47              |
| 50                                                                                                                            | 300 | 205 | 140 | 90  | 65  |     |     |   |     |   | 7.85              |
| 60                                                                                                                            | 345 | 250 | 170 | 120 | 90  | 65  |     |   |     |   | 8.23              |
| 80                                                                                                                            | 460 | 340 | 240 | 180 | 135 | 100 | 75  |   |     |   | 8.99              |
| 100                                                                                                                           | 570 | 410 | 320 | 240 | 185 | 140 | 110 |   |     |   | 9.75              |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |   |     |   |                   |

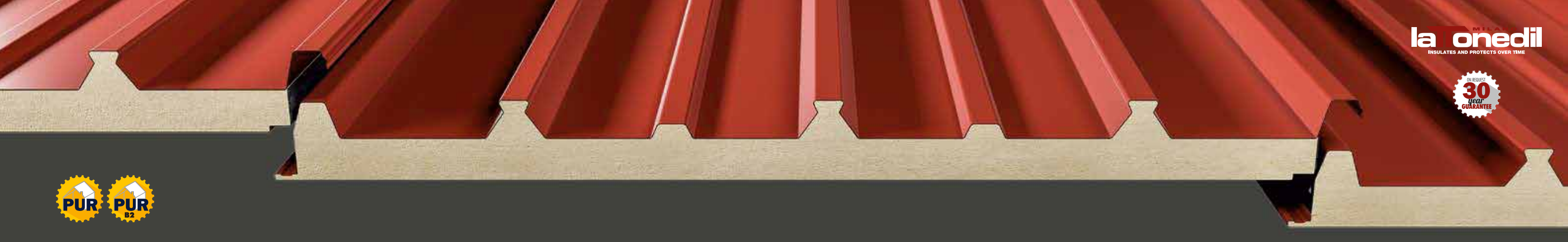
**EXTERNAL facing:**  
Aluminium 0.6 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5 | 5.5 | 6 | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|---|-----|---|-------------------|
| 30                                                                                                                            | 195 | 140 | 95  | 55  |     |     |     |   |     |   | 5.67              |
| 40                                                                                                                            | 255 | 171 | 130 | 85  |     |     |     |   |     |   | 6.05              |
| 50                                                                                                                            | 315 | 230 | 160 | 120 | 85  |     |     |   |     |   | 6.43              |
| 60                                                                                                                            | 375 | 275 | 195 | 155 | 110 | 80  |     |   |     |   | 6.81              |
| 80                                                                                                                            | 495 | 335 | 260 | 210 | 170 | 130 | 95  |   |     |   | 7.57              |
| 100                                                                                                                           | 580 | 420 | 330 | 270 | 225 | 180 | 135 |   |     |   | 8.33              |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |   |     |   |                   |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |





# SOLARPAN® PLUS

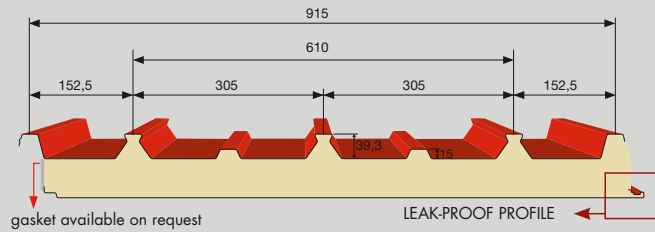
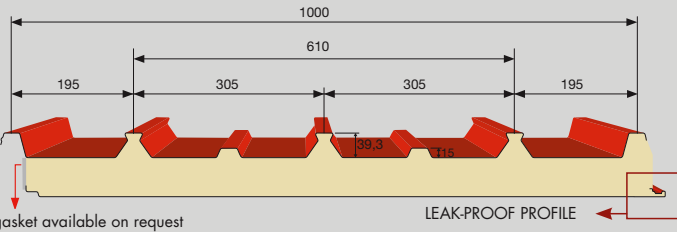
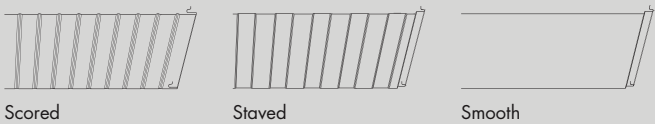
FIVE STAR SUPPORT FOR PHOTOVOLTAIC MODULES

Lattonedil presents the system that revolutionised the installation of photovoltaic modules. Here is the complete SOLARPAN® PLUS solution:

- Its main advantage: essential design
- No costly supporting structure
- No additional gasket
- No need for useless and costly aluminium profiles
- Quick installation of the photovoltaic modules: components are fastened by snapping them into the brackets
- A pre-insulated roof that can be fitted without drilling any holes
- The light weight of the SOLARPAN® PLUS system compared to a traditional roof covering offers greater performance in all of its applications. SOLARPAN® PLUS offers a complete, low cost solution thanks to savings in terms of material and installation time. The SOLARPAN® PLUS system also provides all the accessories needed for installation of the photovoltaic modules. A SOLARPAN® PLUS roof today, a photovoltaic system tomorrow.

Looking towards the future, we have thought of everything: you can cover a roof or facade using SOLARPAN® PLUS panels today and decide to install a photovoltaic system in the future. Ideal for use on a facade or roof and thanks to the use of an inclined structure, the modules can also be mounted on roof pitches that do not face south and thus typically not used. Installation times are very fast thanks to the use of accessories such as support profiles, clamps and junction triangles, which can all be clipped onto the roof covering without the need to drill holes into it; this makes the SOLARPAN® PLUS system the best solution for roof coverings with photovoltaic modules.

Micro-veining of the LOWER side of the panel  
(to be specified when ordering)



Stainless steel bracket for connection to the Solarpan® Plus panel



Aluminium bracket for connection to the Solarpan® Plus panel



Aluminium bracket for connection to the Solarpan® Plus panel with ZETA fixing for PV modules with frame



Aluminium bracket for connection to the Solarpan® Plus panel with OMEGA fixing for PV modules with frame



Bracket for fixing structures to the Solarpan® Plus panel



Aluminium bracket for connection to the Solarpan® Plus panel with single fixing for glass/glass PV modules



Aluminium bracket for connection to the Solarpan® Plus panel with double fixing for glass/glass PV modules



Anchor bracket for connecting a ladder to the Solarpan® Plus panel



Bracket for fixing snow guards to the Solarpan® Plus panel



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

## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| 30                                                                                                                            | 330  | 245 | 175 | 105 | 65  |     |     |     |     |     | 8.84              |
| 40                                                                                                                            | 420  | 315 | 225 | 145 | 90  | 60  |     |     |     |     | 9.22              |
| 50                                                                                                                            | 510  | 380 | 280 | 190 | 125 | 85  | 60  |     |     |     | 9.60              |
| 60                                                                                                                            | 605  | 450 | 335 | 240 | 160 | 110 | 80  | 55  |     |     | 9.98              |
| 80                                                                                                                            | 785  | 585 | 450 | 340 | 240 | 170 | 125 | 90  | 70  | 50  | 10.74             |
| 100                                                                                                                           | 965  | 720 | 570 | 435 | 335 | 240 | 180 | 135 | 100 | 80  | 11.50             |
| 120                                                                                                                           | 1000 | 855 | 680 | 535 | 420 | 320 | 240 | 180 | 140 | 110 | 12.26             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |      |     |     |     |     |     |     |     |     |     |                   |

**EXTERNAL facing:**  
Aluminium 0.8 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| 30                                                                                                                            | 330  | 245 | 155 | 100 | 65  |     |     |     |     |     | 6.85              |
| 40                                                                                                                            | 420  | 315 | 210 | 135 | 95  | 65  |     |     |     |     | 7.23              |
| 50                                                                                                                            | 515  | 385 | 275 | 180 | 125 | 85  | 65  |     |     |     | 7.61              |
| 60                                                                                                                            | 605  | 450 | 340 | 225 | 155 | 110 | 80  | 60  |     |     | 7.99              |
| 80                                                                                                                            | 785  | 585 | 465 | 325 | 230 | 165 | 125 | 95  | 70  | 55  | 8.75              |
| 100                                                                                                                           | 970  | 725 | 575 | 435 | 310 | 225 | 170 | 130 | 100 | 80  | 9.51              |
| 120                                                                                                                           | 1000 | 860 | 685 | 555 | 400 | 295 | 220 | 170 | 135 | 105 | 10.27             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |      |     |     |     |     |     |     |     |     |     |                   |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



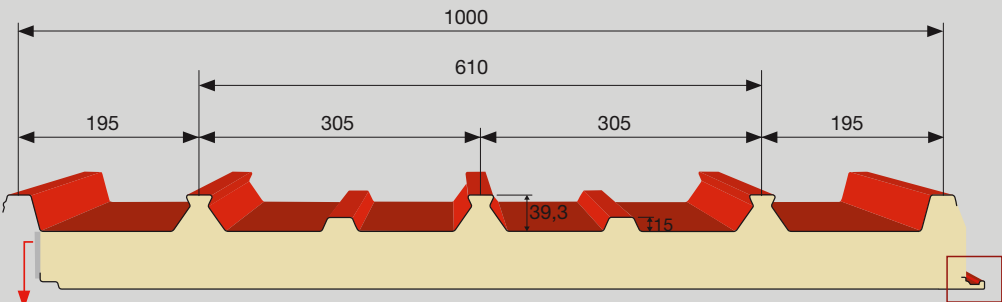


# SOLARPAN® PLUS HOUSE

FIVE STAR SUPPORT FOR PHOTOVOLTAIC MODULES, EXCELLENT FOR INTEGRATED SYSTEMS

Developed on the basis of the experience acquired during production of the SOLARPAN® PLUS panel, this innovative solution makes it possible to achieve great savings on the installation of photovoltaic modules on the roofs of domestic buildings. Just remove the roof tiles in the area where the photovoltaic system is to be installed and apply SOLARPAN® HOUSE to the existing roof supports, leaving the insulation intact. This makes it possible to distribute the panels flush with the roof, resulting in better appearance.

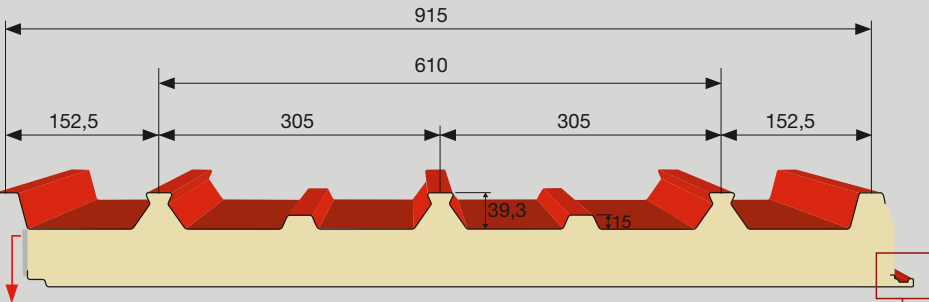
Furthermore, the installation of SOLARPAN® HOUSE offers a more secure way of fixing the photovoltaic modules into place, ensuring the complete absence of any infiltrations of water, the correct amount of ventilation between the panel and the surface on which it rests and reduced installation times. In the case of new builds, SOLARPAN® PLUS HOUSE sandwich panels with expanded polyurethane insulation can be installed, which will reinforce all of the properties of the system and the roof itself; traditional tiles or pantiles can also be fitted on them, see detail shown above.



**B**  
ROOF  
(T2)

**B**  
ROOF  
(T3)

LEAK-PROOF PROFILE



LEAK-PROOF PROFILE

## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                                 | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   | WEIGHT (Kg/sq.m.) |
|--------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| 30                                                                                                                                   | 330  | 245 | 175 | 105 | 65  |     |     |     |     |     | 8.84              |
| 40                                                                                                                                   | 420  | 315 | 225 | 145 | 90  | 60  |     |     |     |     | 9.22              |
| 50                                                                                                                                   | 510  | 380 | 280 | 190 | 125 | 85  | 60  |     |     |     | 9.60              |
| 60                                                                                                                                   | 605  | 450 | 335 | 240 | 160 | 110 | 80  | 55  |     |     | 9.98              |
| 80                                                                                                                                   | 785  | 585 | 450 | 340 | 240 | 170 | 125 | 90  | 70  | 50  | 10.74             |
| 100                                                                                                                                  | 965  | 720 | 570 | 435 | 335 | 240 | 180 | 135 | 100 | 80  | 11.50             |
| 120                                                                                                                                  | 1000 | 855 | 680 | 535 | 420 | 320 | 240 | 180 | 140 | 110 | 12.26             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 <i>l</i> |      |     |     |     |     |     |     |     |     |     |                   |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |

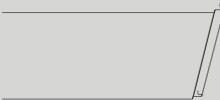
Micro-veining of the LOWER SIDE of the panel (to be specified when ordering)



Scored



Staved



Smooth



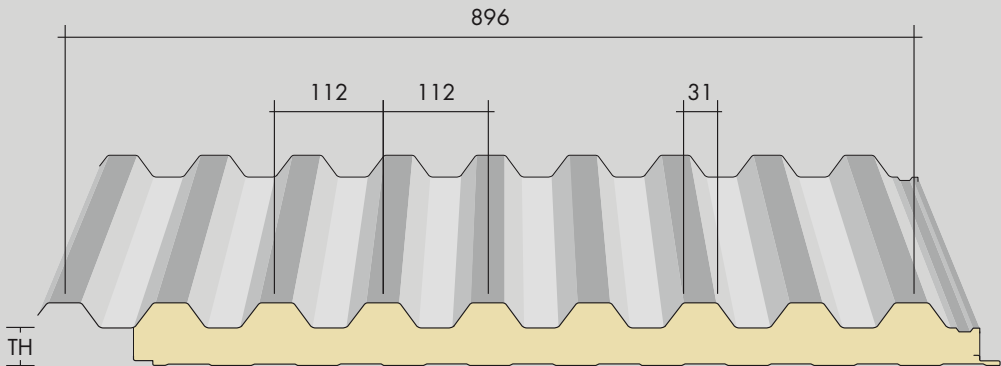


# G9® PLUS

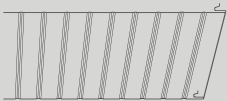
ARCHITECTURAL ROOF COVERING

G9® PLUS is a roof panel suitable for both residential and industrial buildings. It has 9 ribs and is composed of a layer of insulating polyurethane sandwiched between two sheet metal facings.

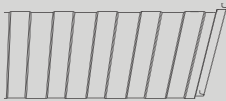
It has a distinctive appearance and good static resistance, resulting in excellent load performance.



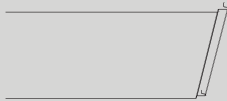
Micro-veining of the LOWER SIDE Of the panel (to be specified when ordering)



Scored



Staved



Smooth

## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|-------------------|
| 20                                                                                                                            | 313 | 262 | 170 | 115 | 85  | 64  | 49  | 37  |     |   | 10.50             |
| 40                                                                                                                            | 411 | 360 | 245 | 180 | 135 | 105 | 83  | 66  |     |   | 11.30             |
| 60                                                                                                                            | 531 | 480 | 335 | 248 | 192 | 150 | 122 | 100 |     |   | 12.10             |
| 80                                                                                                                            | 651 | 600 | 425 | 320 | 250 | 203 | 163 | 136 |     |   | 12.90             |
| 100                                                                                                                           | 771 | 720 | 515 | 400 | 320 | 255 | 210 | 175 |     |   | 13.70             |
| 120                                                                                                                           | 891 | 830 | 595 | 470 | 380 | 297 | 247 | 204 |     |   | 14.50             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |   |                   |

**EXTERNAL facing:**  
Aluminium 0.7 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|-------------------|
| 20                                                                                                                            | 356 | 305 | 194 | 133 | 96  | 71  | 54  | 42  |     |   | 7.50              |
| 40                                                                                                                            | 463 | 412 | 273 | 196 | 136 | 112 | 89  | 71  |     |   | 8.30              |
| 60                                                                                                                            | 571 | 520 | 359 | 265 | 204 | 151 | 129 | 106 |     |   | 9.10              |
| 80                                                                                                                            | 689 | 638 | 449 | 338 | 264 | 211 | 163 | 142 |     |   | 9.90              |
| 100                                                                                                                           | 809 | 758 | 531 | 412 | 326 | 264 | 218 | 181 |     |   | 10.70             |
| 120                                                                                                                           | 901 | 840 | 623 | 476 | 378 | 307 | 253 | 210 |     |   | 11.50             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |   |                   |

| U Transmittance | 20   | 40   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.79 | 0.46 | 0.33 | 0.25 | 0.21 | 0.18 |
| Kcal/sq.m. h °C | 0.68 | 0.39 | 0.28 | 0.21 | 0.18 | 0.15 |





# ENERGY ROOF® FV

PATENTED SYSTEM FOR THE INSTALLATION OF PHOTOVOLTAIC SYSTEMS



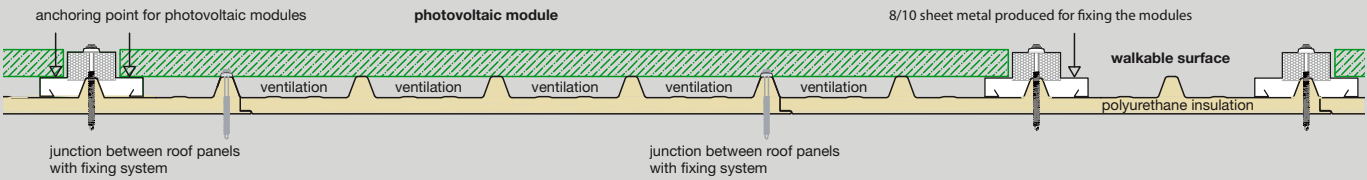
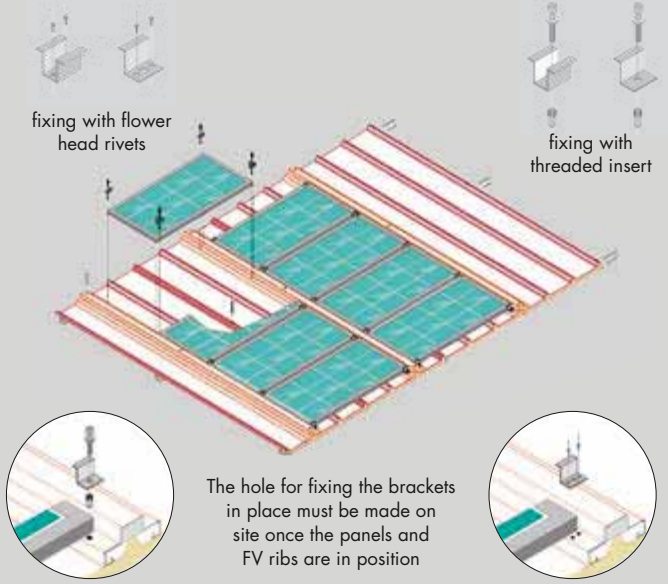
The ENERGY ROOF® FV system is composed of insulating panels suitable for the type of module to be installed and of profiles into which the photovoltaic modules are inserted.

- This solution offers many advantages, including:
- Absolute guarantee of water tightness of the roof fitted with a photovoltaic system;
  - The system can be used with any standard photovoltaic module available on the market;
  - Installation of photovoltaic modules is simple, quick and cost-effective, with a fixing system that is independent from that of the roof covering (modules can also be retrofitted to the roof);
  - The system for anchoring the modules is integrated into the roof covering;
  - Side closing profiles of the roof integrated with the support for the modules;
  - Improved ventilation of the photovoltaic modules thanks to the height of the ribs, resulting in optimised energy production;
  - The photovoltaic modules rest on multiple ribs, resulting in considerable improvement in the snow load carrying capacity;
  - Increase in the thermal insulation of the panel thanks to the ventilated roof effect created from the combination of roof panels with recessed photovoltaic module; this ventilation considerably reduces the temperature of the panel's external facing, creating an effect that can noticeably improve the energy performance of buildings;
  - Possibility to leave walkways to facilitate cleaning of the roof and modules and the performance of any maintenance work.

- Roof coverings created with FV panels make it possible to create photovoltaic systems with:
- Modules covering the entire roof;
  - Modules on part of the roof;
  - Modules on part of the roof, prepared for future expansion of the system;
  - Modules covering the entire roof with horizontal or vertical walkways allowing access to the roof and photovoltaic modules for maintenance and cleaning purposes.

The ENERGY ROOF® FV panel is insulated with a layer of expanded polyurethane, which can vary in thickness depending on the needs of the client.

No fixings (screws, brackets, etc) are supplied with the ENERGY ROOF® FV system. Such accessories must be expressly requested at the time of order.



# EURODUE ENERGY®

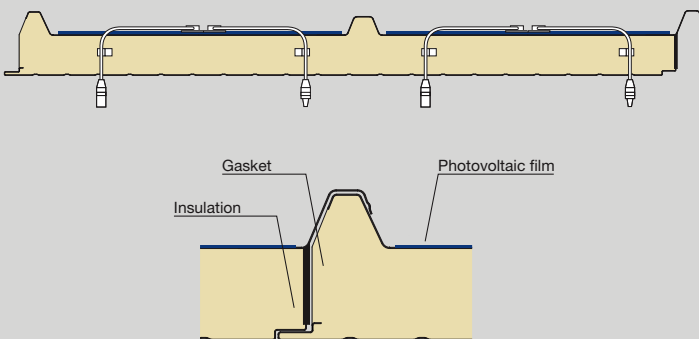
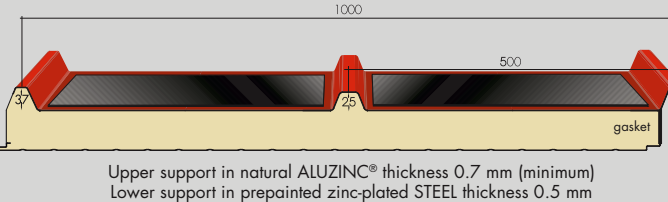
THE PERFECT PANEL FOR THIN FILM PHOTOVOLTAIC MODULES



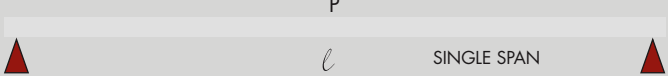
EURODUEENERGY® is a polyurethane sandwich panel designed to be used with thin film photovoltaic modules. In addition to its use as an aesthetically simple and cost-effective roof covering, which in terms of sturdiness is as reliable as all of the other roof panels made by Lattonedil, EURODUEENERGY® can also be completed with an amorphous silicon photovoltaic system, even at a later date if required. To summarise, EURODUEENERGY® offers:

- A roof covering system for large surfaces that can be fully integrated with photovoltaic modules.

- Flexibility in terms of design and installation in relation to inclination and length.
  - Ease of installation and reduced installation costs.
  - Resistance to atmospheric agents.
  - Less weight per square metre compared to traditional photovoltaic systems.
  - Competitiveness in terms of cost per kWh of energy produced.
  - Ease of maintenance, as it is possible to walk on it.
  - The ideal solution for the disposal of asbestos roofs, without the need to disturb existing structures.
- Can be used for roofs not subjected to severe operating conditions.



## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.7 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm) | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5 | 5.5 | 6 | WEIGHT (Kg/sq.m.) |
|----------------------|-----|-----|-----|-----|-----|-----|-----|---|-----|---|-------------------|
| 30                   | 190 | 120 | 90  | 65  |     |     |     |   |     |   | 7.26              |
| 40                   | 250 | 160 | 125 | 100 |     |     |     |   |     |   | 7.64              |
| 50                   | 305 | 205 | 160 | 125 | 105 |     |     |   |     |   | 8.02              |
| 60                   | 345 | 250 | 200 | 150 | 130 | 105 |     |   |     |   | 8.40              |
| 80                   | 460 | 345 | 255 | 210 | 175 | 150 | 120 |   |     |   | 9.16              |
| 100                  | 575 | 415 | 330 | 270 | 230 | 190 | 170 |   |     |   | 9.92              |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l

| U Transmittance W/sq.m. K | 30   | 40   | 50   | 60   | 80   | 100  |
|---------------------------|------|------|------|------|------|------|
| W/sq.m. K                 | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C           | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



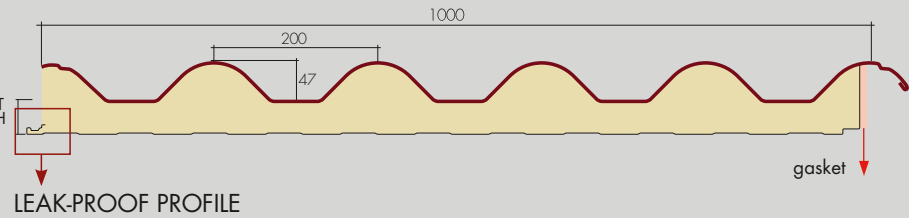
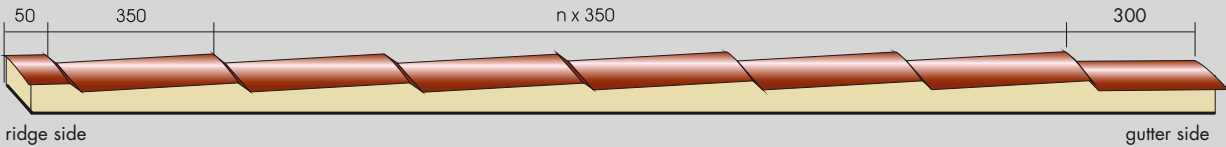


# TTCOPPO®

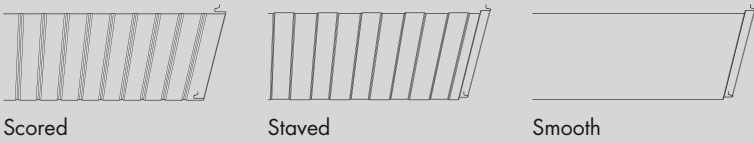
THE ROOF WITH GOOD AESTHETICS

TTCOPPO® is an insulated panel suitable for use on residential buildings when appearance must be taken into account. The finished roof has the appearance of a traditional tiled roof and is proposed as standard in the same colour as real tiles, although an aged finish is also available. TTCOPPO® meets the landscape planning regulations that also apply to old towns. TTCOPPO® guarantees excellent thermal insulation thanks to the increased thickness of its distinctive section.

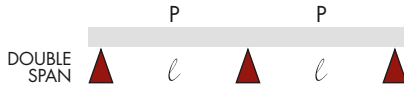
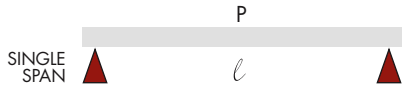
**Technical characteristics**  
Metal sandwich panel with expanded polyurethane insulation. Effective width: 1000 mm. Upper facing: prepainted zinc-plated steel, aluminium or copper. Lower facing: prepainted zinc-plated steel, other facings and colours available on request. Panel length depends on the module dictated by the design of the tile, see illustration below, with a constant dimension of 350 mm.



Micro-veining of the LOWER SIDE Of the panel (to be specified when ordering)



## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.4 mm

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 | WEIGHT (Kg/sq.m.) |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|-------------------|
| 30                                                                     | 271 | 190 | 108 | 47  | 41  | 8.78              |
| 40                                                                     | 339 | 249 | 156 | 82  | 58  | 9.16              |
| 50                                                                     | 406 | 307 | 202 | 117 | 86  | 9.54              |
| 60                                                                     | 472 | 366 | 250 | 153 | 111 | 9.92              |
| 80                                                                     | 607 | 487 | 345 | 224 | 178 | 10.68             |
| 100                                                                    | 715 | 597 | 440 | 305 | 250 | 11.44             |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |                   |

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| 30                                                                     | 307 | 248 | 196 | 139 | 99  |
| 40                                                                     | 366 | 295 | 228 | 162 | 120 |
| 50                                                                     | 442 | 342 | 260 | 183 | 141 |
| 60                                                                     | 484 | 389 | 293 | 206 | 162 |
| 80                                                                     | 629 | 502 | 361 | 253 | 202 |
| 100                                                                    | 759 | 710 | 470 | 340 | 260 |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |

**EXTERNAL facing:**  
Aluminium 0.7 mm  
**INTERNAL facing:**  
Steel 0.4 mm

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 | WEIGHT (Kg/sq.m.) |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|-------------------|
| 30                                                                     | 231 | 162 | 82  | 36  | 31  | 6.60              |
| 40                                                                     | 253 | 186 | 117 | 64  | 44  | 6.98              |
| 50                                                                     | 305 | 231 | 152 | 87  | 64  | 7.36              |
| 60                                                                     | 353 | 275 | 187 | 115 | 83  | 7.74              |
| 80                                                                     | 455 | 366 | 258 | 168 | 120 | 8.50              |
| 100                                                                    | 545 | 446 | 328 | 228 | 170 | 9.26              |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |                   |

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| 30                                                                     | 249 | 185 | 146 | 105 | 74  |
| 40                                                                     | 275 | 219 | 171 | 122 | 90  |
| 50                                                                     | 318 | 256 | 196 | 136 | 106 |
| 60                                                                     | 276 | 293 | 220 | 155 | 121 |
| 80                                                                     | 471 | 382 | 276 | 190 | 151 |
| 100                                                                    | 570 | 426 | 303 | 235 | 185 |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |

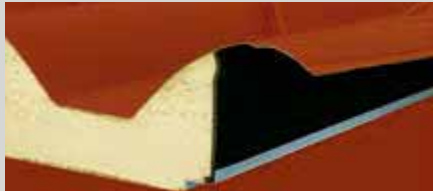
| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.44 | 0.37 | 0.29 | 0.27 | 0.18 |
| Kcal/sq.m. h °C | 0.61 | 0.38 | 0.32 | 0.25 | 0.24 | 0.16 |



Shaped in the form of a pantile

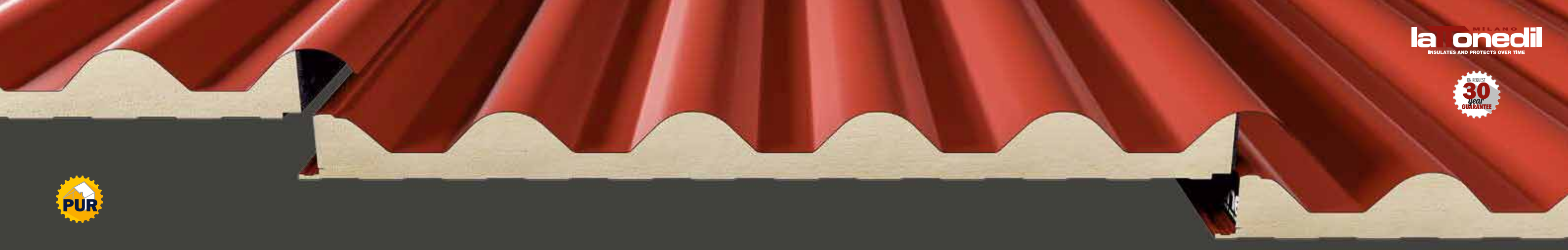


Joint with gasket and drip element



Overlapping tile



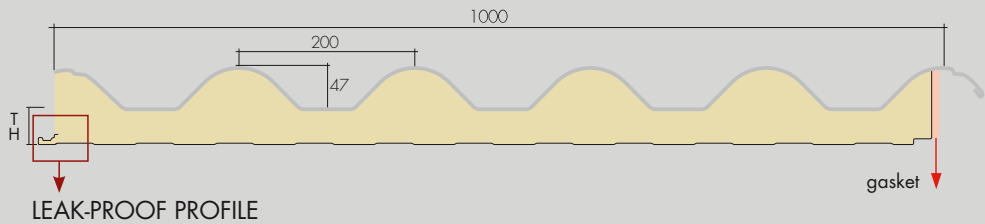


## TTONDA®

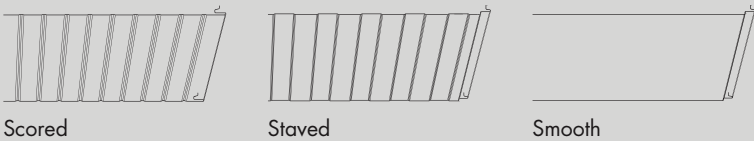
NEW DESIGN ROOF PANEL

TTONDA® is an insulated panel with a new corrugated design suitable for use as either a vertical or horizontal covering. TTONDA® guarantees excellent thermal insulation thanks to the increased thickness of its distinctive section.

**Technical characteristics**  
Effective width: 1000 mm  
Upper facing: prepainted zinc-plated steel, prepainted aluminium and Aluzinc®.  
Lower facing: prepainted zinc-plated steel.



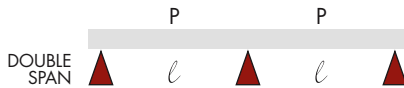
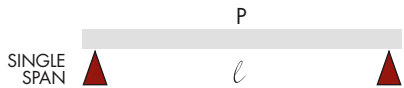
Micro-veining of the LOWER SIDE Of the panel (to be specified when ordering)



The lower side also available in:



### Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 | WEIGHT (Kg/sq.m.) |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|-------------------|
| 30                                                                     | 271 | 190 | 108 | 47  | 41  | 8.78              |
| 40                                                                     | 339 | 249 | 156 | 82  | 58  | 9.16              |
| 50                                                                     | 406 | 307 | 202 | 117 | 86  | 9.54              |
| 60                                                                     | 472 | 366 | 250 | 153 | 111 | 9.92              |
| 80                                                                     | 607 | 487 | 345 | 224 | 178 | 10.68             |
| 100                                                                    | 715 | 597 | 440 | 305 | 250 | 11.44             |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |                   |

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| 30                                                                     | 307 | 248 | 196 | 139 | 99  |
| 40                                                                     | 366 | 295 | 228 | 162 | 120 |
| 50                                                                     | 442 | 342 | 260 | 183 | 141 |
| 60                                                                     | 484 | 389 | 293 | 206 | 162 |
| 80                                                                     | 629 | 502 | 361 | 253 | 202 |
| 100                                                                    | 759 | 710 | 470 | 340 | 260 |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |

**EXTERNAL facing:**  
Aluminium 0.6 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 | WEIGHT (Kg/sq.m.) |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|-------------------|
| 30                                                                     | 231 | 162 | 82  | 36  | 31  | 6.60              |
| 40                                                                     | 253 | 186 | 117 | 64  | 44  | 6.98              |
| 50                                                                     | 305 | 231 | 152 | 87  | 64  | 7.36              |
| 60                                                                     | 353 | 275 | 187 | 115 | 83  | 7.74              |
| 80                                                                     | 455 | 366 | 258 | 168 | 120 | 8.50              |
| 100                                                                    | 545 | 446 | 328 | 228 | 170 | 9.26              |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |                   |

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| 30                                                                     | 249 | 185 | 146 | 105 | 74  |
| 40                                                                     | 275 | 219 | 171 | 122 | 90  |
| 50                                                                     | 318 | 256 | 196 | 136 | 106 |
| 60                                                                     | 276 | 293 | 220 | 155 | 121 |
| 80                                                                     | 471 | 382 | 276 | 190 | 151 |
| 100                                                                    | 570 | 426 | 303 | 235 | 185 |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.44 | 0.37 | 0.29 | 0.27 | 0.18 |
| Kcal/sq.m. h °C | 0.61 | 0.38 | 0.32 | 0.25 | 0.24 | 0.16 |



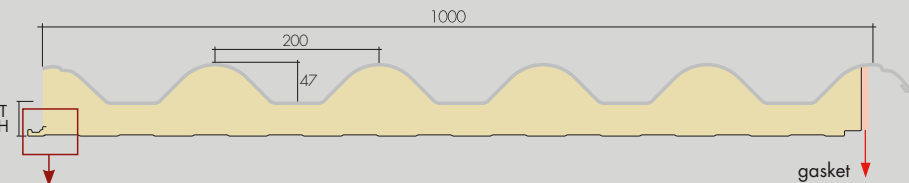
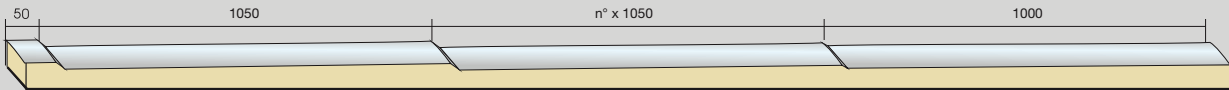


# TTONDAFIBRO®

ROOFING WITH A RETRO DESIGN

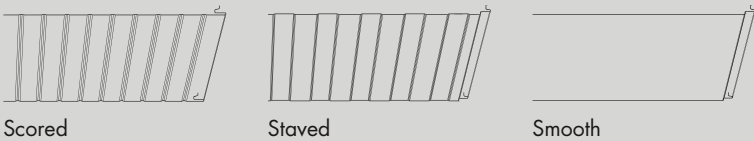
TTONDAFIBRO® is a metal sandwich panel filled with expanded polyurethane insulation with a retro design. It is used in residential construction as it enables designers to restore old roofs whilst meeting the requirements imposed by landscaping constraints applicable to the area. TTONDAFIBRO® guarantees excellent thermal insulation thanks to the increased thickness of its distinctive section.

**Technical characteristics**  
Effective width: 1000 mm  
Upper facing: prepainted zinc-plated steel, prepainted aluminium and Aluzinc®.  
Lower facing: prepainted zinc-plated steel.  
Panel length depends on the module dictated by the design of the TTONDAFIBRO®, see illustration, in multiples of 1050 mm.



LEAK-PROOF PROFILE

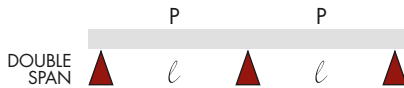
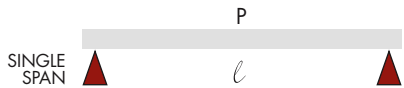
Micro-veining of the LOWER SIDE Of the panel (to be specified when ordering)



The lower side also available in:



## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 | WEIGHT (Kg/sq.m.) |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|-------------------|
| 30                                                                     | 271 | 190 | 108 | 47  | 41  | 8.78              |
| 40                                                                     | 339 | 249 | 156 | 82  | 58  | 9.16              |
| 50                                                                     | 406 | 307 | 202 | 117 | 86  | 9.54              |
| 60                                                                     | 472 | 366 | 250 | 153 | 111 | 9.92              |
| 80                                                                     | 607 | 487 | 345 | 224 | 178 | 10.68             |
| 100                                                                    | 715 | 597 | 440 | 305 | 250 | 11.44             |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |                   |

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| 30                                                                     | 307 | 248 | 196 | 139 | 99  |
| 40                                                                     | 366 | 295 | 228 | 162 | 120 |
| 50                                                                     | 442 | 342 | 260 | 183 | 141 |
| 60                                                                     | 484 | 389 | 293 | 206 | 162 |
| 80                                                                     | 629 | 502 | 361 | 253 | 202 |
| 100                                                                    | 759 | 710 | 470 | 340 | 260 |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |

**EXTERNAL facing:**  
Aluminium 0.6 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 | WEIGHT (Kg/sq.m.) |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|-------------------|
| 30                                                                     | 231 | 162 | 82  | 36  | 31  | 6.60              |
| 40                                                                     | 253 | 186 | 117 | 64  | 44  | 6.98              |
| 50                                                                     | 305 | 231 | 152 | 87  | 64  | 7.36              |
| 60                                                                     | 353 | 275 | 187 | 115 | 83  | 7.74              |
| 80                                                                     | 455 | 366 | 258 | 168 | 120 | 8.50              |
| 100                                                                    | 545 | 446 | 328 | 228 | 170 | 9.26              |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |                   |

| PANEL THICKNESS (mm)                                                   | 1.5 | 2   | 2.5 | 3   | 3.5 |
|------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| 30                                                                     | 249 | 185 | 146 | 105 | 74  |
| 40                                                                     | 275 | 219 | 171 | 122 | 90  |
| 50                                                                     | 318 | 256 | 196 | 136 | 106 |
| 60                                                                     | 276 | 293 | 220 | 155 | 121 |
| 80                                                                     | 471 | 382 | 276 | 190 | 151 |
| 100                                                                    | 570 | 426 | 303 | 235 | 185 |
| p = Kg/sq.m. evenly distributed<br>Operating limit: deflection 1/200 l |     |     |     |     |     |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.44 | 0.37 | 0.29 | 0.27 | 0.18 |
| Kcal/sq.m. h °C | 0.61 | 0.38 | 0.32 | 0.25 | 0.24 | 0.16 |





# ISOCURVO®

WITH A FIXED BEND RADIUS: 3.3 - 6 M.

ISOCURVO® is an insulating and self-supporting panel with five ribs, curved in shape with a bend radius of 3.3 or 6 metres and designed for roofs installed on prefabricated wing beams or "Y" beams. ISOCURVO® is lightweight and offers good mechanical performance, making it possible to maximize spacing between the prefabricated beams.

## Extrados

Made with:

- metal, ribbed, curved, steel sheet protected with aluminium-zinc-silicon alloy (aluzinc), thickness 5/10 mm.
- metal, ribbed, curved sheet in natural or pre-painted aluminium, thickness 7/10 mm.

- metal, ribbed, curved sheet in pre-painted galvanized sheet, thickness 5/10 mm

## Central body

Made of rigid expanded polyurethane foam with closed cell, density  $\geq 35 \text{ Kg / m}^3$ , thickness 40-60-80-100 mm.

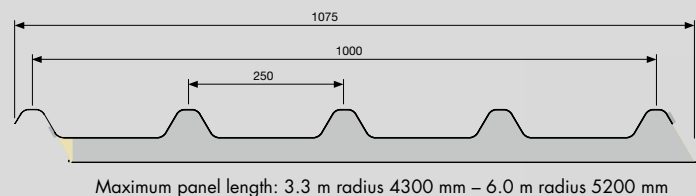
Polyurethane composition:

- high molecular WEIGHT polyols, more stabilizing, expanding agent and catalyst.
- diphenylmethane diisocyanate and its polymeric derivatives.

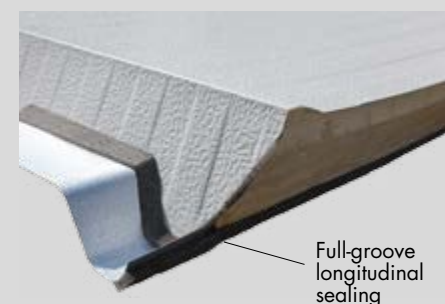
## Intrados:

Made with:

- Pre-painted galvanized sheet, thickness 4/10 mm (standard).



**B**  
ROOF  
(T3)



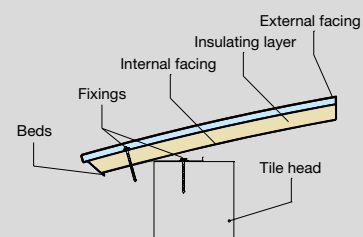
Full-groove longitudinal sealing



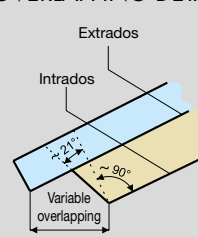
Head closure with sheet and sealing

Empty-groove longitudinal sealing

## ASSEMBLY DIAGRAM



## OVERLAPPING DETAIL



## ISOCURVO®

### STATIC CHARACTERISTICS

Bend radius 3,30 m

| TYPE - Aluzinc 5/10 - Prepainted sheet 5/10 (Kg/sq.m.)      |                |     |     |     |  |
|-------------------------------------------------------------|----------------|-----|-----|-----|--|
| L<br>Free span<br>(cm)                                      | Thickness (mm) |     |     |     |  |
|                                                             | 40             | 60  | 80  | 100 |  |
| 150                                                         | 355            | 426 | 511 | 613 |  |
| 200                                                         | 281            | 337 | 404 | 485 |  |
| 250                                                         | 243            | 292 | 349 | 419 |  |
| 300                                                         | 206            | 247 | 296 | 354 |  |
| 350                                                         | 168            | 201 | 241 | 289 |  |
| Uniformly distributed load Kg/sq.m.<br>SAFETY COEFFICIENT 3 |                |     |     |     |  |

| TYPE - Aluminium 6/10 (Kg/sq.m.)                            |                |     |     |     |  |
|-------------------------------------------------------------|----------------|-----|-----|-----|--|
| L<br>Free span<br>(cm)                                      | Thickness (mm) |     |     |     |  |
|                                                             | 40             | 60  | 80  | 100 |  |
| 150                                                         | 243            | 292 | 349 | 419 |  |
| 200                                                         | 206            | 247 | 296 | 354 |  |
| 250                                                         | 178            | 213 | 255 | 306 |  |
| 300                                                         | 150            | 179 | 215 | 258 |  |
| 350                                                         | 122            | 145 | 174 | 209 |  |
| Uniformly distributed load Kg/sq.m.<br>SAFETY COEFFICIENT 3 |                |     |     |     |  |

## ISOCURVO®

### STATIC CHARACTERISTICS

Bend radius 6,00 m

| TYPE - Aluzinc 5/10 - Prepainted sheet 5/10 (Kg/sq.m.)      |                |     |     |     |  |
|-------------------------------------------------------------|----------------|-----|-----|-----|--|
| L<br>Free span<br>(cm)                                      | Thickness (mm) |     |     |     |  |
|                                                             | 40             | 60  | 80  | 100 |  |
| 150                                                         | 275            | 329 | 394 | 473 |  |
| 200                                                         | 217            | 255 | 306 | 367 |  |
| 250                                                         | 188            | 225 | 270 | 324 |  |
| 300                                                         | 159            | 190 | 228 | 273 |  |
| 350                                                         | 130            | 156 | 186 | 223 |  |
| 400                                                         | 102            | 122 | 146 | 175 |  |
| 450                                                         | 77             | 92  | 110 | 131 |  |
| Uniformly distributed load Kg/sq.m.<br>SAFETY COEFFICIENT 3 |                |     |     |     |  |

| TYPE - Aluminium 6/10 (Kg/sq.m.)                            |                |     |     |     |  |
|-------------------------------------------------------------|----------------|-----|-----|-----|--|
| L<br>Free span<br>(cm)                                      | Thickness (mm) |     |     |     |  |
|                                                             | 40             | 60  | 80  | 100 |  |
| 150                                                         | 194            | 273 | 327 | 393 |  |
| 200                                                         | 168            | 228 | 273 | 327 |  |
| 250                                                         | 146            | 190 | 228 | 273 |  |
| 300                                                         | 128            | 159 | 190 | 228 |  |
| 350                                                         | 111            | 133 | 159 | 190 |  |
| 400                                                         | 94             | 105 | 126 | 150 |  |
| 450                                                         | 71             | 84  | 100 | 120 |  |
| Uniformly distributed load Kg/sq.m.<br>SAFETY COEFFICIENT 3 |                |     |     |     |  |

## Note

- The information contained in this table is based on an internal method and is the result of load tests carried out on a single sheet.
- For more information refer to the Product Technical Sheet.
- The choice of material for the roofing must comply with the provisions of the Law (NTC) relating to loads and overloads.
- During the assembly phases, provide safety devices (e.g. life lines) as required by legislation relating to work at a height.

| FEATURES                                                                                                            | U.M.             | VALUES                                                                                                                                  |       |       |        |
|---------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------|-------|--------|
| <b>Reaction to fire:</b><br>(ministerial decree 26/06/1984<br>and ministerial decree 03/09/01)                      | <b>Class 0-2</b> | 0 → Metal extrados/intrados<br>2 → rigid expanded polyurethane<br>Certification MI380A60DO-200005 dated 22/04/03<br>(Interior ministry) |       |       |        |
| Thermal conductivity $\lambda_i$ (UNI EN 12667):                                                                    | W/mk             | $\lambda_i \geq 0.0225 (t_m 10^\circ\text{C})$                                                                                          |       |       |        |
| Thermal transmittance $U_i$ ( $\pm 5\%$ ):<br>$(\lambda_i/d): d \rightarrow$ average insulation thickness in meters | W/sq.m. K        | 40 mm                                                                                                                                   | 60 mm | 80 mm | 100 mm |
|                                                                                                                     |                  | 0.42                                                                                                                                    | 0.29  | 0.23  | 0.19   |
| Thermal resistance $R_i$ ( $\pm 5\%$ ):<br>$(d/\lambda_i): d \rightarrow$ average insulation thickness in meters    | sq.m. K/W        | 40 mm                                                                                                                                   | 60 mm | 80 mm | 100 mm |
|                                                                                                                     |                  | 2.38                                                                                                                                    | 3.45  | 4.35  | 5.26   |

The transmittance and thermal resistance values have been calculated considering the real thickness of the panel and the contribution, in terms of insulation, given by the polyurethane foam inside the ribs.

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



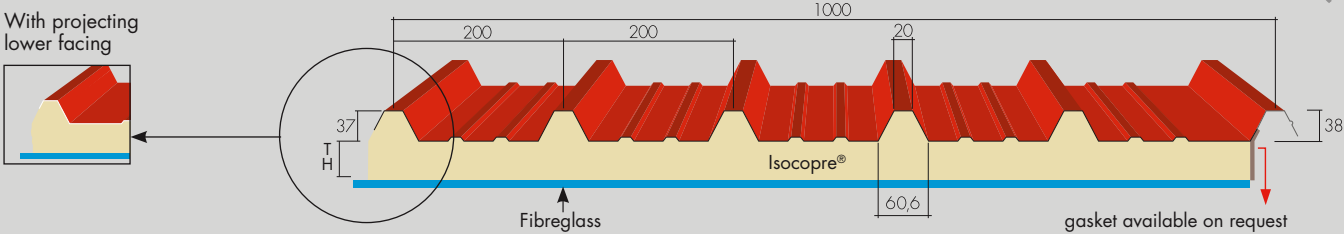
# ISOFACTOR® ISOCOPRE

ROOFING FOR LIVESTOCK AREAS



The ISOFACTOR® range of roof panels has been designed for use in the agricultural and livestock industry, which has specific and distinctive requirements in terms of performance. ISOFACTOR® not only offers a high degree of thermal insulation, it is also hygienic and offers good resistance to mechanical stress, mould, acids, rust and any other type of corrosion. ISOFACTOR® insulated roof panels have a sheet of fibreglass applied to the internal side, meaning they can be cleaned and washed, thus preventing deterioration issues. This feature

makes it an innovative roof panel that will last well over time and protects your investment. ISOFACTOR® ISOCOPRE is a self-supporting sandwich panel composed of a high-density expanded polyurethane insulating layer, CFC-free and therefore environmentally friendly, faced with a rigid external layer of prepainted steel or aluminium with six ribs and excellent static resistance and a fibreglass facing, which may be subject to colour alterations. Maximum manufacturing thickness 100 mm.



## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted zinc-plated steel  
**INTERNAL facing:**  
Fibreglass

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P    |      |     |      |     |      |     |      |    |      |     |
|---------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|----|------|-----|
|                                                                     | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
| 0.4                                                                 | 364  | 241  | 167 | 123  | 95  | 75   |     |      |    |      |     |
| 0.5                                                                 | 519  | 338  | 235 | 173  | 133 | 98   | 72  |      |    |      |     |
| 0.6                                                                 | 625  | 400  | 278 | 205  | 155 | 117  | 85  | 64   |    |      |     |
| 0.8                                                                 | 835  | 533  | 371 | 272  | 208 | 156  | 113 | 85   | 66 | 51   |     |
| 1                                                                   | 1045 | 677  | 463 | 340  | 260 | 196  | 142 | 106  | 82 | 65   | 53  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |      |      |     |      |     |      |     |      |    |      |     |



**EXTERNAL facing:**  
Prepainted zinc-plated steel  
**INTERNAL facing:**  
Fibreglass

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P    |      |     |      |     |      |     |      |     |      |     |
|---------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                                                                     | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 |
| 0.4                                                                 | 474  | 311  | 209 | 153  | 118 | 94   | 76  |      |     |      |     |
| 0.5                                                                 | 676  | 437  | 293 | 215  | 166 | 132  | 107 | 87   | 69  | 55   |     |
| 0.6                                                                 | 781  | 500  | 347 | 255  | 195 | 154  | 125 | 102  | 82  | 65   | 49  |
| 0.8                                                                 | 1044 | 668  | 463 | 339  | 260 | 205  | 167 | 137  | 110 | 86   | 69  |
| 1                                                                   | 1303 | 834  | 579 | 425  | 326 | 257  | 207 | 172  | 137 | 107  | 87  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |      |      |     |      |     |      |     |      |     |      |     |

## WEIGHT table (Kg/sq.m)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |       |       |       |       |       |
|----------------------------|----------------|-------|-------|-------|-------|-------|
|                            | 30             | 40    | 50    | 60    | 80    | 100   |
| 0.4                        | 3.90           | 5.42  | 6.16  | 6.54  | 6.60  | 7.36  |
| 0.5                        | 5.68           | 6.06  | 6.44  | 6.82  | 7.58  | 8.34  |
| 0.6                        | 6.66           | 7.04  | 7.42  | 7.80  | 8.56  | 9.32  |
| 0.8                        | 8.62           | 9.00  | 9.38  | 9.76  | 10.52 | 11.28 |
| 1                          | 10.58          | 10.96 | 11.34 | 11.72 | 12.48 | 13.24 |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |

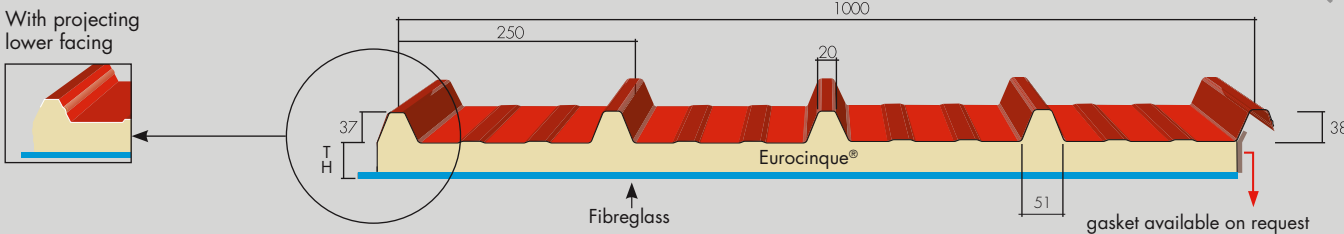
# ISOFACTOR® EUROCINQUE

ROOFING FOR LIVESTOCK AREAS



ISOFACTOR® is a range of Lattonedil panels designed for use in the agricultural and livestock industry thanks to the addition of a fibreglass facing that gives the panel high resistance to chemical and bacterial agents (in particular urea and ammonia) and good scratch resistance. ISOFACTOR® insulated roof panels can therefore be cleaned and washed internally, preventing issues with hygiene and corrosion, meaning they will last well over time and protect your investment.

ISOFACTOR® EUROCINQUE is a self-supporting sandwich panel composed of an environmentally friendly, high-density expanded polyurethane insulating core, faced with a rigid external layer of prepainted steel or aluminium with five ribs and good static resistance and a fibreglass facing, which may be subject to colour alterations. Maximum manufacturing thickness 100 mm.



## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted zinc-plated steel  
**INTERNAL facing:**  
Fibreglass

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |      |     |      |     |      |     |      |    |      |     |
|---------------------------------------------------------------------|-----|------|-----|------|-----|------|-----|------|----|------|-----|
|                                                                     | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
| 0.4                                                                 | 340 | 225  | 156 | 114  | 88  | 65   |     |      |    |      |     |
| 0.5                                                                 | 495 | 322  | 224 | 164  | 126 | 93   | 68  |      |    |      |     |
| 0.6                                                                 | 595 | 381  | 265 | 195  | 148 | 111  | 81  | 61   |    |      |     |
| 0.8                                                                 | 795 | 508  | 353 | 259  | 198 | 149  | 108 | 81   | 63 | 49   |     |
| 1                                                                   | 995 | 645  | 441 | 324  | 248 | 187  | 135 | 101  | 78 | 62   | 50  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |     |      |     |      |     |      |     |      |    |      |     |



**EXTERNAL facing:**  
Prepainted zinc-plated steel  
**INTERNAL facing:**  
Fibreglass

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P    |      |     |      |     |      |     |      |     |      |     |
|---------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                                                                     | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 |
| 0.4                                                                 | 450  | 291  | 195 | 143  | 110 | 88   | 70  |      |     |      |     |
| 0.5                                                                 | 644  | 417  | 279 | 205  | 158 | 126  | 101 | 83   | 66  | 52   |     |
| 0.6                                                                 | 744  | 476  | 330 | 243  | 186 | 147  | 119 | 97   | 78  | 62   | 49  |
| 0.8                                                                 | 994  | 636  | 441 | 323  | 248 | 195  | 159 | 130  | 105 | 82   | 66  |
| 1                                                                   | 1241 | 794  | 551 | 405  | 310 | 245  | 197 | 164  | 130 | 102  | 83  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |      |      |     |      |     |      |     |      |     |      |     |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |       |       |       |       |       |       |
|----------------------------|----------------|-------|-------|-------|-------|-------|-------|
|                            | 30             | 40    | 50    | 60    | 80    | 100   | 120   |
| 0.4                        | 4.69           | 4.87  | 5.25  | 5.63  | 6.39  | 7.15  | 7.73  |
| 0.5                        | 5.45           | 5.83  | 6.21  | 6.59  | 7.35  | 8.11  | 8.49  |
| 0.6                        | 6.41           | 6.79  | 7.17  | 7.55  | 8.31  | 9.07  | 9.45  |
| 0.8                        | 8.32           | 8.70  | 9.08  | 9.46  | 10.22 | 10.98 | 11.36 |
| 1                          | 10.24          | 10.62 | 11.00 | 11.38 | 12.14 | 12.90 | 13.28 |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |



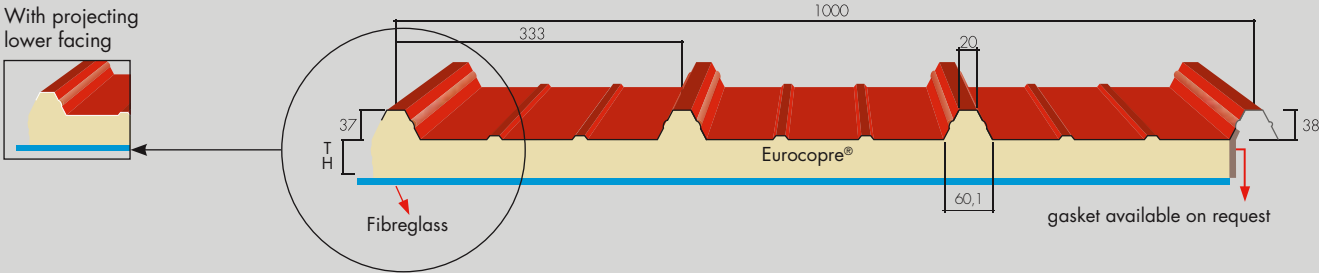
# ISOFACTOR® EUROCOPE

ROOFING FOR LIVESTOCK AREAS



Cost effective, good load-bearing performance, good resistance to aggressive agents and good hygiene and safety are just some of the benefits offered by ISOFACTOR®, roof panels specifically designed for livestock buildings. ISOFACTOR® panels have a lower facing in fibreglass, making them particularly good for use in the agricultural and livestock industry as they are resistant to acids and the chemical products commonly used for cleaning and hygiene purposes in

livestock areas. ISOFACTOR® EUROCOPE is a self-supporting sandwich panel composed of a high-density expanded polyurethane insulating core, faced with a rigid external layer of prepainted steel or aluminium with four ribs and a fibreglass facing, which may be subject to colour alterations. Maximum manufacturing thickness 100 mm.



## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Fibreglass

Effective span width:  
120 mm

| <div><div>SINGLE SPAN</div><div><div>P</div><div></div></div></div> |                                                                            |      |     |      |     |      |     |      |    |      |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------|-----|------|-----|------|-----|------|----|------|-----|
| SHEET METAL THICKNESS (mm)                                                                                                                           | 1                                                                          | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
| 0.5                                                                                                                                                  | 445                                                                        | 290  | 202 | 148  | 113 | 83   | 61  |      |    |      |     |
| 0.6                                                                                                                                                  | 536                                                                        | 343  | 239 | 176  | 133 | 100  | 73  | 54   |    |      |     |
| 0.8                                                                                                                                                  | 716                                                                        | 457  | 318 | 233  | 178 | 134  | 97  | 73   | 57 | 44   |     |
| 1                                                                                                                                                    | 896                                                                        | 581  | 397 | 292  | 223 | 168  | 122 | 91   | 70 | 56   |     |
|                                                                                                                                                      | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 <i>ℓ</i> |      |     |      |     |      |     |      |    |      |     |



**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Fibreglass

Effective span width:  
120 mm

| SHEET<br>METAL<br>THICKNESS<br>(mm) |                                                                            |      |     |      |     |      |     |      |     |      |     |
|-------------------------------------|----------------------------------------------------------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                                     | 1                                                                          | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 |
| 0.5                                 | 580                                                                        | 376  | 251 | 185  | 143 | 113  | 90  | 74   | 59  | 47   |     |
| 0.6                                 | 670                                                                        | 428  | 297 | 219  | 167 | 132  | 107 | 87   | 70  | 56   |     |
| 0.8                                 | 895                                                                        | 572  | 397 | 291  | 223 | 176  | 143 | 117  | 95  | 74   |     |
| 1                                   | 1117                                                                       | 715  | 496 | 365  | 279 | 221  | 177 | 148  | 117 | 92   |     |
|                                     | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 <i>ℓ</i> |      |     |      |     |      |     |      |     |      |     |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |       |       |       |       |       |
|----------------------------|----------------|-------|-------|-------|-------|-------|
|                            | 30             | 40    | 50    | 60    | 80    | 100   |
| 0.5                        | 5.45           | 5.83  | 6.21  | 6.54  | 7.35  | 8.11  |
| 0.6                        | 6.37           | 6.75  | 7.13  | 7.51  | 8.27  | 9.03  |
| 0.8                        | 8.21           | 8.59  | 8.97  | 9.35  | 10.11 | 10.87 |
| 1                          | 10.05          | 10.43 | 10.81 | 11.19 | 11.95 | 12.71 |

| U               |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|
| Transmittance   |      |      |      |      |      |      |
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |

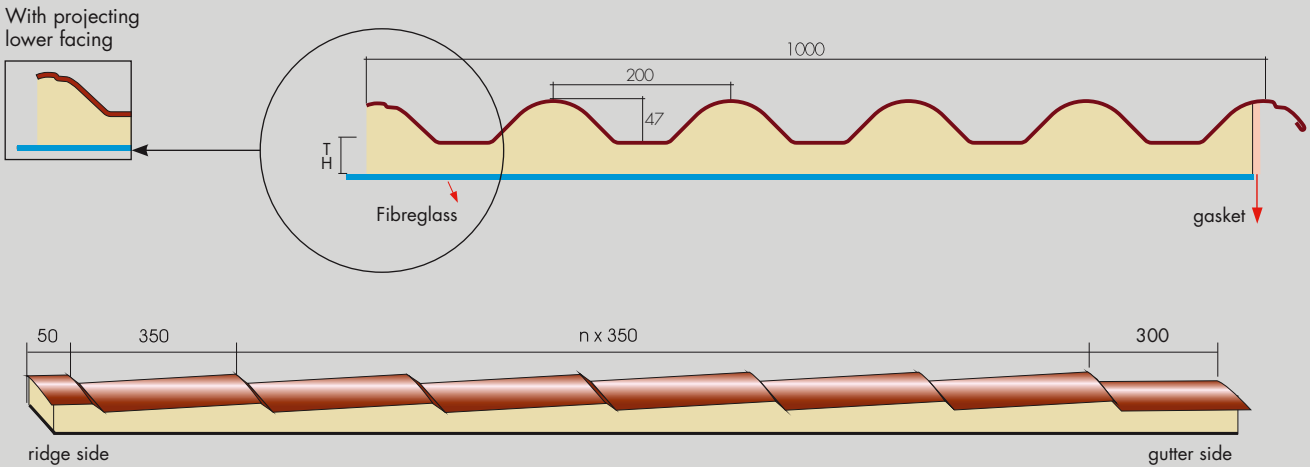


# TTFactor®

ROOFING FOR LIVESTOCK AREAS

The TTFactor® panel is the utmost evolution in aesthetics for an insulated roof panel designed for rural areas. The tile style design makes it possible to create aesthetically pleasing roofs that are also practical, light, waterproof and above all suitable for the agricultural and livestock environments where they will be used. TTFactor® is a self-supporting sandwich panel composed of a high-density

expanded polyurethane insulating core, providing high thermal insulation values, with a rigid external facing shaped in the form of tiles in prepainted steel or aluminium and an internal facing in fibreglass, which is easy to clean. The fibreglass facing may be subject to colour alterations. Maximum manufacturing thickness 100 mm.



## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |      |      |       |       |       |
|----------------------------|----------------|------|------|-------|-------|-------|
|                            | 30             | 40   | 50   | 60    | 80    | 100   |
| 0.5                        | 6.04           | 6.42 | 6.80 | 7.18  | 7.94  | 8.70  |
| 0.6                        | 7.00           | 7.38 | 7.76 | 8.14  | 8.30  | 9.66  |
| 0.8                        | 8.91           | 9.29 | 9.67 | 10.05 | 10.81 | 11.57 |

| U               |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|
| Transmittance   |      |      |      |      |      |      |
| W/sq.m. K       | 0.71 | 0.44 | 0.37 | 0.29 | 0.27 | 0.18 |
| Kcal/sq.m. h °C | 0.81 | 0.38 | 0.32 | 0.25 | 0.24 | 0.16 |



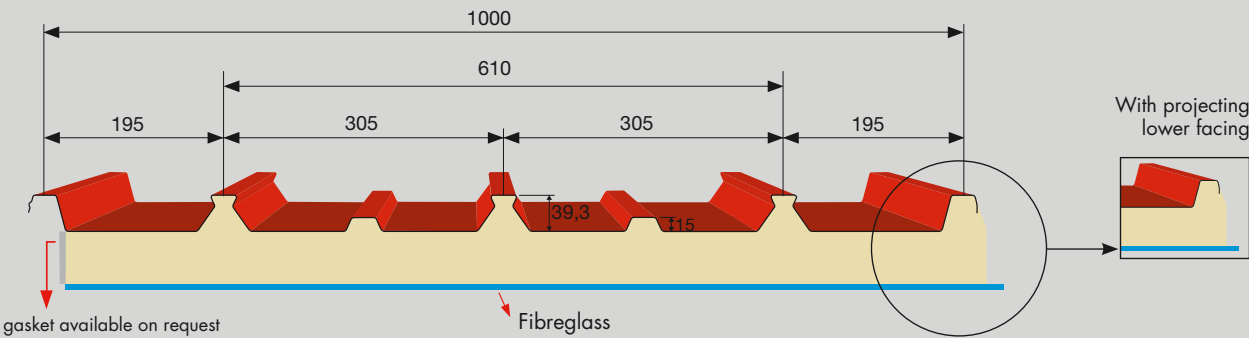
# SOLARPAN® FACTOR

AN ENERGY ROOF FOR YOUR AGRICULTURAL/LIVESTOCK FARM



Lattonedil has designed an insulating and insulated roof panel suitable for agricultural and livestock areas that can be transformed, even at a later stage, into a roof in line with energy redevelopment requirements, a subject that has now assumed considerable importance. SOLARPAN FACTOR® revolutionises the installation of photovoltaic modules in the livestock industry thanks to a kit of compatible accessories that make it possible

to fit the modules quickly without the need to adapt or drill holes into the zinc-plated roof covering, thus preventing issues associated with infiltrations. SOLARPAN FACTOR® also complies with the rules related to hygiene, inalterability and resistance that apply to livestock farms thanks to its inner layer of fibreglass. The fibreglass layer may be subject to colour alteration. Maximum manufacturing thickness 120 mm.



**B**  
ROOF  
(T2)

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Fibreglass

Effective span width:  
120 mm

| SHEET<br>METAL<br>THICKNESS<br>(mm) | P   |      |     |      |     |      |     |      |    |      |     |
|-------------------------------------|-----|------|-----|------|-----|------|-----|------|----|------|-----|
|                                     | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
| 0.5                                 | 480 | 311  | 220 | 159  | 121 | 90   | 66  |      |    |      |     |
| 0.6                                 | 577 | 370  | 257 | 189  | 144 | 108  | 79  | 58   |    |      |     |
| 0.8                                 | 771 | 493  | 342 | 251  | 192 | 145  | 105 | 79   | 61 | 47   |     |
| 1                                   | 965 | 626  | 428 | 314  | 241 | 181  | 131 | 98   | 76 | 60   |     |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Fibreglass

Effective span width:  
120 mm

| SHEET<br>METAL<br>THICKNESS<br>(mm) | P    |      |     |      |     |      |     |      |     |      |     |
|-------------------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                                     | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 |
| 0.5                                 | 623  | 404  | 270 | 198  | 153 | 122  | 97  | 80   | 63  | 50   |     |
| 0.6                                 | 722  | 462  | 320 | 236  | 180 | 143  | 115 | 94   | 76  | 60   |     |
| 0.8                                 | 964  | 617  | 428 | 313  | 241 | 189  | 154 | 126  | 102 | 80   |     |
| 1                                   | 1204 | 770  | 534 | 393  | 301 | 238  | 191 | 159  | 126 | 99   |     |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

## WEIGHT table (Kg/sq.m.)

| SHEET METAL<br>THICKNESS<br>(mm) | Thickness (mm) |       |       |       |       |       |       |  |
|----------------------------------|----------------|-------|-------|-------|-------|-------|-------|--|
|                                  | 30             | 40    | 50    | 60    | 80    | 100   | 120   |  |
| 0.5                              | 6.11           | 6.49  | 6.87  | 7.25  | 8.01  | 8.77  | 8.95  |  |
| 0.6                              | 7.15           | 7.53  | 7.91  | 8.29  | 9.05  | 9.81  | 9.99  |  |
| 0.8                              | 9.22           | 9.6   | 9.98  | 10.36 | 11.12 | 11.88 | 12.06 |  |
| 1                                | 11.30          | 11.68 | 12.06 | 12.44 | 13.20 | 13.96 | 14.14 |  |

| U               | 30   | 40   | 50   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|------|
| Transmittance   |      |      |      |      |      |      |      |
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |

# ISOFACTOR 15 ISOCOPRE®

ROOFING FOR THE LIVESTOCK INDUSTRY WITH HIGH STATIC PERFORMANCE

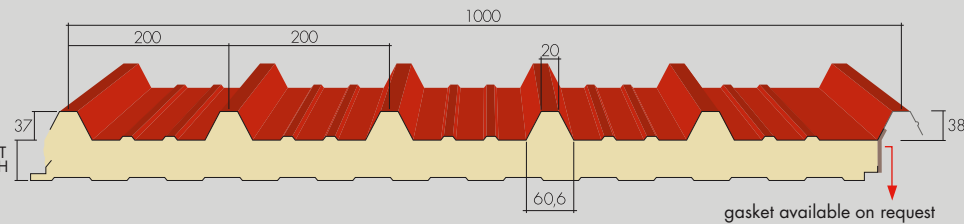


ISOFACTOR 15® is a range of panels manufactured by Lattonedil with an intrados in COLORFARM® 15, sheet metal with a 15-year warranty, which are suitable for installation inside agricultural buildings thanks to the excellent degree of resistance offered against many chemical agents commonly found in agricultural environments. COLORFARM® 15 is the result of a carefully monitored and tested production process, which guarantees consistent and long-lasting quality (it offers a 15-year anti-perforation warranty, dependant on the correct design and proper ventilation of the buildings).

Proper maintenance will considerably extend the working life of this product. ISOFACTOR 15 ISOCOPRE®, is a self-supporting sandwich panel composed of a high-density expanded polyurethane insulating core, CFC-free and therefore environmentally friendly, faced with a rigid external layer of prepainted steel or aluminium with six ribs offering excellent static resistance and an internal facing in COLORFARM® 15. Maximum manufacturing thickness 100 mm.

**B**  
ROOF  
(T2)

**B**  
ROOF  
(T3)



## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm

| PANEL<br>THICKNESS<br>(mm) | P   |     |     |     |     |     |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
|                            | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| 30                         | 260 | 205 | 120 | 85  | 55  |     |     |     |     |    | 7.62                 |
| 40                         | 315 | 225 | 150 | 110 | 80  | 50  |     |     |     |    | 8.00                 |
| 50                         | 380 | 270 | 190 | 135 | 100 | 75  | 50  |     |     |    | 8.38                 |
| 60                         | 450 | 320 | 225 | 165 | 125 | 95  | 65  | 50  |     |    | 8.76                 |
| 80                         | 580 | 425 | 305 | 225 | 175 | 135 | 105 | 80  | 60  |    | 9.52                 |
| 100                        | 710 | 530 | 390 | 290 | 225 | 175 | 140 | 115 | 85  | 65 | 10.28                |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $\ell$

| U               | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| Transmittance   |      |      |      |      |      |      |
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |

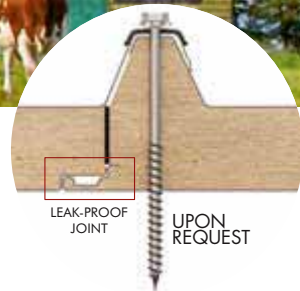




**lattonedil**  
MILANO  
INSULATES AND PROTECTS OVER TIME

ON REQUEST  
**30**  
year  
GUARANTEE  
EXTERNAL SIDE

ON REQUEST  
**15**  
year  
GUARANTEE  
INTERNAL SIDE

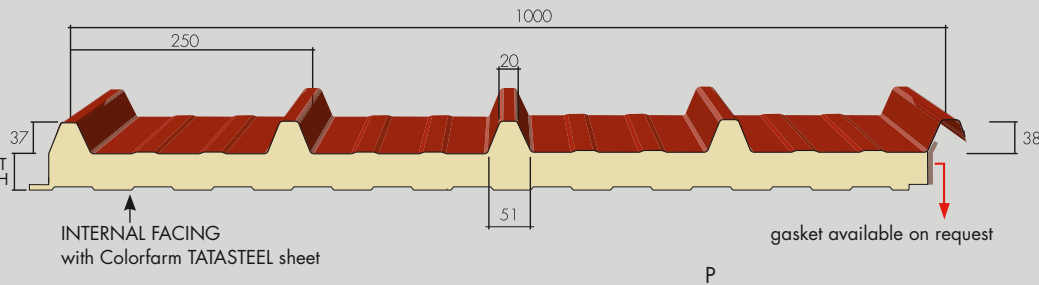


# ISOFACTOR 15 EURO CINQUE®

PREPAINTED SHEET METAL FINALLY AVAILABLE FOR THE LIVESTOCK INDUSTRY

ISOFACTOR 15® is a range of panels manufactured by Lattonedil with an intrados in COLORFARM® 15, sheet metal with a 15-year warranty, which are suitable for installation inside agricultural buildings thanks to the excellent degree of resistance offered against many chemical agents commonly found in agricultural environments. COLORFARM® 15 is the result of a carefully monitored and tested production process, which guarantees consistent and long-lasting quality (it offers a 15-year anti-perforation warranty, dependant on the

correct design and proper ventilation of the buildings). Proper maintenance will considerably extend the working life of this product. ISOFACTOR 15 EURO CINQUE® Is a self-supporting sandwich panel composed of an environmentally friendly, high-density expanded polyurethane insulating core, a highly versatile, rigid external facing in pre-painted steel or aluminium with five ribs and an inner facing in COLORFARM® 15 guaranteed for 15 years. Maximum manufacturing thickness 200 mm.



**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

| PANEL THICKNESS (mm) | SINGLE SPAN |     |     |     |     |     |     |     |     |     | WEIGHT (Kg/sq.m.) |
|----------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
|                      | 1.5         | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   |                   |
| 30                   | 250         | 195 | 105 | 70  |     |     |     |     |     |     | 7.42              |
| 40                   | 290         | 200 | 135 | 90  | 65  |     |     |     |     |     | 7.80              |
| 50                   | 315         | 230 | 160 | 115 | 85  | 65  |     |     |     |     | 8.18              |
| 60                   | 370         | 275 | 195 | 145 | 110 | 85  | 60  |     |     |     | 8.56              |
| 80                   | 485         | 360 | 265 | 200 | 155 | 120 | 95  | 70  | 50  |     | 9.32              |
| 100                  | 595         | 445 | 340 | 260 | 200 | 160 | 125 | 105 | 80  | 60  | 10.08             |
| 120                  | 710         | 530 | 420 | 320 | 250 | 195 | 160 | 130 | 105 | 85  | 10.84             |
| 150                  | 880         | 655 | 520 | 410 | 325 | 260 | 210 | 170 | 145 | 120 | 12.15             |
| 160                  | 935         | 700 | 555 | 445 | 350 | 280 | 225 | 185 | 155 | 130 | 12.36             |
| 180                  | 975         | 725 | 580 | 480 | 400 | 320 | 260 | 215 | 180 | 150 | 13.12             |
| 200                  | 1000        | 745 | 595 | 495 | 420 | 360 | 295 | 245 | 205 | 170 | 13.88             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $\ell$

Effective span width: 120 mm

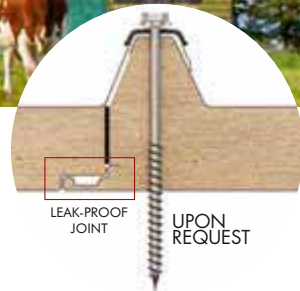
| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 160  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.14 | 0.12 | 0.11 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.12 | 0.11 | 0.10 |



**lattonedil**  
MILANO  
INSULATES AND PROTECTS OVER TIME

ON REQUEST  
**30**  
year  
GUARANTEE  
EXTERNAL SIDE

ON REQUEST  
**15**  
year  
GUARANTEE  
INTERNAL SIDE

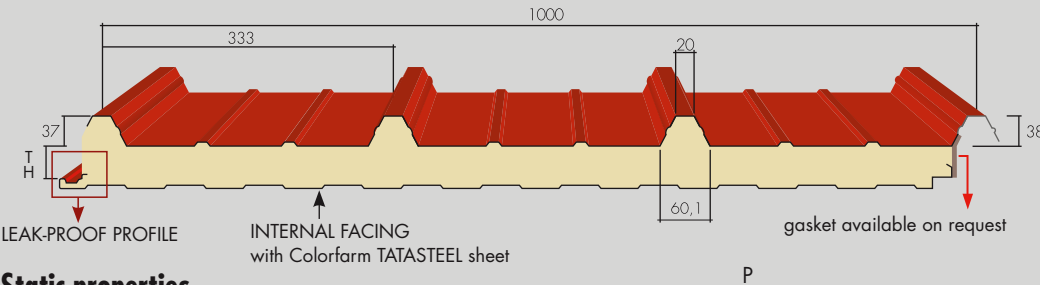


# ISOFACTOR 15 EURO COPRE®

PANEL WITH FOUR RIBS FOR THE LIVESTOCK INDUSTRY

ISOFACTOR 15® is a range of panels manufactured by Lattonedil with an intrados in COLORFARM® 15, sheet metal with a 15-year warranty, which are suitable for installation inside agricultural buildings thanks to the excellent degree of resistance offered against many chemical agents commonly found in agricultural environments. COLORFARM® 15 is the result of a carefully monitored and tested production process, which guarantees consistent and long-lasting quality (it offers a 15-year anti-perforation warranty, dependant on the correct design and proper

ventilation of the buildings). Proper maintenance will considerably extend the working life of this product. ISOFACTOR 15 EURO COPRE® is a self-supporting sandwich panel composed of a high-density expanded polyurethane insulating core, a rigid external facing in pre-painted steel or aluminium with four ribs, successfully combining function with value for money, and an inner facing in COLORFARM® 15 guaranteed for 15 years. Maximum manufacturing thickness 100 mm.



## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

| PANEL THICKNESS (mm) | SINGLE SPAN |     |     |     |     |     |     |     |     |    | WEIGHT (Kg/sq.m.) |
|----------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
|                      | 1.5         | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                   |
| 30                   | 205         | 135 | 90  | 60  |     |     |     |     |     |    | 7.26              |
| 40                   | 265         | 175 | 120 | 85  | 60  |     |     |     |     |    | 7.64              |
| 50                   | 315         | 220 | 155 | 110 | 80  | 60  |     |     |     |    | 8.02              |
| 60                   | 360         | 265 | 190 | 140 | 105 | 80  | 55  |     |     |    | 8.40              |
| 80                   | 475         | 355 | 255 | 195 | 150 | 115 | 90  | 70  | 50  |    | 9.16              |
| 100                  | 585         | 435 | 335 | 255 | 200 | 155 | 125 | 100 | 80  | 60 | 9.92              |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $\ell$

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



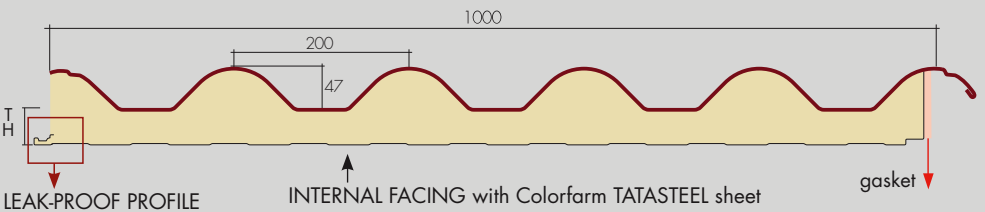


# ISOFACTOR 15 TTCOPPO®

ROOFING FOR THE LIVESTOCK INDUSTRY

ISOFACTOR 15® is a range of panels manufactured by Lattonedil in collaboration with Tatasteel, the producer of COLORFARM® 15, sheet metal with a 15-year warranty, which are suitable for installation inside agricultural buildings thanks to the excellent degree of resistance offered against many chemical agents commonly found in agricultural environments. COLORFARM® 15 is the result of a carefully monitored and tested production process, which guarantees consistent and long-lasting quality (it offers a 15-year anti-perforation warranty,

dependent on the correct design and proper ventilation of the buildings). Proper maintenance will considerably extend the working life of this product. ISOFACTOR 15 TTCOPPO® is a self-supporting sandwich panel composed of a high-density expanded polyurethane insulating core, providing high thermal insulation values, with a rigid external facing shaped in the form of tiles in prepainted steel and an internal facing in COLORFARM® 15 guaranteed for 15 years. Maximum manufactured thickness 100 mm.



## Static properties (kg/sq.m.)

| SINGLE SPAN                                                                         |     |     |     |     |     | DOUBLE SPAN                                                                           |                                                                             |     |     |     |     |     |
|-------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| P                                                                                   |     |     |     |     |     | P                                                                                     |                                                                             |     |     |     |     |     |
|  |     |     |     |     |     |  |                                                                             |     |     |     |     |     |
| PANEL THICKNESS (mm)                                                                | 1.5 | 2   | 2.5 | 3   | 3.5 | WEIGHT (Kg/sq.m.)                                                                     | PANEL THICKNESS (mm)                                                        | 1.5 | 2   | 2.5 | 3   | 3.5 |
| 30                                                                                  | 271 | 190 | 108 | 47  | 41  | 8.78                                                                                  | 30                                                                          | 307 | 248 | 196 | 139 | 99  |
| 40                                                                                  | 339 | 249 | 156 | 82  | 58  | 9.16                                                                                  | 40                                                                          | 366 | 295 | 228 | 162 | 120 |
| 50                                                                                  | 406 | 307 | 202 | 117 | 86  | 9.54                                                                                  | 50                                                                          | 442 | 342 | 260 | 183 | 141 |
| 60                                                                                  | 472 | 366 | 250 | 153 | 111 | 9.92                                                                                  | 60                                                                          | 484 | 389 | 293 | 206 | 162 |
| 80                                                                                  | 607 | 487 | 345 | 224 | 178 | 10.68                                                                                 | 80                                                                          | 629 | 502 | 361 | 253 | 202 |
| 100                                                                                 | 715 | 597 | 440 | 305 | 250 | 11.44                                                                                 | 100                                                                         | 759 | 710 | 470 | 340 | 260 |
| p = (kg/sq.m.) uniformly distributed load<br>Deflection limit: 1/200 $\ell$         |     |     |     |     |     |                                                                                       | p = (kg/sq.m.) uniformly distributed load<br>Deflection limit: 1/200 $\ell$ |     |     |     |     |     |

Effective span width: 120 mm

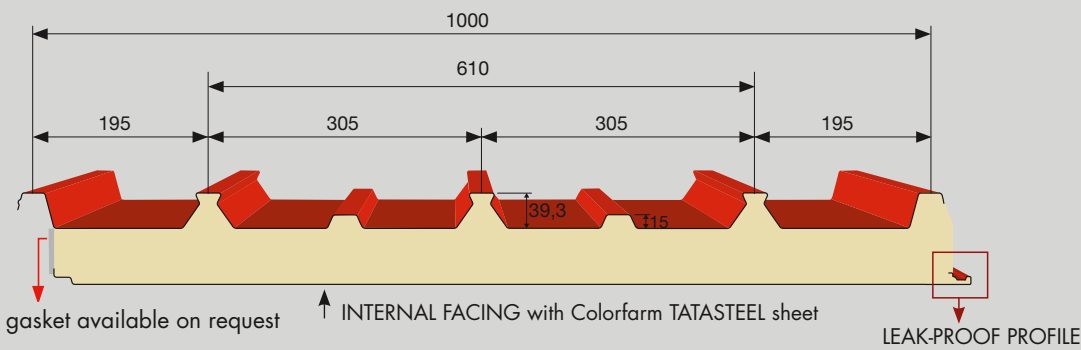
| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.44 | 0.37 | 0.29 | 0.27 | 0.18 |
| Kcal/sq.m. h °C | 0.61 | 0.38 | 0.32 | 0.25 | 0.24 | 0.13 |

# ISOFACTOR 15 SOLARPAN®

A GUARANTEED ENERGY ROOF FOR YOUR FARM

ISOFACTOR 15® is a range of panels manufactured by Lattonedil in collaboration with Tatasteel, the producer of COLORFARM® 15, sheet metal with a 15-year warranty, which are suitable for installation inside agricultural buildings thanks to the excellent degree of resistance offered against many chemical agents commonly found in agricultural environments. COLORFARM® 15 is the result of a carefully monitored and tested production process, which guarantees consistent and long-lasting quality (it offers a 15-year anti-perforation warranty, dependent on the correct design and proper ventilation of

the buildings). Proper maintenance will considerably extend the working life of this product. ISOFACTOR 15 SOLARPAN® revolutionizes the installation of photovoltaic modules in the livestock industry thanks to a kit of compatible accessories that make it possible to fit the modules quickly without the need to adapt or drill holes into the zinc-plated roof covering, thus preventing issues associated with infiltrations. ISOFACTOR 15 SOLARPAN® is also supplied with a 15-year warranty thanks to the internal facing in COLORFARM® 15. Maximum manufactured thickness 150 mm.



## Static properties (kg/sq.m.)

| SINGLE SPAN                                                                                                                        |      |     |     |     |     |     |     |     |     |     |       | WEIGHT<br>(Kg/sq.m.) |
|------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|----------------------|
| PANEL THICKNESS<br>(mm)                                                                                                            | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   |       |                      |
| 30                                                                                                                                 | 330  | 245 | 175 | 105 | 65  |     |     |     |     |     | 8.84  |                      |
| 40                                                                                                                                 | 420  | 315 | 225 | 145 | 90  | 60  |     |     |     |     | 9.22  |                      |
| 50                                                                                                                                 | 510  | 380 | 280 | 190 | 125 | 85  | 60  |     |     |     | 9.60  |                      |
| 60                                                                                                                                 | 605  | 450 | 335 | 240 | 160 | 110 | 80  | 55  |     |     | 9.98  |                      |
| 80                                                                                                                                 | 785  | 585 | 450 | 340 | 240 | 170 | 125 | 90  | 70  | 50  | 10.74 |                      |
| 100                                                                                                                                | 965  | 720 | 570 | 435 | 335 | 240 | 180 | 135 | 100 | 80  | 11.50 |                      |
| 120                                                                                                                                | 1000 | 855 | 680 | 535 | 420 | 320 | 240 | 180 | 140 | 110 | 12.26 |                      |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $\ell$ |      |     |     |     |     |     |     |     |     |     |       |                      |

Effective span width: 120 mm

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |

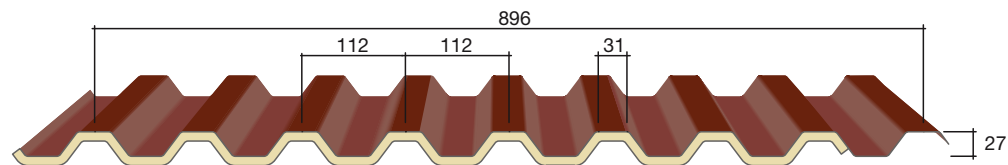


OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.





## G9® CORRUGATED MONOSHEET



G9® is a sandwich roof panel available in prepainted steel or aluminium or in copper and any of the RAL colours. This product guarantees noise reduction, the elimination of condensation and greater resistance to hail compared to

traditional corrugated sheet metal thanks to the addition of a layer of expanded polyurethane. G9® is ideal for installation in new buildings and for use in the redevelopment of buildings, in particular for rooms not requiring a high degree of insulation.

### Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Exposed polyurethane

Effective span width:  
120 mm

|                                                                                                         |                   |                                     |                                         |                                         |                                     | P           |      |     |      |     |      |     |      |   |      |      |
|---------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------|-----------------------------------------|-----------------------------------------|-------------------------------------|-------------|------|-----|------|-----|------|-----|------|---|------|------|
|                                                                                                         |                   |                                     |                                         |                                         |                                     | SINGLE SPAN |      |     |      |     |      |     |      |   |      |      |
| SHEET METAL THICKNESS (mm)                                                                              | WEIGHT (kg/sq.m.) | 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) | 1           | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3 | 3.25 | 3.50 |
| 0.4                                                                                                     | 4.11              | 5.36                                | 3.83                                    | 3.83                                    | 4.50                                | 350         | 180  | 100 | 60   |     |      |     |      |   |      |      |
| 0.5                                                                                                     | 4.89              | 7.14                                | 5.10                                    | 5.10                                    | 5.89                                | 495         | 250  | 140 | 140  | 85  | 55   |     |      |   |      |      |
| 0.6                                                                                                     | 5.99              | 8.63                                | 6.16                                    | 6.16                                    | 7.16                                | 615         | 310  | 175 | 175  | 105 | 70   |     |      |   |      |      |
| 0.8                                                                                                     | 8.09              | 11.35                               | 8.11                                    | 8.11                                    | 9.53                                | 860         | 435  | 245 | 245  | 150 | 95   | 65  |      |   |      |      |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ - Sliding deflection limit: 1/200 ℓ |                   |                                     |                                         |                                         |                                     |             |      |     |      |     |      |     |      |   |      |      |

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Exposed polyurethane

Effective span width:  
120 mm

|                            |                   |                            |                                  |                                  |                            | P                                                                                                                 |      |     |      | P                                                                                            |      |     |      |                                                                                                   |      |      |
|----------------------------|-------------------|----------------------------|----------------------------------|----------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------|------|-----|------|----------------------------------------------------------------------------------------------|------|-----|------|---------------------------------------------------------------------------------------------------|------|------|
|                            |                   |                            |                                  |                                  |                            |  $\ell$                        |      |     |      |  $\ell$ |      |     |      | DOUBLE SPAN  |      |      |
| SHEET METAL THICKNESS (mm) | WEIGHT (kg/sq.m.) | $J_y$ (cm <sup>4</sup> /m) | $W_{e,inf}$ (cm <sup>3</sup> /m) | $W_{e,sup}$ (cm <sup>3</sup> /m) | $W_p$ (cm <sup>3</sup> /m) | 1                                                                                                                 | 1.25 | 1.5 | 1.75 | 2                                                                                            | 2.25 | 2.5 | 2.75 | 3                                                                                                 | 3.25 | 3.50 |
| 0.4                        | 4.11              | 5.36                       | 3.83                             | 3.83                             | 4.50                       | 215                                                                                                               | 150  | 115 | 90   | 70                                                                                           | 55   |     |      |                                                                                                   |      |      |
| 0.5                        | 4.89              | 7.14                       | 5.10                             | 5.10                             | 5.89                       | 450                                                                                                               | 305  | 220 | 170  | 125                                                                                          | 100  | 75  | 55   |                                                                                                   |      |      |
| 0.6                        | 5.99              | 8.63                       | 6.16                             | 6.16                             | 7.16                       | 595                                                                                                               | 405  | 290 | 225  | 170                                                                                          | 130  | 90  | 65   | 50                                                                                                |      |      |
| 0.8                        | 8.09              | 11.35                      | 8.11                             | 8.11                             | 9.53                       | 895                                                                                                               | 605  | 430 | 335  | 255                                                                                          | 175  | 125 | 90   | 70                                                                                                | 50   |      |
|                            |                   |                            |                                  |                                  |                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ - Sliding deflection limit: 1/200 $\ell$ |      |     |      |                                                                                              |      |     |      |                                                                                                   |      |      |

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Exposed polyurethane

Effective span width:  
120 mm

|                            |                   |                            |                                  |                                  |                            | P                                                                                                                 |      |     |      | P                                                                                          |      |     |      | P                                                                                                                                                                                                |      |      |  |
|----------------------------|-------------------|----------------------------|----------------------------------|----------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------|------|-----|------|--------------------------------------------------------------------------------------------|------|-----|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|--|
|                            |                   |                            |                                  |                                  |                            |  $\ell$                        |      |     |      |  $\ell$ |      |     |      |  $\ell$ MULTIPLE SPAN  |      |      |  |
| SHEET METAL THICKNESS (mm) | WEIGHT (kg/sq.m.) | $J_y$ (cm <sup>4</sup> /m) | $W_{e,inf}$ (cm <sup>3</sup> /m) | $W_{e,sup}$ (cm <sup>3</sup> /m) | $W_p$ (cm <sup>3</sup> /m) | 1                                                                                                                 | 1.25 | 1.5 | 1.75 | 2                                                                                          | 2.25 | 2.5 | 2.75 | 3                                                                                                                                                                                                | 3.25 | 3.50 |  |
| 0.4                        | 4.11              | 5.36                       | 3.83                             | 3.83                             | 4.50                       | 255                                                                                                               | 180  | 135 | 110  | 85                                                                                         | 55   |     |      |                                                                                                                                                                                                  |      |      |  |
| 0.5                        | 4.89              | 7.14                       | 5.10                             | 5.10                             | 5.89                       | 550                                                                                                               | 380  | 275 | 175  | 115                                                                                        | 80   | 55  |      |                                                                                                                                                                                                  |      |      |  |
| 0.6                        | 5.99              | 8.63                       | 6.16                             | 6.16                             | 7.16                       | 725                                                                                                               | 500  | 350 | 215  | 140                                                                                        | 95   | 70  | 50   |                                                                                                                                                                                                  |      |      |  |
| 0.8                        | 8.09              | 11.35                      | 8.11                             | 8.11                             | 9.53                       | 1095                                                                                                              | 750  | 480 | 300  | 195                                                                                        | 135  | 95  | 70   | 50                                                                                                                                                                                               |      |      |  |
|                            |                   |                            |                                  |                                  |                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ - Sliding deflection limit: 1/200 $\ell$ |      |     |      |                                                                                            |      |     |      |                                                                                                                                                                                                  |      |      |  |



G9® can be supplied with  
a maxi notch to meet  
your needs or can be notched  
to create the required radius.



Finishing on request  
for the internal facing



White centesimal  
aluminium

### Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted aluminium  
**INTERNAL facing:**  
Exposed polyurethane

Effective span width:  
120 mm

|                                                                                                                   |                   |                            |                                  |                                  |                            | P           |      |     |      |    |      |     |      |   |      |      |  |  |  |
|-------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|----------------------------------|----------------------------------|----------------------------|-------------|------|-----|------|----|------|-----|------|---|------|------|--|--|--|
|                                                                                                                   |                   |                            |                                  |                                  |                            | SINGLE SPAN |      |     |      |    |      |     |      |   |      |      |  |  |  |
|                                                                                                                   |                   |                            |                                  |                                  |                            | $\ell$      |      |     |      |    |      |     |      |   |      |      |  |  |  |
| SHEET METAL THICKNESS (mm)                                                                                        | WEIGHT (kg/sq.m.) | $J_y$ (cm <sup>4</sup> /m) | $W_{e,inf}$ (cm <sup>3</sup> /m) | $W_{e,sup}$ (cm <sup>3</sup> /m) | $W_p$ (cm <sup>3</sup> /m) | 1           | 1.25 | 1.5 | 1.75 | 2  | 2.25 | 2.5 | 2.75 | 3 | 3.25 | 3.50 |  |  |  |
| 0.6                                                                                                               | 1.88              | 9.06                       | 6.47                             | 6.47                             | 7.53                       | 225         | 115  | 65  |      |    |      |     |      |   |      |      |  |  |  |
| 0.8                                                                                                               | 2.58              | 11.77                      | 8.40                             | 8.40                             | 9.89                       | 300         | 150  | 85  |      | 50 |      |     |      |   |      |      |  |  |  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ - Sliding deflection limit: 1/200 $\ell$ |                   |                            |                                  |                                  |                            |             |      |     |      |    |      |     |      |   |      |      |  |  |  |

**EXTERNAL facing:**  
Prepainted aluminium  
**INTERNAL facing:**  
Exposed polyurethane

Effective span width:  
120 mm

|                            |                                                                                                         |                                     |                                         |                                         |                                     | P                                                                                     |      |     |      |    | P    |     |      |   |      | DOUBLE SPAN |  |  |
|----------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------|-----------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------|------|-----|------|----|------|-----|------|---|------|-------------|--|--|
|                            |                                                                                                         |                                     |                                         |                                         |                                     |  |      |     |      |    |      |     |      |   |      |             |  |  |
| SHEET METAL THICKNESS (mm) | WEIGHT (kg/sq.m.)                                                                                       | 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) | 1                                                                                     | 1.25 | 1.5 | 1.75 | 2  | 2.25 | 2.5 | 2.75 | 3 | 3.25 | 3.50        |  |  |
| 0.6                        | 1.88                                                                                                    | 9.06                                | 6.47                                    | 6.47                                    | 7.53                                | 420                                                                                   | 280  | 160 | 100  | 65 |      |     |      |   |      |             |  |  |
| 0.8                        | 2.58                                                                                                    | 11.77                               | 8.40                                    | 8.40                                    | 9.89                                | 605                                                                                   | 370  | 210 | 130  | 85 |      |     |      |   |      | 60          |  |  |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ - Sliding deflection limit: 1/200 ℓ |                                     |                                         |                                         |                                     |                                                                                       |      |     |      |    |      |     |      |   |      |             |  |  |

**EXTERNAL facing:**  
Prepainted aluminium  
**INTERNAL facing:**  
Exposed polyurethane

Effective span width:  
120 mm

|                                                                                                         |                   |                                     |                                         |                                         |                                     | P                                                                                                                                                                             |      |     |      | P                                                                                                                                                                             |      |     |      | P                                                                                                   |      |      |  |
|---------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------|-----------------------------------------|-----------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-----------------------------------------------------------------------------------------------------|------|------|--|
|                                                                                                         |                   |                                     |                                         |                                         |                                     |  ℓ  |      |     |      |  ℓ  |      |     |      | MULTIPLE SPAN  |      |      |  |
| SHEET METAL THICKNESS (mm)                                                                              | WEIGHT (kg/sq.m.) | 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) | 1                                                                                                                                                                             | 1.25 | 1.5 | 1.75 | 2                                                                                                                                                                             | 2.25 | 2.5 | 2.75 | 3                                                                                                   | 3.25 | 3.50 |  |
| 0.6                                                                                                     | 1.88              | 9.06                                | 6.47                                    | 6.47                                    | 7.53                                | 430                                                                                                                                                                           | 220  | 125 | 80   | 60                                                                                                                                                                            |      |     |      |                                                                                                     |      |      |  |
| 0.8                                                                                                     | 2.58              | 11.77                               | 8.40                                    | 8.40                                    | 9.89                                | 565                                                                                                                                                                           | 290  | 165 | 105  | 65                                                                                                                                                                            |      |     |      |                                                                                                     |      |      |  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ - Sliding deflection limit: 1/200 ℓ |                   |                                     |                                         |                                         |                                     |                                                                                                                                                                               |      |     |      |                                                                                                                                                                               |      |     |      |                                                                                                     |      |      |  |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.





# MONOLAMIERA ISOCOPRE®

THE LIGHTWEIGHT ROOF PANEL

The main characteristic of monosheet panels is the lightweight internal finish that consists of a flexible facing made of bituminized felt, centesimal aluminium or a fibreglass membrane.

- Bituminized felt is a black, semi-breathable, bituminized sheet.
- Centesimal aluminium has a natural glossy colour, is lacquered and embossed and non-breathable.

– The fibreglass membrane, made of a white non-woven fabric, is capable of trapping any condensation that may form. Monosheet panels require structural supports positioned no more than one metre apart. In addition, given the characteristics of the flexible facings, the joint between panels has no patterned tooth.

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted zinc-plated steel  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                   |      |     |      |     |      |     |      |    |      |     |
|----------------------------|---------------------------------------------------------------------|------|-----|------|-----|------|-----|------|----|------|-----|
|                            | 1                                                                   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
| 0.4                        | 364                                                                 | 241  | 167 | 123  | 95  | 75   |     |      |    |      |     |
| 0.5                        | 519                                                                 | 338  | 235 | 173  | 133 | 98   | 72  |      |    |      |     |
| 0.6                        | 625                                                                 | 400  | 278 | 205  | 155 | 117  | 85  | 64   |    |      |     |
| 0.8                        | 835                                                                 | 533  | 371 | 272  | 208 | 156  | 113 | 85   | 66 | 51   |     |
| 1                          | 1045                                                                | 677  | 463 | 340  | 260 | 196  | 142 | 106  | 82 | 65   | 53  |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |      |     |      |     |      |     |      |    |      |     |

**EXTERNAL facing:**  
Prepainted zinc-plated steel  
**INTERNAL facing:**  
Bituminized felt

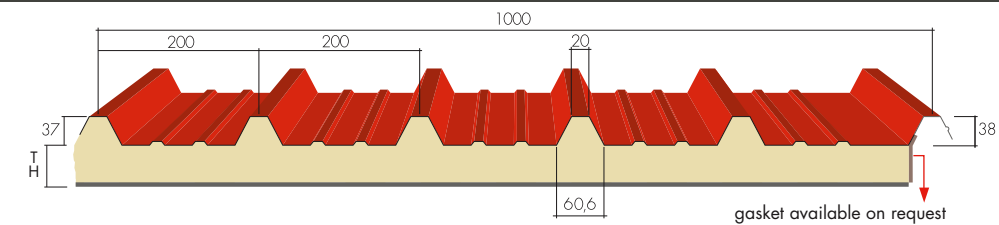
Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                   |      |     |      |     |      |     |      |     |      |     |
|----------------------------|---------------------------------------------------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                            | 1                                                                   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 |
| 0.4                        | 474                                                                 | 311  | 209 | 153  | 118 | 94   | 76  |      |     |      |     |
| 0.5                        | 676                                                                 | 437  | 293 | 215  | 166 | 132  | 107 | 87   | 69  | 55   |     |
| 0.6                        | 781                                                                 | 500  | 347 | 255  | 195 | 154  | 125 | 102  | 82  | 65   | 49  |
| 0.8                        | 1044                                                                | 668  | 463 | 339  | 260 | 205  | 167 | 137  | 110 | 86   | 69  |
| 1                          | 1303                                                                | 834  | 579 | 425  | 326 | 257  | 207 | 172  | 137 | 107  | 87  |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |      |     |      |     |      |     |      |     |      |     |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |       |       |       |       |       |
|----------------------------|----------------|-------|-------|-------|-------|-------|
|                            | 30             | 40    | 50    | 60    | 80    | 100   |
| 0.4                        | 3.90           | 5.42  | 6.16  | 6.54  | 6.60  | 7.36  |
| 0.5                        | 5.68           | 6.06  | 6.44  | 6.82  | 7.58  | 8.34  |
| 0.6                        | 6.66           | 7.04  | 7.42  | 7.80  | 8.56  | 9.32  |
| 0.8                        | 8.62           | 9.00  | 9.38  | 9.76  | 10.52 | 11.28 |
| 1                          | 10.58          | 10.96 | 11.34 | 11.72 | 12.48 | 13.24 |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |



This product is suitable for installation over eternit roofs, on roof pitches with a concrete and masonry flooring system or to cover prefabricated tiles. Monosheet panels are not recommended for use on roofs that do not leave the internal part exposed.

The upper metal facing of these monosheet panels is available in the same profiles, materials and range of colours as Lattonedil's conventional sandwich panels; MONOLAMIERA ISOCOPRE®, with six ribs, is available in thicknesses from 30 to 100 mm. The internal side may not have a perfect appearance.

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Aluminium  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                   |      |     |      |    |      |     |      |   |      |     |
|----------------------------|---------------------------------------------------------------------|------|-----|------|----|------|-----|------|---|------|-----|
|                            | 1                                                                   | 1.25 | 1.5 | 1.75 | 2  | 2.25 | 2.5 | 2.75 | 3 | 3.25 | 3.5 |
| 0.5                        | 195                                                                 | 126  | 95  | 64   | 39 |      |     |      |   |      |     |
| 0.6                        | 296                                                                 | 189  | 127 | 80   | 54 | 36   | 29  |      |   |      |     |
| 0.8                        | 395                                                                 | 252  | 169 | 106  | 72 | 51   | 37  |      |   |      |     |
| 1                          | 492                                                                 | 315  | 212 | 133  | 90 | 63   | 46  |      |   |      |     |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |      |     |      |    |      |     |      |   |      |     |

**EXTERNAL facing:**  
Aluminium  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                   |      |     |      |     |      |     |      |   |      |     |
|----------------------------|---------------------------------------------------------------------|------|-----|------|-----|------|-----|------|---|------|-----|
|                            | 1                                                                   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3 | 3.25 | 3.5 |
| 0.5                        | 269                                                                 | 173  | 123 | 95   | 66  |      |     |      |   |      |     |
| 0.6                        | 370                                                                 | 236  | 165 | 121  | 91  | 60   | 45  |      |   |      |     |
| 0.8                        | 494                                                                 | 315  | 219 | 162  | 120 | 84   | 61  |      |   |      |     |
| 1                          | 616                                                                 | 395  | 274 | 202  | 150 | 105  | 77  |      |   |      |     |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |      |     |      |     |      |     |      |   |      |     |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |      |      |      |      |      |
|----------------------------|----------------|------|------|------|------|------|
|                            | 30             | 40   | 50   | 60   | 80   | 100  |
| 0.5                        | 2.78           | 3.16 | 3.54 | 3.92 | 4.68 | 5.44 |
| 0.6                        | 3.12           | 3.50 | 3.88 | 4.26 | 5.02 | 5.78 |
| 0.8                        | 3.79           | 4.17 | 3.95 | 4.93 | 5.69 | 6.45 |
| 1                          | 4.47           | 4.86 | 5.24 | 5.62 | 6.38 | 7.14 |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.





# MONOLAMIERA EURO CINQUE®

THE LIGHTWEIGHT ROOF PANEL

The main characteristic of monosheet panels is the lightweight internal finish that consists of a flexible facing made of bituminized felt, centesimal aluminium or a fibreglass membrane.

- Bituminized felt is a black, semi-breathable, bituminized sheet.
- Centesimal aluminium has a natural glossy colour, is lacquered and embossed and non-breathable.

– The fibreglass membrane, made of a white non-woven fabric, is capable of trapping any condensation that may form. Monosheet panels require structural supports positioned no more than one metre apart. In addition, given the characteristics of the flexible facings, the joint between panels has no patterned tooth.

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted zinc-plated steel  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                        |      |     |      |     |      |     |      |    |          |
|----------------------------|--------------------------------------------------------------------------|------|-----|------|-----|------|-----|------|----|----------|
|                            | 1                                                                        | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 3.5 |
| <b>0.4</b>                 | 340                                                                      | 225  | 156 | 114  | 88  | 65   |     |      |    |          |
| <b>0.5</b>                 | 495                                                                      | 322  | 224 | 164  | 126 | 93   | 68  |      |    |          |
| <b>0.6</b>                 | 595                                                                      | 381  | 265 | 195  | 148 | 111  | 81  | 61   |    |          |
| <b>0.8</b>                 | 795                                                                      | 508  | 353 | 259  | 198 | 149  | 108 | 81   | 63 | 49       |
| <b>1</b>                   | 995                                                                      | 645  | 441 | 324  | 248 | 187  | 135 | 101  | 78 | 62 50    |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |     |      |     |      |     |      |    |          |

**EXTERNAL facing:**  
Prepainted zinc-plated steel  
**INTERNAL facing:**  
Bituminized felt

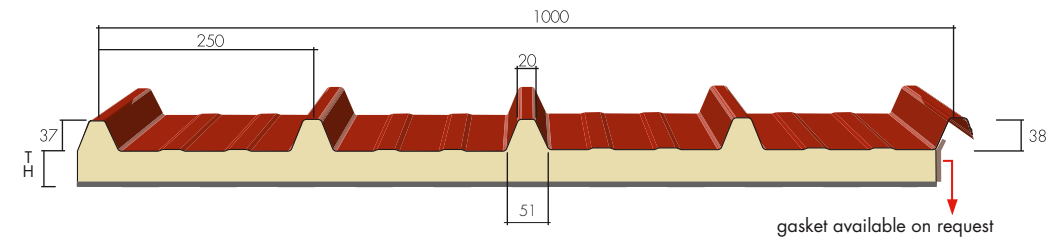
Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                        |      |     |      |     |      |     |      |     |          |
|----------------------------|--------------------------------------------------------------------------|------|-----|------|-----|------|-----|------|-----|----------|
|                            | 1                                                                        | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 3.5 |
| <b>0.4</b>                 | 450                                                                      | 291  | 195 | 143  | 110 | 88   | 70  |      |     |          |
| <b>0.5</b>                 | 644                                                                      | 417  | 279 | 205  | 158 | 126  | 101 | 83   | 66  | 52       |
| <b>0.6</b>                 | 744                                                                      | 476  | 330 | 243  | 186 | 147  | 119 | 97   | 78  | 62 49    |
| <b>0.8</b>                 | 994                                                                      | 636  | 441 | 323  | 248 | 195  | 159 | 130  | 105 | 82 66    |
| <b>1</b>                   | 1241                                                                     | 794  | 551 | 405  | 310 | 245  | 197 | 164  | 130 | 102 83   |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |     |      |     |      |     |      |     |          |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |       |       |       |       |       |       |
|----------------------------|----------------|-------|-------|-------|-------|-------|-------|
|                            | 30             | 40    | 50    | 60    | 80    | 100   | 120   |
| <b>0.4</b>                 | 4.69           | 4.87  | 5.25  | 5.63  | 6.39  | 7.15  | 7.73  |
| <b>0.5</b>                 | 5.45           | 5.83  | 6.21  | 6.59  | 7.35  | 8.11  | 8.49  |
| <b>0.6</b>                 | 6.41           | 6.79  | 7.17  | 7.55  | 8.31  | 9.07  | 9.45  |
| <b>0.8</b>                 | 8.32           | 8.70  | 9.08  | 9.46  | 10.22 | 10.98 | 11.36 |
| <b>1</b>                   | 10.24          | 10.62 | 11.00 | 11.38 | 12.14 | 12.90 | 13.28 |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |



This product is suitable for installation on eternit roofs, on roof pitches with a concrete and masonry flooring system or to cover prefabricated tiles. Monosheet panels are not recommended for use on roofs that do not leave the internal part exposed. The upper facing for the MONOLAMIERA EURO CINQUE®

panel, with five ribs, is made using the same external coating materials and in the same range of colours as the EURO CINQUE® panels. In terms of thickness, however, the panel is available in thicknesses from 30 to 100 mm. The internal side may not have a perfect appearance.

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Aluminium  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                        |      |     |      |    |      |     |      |   |          |
|----------------------------|--------------------------------------------------------------------------|------|-----|------|----|------|-----|------|---|----------|
|                            | 1                                                                        | 1.25 | 1.5 | 1.75 | 2  | 2.25 | 2.5 | 2.75 | 3 | 3.25 3.5 |
| <b>0.5</b>                 | 188                                                                      | 120  | 90  | 60   | 29 |      |     |      |   |          |
| <b>0.6</b>                 | 282                                                                      | 180  | 121 | 76   | 51 | 34   | 27  |      |   |          |
| <b>0.8</b>                 | 376                                                                      | 240  | 161 | 101  | 69 | 49   | 35  |      |   |          |
| <b>1</b>                   | 469                                                                      | 300  | 202 | 127  | 86 | 60   | 44  |      |   |          |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |     |      |    |      |     |      |   |          |

**EXTERNAL facing:**  
Aluminium  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                        |      |     |      |     |      |     |      |   |          |
|----------------------------|--------------------------------------------------------------------------|------|-----|------|-----|------|-----|------|---|----------|
|                            | 1                                                                        | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3 | 3.25 3.5 |
| <b>0.5</b>                 | 258                                                                      | 165  | 120 | 90   | 60  |      |     |      |   |          |
| <b>0.6</b>                 | 352                                                                      | 225  | 157 | 115  | 86  | 57   | 43  |      |   |          |
| <b>0.8</b>                 | 470                                                                      | 300  | 209 | 154  | 114 | 80   | 58  |      |   |          |
| <b>1</b>                   | 587                                                                      | 376  | 261 | 192  | 143 | 100  | 73  |      |   |          |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |     |      |     |      |     |      |   |          |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |      |      |      |      |      |      |
|----------------------------|----------------|------|------|------|------|------|------|
|                            | 30             | 40   | 50   | 60   | 80   | 100  | 120  |
| <b>0.5</b>                 | 2.82           | 3.20 | 3.58 | 3.96 | 4.72 | 5.48 | 5.86 |
| <b>0.6</b>                 | 3.15           | 3.53 | 3.91 | 4.29 | 5.05 | 5.81 | 6.19 |
| <b>0.8</b>                 | 3.81           | 4.19 | 4.57 | 4.95 | 5.71 | 6.47 | 6.85 |
| <b>1</b>                   | 4.47           | 4.85 | 5.23 | 5.61 | 6.37 | 7.13 | 7.51 |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.





# MONOLAMIERA EUROCOPE®

THE LIGHTWEIGHT ROOF PANEL

The main characteristic of monosheet panels is the lightweight internal finish that consists of a flexible facing made of bituminized felt, centesimal aluminium or a fibreglass membrane.

- Bituminized felt is a black, semi-breathable, bituminized sheet.
- Centesimal aluminium has a natural glossy colour, is lacquered and embossed and non-breathable.

– The fibreglass membrane, made of a white non-woven fabric, is capable of trapping any condensation that may form. Monosheet panels require structural supports positioned no more than one metre apart. In addition, given the characteristics of the flexible facings, the joint between panels has no patterned tooth.

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                        |      |     |      |     |      |     |      |    |          |
|----------------------------|--------------------------------------------------------------------------|------|-----|------|-----|------|-----|------|----|----------|
|                            | 1                                                                        | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 3.5 |
| 0.5                        | 445                                                                      | 290  | 202 | 148  | 113 | 83   | 61  |      |    |          |
| 0.6                        | 536                                                                      | 343  | 239 | 176  | 133 | 100  | 73  | 54   |    |          |
| 0.8                        | 716                                                                      | 457  | 318 | 233  | 178 | 134  | 97  | 73   | 57 | 44       |
| 1                          | 896                                                                      | 581  | 397 | 292  | 223 | 168  | 122 | 91   | 70 | 56       |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |     |      |     |      |     |      |    |          |

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Bituminized felt

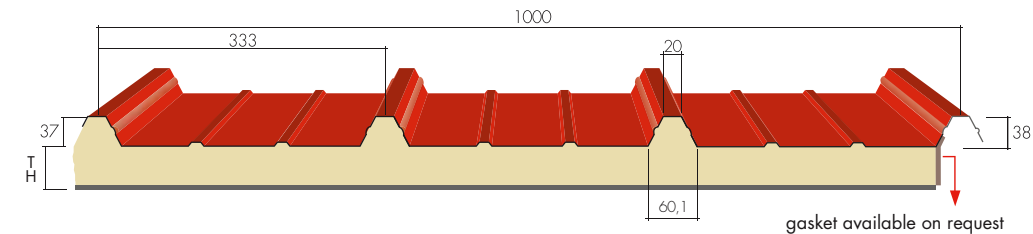
Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                        |      |     |      |     |      |     |      |     |          |
|----------------------------|--------------------------------------------------------------------------|------|-----|------|-----|------|-----|------|-----|----------|
|                            | 1                                                                        | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 3.5 |
| 0.5                        | 580                                                                      | 376  | 251 | 185  | 143 | 113  | 90  | 74   | 59  | 47       |
| 0.6                        | 670                                                                      | 428  | 297 | 219  | 167 | 132  | 107 | 87   | 70  | 56       |
| 0.8                        | 895                                                                      | 572  | 397 | 291  | 223 | 176  | 143 | 117  | 95  | 74       |
| 1                          | 1117                                                                     | 715  | 496 | 365  | 279 | 221  | 177 | 148  | 117 | 92       |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |     |      |     |      |     |      |     |          |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |       |       |       |       |       |
|----------------------------|----------------|-------|-------|-------|-------|-------|
|                            | 30             | 40    | 50    | 60    | 80    | 100   |
| 0.5                        | 5.25           | 5.63  | 6.01  | 6.34  | 7.15  | 7.91  |
| 0.6                        | 6.17           | 6.55  | 6.93  | 7.31  | 8.07  | 8.93  |
| 0.8                        | 8.01           | 8.39  | 8.77  | 9.15  | 9.91  | 10.67 |
| 1                          | 9.85           | 10.23 | 10.61 | 10.99 | 11.75 | 12.51 |

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
|                 | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |



This product is suitable for installation on eternit roofs, on roof pitches with a concrete and masonry flooring system or to cover prefabricated tiles. Monosheet panels are not recommended for use on roofs that do not leave the internal part exposed.

MONOLAMIERA EUROCOPE®, with four ribs, is made using the same external coating materials and in the same range of colours as the EUROCOPE® panels. In terms of thickness, however, the panel is available in thicknesses from 30 to 100 mm. The internal side may not have a perfect appearance.

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Aluminium  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                        |      |     |      |    |      |     |      |   |          |
|----------------------------|--------------------------------------------------------------------------|------|-----|------|----|------|-----|------|---|----------|
|                            | 1                                                                        | 1.25 | 1.5 | 1.75 | 2  | 2.25 | 2.5 | 2.75 | 3 | 3.25 3.5 |
| 0.5                        | 174                                                                      | 111  | 84  | 57   | 26 |      |     |      |   |          |
| 0.6                        | 268                                                                      | 171  | 115 | 73   | 48 | 32   | 26  |      |   |          |
| 0.8                        | 357                                                                      | 228  | 153 | 96   | 66 | 47   | 33  |      |   |          |
| 1                          | 446                                                                      | 285  | 192 | 121  | 82 | 57   | 42  |      |   |          |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |     |      |    |      |     |      |   |          |

**EXTERNAL facing:**  
Aluminium  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                        |      |     |      |     |      |     |      |   |          |
|----------------------------|--------------------------------------------------------------------------|------|-----|------|-----|------|-----|------|---|----------|
|                            | 1                                                                        | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3 | 3.25 3.5 |
| 0.5                        | 240                                                                      | 153  | 113 | 84   | 56  |      |     |      |   |          |
| 0.6                        | 334                                                                      | 213  | 150 | 109  | 82  | 55   | 41  |      |   |          |
| 0.8                        | 447                                                                      | 285  | 199 | 146  | 108 | 76   | 55  |      |   |          |
| 1                          | 558                                                                      | 357  | 248 | 182  | 136 | 95   | 69  |      |   |          |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |     |      |     |      |     |      |   |          |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |      |      |      |      |      |
|----------------------------|----------------|------|------|------|------|------|
|                            | 30             | 40   | 50   | 60   | 80   | 100  |
| 0.5                        | 2.54           | 2.92 | 3.30 | 3.68 | 4.44 | 5.20 |
| 0.6                        | 2.86           | 3.24 | 3.62 | 4.00 | 4.76 | 5.52 |
| 0.8                        | 3.49           | 3.87 | 4.25 | 4.63 | 5.79 | 6.15 |
| 1                          | 4.12           | 4.50 | 4.88 | 5.26 | 6.02 | 6.78 |





# MONOLAMIERA TTCOPPO®

THE LIGHTWEIGHT PANEL WITH AN AESTHETIC DESIGN

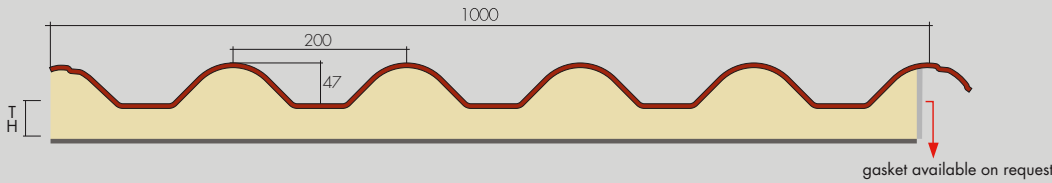
The main characteristic of monosheet panels is the lightweight internal finish that consists of a flexible facing made of bituminized felt, centesimal aluminium or a fibreglass membrane.

- Bituminized felt is a black, semi-breathable, bituminized sheet.
- Centesimal aluminium has a natural glossy colour, is lacquered and embossed and non-breathable.
- The fibreglass membrane, made of a white non-woven fabric, is capable of trapping any condensation that may form.

Monosheet panels require structural supports positioned no more than one metre apart. In addition, given the characteristics of the flexible facings, the joint between panels has no patterned tooth. This product is suitable for installation on eternit

roofs, on roof pitches with a concrete and masonry flooring system or to cover prefabricated tiles. Monosheet panels are not recommended for use on roofs that do not leave the internal part exposed.

MONOLAMIERA TTCOPPO® is made using the same external coating materials and in the same range of colours as the TTCOPPO® panels. In terms of thickness, however, the panel is available in thicknesses from 30 to 100 mm. It finds application in the specific case of residential buildings with roofs that have a cement floor slab and, therefore, do not require a high standard of internal finish, but do need to preserve an external appearance that is consistent with the surrounding landscape.



**WEIGHT table**  
(Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |      |      |      |      |      |
|----------------------------|----------------|------|------|------|------|------|
|                            | 30             | 40   | 50   | 60   | 80   | 100  |
| 0.8                        | 3.92           | 4.30 | 4.68 | 4.96 | 5.82 | 6.58 |
| 1                          | 4.63           | 5.01 | 5.39 | 5.77 | 6.53 | 7.29 |

| U               | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| Transmittance   |      |      |      |      |      |      |
| W/sq.m. K       | 0.71 | 0.44 | 0.37 | 0.29 | 0.27 | 0.18 |
| Kcal/sq.m. h °C | 0.61 | 0.38 | 0.32 | 0.25 | 0.24 | 0.16 |



OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.





# MONOLAMIERA SOLARPAN®

LIGHTWEIGHT PANELS FOR PHOTOVOLTAIC MODULES

The main characteristic of monosheet panels is the lightweight internal finish that consists of a flexible facing made of bituminized felt, centesimal aluminium or a fibreglass membrane.

- Bituminized felt is a black, semi-breathable, bituminized sheet.
- Centesimal aluminium has a natural glossy colour, is lacquered and embossed and non-breathable.

– The fibreglass membrane, made of a white non-woven fabric, is capable of trapping any condensation that may form. Monosheet panels require structural supports positioned no more than one metre apart. In addition, given the characteristics of the flexible facings, the joint between panels has no patterned tooth.

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                   |      |     |      |     |      |     |      |    |          |
|----------------------------|---------------------------------------------------------------------|------|-----|------|-----|------|-----|------|----|----------|
|                            | 1                                                                   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 3.5 |
| 0.5                        | 480                                                                 | 311  | 220 | 159  | 121 | 90   | 66  |      |    |          |
| 0.6                        | 577                                                                 | 370  | 257 | 189  | 144 | 108  | 79  | 58   |    |          |
| 0.8                        | 771                                                                 | 493  | 342 | 251  | 192 | 145  | 105 | 79   | 61 | 47       |
| 1                          | 965                                                                 | 626  | 428 | 314  | 241 | 181  | 131 | 98   | 76 | 60       |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |      |     |      |     |      |     |      |    |          |

**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Fibreglass

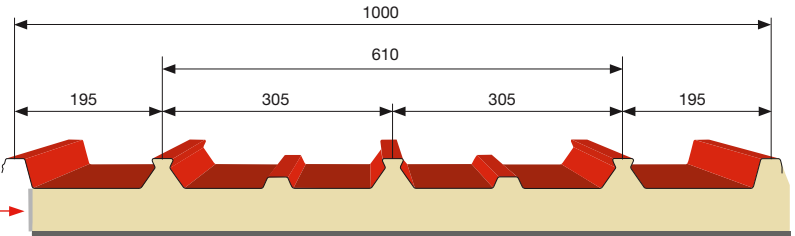
Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                   |      |     |      |     |      |     |      |     |          |
|----------------------------|---------------------------------------------------------------------|------|-----|------|-----|------|-----|------|-----|----------|
|                            | 1                                                                   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 3.5 |
| 0.5                        | 623                                                                 | 404  | 270 | 198  | 153 | 122  | 97  | 80   | 63  | 50       |
| 0.6                        | 722                                                                 | 462  | 320 | 236  | 180 | 143  | 115 | 94   | 76  | 60       |
| 0.8                        | 964                                                                 | 617  | 428 | 313  | 241 | 189  | 154 | 126  | 102 | 80       |
| 1                          | 1204                                                                | 770  | 534 | 393  | 301 | 238  | 191 | 159  | 126 | 99       |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |      |     |      |     |      |     |      |     |          |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |       |       |       |       |       |       |
|----------------------------|----------------|-------|-------|-------|-------|-------|-------|
|                            | 30             | 40    | 50    | 60    | 80    | 100   | 120   |
| 0.5                        | 5.91           | 6.29  | 6.67  | 7.05  | 7.81  | 8.57  | 8.95  |
| 0.6                        | 6.95           | 7.33  | 7.71  | 8.09  | 8.85  | 9.61  | 9.99  |
| 0.8                        | 9.02           | 9.40  | 9.78  | 10.16 | 10.92 | 11.68 | 12.06 |
| 1                          | 11.10          | 11.48 | 11.86 | 12.24 | 13.00 | 13.76 | 14.14 |

| U               | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| Transmittance   |      |      |      |      |      |      |
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |



gasket available on request



This product is suitable for installation on eternit roofs, on roof pitches with a concrete and masonry flooring system or to cover prefabricated tiles. Monosheet panels are not recommended for use on roofs that do not leave the internal part exposed. MONOLAMIERA SOLARPAN® revolutionises the installation

of photovoltaic modules in situations where an exposed internal finish is not required; thanks to the kit of compatible accessories, the modules can be fitted quickly, without the need to adapt or drill holes into the zinc-plated steel, thus preventing issues associated with infiltrations. It is available in thicknesses from 30 to 100 mm.

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Aluminium  
**INTERNAL facing:**  
Bituminized felt

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                   |      |     |      |    |      |     |      |   |          |
|----------------------------|---------------------------------------------------------------------|------|-----|------|----|------|-----|------|---|----------|
|                            | 1                                                                   | 1.25 | 1.5 | 1.75 | 2  | 2.25 | 2.5 | 2.75 | 3 | 3.25 3.5 |
| 0.8                        | 365                                                                 | 233  | 156 | 98   | 67 | 48   | 34  |      |   |          |
| 1                          | 455                                                                 | 291  | 196 | 123  | 83 | 58   | 43  |      |   |          |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |      |     |      |    |      |     |      |   |          |

**EXTERNAL facing:**  
Aluminium  
**INTERNAL facing:**  
Fibreglass

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P                                                                   |      |     |      |     |      |     |      |   |          |
|----------------------------|---------------------------------------------------------------------|------|-----|------|-----|------|-----|------|---|----------|
|                            | 1                                                                   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3 | 3.25 3.5 |
| 0.8                        | 456                                                                 | 291  | 203 | 149  | 111 | 78   | 56  |      |   |          |
| 1                          | 569                                                                 | 365  | 253 | 186  | 139 | 97   | 71  |      |   |          |
|                            | p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |      |     |      |     |      |     |      |   |          |

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |      |      |      |      |      |      |
|----------------------------|----------------|------|------|------|------|------|------|
|                            | 30             | 40   | 50   | 60   | 80   | 100  | 120  |
| 0.8                        | 3.92           | 4.30 | 4.68 | 5.06 | 5.82 | 6.58 | 6.96 |
| 1                          | 4.63           | 5.01 | 5.39 | 5.77 | 6.53 | 7.29 | 7.67 |



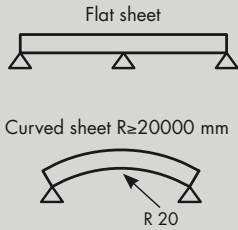
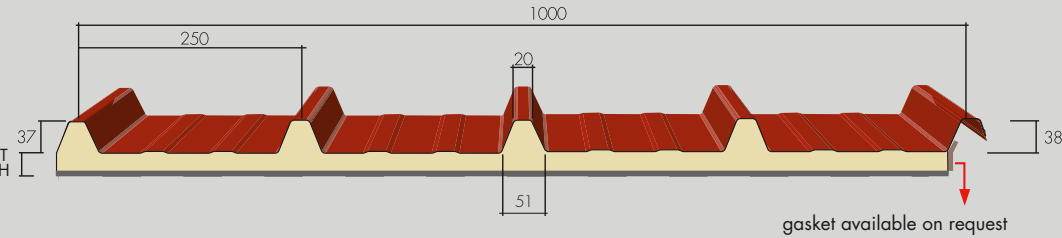
# G5 MONOLAMIERA®

SELF-CENTRING PANEL

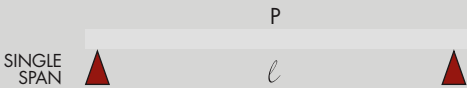


The main feature of the G5 monosheet panel is that it is self-centring, starting from a minimum bend radius of 15 metres; this is made possible thanks to the thickness of the panel that

has been reduced to 2 cm and a lightweight lower finish consisting of a flexible facing in bituminized felt, centesimal aluminium or Alutex.



## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Bituminized felt

| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3 | 3.25 | 3.5 |
|---------------------------------------------------------------------|-----|------|-----|------|-----|------|-----|------|---|------|-----|
| 0.5                                                                 | 495 | 322  | 224 | 164  | 126 | 93   | 68  |      |   |      |     |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |     |      |     |      |   |      |     |

Effective span width:  
120 mm



**EXTERNAL facing:**  
Prepainted  
zinc-plated steel  
**INTERNAL facing:**  
Bituminized felt

| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
|---------------------------------------------------------------------|-----|------|-----|------|-----|------|-----|------|----|------|-----|
| 0.5                                                                 | 644 | 417  | 279 | 205  | 158 | 126  | 101 | 83   | 66 | 52   |     |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |     |      |     |      |    |      |     |

Effective span width:  
120 mm

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |
|----------------------------|----------------|
| 0.5                        | 20             |
|                            | 5.30           |

| U               | 20   |
|-----------------|------|
| Transmittance   |      |
| W/sq.m. K       | 1.03 |
| Kcal/sq.m. h °C | 0.89 |

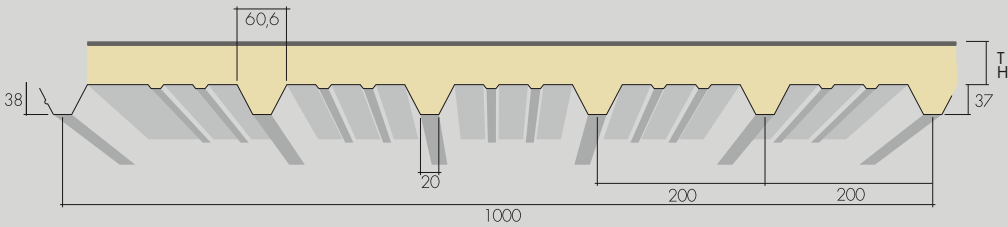
# DECK®

FOR SELF-CONTAINED PLAIN ROOFS

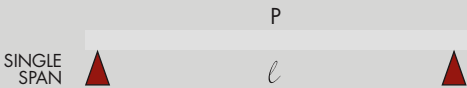


DECK® is a special panel with a lower backing in fretted sheet and a plain upper surface in tarred felt. It is used to make self-contained plain roofs, usually designed to accommodate a waterproofing layer (polymer-modified bitumen, PVC or elastomer), which is cast in situ.

The narrow pitch of the ribbing (200 mm) and the range of sheet metal thicknesses in the plate can suit the most diverse designs. The choice of the method for the structural connection to the carpentry and the sealing of the tarred-felt free edge are also crucially important.



## Static properties (kg/sq.m.)



**INTERNAL facing:**  
Prepainted  
zinc-plated steel  
**EXTERNAL facing:**  
Bituminized felt

| SHEET METAL THICKNESS (mm)                                          | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
|---------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|----|------|-----|
| 0.5                                                                 | 519  | 338  | 235 | 173  | 133 | 98   | 72  |      |    |      |     |
| 0.6                                                                 | 625  | 400  | 278 | 205  | 155 | 117  | 85  | 64   |    |      |     |
| 0.8                                                                 | 835  | 533  | 371 | 272  | 208 | 156  | 113 | 85   | 66 | 51   |     |
| 1                                                                   | 1045 | 677  | 463 | 340  | 260 | 196  | 142 | 106  | 82 | 65   | 53  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |      |      |     |      |     |      |     |      |    |      |     |

Effective span width:  
120 mm



**INTERNAL facing:**  
Prepainted  
zinc-plated steel  
**EXTERNAL facing:**  
Bituminized felt

| SHEET METAL THICKNESS (mm)                                          | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 |
|---------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|
| 0.5                                                                 | 676  | 437  | 293 | 215  | 166 | 132  | 107 | 87   | 69  | 55   |     |
| 0.6                                                                 | 781  | 500  | 347 | 255  | 195 | 154  | 125 | 102  | 82  | 65   | 49  |
| 0.8                                                                 | 1044 | 668  | 463 | 339  | 260 | 205  | 167 | 137  | 110 | 86   | 69  |
| 1                                                                   | 1303 | 834  | 579 | 425  | 326 | 257  | 207 | 172  | 137 | 107  | 87  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |      |      |     |      |     |      |     |      |     |      |     |

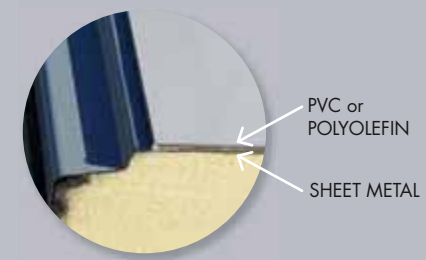
Effective span width:  
120 mm

## WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | 30    | 40    | 50    | 60    | 80    | 100   |
|----------------------------|-------|-------|-------|-------|-------|-------|
| 0.4                        | 4.69  | 5.07  | 5.45  | 5.83  | 6.59  | 7.35  |
| 0.5                        | 5.68  | 6.06  | 6.44  | 6.82  | 7.58  | 8.34  |
| 0.6                        | 6.66  | 7.04  | 7.42  | 7.80  | 8.56  | 9.32  |
| 0.8                        | 8.62  | 9.00  | 9.38  | 9.76  | 10.52 | 11.28 |
| 1                          | 10.58 | 10.96 | 11.34 | 11.72 | 12.48 | 13.24 |

| U               | 30   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|
| Transmittance   |      |      |      |      |      |      |
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |



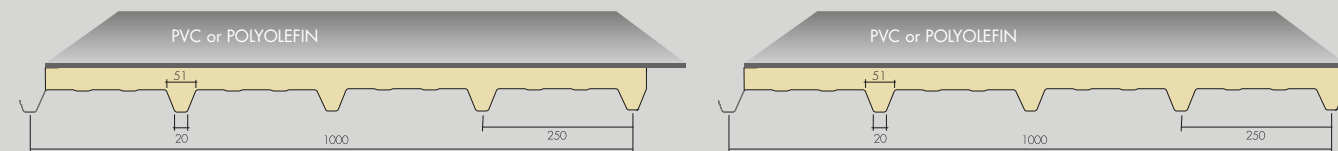


## MONO DECK®

FOR FLAT ROOFS

The MONO DECK® panel has a 1.2 or 1.5 mm upper backing made of PVC or POLYOLEFIN (to be specified when ordering), which is resistant to weather and UV rays. These membranes coupled with non-woven polyester geotextile compose the upper side of the MONO DECK® panel. The surface is certified with a BBA Agreement Certificate

(durability of the coating of 30 years). This product offers credits for LEED certification purposes. The panel is supplied with a lateral selvedge of about 60 mm to be welded in place.



(WITH SELVEDGE or WITHOUT SELVEDGE, to be specified when ordering)

### Static properties (kg/sq.m.)

**INTERNAL facing:**  
Prepainted  
zinc-plated steel  
**EXTERNAL facing:**  
PVC-P

Effective span width:  
120 mm



| SHEET METAL THICKNESS (mm) | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
|----------------------------|-----|------|-----|------|-----|------|-----|------|----|------|-----|
| 0.5                        | 495 | 322  | 224 | 164  | 126 | 93   | 68  |      |    |      |     |
| 0.6                        | 595 | 381  | 265 | 195  | 148 | 111  | 81  | 61   |    |      |     |
| 0.8                        | 795 | 508  | 353 | 259  | 198 | 149  | 108 | 81   | 63 | 49   |     |
| 1                          | 995 | 645  | 441 | 324  | 248 | 187  | 135 | 101  | 78 | 62   | 50  |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200 l



**INTERNAL facing:**  
Prepainted  
zinc-plated steel  
**EXTERNAL facing:**  
PVC-P

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 |
|----------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|
| 0.5                        | 644  | 417  | 279 | 205  | 158 | 126  | 101 | 83   | 66  | 52   |     |
| 0.6                        | 744  | 476  | 330 | 243  | 186 | 147  | 119 | 97   | 78  | 62   | 49  |
| 0.8                        | 994  | 636  | 441 | 323  | 248 | 195  | 159 | 130  | 105 | 82   | 66  |
| 1                          | 1241 | 794  | 551 | 405  | 310 | 245  | 197 | 164  | 130 | 102  | 83  |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200 l

### WEIGHT table (Kg/sq.m.)

| SHEET METAL THICKNESS (mm) | Thickness (mm) |       |       |       |       |       |       |
|----------------------------|----------------|-------|-------|-------|-------|-------|-------|
|                            | 30             | 40    | 50    | 60    | 80    | 100   | 120   |
| 0.5                        | 5.45           | 5.83  | 6.21  | 6.59  | 7.35  | 8.11  | 8.49  |
| 0.6                        | 6.41           | 6.79  | 7.17  | 7.55  | 8.31  | 9.07  | 9.45  |
| 0.8                        | 8.32           | 8.70  | 9.08  | 9.46  | 10.22 | 10.98 | 11.36 |
| 1                          | 10.24          | 10.62 | 11.00 | 11.38 | 12.14 | 12.90 | 13.28 |

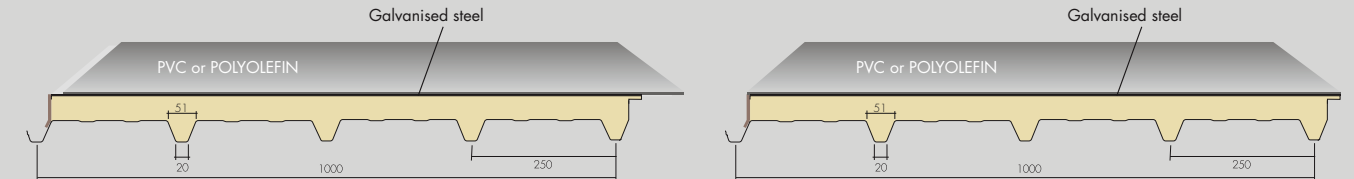
| U               | 30   | 40   | 50   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|------|
| Transmittance   |      |      |      |      |      |      |      |
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |

## ULTRA DECK®

FOR SELF-SUPPORTING FLAT ROOFS

The ULTRA DECK® panel has a 1.2 or 1.5 mm upper backing made of PVC or POLYOLEFIN (to be specified when ordering), which is resistant to weather and UV rays. These membranes coupled with non-woven polyester geotextile compose the upper side of the ULTRA DECK® panel. The surface is certified with a BBA Agreement Certificate (durability of

the coating of 30 years). This product offers credits for LEED certification purposes. The panel is supplied with a lateral selvedge of about 60 mm to be welded in place.

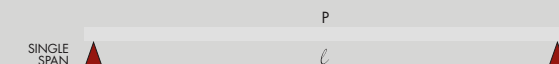


(WITH SELVEDGE or WITHOUT SELVEDGE, to be specified when ordering)

### Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

Effective span width:  
120 mm



| PANEL THICKNESS (mm) | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   | WEIGHT (Kg/sq.m.) |
|----------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| 30                   | 250  | 195 | 105 | 70  |     |     |     |     |     |     | 7.42              |
| 40                   | 290  | 200 | 135 | 90  | 65  |     |     |     |     |     | 7.80              |
| 50                   | 315  | 230 | 160 | 115 | 85  | 65  |     |     |     |     | 8.18              |
| 60                   | 370  | 275 | 195 | 145 | 110 | 85  | 60  |     |     |     | 8.56              |
| 80                   | 485  | 360 | 265 | 200 | 155 | 120 | 95  | 70  | 50  |     | 9.32              |
| 100                  | 595  | 445 | 340 | 260 | 200 | 160 | 125 | 105 | 80  | 60  | 10.08             |
| 120                  | 710  | 530 | 420 | 320 | 250 | 195 | 160 | 130 | 105 | 85  | 10.84             |
| 150                  | 880  | 655 | 520 | 410 | 325 | 260 | 210 | 170 | 145 | 120 | 11.98             |
| 160                  | 935  | 700 | 555 | 445 | 350 | 280 | 225 | 185 | 155 | 130 | 12.36             |
| 180                  | 975  | 725 | 580 | 480 | 400 | 320 | 260 | 215 | 180 | 150 | 13.12             |
| 200                  | 1000 | 745 | 595 | 495 | 420 | 360 | 295 | 245 | 205 | 170 | 13.88             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l

| U               | 30   | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 160  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|
| Transmittance   |      |      |      |      |      |      |      |      |      |      |      |
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.14 | 0.12 | 0.11 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.12 | 0.11 | 0.10 |

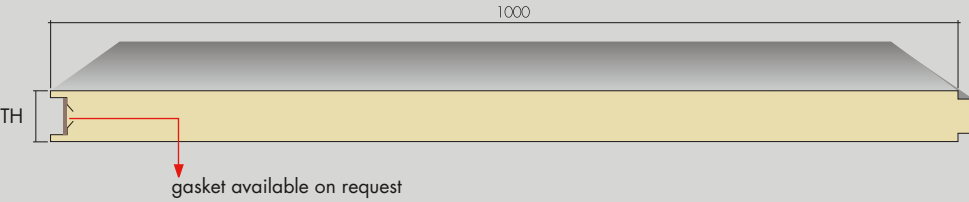


# ISOPAR®

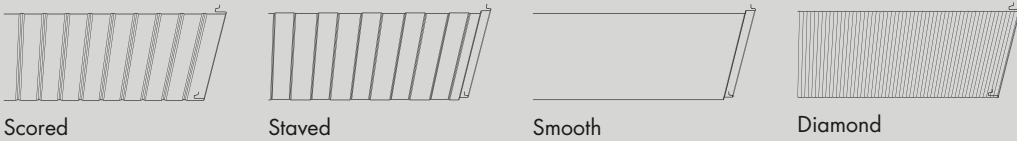
INSULATING WALL PANEL

In the building industry, energy savings are an increasingly important issue. Therefore, the industry is focussing on building materials that include highly-insulating components. ISOPAR® is a self-supporting flat panel specially designed for mobile walls, prefabricated boxes, cooling chambers, exhibition

stands, sliding doors, false ceilings and is an ideal component for those projects that require light, strong, insulating products. In the “staved”, “scored”, “smooth” and “diamond” versions, ISOPAR® improves the design of any new architecture: sleek, simple and even.



Available profiles (please state when ordering)



| U<br>Transmittance | 25   | 30   | 35   | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 180  | 200  | 220  | 240  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.84 | 0.71 | 0.62 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.12 | 0.11 | 0.10 | 0.09 |
| Kcal/sq.m. h °C    | 0.73 | 0.61 | 0.53 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 |

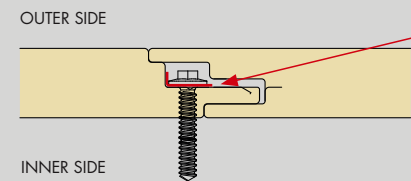
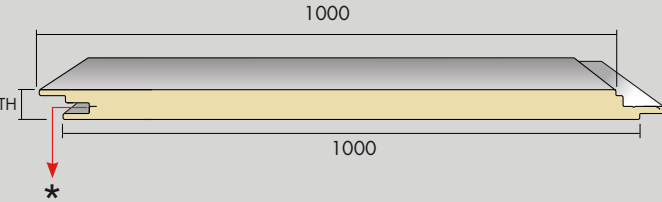
# ISOPAR® ÉLITE

INSULATING WALL PANELS WITH HIDDEN FASTENERS

More often than not, the look of a wall is important. After extensive research, now ISOPAR® is available with hidden fasteners. The panels are secured by special joints, as shown in the drawing.

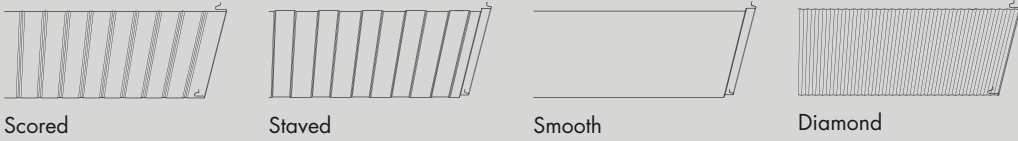
Now, ISOPAR® is not just practical and high quality, it offers the beauty of a wall with hidden fasteners. ISOPAR® ÉLITE is available with Scored, Smooth, Staved and Diamond finishes. Available for the thinnest thicknesses: 25-30-35-40-50-60-80-100-120 mm.

## THICKNESS FROM 25 TO 35 MM



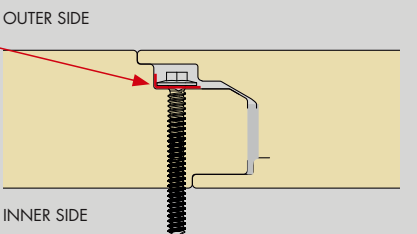
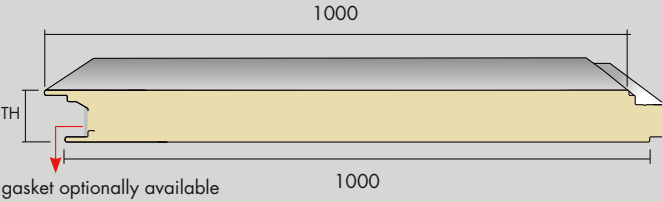
During the assembly phase, use the steel fastening plate. The plate is intended to distribute the efforts arising from fixing and to increase the resistance to compressive and depression stresses acting on the wall panels. The position and the number of fixing points must be defined by the designer depending on the stresses on the structure.

Available profiles (please state when ordering)



| U<br>Transmittance | 25   | 30   | 35   | 40   | 50   | 60   | 80   | 100  | 120  |
|--------------------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.84 | 0.71 | 0.62 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C    | 0.73 | 0.61 | 0.53 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |

## THICKNESS FROM 40 TO 120 MM



Hex head screw with 8 mm key.

\*The side gasket is not supplied as standard with the 25mm and 30mm thick ISOPAR ÉLITE panels. A single-sided adhesive gasket can be supplied on request for application on site before installation (to be specified on the order).





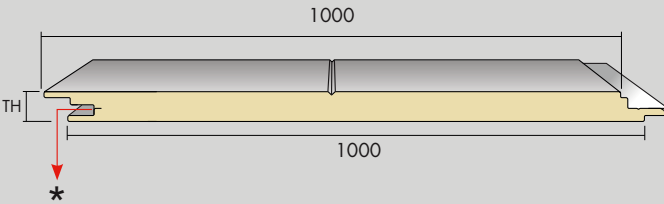
# ISOPAR® ÉLITE 500

INSULATING WALL PANEL WITH HIDDEN FASTENERS WITH STAVE EFFECT

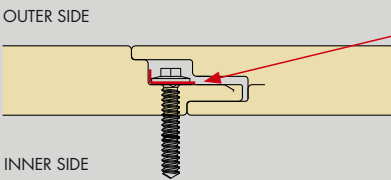
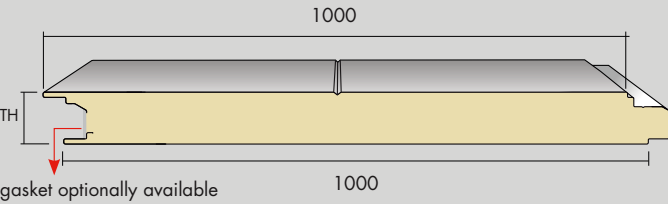
More often than not, the look of a wall is essential. After extensive research, now ISOPAR® is available with hidden fasteners. The panels are secured by special joints, as shown in the drawing.

Now, ISOPAR® is not just practical and high quality, but it also offers the beauty of a wall with hidden fasteners. ISOPAR® ÉLITE 500 is available with thinner thickness: 25-30-35-40-50-60-80-100-120 mm. We recommend using 0.6 mm thickness steel for the external side.

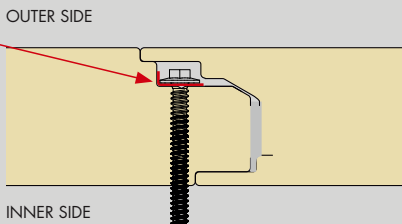
## THICKNESS FROM 25 TO 35 MM



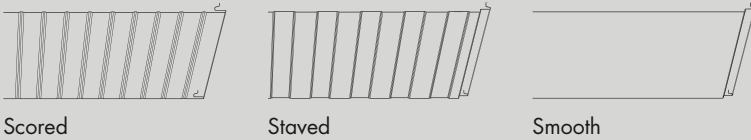
## THICKNESS FROM 40 TO 120 MM



During the assembly phase, use the steel fastening plate. The plate is intended to distribute the efforts arising from fixing and to increase the resistance to compressive and depression stresses acting on the wall panels. The position and the number of fixing points must be defined by the designer depending on the stresses on the structure.



Available profiles internal facing (please state when ordering)



| U Transmittance | 25   | 30   | 35   | 40   | 50   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.84 | 0.71 | 0.62 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C | 0.73 | 0.61 | 0.53 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |

Hex head screw with 8 mm key.

\*The side gasket is not supplied as standard with the 25mm and 30mm thick ISOPAR ÉLITE 500 panels. A single-sided adhesive gasket can be supplied on request for application on site before installation (to be specified on the order).

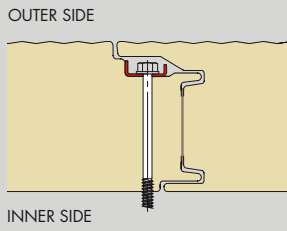
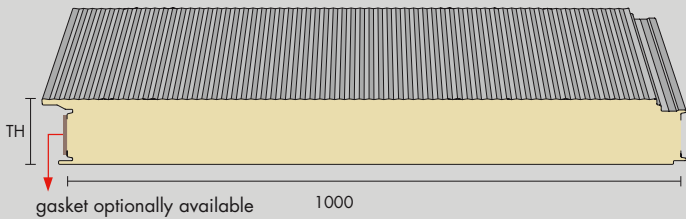
# ISOPAR® ELEGANT

INSULATING PANEL WITH HIDDEN FASTENERS

The look of a wall is important. Lattonedil® combines the beauty of an architectural wall with hidden fasteners and the practicality of a modular design. The maze-like design and the hot-cut joint with a special housing for the fasteners offers an

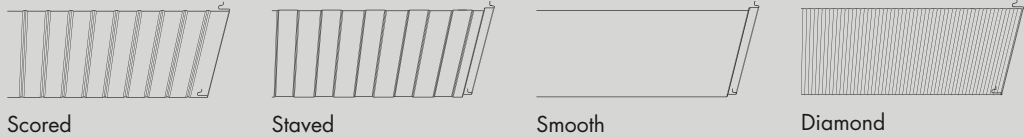
excellent aesthetic result, with the fasteners completely hidden from view, keeping airflows and cold bridges away. Ideal for false ceilings and insulated walls. For panel with a smooth finish, we recommend using a 0.6 mm thickness steel support.

## THICKNESS FROM 50 TO 240 MM



During the assembly phase, use the steel fastening plate. The plate is intended to distribute the efforts arising from fixing and to increase the resistance to compressive and depression stresses acting on the wall panels. The position and the number of fixing points must be defined by the designer depending on the stresses on the structure.

Available profiles (please state when ordering)



| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 180  | 200  | 220  | 240  |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.12 | 0.11 | 0.10 | 0.09 |
| Kcal/sq.m. h °C | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 |

Hex head screw with 8mm key.

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.

ISOPAR® / ISOPAR® ÉLITE / ISOPAR® ÉLITE 5 00 / ISOPAR® ELEGANT

STATIC PROPERTIES

Static properties  
(kg/sq.m.)

EXTERNAL facing:  
Steel 0.4 mm  
INTERNAL facing:  
Steel 0.4 mm

Effective span width:  
120 mm

| SINGLE SPAN                                                                                                                        | P    |     |     |     |     |     |     |     |     |   | WEIGHT<br>(Kg/sq.m.) |
|------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|---|----------------------|
|                                                                                                                                    | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 |                      |
| PANEL THICKNESS (mm)                                                                                                               | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 | WEIGHT (Kg/sq.m.)    |
| 25                                                                                                                                 | 165  | 90  | 70  |     |     |     |     |     |     |   | 6.68                 |
| 30                                                                                                                                 | 190  | 110 | 85  | 65  |     |     |     |     |     |   | 6.86                 |
| 35                                                                                                                                 | 215  | 125 | 100 | 80  | 55  |     |     |     |     |   | 7.04                 |
| 40                                                                                                                                 | 236  | 145 | 115 | 90  | 65  | 50  |     |     |     |   | 7.22                 |
| 50                                                                                                                                 | 297  | 185 | 150 | 115 | 85  | 65  | 50  |     |     |   | 7.61                 |
| 60                                                                                                                                 | 357  | 225 | 180 | 140 | 105 | 80  | 60  | 50  |     |   | 8.00                 |
| 80                                                                                                                                 | 460  | 305 | 245 | 190 | 140 | 105 | 85  | 65  |     |   | 8.78                 |
| 100                                                                                                                                | 515  | 385 | 305 | 240 | 175 | 135 | 105 | 85  |     |   | 9.56                 |
| 120                                                                                                                                | 620  | 465 | 370 | 290 | 215 | 165 | 130 | 105 |     |   | 10.34                |
| 150                                                                                                                                | 775  | 580 | 465 | 365 | 270 | 205 | 160 | 130 |     |   | 11.51                |
| 180                                                                                                                                | 935  | 700 | 560 | 440 | 325 | 245 | 195 | 155 |     |   | 12.68                |
| 200                                                                                                                                | 1000 | 780 | 625 | 490 | 360 | 275 | 215 | 175 |     |   | 13.46                |
| 220                                                                                                                                | 1000 | 860 | 685 | 540 | 395 | 305 | 240 | 195 |     |   | 14.22                |
| 240                                                                                                                                | 1000 | 940 | 750 | 590 | 435 | 330 | 260 | 210 |     |   | 14.98                |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $\ell$ |      |     |     |     |     |     |     |     |     |   |                      |

EXTERNAL facing:  
Steel 0.4 mm  
INTERNAL facing:  
Steel 0.4 mm

Effective span width:  
120 mm

| DOUBLE SPAN                                                                                                                        | P    |     |     |     |     | P   |     |     |     |     | WEIGHT<br>(Kg/sq.m.) |
|------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------|
|                                                                                                                                    | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   |                      |
| PANEL THICKNESS (mm)                                                                                                               | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   | WEIGHT (Kg/sq.m.)    |
| 25                                                                                                                                 | 125  | 75  | 55  |     |     |     |     |     |     |     | 6.68                 |
| 30                                                                                                                                 | 151  | 90  | 70  | 60  | 50  |     |     |     |     |     | 6.86                 |
| 35                                                                                                                                 | 170  | 105 | 85  | 70  | 60  |     |     |     |     |     | 7.04                 |
| 40                                                                                                                                 | 195  | 125 | 95  | 80  | 65  | 50  |     |     |     |     | 7.22                 |
| 50                                                                                                                                 | 245  | 160 | 130 | 100 | 80  | 65  | 50  |     |     |     | 7.61                 |
| 60                                                                                                                                 | 295  | 195 | 155 | 125 | 95  | 75  | 65  | 50  |     |     | 8.00                 |
| 80                                                                                                                                 | 395  | 270 | 210 | 165 | 120 | 95  | 75  | 65  | 50  |     | 8.78                 |
| 100                                                                                                                                | 495  | 340 | 265 | 195 | 145 | 115 | 95  | 75  | 65  | 55  | 9.56                 |
| 120                                                                                                                                | 600  | 415 | 310 | 225 | 170 | 135 | 110 | 90  | 75  | 65  | 10.34                |
| 150                                                                                                                                | 735  | 515 | 365 | 270 | 205 | 160 | 130 | 110 | 90  | 80  | 11.51                |
| 180                                                                                                                                | 770  | 560 | 415 | 310 | 240 | 190 | 155 | 125 | 105 | 90  | 12.68                |
| 200                                                                                                                                | 1000 | 590 | 450 | 335 | 260 | 205 | 170 | 140 | 115 | 100 | 13.46                |
| 220                                                                                                                                | 1000 | 620 | 485 | 365 | 280 | 225 | 180 | 150 | 130 | 110 | 14.22                |
| 240                                                                                                                                | 1000 | 650 | 510 | 390 | 305 | 240 | 195 | 165 | 140 | 120 | 14.98                |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $\ell$ |      |     |     |     |     |     |     |     |     |     |                      |

EXTERNAL facing:  
Steel 0.4 mm  
INTERNAL facing:  
Steel 0.4 mm

Effective span width:  
120 mm

| MULTIPLE SPAN                                                                                                                      | P                                                                                   |        |                                                                                     | P      |                                                                                     |        | P                                                                                     |     |     | WEIGHT (Kg/sq.m.) |       |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|-----|-----|-------------------|-------|
|                                                                                                                                    |  | $\ell$ |  | $\ell$ |  | $\ell$ |  |     |     |                   |       |
| PANEL THICKNESS (mm)                                                                                                               | 1.5                                                                                 | 2      | 2.5                                                                                 | 3      | 3.5                                                                                 | 4      | 4.5                                                                                   | 5   | 5.5 | 6                 |       |
| 25                                                                                                                                 | 125                                                                                 | 75     | 60                                                                                  | 50     |                                                                                     |        |                                                                                       |     |     |                   | 6.68  |
| 30                                                                                                                                 | 151                                                                                 | 90     | 70                                                                                  | 60     | 50                                                                                  |        |                                                                                       |     |     |                   | 6.86  |
| 35                                                                                                                                 | 170                                                                                 | 110    | 85                                                                                  | 70     | 60                                                                                  | 50     |                                                                                       |     |     |                   | 7.04  |
| 40                                                                                                                                 | 195                                                                                 | 125    | 100                                                                                 | 80     | 70                                                                                  | 60     | 50                                                                                    |     |     |                   | 7.22  |
| 50                                                                                                                                 | 245                                                                                 | 160    | 125                                                                                 | 105    | 90                                                                                  | 75     | 60                                                                                    | 50  |     |                   | 7.61  |
| 60                                                                                                                                 | 295                                                                                 | 195    | 155                                                                                 | 125    | 110                                                                                 | 85     | 70                                                                                    | 55  | 50  |                   | 8.00  |
| 80                                                                                                                                 | 395                                                                                 | 265    | 210                                                                                 | 170    | 135                                                                                 | 105    | 85                                                                                    | 70  | 60  | 50                | 8.78  |
| 100                                                                                                                                | 495                                                                                 | 335    | 265                                                                                 | 205    | 160                                                                                 | 125    | 105                                                                                   | 85  | 75  | 65                | 9.56  |
| 120                                                                                                                                | 600                                                                                 | 410    | 310                                                                                 | 235    | 180                                                                                 | 145    | 120                                                                                   | 100 | 85  | 75                | 10.34 |
| 150                                                                                                                                | 735                                                                                 | 505    | 360                                                                                 | 275    | 215                                                                                 | 170    | 140                                                                                   | 120 | 100 | 90                | 11.51 |
| 180                                                                                                                                | 770                                                                                 | 570    | 410                                                                                 | 310    | 245                                                                                 | 200    | 165                                                                                   | 140 | 120 | 100               | 12.68 |
| 200                                                                                                                                | 1000                                                                                | 605    | 445                                                                                 | 335    | 265                                                                                 | 215    | 180                                                                                   | 150 | 130 | 110               | 13.46 |
| 220                                                                                                                                | 1000                                                                                | 635    | 475                                                                                 | 360    | 285                                                                                 | 230    | 190                                                                                   | 160 | 140 | 120               | 14.22 |
| 240                                                                                                                                | 1000                                                                                | 665    | 505                                                                                 | 385    | 305                                                                                 | 250    | 205                                                                                   | 175 | 150 | 130               | 14.98 |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $\ell$ |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                       |     |     |                   |       |

Static properties  
(kg/sq.m.)

EXTERNAL facing:  
Aluminium 0.6 mm  
INTERNAL facing:  
Steel 0.4 mm

Effective span width:  
120 mm

| SINGLE SPAN                                                                                                                        | P    |     |     |     |     |     |     |     |     |   | WEIGHT<br>(Kg/sq.m.) |
|------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|---|----------------------|
|                                                                                                                                    | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 |                      |
| PANEL THICKNESS (mm)                                                                                                               | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 | WEIGHT (Kg/sq.m.)    |
| 25                                                                                                                                 | 130  | 185 | 70  |     |     |     |     |     |     |   | 5.53                 |
| 30                                                                                                                                 | 160  | 120 | 100 | 75  |     |     |     |     |     |   | 5.71                 |
| 35                                                                                                                                 | 185  | 140 | 115 | 85  | 65  |     |     |     |     |   | 5.89                 |
| 40                                                                                                                                 | 210  | 160 | 130 | 95  | 75  |     |     |     |     |   | 6.07                 |
| 50                                                                                                                                 | 265  | 200 | 165 | 115 | 90  | 70  | 50  |     |     |   | 6.46                 |
| 60                                                                                                                                 | 315  | 240 | 195 | 140 | 105 | 85  | 70  | 50  |     |   | 6.85                 |
| 80                                                                                                                                 | 420  | 320 | 260 | 185 | 140 | 110 | 90  | 75  |     |   | 7.63                 |
| 100                                                                                                                                | 530  | 400 | 320 | 225 | 170 | 135 | 110 | 90  |     |   | 8.41                 |
| 120                                                                                                                                | 635  | 480 | 385 | 270 | 205 | 160 | 115 | 105 |     |   | 9.19                 |
| 150                                                                                                                                | 790  | 595 | 480 | 335 | 250 | 195 | 155 | 130 |     |   | 10.36                |
| 180                                                                                                                                | 950  | 715 | 575 | 405 | 300 | 230 | 185 | 155 |     |   | 11.53                |
| 200                                                                                                                                | 1000 | 780 | 625 | 430 | 315 | 245 | 200 | 170 |     |   | 12.31                |
| 220                                                                                                                                | 1000 | 860 | 690 | 455 | 345 | 280 | 220 | 195 |     |   | 13.10                |
| 240                                                                                                                                | 1000 | 940 | 755 | 480 | 375 | 315 | 240 | 220 |     |   | 13.87                |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $\ell$ |      |     |     |     |     |     |     |     |     |   |                      |

EXTERNAL facing:  
Aluminium 0.6 mm  
INTERNAL facing:  
Steel 0.4 mm

Effective span width:  
120 mm

| DOUBLE SPAN                                                                                                                        | P   |     |     |     |     | P   |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
|                                                                                                                                    | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| PANEL THICKNESS (mm)                                                                                                               | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  | WEIGHT (Kg/sq.m.)    |
| 25                                                                                                                                 | 115 | 85  | 65  |     |     |     |     |     |     |    | 5.53                 |
| 30                                                                                                                                 | 135 | 105 | 75  | 60  | 50  |     |     |     |     |    | 5.71                 |
| 35                                                                                                                                 | 160 | 120 | 85  | 65  | 60  |     |     |     |     |    | 5.89                 |
| 40                                                                                                                                 | 185 | 135 | 95  | 70  | 65  | 50  |     |     |     |    | 6.07                 |
| 50                                                                                                                                 | 230 | 165 | 110 | 80  | 65  | 65  | 50  |     |     |    | 6.46                 |
| 60                                                                                                                                 | 280 | 190 | 125 | 95  | 75  | 75  | 65  | 50  |     |    | 6.85                 |
| 80                                                                                                                                 | 380 | 235 | 160 | 115 | 90  | 70  | 75  | 65  | 50  |    | 7.63                 |
| 100                                                                                                                                | 465 | 280 | 185 | 135 | 105 | 85  | 70  | 75  | 65  | 55 | 8.41                 |
| 120                                                                                                                                | 530 | 320 | 215 | 155 | 120 | 95  | 80  | 70  | 75  | 65 | 9.19                 |
| 150                                                                                                                                | 620 | 380 | 255 | 185 | 140 | 115 | 95  | 80  | 70  | 68 | 10.36                |
| 180                                                                                                                                | 705 | 440 | 300 | 215 | 165 | 130 | 110 | 90  | 80  | 70 | 11.53                |
| 200                                                                                                                                | 745 | 480 | 325 | 235 | 180 | 145 | 115 | 110 | 85  | 75 | 12.31                |
| 220                                                                                                                                | 785 | 520 | 365 | 245 | 200 | 155 | 125 | 115 | 90  | 80 | 13.10                |
| 240                                                                                                                                | 825 | 560 | 405 | 275 | 220 | 165 | 135 | 120 | 95  | 85 | 13.87                |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $\ell$ |     |     |     |     |     |     |     |     |     |    |                      |

EXTERNAL facing:  
Aluminium 0.6 mm  
INTERNAL facing:  
Steel 0.4 mm

Effective span width:  
120 mm

| MULTIPLE SPAN                                                                                                                      | P                                                                                     |        |                                                                                       | P      |                                                                                       |        | P                                                                                     |     |     | WEIGHT (Kg/sq.m.) |       |
|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|-----|-----|-------------------|-------|
|                                                                                                                                    |  | $\ell$ |  | $\ell$ |  | $\ell$ |  |     |     |                   |       |
| PANEL THICKNESS (mm)                                                                                                               | 1.5                                                                                   | 2      | 2.5                                                                                   | 3      | 3.5                                                                                   | 4      | 4.5                                                                                   | 5   | 5.5 | 6                 |       |
| 25                                                                                                                                 | 115                                                                                   | 85     | 65                                                                                    | 50     |                                                                                       |        |                                                                                       |     |     |                   | 5.53  |
| 30                                                                                                                                 | 135                                                                                   | 105    | 75                                                                                    | 60     | 50                                                                                    |        |                                                                                       |     |     |                   | 5.71  |
| 35                                                                                                                                 | 160                                                                                   | 120    | 85                                                                                    | 65     | 60                                                                                    | 50     |                                                                                       |     |     |                   | 5.89  |
| 40                                                                                                                                 | 185                                                                                   | 135    | 95                                                                                    | 70     | 70                                                                                    | 60     | 50                                                                                    |     |     |                   | 6.07  |
| 50                                                                                                                                 | 230                                                                                   | 165    | 110                                                                                   | 80     | 65                                                                                    | 75     | 60                                                                                    | 50  |     |                   | 6.46  |
| 60                                                                                                                                 | 280                                                                                   | 190    | 125                                                                                   | 95     | 75                                                                                    | 85     | 70                                                                                    | 55  | 50  |                   | 6.85  |
| 80                                                                                                                                 | 380                                                                                   | 235    | 160                                                                                   | 115    | 90                                                                                    | 70     | 85                                                                                    | 70  | 60  | 50                | 7.63  |
| 100                                                                                                                                | 465                                                                                   | 280    | 185                                                                                   | 135    | 105                                                                                   | 85     | 70                                                                                    | 85  | 75  | 65                | 8.41  |
| 120                                                                                                                                | 530                                                                                   | 320    | 215                                                                                   | 155    | 120                                                                                   | 95     | 80                                                                                    | 70  | 85  | 75                | 9.19  |
| 150                                                                                                                                | 620                                                                                   | 380    | 255                                                                                   | 185    | 140                                                                                   | 115    | 95                                                                                    | 80  | 70  | 90                | 10.36 |
| 180                                                                                                                                | 705                                                                                   | 440    | 300                                                                                   | 215    | 165                                                                                   | 130    | 110                                                                                   | 90  | 80  | 70                | 11.53 |
| 200                                                                                                                                | 745                                                                                   | 480    | 325                                                                                   | 235    | 180                                                                                   | 145    | 115                                                                                   | 110 | 85  | 75                | 12.31 |
| 220                                                                                                                                | 785                                                                                   | 520    | 365                                                                                   | 245    | 200                                                                                   | 155    | 125                                                                                   | 115 | 90  | 80                | 13.10 |
| 240                                                                                                                                | 825                                                                                   | 560    | 405                                                                                   | 275    | 220                                                                                   | 165    | 135                                                                                   | 120 | 95  | 85                | 13.87 |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $\ell$ |                                                                                       |        |                                                                                       |        |                                                                                       |        |                                                                                       |     |     |                   |       |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



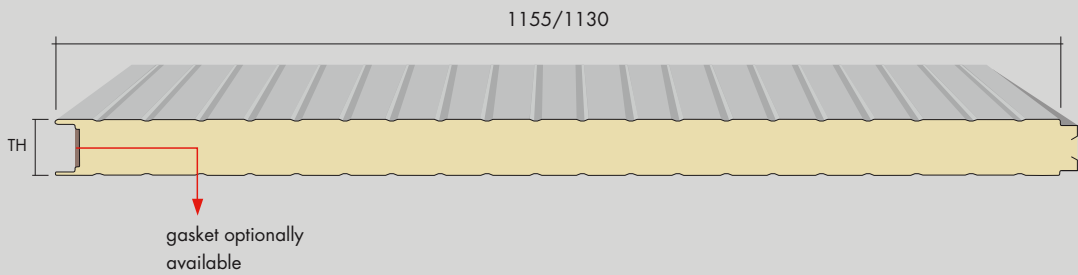


# ISOPAR® 1155/1130

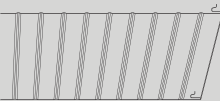
THE EXTRALARGE WALL PANEL

ISOPAR® 1155/1130 is the extra-large or outsized flat panel, specially designed for mobile walls, prefabricated boxes, exhibition stands, sliding doors or false ceilings: it is the ideal component for projects that require a light, strong and

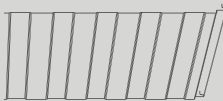
insulating product. In its “staved”, “scored” and “smooth” versions, with its oversize proportions ISOPAR® 1155/1130 makes installation quicker and cheaper. Available in a 1155 mm or 1130 mm width, to be specified when ordering.



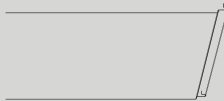
Available profiles (please state when ordering)



Scored



Staved



Smooth

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

| SINGLE SPAN                                                                                                                   | P    |     |     |     |     |     |     |     |     |   | WEIGHT<br>(Kg / sq. m.) |
|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|---|-------------------------|
|                                                                                                                               | ℓ    |     |     |     |     |     |     |     |     |   |                         |
| PANEL THICKNESS<br>(mm)                                                                                                       | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 |                         |
| 40                                                                                                                            | 236  | 145 | 115 | 90  | 65  | 50  | 50  |     |     |   | 8.30                    |
| 50                                                                                                                            | 297  | 185 | 150 | 115 | 85  | 65  | 50  | 50  |     |   | 8.75                    |
| 60                                                                                                                            | 357  | 225 | 180 | 140 | 105 | 80  | 60  | 50  |     |   | 9.20                    |
| 80                                                                                                                            | 460  | 305 | 245 | 190 | 140 | 105 | 85  | 65  |     |   | 10.10                   |
| 100                                                                                                                           | 515  | 385 | 305 | 240 | 175 | 135 | 105 | 85  |     |   | 11.00                   |
| 120                                                                                                                           | 620  | 465 | 370 | 290 | 215 | 165 | 130 | 105 |     |   | 11.90                   |
| 150                                                                                                                           | 775  | 580 | 465 | 365 | 270 | 205 | 160 | 130 |     |   | 13.25                   |
| 180                                                                                                                           | 935  | 700 | 560 | 440 | 325 | 245 | 195 | 155 |     |   | 14.60                   |
| 200                                                                                                                           | 1000 | 780 | 625 | 490 | 360 | 275 | 215 | 175 |     |   | 15.50                   |
| 220                                                                                                                           | 1000 | 860 | 685 | 540 | 395 | 305 | 240 | 195 |     |   | 14.22                   |
| 240                                                                                                                           | 1000 | 940 | 750 | 590 | 435 | 330 | 260 | 210 |     |   | 14.98                   |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 ℓ |      |     |     |     |     |     |     |     |     |   |                         |

| DOUBLE SPAN                                                                                                                   | P    |     |     |     |     | P   |     |     |     |     | WEIGHT<br>(Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------|
|                                                                                                                               | ℓ    |     |     |     |     | ℓ   |     |     |     |     |                      |
| PANEL THICKNESS<br>(mm)                                                                                                       | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   |                      |
| 40                                                                                                                            | 195  | 125 | 95  | 75  | 65  | 50  | 50  |     |     |     | 8.30                 |
| 50                                                                                                                            | 245  | 160 | 130 | 100 | 80  | 65  | 50  | 50  |     |     | 8.75                 |
| 60                                                                                                                            | 295  | 195 | 155 | 125 | 95  | 75  | 65  | 50  |     |     | 9.20                 |
| 80                                                                                                                            | 395  | 270 | 210 | 165 | 120 | 95  | 75  | 65  | 50  |     | 10.10                |
| 100                                                                                                                           | 495  | 340 | 265 | 195 | 145 | 115 | 95  | 75  | 65  | 55  | 11.00                |
| 120                                                                                                                           | 600  | 415 | 310 | 225 | 170 | 135 | 110 | 90  | 75  | 65  | 11.90                |
| 150                                                                                                                           | 735  | 515 | 365 | 270 | 205 | 160 | 130 | 110 | 90  | 80  | 13.25                |
| 180                                                                                                                           | 770  | 560 | 415 | 310 | 240 | 190 | 155 | 125 | 105 | 90  | 14.60                |
| 200                                                                                                                           | 1000 | 590 | 450 | 335 | 260 | 205 | 170 | 140 | 115 | 100 | 15.50                |
| 220                                                                                                                           | 1000 | 620 | 485 | 365 | 280 | 225 | 180 | 150 | 130 | 110 | 14.22                |
| 240                                                                                                                           | 1000 | 650 | 510 | 390 | 305 | 240 | 195 | 165 | 140 | 120 | 14.98                |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 ℓ |      |     |     |     |     |     |     |     |     |     |                      |

| MULTIPLE SPAN                                                                                                                      | P                                                                                     |        |                                                                                       | P      |                                                                                       |        | P                                                                                     |     |     | WEIGHT (Kg/sq.m.) |       |
|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|-----|-----|-------------------|-------|
|                                                                                                                                    |  | $\ell$ |  | $\ell$ |  | $\ell$ |  |     |     |                   |       |
| PANEL THICKNESS (mm)                                                                                                               | 1.5                                                                                   | 2      | 2.5                                                                                   | 3      | 3.5                                                                                   | 4      | 4.5                                                                                   | 5   | 5.5 | 6                 |       |
| 40                                                                                                                                 | 195                                                                                   | 125    | 100                                                                                   | 80     | 70                                                                                    | 60     | 50                                                                                    |     |     |                   | 8.30  |
| 50                                                                                                                                 | 245                                                                                   | 160    | 125                                                                                   | 105    | 90                                                                                    | 75     | 60                                                                                    | 50  |     |                   | 8.75  |
| 60                                                                                                                                 | 295                                                                                   | 195    | 155                                                                                   | 125    | 110                                                                                   | 85     | 70                                                                                    | 55  | 50  |                   | 9.20  |
| 80                                                                                                                                 | 395                                                                                   | 265    | 210                                                                                   | 170    | 135                                                                                   | 105    | 85                                                                                    | 70  | 60  | 50                | 10.10 |
| 100                                                                                                                                | 495                                                                                   | 335    | 265                                                                                   | 205    | 160                                                                                   | 125    | 105                                                                                   | 85  | 75  | 65                | 11.00 |
| 120                                                                                                                                | 600                                                                                   | 410    | 310                                                                                   | 235    | 180                                                                                   | 145    | 120                                                                                   | 100 | 85  | 75                | 11.90 |
| 150                                                                                                                                | 735                                                                                   | 505    | 360                                                                                   | 275    | 215                                                                                   | 170    | 140                                                                                   | 120 | 100 | 90                | 13.25 |
| 180                                                                                                                                | 770                                                                                   | 570    | 410                                                                                   | 310    | 245                                                                                   | 200    | 165                                                                                   | 140 | 120 | 100               | 14.60 |
| 200                                                                                                                                | 1000                                                                                  | 605    | 445                                                                                   | 335    | 265                                                                                   | 215    | 180                                                                                   | 150 | 130 | 110               | 15.50 |
| 220                                                                                                                                | 1000                                                                                  | 635    | 475                                                                                   | 360    | 285                                                                                   | 230    | 190                                                                                   | 160 | 140 | 120               | 14.22 |
| 240                                                                                                                                | 1000                                                                                  | 665    | 505                                                                                   | 385    | 305                                                                                   | 250    | 205                                                                                   | 175 | 150 | 130               | 14.98 |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 $\ell$ |                                                                                       |        |                                                                                       |        |                                                                                       |        |                                                                                       |     |     |                   |       |

| U Transmittance | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 180  | 200  | 220  | 240  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.12 | 0.11 | 0.10 | 0.09 |
| Kcal/sq.m. h °C | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 |

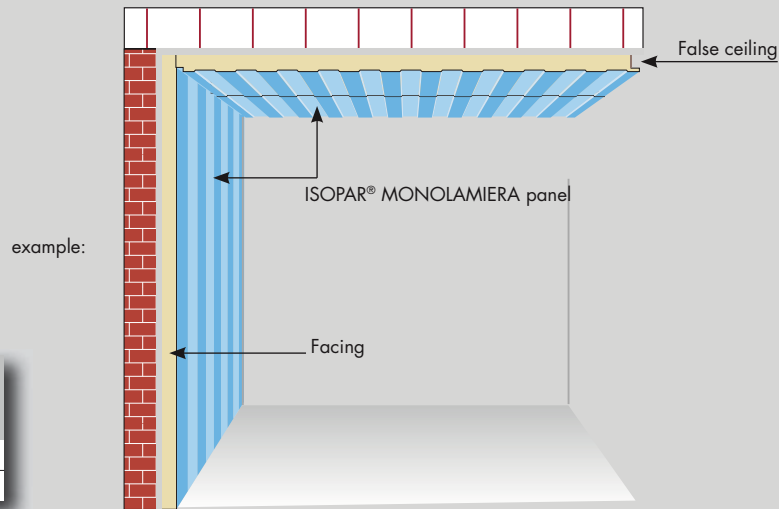
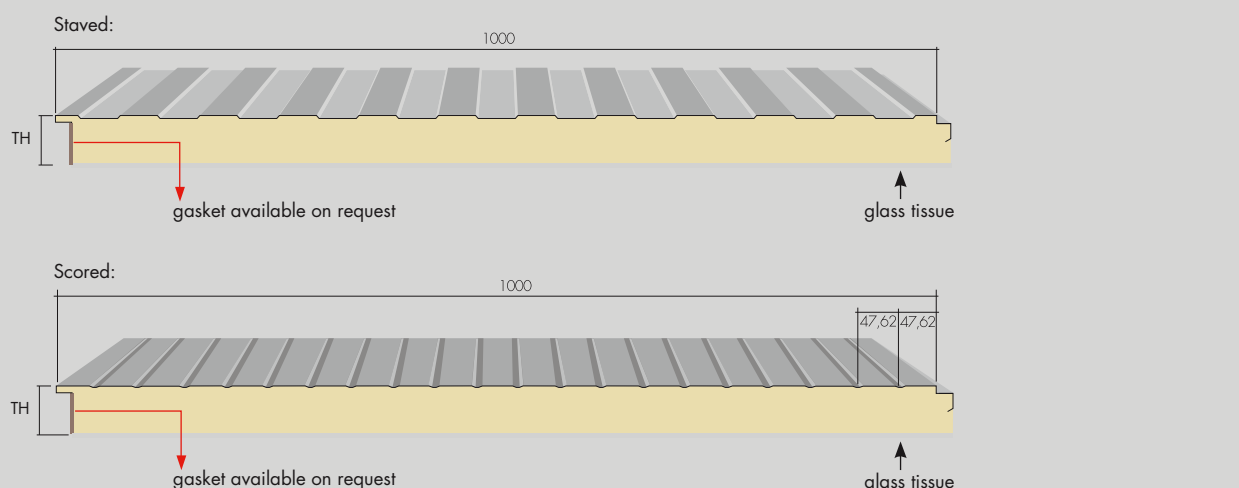


# ISOPAR® MONOLAMIERA

INSULATING WALL PANEL

Ideal for false ceilings and insulated walls. ISOPAR® MONOLAMIERA is a sandwich panel composed of a stiff sheet backing made in the same profiles and colours as the ISOPAR®

panel, for an excellent visual effect, and an inner backing which may be glass tissue, tarred felt or aluminium foil. The max length of the ISOPAR® MONOLAMIERA panels is 4 m.



| U Transmittance | 25   | 30   | 35   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.84 | 0.71 | 0.62 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.73 | 0.61 | 0.53 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |

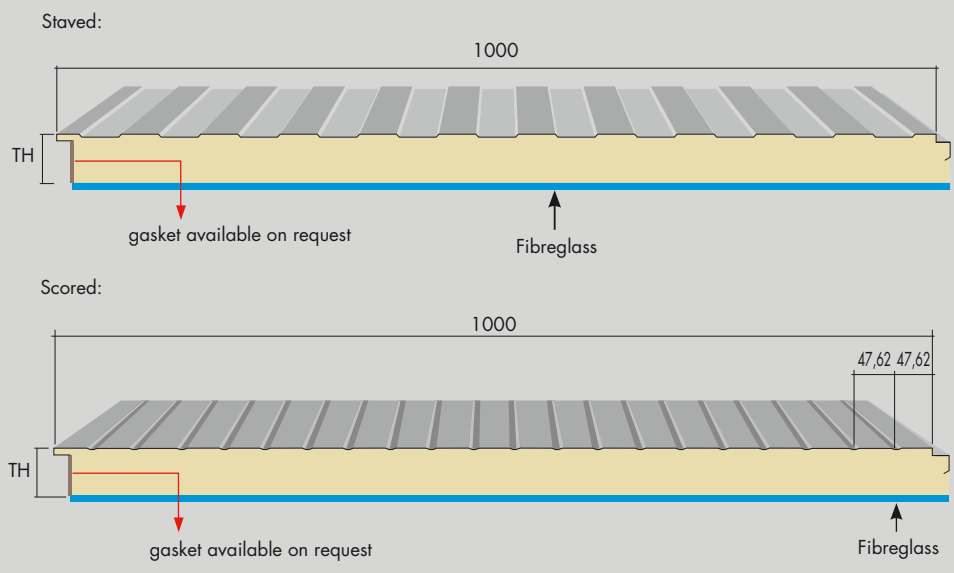
# ISOPARFACTOR®

INSULATING WALL PANEL FOR AGRICULTURAL FARMS

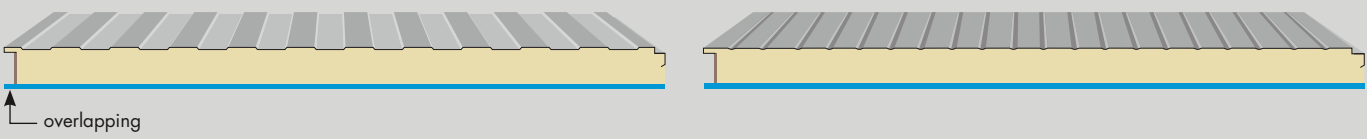
Cost effective, good resistance to aggressive agents and good hygiene and safety are just some of the benefits offered by ISOPARFACTOR®, roof panels, specifically designed for livestock buildings. With a fibreglass internal side, the panel is resistant to acids and the chemical products commonly used for cleaning

and hygiene purposes in livestock areas. ISOPARFACTOR® is a sandwich panel composed of a high-density expanded polyurethane insulating core, faced with a rigid external layer of prepainted steel or aluminium with four ribs and a fibreglass facing. Maximum manufacturing thickness 100 mm.

## FIBREGLASS ON FEMALE SIDE



## FIBREGLASS WITH OVERLAPPING



| U Transmittance | 25   | 30   | 35   | 40   | 50   | 60   | 80   | 100  |
|-----------------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.84 | 0.71 | 0.62 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.73 | 0.61 | 0.53 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 |

Isoparfactor® can be requested with fibreglass trimmed to fit the panel or with overlapping (to be specified when ordering).

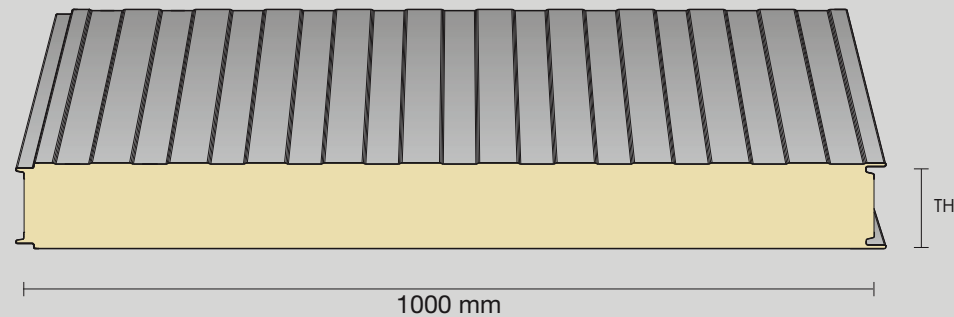




# ISOPAR® FRIGO / GIUNTO A LABIRINTO

INSULATING WALL PANEL FOR REFRIGERATED AREAS

The very high thermal insulation performance and the quality of the joining system make it particularly suitable for the construction of areas where a controlled temperature is required, such as cold rooms and working chambers.



## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

| PANEL THICKNESS (mm) | SINGLE SPAN |     |     |     |     |     |     |     |     |   | WEIGHT (Kg/sq.m.) |
|----------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|---|-------------------|
|                      | 1.5         | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 |                   |
| 50                   | 297         | 185 | 150 | 115 | 85  | 65  | 50  |     |     |   | 7.61              |
| 60                   | 357         | 225 | 180 | 140 | 105 | 80  | 60  | 50  |     |   | 8.00              |
| 80                   | 460         | 305 | 245 | 190 | 140 | 105 | 85  | 65  |     |   | 8.78              |
| 100                  | 515         | 385 | 305 | 240 | 175 | 135 | 105 | 85  |     |   | 9.56              |
| 120                  | 620         | 465 | 370 | 290 | 215 | 165 | 130 | 105 |     |   | 10.34             |
| 150                  | 775         | 580 | 465 | 365 | 270 | 205 | 160 | 130 |     |   | 11.51             |
| 180                  | 935         | 700 | 560 | 440 | 325 | 245 | 195 | 155 |     |   | 12.68             |
| 200                  | 1000        | 780 | 625 | 490 | 360 | 275 | 215 | 175 |     |   | 13.46             |
| 220                  | 1000        | 860 | 685 | 540 | 395 | 305 | 240 | 195 |     |   | 14.22             |
| 240                  | 1000        | 940 | 750 | 590 | 435 | 330 | 260 | 210 |     |   | 14.98             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $l$



## DRY JOINT

Suitable for areas with above-zero temperatures and not lower than 4°C (in the case of areas with temperatures lower than 4°C, a thermohygrometric test of the joint is needed, as it may generate condensation and/or ice formation). The joint geometry is interlocking male/female and is provided with standard PVC gasket inserted during production.



## JOINT WITH THERMO-EXPANDENT TAPE

Suitable for areas with temperatures not lower than -1°C (in the case of environments with temperatures lower than -1°C, a thermohygrometric test of the joint is needed, as it could generate condensation and/or ice formation). The joint consists of the standard PVC gasket to which two thermo-expanding tapes are added during assembly in the two cavities of the female side, along the entire length of the panel. This allows good sealing for the passage of air.



## JOINT WITH THIXOTROPIC SEALANT

Suitable for environments with below-zero temperatures. The sealant is inserted into the two cavities of the female side over the entire length of the panel. This sealant provides excellent air tightness.

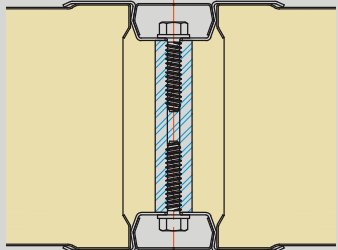
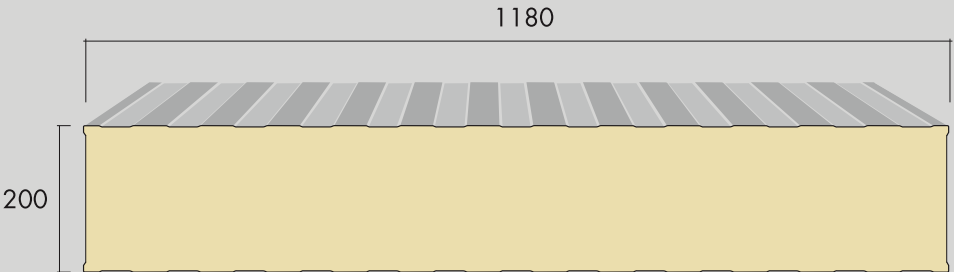


# ISOPAR® FRIGO / GIUNTO INIETTATO

INSULATING WALL PANEL FOR REFRIGERATED AREAS

Insulating panel with double metal coating, with polyurethane core, highly versatile and easy to assemble. The very high thermal insulation performance and the quality of the joining system make it particularly suitable for the construction of areas where a controlled temperature is required, such as cold rooms

and working chambers. The lack of cracks and the continuity of the insulating material, foamed directly on site within the joints, ensures excellent air tightness and minimization of thermal bridges.



## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

| PANEL THICKNESS (mm)                                                                                                          | P<br>SINGLE SPAN<br>ℓ |     |     |     |     |     |     |     |     |   | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|---|-------------------|
|                                                                                                                               | 1.5                   | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 |                   |
| <b>50</b>                                                                                                                     | 297                   | 185 | 150 | 115 | 85  | 65  | 50  |     |     |   | <b>7.61</b>       |
| <b>60</b>                                                                                                                     | 357                   | 225 | 180 | 140 | 105 | 80  | 60  | 50  |     |   | <b>8.00</b>       |
| <b>80</b>                                                                                                                     | 460                   | 305 | 245 | 190 | 140 | 105 | 85  | 65  |     |   | <b>8.78</b>       |
| <b>100</b>                                                                                                                    | 515                   | 385 | 305 | 240 | 175 | 135 | 105 | 85  |     |   | <b>9.56</b>       |
| <b>120</b>                                                                                                                    | 620                   | 465 | 370 | 290 | 215 | 165 | 130 | 105 |     |   | <b>10.34</b>      |
| <b>150</b>                                                                                                                    | 775                   | 580 | 465 | 365 | 270 | 205 | 160 | 130 |     |   | <b>11.51</b>      |
| <b>180</b>                                                                                                                    | 935                   | 700 | 560 | 440 | 325 | 245 | 195 | 155 |     |   | <b>12.68</b>      |
| <b>200</b>                                                                                                                    | 1000                  | 780 | 625 | 490 | 360 | 275 | 215 | 175 |     |   | <b>13.46</b>      |
| <b>220</b>                                                                                                                    | 1000                  | 860 | 685 | 540 | 395 | 305 | 240 | 195 |     |   | <b>14.22</b>      |
| <b>240</b>                                                                                                                    | 1000                  | 940 | 750 | 590 | 435 | 330 | 260 | 210 |     |   | <b>14.98</b>      |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 ℓ |                       |     |     |     |     |     |     |     |     |   |                   |

## INJECTED JOINT

Suitable for areas with very low below-zero temperatures that impose very restrictive requirements from the point of view of thermal bridges and air permeability.





GREAT INSULATION WITH  
MAXIMUM FIRE INSULATION

# CHAPTER 2

## POLYISOCYANURATE SANDWICH PANELS



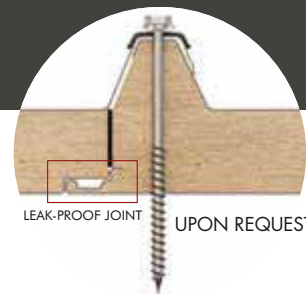


## EUROOCINQUE® HP

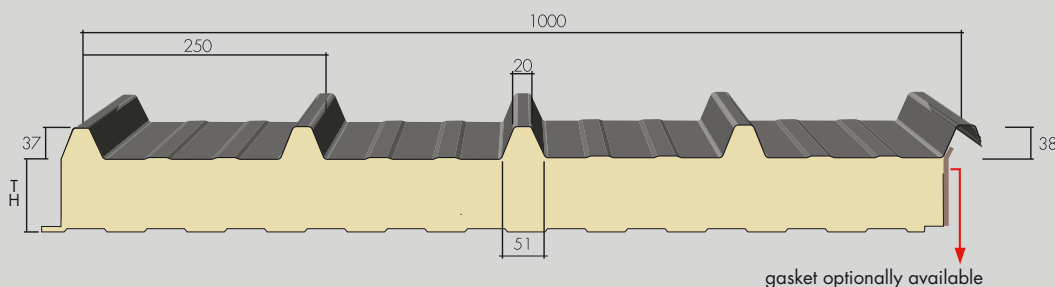
POLYISOCYANURATE ROOF

EUROOCINQUE® HP is a self-supporting insulated roof panel made of polyisocyanurate, a chemically and thermally very stable material: the breaking of the isocyanurate bond occurs above 200°C.

It can be defined as fireproof or fire retardant. EUROOCINQUE® HP proposes a 5- ribs industrial or residential roof for a good static resistance, with great aesthetic value.



B-s1,d0



### Static properties (kg/sq.m.)

EXTERNAL facing:  
Steel 0.4 mm  
INTERNAL facing:  
Steel 0.4 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P    |     |     |     |     |     |     |     |     |     | WEIGHT (Kg/sq.m.) |
|----------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
|                            | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   |                   |
| 30                         | 250  | 195 | 105 | 70  |     |     |     |     |     |     | 7.42              |
| 40                         | 290  | 200 | 135 | 90  | 65  |     |     |     |     |     | 7.80              |
| 50                         | 315  | 230 | 160 | 115 | 85  | 65  |     |     |     |     | 8.18              |
| 60                         | 370  | 275 | 195 | 145 | 110 | 85  | 60  |     |     |     | 8.56              |
| 80                         | 485  | 360 | 265 | 200 | 155 | 120 | 95  | 70  | 50  |     | 9.32              |
| 100                        | 595  | 445 | 340 | 260 | 200 | 160 | 125 | 105 | 80  | 60  | 10.08             |
| 120                        | 710  | 530 | 420 | 320 | 250 | 195 | 160 | 130 | 105 | 85  | 10.84             |
| 150                        | 880  | 655 | 520 | 410 | 325 | 260 | 210 | 170 | 145 | 120 | 11.98             |
| 160                        | 935  | 700 | 555 | 445 | 350 | 280 | 225 | 185 | 155 | 130 | 12.36             |
| 180                        | 975  | 725 | 580 | 480 | 400 | 320 | 260 | 215 | 180 | 150 | 13.12             |
| 200                        | 1000 | 745 | 595 | 495 | 420 | 360 | 295 | 245 | 205 | 170 | 13.88             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $\ell$

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 160  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.14 | 0.12 | 0.11 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.12 | 0.11 | 0.10 |

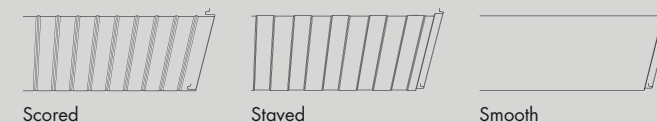
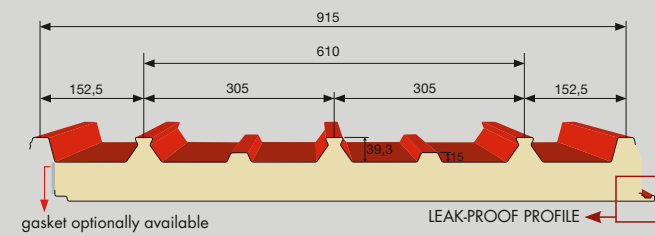
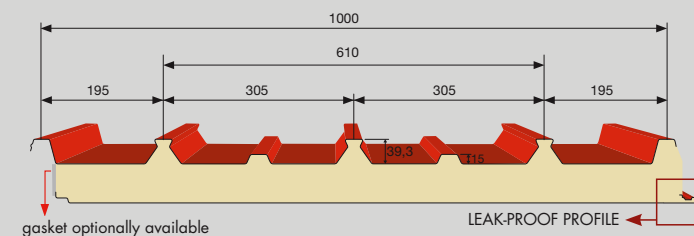


## SOLARPAN® PLUS HP

5-STAR ACCOMMODATION FOR POLYISOCYANURATE PHOTOVOLTAIC MODULES

Lattonedil presents the SOLARPAN® PLUS HP panel, now manufactured in PIR (Polyisocyanurate): with the same features and accessories as the SOLARPAN® PLUS panel

with the addition of fire reaction in B-s2, d0. For more information see page 40 of this catalogue.



### Static properties (kg/sq.m.)

EXTERNAL facing:  
Steel 0.5 mm  
INTERNAL facing:  
Steel 0.4 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | P    |     |     |     |     |     |     |     |     |     | WEIGHT (Kg/sq.m.) |
|----------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
|                            | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   |                   |
| 30                         | 330  | 245 | 175 | 105 | 65  |     |     |     |     |     | 8.84              |
| 40                         | 420  | 315 | 225 | 145 | 90  | 60  |     |     |     |     | 9.22              |
| 50                         | 510  | 380 | 280 | 190 | 125 | 85  | 60  |     |     |     | 9.60              |
| 60                         | 605  | 450 | 335 | 240 | 160 | 110 | 80  | 55  |     |     | 9.98              |
| 80                         | 785  | 585 | 450 | 340 | 240 | 170 | 125 | 90  | 70  | 50  | 10.74             |
| 100                        | 965  | 720 | 570 | 435 | 335 | 240 | 180 | 135 | 100 | 80  | 11.50             |
| 120                        | 1000 | 855 | 680 | 535 | 420 | 320 | 240 | 180 | 140 | 110 | 12.26             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $\ell$

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  |
|-----------------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.





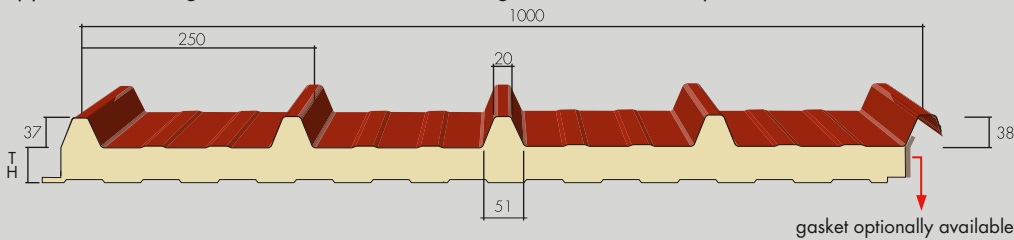
# ISOFACTOR 15 EURO CINQUE® HP

INDUSTRIAL OR RESIDENTIAL POLYISOCYANURATE ROOF

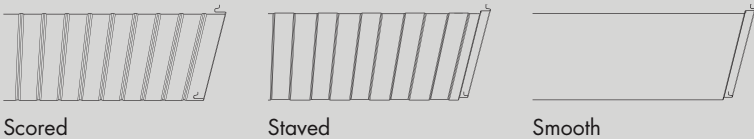


ISOFACTOR 15 EURO CINQUE® HP is a roof panel suitable for both residential and industrial buildings. It has five ribs and is composed of a layer of insulating polyurethane sandwiched between two sheet metal facings. It has a distinctive appearance and good static resistance, resulting in excellent

load performance. We are proud to say that its versatility of use and great aesthetic value has made it the best-selling and most sought after panel on the market.



Micro-veining of the LOWER SIDE of the panel (to be specified when ordering)



EXTERNAL facing:  
Steel 0.4 mm  
INTERNAL facing:  
Steel 0.4 mm

| SHEET METAL THICKNESS (mm)                                                                                                    | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| 30                                                                                                                            | 250  | 195 | 105 | 70  |     |     |     |     |     |     | 7.42              |
| 40                                                                                                                            | 290  | 200 | 135 | 90  | 65  |     |     |     |     |     | 7.80              |
| 50                                                                                                                            | 315  | 230 | 160 | 115 | 85  | 65  |     |     |     |     | 8.18              |
| 60                                                                                                                            | 370  | 275 | 195 | 145 | 110 | 85  | 60  |     |     |     | 8.56              |
| 80                                                                                                                            | 485  | 360 | 265 | 200 | 155 | 120 | 95  | 70  | 50  |     | 9.32              |
| 100                                                                                                                           | 595  | 445 | 340 | 260 | 200 | 160 | 125 | 105 | 80  | 60  | 10.08             |
| 120                                                                                                                           | 710  | 530 | 420 | 320 | 250 | 195 | 160 | 130 | 105 | 85  | 10.84             |
| 150                                                                                                                           | 880  | 655 | 520 | 410 | 325 | 260 | 210 | 170 | 145 | 120 | 11.98             |
| 160                                                                                                                           | 935  | 700 | 555 | 445 | 350 | 280 | 225 | 185 | 155 | 130 | 12.36             |
| 180                                                                                                                           | 975  | 725 | 580 | 480 | 400 | 320 | 260 | 215 | 180 | 150 | 13.12             |
| 200                                                                                                                           | 1000 | 745 | 595 | 495 | 420 | 360 | 295 | 245 | 205 | 170 | 13.88             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 ℓ |      |     |     |     |     |     |     |     |     |     |                   |

Effective span width:  
120 mm

| U Transmittance | 30   | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 160  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.14 | 0.12 | 0.11 |
| Kcal/sq.m. h °C | 0.61 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.12 | 0.11 | 0.10 |

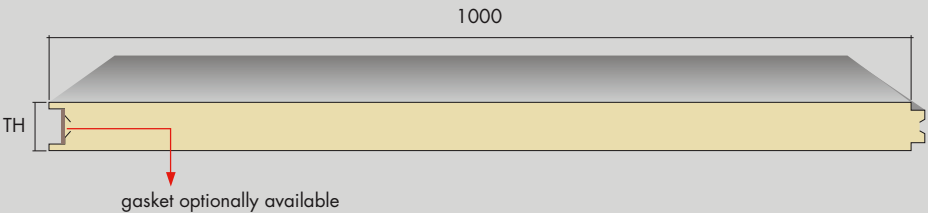
# ISOPAR® HP

POLYISOCYANURATE INSULATING WALL PANEL

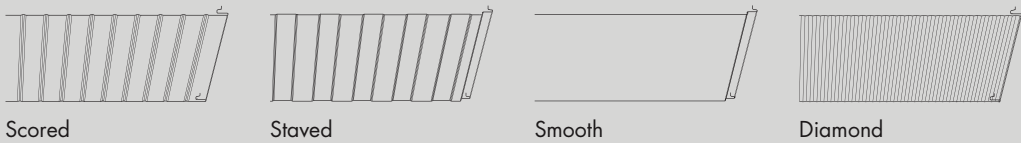


ISOPAR® HP is an insulating wall panel made of polyisocyanurate, a chemically and thermally stable material: the breaking of the isocyanurate bond occurs

above 200°C. It can be defined as fireproof or fire retardant. ISOPAR® HP is available with 4 different external finishing profiles.



Available profiles (please state when ordering)



EXTERNAL facing:  
Steel 0.4 mm  
INTERNAL facing:  
Steel 0.4 mm

| SHEET METAL THICKNESS (mm)                                                                                                    | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|---|-------------------|
| 30                                                                                                                            | 190  | 110 | 85  | 65  |     |     |     |     |     |   | 6.86              |
| 35                                                                                                                            | 215  | 125 | 100 | 80  | 55  |     |     |     |     |   | 7.04              |
| 40                                                                                                                            | 236  | 145 | 115 | 90  | 65  | 50  |     |     |     |   | 7.22              |
| 50                                                                                                                            | 297  | 185 | 150 | 115 | 85  | 65  | 50  |     |     |   | 7.61              |
| 60                                                                                                                            | 357  | 225 | 180 | 140 | 105 | 80  | 60  | 50  |     |   | 8.00              |
| 80                                                                                                                            | 460  | 305 | 245 | 190 | 140 | 105 | 85  | 65  |     |   | 8.78              |
| 100                                                                                                                           | 515  | 385 | 305 | 240 | 175 | 135 | 105 | 85  |     |   | 9.56              |
| 120                                                                                                                           | 620  | 465 | 370 | 290 | 215 | 165 | 130 | 105 |     |   | 10.34             |
| 150                                                                                                                           | 775  | 580 | 465 | 365 | 270 | 205 | 160 | 130 |     |   | 11.51             |
| 180                                                                                                                           | 935  | 700 | 560 | 440 | 325 | 245 | 195 | 155 |     |   | 12.68             |
| 200                                                                                                                           | 1000 | 780 | 625 | 490 | 360 | 275 | 215 | 175 |     |   | 13.46             |
| 220                                                                                                                           | 1000 | 860 | 685 | 540 | 395 | 305 | 240 | 195 |     |   | 14.22             |
| 240                                                                                                                           | 1000 | 940 | 750 | 590 | 435 | 330 | 260 | 210 |     |   | 14.98             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 ℓ |      |     |     |     |     |     |     |     |     |   |                   |

Effective span width:  
120 mm

| U Transmittance | 30   | 35   | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 180  | 200  | 220  | 240  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.71 | 0.62 | 0.55 | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.12 | 0.11 | 0.10 | 0.09 |
| Kcal/sq.m. h °C | 0.61 | 0.53 | 0.47 | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



# ISOPAR® ELEGANT HP

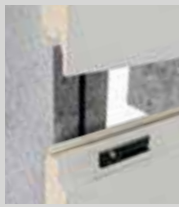
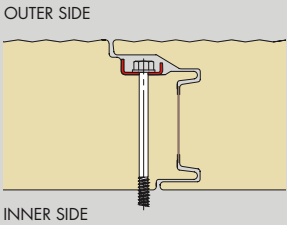
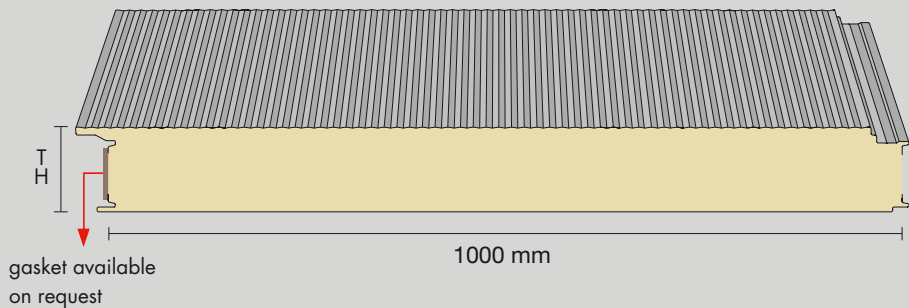
POLYISOCYANURATE INSULATING WALL PANEL WITH HIDDEN FASTENING



ISOPAR® Elegant HP is an insulating sandwich panel suitable for walls that require a high degree of reaction to fire.

ISOPAR® Elegant HP is the polyisocyanurate flat panel realized in its Staved, Scored, Smooth and Diamond versions.

## THICKNESS FROM 50 TO 240 MM



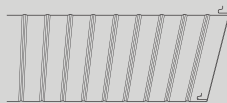
Horizontally panel assembly



Vertically panel assembly

During the assembly phase, use the steel fastening plate. The plate is intended to distribute the efforts arising from fixing and to increase the resistance to compressive and depression stresses acting on the wall panels. The position and the number of fixing points must be defined by the designer depending on the stresses on the structure.

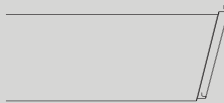
Available profiles (please state when ordering)



Scored



Staved



Smooth



Diamond

## Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.4 mm  
**INTERNAL facing:**  
Steel 0.4 mm

| SHEET METAL THICKNESS (mm)                                                                                                    | 1.5  | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|---|-------------------|
| 50                                                                                                                            | 297  | 185 | 150 | 115 | 85  | 65  | 50  |     |     |   | 7.61              |
| 60                                                                                                                            | 357  | 225 | 180 | 140 | 105 | 80  | 60  | 50  |     |   | 8.00              |
| 80                                                                                                                            | 460  | 305 | 245 | 190 | 140 | 105 | 85  | 65  |     |   | 8.78              |
| 100                                                                                                                           | 515  | 385 | 305 | 240 | 175 | 135 | 105 | 85  |     |   | 9.56              |
| 120                                                                                                                           | 620  | 465 | 370 | 290 | 215 | 165 | 130 | 105 |     |   | 10.34             |
| 150                                                                                                                           | 775  | 580 | 465 | 365 | 270 | 205 | 160 | 130 |     |   | 11.51             |
| 180                                                                                                                           | 935  | 700 | 560 | 440 | 325 | 245 | 195 | 155 |     |   | 12.68             |
| 200                                                                                                                           | 1000 | 780 | 625 | 490 | 360 | 275 | 215 | 175 |     |   | 13.46             |
| 220                                                                                                                           | 1000 | 860 | 685 | 540 | 395 | 305 | 240 | 195 |     |   | 14.22             |
| 240                                                                                                                           | 1000 | 940 | 750 | 590 | 435 | 330 | 260 | 210 |     |   | 14.98             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |      |     |     |     |     |     |     |     |     |   |                   |

Effective span width: 120 mm

| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 180  | 200  | 220  | 240  |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.44 | 0.37 | 0.28 | 0.22 | 0.19 | 0.15 | 0.12 | 0.11 | 0.10 | 0.09 |
| Kcal/sq.m. h °C | 0.38 | 0.32 | 0.24 | 0.19 | 0.16 | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 |





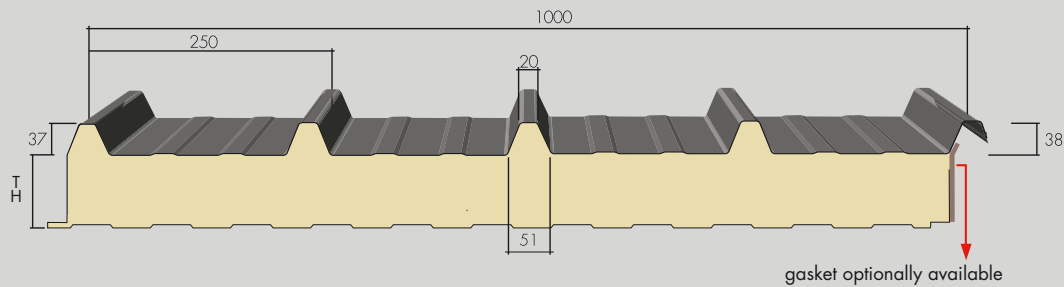
## EURO CINQUE® REI

THE FIRE-RESISTANT ROOF - POLYISOCYANURATE

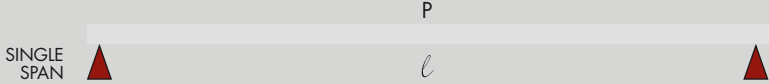


EURO CINQUE® REI is a self-supporting insulated roof panel made of polyisocyanurate, a chemically and thermally very stable material. The breaking of the isocyanurate bond occurs above 200°C. It can be defined as fireproof or fire retardant. EURO CINQUE® REI offers a 5- ribs industrial or residential

roof for a good static resistance, with great aesthetic value. Class B-s1,d0. Fire resistance depends on the thickness: REI 15 for 50 mm thick panels REI 30 for 100 mm thick panels



### Static properties (kg/sq.m.)



EXTERNAL facing: Steel 0.4 mm  
INTERNAL facing: Steel 0.4 mm

Effective span width: 120 mm

| SHEET METAL THICKNESS (mm) | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
| 50                         | 315 | 230 | 160 | 115 | 85  | 65  |     |     |     |    | 8.18              |
| 100                        | 595 | 445 | 340 | 260 | 200 | 160 | 125 | 105 | 80  | 60 | 10.08             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $l$

| U Transmittance | 50   | 100  |
|-----------------|------|------|
| W/sq.m. K       | 0.44 | 0.22 |
| Kcal/sq.m. h °C | 0.38 | 0.19 |

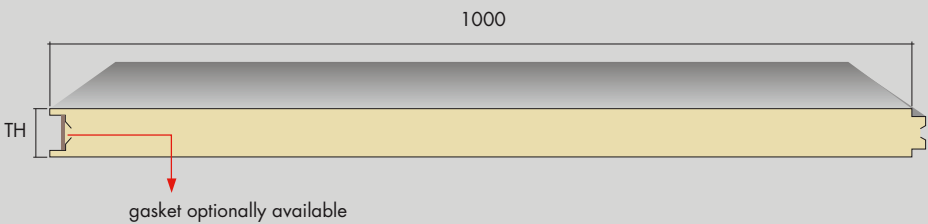
## ISOPAR® EI

FIRE-RESISTANT INSULATING WALL PANEL POLYISOCYANURATE

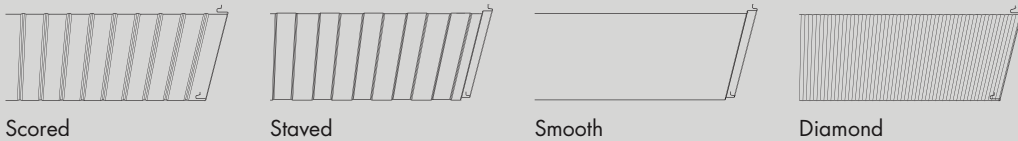


ISOPAR® EI is an insulating sandwich panel suitable for walls that require a high degree of reaction to fire.

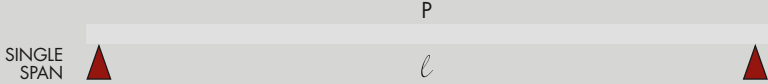
Class B-s1,d0. Fire resistance depends on the thickness: EI 15 for 60 mm thick panels EI 30 for 100 mm thick panels



Available profiles (please state when ordering)



### Static properties (kg/sq.m.)



EXTERNAL facing: Steel 0.5 mm  
INTERNAL facing: Steel 0.5 mm

Effective span width: 120 mm

| SHEET METAL THICKNESS (mm) | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6 | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|---|-------------------|
| 60                         | 357 | 225 | 180 | 140 | 105 | 80  | 60  | 50 |     |   | 9.56              |
| 100                        | 515 | 385 | 305 | 240 | 175 | 135 | 105 | 85 |     |   | 8.00              |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $l$

| U Transmittance | 60   | 100  |
|-----------------|------|------|
| W/sq.m. K       | 0.37 | 0.22 |
| Kcal/sq.m. h °C | 0.32 | 0.19 |

MINERAL FIBRE IS AN INORGANIC MATERIAL THAT MELTS WHEN THE TEMPERATURE EXCEEDS 1000° C.  
THIS NATURAL INSULATING MATERIAL DOES NOT CONTRIBUTE TO THE DEVELOPMENT AND SPREADING OF FIRES NOR TO TOXIC EMISSIONS.

# CHAPTER 3

## MINERAL FIBRE SANDWICH PANELS

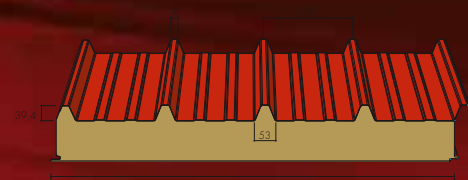


TO SEE HOW A MATERIAL RESPONDS TO FIRE, ONE MUST CONSIDER AND TEST ITS REACTION AND RESISTANCE. DESPITE BEING EXTREMELY IMPORTANT FOR THE PROTECTION OF HUMAN LIFE IN THE EVENT OF A FIRE, FIRE RESPONSE IS OFTEN UNDERESTIMATED, WITH MORE ATTENTION PAID TO FIRE RESISTANCE. FIRE RESISTANCE IS MEASURED IN TERMS OF SMOKE EMISSIONS AND DROPPING; THE NEW EU RATINGS BASED ON EN 13501-1 LISTS THE LETTERS A1, A2, B, C, D ETC. PLUS THE SUFFIXES: S=SMOKE, D=DROPPING. UNDER MD 16/02/2007, LATTONEDIL RUNS FIRE LAB TESTS, ACCORDING TO EU TEST PROCEDURES. NOTE THAT, FOR CURTAIN WALLS, THE TEST STANDARD IS UNI EN 1364-1, AS WELL AS THE GENERAL UNI EN 1363-1. FIRE REACTION IS INSTEAD MEASURED IN TERMS OF STABILITY (R), PROOFING (E) AND INSULATION (I), WHICH IS WHAT REI STANDS FOR. SPECIFICALLY, STABILITY IS A BUILDING COMPONENT'S TENDENCY TO RETAIN ITS MECHANICAL STRENGTH UNDER THE EFFECT OF A FIRE; PROOFING IS A BUILDING COMPONENT'S ABILITY TO BLOCK – AND OBVIOUSLY NOT PRODUCE – FLAMES, STEAM OR HOT GAS FROM THE OPPOSITE SIDE TO THE EXPOSED ONE; INSULATION IS A

BUILDING COMPONENT'S TENDENCY TO REDUCE HEAT EXCHANGE, UP TO A CERTAIN POINT. TESTS BASED ON EU TEST RULES ARE THE ONLY ONES THAT MAY BE USED FOR FIRE-PREVENTION APPLICATIONS. THE REI SEAL APPLIES ONLY TO LOADBEARING BUILDING COMPONENTS; ANY NON-LOADBEARING, PARTITIONING BUILDING COMPONENT, SUCH AS WALLS OR DOORS, BEARS THE EI 30. EI 60. EI 90 RATING, DEPENDING ON HOW THICK THE SANDWICH PANEL IS. AS TO THE AREA OF APPLICATION, NOTE THAT, WITH THE OLD TESTS (THOSE THAT DO NOT COMPLY WITH EU REGULATIONS), PROFESSIONALS WHO CERTIFY A BUILDING COMPONENT AS FIRE RESISTANT (SEE MD 04/05/1998 IN ANNEX II) ARE RESPONSIBLE FOR ANY DEVIATION FROM THE TESTED SAMPLE, WHILE, PURSUANT TO EU RULES, THEY ARE SUPPORTED BY THE MANUFACTURER'S TECHNICAL DOCUMENTS. THE NEW TESTING CONDITIONS ARE MUCH STRICTER, SO THE PERFORMANCE, AS WE KNEW IT, IS NOW MUCH POORER.

PANEL DENSITY FIBRE  
MORE LIGHT DENSITY 75 KG/M<sup>3</sup>

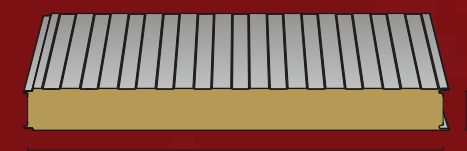
**EUROFIRE® LIGHT**



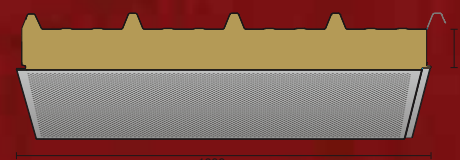
**ISOPARFIRE® SOUND LIGHT**



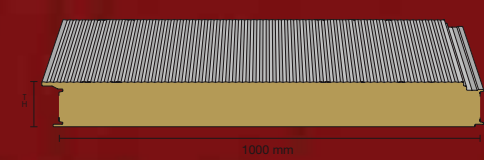
**ISOPARFIRE® LIGHT**



**EUROFIRE® SOUND LIGHT**



**ISOPARFIRE® ELEGANT LIGHT**



**ISOPARFIRE® ELEGANT SOUND LIGHT**





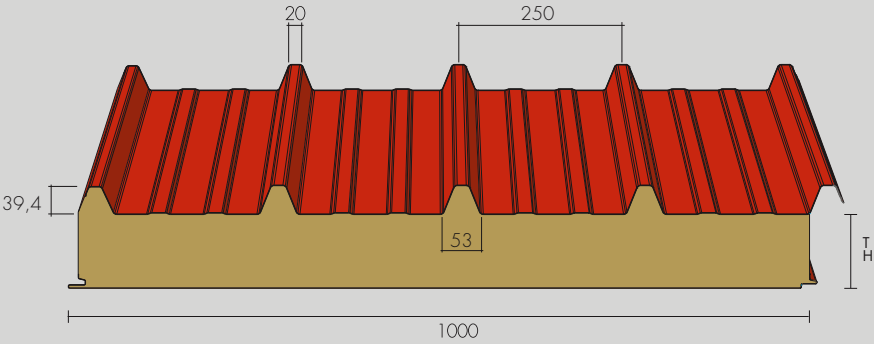


UPON REQUEST WITH DENSITY FROM 120 TO 180 KG/M³

EUROFIRE® is a fire-resistant sandwich panel, class A2-s1,d0, with an insulating layer made of bio-soluble mineral fibre strips, which are staggered lengthwise so that the fibres are at right angles with the plane of the two 0.5mm backings, in pre-painted galvanised steel, stainless steel, embossed or pre-painted natural aluminium or copper.  
The frets on the outer plate are also filled with mineral fibre shaped strips.

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

Note: manufacturing-wise it is impossible to fill the lower lip.  
This is due to the characteristics of the type of insulation.



Static properties (kg/sq.m.)

EXTERNAL facing:  
Steel 0.5 mm  
INTERNAL facing:  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                                                                                    | 1.52.2.533.544.555.56 |     |     |     |     |     |     |     |     |    | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
|                                                                                                                               | 1.5                   | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                   |
| 50                                                                                                                            | 270                   | 210 | 150 | 105 |     |     |     |     |     |    | 13.72             |
| 60                                                                                                                            | 310                   | 250 | 170 | 125 | 80  |     |     |     |     |    | 14.72             |
| 80                                                                                                                            | 350                   | 290 | 220 | 165 | 125 | 90  |     |     |     |    | 16.72             |
| 100                                                                                                                           | 390                   | 330 | 260 | 205 | 160 | 125 | 80  |     |     |    | 18.72             |
| 120                                                                                                                           | 430                   | 370 | 300 | 245 | 185 | 140 | 110 | 85  |     |    | 20.72             |
| 150                                                                                                                           | 451                   | 390 | 315 | 260 | 195 | 150 | 115 | 90  | 80  |    | 23.72             |
| 170                                                                                                                           | 460                   | 400 | 320 | 270 | 200 | 152 | 117 | 92  | 82  |    | 25.72             |
| 180                                                                                                                           | 470                   | 405 | 330 | 275 | 205 | 155 | 120 | 95  | 85  | 70 | 16.72             |
| 200                                                                                                                           | 485                   | 420 | 340 | 285 | 210 | 160 | 125 | 100 | 90  | 75 | 28.72             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 ℓ |                       |     |     |     |     |     |     |     |     |    |                   |

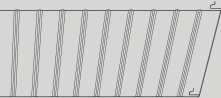
λ = 0.039 Watt/mK

| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 |
| Kcal/sq.m. h °C | 0.62 | 0.52 | 0.40 | 0.32 | 0.17 | 0.22 | 0.19 | 0.18 | 0.16 |

λ = 0.041 Watt/mK

| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.76 | 0.64 | 0.49 | 0.39 | 0.33 | 0.27 | 0.24 | 0.22 | 0.20 |
| Kcal/sq.m. h °C | 0.65 | 0.55 | 0.42 | 0.33 | 0.28 | 0.23 | 0.20 | 0.19 | 0.17 |

Available profiles (please state when ordering)



Scored



Staved



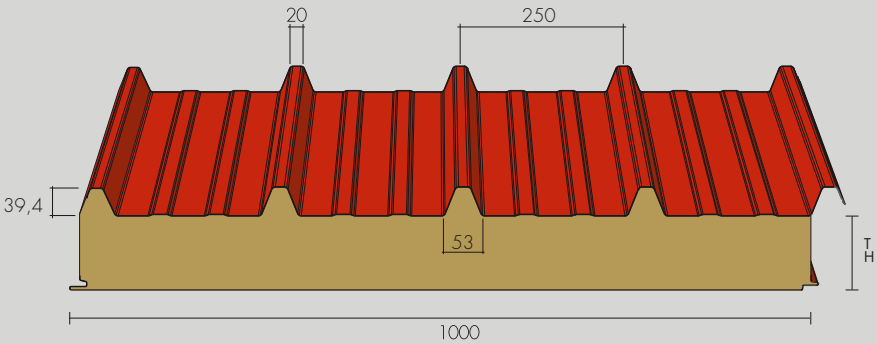
UPON REQUEST WITH DENSITY FROM 120 TO 180 KG/M³

Reliability, safety and peace of mind. In a word: EUROFIRE® REI, the top of the range roof panels with outstanding fire response.  
This panel's fire response can actually be summed up as Class A2-s1,d0; its fire resistance depends instead on thickness, namely: REI 30 for a 50mm thick panel  
REI 90 for a 80mm thick panel  
REI 120 for a 120mm thick panel  
REI 240 for a 180mm thick panel

Mineral fibres are placed at right angles with the two 5-fret steel backings, for good static resistance.

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

Note: manufacturing-wise it is impossible to fill the lower lip.  
This is due to the characteristics of the type of insulation.



Static properties (kg/sq.m.)

EXTERNAL facing:  
Steel 0.5 mm  
INTERNAL facing:  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                                                                                    | 1.52.2.533.544.555.56 |     |     |     |     |     |     |    |     |    | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|----|-----|----|-------------------|
|                                                                                                                               | 1.5                   | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  |                   |
| 50                                                                                                                            | 270                   | 210 | 150 | 105 |     |     |     |    |     |    | 13.72             |
| 80                                                                                                                            | 350                   | 290 | 220 | 165 | 125 | 90  |     |    |     |    | 16.72             |
| 100                                                                                                                           | 390                   | 330 | 265 | 205 | 160 | 125 | 80  |    |     |    | 18.72             |
| 180                                                                                                                           | 470                   | 405 | 330 | 275 | 205 | 155 | 120 | 95 | 85  | 70 | 26.72             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 ℓ |                       |     |     |     |     |     |     |    |     |    |                   |

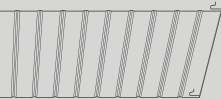
λ = 0.039 Watt/mK

| U Transmittance | 50   | 80   | 100  | 180  |
|-----------------|------|------|------|------|
| W/sq.m. K       | 0.72 | 0.47 | 0.38 | 0.21 |
| Kcal/sq.m. h °C | 0.62 | 0.40 | 0.32 | 0.18 |

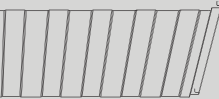
λ = 0.041 Watt/mK

| U Transmittance | 50   | 80   | 100  | 180  |
|-----------------|------|------|------|------|
| W/sq.m. K       | 0.76 | 0.49 | 0.39 | 0.22 |
| Kcal/sq.m. h °C | 0.65 | 0.42 | 0.33 | 0.19 |

Available profiles (please state when ordering)



Scored



Staved



# EUROFIRE® SOUND REI

SOUND-ABSORBING AND SOUND-INSULATING ROOF PANELS IN MINERAL FIBRE

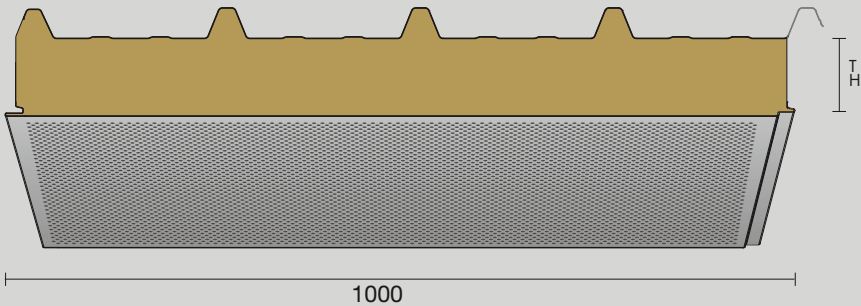
For those buildings that need not just to be fireproofed and thermally insulated but need soundproofing and sound-absorption as well, Lattonedil has come up with EUROFIRE® SOUND, with micro-holes on the inner plate, which is extremely efficient in reducing the outward transmission of sound as well as reducing echoing effects and inward reverberation, which means improving acoustic performance and ensuring good acoustic comfort. EUROFIRE® SOUND is a fire-resistant sandwich panel, class A2-s1,d0. It is made with a mineral fibre insulating layer coupled with two 0.5mm backings, in pre-painted or plastic-coated galvanised steel, in embossed or pre-painted natural aluminium or in copper, with a 5-fret outer layer offering good static resistance and a micro-holed inner one.

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

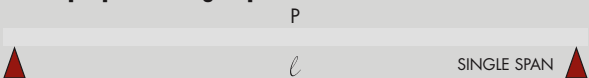
**Sound-absorption**  
Thickness mm 100: AW = 0.95

**Soundproofing**  
Thickness mm 100: RW = 35 dB

Note: manufacturing-wise it is impossible to fill the lower lip.  
This is due to the characteristics of the type of insulation.



Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.6 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | 1.52.2.533.544.555.56 |     |     |     |     |     |    |  |  |  | WEIGHT (Kg/sq.m.) |
|----------------------------|-----------------------|-----|-----|-----|-----|-----|----|--|--|--|-------------------|
|                            | 100                   | 370 | 290 | 210 | 150 | 100 | 80 |  |  |  | 17.90             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $\ell$

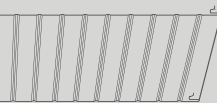
$\lambda = 0.039 \text{ Watt/mK}$

| U Transmittance | 100  |
|-----------------|------|
| W/sq.m. K       | 0.38 |
| Kcal/sq.m. h °C | 0.32 |

$\lambda = 0.041 \text{ Watt/mK}$

| U Transmittance | 100  |
|-----------------|------|
| W/sq.m. K       | 0.39 |
| Kcal/sq.m. h °C | 0.33 |

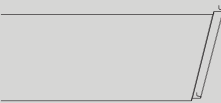
Available profiles (please state when ordering)



Scored



Staved



Smooth



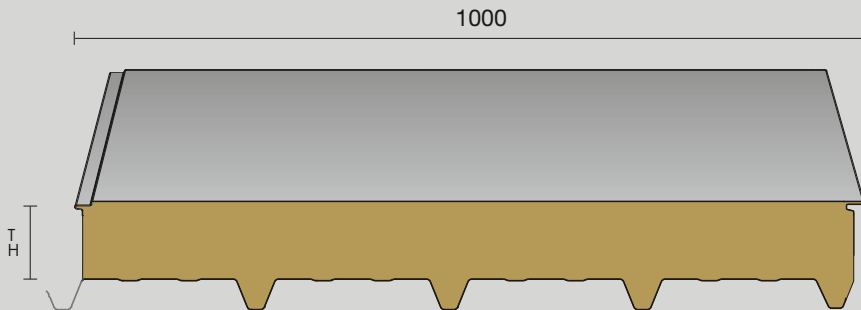
# EUROFIRE® DECK REI

FIRE-RESISTANT ROOF PANELS IN MINERAL FIBRE

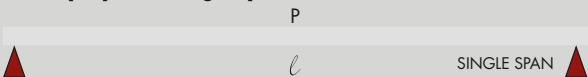
EUROFIRE® DECK REI is used to build self-bearing flat roofs, generally intended to house an upper coat of waterproof membrane (bitumen-polymer, PVC or elastomer) to apply on-site. The ribbing pitch (250 mm) and the range of sheet thicknesses allow satisfying the needs of design solutions. The choice of the structuring anchoring method to the framework is particularly important.

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

Note: manufacturing-wise it is impossible to fill the lower lip.  
This is due to the characteristics of the type of insulation.



Static properties (kg/sq.m.)



**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
|                            | 170 | 460 | 400 | 320 | 270 | 200 | 152 | 117 | 92  | 82 | 25.72             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200  $\ell$

$\lambda = 0.039 \text{ Watt/mK}$

| U Transmittance | 170  |
|-----------------|------|
| W/sq.m. K       | 0.23 |
| Kcal/sq.m. h °C | 0.19 |

$\lambda = 0.041 \text{ Watt/mK}$

| U Transmittance | 170  |
|-----------------|------|
| W/sq.m. K       | 0.24 |
| Kcal/sq.m. h °C | 0.20 |





# EUROFIRE® SOUND

SOUND-ABSORBING AND SOUND-INSULATING ROOF PANELS IN MINERAL FIBRE

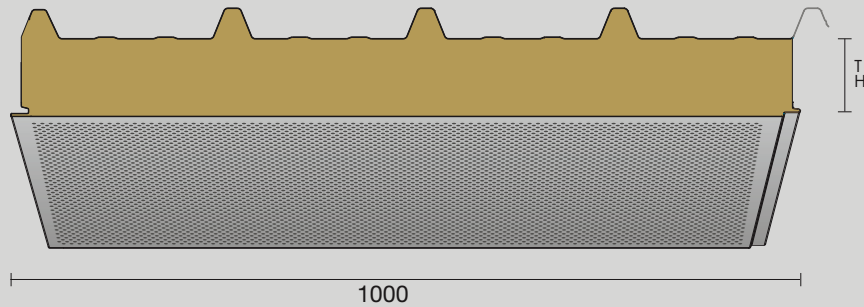
For those buildings that need not just to be fireproofed and thermally insulated but need soundproofing and sound-absorption as well, Lattonedil has come up with EUROFIRE® SOUND, with micro-holes on the inner plate, which is extremely efficient in reducing the outward transmission of sound as well as reducing echoing effects and inward reverberation, which means improving acoustic performance and ensuring good acoustic comfort. EUROFIRE® SOUND is a fire-resistant sandwich panel, class A2-s1,d0. It is made with a mineral fibre insulating layer coupled with two 0.5mm backings, in pre-painted or plastic-coated galvanised steel, in stainless steel, in embossed or pre-painted natural aluminium or in copper, with a 5-fret outer layer offering good static resistance and a micro-holed inner one.

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

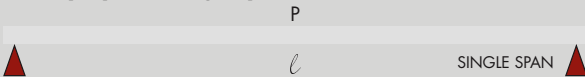
**Sound-absorption**  
Thickness mm 50: AW = 0.90  
Thickness mm 80: AW = 0.95  
Thickness mm 100: AW = 0.95

**Soundproofing**  
Thickness mm 50: RW = 31 dB  
Thickness mm 80: RW = 34 dB  
Thickness mm 100: RW = 35 dB

Note: manufacturing-wise it is impossible to fill the lower lip. This is due to the characteristics of the type of insulation.



Static properties (kg/sq.m.)



EXTERNAL facing:  
Steel 0.5 mm  
INTERNAL facing:  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6 | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|---|-------------------|
| 50                         | 250 | 170 | 110 | 60  |     |     |     |    |     |   | 12.90             |
| 60                         | 290 | 190 | 130 | 80  |     |     |     |    |     |   | 13.70             |
| 80                         | 330 | 250 | 170 | 110 | 80  |     |     |    |     |   | 15.80             |
| 100                        | 370 | 290 | 210 | 150 | 100 | 80  |     |    |     |   | 17.90             |
| 120                        | 400 | 330 | 250 | 190 | 140 | 100 | 80  |    |     |   | 19.80             |
| 150                        | 420 | 345 | 265 | 200 | 150 | 105 | 85  | 60 |     |   | 22.60             |
| 170                        | 425 | 350 | 270 | 205 | 152 | 107 | 87  | 62 |     |   | 23.30             |
| 180                        | 435 | 360 | 275 | 210 | 155 | 110 | 90  | 65 |     |   | 23.90             |
| 200                        | 450 | 370 | 290 | 220 | 160 | 115 | 95  | 70 | 55  |   | 24.80             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 L

λ = 0.041 Watt/mK

| U Transmittance | 50   | 80   | 100  | 180  |
|-----------------|------|------|------|------|
| W/sq.m. K       | 0.76 | 0.49 | 0.39 | 0.22 |
| Kcal/sq.m. h °C | 0.65 | 0.42 | 0.33 | 0.19 |

λ = 0.039 Watt/mK

| U Transmittance | 50   | 80   | 100  | 180  |
|-----------------|------|------|------|------|
| W/sq.m. K       | 0.72 | 0.47 | 0.38 | 0.21 |
| Kcal/sq.m. h °C | 0.62 | 0.40 | 0.32 | 0.18 |

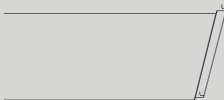
Available profiles (please state when ordering)



Scored



Staved



Smooth



# ULTRA DECK FIRE®

MINERAL FIBRE ROOF PANELS

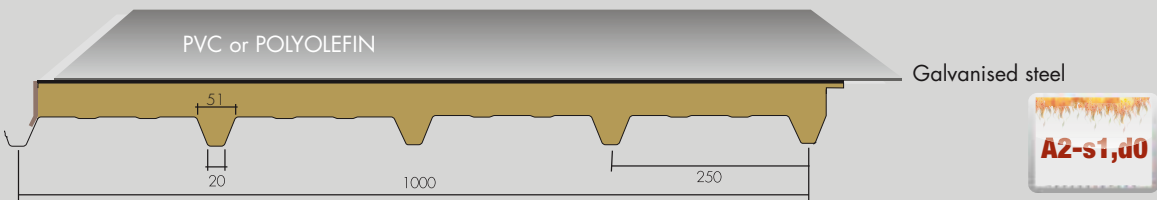
UPON REQUEST WITH DENSITY FROM 120 TO 180 KG/M³

ULTRA DECK FIRE® is a sandwich panel with A2-s1,d0 fire resistance built with an insulating coat consisting of lists in biosoluble mineral fibre, off-set longitudinally, or with fibres arranged at 90° in relation to the plane of the two steel supports. A synthetic coat in PVC or POLYMERIZING OLEFINS is applied on the external side featuring thickness of 1.2 or 1.5 mm (to be specified when placing the order), resistant to atmospheric agents and UV rays. The surface is certified with a BBA Agreement Certificate (stating a coat durability of 30 years). This product offers credits to obtain the LEED

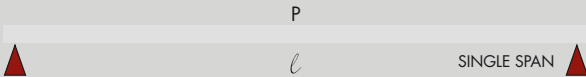
certification. The panel is supplied with lateral selvedge of about 60 mm to weld on-site. Note: you can purchase ULTRA DECK FIRE® also without selvedge.

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

Note: manufacturing-wise it is impossible to fill the lower lip. This is due to the characteristics of the type of insulation.



Static properties (kg/sq.m.)



EXTERNAL facing:  
Steel 0.5 mm  
INTERNAL facing:  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm) | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
| 50                         | 270 | 210 | 150 | 105 |     |     |     |     |     |    | 13.72             |
| 60                         | 310 | 250 | 170 | 125 | 80  |     |     |     |     |    | 14.72             |
| 80                         | 350 | 290 | 220 | 165 | 125 | 90  |     |     |     |    | 16.72             |
| 100                        | 390 | 330 | 260 | 205 | 160 | 125 | 80  |     |     |    | 18.72             |
| 120                        | 430 | 370 | 300 | 245 | 185 | 140 | 110 | 85  |     |    | 20.72             |
| 150                        | 451 | 390 | 315 | 260 | 195 | 150 | 115 | 90  | 80  |    | 23.72             |
| 170                        | 460 | 400 | 320 | 270 | 200 | 152 | 117 | 92  | 82  |    | 25.72             |
| 180                        | 470 | 405 | 330 | 275 | 205 | 155 | 120 | 95  | 85  | 70 | 16.72             |
| 200                        | 485 | 420 | 340 | 285 | 210 | 160 | 125 | 100 | 90  | 75 | 28.72             |

Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 L

λ = 0.039 Watt/mK

| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 |
| Kcal/sq.m. h °C | 0.62 | 0.52 | 0.40 | 0.32 | 0.17 | 0.22 | 0.19 | 0.18 | 0.16 |

λ = 0.041 Watt/mK

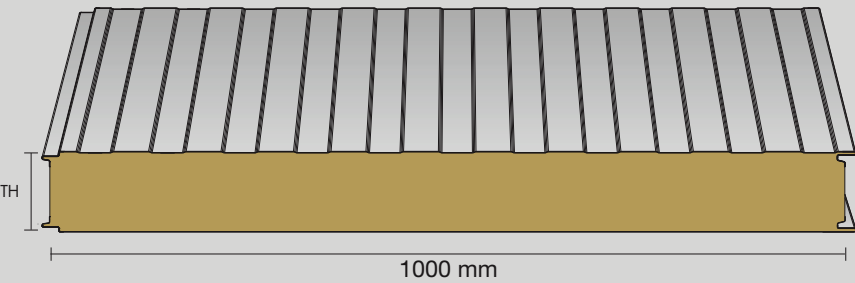
| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.76 | 0.64 | 0.49 | 0.39 | 0.33 | 0.27 | 0.24 | 0.22 | 0.20 |
| Kcal/sq.m. h °C | 0.65 | 0.55 | 0.42 | 0.33 | 0.28 | 0.23 | 0.20 | 0.19 | 0.17 |



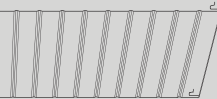
# ISOPARFIRE® EI

FIRE-RESISTANT WALL PANELS IN MINERAL FIBRE

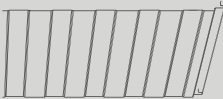
Lattonedil's lab tests proved that the ISOPARFIRE® EI panel, with its outstanding fire response, is the top of the range panel for self-contained insulating walls. ISOPARFIRE® EI's fire response may be summed up as Class A2-s1,d0; while its fire resistance depends on how thick it is as follows:  
EI 30 for a 50 mm thick panel  
EI 60 for a 80 mm thick panel  
EI 120 for a 100 mm thick panel  
EI 180 for a 150 mm thick panel



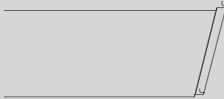
Available profiles (please state when ordering)



Scored



Staved



Smooth

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

Note: manufacturing-wise it is impossible to fill the lip of the joint.  
This is due to the characteristics of the type of insulation.

A2-s1,d0

EI  
30 60 120 180

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

$\lambda = 0.039 \text{ Watt/mK}$

| U<br>Transmittance | 50   | 80   | 100  | 150  |
|--------------------|------|------|------|------|
| W/sq.m. K          | 0.72 | 0.47 | 0.38 | 0.25 |
| Kcal/sq.m. h °C    | 0.62 | 0.40 | 0.32 | 0.22 |

$\lambda = 0.041 \text{ Watt/mK}$

| U<br>Transmittance | 50   | 80   | 100  | 150  |
|--------------------|------|------|------|------|
| W/sq.m. K          | 0.76 | 0.49 | 0.39 | 0.27 |
| Kcal/sq.m. h °C    | 0.65 | 0.42 | 0.33 | 0.13 |

| P                                                                         |                                                                                     |     |     |     |     |     |     |    |     |    |                    |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|----|-----|----|--------------------|
| SINGLE SPAN                                                               |  |     |     |     |     |     |     |    |     |    |                    |
| SHEET METAL THICKNESS (mm)                                                | 1.5                                                                                 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  | WEIGHT (Kg./sq.m.) |
| 50                                                                        | 185                                                                                 | 130 | 110 | 81  | 73  |     |     |    |     |    | 12.94              |
| 80                                                                        | 266                                                                                 | 187 | 158 | 116 | 105 | 85  | 65  |    |     |    | 15.94              |
| 100                                                                       | 319                                                                                 | 224 | 190 | 140 | 126 | 102 | 78  | 61 |     |    | 19.66              |
| 150                                                                       | 422                                                                                 | 296 | 251 | 185 | 166 | 135 | 103 | 81 | 56  | 45 | 22.94              |
| p = Kg./sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |                                                                                     |     |     |     |     |     |     |    |     |    |                    |

|                                                                          | P                                                                                     |        |     |                                                                                       |     | P      |     |                                                                                       |     |    |                   |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|-----|---------------------------------------------------------------------------------------|-----|--------|-----|---------------------------------------------------------------------------------------|-----|----|-------------------|
| DOUBLE SPAN                                                              |  | $\ell$ |     |  |     | $\ell$ |     |  |     |    |                   |
| SHEET METAL THICKNESS (mm)                                               | 1.5                                                                                   | 2      | 2.5 | 3                                                                                     | 3.5 | 4      | 4.5 | 5                                                                                     | 5.5 | 6  | WEIGHT (Kg/sq.m.) |
| 50                                                                       | 190                                                                                   | 135    | 115 | 86                                                                                    | 78  |        |     |                                                                                       |     |    | 12.94             |
| 80                                                                       | 273                                                                                   | 194    | 165 | 124                                                                                   | 112 | 91     | 70  |                                                                                       |     |    | 15.94             |
| 100                                                                      | 328                                                                                   | 233    | 198 | 148                                                                                   | 135 | 110    | 84  | 66                                                                                    |     |    | 19.66             |
| 150                                                                      | 433                                                                                   | 308    | 262 | 196                                                                                   | 178 | 145    | 111 | 87                                                                                    | 62  | 50 | 22.94             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |                                                                                       |        |     |                                                                                       |     |        |     |                                                                                       |     |    |                   |

| MULTIPLE SPAN                                                            | P                                                                                     |        |                                                                                       | P      |                                                                                       |        | P                                                                                     |    |     |    |                   |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|----|-----|----|-------------------|
|                                                                          |  | $\ell$ |  | $\ell$ |  | $\ell$ |  |    |     |    |                   |
| SHEET METAL THICKNESS (mm)                                               | 1.5                                                                                   | 2      | 2.5                                                                                   | 3      | 3.5                                                                                   | 4      | 4.5                                                                                   | 5  | 5.5 | 6  | WEIGHT (Kg/sq.m.) |
| 50                                                                       | 195                                                                                   | 140    | 120                                                                                   | 92     | 83                                                                                    |        |                                                                                       |    |     |    | 12.94             |
| 80                                                                       | 280                                                                                   | 201    | 173                                                                                   | 132    | 119                                                                                   | 98     | 75                                                                                    |    |     |    | 15.94             |
| 100                                                                      | 336                                                                                   | 242    | 207                                                                                   | 159    | 143                                                                                   | 117    | 90                                                                                    | 71 |     |    | 19.66             |
| 150                                                                      | 445                                                                                   | 319    | 274                                                                                   | 210    | 189                                                                                   | 155    | 119                                                                                   | 94 | 66  | 55 | 22.94             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |                                                                                       |        |                                                                                       |        |                                                                                       |        |                                                                                       |    |     |    |                   |





# ISOPARFIRE® EI PLUS

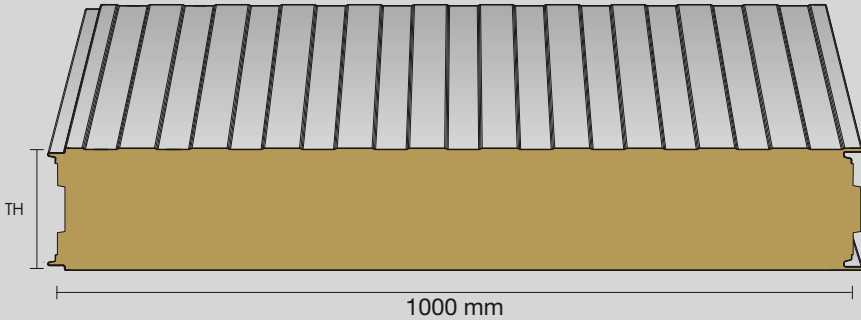
FIRE-RESISTANT WALL PANELS IN MINERAL FIBRE

Lattonedil's laboratory tests proved that ISOPARFIRE® EI PLUS panel is the top-of-the-range for insulating and self-bearing walls with exceptional fire performance. ISOPARFIRE® EI PLUS fire reaction falls under Class A2-s1, d0.

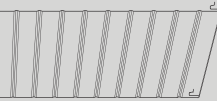
- Fire resistance:**
- EI 90 for 150 mm thick panels with assembly extension up to 12.00 metres.
  - EI 120 for 150 mm thick panels with assembly extension up to 10.88 metres.

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

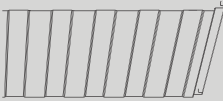
Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.



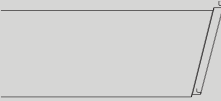
Available profiles (please state when ordering)



Scored



Staved



Smooth



$\lambda = 0.039 \text{ Watt/mK}$

| U               | 150  |
|-----------------|------|
| Transmittance   |      |
| W/sq.m. K       | 0.25 |
| Kcal/sq.m. h °C | 0.22 |

$\lambda = 0.041 \text{ Watt/mK}$

| U               | 150  |
|-----------------|------|
| Transmittance   |      |
| W/sq.m. K       | 0.27 |
| Kcal/sq.m. h °C | 0.23 |

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                               | P   |     |     |     |     |     |     |    |     |    | WEIGHT (Kg/sq.m.) |
|--------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-------------------|
|                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  |                   |
| 150                                                                      | 422 | 296 | 251 | 185 | 166 | 135 | 103 | 81 | 56  | 45 | 22.94             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |     |     |     |     |     |     |    |     |    |                   |

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                               | P   |     |     |     |     |     |     |    |     |    | WEIGHT (Kg/sq.m.) |
|--------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-------------------|
|                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  |                   |
| 150                                                                      | 433 | 308 | 262 | 196 | 178 | 145 | 111 | 87 | 62  | 50 | 22.94             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |     |     |     |     |     |     |    |     |    |                   |

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                               | P   |     |     |     |     |     |     |    |     |    | WEIGHT (Kg/sq.m.) |
|--------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-------------------|
|                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  |                   |
| 150                                                                      | 445 | 319 | 274 | 210 | 189 | 155 | 119 | 94 | 66  | 55 | 22.94             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |     |     |     |     |     |     |    |     |    |                   |



# ISOPARFIRE® EI SOUND

FIRE-RESISTANT WALL PANELS IN MINERAL FIBRE

When the sector's professionals required walls with fireproof and thermal insulation characteristics as well as sound-absorption and sound-insulation properties, Lattonedil's answer was ISOPARFIRE® EI SOUND. Thanks to the micro-holes on the internal sheet, ISOPARFIRE® EI SOUND allows limiting the transmission of the sound signal towards the exterior, improve acoustics and obtain good internal sound comfort.

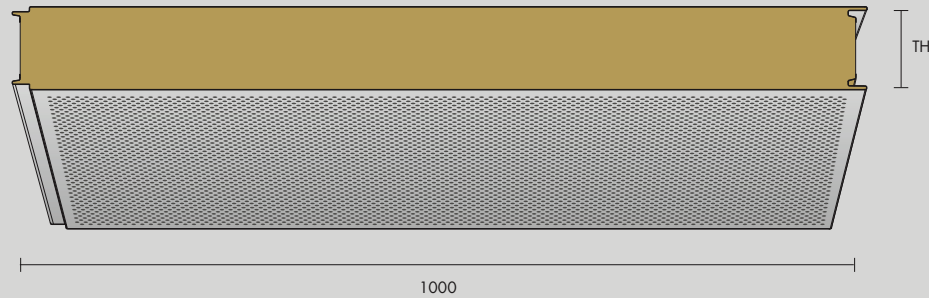
ISOPARFIRE® EI SOUND's fire performance falls under Class A2-s1,d0. Fire resistance instead is based on the following thicknesses:  
EI 30 for 50 mm thick panels  
EI 60 for 80 mm thick panels  
EI 120 for 100 mm thick panels

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

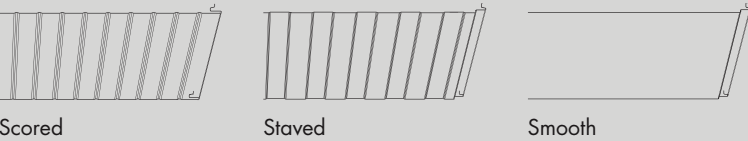
**Sound-absorption**  
Thickness mm 50: AW = 0.90  
Thickness mm 80: AW = 0.95  
Thickness mm 100: AW = 0.95

**Soundproofing**  
Thickness mm 50: RW = 31 dB  
Thickness mm 80: RW = 34 dB  
Thickness mm 100: RW = 35 dB

Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.



Available profiles (please state when ordering)



$\lambda = 0.039 \text{ Watt/mK}$

| U<br>Transmittance | 50   | 80   | 100  |
|--------------------|------|------|------|
| W/sq.m. K          | 0.72 | 0.47 | 0.38 |
| Kcal/sq.m. h °C    | 0.62 | 0.40 | 0.32 |

$\lambda = 0.041 \text{ Watt/mK}$

| U<br>Transmittance | 50   | 80   | 100  |
|--------------------|------|------|------|
| W/sq K             | 0.76 | 0.49 | 0.39 |
| Kcal/sq.m. h °C    | 0.65 | 0.42 | 0.33 |

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.6 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     |    |     |    |     |   | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|----|-----|----|-----|---|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4  | 4.5 | 5  | 5.5 | 6 |                   |
| 50                                                                  | 165 | 110 | 100 | 76  | 68  |    |     |    |     |   | 12.24             |
| 80                                                                  | 237 | 158 | 144 | 109 | 98  | 79 | 60  |    |     |   | 15.24             |
| 100                                                                 | 285 | 190 | 173 | 131 | 117 | 95 | 72  | 56 |     |   | 18.96             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |    |     |    |     |   |                   |

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.6 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     |    |     |    |     |   | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|----|-----|----|-----|---|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4  | 4.5 | 5  | 5.5 | 6 |                   |
| 50                                                                  | 170 | 115 | 105 | 77  | 70  |    |     |    |     |   | 12.24             |
| 80                                                                  | 244 | 165 | 151 | 111 | 101 | 81 | 62  |    |     |   | 15.24             |
| 100                                                                 | 293 | 198 | 181 | 133 | 121 | 98 | 74  | 58 |     |   | 18.96             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |    |     |    |     |   |                   |

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.6 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     |     |     |    |     |   | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|---|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6 |                   |
| 50                                                                  | 175 | 120 | 110 | 81  | 73  |     |     |    |     |   | 12.24             |
| 80                                                                  | 252 | 173 | 158 | 116 | 105 | 85  | 64  |    |     |   | 15.24             |
| 100                                                                 | 302 | 207 | 190 | 140 | 126 | 102 | 77  | 60 |     |   | 18.96             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |    |     |   |                   |





# ISOPARFIRE® EI ELEGANT

FIRE-RESISTANT WALL PANELS IN MINERAL FIBRE WITH HIDDEN FASTENING

## UPON REQUEST WITH DENSITY FROM 120 TO 180 KG/M³

ISOPARFIRE® EI ELEGANT is a panel born to be used in walls that require safety and good aesthetic performance. The peculiarity of ISOPARFIRE® EI ELEGANT consists in the hidden anchoring for the continuity of the wall panels. It is finished by two supports in pre-painted galvanised steel, stainless steel of standard thickness of 0.5 mm. Different thicknesses of the double sheet are available upon request. ISOPARFIRE® EI ELEGANT's fire performance falls under Class A2-s1, d0.

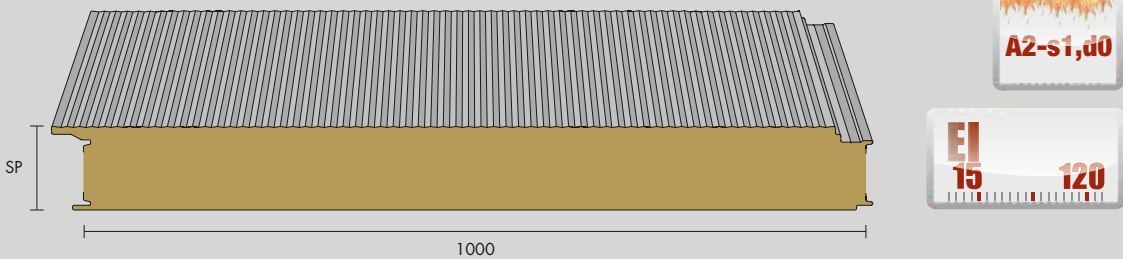
### Fire resistance:

- EI 15 for panel of 80 mm thickness
- EI 120 for panel of 120 mm thickness

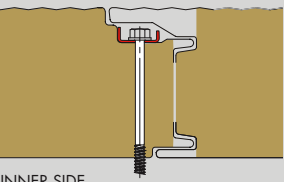
### Density of insulation

Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

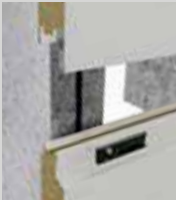
Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.



OUTER SIDE



INNER SIDE

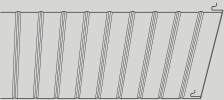


Horizontally panel assembly



Vertically panel assembly

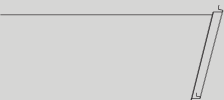
Micro-veining of the LOWER SIDE of the panel (to be specified when ordering)



Scored

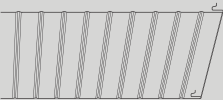


Staved



Smooth

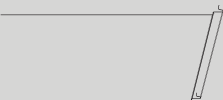
Micro-veining of the UPPER SIDE of the panel (to be specified when ordering)



Scored



Staved



Smooth



Diamond

During the assembly phase, use the steel fastening plate. The plate is intended to distribute the efforts arising from fixing and to increase the resistance to compressive and depression stresses acting on the wall panels. The position and the number of fixing points must be defined by the designer depending on the stresses on the structure.

$$\lambda = 0.039 \text{ Watt/mK}$$

| U               | 120  |
|-----------------|------|
| Transmittance   |      |
| W/sq.m. K       | 0.32 |
| Kcal/sq.m. h °C | 0.17 |

$$\lambda = 0.041 \text{ Watt/mK}$$

| U               | 120  |
|-----------------|------|
| Transmittance   |      |
| W/sq.m. K       | 0.33 |
| Kcal/sq.m. h °C | 0.28 |

## Static properties (kg/sq.m.)

EXTERNAL facing: Steel 0.5 mm  
INTERNAL facing: Steel 0.5 mm

Effective span width: 120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     |     |     |    |     |   | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|---|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6 |                   |
| 80                                                                  | 266 | 187 | 158 | 116 | 105 | 85  | 65  |    |     |   | 15.94             |
| 120                                                                 | 377 | 265 | 224 | 165 | 149 | 120 | 92  | 72 | 50  |   | 21.66             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |    |     |   |                   |

EXTERNAL facing: Steel 0.5 mm  
INTERNAL facing: Steel 0.5 mm

Effective span width: 120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     |     |     |    |     |   | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|---|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6 |                   |
| 80                                                                  | 273 | 194 | 165 | 124 | 112 | 91  | 70  |    |     |   | 15.94             |
| 120                                                                 | 387 | 275 | 234 | 175 | 159 | 129 | 99  | 78 | 55  |   | 21.66             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |    |     |   |                   |

EXTERNAL facing: Steel 0.5 mm  
INTERNAL facing: Steel 0.5 mm

Effective span width: 120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     |     |     |    |     |   | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|---|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6 |                   |
| 80                                                                  | 280 | 201 | 173 | 132 | 119 | 98  | 75  |    |     |   | 15.94             |
| 120                                                                 | 397 | 285 | 244 | 187 | 169 | 138 | 106 | 84 | 59  |   | 21.66             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |    |     |   |                   |



# ISOPARFIRE®

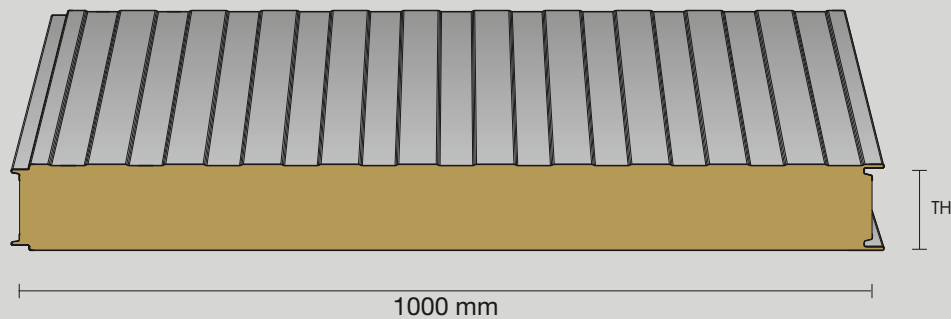
MINERAL FIBRE WALL PANEL

UPON REQUEST WITH DENSITY FROM 120 TO 180 KG/M³

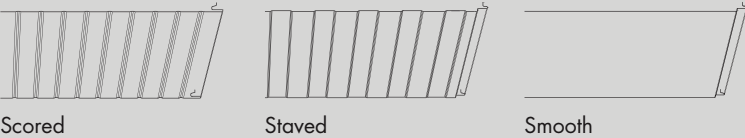
ISOPARFIRE® is a fire-resistant sandwich panel for indoor and outdoor walls, class A2-s1,d0. It is made with a mineral fibre insulating layer coupled with two 0.5mm backings, in pre-painted or plastic-coated galvanised steel, in stainless steel, in embossed or pre-painted natural aluminium or in copper.

**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.



Available profiles (please state when ordering)



$\lambda = 0.039 \text{ Watt/mK}$

| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 220  | 240  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 | 0.17 | 0.16 |
| Kcal/sq.m. h °C | 0.62 | 0.52 | 0.40 | 0.32 | 0.17 | 0.22 | 0.19 | 0.18 | 0.16 | 0.14 | 0.13 |

$\lambda = 0.041 \text{ Watt/mK}$

| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 220  | 240  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.76 | 0.64 | 0.49 | 0.39 | 0.33 | 0.27 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 |
| Kcal/sq.m. h °C | 0.65 | 0.55 | 0.42 | 0.33 | 0.28 | 0.23 | 0.20 | 0.19 | 0.17 | 0.15 | 0.14 |

Static properties  
(kg/sq.m.)

EXTERNAL facing:  
Steel 0.5 mm  
INTERNAL facing:  
Steel 0.5 mm

Effective span width:  
120 mm

EXTERNAL facing:  
Steel 0.5 mm  
INTERNAL facing:  
Steel 0.5 mm

Effective span width:  
120 mm

EXTERNAL facing:  
Steel 0.5 mm  
INTERNAL facing:  
Steel 0.5 mm

Effective span width:  
120 mm



| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     |     |     |     |     |    | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                   |
| 50                                                                  | 185 | 130 | 110 | 81  | 73  |     |     |     |     |    | 12.94             |
| 60                                                                  | 213 | 150 | 127 | 93  | 84  | 68  |     |     |     |    | 13.94             |
| 80                                                                  | 266 | 187 | 158 | 116 | 105 | 85  | 65  |     |     |    | 15.94             |
| 100                                                                 | 319 | 224 | 190 | 140 | 126 | 102 | 78  | 61  |     |    | 19.66             |
| 120                                                                 | 377 | 265 | 224 | 165 | 149 | 120 | 92  | 72  | 50  |    | 21.66             |
| 150                                                                 | 422 | 296 | 251 | 185 | 166 | 135 | 103 | 81  | 56  | 45 | 22.94             |
| 170                                                                 | 447 | 310 | 262 | 195 | 173 | 139 | 109 | 85  | 58  | 47 | 24.94             |
| 180                                                                 | 464 | 326 | 276 | 203 | 183 | 148 | 113 | 89  | 62  | 50 | 25.94             |
| 200                                                                 | 501 | 352 | 298 | 219 | 198 | 160 | 122 | 96  | 67  | 53 | 27.94             |
| 220                                                                 | 525 | 376 | 322 | 243 | 223 | 184 | 146 | 120 | 91  | 77 | 29.94             |
| 240                                                                 | 542 | 393 | 339 | 260 | 240 | 208 | 163 | 137 | 103 | 94 | 31.94             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |    |                   |

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     | P   |     |     |     |     | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6   |                   |
| 50                                                                  | 190 | 135 | 115 | 86  | 78  |     |     |     |     |     | 12.94             |
| 60                                                                  | 219 | 155 | 132 | 99  | 90  | 73  |     |     |     |     | 13.94             |
| 80                                                                  | 273 | 194 | 165 | 124 | 112 | 91  | 70  |     |     |     | 15.94             |
| 100                                                                 | 328 | 233 | 198 | 148 | 135 | 110 | 84  | 66  |     |     | 19.66             |
| 120                                                                 | 387 | 275 | 234 | 175 | 159 | 129 | 99  | 78  | 55  |     | 21.66             |
| 150                                                                 | 433 | 308 | 262 | 196 | 178 | 145 | 111 | 87  | 62  | 50  | 22.94             |
| 170                                                                 | 457 | 315 | 272 | 206 | 187 | 149 | 118 | 89  | 65  | 52  | 24.94             |
| 180                                                                 | 476 | 339 | 288 | 216 | 196 | 159 | 122 | 96  | 68  | 55  | 25.94             |
| 200                                                                 | 515 | 366 | 311 | 233 | 211 | 172 | 132 | 104 | 73  | 59  | 27.94             |
| 220                                                                 | 539 | 390 | 335 | 257 | 235 | 196 | 156 | 128 | 97  | 83  | 29.94             |
| 240                                                                 | 556 | 407 | 352 | 274 | 252 | 213 | 173 | 145 | 114 | 100 | 31.94             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |     |                   |

| MULTIPLE SPAN                                                              | P                                                                                     |          |                                                                                       | P        |                                                                                       |          | P                                                                                     |     |     |     |                   |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|-----|-----|-----|-------------------|
|                                                                            |  | <i>ℓ</i> |  | <i>ℓ</i> |  | <i>ℓ</i> |  |     |     |     |                   |
| SHEET METAL THICKNESS (mm)                                                 | 1.5                                                                                   | 2        | 2.5                                                                                   | 3        | 3.5                                                                                   | 4        | 4.5                                                                                   | 5   | 5.5 | 6   | WEIGHT (Kg/sq.m.) |
| 50                                                                         | 195                                                                                   | 140      | 120                                                                                   | 92       | 83                                                                                    |          |                                                                                       |     |     |     | 12.94             |
| 60                                                                         | 224                                                                                   | 161      | 138                                                                                   | 106      | 95                                                                                    | 78       |                                                                                       |     |     |     | 13.94             |
| 80                                                                         | 280                                                                                   | 201      | 173                                                                                   | 132      | 119                                                                                   | 98       | 75                                                                                    |     |     |     | 15.94             |
| 100                                                                        | 336                                                                                   | 242      | 207                                                                                   | 159      | 143                                                                                   | 117      | 90                                                                                    | 71  |     |     | 19.66             |
| 120                                                                        | 397                                                                                   | 285      | 244                                                                                   | 187      | 169                                                                                   | 138      | 106                                                                                   | 84  | 59  |     | 21.66             |
| 150                                                                        | 445                                                                                   | 319      | 274                                                                                   | 210      | 189                                                                                   | 155      | 119                                                                                   | 94  | 66  | 55  | 22.94             |
| 170                                                                        | 468                                                                                   | 325      | 285                                                                                   | 224      | 195                                                                                   | 163      | 125                                                                                   | 97  | 69  | 58  | 24.94             |
| 180                                                                        | 489                                                                                   | 351      | 301                                                                                   | 231      | 208                                                                                   | 170      | 131                                                                                   | 103 | 73  | 61  | 25.94             |
| 200                                                                        | 528                                                                                   | 379      | 325                                                                                   | 249      | 225                                                                                   | 184      | 141                                                                                   | 111 | 79  | 65  | 27.94             |
| 220                                                                        | 552                                                                                   | 403      | 349                                                                                   | 273      | 247                                                                                   | 203      | 166                                                                                   | 135 | 103 | 89  | 29.94             |
| 240                                                                        | 589                                                                                   | 420      | 366                                                                                   | 290      | 266                                                                                   | 225      | 183                                                                                   | 152 | 120 | 106 | 31.94             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 <i>ℓ</i> |                                                                                       |          |                                                                                       |          |                                                                                       |          |                                                                                       |     |     |     |                   |



# ISOPARFIRE® SOUND

SOUNDPROOFING, SOUND-ABSORBING MINERAL FIBRE WALL PANEL

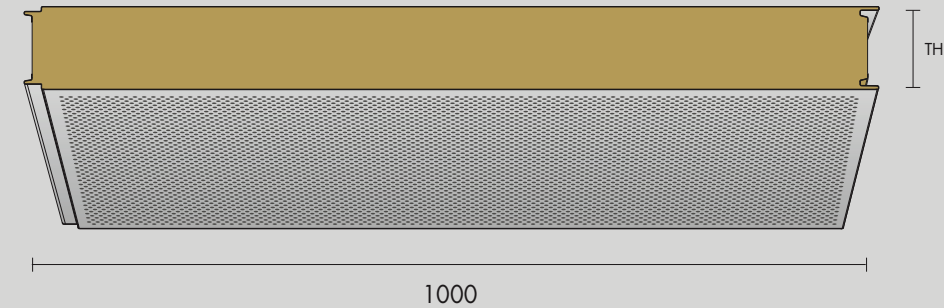
When industry professionals needed walls with excellent fireproofing, soundproofing and sound-absorbing standards, Lattonedil's answer was ISOPARFIRE® SOUND. Through the micro-holes on the inner plate, ISOPARFIRE® SOUND can reduce the outward transmission of sound as well as improve acoustic performance and offer good indoor acoustic comfort. ISOPARFIRE® SOUND is a fire-resistant sandwich panel for indoor and outdoor walls, class A2-s1,d0. It is made with a mineral fibre insulating layer coupled with two 0.5mm backings, in pre-painted or plastic-coated galvanised steel, in stainless steel, in embossed or pre-painted natural aluminium or in copper, the internal ones with micro-holes.

**Density of insulation**  
Density: 100 Kg/m<sup>3</sup> ±10%.  
Other densities optionally available.

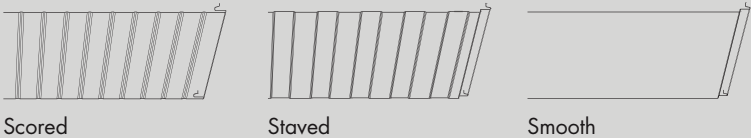
**Sound-absorption**  
Thickness mm 50: AW = 0.90  
Thickness mm 80: AW = 0.95  
Thickness mm 100: AW = 0.95

**Soundproofing**  
Thickness mm 50: RW = 31 dB  
Thickness mm 80: RW = 34 dB  
Thickness mm 100: RW = 35 dB

Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.



Available profiles (please state when ordering)



$\lambda = 0.039 \text{ Watt/mK}$

| U<br>Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 220  | 240  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 | 0.17 | 0.16 |
| Kcal/sq.m. h °C    | 0.62 | 0.52 | 0.40 | 0.32 | 0.17 | 0.22 | 0.19 | 0.18 | 0.16 | 0.14 | 0.13 |

$\lambda = 0.041 \text{ Watt/mK}$

| U<br>Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 220  | 240  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.76 | 0.64 | 0.49 | 0.39 | 0.33 | 0.27 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 |
| Kcal/sq.m. h °C    | 0.65 | 0.55 | 0.42 | 0.33 | 0.28 | 0.23 | 0.20 | 0.19 | 0.17 | 0.15 | 0.14 |

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SINGLE SPAN                                                              | P      |     |     |     |     |     |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|--------------------------------------------------------------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
|                                                                          | $\ell$ |     |     |     |     |     |     |     |     |    |                      |
| SHEET METAL THICKNESS<br>(mm)                                            | 1.5    | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| 50                                                                       | 165    | 110 | 100 | 76  | 68  |     |     |     |     |    | 12.44                |
| 60                                                                       | 190    | 127 | 115 | 87  | 78  | 63  |     |     |     |    | 13.44                |
| 80                                                                       | 237    | 158 | 144 | 109 | 98  | 79  | 60  |     |     |    | 15.44                |
| 100                                                                      | 285    | 190 | 173 | 131 | 117 | 95  | 72  | 56  |     |    | 19.16                |
| 120                                                                      | 336    | 224 | 204 | 155 | 138 | 112 | 85  | 66  | 45  |    | 21.16                |
| 150                                                                      | 376    | 251 | 228 | 173 | 155 | 125 | 95  | 74  | 50  | 40 | 22.44                |
| 170                                                                      | 389    | 259 | 236 | 178 | 161 | 128 | 99  | 78  | 53  | 42 | 24.44                |
| 180                                                                      | 414    | 276 | 251 | 191 | 171 | 137 | 105 | 81  | 55  | 44 | 25.44                |
| 200                                                                      | 447    | 298 | 271 | 206 | 184 | 148 | 113 | 88  | 60  | 48 | 27.44                |
| 220                                                                      | 471    | 322 | 295 | 230 | 208 | 172 | 137 | 112 | 84  | 72 | 29.44                |
| 240                                                                      | 488    | 339 | 312 | 247 | 225 | 189 | 154 | 129 | 101 | 88 | 31.44                |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |        |     |     |     |     |     |     |     |     |    |                      |

| DOUBLE SPAN                                                              | P      |     |     |     |     | P      |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|--------------------------------------------------------------------------|--------|-----|-----|-----|-----|--------|-----|-----|-----|----|----------------------|
|                                                                          | $\ell$ |     |     |     |     | $\ell$ |     |     |     |    |                      |
| SHEET METAL THICKNESS<br>(mm)                                            | 1.5    | 2   | 2.5 | 3   | 3.5 | 4      | 4.5 | 5   | 5.5 | 6  |                      |
| 50                                                                       | 170    | 115 | 105 | 77  | 70  |        |     |     |     |    | 12.44                |
| 60                                                                       | 196    | 132 | 121 | 89  | 81  | 65     |     |     |     |    | 13.44                |
| 80                                                                       | 244    | 165 | 151 | 111 | 101 | 81     | 62  |     |     |    | 15.44                |
| 100                                                                      | 293    | 198 | 181 | 133 | 121 | 98     | 74  | 58  |     |    | 19.16                |
| 120                                                                      | 346    | 234 | 214 | 157 | 142 | 115    | 88  | 68  | 47  |    | 21.16                |
| 150                                                                      | 388    | 262 | 239 | 176 | 160 | 129    | 98  | 77  | 53  | 42 | 22.44                |
| 170                                                                      | 400    | 271 | 247 | 181 | 165 | 133    | 104 | 81  | 55  | 44 | 24.44                |
| 180                                                                      | 426    | 288 | 263 | 193 | 176 | 142    | 108 | 84  | 58  | 46 | 25.44                |
| 200                                                                      | 460    | 311 | 284 | 209 | 190 | 153    | 117 | 91  | 63  | 50 | 27.44                |
| 220                                                                      | 484    | 335 | 303 | 233 | 214 | 177    | 141 | 115 | 87  | 74 | 29.44                |
| 240                                                                      | 501    | 352 | 325 | 250 | 231 | 194    | 158 | 132 | 104 | 91 | 31.44                |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |        |     |     |     |     |        |     |     |     |    |                      |

| MULTIPLE SPAN                                                            | P                                                                                     |        |                                                                                       | P      |                                                                                       |        | P                                                                                     |     |     | WEIGHT (Kg/sq.m.) |       |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|-----|-----|-------------------|-------|
|                                                                          |  | $\ell$ |  | $\ell$ |  | $\ell$ |  |     |     |                   |       |
| SHEET METAL THICKNESS (mm)                                               | 1.5                                                                                   | 2      | 2.5                                                                                   | 3      | 3.5                                                                                   | 4      | 4.5                                                                                   | 5   | 5.5 | 6                 |       |
| 50                                                                       | 175                                                                                   | 120    | 110                                                                                   | 81     | 73                                                                                    |        |                                                                                       |     |     |                   | 12.44 |
| 60                                                                       | 201                                                                                   | 138    | 127                                                                                   | 93     | 84                                                                                    | 68     |                                                                                       |     |     |                   | 13.44 |
| 80                                                                       | 252                                                                                   | 173    | 158                                                                                   | 116    | 105                                                                                   | 85     | 64                                                                                    |     |     |                   | 15.44 |
| 100                                                                      | 302                                                                                   | 207    | 190                                                                                   | 140    | 126                                                                                   | 102    | 77                                                                                    | 60  |     |                   | 19.16 |
| 120                                                                      | 356                                                                                   | 244    | 224                                                                                   | 165    | 149                                                                                   | 120    | 91                                                                                    | 71  | 50  |                   | 21.16 |
| 150                                                                      | 399                                                                                   | 274    | 251                                                                                   | 185    | 166                                                                                   | 135    | 101                                                                                   | 79  | 56  | 45                | 22.44 |
| 170                                                                      | 463                                                                                   | 333    | 284                                                                                   | 219    | 198                                                                                   | 155    | 120                                                                                   | 90  | 68  | 55                | 24.44 |
| 180                                                                      | 489                                                                                   | 351    | 301                                                                                   | 231    | 208                                                                                   | 170    | 131                                                                                   | 103 | 73  | 61                | 25.44 |
| 200                                                                      | 528                                                                                   | 379    | 325                                                                                   | 249    | 225                                                                                   | 184    | 141                                                                                   | 111 | 79  | 65                | 27.44 |
| 220                                                                      | 498                                                                                   | 349    | 322                                                                                   | 243    | 222                                                                                   | 184    | 145                                                                                   | 118 | 91  | 77                | 29.44 |
| 240                                                                      | 515                                                                                   | 366    | 339                                                                                   | 260    | 231                                                                                   | 201    | 162                                                                                   | 135 | 108 | 94                | 31.44 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |                                                                                       |        |                                                                                       |        |                                                                                       |        |                                                                                       |     |     |                   |       |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.

# ISOPARFIRE® ELEGANT

MINERAL FIBRE WALL PANELS WITH HIDDEN FASTENERS

ISOPARFIRE® ELEGANT is a panel designed to be used on walls that need to be safe and look good. It features fire resistance class A2-s1,d0 as it is made of mineral fibre; in addition, it stands out for its hidden fasteners so that the panels on the walls look seamlessly applied. It is coated in two backings of pre-painted galvanised steel, or, optionally, stainless steel or pre-painted natural aluminium, with a standard thickness of 0.5 mm each. Double plates are optionally available in other thicknesses as well.

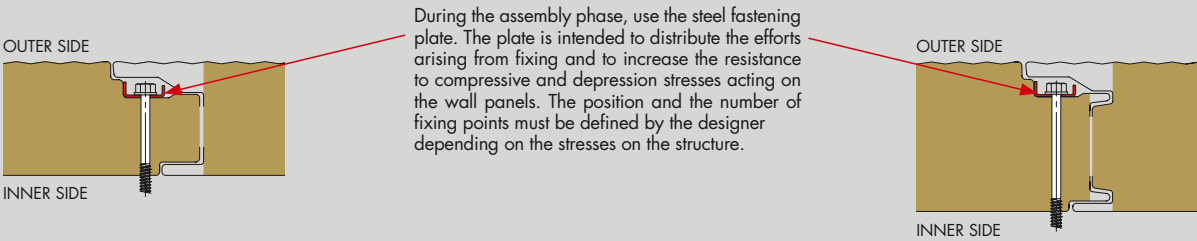
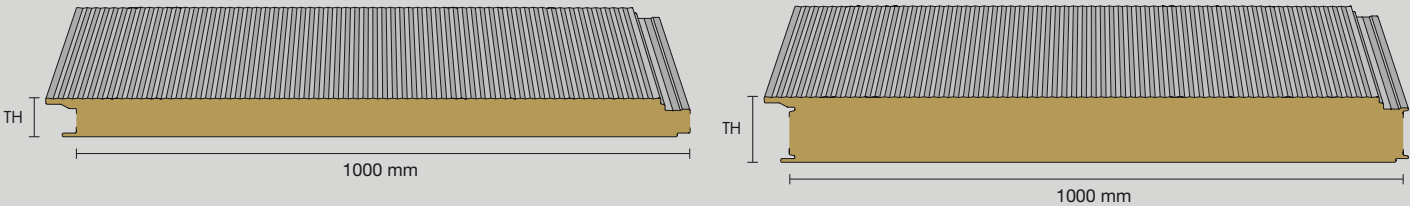
**Density of insulation**  
Density: 100 Kg/m³ ±10%.  
Other densities optionally available.

Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.



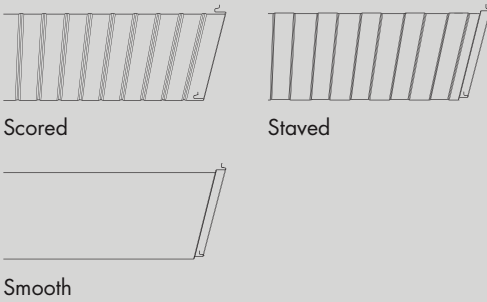
## THICKNESS 40 MM

## THICKNESS FROM 50 TO 240 MM

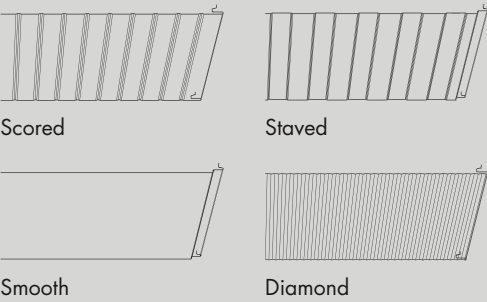


During the assembly phase, use the steel fastening plate. The plate is intended to distribute the efforts arising from fixing and to increase the resistance to compressive and depression stresses acting on the wall panels. The position and the number of fixing points must be defined by the designer depending on the stresses on the structure.

Micro-veining of the LOWER SIDE of the panel  
(to be specified when ordering)



Micro-veining of the UPPER SIDE of the panel  
(to be specified when ordering)



$\lambda = 0.039 \text{ Watt/mK}$

| U<br>Transmittance | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 220  | 240  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.89 | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 | 0.17 | 0.16 |
| Kcal/sq.m. h °C    | 0.76 | 0.62 | 0.52 | 0.40 | 0.32 | 0.17 | 0.22 | 0.19 | 0.18 | 0.16 | 0.14 | 0.13 |

$\lambda = 0.041 \text{ Watt/mK}$

| U<br>Transmittance | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 220  | 240  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.93 | 0.76 | 0.64 | 0.49 | 0.39 | 0.33 | 0.27 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 |
| Kcal/sq.m. h °C    | 0.80 | 0.65 | 0.55 | 0.42 | 0.33 | 0.28 | 0.23 | 0.20 | 0.19 | 0.17 | 0.15 | 0.14 |

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SINGLE SPAN                                                              | P      |     |     |     |     |     |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|--------------------------------------------------------------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
|                                                                          | $\ell$ |     |     |     |     |     |     |     |     |    |                      |
| SHEET METAL THICKNESS<br>(mm)                                            | 1.5    | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| 40                                                                       | 167    | 115 | 98  | 73  | 68  |     |     |     |     |    | 11.94                |
| 50                                                                       | 185    | 130 | 110 | 81  | 73  |     |     |     |     |    | 12.94                |
| 60                                                                       | 213    | 150 | 127 | 93  | 84  | 68  |     |     |     |    | 13.94                |
| 80                                                                       | 266    | 187 | 158 | 116 | 105 | 85  | 65  |     |     |    | 15.94                |
| 100                                                                      | 319    | 224 | 190 | 140 | 126 | 102 | 78  | 61  |     |    | 19.66                |
| 120                                                                      | 377    | 265 | 224 | 165 | 149 | 120 | 92  | 72  | 50  |    | 21.66                |
| 150                                                                      | 422    | 296 | 251 | 185 | 166 | 135 | 103 | 81  | 56  | 45 | 22.94                |
| 170                                                                      | 447    | 310 | 262 | 195 | 173 | 139 | 109 | 85  | 58  | 47 | 24.94                |
| 180                                                                      | 464    | 326 | 276 | 203 | 183 | 148 | 113 | 89  | 62  | 50 | 25.94                |
| 200                                                                      | 501    | 352 | 298 | 219 | 198 | 160 | 122 | 96  | 67  | 53 | 27.94                |
| 220                                                                      | 525    | 376 | 322 | 243 | 223 | 184 | 146 | 120 | 91  | 77 | 29.94                |
| 240                                                                      | 542    | 393 | 339 | 260 | 240 | 208 | 163 | 137 | 103 | 94 | 31.94                |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: $1/200 \ell$ |        |     |     |     |     |     |     |     |     |    |                      |

| DOUBLE SPAN                                                              | P      |     |     |     |     | P      |     |     |     |     | WEIGHT<br>(Kg/sq.m.) |
|--------------------------------------------------------------------------|--------|-----|-----|-----|-----|--------|-----|-----|-----|-----|----------------------|
|                                                                          | $\ell$ |     |     |     |     | $\ell$ |     |     |     |     |                      |
| SHEET METAL THICKNESS<br>(mm)                                            | 1.5    | 2   | 2.5 | 3   | 3.5 | 4      | 4.5 | 5   | 5.5 | 6   |                      |
| 40                                                                       | 172    | 120 | 103 | 78  | 73  |        |     |     |     |     | 11.94                |
| 50                                                                       | 190    | 135 | 115 | 86  | 78  |        |     |     |     |     | 12.94                |
| 60                                                                       | 219    | 155 | 132 | 99  | 90  | 73     |     |     |     |     | 13.94                |
| 80                                                                       | 273    | 194 | 165 | 124 | 112 | 91     | 70  |     |     |     | 15.94                |
| 100                                                                      | 328    | 233 | 198 | 148 | 135 | 110    | 84  | 66  |     |     | 19.66                |
| 120                                                                      | 387    | 275 | 234 | 175 | 159 | 129    | 99  | 78  | 55  |     | 21.66                |
| 150                                                                      | 433    | 308 | 262 | 196 | 178 | 145    | 111 | 87  | 62  | 50  | 22.94                |
| 170                                                                      | 457    | 315 | 272 | 206 | 187 | 149    | 118 | 89  | 65  | 52  | 24.94                |
| 180                                                                      | 476    | 339 | 288 | 216 | 196 | 159    | 122 | 96  | 68  | 55  | 25.94                |
| 200                                                                      | 515    | 366 | 311 | 233 | 211 | 172    | 132 | 104 | 73  | 59  | 27.94                |
| 220                                                                      | 539    | 390 | 335 | 257 | 235 | 196    | 156 | 128 | 97  | 83  | 29.94                |
| 240                                                                      | 556    | 407 | 352 | 274 | 252 | 213    | 173 | 145 | 114 | 100 | 31.94                |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |        |     |     |     |     |        |     |     |     |     |                      |

| MULTIPLE SPAN                                                            | P                                                                                     |        |                                                                                       | P      |                                                                                       |        | P                                                                                     |     |     | WEIGHT (Kg/sq.m.) |       |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|-----|-----|-------------------|-------|
|                                                                          |  | $\ell$ |  | $\ell$ |  | $\ell$ |  |     |     |                   |       |
| SHEET METAL THICKNESS (mm)                                               | 1.5                                                                                   | 2      | 2.5                                                                                   | 3      | 3.5                                                                                   | 4      | 4.5                                                                                   | 5   | 5.5 | 6                 |       |
| 40                                                                       | 177                                                                                   | 125    | 108                                                                                   | 84     | 78                                                                                    |        |                                                                                       |     |     |                   | 11.94 |
| 50                                                                       | 195                                                                                   | 140    | 120                                                                                   | 92     | 83                                                                                    |        |                                                                                       |     |     |                   | 12.94 |
| 60                                                                       | 224                                                                                   | 161    | 138                                                                                   | 106    | 95                                                                                    | 78     |                                                                                       |     |     |                   | 13.94 |
| 80                                                                       | 280                                                                                   | 201    | 173                                                                                   | 132    | 119                                                                                   | 98     | 75                                                                                    |     |     |                   | 15.94 |
| 100                                                                      | 336                                                                                   | 242    | 207                                                                                   | 159    | 143                                                                                   | 117    | 90                                                                                    | 71  |     |                   | 19.66 |
| 120                                                                      | 397                                                                                   | 285    | 244                                                                                   | 187    | 169                                                                                   | 138    | 106                                                                                   | 84  | 59  |                   | 21.66 |
| 150                                                                      | 445                                                                                   | 319    | 274                                                                                   | 210    | 189                                                                                   | 155    | 119                                                                                   | 94  | 66  | 55                | 22.94 |
| 170                                                                      | 468                                                                                   | 325    | 285                                                                                   | 224    | 195                                                                                   | 163    | 125                                                                                   | 97  | 69  | 58                | 24.94 |
| 180                                                                      | 489                                                                                   | 351    | 301                                                                                   | 231    | 208                                                                                   | 170    | 131                                                                                   | 103 | 73  | 61                | 25.94 |
| 200                                                                      | 528                                                                                   | 379    | 325                                                                                   | 249    | 225                                                                                   | 184    | 141                                                                                   | 111 | 79  | 65                | 27.94 |
| 220                                                                      | 552                                                                                   | 403    | 349                                                                                   | 273    | 247                                                                                   | 203    | 166                                                                                   | 135 | 103 | 89                | 29.94 |
| 240                                                                      | 589                                                                                   | 420    | 366                                                                                   | 290    | 266                                                                                   | 225    | 183                                                                                   | 152 | 120 | 106               | 31.94 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |                                                                                       |        |                                                                                       |        |                                                                                       |        |                                                                                       |     |     |                   |       |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



# ISOPARFIRE® ELEGANT SOUND

SOUNDPROOFING, SOUND-ABSORBING MINERAL FIBRE WALLS PANELS, WITH HIDDEN FASTENERS

ISOPARFIRE® ELEGANT SOUND is a sandwich panel used on walls that need to be fireproof, look good and have good acoustic standards in terms of sound absorption and soundproofing. Its fire resistance class is A2-s1,d0, as its insulating material is mineral fibre; in addition, it stands out for its hidden fasteners so that the panels on the walls look seamlessly applied; finally, acoustic comfort and soundproofing are provided by the micro-holes on the inner backing, which is available in pre-painted galvanised steel, stainless steel or pre-painted natural aluminium, in a standard thickness of 0.5 mm. Double plates are optionally available in other thicknesses as well.

**Density of insulation**  
Density: 100 Kg/m<sup>3</sup> ±10%.  
Other densities optionally available.

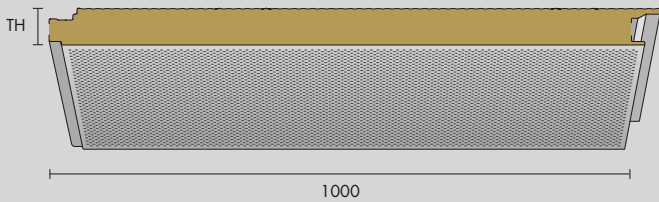
**Sound-absorption**  
Thickness mm 50: AW = 0.90  
Thickness mm 80: AW = 0.95  
Thickness mm 100: AW = 0.95

**Soundproofing**  
Thickness mm 50: RW = 31 dB  
Thickness mm 80: RW = 34 dB  
Thickness mm 100: RW = 35 dB

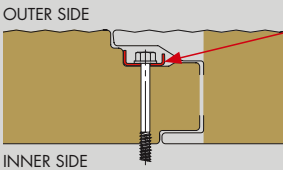
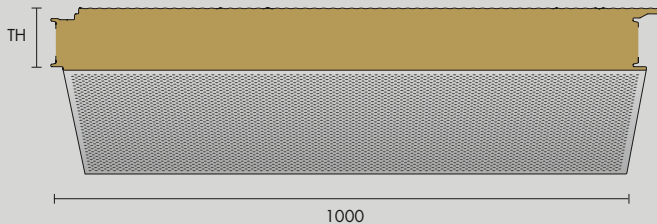
Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.



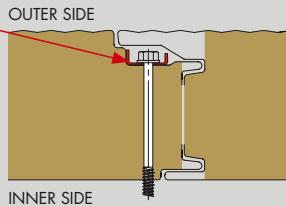
## THICKNESS 40 MM



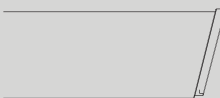
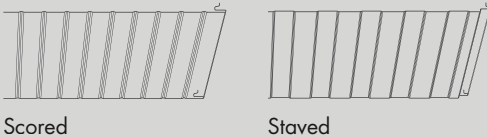
## THICKNESS FROM 50 TO 240 MM



During the assembly phase, use the steel fastening plate. The plate is intended to distribute the efforts arising from fixing and to increase the resistance to compressive and depression stresses acting on the wall panels. The position and the number of fixing points must be defined by the designer depending on the stresses on the structure.



Micro-veining of the LOWER SIDE of the panel  
(to be specified when ordering)



Smooth

$\lambda = 0.039 \text{ Watt/mK}$

| U Transmittance | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 220  | 240  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.89 | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 | 0.17 | 0.16 |
| Kcal/sq.m. h °C | 0.76 | 0.62 | 0.52 | 0.40 | 0.32 | 0.17 | 0.22 | 0.19 | 0.18 | 0.16 | 0.14 | 0.13 |

$\lambda = 0.041 \text{ Watt/mK}$

| U Transmittance | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 220  | 240  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.93 | 0.76 | 0.64 | 0.49 | 0.39 | 0.33 | 0.27 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 |
| Kcal/sq.m. h °C | 0.80 | 0.65 | 0.55 | 0.42 | 0.33 | 0.28 | 0.23 | 0.20 | 0.19 | 0.17 | 0.15 | 0.14 |

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0,5 mm

Effective span width:  
120 mm

| SINGLE SPAN                                                         | P   |     |     |     |     |     |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| SHEET METAL THICKNESS (mm)                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| 40                                                                  | 147 | 95  | 88  | 68  |     |     |     |     |     |    | 11.44                |
| 50                                                                  | 165 | 110 | 100 | 76  | 68  |     |     |     |     |    | 12.44                |
| 60                                                                  | 190 | 127 | 115 | 87  | 78  | 63  |     |     |     |    | 13.44                |
| 80                                                                  | 237 | 158 | 144 | 109 | 98  | 79  | 60  |     |     |    | 15.44                |
| 100                                                                 | 285 | 190 | 173 | 131 | 117 | 95  | 72  | 56  |     |    | 19.16                |
| 120                                                                 | 336 | 224 | 204 | 155 | 138 | 112 | 85  | 66  | 45  |    | 21.16                |
| 150                                                                 | 376 | 251 | 228 | 173 | 155 | 125 | 95  | 74  | 50  | 40 | 22.44                |
| 170                                                                 | 389 | 259 | 236 | 178 | 161 | 128 | 99  | 78  | 53  | 42 | 24.44                |
| 180                                                                 | 414 | 276 | 251 | 191 | 171 | 137 | 105 | 81  | 55  | 44 | 25.44                |
| 200                                                                 | 447 | 298 | 271 | 206 | 184 | 148 | 113 | 88  | 60  | 48 | 27.44                |
| 220                                                                 | 471 | 322 | 295 | 230 | 208 | 172 | 137 | 112 | 84  | 72 | 29.44                |
| 240                                                                 | 488 | 339 | 312 | 247 | 225 | 189 | 154 | 129 | 101 | 88 | 31.44                |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |    |                      |

| DOUBLE SPAN                                                         | P   |     |     |     |     | P   |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| SHEET METAL THICKNESS (mm)                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| 40                                                                  | 152 | 100 | 93  | 69  |     |     |     |     |     |    | 11.44                |
| 50                                                                  | 170 | 115 | 105 | 77  | 70  |     |     |     |     |    | 12.44                |
| 60                                                                  | 196 | 132 | 121 | 89  | 81  | 65  |     |     |     |    | 13.44                |
| 80                                                                  | 244 | 165 | 151 | 111 | 101 | 81  | 62  |     |     |    | 15.44                |
| 100                                                                 | 293 | 198 | 181 | 133 | 121 | 98  | 74  | 58  |     |    | 19.16                |
| 120                                                                 | 346 | 234 | 214 | 157 | 142 | 115 | 88  | 68  | 47  |    | 21.16                |
| 150                                                                 | 388 | 262 | 239 | 176 | 160 | 129 | 98  | 77  | 53  | 42 | 22.44                |
| 170                                                                 | 400 | 271 | 247 | 181 | 165 | 133 | 104 | 81  | 55  | 44 | 24.44                |
| 180                                                                 | 426 | 288 | 263 | 193 | 176 | 142 | 108 | 84  | 58  | 46 | 25.44                |
| 200                                                                 | 460 | 311 | 284 | 209 | 190 | 153 | 117 | 91  | 63  | 50 | 27.44                |
| 220                                                                 | 484 | 335 | 303 | 233 | 214 | 177 | 141 | 115 | 87  | 74 | 29.44                |
| 240                                                                 | 501 | 352 | 325 | 250 | 231 | 194 | 158 | 132 | 104 | 91 | 31.44                |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |     |     |     |     |     |     |     |     |    |                      |

| MULTIPLE SPAN                                                              | P                                                                                     |          |                                                                                       | P        |                                                                                       |          | P                                                                                     |     |     | WEIGHT (Kg/sq.m.) |       |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|-----|-----|-------------------|-------|
|                                                                            |  | <i>l</i> |  | <i>l</i> |  | <i>l</i> |  |     |     |                   |       |
| SHEET METAL THICKNESS (mm)                                                 | 1.5                                                                                   | 2        | 2.5                                                                                   | 3        | 3.5                                                                                   | 4        | 4.5                                                                                   | 5   | 5.5 | 6                 |       |
| 40                                                                         | 157                                                                                   | 105      | 98                                                                                    | 73       |                                                                                       |          |                                                                                       |     |     |                   | 11.44 |
| 50                                                                         | 175                                                                                   | 120      | 110                                                                                   | 81       | 73                                                                                    |          |                                                                                       |     |     |                   | 12.44 |
| 60                                                                         | 201                                                                                   | 138      | 127                                                                                   | 93       | 84                                                                                    | 68       |                                                                                       |     |     |                   | 13.44 |
| 80                                                                         | 252                                                                                   | 173      | 158                                                                                   | 116      | 105                                                                                   | 85       | 64                                                                                    |     |     |                   | 15.44 |
| 100                                                                        | 302                                                                                   | 207      | 190                                                                                   | 140      | 126                                                                                   | 102      | 77                                                                                    | 60  |     |                   | 19.16 |
| 120                                                                        | 356                                                                                   | 244      | 224                                                                                   | 165      | 149                                                                                   | 120      | 91                                                                                    | 71  | 50  |                   | 21.16 |
| 150                                                                        | 399                                                                                   | 274      | 251                                                                                   | 185      | 166                                                                                   | 135      | 101                                                                                   | 79  | 56  | 45                | 22.44 |
| 170                                                                        | 463                                                                                   | 333      | 284                                                                                   | 219      | 198                                                                                   | 155      | 120                                                                                   | 90  | 68  | 55                | 24.44 |
| 180                                                                        | 439                                                                                   | 301      | 276                                                                                   | 203      | 183                                                                                   | 148      | 112                                                                                   | 87  | 62  | 50                | 25.44 |
| 200                                                                        | 474                                                                                   | 325      | 298                                                                                   | 219      | 198                                                                                   | 160      | 121                                                                                   | 94  | 67  | 53                | 27.44 |
| 220                                                                        | 498                                                                                   | 349      | 322                                                                                   | 243      | 222                                                                                   | 184      | 145                                                                                   | 118 | 91  | 77                | 29.44 |
| 240                                                                        | 515                                                                                   | 366      | 339                                                                                   | 260      | 231                                                                                   | 201      | 162                                                                                   | 135 | 108 | 94                | 31.44 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 <i>l</i> |                                                                                       |          |                                                                                       |          |                                                                                       |          |                                                                                       |     |     |                   |       |

TYPICAL WEIGHT OF SANDWICH PANELS:

FIBREGLASS: 55 KG/M<sup>3</sup>

STONE WOOL: 100 KG/M<sup>3</sup>

MINERAL INSULATION SANDWICH PANELS ARE UP TO 30%  
LIGHTER THAN STONE WOOL PANELS

# CHAPTER 4

## FIBREGLASS SANDWICH PANELS



FIBREGLASS ENSURES UTMOST LEVELS OF COMFORT AND WELLNESS INSIDE THE BUILDING. PERFORMING, CERTIFIED AND INTEGRATED IN THE INSULATION SYSTEMS, THE MATERIALS PRODUCED WITH ROCK WOOL ENSURE OPTIMAL LIVING COMFORT AS THEY EFFECTIVELY INSULATE THERMICALLY AND ACOUSTICALLY, ENSURING OPTIMAL AIR QUALITY. THE FIBREGLASS USES A NEWLY CONCEIVED RESIN THAT COMBINES ORGANIC AND VEGETABLE COMPONENTS TO FURTHER REDUCE THE EMISSIONS OF FORMALDEHYDE AND VOC (ORGANIC VOLATILE COMPOUNDS), RESPECTING THE STRICTEST LIMITS SET FORTH BY EUROPEAN STANDARDS.

THE STRUCTURE OF THE FIBREGLASS INSULATOR ENSURES HIGH BREATHABILITY TO THE PRODUCT: THIS WAY, NO CONDENSATION IS CREATED INSIDE THE WALLS WITH CONSEQUENT RISK OF MOULD FORMATION. MOREOVER, THE FIBREGLASS, SINCE IT IS TREATED WITH SPECIAL THERMO-HARDENING RESIN BINDING AGENTS, IS HIGHLY WATER-REPELLENT AND WATER-RESISTANT, SUCH TO PASS THE DURABILITY TEST DUR2 SET FORTH BY UNI EN 14509:2007 STANDARD.



# EUROFIRE® GLASS 2

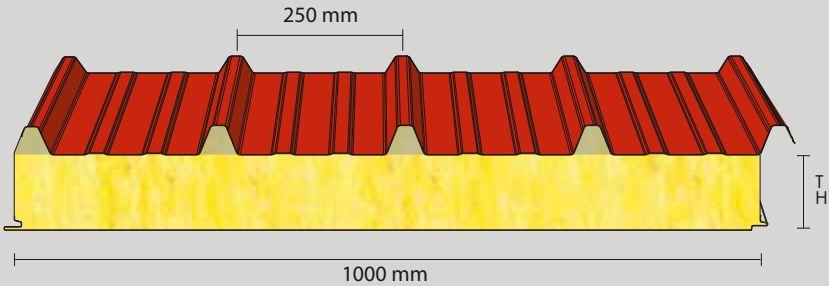
ROOF PANELS WITH MINERAL FIBREGLASS INSULATION



In a nutshell: revolutionary. The reliability and experience of Lattonedil led to the creation of a feather-light, safe, fire-resistant panel under class A2-s1,d0. EUROFIRE® GLASS 2 is the roof panel made with an insulating layer of medium-density mineral fibreglass insulation, its fibres are placed at angles with the plane of the two backings are available galvanised steel, or, optionally, in stainless steel, copper or pre-painted natural aluminium, with a standard thickness of 0.5 mm each.

**Density of insulation**  
Density: 55 Kg/m<sup>3</sup> ±10%.  
Other densities optionally available.  
Thermal conductivity up to  $\lambda = 0.039$  Watt/mK

Note: manufacturing-wise it is impossible to fill the lower lip.  
This is due to the characteristics of the type of insulation.



## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

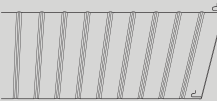
Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                               | P   |     |     |     |     |     |     |     |     |   | WEIGHT (Kg/sq.m.) |
|--------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|-------------------|
|                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6 |                   |
| 50                                                                       | 243 | 189 | 135 | 95  |     |     |     |     |     |   | 12.68             |
| 60                                                                       | 279 | 225 | 153 | 113 | 72  |     |     |     |     |   | 13.23             |
| 80                                                                       | 315 | 261 | 198 | 149 | 113 | 81  |     |     |     |   | 13.78             |
| 100                                                                      | 351 | 297 | 234 | 185 | 144 | 113 | 72  |     |     |   | 14.33             |
| 120                                                                      | 387 | 333 | 270 | 221 | 167 | 126 | 99  | 77  |     |   | 14.88             |
| 150                                                                      | 423 | 369 | 306 | 257 | 230 | 171 | 135 | 108 | 72  |   | 15.43             |
| 170                                                                      | 459 | 405 | 342 | 293 | 253 | 191 | 155 | 128 | 92  |   | 16.73             |
| 180                                                                      | 495 | 449 | 378 | 329 | 276 | 211 | 175 | 148 | 112 |   | 17.28             |
| 200                                                                      | 531 | 477 | 414 | 365 | 312 | 231 | 195 | 168 | 132 |   | 18.38             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |     |     |     |     |     |     |     |     |   |                   |

$\lambda = 0.039$  Watt/mK

| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 |
| Kcal/sq.m. h °C | 0.62 | 0.52 | 0.40 | 0.32 | 0.27 | 0.22 | 0.19 | 0.18 | 0.16 |

Available profiles  
(please state when ordering)



Scored



Staved

# EUROFIRE® GLASS SOUND 2

SOUNDPROOFING, SOUND-ABSORBING ROOF PANEL WITH MINERAL FIBREGLASS INSULATION



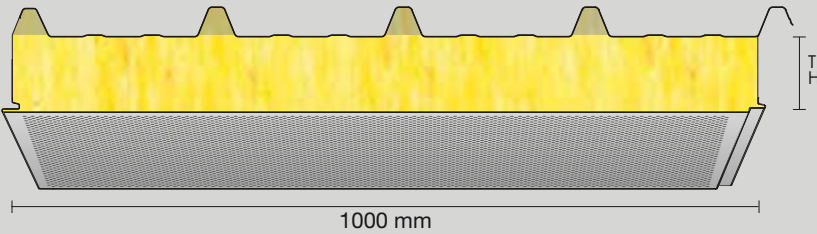
With the advancement of technology and the launch of ever-new building materials, needs change and take new directions, with buildings that need feather-light, insulating, fire-resistant roof panels that deliver high living comfort in terms of air quality and noise; then, the answer is EUROFIRE® GLASS SOUND 2. Fireproof fibreglass (fire resistance class A2-s1,d0), which, despite being so light, is extremely resistant to thermal gradients and is coupled with a micro-holed plate that is available in galvanised steel or stainless steel, or pre-painted aluminium, which increases soundproofing and sound absorption levels.

Note: manufacturing-wise it is impossible to fill the lower lip.  
This is due to the characteristics of the type of insulation.

**Density of insulation**  
Density: 55 Kg/m<sup>3</sup> ±10%.  
Other densities optionally available.  
Thermal conductivity up to  $\lambda = 0.039$  Watt/mK

**Sound absorption**  
Thickness mm 50: AW = 0.90  
Thickness mm 80: AW = 0.95  
Thickness mm 100: AW = 0.95

**Soundproofing**  
Thickness mm 50: Rw = 31 dB  
Thickness mm 80: Rw = 34 dB  
Thickness mm 100: Rw = 35 dB



## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

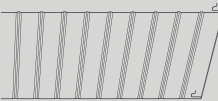
Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                               | P   |     |     |     |     |     |     |    |     |   | WEIGHT (Kg/sq.m.) |
|--------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|---|-------------------|
|                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6 |                   |
| 50                                                                       | 225 | 153 | 99  | 54  |     |     |     |    |     |   | 11.99             |
| 60                                                                       | 261 | 171 | 117 | 72  |     |     |     |    |     |   | 12.54             |
| 80                                                                       | 297 | 225 | 153 | 99  | 72  |     |     |    |     |   | 13.09             |
| 100                                                                      | 315 | 261 | 189 | 135 | 90  | 72  |     |    |     |   | 13.64             |
| 120                                                                      | 360 | 297 | 225 | 171 | 126 | 90  | 72  |    |     |   | 14.19             |
| 150                                                                      | 378 | 310 | 238 | 180 | 135 | 94  | 76  | 54 |     |   | 14.74             |
| 170                                                                      | 393 | 375 | 251 | 183 | 144 | 98  | 90  | 53 |     |   | 16.04             |
| 180                                                                      | 408 | 340 | 264 | 198 | 153 | 102 | 94  | 62 |     |   | 16.59             |
| 200                                                                      | 423 | 355 | 277 | 207 | 161 | 108 | 98  | 66 |     |   | 17.63             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |     |     |     |     |     |     |    |     |   |                   |

$\lambda = 0.039$  Watt/mK

| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  |
|-----------------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 |
| Kcal/sq.m. h °C | 0.62 | 0.52 | 0.40 | 0.32 | 0.27 | 0.22 | 0.19 | 0.18 | 0.16 |

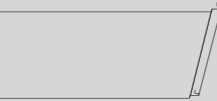
Available profiles  
(please state when ordering)



Scored



Staved



Smooth

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.





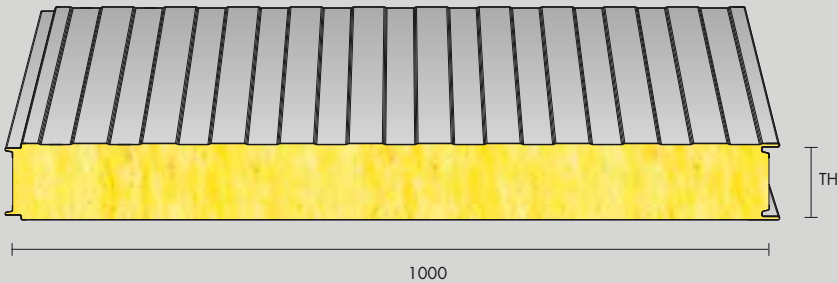
# ISOPARFIRE® GLASS 2

WALL PANELS WITH MINERAL FIBREGLASS INSULATION

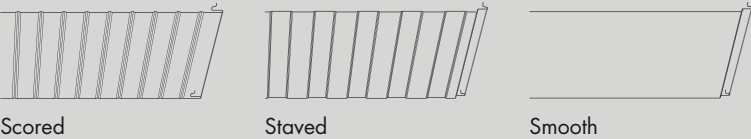
Fibreglass as a thermal insulation material may also be applied to walls. Fire resistant ISOPARFIRE® GLASS 2, class A2-s1,d0 is the lightest sandwich panel in its class, coated with 2 plate backings, optionally available in pre-painted or plastic-coated galvanised steel, embossed or pre-painted natural aluminium or stainless steel.

**Density of insulation**  
Density: 55 Kg/m³ ±10%.  
Other densities optionally available.  
Thermal conductivity up to  $\lambda = 0.039$  Watt/mK

Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.



Available profiles (please state when ordering)



$\lambda = 0.039$  Watt/mK

| U<br>Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 240  |
|--------------------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 | 0.16 |
| Kcal/sq.m. h °C    | 0.62 | 0.52 | 0.40 | 0.32 | 0.27 | 0.22 | 0.19 | 0.18 | 0.16 | 0.13 |

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

| SHEET METAL THICKNESS (mm)                                               | P   |     |     |     |     |     |     |     |     |    | WEIGHT (Kg/sq.m.) |
|--------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
|                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                   |
| 50                                                                       | 166 | 117 | 99  | 73  | 66  |     |     |     |     |    | 11.58             |
| 60                                                                       | 191 | 135 | 114 | 84  | 76  | 61  |     |     |     |    | 12.13             |
| 80                                                                       | 239 | 168 | 142 | 105 | 95  | 76  | 59  |     |     |    | 12.68             |
| 100                                                                      | 286 | 202 | 171 | 126 | 114 | 92  | 71  | 55  |     |    | 13.23             |
| 120                                                                      | 338 | 238 | 202 | 149 | 134 | 108 | 84  | 65  | 45  |    | 13.78             |
| 150                                                                      | 378 | 267 | 226 | 166 | 150 | 121 | 94  | 73  | 50  | 40 | 14.33             |
| 170                                                                      | 408 | 292 | 250 | 183 | 165 | 134 | 104 | 81  | 55  | 43 | 15.43             |
| 180                                                                      | 438 | 317 | 274 | 200 | 182 | 147 | 114 | 89  | 60  | 46 | 15.98             |
| 200                                                                      | 468 | 342 | 298 | 217 | 198 | 150 | 124 | 97  | 65  | 49 | 17.08             |
| 240                                                                      | 498 | 344 | 322 | 234 | 214 | 173 | 134 | 105 | 70  | 52 | 19.28             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |     |     |     |     |     |     |     |     |    |                   |

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

| SHEET METAL THICKNESS (mm)                                               | P   |     |     |     |     | P   |     |     |     |    | WEIGHT (Kg/sq.m.) |
|--------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------------|
|                                                                          | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                   |
| 50                                                                       | 171 | 122 | 104 | 77  | 70  |     |     |     |     |    | 11.58             |
| 60                                                                       | 197 | 140 | 120 | 89  | 81  | 66  |     |     |     |    | 12.13             |
| 80                                                                       | 246 | 175 | 150 | 111 | 101 | 83  | 62  |     |     |    | 12.68             |
| 100                                                                      | 295 | 210 | 179 | 133 | 121 | 99  | 74  | 59  |     |    | 13.23             |
| 120                                                                      | 348 | 248 | 212 | 157 | 142 | 117 | 88  | 70  | 49  |    | 13.78             |
| 150                                                                      | 390 | 278 | 237 | 176 | 160 | 131 | 98  | 78  | 55  | 45 | 14.33             |
| 170                                                                      | 430 | 313 | 267 | 195 | 179 | 146 | 109 | 85  | 60  | 45 | 15.43             |
| 180                                                                      | 470 | 348 | 297 | 216 | 198 | 161 | 120 | 92  | 65  | 53 | 15.98             |
| 200                                                                      | 510 | 383 | 327 | 236 | 217 | 176 | 131 | 99  | 70  | 57 | 17.08             |
| 240                                                                      | 550 | 418 | 357 | 256 | 236 | 191 | 142 | 105 | 75  | 61 | 19.28             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |     |     |     |     |     |     |     |     |    |                   |

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

| MULTIPLE SPAN                                                            | P                                                                                     |        |                                                                                       | P      |                                                                                       |        | P                                                                                     |     |     | WEIGHT (Kg/sq.m.) |       |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|-----|-----|-------------------|-------|
|                                                                          |  | $\ell$ |  | $\ell$ |  | $\ell$ |  |     |     |                   |       |
| SHEET METAL THICKNESS (mm)                                               | 1.5                                                                                   | 2      | 2.5                                                                                   | 3      | 3.5                                                                                   | 4      | 4.5                                                                                   | 5   | 5.5 | 6                 |       |
| 50                                                                       | 176                                                                                   | 126    | 108                                                                                   | 83     | 75                                                                                    |        |                                                                                       |     |     |                   | 11.58 |
| 60                                                                       | 202                                                                                   | 145    | 124                                                                                   | 95     | 86                                                                                    | 70     |                                                                                       |     |     |                   | 12.13 |
| 80                                                                       | 253                                                                                   | 181    | 155                                                                                   | 119    | 108                                                                                   | 88     | 68                                                                                    |     |     |                   | 12.68 |
| 100                                                                      | 304                                                                                   | 217    | 186                                                                                   | 143    | 129                                                                                   | 105    | 82                                                                                    | 64  |     |                   | 13.23 |
| 120                                                                      | 358                                                                                   | 256    | 220                                                                                   | 169    | 153                                                                                   | 124    | 96                                                                                    | 76  | 53  |                   | 13.78 |
| 150                                                                      | 401                                                                                   | 287    | 246                                                                                   | 189    | 171                                                                                   | 139    | 108                                                                                   | 85  | 59  | 49                | 14.33 |
| 170                                                                      | 431                                                                                   | 312    | 266                                                                                   | 207    | 185                                                                                   | 150    | 118                                                                                   | 93  | 64  | 52                | 15.43 |
| 180                                                                      | 461                                                                                   | 337    | 286                                                                                   | 225    | 201                                                                                   | 161    | 128                                                                                   | 101 | 69  | 55                | 15.98 |
| 200                                                                      | 491                                                                                   | 362    | 306                                                                                   | 243    | 216                                                                                   | 172    | 138                                                                                   | 109 | 74  | 58                | 17.08 |
| 240                                                                      | 521                                                                                   | 387    | 326                                                                                   | 261    | 231                                                                                   | 183    | 148                                                                                   | 117 | 79  | 61                | 19.28 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |                                                                                       |        |                                                                                       |        |                                                                                       |        |                                                                                       |     |     |                   |       |





# ISOPARFIRE® GLASS SOUND 2

SOUNDPROOFING, SOUND-ABSORBING WALL PANELS WITH MINERAL FIBREGLOSS INSULATION

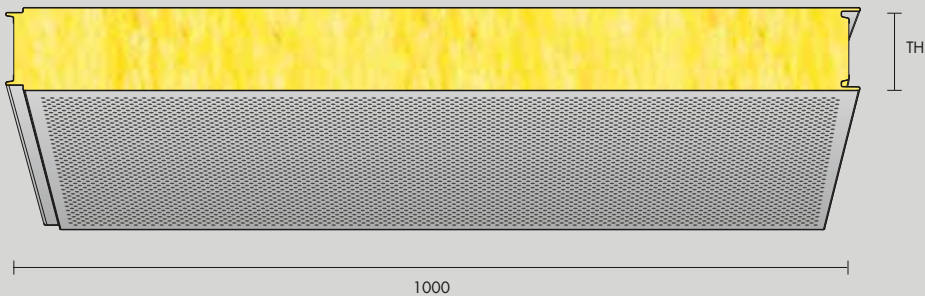
Fire-resistant ISOPARFIRE® GLASS SOUND 2, a class A2-s1,d0 material, is the lightest sandwich panel in the Lattonedil's range of products, coated with 2 plate backings, optionally available in pre-painted or plastic-coated galvanised steel, embossed or pre-painted natural aluminium or stainless steel, where the micro-holes on the inner backing improve its soundproofing and sound absorbing performance.

Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.

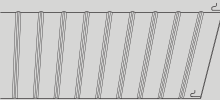
**Density of insulation**  
Density: 55 Kg/m³ ±10%.  
Other densities optionally available.  
Thermal conductivity up to λ = 0.039 Watt/mK

**Sound absorption**  
Thickness mm 50: AW = 0.90  
Thickness mm 80: AW = 0.95  
Thickness mm 100: AW = 0.95

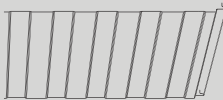
**Soundproofing**  
Thickness mm 50: Rw = 30 dB  
Thickness mm 80: Rw = 33 dB  
Thickness mm 100: Rw = 34 dB



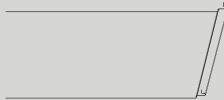
Available profiles (please state when ordering)



Scored



Staved



Smooth

λ = 0.039 Watt/mK

| U Transmittance | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 240  |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K       | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 | 0.16 |
| Kcal/sq.m. h °C | 0.62 | 0.52 | 0.40 | 0.32 | 0.27 | 0.22 | 0.19 | 0.18 | 0.16 | 0.13 |

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.6 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     |     |     |    |     |    | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  |                   |
| 50                                                                  | 149 | 99  | 90  | 68  | 61  |     |     |    |     |    | 10.69             |
| 60                                                                  | 171 | 114 | 104 | 78  | 70  | 57  |     |    |     |    | 11.24             |
| 80                                                                  | 214 | 142 | 129 | 98  | 88  | 71  | 54  |    |     |    | 11.79             |
| 100                                                                 | 257 | 171 | 155 | 117 | 105 | 86  | 65  | 50 |     |    | 12.44             |
| 120                                                                 | 303 | 202 | 183 | 138 | 124 | 101 | 76  | 59 | 41  |    | 12.89             |
| 150                                                                 | 340 | 226 | 205 | 155 | 139 | 113 | 86  | 66 | 46  | 36 | 13.44             |
| 170                                                                 | 375 | 251 | 228 | 172 | 155 | 125 | 96  | 73 | 51  | 40 | 14.74             |
| 180                                                                 | 412 | 276 | 251 | 183 | 171 | 137 | 106 | 80 | 56  | 44 | 15.29             |
| 200                                                                 | 449 | 301 | 274 | 206 | 187 | 149 | 116 | 87 | 61  | 48 | 16.39             |
| 240                                                                 | 484 | 325 | 297 | 223 | 203 | 161 | 126 | 94 | 66  | 52 | 18.59             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |     |     |     |     |     |     |     |    |     |    |                   |

**EXTERNAL facing:**  
Steel 0,5 mm  
**INTERNAL facing:**  
Steel 0,6 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |     |     | P   |     |    |     |    | WEIGHT (Kg/sq.m.) |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-------------------|
|                                                                     | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  |                   |
| 50                                                                  | 153 | 104 | 95  | 69  | 63  |     |     |    |     |    | 10.69             |
| 60                                                                  | 176 | 120 | 109 | 79  | 72  | 59  |     |    |     |    | 11.24             |
| 80                                                                  | 220 | 150 | 137 | 99  | 91  | 74  | 56  |    |     |    | 11.79             |
| 100                                                                 | 264 | 179 | 164 | 119 | 109 | 89  | 67  | 52 |     |    | 12.44             |
| 120                                                                 | 311 | 212 | 193 | 140 | 128 | 104 | 79  | 61 | 42  |    | 12.89             |
| 150                                                                 | 349 | 237 | 217 | 157 | 144 | 117 | 89  | 69 | 47  | 38 | 13.44             |
| 170                                                                 | 385 | 262 | 240 | 174 | 160 | 129 | 99  | 76 | 52  | 42 | 14.74             |
| 180                                                                 | 421 | 287 | 263 | 191 | 176 | 141 | 109 | 83 | 57  | 46 | 15.29             |
| 200                                                                 | 457 | 312 | 285 | 208 | 192 | 153 | 119 | 90 | 62  | 50 | 16.39             |
| 240                                                                 | 493 | 337 | 309 | 225 | 208 | 165 | 129 | 97 | 67  | 54 | 18.59             |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |     |     |     |     |     |     |     |    |     |    |                   |

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.6 mm

| MULTIPLE SPAN                                                              | P                                                                                     |          |                                                                                       | P        |                                                                                       |          | P                                                                                     |    |     | WEIGHT (Kg/sq.m.) |       |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|----|-----|-------------------|-------|
|                                                                            |  | <i>ℓ</i> |  | <i>ℓ</i> |  | <i>ℓ</i> |  |    |     |                   |       |
| SHEET METAL THICKNESS (mm)                                                 | 1.5                                                                                   | 2        | 2.5                                                                                   | 3        | 3.5                                                                                   | 4        | 4.5                                                                                   | 5  | 5.5 | 6                 |       |
| 50                                                                         | 158                                                                                   | 108      | 99                                                                                    | 73       | 67                                                                                    |          |                                                                                       |    |     |                   | 10.69 |
| 60                                                                         | 182                                                                                   | 124      | 114                                                                                   | 84       | 77                                                                                    | 61       |                                                                                       |    |     |                   | 11.24 |
| 80                                                                         | 227                                                                                   | 155      | 142                                                                                   | 105      | 96                                                                                    | 76       | 58                                                                                    |    |     |                   | 11.79 |
| 100                                                                        | 273                                                                                   | 186      | 171                                                                                   | 126      | 116                                                                                   | 92       | 70                                                                                    | 54 |     |                   | 12.44 |
| 120                                                                        | 322                                                                                   | 220      | 202                                                                                   | 149      | 136                                                                                   | 108      | 82                                                                                    | 64 | 45  |                   | 12.89 |
| 150                                                                        | 360                                                                                   | 246      | 226                                                                                   | 166      | 153                                                                                   | 121      | 92                                                                                    | 71 | 50  | 40                | 13.44 |
| 170                                                                        | 366                                                                                   | 271      | 249                                                                                   | 183      | 169                                                                                   | 133      | 102                                                                                   | 78 | 55  | 44                | 14.74 |
| 180                                                                        | 432                                                                                   | 296      | 272                                                                                   | 200      | 185                                                                                   | 145      | 112                                                                                   | 85 | 60  | 48                | 15.29 |
| 200                                                                        | 458                                                                                   | 321      | 295                                                                                   | 217      | 201                                                                                   | 157      | 122                                                                                   | 92 | 65  | 52                | 16.39 |
| 240                                                                        | 504                                                                                   | 346      | 318                                                                                   | 234      | 217                                                                                   | 169      | 132                                                                                   | 99 | 70  | 56                | 18.59 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 <i>ℓ</i> |                                                                                       |          |                                                                                       |          |                                                                                       |          |                                                                                       |    |     |                   |       |

# ISOPARFIRE® GLASS ELEGANT 2

WALL PANELS WITH MINERAL FIBREGLOSS INSULATION AND HIDDEN FASTENERS

When aesthetics confer value to the building, ISOPARFIRE® GLASS ELEGANT 2 comes into play: the lightest sandwich panel of the category, with fire performance falling under class A2-s1,d0. It features, in order to ensure visual continuity and exalt aesthetic impact.

The two sheet supports can be either in pre-painted or plasticised galvanised steel, embossed natural or pre-painted aluminium or stainless steel.

## Density of insulation

Density: 55 Kg/m³ ±10%.

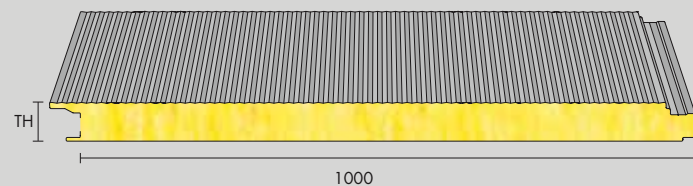
Other densities optionally available.

Thermal conductivity up to  $\lambda = 0.039$  Watt/mK

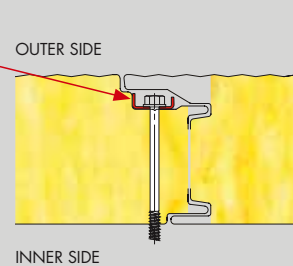
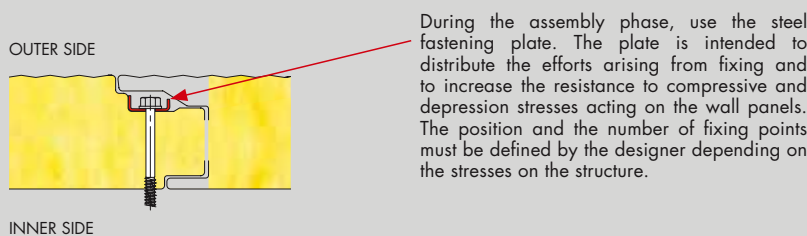
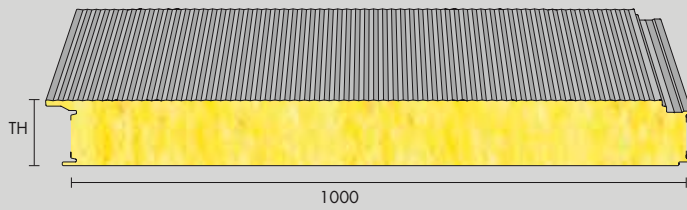
Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.

A2-s1,d0

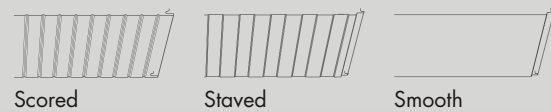
## THICKNESS 40 MM



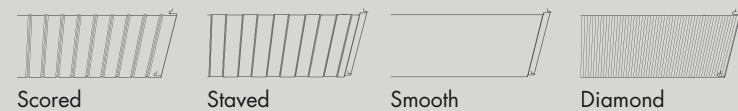
## THICKNESS FROM 50 TO 240 MM



Profiles available on the internal side  
(to specify when placing the order)



Profiles available on the external side  
(to specify when placing the order)



$\lambda = 0.039$  Watt/mK

| U<br>Transmittance | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 240  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.89 | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 | 0.16 |
| Kcal/sq.m. h °C    | 0.76 | 0.62 | 0.52 | 0.40 | 0.32 | 0.27 | 0.22 | 0.19 | 0.18 | 0.16 | 0.13 |

## Static properties (kg/sq.m.)

EXTERNAL facing:

Steel 0.5 mm

INTERNAL facing:

Steel 0.6 mm

| SHEET METAL<br>THICKNESS<br>(mm) | P   |     |     |     |     |     |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
|                                  | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| 40                               | 148 | 102 | 87  | 65  | 64  |     |     |     |     |    | 10.90                |
| 50                               | 166 | 117 | 99  | 73  | 66  |     |     |     |     |    | 11.38                |
| 60                               | 191 | 135 | 114 | 84  | 76  | 61  |     |     |     |    | 11.93                |
| 80                               | 239 | 168 | 142 | 105 | 95  | 76  | 59  |     |     |    | 12.48                |
| 100                              | 286 | 202 | 171 | 126 | 114 | 92  | 71  | 55  |     |    | 13.03                |
| 120                              | 338 | 238 | 202 | 149 | 134 | 108 | 84  | 65  | 45  |    | 13.58                |
| 150                              | 378 | 267 | 226 | 166 | 150 | 121 | 94  | 73  | 50  | 40 | 14.13                |
| 170                              | 418 | 296 | 250 | 184 | 167 | 135 | 105 | 81  | 55  | 44 | 15.43                |
| 180                              | 458 | 325 | 274 | 202 | 184 | 149 | 115 | 89  | 60  | 48 | 15.98                |
| 200                              | 498 | 354 | 298 | 220 | 201 | 153 | 127 | 97  | 65  | 52 | 17.08                |
| 240                              | 578 | 383 | 322 | 238 | 218 | 177 | 138 | 105 | 70  | 56 | 19.28                |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

EXTERNAL facing:

Steel 0.5 mm

INTERNAL facing:

Steel 0.6 mm

| SHEET METAL<br>THICKNESS<br>(mm) | P   |     |     |     |     |     |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
|                                  | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| 40                               | 153 | 107 | 92  | 69  | 65  |     |     |     |     |    | 10.90                |
| 50                               | 171 | 122 | 104 | 77  | 70  |     |     |     |     |    | 11.38                |
| 60                               | 197 | 140 | 120 | 89  | 81  | 66  |     |     |     |    | 11.93                |
| 80                               | 246 | 175 | 150 | 111 | 101 | 83  | 62  |     |     |    | 12.48                |
| 100                              | 295 | 210 | 179 | 133 | 121 | 99  | 74  | 59  |     |    | 13.03                |
| 120                              | 348 | 248 | 212 | 157 | 142 | 117 | 88  | 70  | 49  |    | 13.58                |
| 150                              | 390 | 278 | 237 | 176 | 160 | 131 | 98  | 78  | 55  | 45 | 14.13                |
| 170                              | 430 | 307 | 261 | 194 | 177 | 145 | 109 | 86  | 60  | 49 | 15.43                |
| 180                              | 470 | 336 | 285 | 212 | 194 | 159 | 120 | 94  | 65  | 53 | 15.98                |
| 200                              | 510 | 365 | 309 | 230 | 211 | 173 | 131 | 102 | 70  | 57 | 17.08                |
| 240                              | 550 | 394 | 333 | 248 | 228 | 187 | 142 | 110 | 75  | 61 | 19.28                |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

EXTERNAL facing:

Steel 0.5 mm

INTERNAL facing:

Steel 0.6 mm

| SHEET METAL<br>THICKNESS<br>(mm) | P   |     |     |     |     |     |     |     |     |    | WEIGHT<br>(Kg/sq.m.) |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
|                                  | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5   | 5.5 | 6  |                      |
| 40                               | 158 | 111 | 96  | 75  | 67  |     |     |     |     |    | 10.90                |
| 50                               | 176 | 126 | 108 | 83  | 75  |     |     |     |     |    | 11.38                |
| 60                               | 202 | 145 | 124 | 95  | 86  | 70  |     |     |     |    | 11.93                |
| 80                               | 253 | 181 | 155 | 119 | 108 | 88  | 68  |     |     |    | 12.48                |
| 100                              | 304 | 217 | 186 | 143 | 129 | 105 | 82  | 64  |     |    | 13.03                |
| 120                              | 358 | 256 | 220 | 169 | 153 | 124 | 96  | 76  | 53  |    | 13.58                |
| 150                              | 401 | 287 | 246 | 189 | 171 | 139 | 108 | 85  | 59  | 49 | 14.13                |
| 170                              | 441 | 316 | 270 | 207 | 188 | 153 | 115 | 93  | 64  | 53 | 15.43                |
| 180                              | 491 | 345 | 294 | 225 | 205 | 167 | 130 | 101 | 69  | 57 | 15.98                |
| 200                              | 521 | 374 | 318 | 243 | 222 | 181 | 141 | 109 | 74  | 61 | 17.08                |
| 240                              | 551 | 403 | 342 | 251 | 239 | 195 | 152 | 117 | 79  | 65 | 19.28                |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.





# ISOPARFIRE® GLASS ELEGANT SOUND 2

SOUNDPROOFING, SOUND-ABSORBING WALL PANELS WITH MINERAL FIBREGLASS INSULATION AND HIDDEN FASTENERS

ISOPARFIRE® GLASS ELEGANT SOUND is a full sandwich wall panel, with lots of special properties that is worth considering if you are looking for:

- excellent fire response (fire resistance, class A2-s1,d0)
- light-weight material and construction (due to wool fibreglass)
- excellent acoustic performance (due to a micro-holed inner backing that enhances its soundproofing and sound absorption levels)
- perfect aesthetic effect (hidden fasteners give it an even appearance).

Metal backings are optionally available in pre-painted or plastic-coated galvanised steel, embossed or pre-painted natural aluminium or stainless steel.

## Density of insulation

Density: 55 Kg/m<sup>3</sup> ±10%.

Other densities optionally available.

Thermal conductivity up to  $\lambda = 0.039$  Watt/mK

## Sound absorption

Thickness mm 50: AW = 0.90

Thickness mm 80: AW = 0.95

Thickness mm 100: AW = 0.95

## Soundproofing

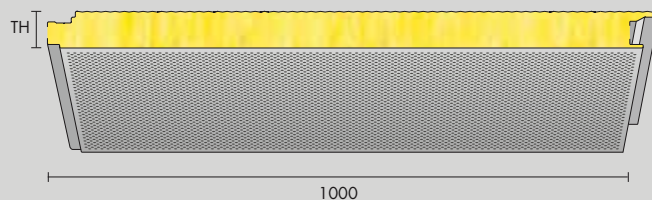
Thickness mm 50: Rw = 30 dB

Thickness mm 80: Rw = 33 dB

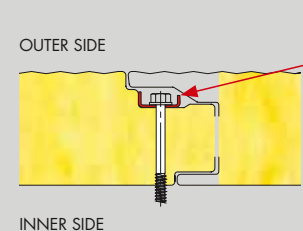
Thickness mm 100: Rw = 34 dB

Note: manufacturing-wise it is impossible to fill the lip of the joint. This is due to the characteristics of the type of insulation.

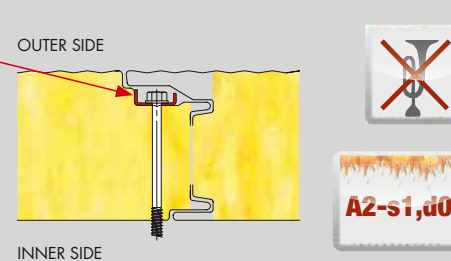
## THICKNESS 40 MM



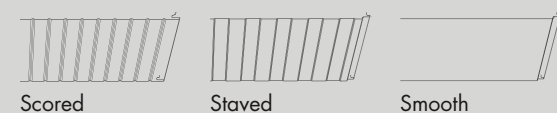
## THICKNESS FROM 50 TO 240 MM



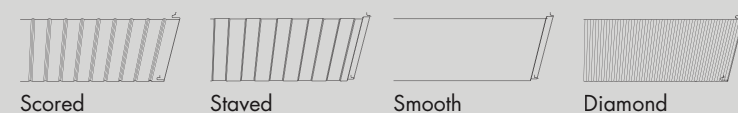
During the assembly phase, use the steel fastening plate. The plate is intended to distribute the efforts arising from fixing and to increase the resistance to compressive and depression stresses acting on the wall panels. The position and the number of fixing points must be defined by the designer depending on the stresses on the structure.



Profiles available on the internal side (to specify when placing the order)



Profiles available on the external side (to specify when placing the order)



$\lambda = 0.039$  Watt/mK

| U<br>Transmittance | 40   | 50   | 60   | 80   | 100  | 120  | 150  | 170  | 180  | 200  | 240  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.89 | 0.72 | 0.61 | 0.47 | 0.38 | 0.32 | 0.25 | 0.23 | 0.21 | 0.19 | 0.16 |
| Kcal/sq.m. °C      | 0.76 | 0.62 | 0.52 | 0.40 | 0.32 | 0.27 | 0.22 | 0.19 | 0.18 | 0.16 | 0.13 |

## Static properties (kg/sq.m.)

EXTERNAL facing:

Steel 0.5 mm

INTERNAL facing:

Steel 0.6 mm

| SHEET METAL THICKNESS (mm) | P   |     |     |     |     |     |     |    |     |    | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-------------------|
|                            | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  |                   |
| 40                         | 131 | 84  | 78  | 60  |     |     |     |    |     |    | 10.14             |
| 50                         | 149 | 99  | 90  | 68  | 61  |     |     |    |     |    | 10.69             |
| 60                         | 171 | 114 | 104 | 78  | 70  | 57  |     |    |     |    | 11.24             |
| 80                         | 214 | 142 | 129 | 98  | 88  | 71  | 54  |    |     |    | 11.79             |
| 100                        | 257 | 171 | 155 | 117 | 105 | 86  | 65  | 50 |     |    | 12.34             |
| 120                        | 303 | 202 | 183 | 138 | 124 | 101 | 76  | 59 | 41  |    | 12.89             |
| 150                        | 340 | 226 | 205 | 155 | 139 | 113 | 86  | 66 | 46  | 36 | 13.44             |
| 170                        | 377 | 250 | 228 | 172 | 154 | 125 | 96  | 73 | 51  | 40 | 14.74             |
| 180                        | 414 | 274 | 251 | 189 | 169 | 137 | 106 | 80 | 56  | 44 | 15.29             |
| 200                        | 451 | 298 | 274 | 206 | 184 | 149 | 116 | 87 | 61  | 48 | 16.39             |
| 240                        | 488 | 322 | 297 | 223 | 199 | 161 | 126 | 94 | 66  | 52 | 18.59             |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

EXTERNAL facing:

Steel 0.5 mm

INTERNAL facing:

Steel 0.6 mm

| SHEET METAL THICKNESS (mm) | P   |     |     |     |     |     |     |    |     |    | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-------------------|
|                            | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  |                   |
| 40                         | 135 | 89  | 82  | 59  |     |     |     |    |     |    | 10.14             |
| 50                         | 153 | 104 | 95  | 69  | 63  |     |     |    |     |    | 10.69             |
| 60                         | 176 | 120 | 109 | 79  | 72  | 59  |     |    |     |    | 11.24             |
| 80                         | 220 | 150 | 137 | 99  | 91  | 74  | 56  |    |     |    | 11.79             |
| 100                        | 264 | 179 | 164 | 119 | 109 | 89  | 67  | 52 |     |    | 12.34             |
| 120                        | 311 | 212 | 193 | 140 | 128 | 104 | 79  | 61 | 42  |    | 12.89             |
| 150                        | 349 | 237 | 217 | 157 | 144 | 117 | 89  | 69 | 47  | 38 | 13.44             |
| 170                        | 385 | 251 | 240 | 174 | 159 | 129 | 99  | 76 | 52  | 42 | 14.74             |
| 180                        | 423 | 285 | 263 | 191 | 174 | 141 | 109 | 83 | 57  | 46 | 15.29             |
| 200                        | 450 | 309 | 286 | 208 | 189 | 153 | 119 | 90 | 62  | 50 | 16.39             |
| 240                        | 497 | 333 | 309 | 225 | 204 | 165 | 129 | 97 | 67  | 54 | 18.59             |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

EXTERNAL facing:

Steel 0.5 mm

INTERNAL facing:

Steel 0.6 mm

| SHEET METAL THICKNESS (mm) | P   |     |     |     |     |     |     |    |     |    | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-------------------|
|                            | 1.5 | 2   | 2.5 | 3   | 3.5 | 4   | 4.5 | 5  | 5.5 | 6  |                   |
| 40                         | 140 | 93  | 87  | 65  |     |     |     |    |     |    | 10.14             |
| 50                         | 158 | 108 | 99  | 73  | 67  |     |     |    |     |    | 10.69             |
| 60                         | 182 | 124 | 114 | 84  | 77  | 61  |     |    |     |    | 11.24             |
| 80                         | 227 | 155 | 142 | 105 | 96  | 76  | 58  |    |     |    | 11.79             |
| 100                        | 273 | 186 | 171 | 126 | 116 | 92  | 70  | 54 |     |    | 12.34             |
| 120                        | 322 | 220 | 202 | 149 | 136 | 108 | 82  | 64 | 45  |    | 12.89             |
| 150                        | 360 | 246 | 226 | 166 | 153 | 121 | 92  | 71 | 50  | 40 | 13.44             |
| 170                        | 397 | 270 | 249 | 183 | 168 | 133 | 102 | 78 | 55  | 44 | 14.74             |
| 180                        | 434 | 294 | 272 | 200 | 183 | 145 | 112 | 85 | 60  | 48 | 15.29             |
| 200                        | 471 | 318 | 295 | 217 | 198 | 157 | 122 | 92 | 65  | 52 | 16.39             |
| 240                        | 559 | 342 | 318 | 234 | 213 | 169 | 132 | 99 | 70  | 56 | 18.59             |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

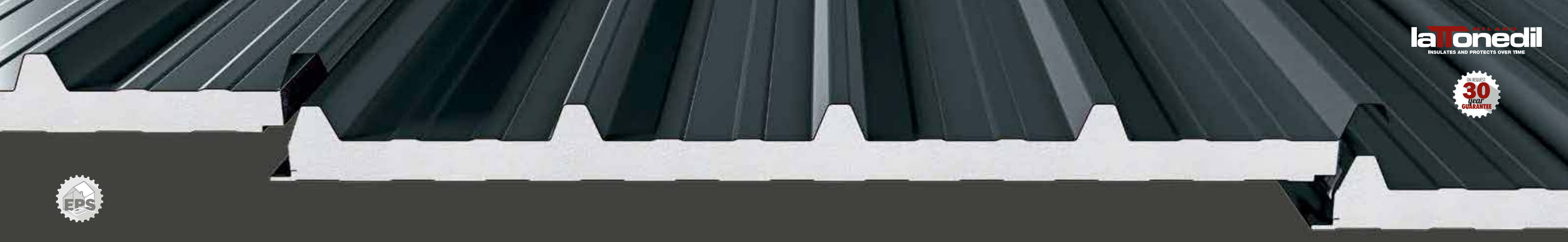
GREAT INSULATION WITH MINIMUM WEIGHT

# CHAPTER 5

## POLYSTYRENE SANDWICH PANELS







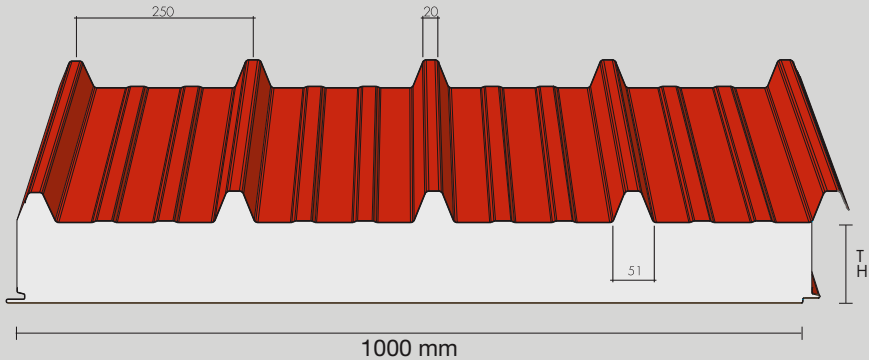
# EUROOCINQUE EPS®

POLYSTYRENE ROOF PANELS

EUROOCINQUEEPS® is a feather-light roof panel in sintered polystyrene foam or closed-cell EPS (chips), designed to offer one of the best thermal insulation ever among all insulating materials; it is coated with two backings in pre-painted galvanised steel or, optionally, in stainless steel or pre-painted natural aluminium, with a standard thickness of 0.5 mm each. The double sheet is optionally available with a different thickness.

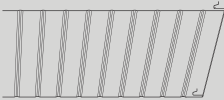
Note: manufacturing-wise it is impossible to fill the lower lip. This is due to the characteristics of the type of insulation.

**Panel size:**  
Workable width: mm 1000  
Thickness: 50, 60, 80, 100, 120, 150 mm

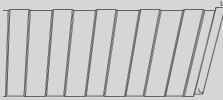


**B**  
ROOF  
(T3)

Available profiles (please state when ordering)



Scored



Staved

## Static properties (kg/sq.m.)



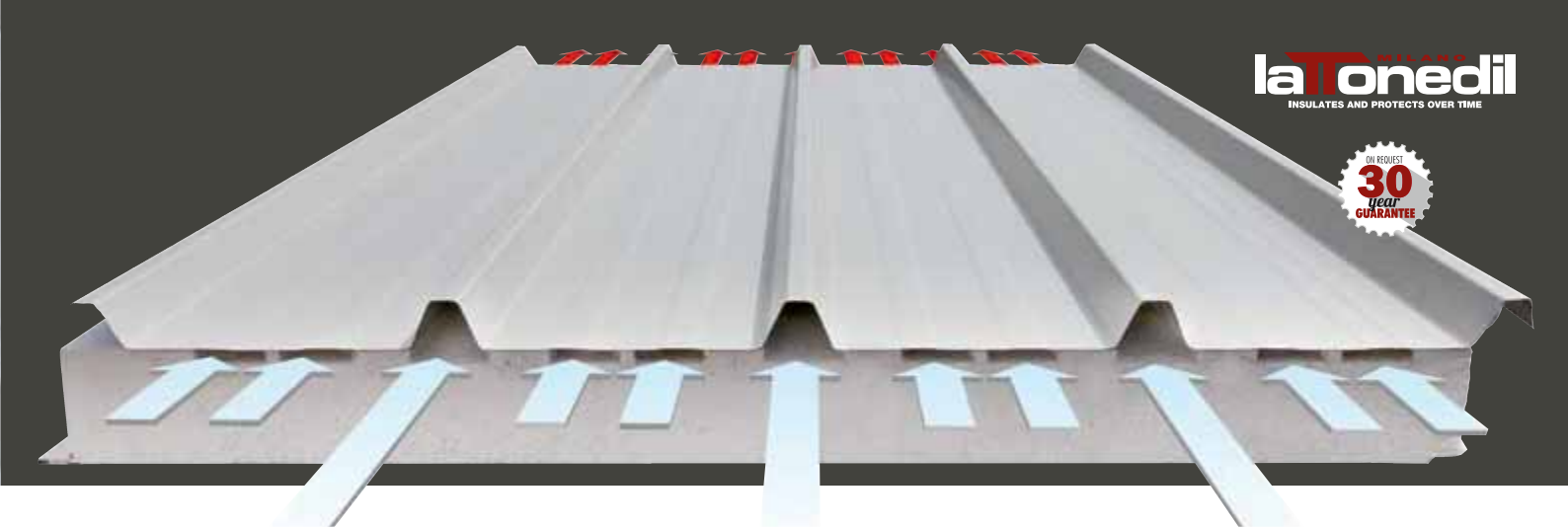
**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                                                                                       | 1.5 | 2   | 2.5 | 3   | WEIGHT (Kg/sq.m.) |
|----------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-------------------|
| 50                                                                                                                               | 320 | 240 | 230 | 200 | 10.20             |
| 60                                                                                                                               | 325 | 270 | 240 | 205 | 10.50             |
| 80                                                                                                                               | 380 | 330 | 265 | 220 | 11.00             |
| 100                                                                                                                              | 410 | 335 | 290 | 215 | 11.50             |
| 120                                                                                                                              | 440 | 360 | 305 | 250 | 12.00             |
| 150                                                                                                                              | 470 | 390 | 330 | 270 | 12.70             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard.<br>Normal deflection limit: 1/200 l |     |     |     |     |                   |

| U Transmittance | EPS Traditional |      |      |      |      |      |
|-----------------|-----------------|------|------|------|------|------|
|                 | 50              | 60   | 80   | 100  | 120  | 150  |
| W/sq.m. K       | 0.64            | 0.54 | 0.41 | 0.33 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.55            | 0.46 | 0.35 | 0.28 | 0.24 | 0.19 |

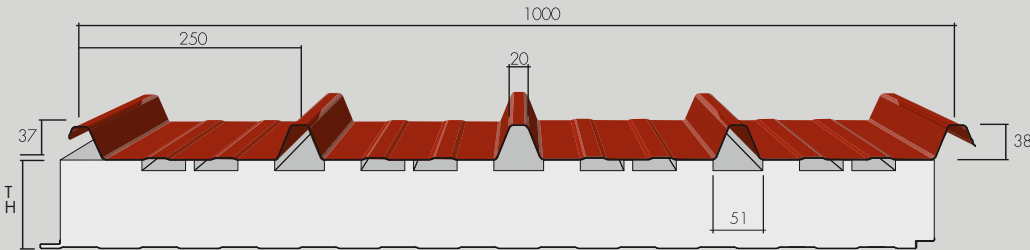
| U Transmittance | EPS Black |      |      |      |      |      |
|-----------------|-----------|------|------|------|------|------|
|                 | 50        | 60   | 80   | 100  | 120  | 150  |
| W/sq.m. K       | 0.62      | 0.51 | 0.38 | 0.31 | 0.26 | 0.20 |
| Kcal/sq.m. h °C | 0.53      | 0.44 | 0.32 | 0.26 | 0.22 | 0.17 |



**AIRPANEL®**  
POLYSTYRENE VENTILATED PANEL

What drives innovation and research in new products, except a feel for external challenges and needs? That's how the experience of Lattonedil® has created AIRPANEL®, the insulating panel in self-extinguishing sintered polystyrene foam that offers proper and steady airflow ventilation. With AIRPANEL®, you can very easily and cost-effectively

create make your own ventilated roof, providing your building with proper insulation and airflows, especially in the summer. Note: manufacturing-wise it is impossible to fill the lower lip. This is due to the characteristics of the type of insulation.



**B**  
ROOF  
(T3)

**Static properties (kg/sq.m.)**



**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                                                                                    | 1.5 | 2   | 2.5 | 3   | WEIGHT (Kg/sq.m.) |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-------------------|
| 50                                                                                                                            | 320 | 240 | 230 | 200 | 10.20             |
| 60                                                                                                                            | 325 | 270 | 240 | 205 | 10.50             |
| 80                                                                                                                            | 380 | 330 | 265 | 220 | 11.00             |
| 100                                                                                                                           | 410 | 335 | 290 | 215 | 11.50             |
| 120                                                                                                                           | 440 | 360 | 305 | 250 | 12.00             |
| 150                                                                                                                           | 470 | 390 | 330 | 270 | 12.70             |
| Static sizing calculation performed in accordance with Annex E of the UNI EN 14509 standard. Normal deflection limit: 1/200 l |     |     |     |     |                   |

| U Transmittance | EPS Traditional |      |      |      |      |      |
|-----------------|-----------------|------|------|------|------|------|
|                 | 50              | 60   | 80   | 100  | 120  | 150  |
| W/sq.m. K       | 0.64            | 0.54 | 0.41 | 0.33 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.55            | 0.46 | 0.35 | 0.28 | 0.24 | 0.19 |

| U Transmittance | EPS Black |      |      |      |      |      |
|-----------------|-----------|------|------|------|------|------|
|                 | 50        | 60   | 80   | 100  | 120  | 150  |
| W/sq.m. K       | 0.62      | 0.51 | 0.38 | 0.31 | 0.26 | 0.20 |
| Kcal/sq.m. h °C | 0.53      | 0.44 | 0.32 | 0.26 | 0.22 | 0.17 |



# ISOCURVO® VARIABLE

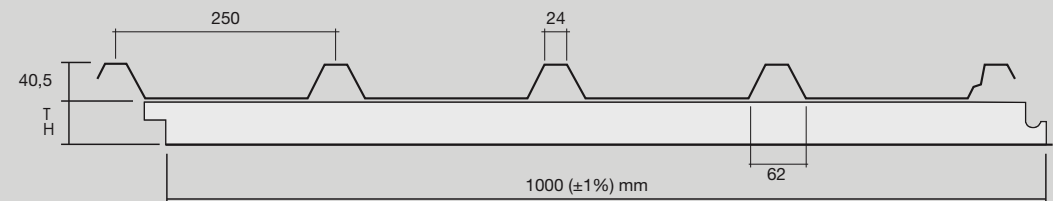
SINTERED POLYSTYRENE EPS

laTtonedil  
MILANO  
INSULATES AND PROTECTS OVER TIME

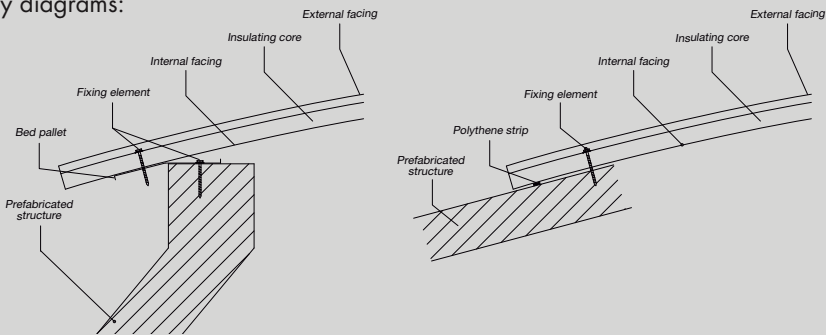


ISOCURVO® Variable is an insulated sandwich panel in sintered polystyrene foam (EPS). ISOCURVO® Variable is one of a kind: the radius is variable and, unlike the other panels, ISOCURVO® Variable has a minimum radius of 3.3 metres. ISOCURVO® variable is made by coupling the inner and outer backings, in pre-painted plate, natural aluminium, pre-painted

aluminium and aluzinc® in varying thickness, with a layer of insulating EPS press-glued in between. With its wide range of materials and thicknesses, this product may be customised to suit any requirement. Maximum panel length: 6000 mm overlap included.



Assembly diagrams:



## STATIC CHARACTERISTICS ISOCURVO® VARIABLE 3.30 m radius of curvature

| TYPE - Aluzinc® 5/10 - Prepainted sheet (Kg/sq.m.) |                |     |     |     |     |  |
|----------------------------------------------------|----------------|-----|-----|-----|-----|--|
| L<br>Free span<br>(cm)                             | Thickness (mm) |     |     |     |     |  |
|                                                    | 40             | 60  | 80  | 100 | 120 |  |
| 200                                                | 220            | 240 | 260 | 265 | 270 |  |
| 250                                                | 180            | 200 | 230 | 240 | 250 |  |
| 300                                                | 160            | 180 | 200 | 200 | 215 |  |
| 350                                                | 100            | 120 | 150 | 160 | 170 |  |
| 400                                                | 70             | 90  | 120 | 140 | 150 |  |
| Uniformly distributed load Kg/sq.m.                |                |     |     |     |     |  |

| TYPE - Aluzinc® 7/10 - Prepainted sheet (Kg/sq.m.) |                |     |     |     |     |  |
|----------------------------------------------------|----------------|-----|-----|-----|-----|--|
| L<br>Free span<br>(cm)                             | Thickness (mm) |     |     |     |     |  |
|                                                    | 40             | 60  | 80  | 100 | 120 |  |
| 200                                                | 210            | 230 | 240 | 245 | 250 |  |
| 250                                                | 180            | 200 | 210 | 215 | 220 |  |
| 300                                                | 160            | 180 | 190 | 190 | 200 |  |
| 350                                                | 110            | 130 | 150 | 160 | 170 |  |
| 400                                                | 80             | 100 | 105 | 110 | 120 |  |
| Uniformly distributed load Kg/sq.m.                |                |     |     |     |     |  |

## STATIC CHARACTERISTICS ISOCURVO® VARIABLE 6.00 m radius of curvature

| TYPE - Aluzinc® 5/10 - Prepainted sheet (Kg/sq.m.) |                |     |     |     |     |  |
|----------------------------------------------------|----------------|-----|-----|-----|-----|--|
| L<br>Free span<br>(cm)                             | Thickness (mm) |     |     |     |     |  |
|                                                    | 40             | 60  | 80  | 100 | 120 |  |
| 300                                                | 140            | 160 | 190 | 190 | 200 |  |
| 350                                                | 80             | 100 | 160 | 160 | 170 |  |
| 400                                                | 65             | 85  | 120 | 130 | 140 |  |
| 450                                                | 40             | 60  | 80  | 90  | 110 |  |
| Uniformly distributed load Kg/sq.m.                |                |     |     |     |     |  |

| TYPE - Aluminium 7/10 (Kg/sq.m.)    |                |     |     |     |     |  |
|-------------------------------------|----------------|-----|-----|-----|-----|--|
| L<br>Free span<br>(cm)              | Thickness (mm) |     |     |     |     |  |
|                                     | 40             | 60  | 80  | 100 | 120 |  |
| 200                                 | 130            | 150 | 170 | 180 | 190 |  |
| 350                                 | 100            | 120 | 140 | 150 | 160 |  |
| 400                                 | 70             | 90  | 100 | 120 | 130 |  |
| 450                                 | 45             | 65  | 80  | 90  | 100 |  |
| Uniformly distributed load Kg/sq.m. |                |     |     |     |     |  |

| U<br>Transmittance | EPS Traditional |      |      |      |      |
|--------------------|-----------------|------|------|------|------|
|                    | 40              | 60   | 80   | 100  | 120  |
| W/sq.m. K          | 0.69            | 0.49 | 0.37 | 0.29 | 0.26 |
| Kcal/sq.m. h °C    | 0.59            | 0.42 | 0.31 | 0.25 | 0.22 |

| U<br>Transmittance | EPS Black |      |      |      |      |
|--------------------|-----------|------|------|------|------|
|                    | 40        | 60   | 80   | 100  | 120  |
| W/sq.m. K          | 0.63      | 0.45 | 0.34 | 0.27 | 0.23 |
| Kcal/sq.m. h °C    | 0.54      | 0.38 | 0.29 | 0.23 | 0.19 |

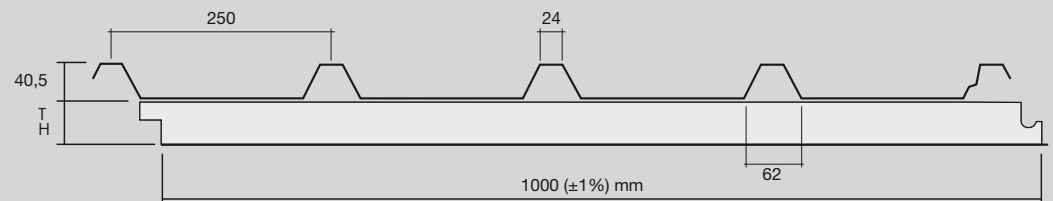
# ISOCURVO® VARIABLE MONOLAMIERA

SINTERED POLYSTYRENE EPS

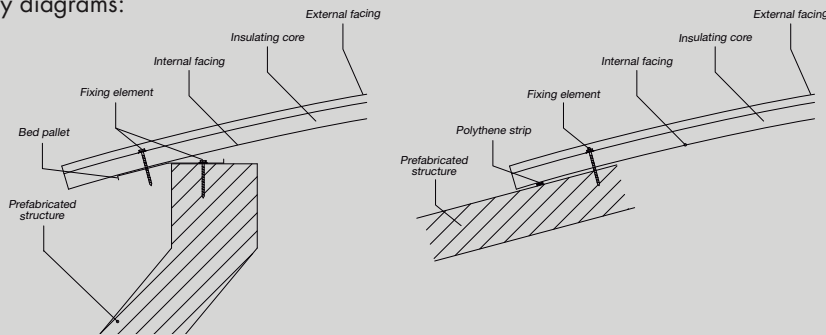


ISOCURVO® Variable Monolamiera is an extremely light and very practical insulated panel in sintered polystyrene foam (EPS): the radius is variable, starting from a minimum of 3.3 metres. ISOCURVO® Variable Monolamiera is made by coupling the inner and outer backings, in pre-painted plate, natural aluminium, pre-painted aluminium and aluzinc® in varying

thickness, to a layer of insulating EPS press-glued in between. With its wide range of materials and thicknesses, this product may be customised to suit any roof that needs no exposed inner finish. Maximum panel length: 6000 mm overlap included.



Assembly diagrams:



## STATIC CHARACTERISTICS ISOCURVO® VARIABLE 3.30 m curvature radius

| TYPE - Aluzinc® 5/10 - Prepainted sheet (Kg/sq.m.) |                      |     |     |  |
|----------------------------------------------------|----------------------|-----|-----|--|
| L<br>Free span<br>(cm)                             | Steel thickness (mm) |     |     |  |
|                                                    | 0.6                  | 0.7 | 0.8 |  |
| 150                                                | 165                  | 190 | 215 |  |
| 200                                                | 140                  | 160 | 180 |  |
| 250                                                | 120                  | 135 | 150 |  |
| Uniformly distributed load Kg/sq.m.                |                      |     |     |  |

| TYPE - Aluminium (Kg/sq.m.)         |                          |     |     |  |
|-------------------------------------|--------------------------|-----|-----|--|
| L<br>Free span<br>(cm)              | Aluminium thickness (mm) |     |     |  |
|                                     | 0.6                      | 0.7 | 0.8 |  |
| 150                                 |                          | 155 | 165 |  |
| 200                                 |                          | 130 | 140 |  |
| 250                                 |                          | 110 | 120 |  |
| Uniformly distributed load Kg/sq.m. |                          |     |     |  |

## STATIC CHARACTERISTICS ISOCURVO® VARIABLE 6.00 m curvature radius

| TYPE - Aluzinc® 5/10 - Prepainted sheet (Kg/sq.m.) |                      |     |     |  |
|----------------------------------------------------|----------------------|-----|-----|--|
| L<br>Free span<br>(cm)                             | Steel thickness (mm) |     |     |  |
|                                                    | 0.6                  | 0.7 | 0.8 |  |
| 150                                                | 155                  | 130 | 110 |  |
| 200                                                | 180                  | 150 | 125 |  |
| 250                                                | 205                  | 170 | 140 |  |
| Uniformly distributed load Kg/sq.m.                |                      |     |     |  |

| TYPE - Aluminium (Kg/sq.m.)         |                      |     |     |  |
|-------------------------------------|----------------------|-----|-----|--|
| L<br>Free span<br>(cm)              | Steel thickness (mm) |     |     |  |
|                                     | 0.6                  | 0.7 | 0.8 |  |
| 150                                 |                      | 145 | 155 |  |
| 200                                 |                      | 120 | 130 |  |
| 250                                 |                      | 100 | 110 |  |
| Uniformly distributed load Kg/sq.m. |                      |     |     |  |

| U<br>Transmittance | EPS Traditional |      |      |      |      |
|--------------------|-----------------|------|------|------|------|
|                    | 40              | 60   | 80   | 100  | 120  |
| W/sq.m. K          | 0.69            | 0.49 | 0.37 | 0.29 | 0.26 |
| Kcal/sq.m. h °C    | 0.59            | 0.42 | 0.31 | 0.25 | 0.22 |

| U<br>Transmittance | EPS Black |      |      |      |      |
|--------------------|-----------|------|------|------|------|
|                    | 40        | 60   | 80   | 100  | 120  |
| W/sq.m. K          | 0.63      | 0.45 | 0.34 | 0.27 | 0.23 |
| Kcal/sq.m. h °C    | 0.54      | 0.38 | 0.29 | 0.23 | 0.19 |



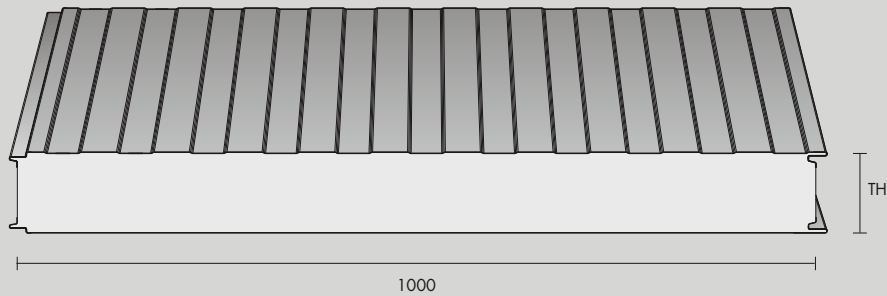
# ISOPAREPS®

POLYSTYRENE WALL PANELS

ISOPAREPS® is an extremely light wall panel which provides excellent thermal insulation as it is made of closed-cell sintered polystyrene foam EPS (chips); ISOPAREPS® is coated with two backings in pre-painted galvanised steel, or optionally in stainless steel or pre-painted natural aluminium, with a standard thickness of 0.5 mm each. The double plate is optionally available in different thicknesses.

**Panel size:**  
Workable width: 1000 mm  
Thickness: 50, 60, 80, 100, 120, 150 mm

Note: manufacturing-wise it is impossible to fill the lower lip.  
This is due to the characteristics of the type of insulation.



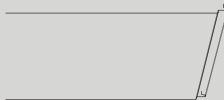
Available profiles (please state when ordering)



Scored



Staved



Smooth

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |
|---------------------------------------------------------------------|-----|-----|-----|
|                                                                     | 100 | 120 | 150 |
| 50                                                                  | 270 | 245 | 220 |
| 60                                                                  | 295 | 270 | 240 |
| 80                                                                  | 340 | 310 | 280 |
| 100                                                                 | 380 | 350 | 310 |
| 120                                                                 | 420 | 380 | 340 |
| 150                                                                 | 470 | 430 | 380 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |     |     |     |

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |
|---------------------------------------------------------------------|-----|-----|-----|
|                                                                     | 100 | 120 | 150 |
| 50                                                                  | 330 | 300 | 260 |
| 60                                                                  | 360 | 330 | 300 |
| 80                                                                  | 415 | 380 | 350 |
| 100                                                                 | 465 | 430 | 390 |
| 120                                                                 | 510 | 470 | 430 |
| 150                                                                 | 570 | 525 | 480 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |     |     |     |

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |
|---------------------------------------------------------------------|-----|-----|-----|
|                                                                     | 100 | 120 | 150 |
| 50                                                                  | 330 | 300 | 260 |
| 60                                                                  | 360 | 330 | 300 |
| 80                                                                  | 415 | 380 | 350 |
| 100                                                                 | 465 | 430 | 390 |
| 120                                                                 | 510 | 470 | 430 |
| 150                                                                 | 570 | 525 | 480 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |     |     |     |

## WEIGHT table

| SHEET METAL THICKNESS (mm) | WEIGHT (kg/sq.m.) |
|----------------------------|-------------------|
| 50                         | 9,60              |
| 60                         | 9,90              |
| 80                         | 10,40             |
| 100                        | 10,90             |
| 120                        | 11,40             |
| 150                        | 12,10             |

| U Transmittance | EPS Traditional |      |      |      |      |      |
|-----------------|-----------------|------|------|------|------|------|
|                 | 50              | 60   | 80   | 100  | 120  | 150  |
| W/sq.m. K       | 0.64            | 0.54 | 0.41 | 0.33 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.55            | 0.46 | 0.35 | 0.28 | 0.24 | 0.19 |

| U Transmittance | EPS Black |      |      |      |      |      |
|-----------------|-----------|------|------|------|------|------|
|                 | 50        | 60   | 80   | 100  | 120  | 150  |
| W/sq.m. K       | 0.62      | 0.51 | 0.38 | 0.31 | 0.26 | 0.20 |
| Kcal/sq.m. h °C | 0.53      | 0.44 | 0.32 | 0.26 | 0.22 | 0.17 |





# ISOPAREPS® ELEGANT

POLYSTYRENE WALL PANELS WITH HIDDEN FASTENERS

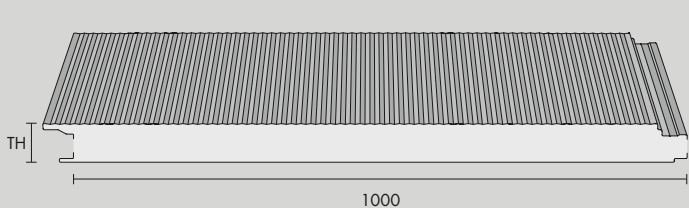
ISOPAREPS® ELEGANT is an extremely light wall panel which provides excellent thermal insulation as it is made of closed-cell sintered polystyrene foam EPS (chips); the outstanding feature of ISOPAREPS® ELEGANT is that it has hidden fasteners so the wall panels look seamlessly applied; it is coated with two backings in pre-painted galvanised steel, or, optionally, in stainless steel or pre-painted natural aluminium with a standard thickness of 0.5 mm each.

The double plate is optionally available in different thicknesses.

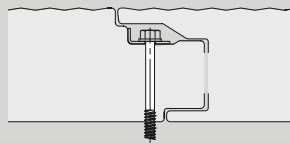
**Panel size:**  
Workable width: mm 1000  
Thickness: mm 40, 50, 60, 80, 100, 120, 150

Note: manufacturing-wise it is impossible to fill the lower lip. This is due to the characteristics of the type of insulation.

## THICKNESS 40 MM



OUTER SIDE



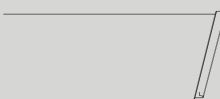
INNER SIDE

Micro-veining of the LOWER SIDE of the panel  
(to be specified when ordering)



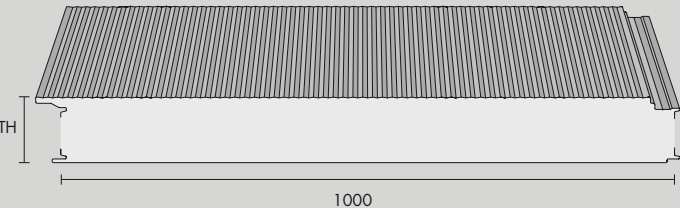
Scored

Staved

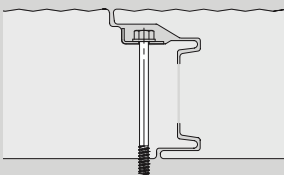


Smooth

## THICKNESS FROM 50 TO 150 MM

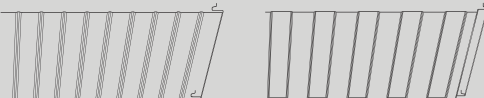


OUTER SIDE



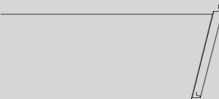
INNER SIDE

Micro-veining of the UPPER SIDE of the panel  
(to be specified when ordering)



Scored

Staved



Smooth



Diamond

## Static properties (kg/sq.m.)

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |
|---------------------------------------------------------------------|-----|-----|-----|
|                                                                     | 100 | 120 | 150 |
| 40                                                                  | 220 | 195 | 170 |
| 50                                                                  | 270 | 245 | 220 |
| 60                                                                  | 295 | 270 | 245 |
| 80                                                                  | 340 | 310 | 280 |
| 100                                                                 | 380 | 350 | 310 |
| 120                                                                 | 405 | 375 | 395 |
| 150                                                                 | 430 | 400 | 360 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |     |     |     |

**EXTERNAL facing:**  
Steel 0.5 mm  
**INTERNAL facing:**  
Steel 0.5 mm

Effective span width:  
120 mm

| SHEET METAL THICKNESS (mm)                                          | P   |     |     |
|---------------------------------------------------------------------|-----|-----|-----|
|                                                                     | 100 | 120 | 150 |
| 40                                                                  | 280 | 250 | 210 |
| 50                                                                  | 330 | 300 | 260 |
| 60                                                                  | 355 | 325 | 285 |
| 80                                                                  | 415 | 385 | 350 |
| 100                                                                 | 465 | 430 | 390 |
| 120                                                                 | 490 | 455 | 415 |
| 150                                                                 | 515 | 480 | 440 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 ℓ |     |     |     |

## WEIGHT table

| SHEET METAL THICKNESS (mm) | WEIGHT (kg/sq.m.) |
|----------------------------|-------------------|
| 40                         | 9.35              |
| 50                         | 9.60              |
| 60                         | 9.85              |
| 80                         | 10.40             |
| 100                        | 10.90             |
| 120                        | 11.40             |
| 150                        | 11.90             |

| U Transmittance | EPS Traditional |      |      |      |      |      |      |
|-----------------|-----------------|------|------|------|------|------|------|
|                 | 40              | 50   | 60   | 80   | 100  | 120  | 150  |
| W/sq.m. K       | 0.74            | 0.64 | 0.54 | 0.41 | 0.33 | 0.28 | 0.22 |
| Kcal/sq.m. h °C | 0.63            | 0.55 | 0.46 | 0.35 | 0.28 | 0.24 | 0.19 |

| U Transmittance | EPS Black |      |      |      |      |      |      |
|-----------------|-----------|------|------|------|------|------|------|
|                 | 40        | 50   | 60   | 80   | 100  | 120  | 150  |
| W/sq.m. K       | 0.72      | 0.62 | 0.51 | 0.38 | 0.31 | 0.26 | 0.20 |
| Kcal/sq.m. h °C | 0.62      | 0.53 | 0.44 | 0.32 | 0.26 | 0.22 | 0.17 |

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.

LIGHTWEIGHT, EASY TO CUT AND INSTALL  
LATTONEDIL® RIBBED STEEL PANEL

# CHAPTER 6

## RIBBED SHEETS







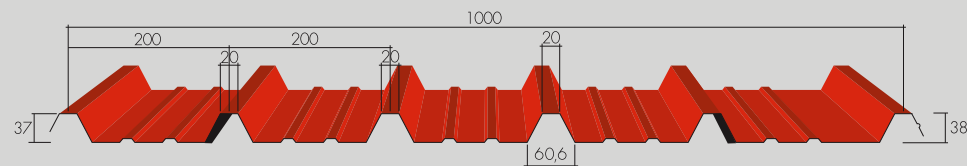
Ideal for  
pantiles  
installation.

## LAMIERA ISOCOPRE®

ROOFS, FALSE CEILINGS AND ENCLOSURES

The main features of Lattonedil's fretted sheet may be summed up as follows: light weight, easy to cut and install, resistant and durable. Galvanised steel and aluminium, both pre-painted, make for practical and easy to manage roofs, which feature an excellent price/quality ratio. With such a wide range of hues and thicknesses, these fretted slabs can fulfil any designer's

requirements. Ideal for roofs, false ceilings and enclosures, when the only requirements are water-, snow- and wind-proofing as well as hail resistance. Lamiera Lattonedil is available in the usual forms: Lamiera ISOCOPRE® has 6 frets, for excellent static resistance.



### Static properties (kg/sq.m.)

**Material:**  
Prepainted  
zinc-plated steel

| SHEET METAL THICKNESS (mm) | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
|----------------------------|------|------|-----|------|-----|------|-----|------|----|------|-----|
| 0.5                        | 519  | 338  | 235 | 173  | 133 | 98   | 72  |      |    |      |     |
| 0.6                        | 625  | 400  | 278 | 205  | 155 | 117  | 85  | 64   |    |      |     |
| 0.8                        | 835  | 533  | 371 | 272  | 208 | 156  | 113 | 85   | 66 | 51   |     |
| 1                          | 1045 | 677  | 463 | 340  | 260 | 196  | 142 | 106  | 82 | 65   | 53  |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

Effective span width:  
120 mm

**Material:**  
Prepainted  
zinc-plated steel

| SHEET METAL THICKNESS (mm) | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 |
|----------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|
| 0.5                        | 676  | 437  | 293 | 215  | 166 | 132  | 107 | 87   | 69  | 55   |     |
| 0.6                        | 781  | 500  | 347 | 255  | 195 | 154  | 125 | 102  | 82  | 65   | 49  |
| 0.8                        | 1044 | 668  | 463 | 339  | 260 | 205  | 167 | 137  | 110 | 86   | 69  |
| 1                          | 1303 | 834  | 579 | 425  | 326 | 257  | 207 | 172  | 137 | 107  | 87  |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

Effective span width:  
120 mm

**WEIGHT table**  
(Kg/sq.m.)

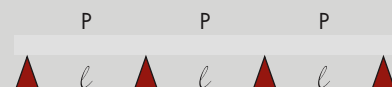
| SHEET METAL THICKNESS (mm) |      |
|----------------------------|------|
| 0.5                        | 4.22 |
| 0.6                        | 5.20 |
| 0.8                        | 7.16 |
| 1                          | 9.12 |

Also available with  
anti-condensation  
felt on the  
internal side

SINGLE SPAN



MULTIPLE SPAN

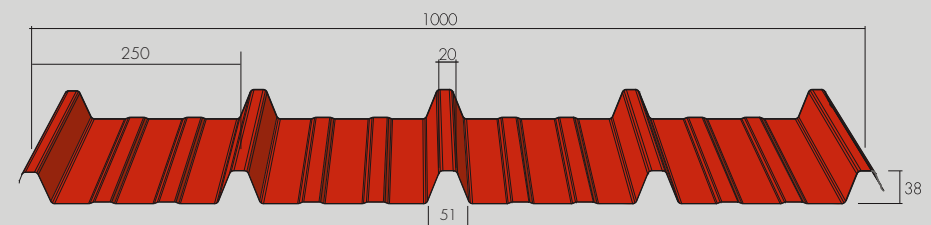


## LAMIERA EUROCINQUE®

ROOFS, FALSE CEILINGS AND ENCLOSURES

LAMIERA EUROCINQUE® is a 5-fret sheet, available in multiple colour finishes, thicknesses and materials, perfect for those roofs that need to be weather-and-impact-proofed (e.g.

hail resistant). Light and strong, it is also available in a bent version, produced by sheeting or warping. If in aluminium, it can instead be bent in situ, depending on how thick the slab is.



### Static properties (kg/sq.m.)

**Material:**  
Prepainted  
zinc-plated steel

| SHEET METAL THICKNESS (mm) | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 |
|----------------------------|-----|------|-----|------|-----|------|-----|------|----|------|-----|
| 0.5                        | 495 | 322  | 224 | 164  | 126 | 93   | 68  |      |    |      |     |
| 0.6                        | 595 | 381  | 265 | 195  | 148 | 111  | 81  | 61   | 61 |      |     |
| 0.8                        | 795 | 508  | 353 | 259  | 198 | 149  | 108 | 81   | 63 | 49   |     |
| 1                          | 995 | 645  | 441 | 324  | 248 | 187  | 135 | 101  | 78 | 62   | 50  |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

Effective span width:  
120 mm

**Material:**  
Prepainted  
zinc-plated steel

| SHEET METAL THICKNESS (mm) | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 |
|----------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|
| 0.5                        | 644  | 417  | 279 | 205  | 158 | 126  | 101 | 83   | 66  | 52   |     |
| 0.6                        | 744  | 476  | 330 | 243  | 186 | 147  | 119 | 97   | 78  | 62   | 49  |
| 0.8                        | 994  | 636  | 441 | 323  | 248 | 195  | 159 | 130  | 105 | 82   | 66  |
| 1                          | 1241 | 794  | 551 | 405  | 310 | 245  | 197 | 164  | 130 | 102  | 83  |

p = Kg/sq.m. evenly distributed  
Normal deflection limit: 1/200  $\ell$

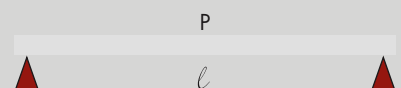
Effective span width:  
120 mm

**WEIGHT table**  
(Kg/sq.m.)

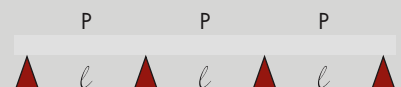
| SHEET METAL THICKNESS (mm) |      |
|----------------------------|------|
| 0.5                        | 3.92 |
| 0.6                        | 4.90 |
| 0.8                        | 6.86 |
| 1                          | 8.82 |

Also available with  
anti-condensation  
felt on the  
internal side

SINGLE SPAN



MULTIPLE SPAN



# LASTRA T20 and T20XL®

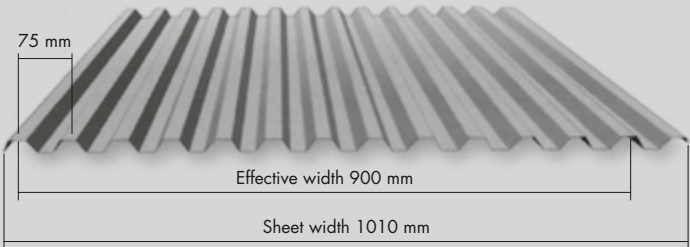
PREPAINTED STEEL, ALUZINC AND ALUMINIUM



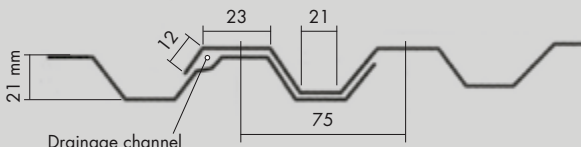
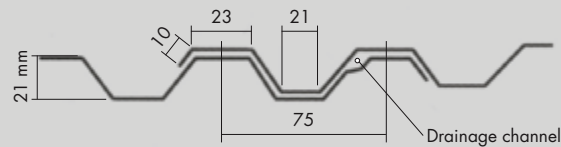
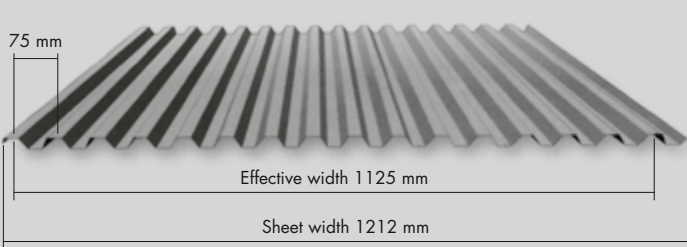
Ribbed sheet suitable for the construction of new industrial and residential roofing with a minimum slope of 7%.  
The pre-painted steel, aluzinc or aluminium sheet can be used in installation over old roofs.  
The geometry of the H20 profile allows use on buildings with short pitches, vertical covering and/or cladding, on

buildings located in places with low levels of precipitation or on roofs that require particular or frequent maintenance works.  
  
Note: The use of ribbed metal sheets is subject to the provisions of current regulations.

SLAB T20



SLAB T20XL



Overlapping rib:  
On large surfaces, the use of sheets with a greater effective width and with a constant lateral overlap of about one and a half rib allows significant financial savings in terms of overlaps and, therefore, the installation of less sheets and

fixings with significant time savings. A drainage channel on the top of the rib, near the sheet overlap, provides an additional guarantee of safety against possible water infiltrations.



LEGEND  
S = sheet thickness  
P = unit WEIGHT  
J = moment of inertia  
W = flexural strength module

## Steel and Aluzinc

| S (mm)     | P (kg/sq.m.) | J (cm <sup>4</sup> /m) | W (cm <sup>3</sup> /m) |
|------------|--------------|------------------------|------------------------|
| <b>0.6</b> | 6.30         | 4.16                   | 5.16                   |
| <b>0.7</b> | 6.80         | 4.85                   | 6.01                   |
| <b>0.8</b> | 8.50         | 5.53                   | 6.84                   |
| <b>1</b>   | 10.50        | 6.86                   | 8.52                   |

## Aluminium

| S (mm)     | P (kg/sq.m.) | J (cm <sup>4</sup> /m) | W (cm <sup>3</sup> /m) |
|------------|--------------|------------------------|------------------------|
| <b>0.6</b> | 1.98         | 4.17                   | 5.17                   |
| <b>0.7</b> | 2.31         | 4.86                   | 6.02                   |
| <b>0.8</b> | 2.64         | 5.54                   | 6.86                   |
| <b>1</b>   | 3.30         | 6.87                   | 8.54                   |

## Static properties (kg/sq.m.)



## Steel and Aluzinc

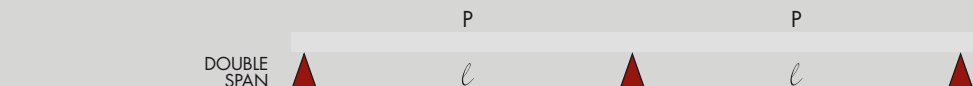
| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2  | 2.25 | 2.5 |
|---------------------------------------------------------------------|-----|------|-----|------|----|------|-----|
| <b>0.6</b>                                                          | 325 | 165  | 92  | 56   | –  | –    | –   |
| <b>0.7</b>                                                          | 365 | 193  | 108 | 65   | 42 | –    | –   |
| <b>0.8</b>                                                          | 439 | 220  | 124 | 75   | 47 | –    | –   |
| <b>1</b>                                                            | 543 | 274  | 154 | 93   | 59 | –    | –   |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |    |      |     |

Effective span width: 50 mm

## Aluminium

| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2 | 2.25 | 2.5 |
|---------------------------------------------------------------------|-----|------|-----|------|---|------|-----|
| <b>0.6</b>                                                          | 96  | –    | –   | –    | – | –    | –   |
| <b>0.7</b>                                                          | 114 | 52   | –   | –    | – | –    | –   |
| <b>0.8</b>                                                          | 133 | 61   | –   | –    | – | –    | –   |
| <b>1</b>                                                            | 169 | 79   | –   | –    | – | –    | –   |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |   |      |     |

Effective span width: 50 mm



## Steel and Aluzinc

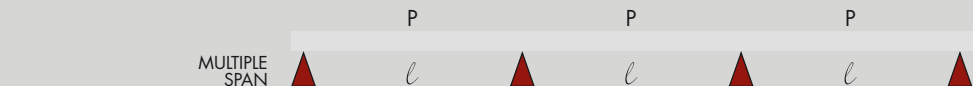
| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 |
|---------------------------------------------------------------------|-----|------|-----|------|-----|------|-----|
| <b>0.6</b>                                                          | 470 | 319  | 220 | 144  | 94  | –    | –   |
| <b>0.7</b>                                                          | 550 | 400  | 271 | 168  | 110 | –    | –   |
| <b>0.8</b>                                                          | 620 | 466  | 310 | 192  | 126 | 85   | –   |
| <b>1</b>                                                            | 774 | 593  | 385 | 239  | 158 | 106  | 75  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |     |      |     |

Effective span width: 50 mm

## Aluminium

| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2 | 2.25 | 2.5 |
|---------------------------------------------------------------------|-----|------|-----|------|---|------|-----|
| <b>0.6</b>                                                          | 248 | 121  | 65  | –    | – | –    | –   |
| <b>0.7</b>                                                          | 293 | 144  | 77  | –    | – | –    | –   |
| <b>0.8</b>                                                          | 338 | 167  | 90  | –    | – | –    | –   |
| <b>1</b>                                                            | 428 | 212  | 116 | 67   | – | –    | –   |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |   |      |     |

Effective span width: 50 mm



## Steel and Aluzinc

| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 |
|---------------------------------------------------------------------|-----|------|-----|------|-----|------|-----|
| <b>0.6</b>                                                          | 570 | 317  | 181 | 111  | 73  | –    | –   |
| <b>0.7</b>                                                          | 680 | 372  | 212 | 131  | 85  | 57   | –   |
| <b>0.8</b>                                                          | 780 | 424  | 241 | 149  | 97  | 65   | –   |
| <b>1</b>                                                            | 970 | 527  | 300 | 185  | 121 | 81   | 56  |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |     |      |     |

Effective span width: 50 mm

## Aluminium

| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2 | 2.25 | 2.5 |
|---------------------------------------------------------------------|-----|------|-----|------|---|------|-----|
| <b>0.6</b>                                                          | 193 | 93   | 48  | –    | – | –    | –   |
| <b>0.7</b>                                                          | 228 | 110  | 58  | –    | – | –    | –   |
| <b>0.8</b>                                                          | 262 | 128  | 68  | –    | – | –    | –   |
| <b>1</b>                                                            | 320 | 163  | 88  | 50   | – | –    | –   |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |   |      |     |

Effective span width: 50 mm

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



# LAstra T28 and T28XL®

PREPAINTED STEEL, ALUZINC AND ALUMINIUM

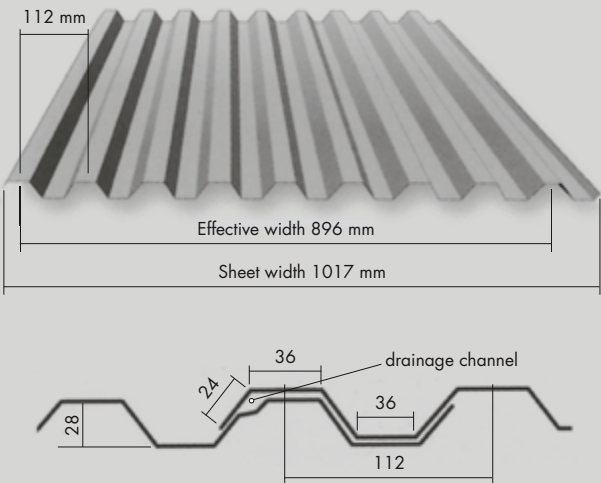


Ribbed sheet suitable for the construction of new industrial and residential roofing with a minimum slope of 7%. The pre-painted steel, aluzinc or aluminium sheet can be used in installation over old roofs. The geometry of the H28 profile allows use on buildings

with long pitches and with low slope, offering adequate ventilation.

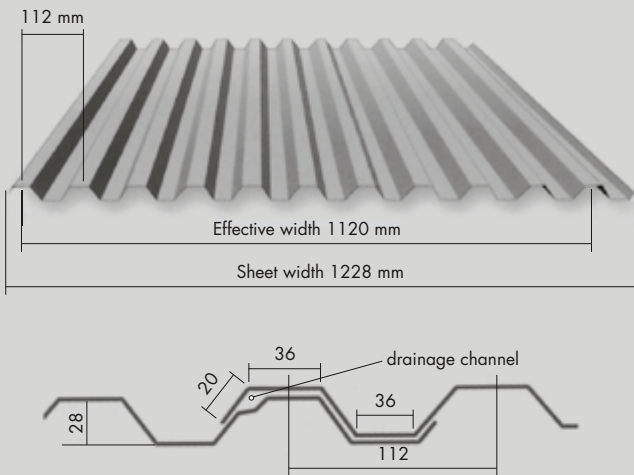
Note: The use of ribbed metal sheets is subject to the provisions of current regulations.

SLAB T28



Overlapping rib:  
On large surfaces, the use of sheets with a greater effective width and with a constant lateral overlap of about one and a half rib allows a significant financial savings in terms of overlaps and, therefore, the installation of less sheets and

SLAB T28XL



fixings with significant time savings. A drainage channel on the top of the rib, near the sheet overlap, provides an additional guarantee of safety against possible water infiltrations.



LEGEND  
S = sheet thickness  
P = unit WEIGHT  
J = moment of inertia  
W = flexural strength module

## Steel and Aluzinc

| S (mm)     | P (kg/sq.m.) | J (cm <sup>4</sup> /m) | W (cm <sup>3</sup> /m) |
|------------|--------------|------------------------|------------------------|
| <b>0.6</b> | 6.30         | 4.16                   | 5.16                   |
| <b>0.7</b> | 6.80         | 4.85                   | 6.01                   |
| <b>0.8</b> | 8.50         | 5.53                   | 6.84                   |
| <b>1</b>   | 10.50        | 6.86                   | 8.52                   |

## Aluminium

| S (mm)     | P (kg/sq.m.) | J (cm <sup>4</sup> /m) | W (cm <sup>3</sup> /m) |
|------------|--------------|------------------------|------------------------|
| <b>0.6</b> | 1.98         | 4.17                   | 5.17                   |
| <b>0.7</b> | 2.31         | 4.86                   | 6.02                   |
| <b>0.8</b> | 2.64         | 5.54                   | 6.86                   |
| <b>1</b>   | 3.30         | 6.87                   | 8.54                   |

## Static properties (kg/sq.m.)

### Steel and Aluzinc

| SHEET METAL THICKNESS (mm)                                               | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3 |
|--------------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|---|
| <b>0.6</b>                                                               | 610  | 310  | 177 | 109  | 71  | –    | –   | –    | – |
| <b>0.7</b>                                                               | 730  | 372  | 212 | 131  | 85  | –    | –   | –    | – |
| <b>0.8</b>                                                               | 860  | 435  | 248 | 153  | 101 | 68   | –   | –    | – |
| <b>1</b>                                                                 | 1100 | 562  | 322 | 199  | 130 | 88   | 61  | –    | – |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |      |     |      |     |      |     |      |   |

Effective span width: 50 mm

### Aluminium

| SHEET METAL THICKNESS (mm)                                               | 1   | 1.25 | 1.5 | 1.75 | 2 | 2.25 | 2.5 |
|--------------------------------------------------------------------------|-----|------|-----|------|---|------|-----|
| <b>0.6</b>                                                               | 201 | 97   | 51  | –    | – | –    | –   |
| <b>0.7</b>                                                               | 238 | 116  | 62  | –    | – | –    | –   |
| <b>0.8</b>                                                               | 274 | 135  | 72  | –    | – | –    | –   |
| <b>1</b>                                                                 | 345 | 173  | 94  | 54   | – | –    | –   |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |      |     |      |   |      |     |

Effective span width: 50 mm

## Steel and Aluzinc

| SHEET METAL THICKNESS (mm)                                               | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  |
|--------------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|----|
| <b>0.6</b>                                                               | 496  | 344  | 252 | 199  | 154 | 120  | 92  | 67   | –  |
| <b>0.7</b>                                                               | 620  | 429  | 315 | 250  | 191 | 149  | 109 | 80   | –  |
| <b>0.8</b>                                                               | 750  | 520  | 381 | 300  | 228 | 178  | 127 | 93   | –  |
| <b>1</b>                                                                 | 1000 | 700  | 500 | 420  | 328 | 227  | 162 | 119  | 90 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |      |     |      |     |      |     |      |    |

Effective span width: 50 mm

## Aluminium

| SHEET METAL THICKNESS (mm)                                               | 1   | 1.25 | 1.5 | 1.75 | 2  | 2.25 | 2.5 |
|--------------------------------------------------------------------------|-----|------|-----|------|----|------|-----|
| <b>0.6</b>                                                               | 315 | 211  | 140 | 84   | –  | –    | –   |
| <b>0.7</b>                                                               | 390 | 263  | 166 | 110  | 63 | –    | –   |
| <b>0.8</b>                                                               | 477 | 319  | 193 | 117  | 74 | –    | –   |
| <b>1</b>                                                                 | 650 | 430  | 245 | 149  | 96 | –    | –   |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |      |     |      |    |      |     |

Effective span width: 50 mm

## Steel and Aluzinc

| SHEET METAL THICKNESS (mm)                                               | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  |
|--------------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|----|
| <b>0.6</b>                                                               | 604  | 420  | 309 | 213  | 141 | 97   | 69  | –    | –  |
| <b>0.7</b>                                                               | 752  | 525  | 387 | 256  | 169 | 116  | 83  | –    | –  |
| <b>0.8</b>                                                               | 915  | 635  | 464 | 300  | 198 | 136  | 97  | 71   | –  |
| <b>1</b>                                                                 | 1240 | 850  | 620 | 385  | 257 | 176  | 125 | 92   | 68 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |      |      |     |      |     |      |     |      |    |

Effective span width: 50 mm

## Aluminium

| SHEET METAL THICKNESS (mm)                                               | 1   | 1.25 | 1.5 | 1.75 | 2  | 2.25 | 2.5 |
|--------------------------------------------------------------------------|-----|------|-----|------|----|------|-----|
| <b>0.6</b>                                                               | 387 | 195  | 108 | 63   | –  | –    | –   |
| <b>0.7</b>                                                               | 458 | 230  | 128 | 76   | –  | –    | –   |
| <b>0.8</b>                                                               | 528 | 266  | 149 | 89   | 55 | –    | –   |
| <b>1</b>                                                                 | 671 | 338  | 190 | 115  | 72 | –    | –   |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 $\ell$ |     |      |     |      |    |      |     |

Effective span width: 50 mm

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



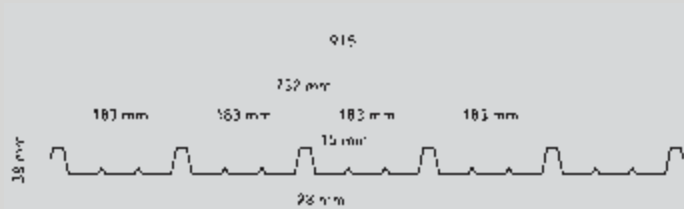
# LAMIERA COMMERCIALE

PREPAINTED STEEL AND ALUZINC

Ribbed sheet suitable for the construction of new industrial and residential roofing with a minimum slope of 7%. The pre-painted steel and aluzinc sheet can be used in installation over old roofs.

The geometry of the commercial sheet profile allows use for roofing of long pitches and with low slope, offering adequate ventilation.

Note: The use of ribbed metal sheets is subject to the provisions of current regulations.



| S (mm) | P (kg/sq.m.) | P 1000 | P 1250 |
|--------|--------------|--------|--------|
| 0.6    | 6.43         | 4.71   | 5.89   |
| 0.7    | 7.50         | 5.50   | 6.87   |
| 0.8    | 8.58         | 6.28   | 7.85   |
| 1      | 10.72        | 7.85   | 9.81   |

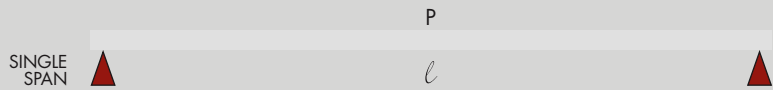
Also available with anti-condensation felt on the internal side



## Static properties (kg/sq.m.)

Steel and Aluzinc

Effective span width: 50 mm



| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 | 3.75 | 4  |
|---------------------------------------------------------------------|-----|------|-----|------|-----|------|-----|------|----|------|-----|------|----|
| 0.6                                                                 | 480 | 305  | 210 | 153  | 116 | 90   | 72  | 59   | 48 | 40   | 34  | 29   | 25 |
| 0.7                                                                 | 576 | 366  | 252 | 184  | 139 | 108  | 87  | 70   | 58 | 49   | 41  | 35   | 30 |
| 0.8                                                                 | 672 | 428  | 295 | 214  | 162 | 127  | 101 | 82   | 68 | 57   | 48  | 41   | 35 |
| 1                                                                   | 865 | 550  | 379 | 276  | 209 | 163  | 130 | 106  | 88 | 73   | 62  | 53   | 45 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |     |      |     |      |    |      |     |      |    |

## Static properties (kg/sq.m.)

Steel and Aluzinc

Effective span width: 50 mm

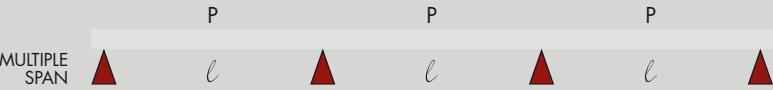


| SHEET METAL THICKNESS (mm)                                          | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 | 3.75 | 4  |
|---------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|------|----|
| 0.6                                                                 | 726  | 466  | 323 | 237  | 180 | 141  | 114 | 93   | 77  | 65   | 55  | 47   | 41 |
| 0.7                                                                 | 830  | 533  | 370 | 270  | 206 | 161  | 130 | 106  | 88  | 74   | 63  | 54   | 47 |
| 0.8                                                                 | 934  | 600  | 416 | 304  | 232 | 182  | 146 | 119  | 99  | 83   | 71  | 61   | 52 |
| 1                                                                   | 1133 | 727  | 504 | 369  | 280 | 220  | 176 | 144  | 120 | 101  | 85  | 73   | 63 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |      |      |     |      |     |      |     |      |     |      |     |      |    |

## Static properties (kg/sq.m.)

Steel and Aluzinc

Effective span width: 50 mm



| SHEET METAL THICKNESS (mm)                                          | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 | 3.75 | 4  |
|---------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|------|----|
| 0.6                                                                 | 753  | 480  | 332 | 242  | 184 | 144  | 116 | 95   | 79  | 66   | 56  | 48   | 42 |
| 0.7                                                                 | 904  | 576  | 398 | 291  | 221 | 173  | 139 | 114  | 95  | 80   | 68  | 58   | 50 |
| 0.8                                                                 | 1055 | 672  | 465 | 339  | 258 | 202  | 162 | 133  | 110 | 93   | 79  | 68   | 59 |
| 1                                                                   | 1312 | 844  | 586 | 429  | 327 | 257  | 206 | 169  | 141 | 118  | 101 | 87   | 75 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |      |      |     |      |     |      |     |      |     |      |     |      |    |





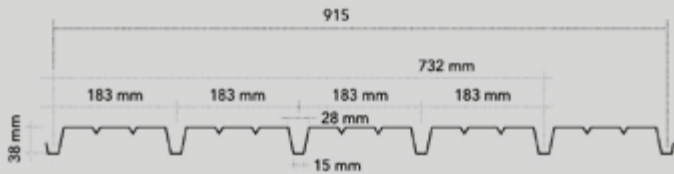
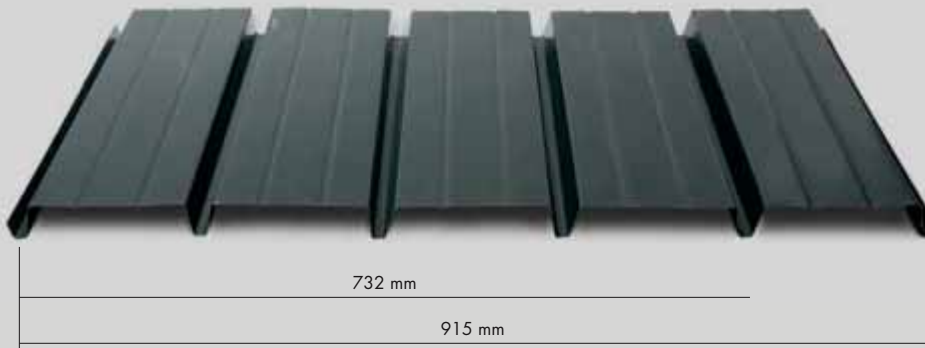
# LAMIERA COMMERCIALE DECK

PREPAINTED STEEL AND ALUZINC

Ribbed sheet suitable for the construction of new industrial and residential roofing. The pre-painted steel, aluzinc sheet can be used in installation over old roofs.

The geometry of the commercial sheet profile allows use for roofing of long pitches and with low slope, offering adequate ventilation.

Note: The use of ribbed metal sheets is subject to the provisions of current regulations.



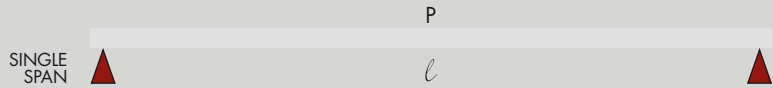
| S (mm) | P (kg/sq.m.) | P 1000 | P 1250 |
|--------|--------------|--------|--------|
| 0.6    | 6.43         | 4.71   | 5.89   |
| 0.7    | 7.50         | 5.50   | 6.87   |
| 0.8    | 8.58         | 6.28   | 7.85   |
| 1      | 10.72        | 7.85   | 9.81   |



## Static properties (kg/sq.m.)

Steel and Aluzinc

Effective span width: 50 mm



| SHEET METAL THICKNESS (mm)                                          | 1    | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 | 3.75 | 4  |
|---------------------------------------------------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|------|----|
| 0.6                                                                 | 742  | 473  | 327 | 239  | 181 | 142  | 114 | 93   | 77  | 65   | 55  | 47   | 41 |
| 0.7                                                                 | 848  | 540  | 373 | 272  | 207 | 162  | 130 | 106  | 88  | 074  | 63  | 54   | 47 |
| 0.8                                                                 | 954  | 608  | 420 | 306  | 233 | 182  | 146 | 120  | 99  | 83   | 71  | 61   | 52 |
| 1                                                                   | 1156 | 737  | 509 | 371  | 282 | 221  | 177 | 145  | 120 | 101  | 86  | 73   | 63 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |      |      |     |      |     |      |     |      |     |      |     |      |    |

## Static properties (kg/sq.m.)

Steel and Aluzinc

Effective span width: 50 mm

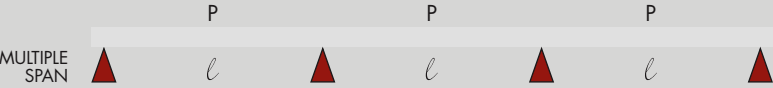


| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3  | 3.25 | 3.5 | 3.75 | 4  |
|---------------------------------------------------------------------|-----|------|-----|------|-----|------|-----|------|----|------|-----|------|----|
| 0.6                                                                 | 475 | 303  | 209 | 152  | 115 | 90   | 72  | 58   | 48 | 40   | 34  | 29   | 25 |
| 0.7                                                                 | 570 | 364  | 251 | 183  | 139 | 108  | 86  | 70   | 58 | 48   | 41  | 35   | 30 |
| 0.8                                                                 | 665 | 425  | 293 | 214  | 162 | 126  | 101 | 82   | 68 | 57   | 48  | 41   | 35 |
| 1                                                                   | 855 | 546  | 377 | 275  | 208 | 163  | 130 | 106  | 87 | 73   | 62  | 53   | 45 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |     |      |     |      |    |      |     |      |    |

## Static properties (kg/sq.m.)

Steel and Aluzinc

Effective span width: 50 mm



| SHEET METAL THICKNESS (mm)                                          | 1   | 1.25 | 1.5 | 1.75 | 2   | 2.25 | 2.5 | 2.75 | 3   | 3.25 | 3.5 | 3.75 | 4  |
|---------------------------------------------------------------------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|----|
| 0.6                                                                 | 552 | 353  | 244 | 178  | 135 | 106  | 84  | 69   | 57  | 48   | 40  | 34   | 30 |
| 0.7                                                                 | 662 | 423  | 293 | 214  | 162 | 127  | 102 | 83   | 69  | 57   | 49  | 41   | 36 |
| 0.8                                                                 | 772 | 494  | 342 | 249  | 189 | 148  | 119 | 97   | 80  | 67   | 57  | 49   | 42 |
| 1                                                                   | 992 | 635  | 439 | 321  | 244 | 191  | 153 | 125  | 103 | 87   | 73  | 63   | 54 |
| p = Kg/sq.m. evenly distributed<br>Normal deflection limit: 1/200 l |     |      |     |      |     |      |     |      |     |      |     |      |    |



## TTCOPPO® LASTRA

THE AESTHETIC ROOF

### ALSO AVAILABLE WITH ANTI-CONDENSATION FELT ON THE INTERNAL SIDE

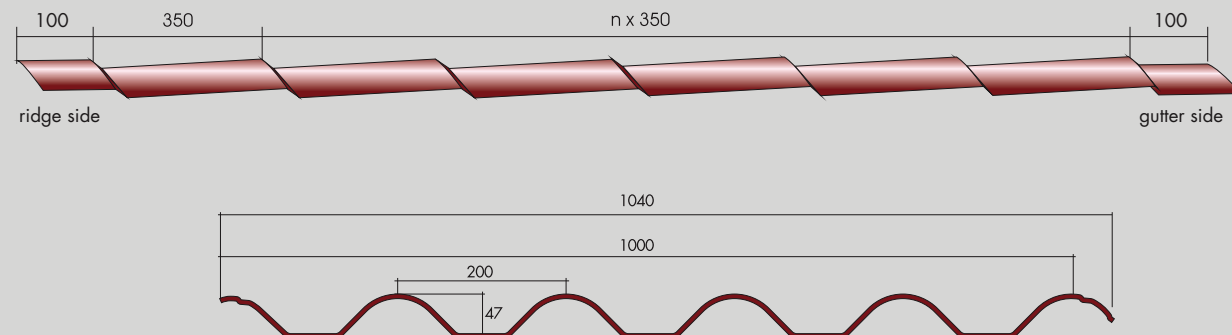
TTCOPPO® LASTRA is a rooftile-shaped sheet which may be used when appearance is all important, that is, mainly in residential buildings. When finished, they look like real terracotta tiles, of which they also imitate the finishes and colour hues. TTCOPPO® LASTRA complies with urban landscape regulations, and that's why it is used in old city centres as well. Its strengths are its lightness, waterproofing and impact resistance.

#### Technical specifications

Effective width: 1000 mm

Upper backing: pre-painted galvanised steel, aluminium and copper.

The length of the sheet depends on the module in the design of the rooftile, see drawing, with 350 mm as a constant.



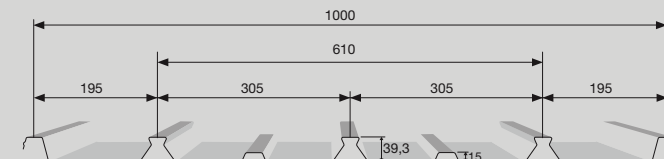
Also available with  
anti-condensation  
felt on the  
internal side

## SOLARPAN®

METAL SHEET FOR THE INSTALLATION OF PHOTOVOLTAIC MODULES

SOLARPAN® is a ribbed sheet with the particular characteristic of the SOLARPAN® PLUS panel, which houses the photovoltaic modules by means of brackets: it is no longer necessary to drill the surface (see page 40).

The SOLARPAN® sheet is also suitable for roofing where the only requirement is impermeability to water, snow, wind, as well as resistance to hail impact.



#### Static properties (kg/sq.m.)

| SHEET METAL THICKNESS (mm) | 1.5 | 1.75 | 2.0 | 2.25 | 2.5 | 2.75 | 3.0 | 3.25 | 3.5 | 3.75 | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|------|-----|------|-----|------|-----|------|-----|------|-------------------|
| 0.5                        | 135 | 95   | 70  | 50   |     |      |     |      |     |      | 5.05              |
| 0.6                        | 190 | 140  | 95  | 65   |     |      |     |      |     |      | 6.14              |
| 0.8                        | 300 | 210  | 140 | 95   | 65  |      |     |      |     |      | 8.22              |
| 1                          | 405 | 280  | 185 | 125  | 90  | 65   |     |      |     |      | 10.39             |

STEEL SHEET

| SHEET METAL THICKNESS (mm) | 1.5 | 1.75 | 2.0 | 2.25 | 2.5 | 2.75 | 3.0 | 3.25 | 3.5 | 3.75 | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|------|-----|------|-----|------|-----|------|-----|------|-------------------|
| 0.5                        | 125 | 95   | 75  | 60   | 50  |      |     |      |     |      | 5.05              |
| 0.6                        | 165 | 125  | 100 | 80   | 65  | 55   |     |      |     |      | 6.14              |
| 0.8                        | 255 | 200  | 160 | 130  | 110 | 90   | 75  | 65   | 55  |      | 8.22              |
| 1                          | 375 | 295  | 240 | 195  | 165 | 140  | 120 | 100  | 75  | 60   | 10.39             |

STEEL SHEET

| SHEET METAL THICKNESS (mm) | 1.5 | 1.75 | 2.0 | 2.25 | 2.5 | 2.75 | 3.0 | 3.25 | 3.5 | 3.75 | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|------|-----|------|-----|------|-----|------|-----|------|-------------------|
| 0.5                        | 155 | 120  | 95  | 75   | 60  | 50   |     |      |     |      | 5.05              |
| 0.6                        | 200 | 155  | 120 | 100  | 80  | 70   | 50  |      |     |      | 6.14              |
| 0.8                        | 315 | 245  | 200 | 165  | 135 | 100  | 75  | 55   |     |      | 8.22              |
| 1                          | 460 | 360  | 295 | 240  | 180 | 130  | 100 | 75   | 55  |      | 10.39             |

STEEL SHEET

| SHEET METAL THICKNESS (mm) | 1.5 | 1.75 | 2.0 | 2.25 | 2.5 | 2.75 | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|------|-----|------|-----|------|-------------------|
| 0.6                        | 90  | 55   |     |      |     |      | 2.08              |
| 0.8                        | 120 | 75   | 50  |      |     |      | 2.76              |
| 1                          | 150 | 95   | 60  |      |     |      | 3.44              |

ALUMINIUM SHEET

| SHEET METAL THICKNESS (mm) | 1.5 | 1.75 | 2.0 | 2.25 | 2.5 | 2.75 | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|------|-----|------|-----|------|-------------------|
| 0.6                        | 110 | 85   | 65  | 55   |     |      | 2.08              |
| 0.8                        | 155 | 120  | 95  | 75   | 60  |      | 2.76              |
| 1                          | 200 | 155  | 120 | 95   | 75  | 55   | 3.44              |

ALUMINIUM SHEET

| SHEET METAL THICKNESS (mm) | 1.5 | 1.75 | 2.0 | 2.25 | 2.5 | 2.75 | WEIGHT (Kg/sq.m.) |
|----------------------------|-----|------|-----|------|-----|------|-------------------|
| 0.6                        | 130 | 100  | 70  | 50   |     |      | 2.08              |
| 0.8                        | 190 | 145  | 95  | 65   |     |      | 2.76              |
| 1                          | 245 | 180  | 120 | 80   | 60  |      | 3.44              |

ALUMINIUM SHEET

OTHER METAL SUPPORTS AND DIFFERENT THICKNESSES ARE AVAILABLE UPON REQUEST.



POLYCARBONATE, TERMOLUCE OR FIBREGLASS,  
TRANSPARENT SHEETS FOR LATTONEDIL PANELS

# CHAPTER 7

## LIGHT-PASSAGE SYSTEMS



### WHY USING POLYCARBONATE?

- BECAUSE IT IS A CLEAR MATERIAL LIKE GLASS, WHICH ALLOWS OBTAINING SLITS FOR THE LIGHT, CREATING PLEASANT CHROMATIC EFFECTS THANKS TO THE COLOUR OF THE SHEETS AND KEEPING UNALTERED ENVIRONMENTAL COMFORT AND THERMAL INSULATION.
- BECAUSE IT IS A STURDY MATERIAL, 250 TIMES MORE RESISTANT THAN GLASS. IT IS RESISTANT TO UV RAYS, ATMOSPHERIC AGENTS AND ACCIDENTAL SHOCKS ALSO AFTER BEING EXPOSED TO DIRECT SOLAR LIGHT FOR A LONG TIME.
- BECAUSE IT IS A LIGHTER MATERIAL THAN GLASS. USING POLYCARBONATE IN CIVIL AND INDUSTRIAL BUILDINGS MEANS REDUCING CONSTRUCTION COSTS AND KEEPING UNALTERED THE LOAD VALUES UNDER PRESSURE AND DEPRESSION.
- BECAUSE IT IS AN INSULATING MATERIAL THAT MINIMIZES THE TRANSFER OF THERMAL ENERGY (SO CALLED THERMAL INSULATION) AND SOUND ENERGY (SO CALLED ACOUSTIC INSULATION).
- BECAUSE IT IS A SAFE MATERIAL, DISTINGUISHED BY RESILIENCE, MEANING THE ABILITY TO ABSORB ELASTIC DEFORMATION ENERGY, IN COMPLIANCE WITH SAFETY STANDARDS CONCERNING PUBLIC AND WORK ENVIRONMENTS.
- BECAUSE IT IS A MATERIAL WITH VERY LOW ENVIRONMENTAL IMPACT, VERSATILE, THAT LEADS TO REMARKABLE ENERGY SAVINGS. AT THE END OF THE CYCLE, THE SHEETS ARE 100% RECYCLABLE.

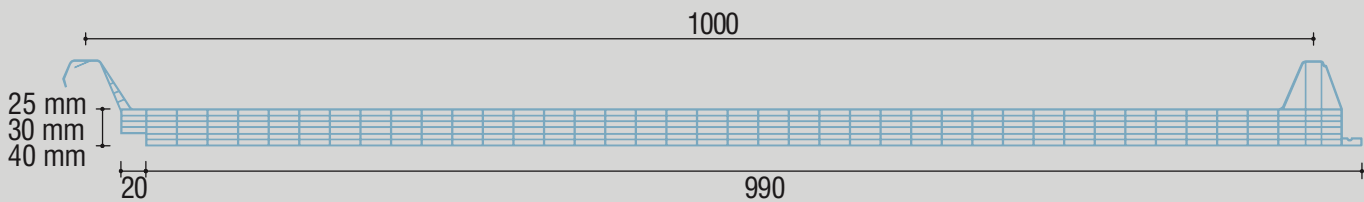


# THERMO SPECIAL®

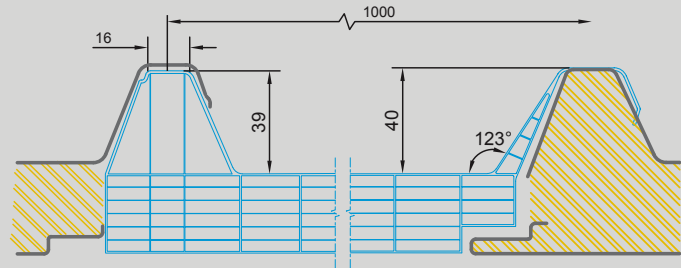
SMART POLYCARBONATE WITH HIGH INSULATION PERFORMANCE

Thermo special® is an alveolar polycarbonate that can be used on all Lattonedil cover panels. It provides great savings at installation and full reliability. Thermo Special polycarbonate by Lattonedil® is a system for

the passage of light that ensures good thermal insulation in addition to excellent translucency. It is available in 30 and 40 mm thicknesses. Ideal for full-pitch rooflights.



POLIMER 30 mm + EURO CINQUE 30 mm



| MM THICKNESS               | 30                                   | 40                         |
|----------------------------|--------------------------------------|----------------------------|
| Vertical cells pitch       | 24 mm                                |                            |
| Number of horizontal walls | 7                                    |                            |
| Panel width                | 1,000 mm                             |                            |
| Length                     | Custom                               |                            |
| Solar radiation            | Neutral 60%<br>Opaline 54%           | Neutral 59%<br>Opaline 58% |
| Light transmission         | Neutral 59%<br>Opaline 32%           | Neutral 57%<br>Opaline 30% |
| Thermal insulation         | 1.28 w/sq.m. / °K                    | 1.14 w/sq.m. / °K          |
| Acoustic insulation        | 23 dB                                |                            |
| Dilation                   | 0.065 mm / 0 °C                      |                            |
| IV protection              | External side coextrusion            |                            |
| Fire classification        | B-s1, d0 (UNE-EN 13501-1:2007)       |                            |
| Operating temperature      | -30° + 120°C                         |                            |
| 10-year warranty           | Resistant to hail, transmission loss |                            |

|                                  | Values               | Unit              |
|----------------------------------|----------------------|-------------------|
| <b>MECHANICAL PROPERTIES</b>     |                      |                   |
| Elastic limit                    | > 60                 | N/mm <sup>2</sup> |
| Tensile strength                 | > 70                 | N/mm <sup>2</sup> |
| Dilation $\epsilon_y$            | 6                    | %                 |
| Tensile dilation $\epsilon_r$    | > 100                | N/mm <sup>2</sup> |
| Traction elastic module          | 2.300                | N/mm <sup>2</sup> |
| Impact resistance +23°           | 65                   | kJ/sq.m.          |
| Impact resistance -40°           | 65                   | kJ/sq.m.          |
| $\alpha_k$ resistance at +23°    | 35                   | kJ/sq.m.          |
| <b>PHYSICAL PROPERTIES</b>       |                      |                   |
| Refraction index                 | 1.58                 | $n_0$             |
| Water absorption by immersion    | 0.36                 | %                 |
| Permeability to water vapour     | 15                   | g/sq.m.d          |
| <b>THERMAL PROPERTIES</b>        |                      |                   |
| Linear thermal dilation $\alpha$ | $6.5 \times 10^{-5}$ | 1/°C              |
| Thermal conductivity $\lambda$   | 0.21                 | W/m°C             |
| Operating temperature            | -20° + 120°          | °C                |
| Melting temperature              | 245° - 250°          | °C                |





A product manufactured in  
cooperation with Onduline

Onduline

# THERMOLIGHT®

INSULATING PANEL IN POLYCARBONATE OR POLYESTER

### It optimises light diffusion

Thermolight® allows vast diffusion of natural light inside the building, with consequent improvement of the wellness of the occupants and energy savings.

### It offers a flexible solution

Available in various thicknesses (30, 40, 50, 60, 80, 100, 120, 140 mm, and more upon request).

### It ensures greater thermal insulation

The air flows of the sandwich panels act as a natural insulator.

### It ensures durable quality

It is a unique construction with reinforcements in extruded polycarbonate. These reinforcements remain rigid and retain their performance over time, while the reinforcements made with foam do not ensure perfect sealing as they tend to give way over time.

### It allows a simple and quick installation

The reinforced of products is one of the finishing solutions that does not require the study of the purlins' layout and allows treating the panels as a unique independent component: a single installation direction, a single length, a single removal of mosses and lichens.

### EUROCOPE®



### BASIC MATERIALS

Thermolight® panels consist of sheets connected to each other through alveolar profiles in extruded polycarbonate. They are assembled at the factory with high performance glues and reinforced through riveting.

Thermolight® panels are available in two versions:

**Thermolight® PC:** system of sandwich-panels with upper layer in polycarbonate (1 mm of thickness pursuant to EN-1013), the bottom layer is in alveolar polycarbonate. The upper and lower layers are connected to each other by alveolar profiles in extruded polycarbonate.

**Thermolight® PLR:** system of sandwich-panels with upper layer in polycarbonate (1.2 or 1.6 mm thickness pursuant to EN-1013 standard), the bottom layer is in alveolar polycarbonate.

### It offers the most suitable solution to your needs

Thermolight offers a wide of solutions that allows you to find the most suitable system for your needs:

- Thermolight® PC: system of sandwich-panels with upper layer in polycarbonate (10/10 thickness pursuant to EN-1013 standard), the bottom layer is in alveolar polycarbonate.
- Thermolight PLR: system of sandwich-panels with upper layer in polycarbonate (1.2 or 1.6 mm thickness pursuant to EN-1013), the bottom layer is in alveolar polycarbonate.
- Thermolight® PCT and PLR: an even more insulating range, for improved thermal comfort (thickness starting from 100 mm and, upon request, 60 and 80 mm)
- Thermolight® PC R and PLR R: in polycarbonate, or with upper layer in polyester, featuring longitudinal reinforcements to increase rigidity and further simplify installation, in particular in restoration works. The system does not require to determine the wheelbase and also adapts to older structures, even if these are offset.

It can be secured to any ribbing height, regardless of the location of the purlin, thus making installation extremely flexible. This way, the capacity can be increased with greater resistance to loads.

### EUROCINQUE®



The upper and lower layers are connected to each other by alveolar profiles in extruded polycarbonate. Two options are available that can also be combined to each other, according to the panel thickness:

**Thermolight® PC T and PLR T:** Thermal comfort option for improved insulation.

**Thermolight® PC R and PLR R:** Reinforced option for improved resistance to loads and easier installation, in the case of new construction or restored building.

**Thermolight® PC TR and PLR TR:** a unique combination of our Thermal comfort and Reinforced options that allows combining thermal and mechanical performance with ease of installation.

### INTENDED OF USE

Thermolight® panels are used to make lighting parts of buildings insulated with metal sandwich panels (they can cover part or the entire roof or finish). They are applied to all buildings with low or medium humidity, at a maximum altitude

of 900 m, regardless of their intended use, in conditions of use set forth by the Installation Specifications. Over 900 m, local installation conditions must be kept in consideration.

### RANGE, COMPATIBILITY CHARACTERISTICS

The following tables show the range of Thermolight® panels and their characteristics, according to chosen options to ensure improved insulation.

|                                                                       | Description                                                                                                                                                                                                                                                     | Thickness*                              | Light transmission**                                                 | Colour                              | Length***                                                            | Fire performance               |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------|-------------------------------------|----------------------------------------------------------------------|--------------------------------|
| <b>Thermolight® PC</b>                                                | Panels consisting of an upper sheet in polycarbonate and a lower sheet in alveolar polycarbonate of 4 mm, connected to each other by alveolar profiles in extruded polycarbonate.                                                                               | 30, 40, 50, 60, 80, 100, 120 and 140 mm | Crystal -<br>From 30 mm to 80 mm: 75%<br>From 100 mm to 140 mm : 60% |                                     |                                                                      |                                |
| Option                                                                |                                                                                                                                                                                                                                                                 |                                         |                                                                      |                                     |                                                                      |                                |
| <b>Thermolight® PC R</b><br>Reinforced option                         | Panels consisting of an upper sheet in polycarbonate and a lower sheet in alveolar polycarbonate of 16 mm, connected to each other by alveolar profiles in extruded polycarbonate.                                                                              | 40, 50, 60, 80, 100, 120 e 140 mm       | Crystal -<br>From 40 mm to 80 mm: 40%<br>From 100 mm to 140 mm: 35%  | Upper Layer: Crystal or opaline 66% | From 1 m to 6.50 m (caisson excluded, removal of mosses and lichens) | Upper and lower layer: B-s1,d0 |
| <b>Thermolight® PC R</b><br>Reinforced option                         | Panels consisting of an upper sheet in polycarbonate and a lower sheet in alveolar polycarbonate of 4 mm, connected to each other by alveolar profiles in extruded polycarbonate with longitudinal reinforcements in polycarbonate located under each ribbing.  | 30, 40, 50, 60 and 80 mm                | Crystal - 75%                                                        | Lower layer: Crystal (colourless)   |                                                                      |                                |
| <b>Thermolight® PC TR</b><br>Comfort option<br>Thermal and Reinforced | Panels consisting of an upper sheet in polycarbonate and a lower sheet in alveolar polycarbonate of 16 mm, connected to each other by alveolar profiles in extruded polycarbonate with longitudinal reinforcements in polycarbonate located under each ribbing. | 40, 50, 60 and 80 mm                    | Crystal -<br>From 40mm to 80 mm: 40%                                 |                                     |                                                                      |                                |

|                                                                        | Description                                                                                                                                                                                                                                                 | Thickness*                              | Light transmission**                                                    | Colour                            | Length***                                                            | Fire performance             |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------|------------------------------|
| <b>Thermolight® PLR</b>                                                | Panels consisting of an upper sheet in polyester and a lower sheet in alveolar polycarbonate of 4 mm, connected to each other by alveolar profiles in extruded polycarbonate.                                                                               | 30, 40, 50, 60, 80, 100, 120 and 140 mm | Colourless -<br>From 30 mm to 80 mm: 65%<br>From 100 mm to 140 mm : 50% |                                   |                                                                      |                              |
| Option                                                                 |                                                                                                                                                                                                                                                             |                                         |                                                                         |                                   |                                                                      |                              |
| <b>Thermolight® PLR T</b><br>Thermal comfort option                    | Panels consisting of an upper sheet in polyester and a lower sheet in alveolar polycarbonate of 16 mm, connected to each other by alveolar profiles in extruded polycarbonate.                                                                              | 40, 50, 60, 80, 100, 120 and 140 mm     | Colourless -<br>From 40 mm to 80 mm: 35%<br>From 100 mm to 140 mm: 30%  | Upper layer: (colourless)         | From 1 m to 6.50 m (caisson excluded, removal of mosses and lichens) | Upper layer: E – no dripping |
| <b>Thermolight® PLR R</b><br>Reinforced option                         | Panels consisting of an upper sheet in polyester and a lower sheet in alveolar polycarbonate of 4 mm, connected to each other by alveolar profiles in extruded polycarbonate with longitudinal reinforcements in polycarbonate located under each ribbing.  | 30, 40, 50, 60 and 80 mm                | Colourless - 65%                                                        | Lower layer: crystal (colourless) |                                                                      | Lower layer: B-s1,d0         |
| <b>Thermolight® PLR TR</b><br>Comfort option<br>Thermal and Reinforced | Panels consisting of an upper sheet in polyester and a lower sheet in alveolar polycarbonate of 16 mm, connected to each other by alveolar profiles in extruded polycarbonate with longitudinal reinforcements in polycarbonate located under each ribbing. | 40, 50, 60 and 80 mm                    | Colourless -<br>From 40 mm to 80 mm: 35%                                |                                   |                                                                      |                              |

\* Additional thicknesses upon request.

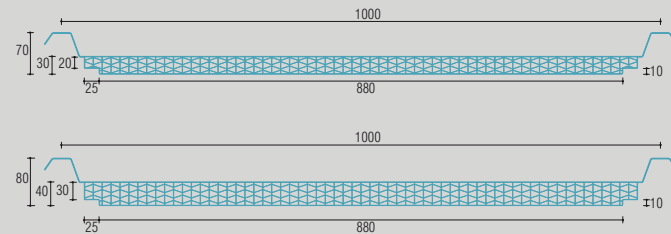
\*\* Note: Total light transmission with new product. A light variation may occur over time (fading).

\*\*\* Thermolight® panels can be assembled in order to increase the natural illumination surface: transversally, thanks to the ribbing that allows longitudinal recovery and the removal of mosses and lichens that allows transversal recovery (it is recommended to divide the requested illumination length in more Thermolight® panels with caisson length less than 6.5 m, making sure the panel joint lies on a purlin).

## THERMOCURVO® 30 e 40

ALVEOLAR POLYCARBONATE

In terms of translucency, it is possible to install alveolar polycarbonate in our ISOCURVO® 2 panels, which perfectly integrates with them, ensuring continuity with regards to bending radius and thicknesses.  
The bending radii are: 3.3 m. or 6 m.  
It is available in 2 thicknesses: 30 and 40 mm to ensure good thermal transmittance.



### THERMO 30 Technical characteristics:

- Panel thickness: 30 mm
- Panel width: ~1000 ± 5 mm (sheet width)
- Number of alveolar walls: 6
- Panel length on demand: Max. 13500 mm
- Standard lateral ribs dimensions: 25-25
- Lateral ribs dimensions on demand: depending on the application
- Colour: Neutral transparent - Opaline
- Weight: ~3,4 Kg/sq.m.
- U.V. protection: co-extruding external side
- Close ends: Taped
- Reaction to fire EN 13501-1: B S2 D0 (Italy-Class 1)
- Light transmission: Neutral ~59% - Opaline ~30%
- Thermal transmittance (U): 1.32 W/sq.m. K
- Thermal expansion: 0.065 mm/sq.m. K
- Temperature limits of use: -40 / +120 °C

### THERMO 40 Technical characteristics:

- Panel thickness: 40 mm
- Panel width: ~1000 ± 5 mm (sheet width)
- Number of alveolar walls: 6
- Panel length on demand: Max. 13500 mm
- Standard lateral ribs dimensions: 25-25
- Lateral ribs dimensions on demand: depending on the application
- Colour: Neutral transparent - Opaline
- Weight: ~3.7 Kg/sq.m.
- U.V. protection: co-extruding external side
- Close ends: Taped
- Reaction to fire EN 13501-1: B S2 D0 (Italy-Class 1)
- Light transmission: Neutral ~54% - Opaline ~20%
- Thermal transmittance (U): 1.15 W/sq.m. K
- Thermal expansion: 0.065 mm/sq.m. K
- Temperature limits of use: -40 / +120 °C



Curved sheet R~3300/6000



## THERMO G5 / G6 / G9

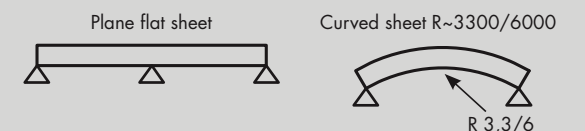
ALVEOLAR POLYCARBONATE IDEAL TO MAKE HALF-PITCHED ROOF LIGHTS

### Technical characteristics:

- Thickness: 2,5 mm
- Width: 1,000 ± 5 mm.
- Length: Customisable
- Colours: Neutral with satined or opaline finishing
- Side closing profiles: Heat-welded
- External protection: Anti UV on the external face. Anti UV possible on both sides (on demand)

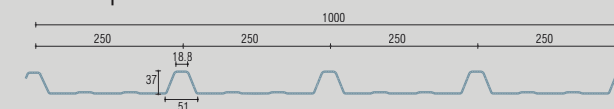
- Reaction to fire: Class 1 self-extinguishing
- Thermal transmittance: U=4,71 W/sq.m. K
- Light transmission: Neutral colour 84% ± 2  
Opaline colour 76% ± 2

### - Application notes:



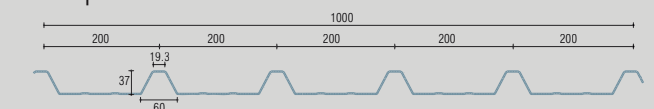
### Thermo G5

Eurocinque®



### Thermo G6

Isocopre®



### Thermo G9

G9®



TRANSVERSAL ROOFLIGHT



ROOF SLOPE GUTTER ROOFLIGHT





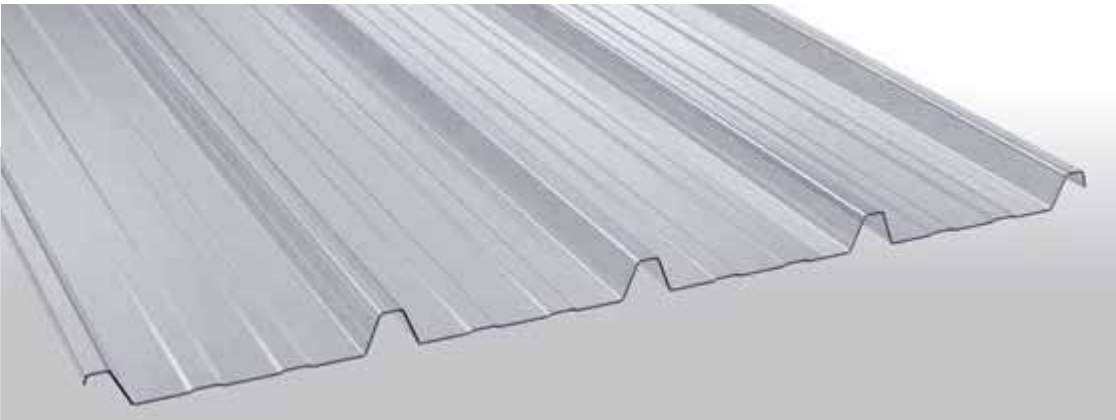
# POLICARBONATO COMPATTO

THE LUMINOUS ROOF IN POLYCARBONATE WITH 1 MM THICKNESS

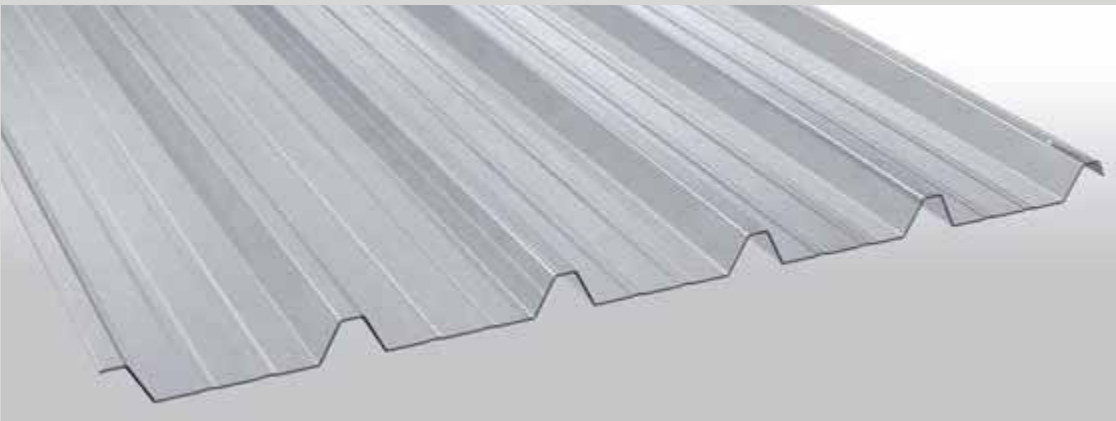
The sheets in POLYCARBONATE COMPACT allow the creation of fixed rooflights able to solve multiple installation problems, and they guarantee a light transmission similar to the glass (92%). Lattonedil® sheets in polycarbonate are of a neutral colour and protected against UV rays; this treatment eliminates the

negative action of atmospheric agents. Ideal to make half-pitched rooflights combined with ISOCOPRE®, EUROCINQUE® panels and G9. On demand, profiled polycarbonate for ISOCOPRE®, thickness 2 mm, pitch 800 mm.

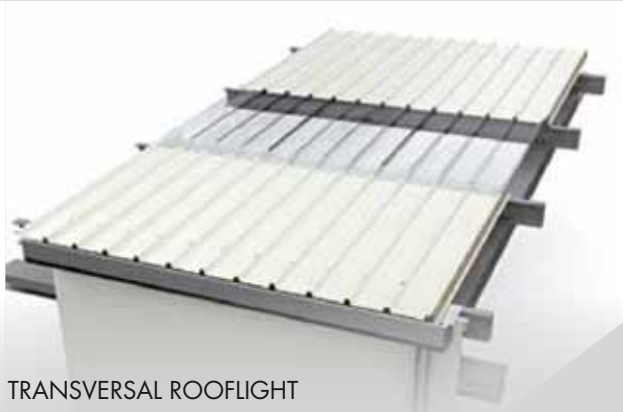
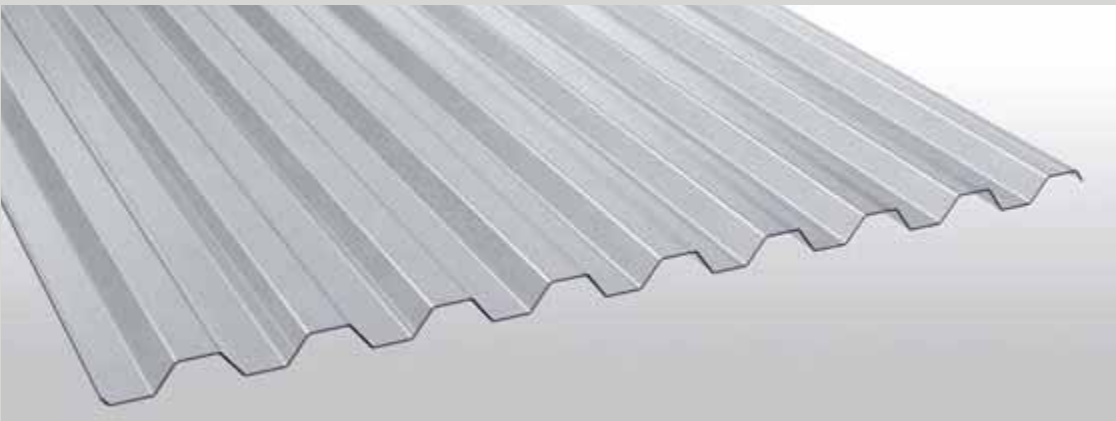
Polycarbonate  
EUROCINQUE®



Polycarbonate  
ISOCOPRE®



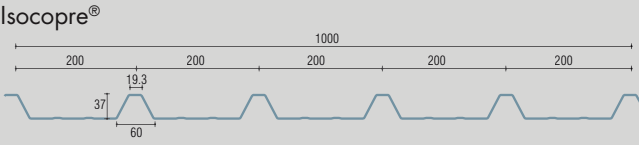
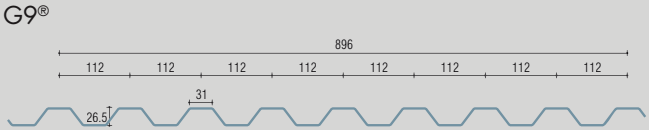
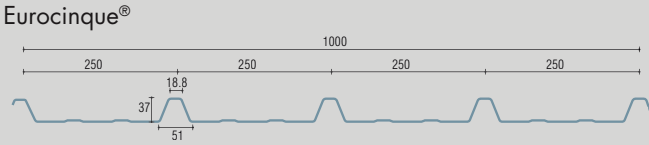
Polycarbonate  
G9®



TRANSVERSAL ROOFLIGHT



ROOF SLOPE GUTTER ROOFLIGHT





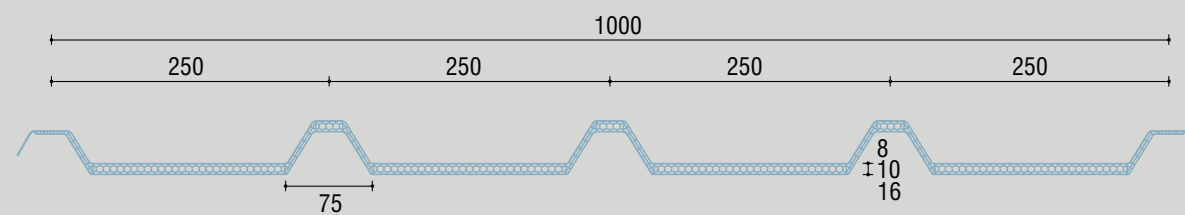
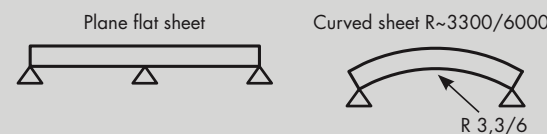
## THERMO G5 8 / 10 / 16

LUMINOUS ROOF

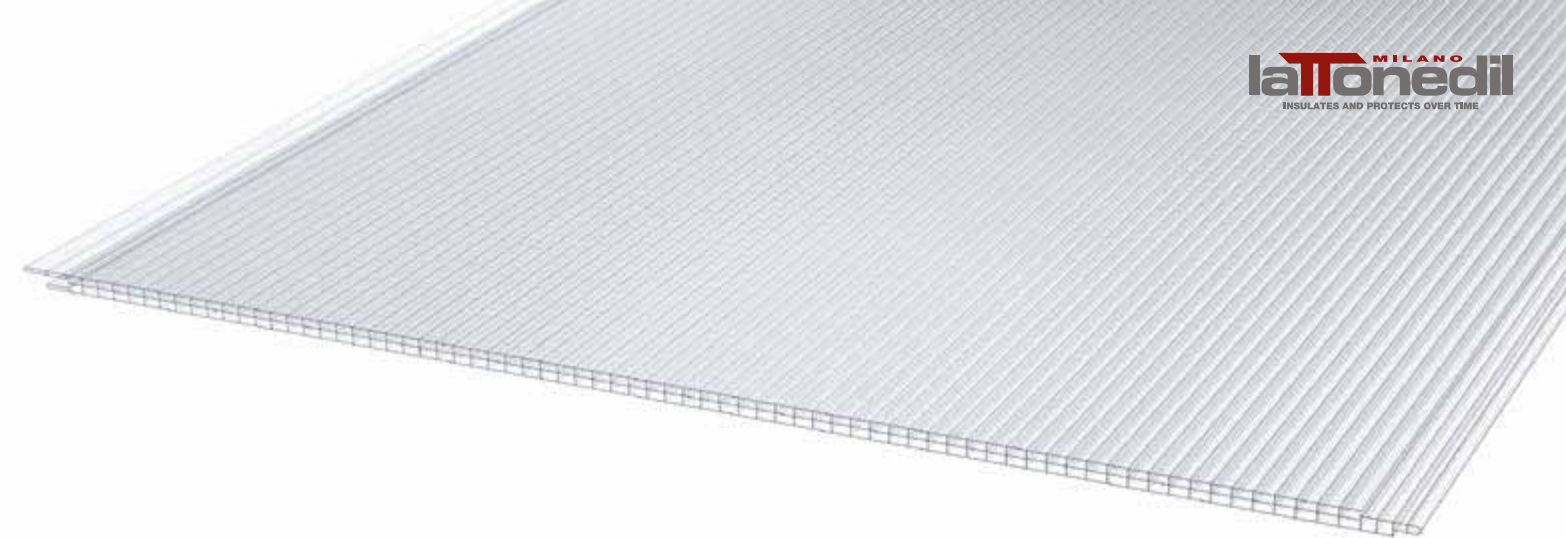
### Technical characteristics:

- Thickness: 8/10/16 mm (honeycomb)
- Width: 1,000 ± 5 mm.
- Length: Custom lengths
- Colours: Neutral with satin finish and opaline
- Side closing profiles: Thermo-welded

- External protection: Anti UV on the external face
- Reaction to fire: Class 1 self-extinguishing
- Thermal transmittance:  $U=2.50 \text{ W/sq.m. K}$
- Light transmission: Neutral colour 65% ± 2  
Opaline colour 40% ± 2
- Application notes:



ROOF SLOPE GUTTER ROOFLIGHT



## VELARIO

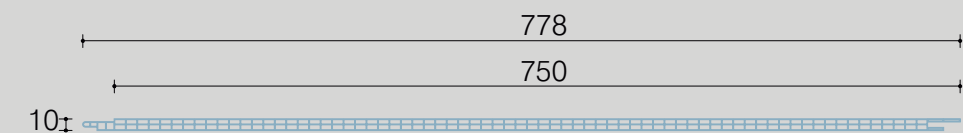
MALE-FEMALE GROOVED SYSTEM IN ALVEOLAR POLYCARBONATE FOR FALSE CEILINGS

VELARIO is suitable for the construction of false ceilings, canopies, internal partitions and all those solutions not exposed to direct sun light. Practicality and cost-efficiency make it a winning solution when seeking:

- extreme lightness
- high resistance to shocks
- high light transmittance
- good thermal insulation

The particular grooved joining system facilitates installation and allows building a solution with constant thickness of 10 mm without external joints.

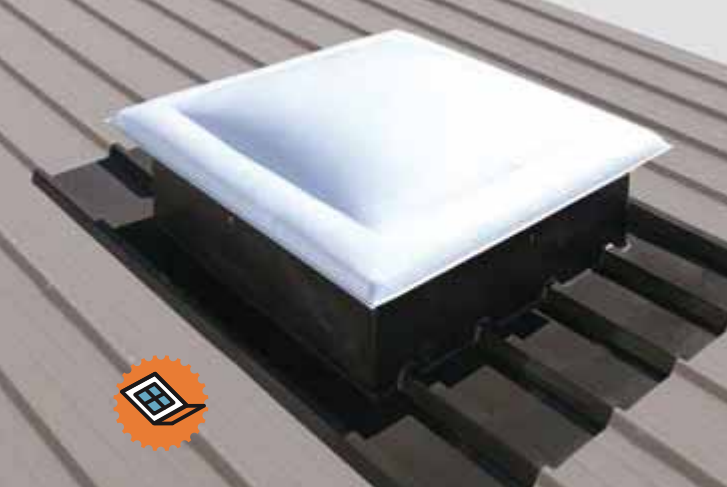
The matte finish allows a more even light diffusion, hiding at the same time any dust deposits on the surface.



Max distance between tops: 1600mm

|                               |                          |
|-------------------------------|--------------------------|
| Thickness                     | 10 mm                    |
| Width                         | 750 mm                   |
| Length                        | Custom                   |
| Colour                        | Crystal / Opal           |
| Light transmittance           | Crystal 78% / Opal 60%   |
| Thermal transmittance         | 3.1 W/sq.m. K            |
| Linear dilation               | 0.065 mm/m °C            |
| Fire certification EN 13501-1 | B-s1,d0                  |
| Operating temperature         | min -30 °C / max +120 °C |





Smoke exhaust vents for Eurocinque®



Safety lock

Opening for micro ventilation



# ROOFLIGHTS AND SMOKE EXHAUST VENTS

FOR ALL LATTONEDIL PANELS

## Prefabricated bases

The rooflights can be applied on prefabricated bases manufactured by our company which offer high resistance against impacts, they do not expand and they are particularly suitable to ensure perfect watertightness to roofs in proximity of rooflights. The bases made of glass-reinforced-plastic have a flared shape to allow a better light transmission and their interior is smooth and white.

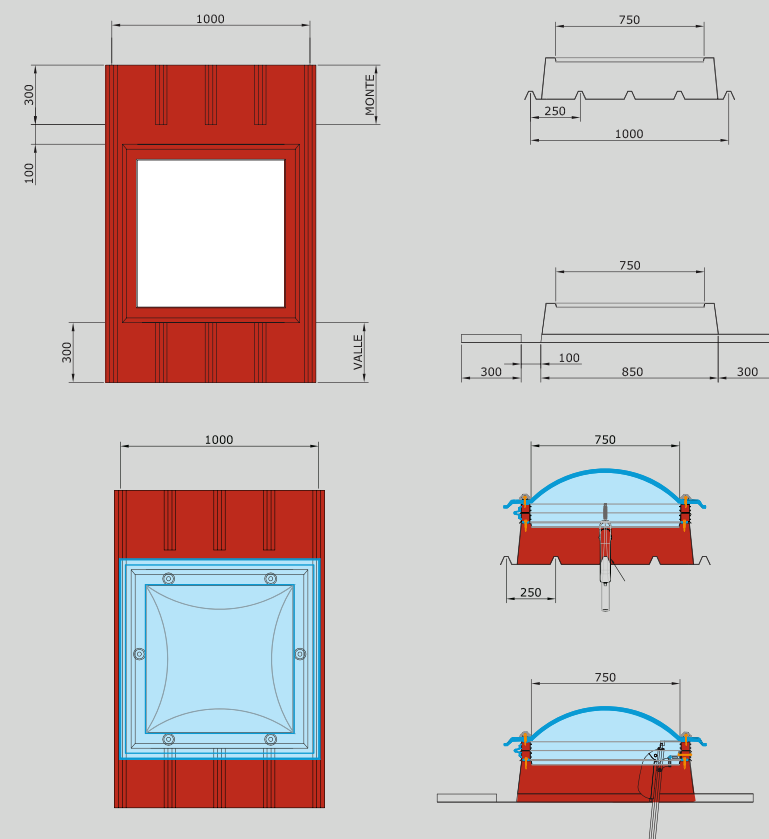
The metal bases can be made of galvanised sheet 12/10 or of anticorodal aluminium. All bases are generally insulated with a layer of self-extinguishing expanded polyurethane of 20 mm thickness and they are externally covered with a layer of glass-

reinforced plastic with a coarse finish for a better grip of the watertight cover.

The bases are generally 20/30 cm high, but they can be manufactured at different heights, according to design needs. The installation of both types is easy and quick since it is sufficient to fix the internal supported edge to the roof with the screws and plugs supplied.

For the roof of large sizes buildings, self-supporting monolithic bases can be produced by joining various single bases. For more information on the availability of sizes and types, please contact our offices.

Examples of rooflights - smoke exhaust vents for Eurocinque®



TTCOPPO® FINESTRA is a real rooflight, with a core made of wood, coated with steel or prepainted aluminium and is available in the same finishing of the TTCOPPO®. The special surface finish makes the window very resistant to wear, cancelling all the internal maintenance and withstanding high levels of humidity. It has insulating glazing at low emissivity, which offers internal protection, energy saving and noise reduction. the opening is manual or, on demand, electric. The internal size of the window compartment is 590x810 mm, while the support of anchor to the panel is 1.650x1.000 mm. On request you can also have electric opening.

# CHAPTER 8

## LATTONEDIL® SPECIAL PANEL





# **GIANO®**

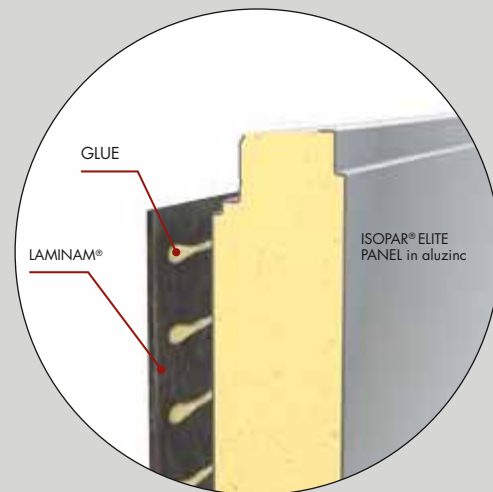
THE NEW LOOK FOR INSULATED FACADES

Lattonedil® created Giano®, the innovative panel to finish facades, combining a standard sandwich panel with porcelain gres. Giano® is produced in the standard size of 3000 x 1000 mm. The sheet in porcelain gres is glued on Lattonedil® sandwich panel thanks to a special glue.

In Lattonedil® plant, the sheets in porcelain gres undergo surface works requested by the customer and are cut accordingly. Giano® was born to finish and insulate any type of building facade. The expansion stone anchoring technology ensures perfect adhesion to the structure's clamping devices. With this solution, it is possible to build facades leaving also some gaps to expose the sandwich panel in porcelain gres below, creating pleasant architectural effects.

## **Benefits:**

- High quality construction;
- Excellent mechanical resistance compared to traditional solutions that have to use greater thicknesses;
- Lightweight, Good Insulation, Integrated and definitive solution;
- Can also be used for internal wall coverings;
- Fast and easy to install;
- Maintenance free.



Giano® consists of an insulating panel with surface in aluzinc, available with:

- POLYURETHANE INSULATION;
- POLYISOCYANURATE INSULATION;
- GLASS WOOL INSULATION;
- MINERAL FIBRE INSULATION.

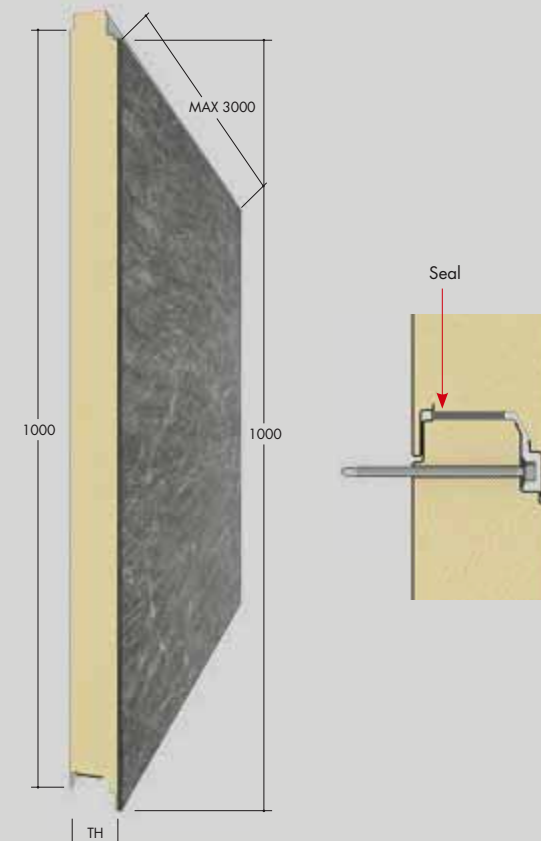
The insulating panel is joined by glue to a sheet in porcelain gres that can be chosen in various finishes.

FINISHES  
**LAMINAM®**

The complete range of finishes and colours can be found on [www.laminam.it](http://www.laminam.it)

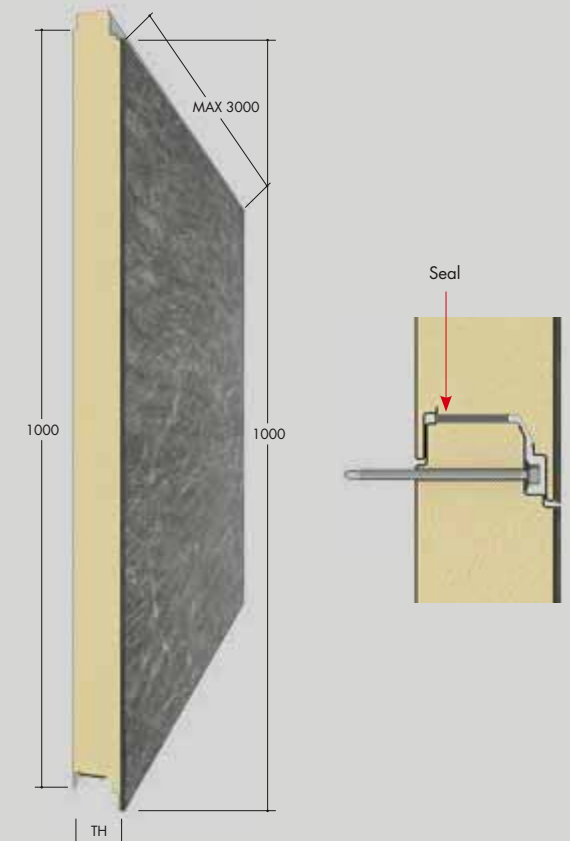
## **Giano® with Polyurethane insulation**

THICKNESS from 43 to 203 mm



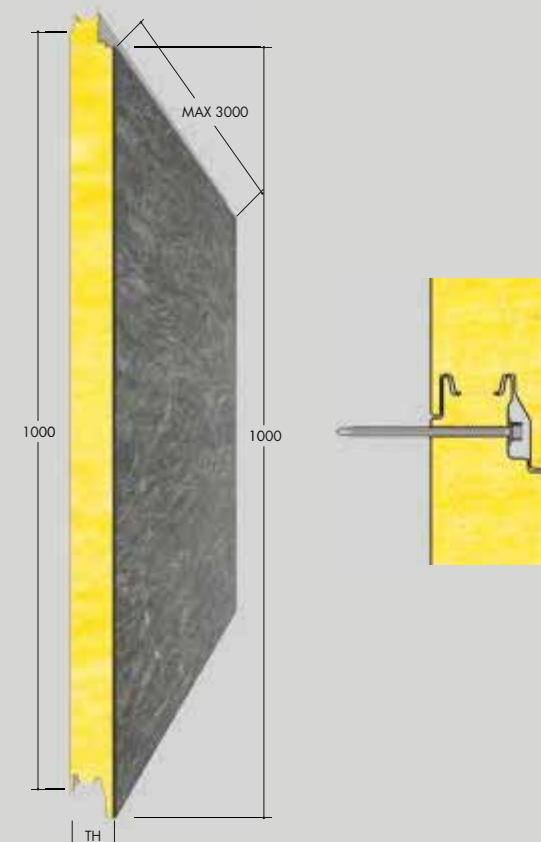
## **Giano® with Polyisocyanurate insulation**

THICKNESS from 43 to 203 mm



## **Giano® with glass wool insulation**

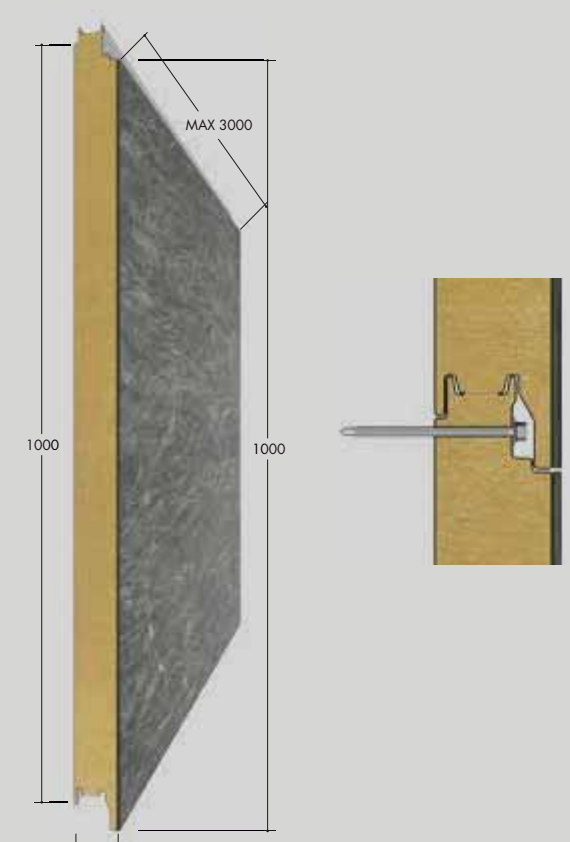
THICKNESS from 53 to 153 mm



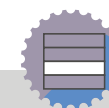
Hexagonal head screw with 8 mm nut.

## **Giano® with mineral fibre insulation**

THICKNESS from 53 to 203 mm



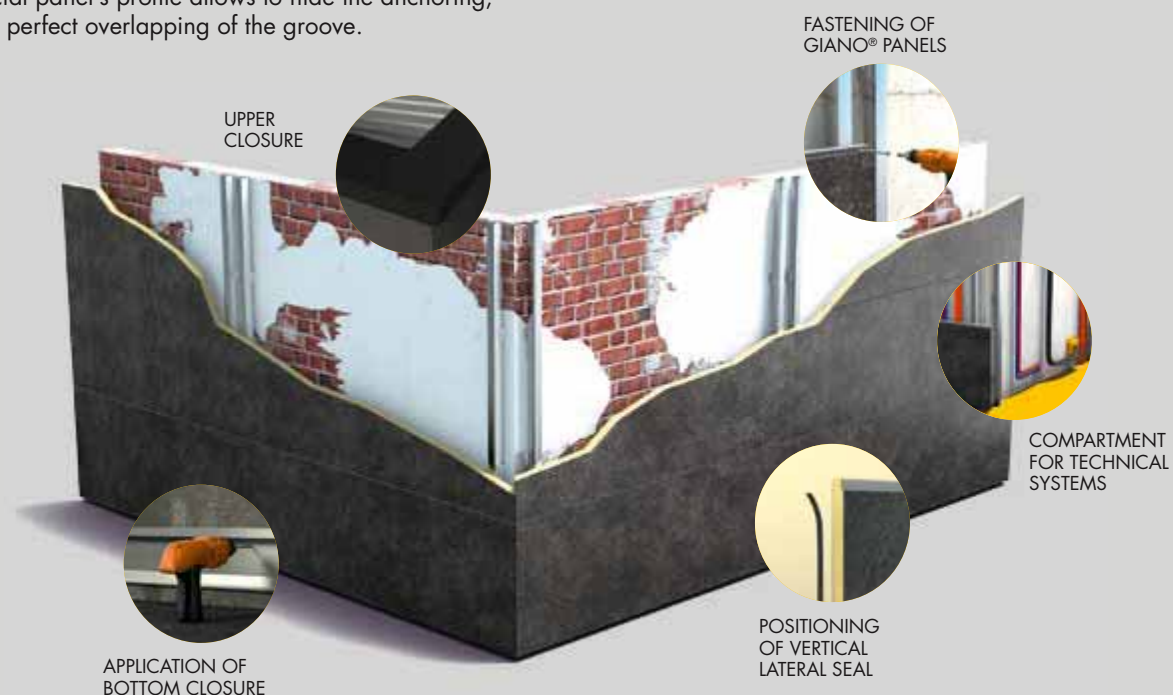
Hexagonal head screw with 8 mm nut.



### Giano® finish on new or existing wall

Giano® is the durable solution, easy and quick to install with great aesthetic value for the creation of finishes on wall surfaces or in pre-fabricated panels or to restore existing buildings. The system calls for the installation of a metal structure anchored to the wall, on which to apply Giano®. The special panel's profile allows to hide the anchoring, ensuring perfect overlapping of the groove.

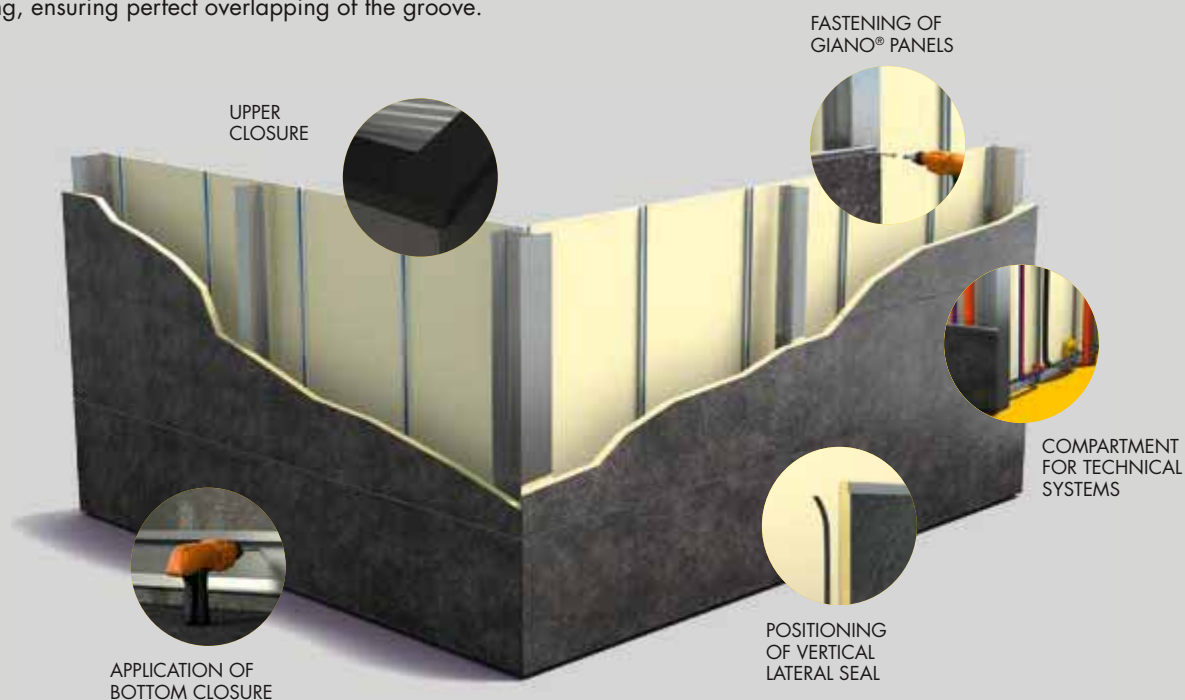
Fastening takes place at the top, with the same system. Only a small gap remains between a panel and the other. The same system is applied also laterally, a vertical seal ensures perfect thermal continuity and adherence between a panel and the other.



### Giano® curtain walling on structure on steel structures

Giano® is the durable solution, easy and quick to install with great aesthetic value for the execution of finishes on steel structures. Giano® is applied directly to the building's metal structure. The special panel's profile allows hiding the anchoring, ensuring perfect overlapping of the groove.

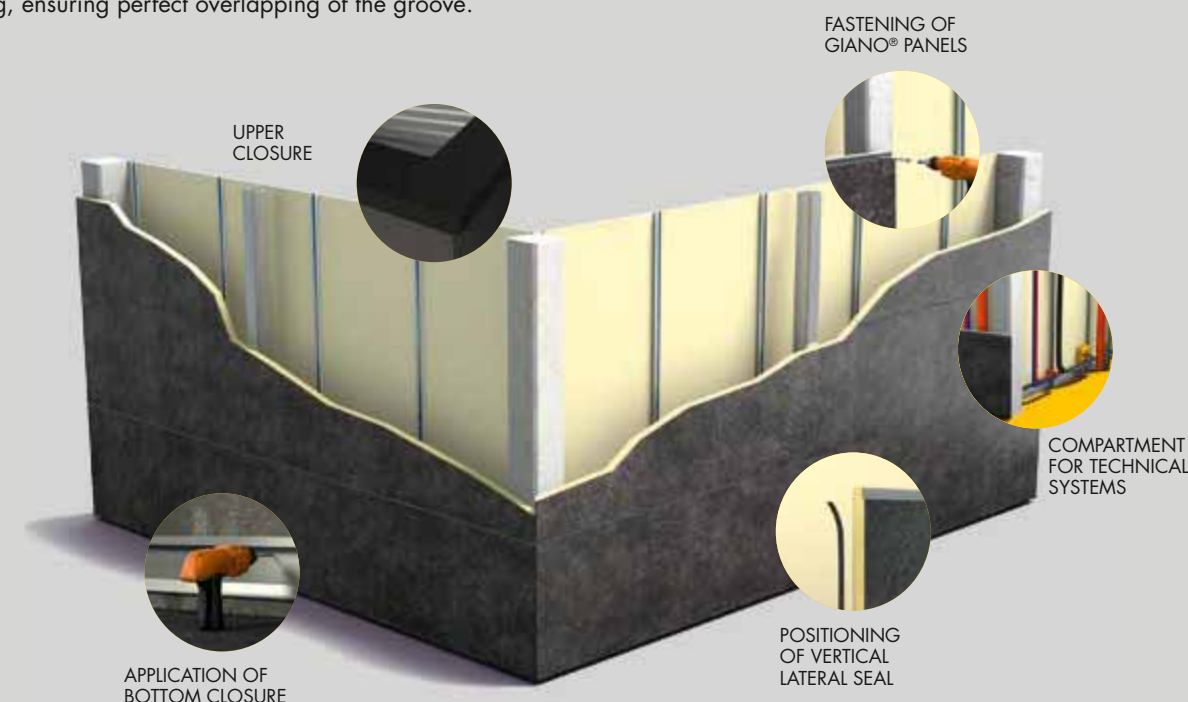
The gap between structure and panel rear can be used as technical compartment to duct installation networks. This solution finds its natural intended use in new buildings.



### Giano® curtain walling on reinforced concrete structures

Giano® is the durable solution, easy and quick to install with great aesthetic value for the execution of finishes on reinforced concrete structures. Giano® is applied directly to the building's structure. The special panel's profile allows hiding the anchoring, ensuring perfect overlapping of the groove.

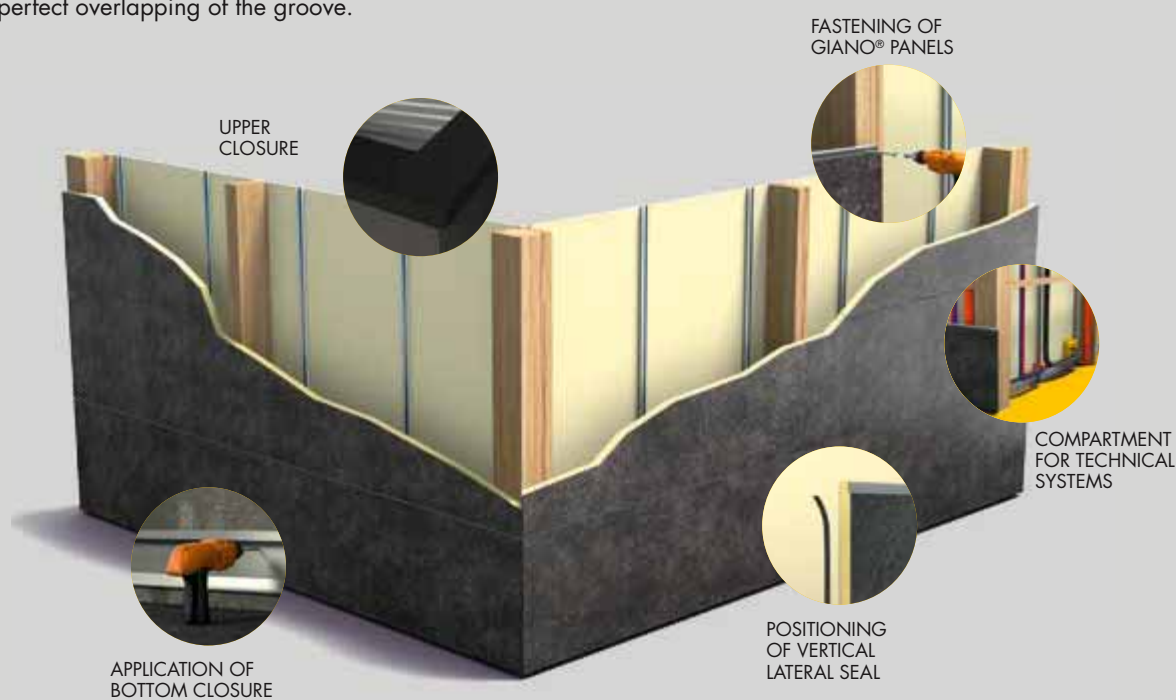
The gap between structure and panel rear can be used as technical compartment to duct installation networks. This solution finds its natural intended use in new buildings.



### Giano® curtain walling on wood structure

Giano® is the durable solution, easy and quick to install with great aesthetic value for the execution of finishes on wood structures. Giano® is applied directly to the building's structure. The special panel's profile allows hiding the anchoring, ensuring perfect overlapping of the groove.

The gap between structure and panel rear can be used as technical compartment to duct installation networks. This solution finds its natural intended use in new buildings.





# **GIANO® AIR**

THE NEW LOOK FOR INSULATED AND VENTILATED FACADES

## **Giano® Air**

Giano® Air system is the ideal and effective solution to build a ventilated facade.

Giano® Air system consists of Solarpan® Plus insulated metal panel by Lattonedil, which ensures support of the external finish and thermal insulation.

Thanks to the particular shape of the "tail-grooving" frets allows using special of special brackets on which the horizontal metal structure is secured.

This structure constitutes a spaced base that creates a gap of over 90 mm on which the finish in Giano® panels is installed. This system guarantees suitable and constant ventilation, ensuring air flow. With Giano® Air, you can build your ventilated facade which ensures excellent insulation against sun rays during the summer. Giano® Air panel allows building roofs ensuring perfect continuity with the vertical wall.

FASTENING OF  
GIANO® PANELS

UPPER  
CLOSURE

COMPARTMENT  
FOR TECHNICAL  
SYSTEMS

POSITIONING  
OF VERTICAL  
LATERAL SEAL

APPLICATION OF  
BOTTOM CLOSURE

## **Thermal-fluido dynamic system**

During the summer, if well sized from an energy point of view, the ventilated facade creates an air flow between the external sheet and insulating panel which allows the warm air formed in the ventilation chamber to be ejected from the building roof.

This dynamic air "cushion" reduces thermal input from outside. Moreover, it performs a sun screening function, absorbing and reflecting a great amount of incident solar energy, significantly reducing the energy fraction transmitted to the building.

During the winter instead, the insulation acts as further barrier to the dispersion of the building's endogenous thermal loads, given by the heating system and all other thermal sources such as computer, machinery, persons, improving the living comfort and reducing total energy consumptions. The ventilated facade also performs a significant role in reducing internal and external sound emissions, improving the living comfort inside the building, significantly.

THERMAL FLOW INSIDE THE BUILDING

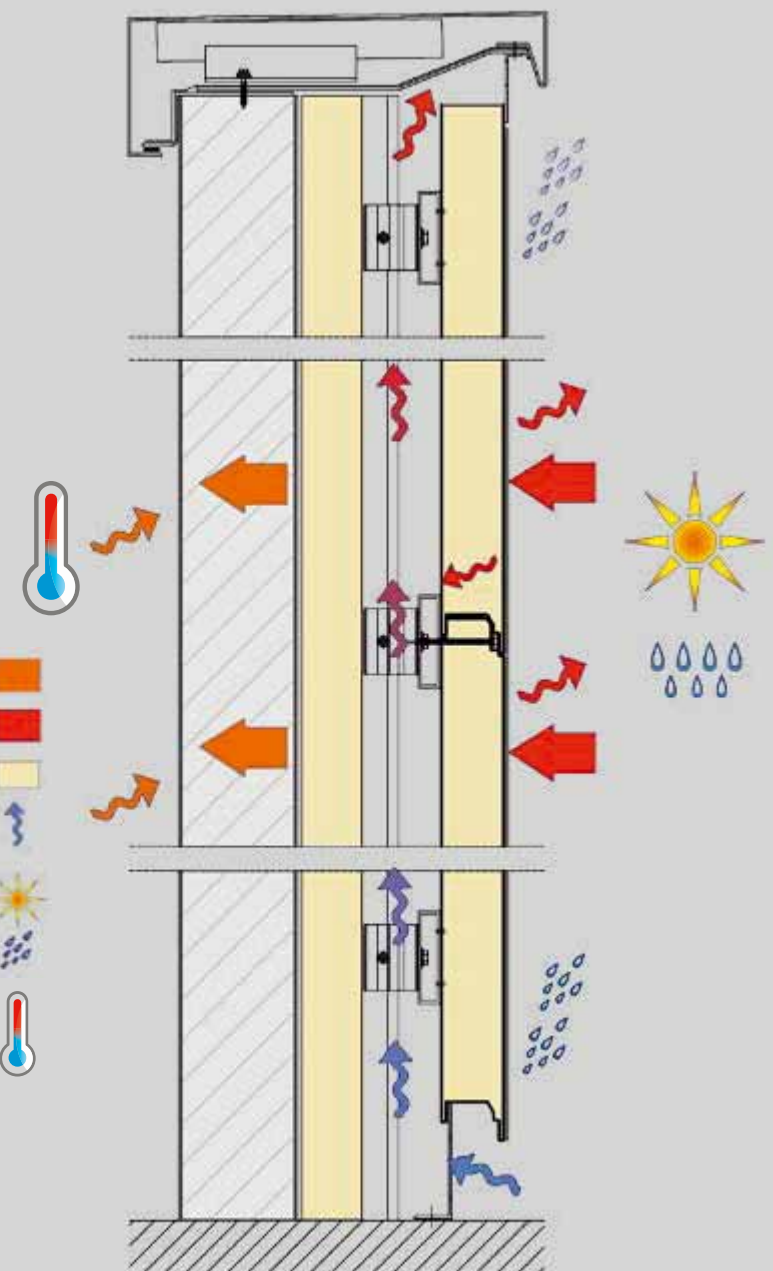
SOLAR RADIATION

INSULATING PANELS

STACK EFFECT

BAD WEATHER

INTERNAL AIR CONDITIONING



FINISHES

**LAMINAM®**

The complete range of finishes and colours can be found on [www.laminam.it](http://www.laminam.it)





# ISOPARSTONE®

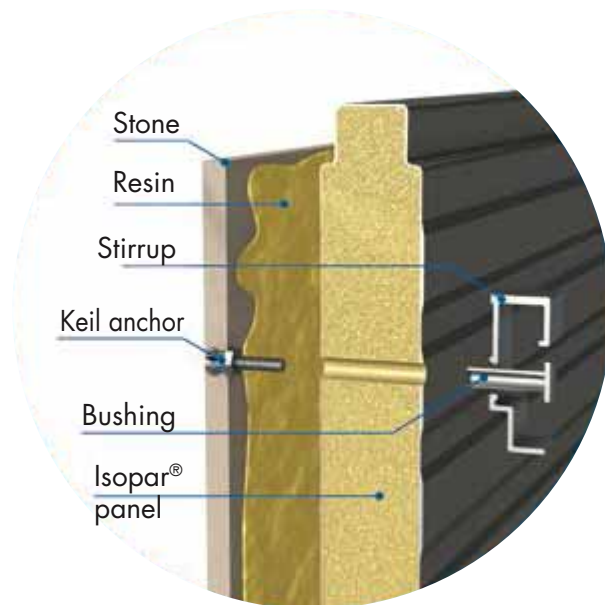
THE CREATION OF A PANEL COVERED IN NATURAL STONE

All stones are usable, reduced to the thickness of 8 to 10 mm and fixed to the insulating panels that may have a thickness from 25 to 200 mm according to insulation and structure requirements. The panels manufactured in our plant may have the following dimensions for a maximum width of 1 m for a length of 3 m. The stone, in addition to being pasted to the panel will be firmly welded by a mechanic nail that,

inserted in the stone, makes it solidly anchored to the panel and to the wall anchor plate. The Lattonedil® plant is able to offer to the most demanding customers the best solution to achieve their final result. We are able to offer to the buyer the technical study of the project for the construction of any kind of façade application, then help the customer with the choice of materials, up to the installation of the product.







# ISOPARSTONE®

THE CREATION OF A PANEL COVERED IN NATURAL STONE

The technology allows obtaining 8 to 10 mm thin slabs from the stone block that can be reduced to 10 mm, which are then processed with special epoxy resins and glass wool fabric. This process makes the stone resistant to breakage. The stone thickness is determined by the type of the used stone, by the type of application and by the fact that an anchor nail is inserted.

In the Lattonedil plant, the stone is superficially manufactured as required by the client and cut to size as specified. The maximum feasible dimensions of the sheets are 3 x 1 with calibrated thickness of 8 to 10 mm. This panel was created to dress and isolate any kind of facade.

The stone's fastening technology with expansion nail guarantees the perfect adherence with the fastening systems of the structure, using different galvanised steel plates.

The best solution with thermal and sound insulation to dress facades:

- With thermal insulation wall cladding systems
- Micro-Ventilated
- Ventilated
- Continued

- Advantages:**
- Executive quality,
  - Excellent mechanical resistance compared to traditional solutions that have to use higher thicknesses
  - Lightness, insulation, integrated and resolving system
  - Easy and quick installation
  - Maintenance free

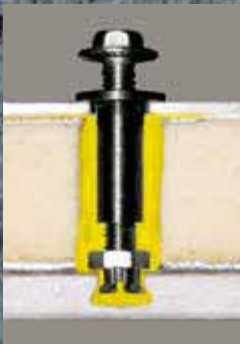
- Disadvantages:**
- Major project rigidity due to the modularity of the insulating panel.

## Tensile strength between fixing element and stone pull-off

| Mechanical characteristics of the sample  | ABSOLUTE BLACK<br>sample dimension<br>30 x 30 x 6.6-6.8 mm. |            | KASHMIR WHITE<br>sample dimension<br>30 x 30 x 6.8-7 mm. |            | CARRARA WHITE<br>sample dimension<br>30 x 30 x 7-8 mm. |            |
|-------------------------------------------|-------------------------------------------------------------|------------|----------------------------------------------------------|------------|--------------------------------------------------------|------------|
| Volumetric weight Kg./m³                  | 3.015                                                       |            | 2.690                                                    |            | 2.698                                                  |            |
| Compressive strength Kg./cm²              | 2.485                                                       |            | 2.075                                                    |            | 1.303                                                  |            |
| Bending strength Kg./cm²                  | 253                                                         |            | 135                                                      |            | 198                                                    |            |
| Imbibition % per weight                   | 0.130                                                       |            | 0.430                                                    |            | 0.103                                                  |            |
| Thermal expansion coefficient mm./m. °C   | -                                                           |            | 0.0067                                                   |            | 0.00590                                                |            |
|                                           | MIN. Value                                                  | MAX. Value | MIN. Value                                               | MAX. Value | MIN. Value                                             | MAX. Value |
| Load of tensile failure limit in Kg.      | 120                                                         | 151        | 83                                                       | 95         | 86                                                     | 95         |
| Diameter of the failure limit cone in mm. | 38                                                          | 41         | 32                                                       | 38         | 49                                                     | 54         |

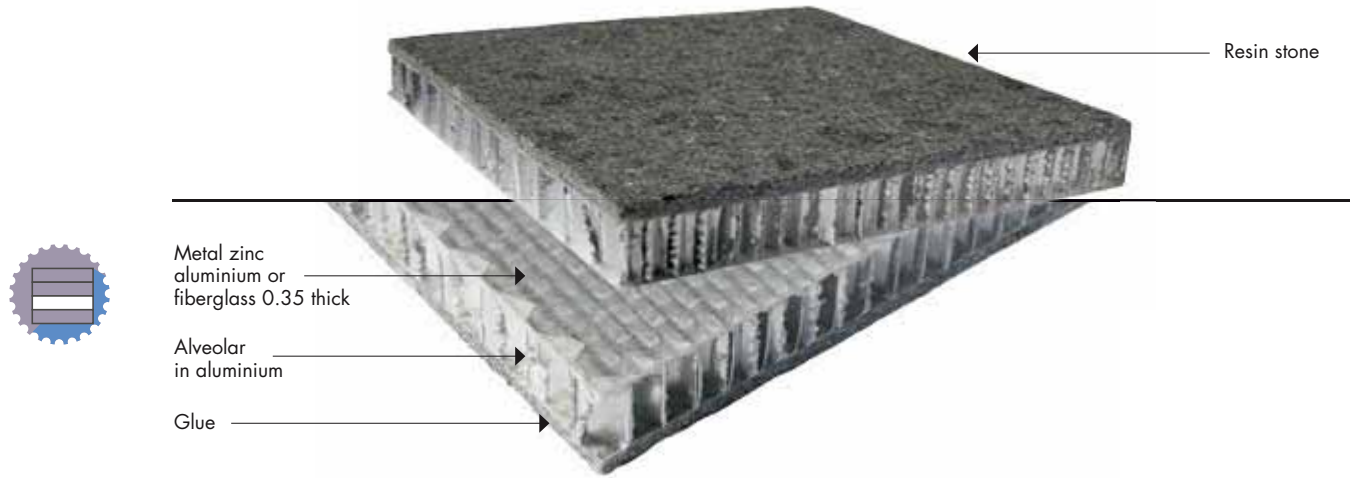
| U<br>transmittance | 25   | 30   | 35   | 40   | 50   | 60   | 70   | 80   | 100  | 120  | 150  | 180  | 200  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| W/sq.m. K          | 0.84 | 0.71 | 0.62 | 0.55 | 0.44 | 0.37 | 0.32 | 0.28 | 0.22 | 0.19 | 0.15 | 0.12 | 0.11 |
| Kcal/sq.m. h °C    | 0.73 | 0.61 | 0.53 | 0.47 | 0.38 | 0.32 | 0.27 | 0.24 | 0.19 | 0.16 | 0.13 | 0.11 | 0.10 |

## Traction Kg.



- Fixing system:  
keil-Undercut-Facade anchor insertion
- Minimum distance of holes  
from the edge: 85x100 mm
- Drilling tool:  
keil Diamond Facade Drill Bit 0.8 b7.515.010.022
- Depth: hS=4 mm
- Hole dimension: Cylindrical of ø 7 mm
- Undercut: ø 9 mm
- Type of traction for the test:  
cylindrical central support of ø 105 mm





# WAPSTONE®

PANEL COVERED IN NATURAL STONE

The technology allows obtaining 8 to 10 mm thin slabs from the stone block that can be reduced to 5 mm, which are then processed with special epoxy resins and glass wool fabric. This process makes the stone resistant to breakage. The stone thickness is determined by the type of the used stone, by the type of application and by the fact that an anchor nail is inserted. in the stonedil plant, the stone is superficially manufactured as required by the client and cut to size as specified. The maximum feasible dimensions of the sheets are 3 x 1 m with calibrated thickness of 8 to 10 mm. This panel is created especially for interior design, while for external use and for facade in particular, we suggest the use of the nail inserted in the stone, as weather conditions may determine the detachment of the stone from the support, using even if necessary different galvanised steel plates. In the Lattonedil plant, the anchor nails are inserted in the stone as required by the analysis of the application with the customer. the special fixing nail between the stone and the dedicated structure. The solution for special applications and interior.

- Advantages:**
- Executive quality
  - Excellent mechanical resistance compared to traditional solutions that have to use higher thicknesses.
  - Lightness
  - Better mechanical resistance compared to Isoparstone
  - Easy and quick installation
  - Maintenance free
  - Fire resistance

- Disadvantages:**
- Low thermal insulation for the facades
  - Higher cost compared to Isoparstone

## Tensile strength between fixing element and stone pull-off

| Mechanical characteristics of the sample  | ABSOLUTE BLACK<br>sample dimension<br>30 x 30 x 6.6-6.8 mm. |            | KASHMIR WHITE<br>sample dimension<br>30 x 30 x 6.8-7 mm. |            | CARRARA WHITE<br>sample dimension<br>30 x 30 x 7-8 mm. |            |
|-------------------------------------------|-------------------------------------------------------------|------------|----------------------------------------------------------|------------|--------------------------------------------------------|------------|
| Volumetric weight Kg./m³                  | 3.015                                                       |            | 2.690                                                    |            | 2.698                                                  |            |
| Compressive strength Kg./cm²              | 2.485                                                       |            | 2.075                                                    |            | 1.303                                                  |            |
| Bending strength Kg./cm²                  | 253                                                         |            | 135                                                      |            | 198                                                    |            |
| Imbibition % per weight                   | 0.130                                                       |            | 0.430                                                    |            | 0.103                                                  |            |
| Thermal expansion coefficient mm./m. °C   | –                                                           |            | 0.0067                                                   |            | 0.00590                                                |            |
|                                           | MIN. Value                                                  | MAX. Value | MIN. Value                                               | MAX. Value | MIN. Value                                             | MAX. Value |
| Load of tensile failure limit in Kg.      | 120                                                         | 151        | 83                                                       | 95         | 86                                                     | 95         |
| Diameter of the failure limit cone in mm. | 38                                                          | 41         | 32                                                       | 38         | 49                                                     | 54         |





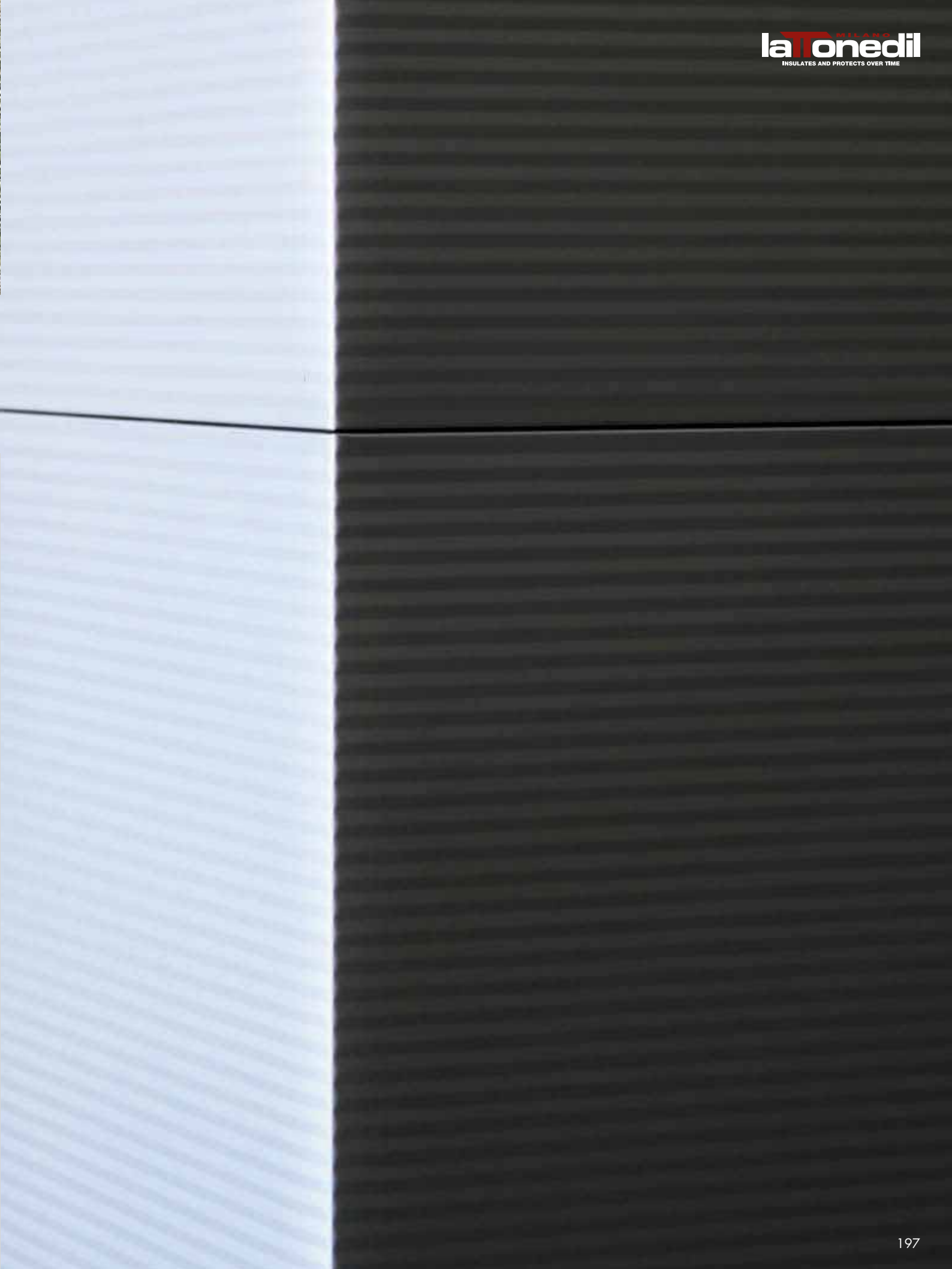
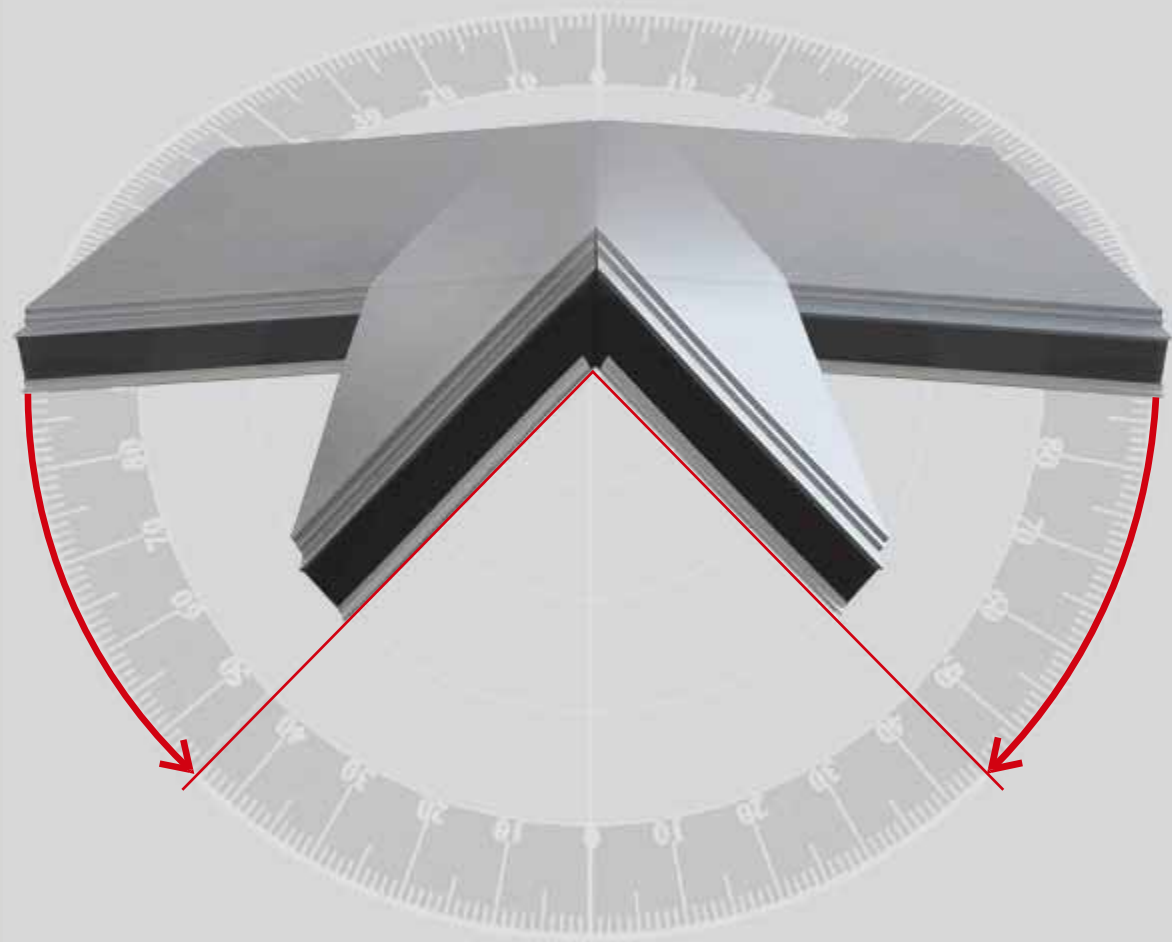


# ANGOLI HIGHTECH

CUSTOM CORNERS WITHOUT METAL INTERRUPTION

The custom-cut technology allows obtaining a perfect corner from the panel, as specifically requested in your drawing. This way, it is possible to obtain a building corner without anti-aesthetic finishing lists, exalting the architectural linearity of the structure and the selected Lattonedil® panel.

The work is performed by tinsmiths who follow a template and manufacture the single corners by emptying and bending the panel without affecting the surface. The obtained special panel ranges from minimum 30° up to 170°. Some examples are shown below.



# CHAPTER 9

## GUARANTEED STEEL

---

Tata Steel +  
Lattonedil.  
A winning  
choice!



## COLORCOAT HPS200 ULTRA® OF TATA STEEL

COLORCOAT HPS200 ULTRA® BY TATA STEEL OFFERS PERFORMANCE SECOND TO NONE, AS THE LATTONEDIL ROOFS AND WALL CLADDING.

TESTS HAVE SHOWN THAT COLORCOAT HPS200 ULTRA® WITH FACING IN GALVALLOY™ SUBSTANTIALLY REDUCES THE RISK OF DAMAGE CAUSED BY CORROSION AND BY THE DETACHMENT OF THE COATING IN THE CUT PERIMETER AREAS, THUS OFFERING MAXIMUM RELIABILITY AND SAFETY.

- GALVALLOY™ metal facing optimised to resist to corrosion and to protect the cutting edges.
- Large colours range created in collaboration with architects and colour experts.
- CONFIDEX® warranty for industrial and commercial buildings with a surface over 500 sq.m. that is valid for 30 years without any need for maintenance or inspections.
- Residential warranty through the manufacturer of the system up to 25 years for the residential buildings.
- Completely recyclable and ecological to remove all elements that are harmful to the environment.
- Conservation of the colour and the gloss two times higher than the standard plastisol products, thanks to its very advanced coating technology.
- Supplied with the SCINTILLA® marking in relief that guarantees the authenticity.

**For a complete reliability, it is recommended to use COLORCOAT HPS200 Ultra® of Tata Steel together with the GALVALLOY™ facing.**

### Product performance

The COLORCOAT HPS200 Ultra® resistance is determined by the particular metal facing, by the high-performance pre-treatment, by the primer and the surface coating, all insured by a complete testing process and real data that validate and confirm our statements on the product.

### GALVALLOY™ facing

Most of the pre-painted steel products use a metal coating with 99% of zinc that ensures good corrosion resistance, but leaves the cutting edges vulnerable to paint peeling and premature delamination. COLORCOAT HPS200 Ultra®, like its predecessor COLORCOAT HPS200. Uses a particular metal facing, GALVALLOY™, made with a special alloy composed of 95% of zinc and 5% of aluminium. This alloy ensures an unbeatable protection, even in the cutting edges.

Some examples of the Colorcoat HPS200 Ultra® colours.



Pure grey

Anthracite  
RAL 7016

Hamlet  
RAL 9002

Burano  
RAL 3004

Terracotta

## COLORCOAT PRISMA® BY TATA STEEL AESTHETIC THAT LASTS IN TIME. GUARANTEED

COLORCOAT PRISMA® IS THE PROOF OF CHANGE OF THOUGHT THAT USES A THREE-LAYER CUTTING-EDGE TECHNOLOGY TO CREATE AN OPTIMISED, STURDY AND CHROME-FREE PRE-PAINTED STEEL PRODUCT. COLORCOAT PRISMA® DOES NOT ONLY OVERCOME THE RESTRICTIONS IMPOSED FOR UV PERFORMANCE, BUT ALSO GOES BEHIND THE STRICTEST EUROPEAN STANDARDS ON CORROSION RESISTANCE. THEREFORE IT IS AN OPTIMAL CHOICE FOR COMMERCIAL, RETAIL BUILDINGS, WAREHOUSES, FOR THE PUBLIC SECTOR AND FOR BUILDINGS WITH PARTICULAR AESTHETICS THAT MUST BE DURABLE OVER TIME.

- Revolutionary technology with 3-layer finish that improves the aesthetics, durability and long-term performance.
- Confidex® warranty up to 30 years for surfaces exposed to weather of industrial and commercial buildings, without any need of inspection or maintenance to retain the validity.
- Optimised Galvalloy™ metal finish with exceptional resistance to corrosion and protection of cutting edges.
- It was tested by independent bodies for the release of volatile organic compounds (VOC) in compliance with EN ISO 16000-9 standard and obtained the "A+" certification.
- Fully compliant with REACH requirements and free of chromates, including hexavalent chrome.
- Made in the United Kingdom. BES 6001 certification, Standard for responsible supplies.
- Fully compliant with BREEAM and LEED certifications.

### Applications

Regardless of the type of building, whether warehouse, office building, school or recreational building, new construction or restored building, COLORCOAT PRISMA® offers a series of solutions that allow realising modern, durable and appealing roofs and walls.

### GALVALLOY™ support

Most pre-painted steel products use a galvanized finish that ensures good resistance to corrosion but leaves the cutting edges vulnerable to scaling and premature paint peeling. COLORCOAT PRISMA® uses an exclusive metal support of proven efficacy, GALVALLOY™ by Tata Steel, consisting of special alloy with 95% zinc and 5% aluminium, thus ensuring unparallel protection against corrosion, also in perimetric cutting areas.

Some examples of the Colorcoat Prisma® colours.



Silver metallic  
RAL 9006

Grey Aluminium  
RAL 9007

Oxide Red  
RAL 3009

Anthracite  
RAL 7016

Hamlet  
RAL 9002

# CONFIDEX® GUARANTEES

BY TATA STEEL

IN EUROPE, CONFIDEX® BY TATA STEEL IS THE MOST COMPLETE WARRANTY FOR PREPAINTED STEEL PRODUCTS AND IS AVAILABLE FOR INDUSTRIAL AND COMMERCIAL BUILDINGS WITH A SURFACE OVER 500 SQ.M. TREATED WITH COLORCOAT HPS200 ULTRA® AND COLORCOAT PRISMA®. THE TATA STEEL CONFIDEX® WARRANTY WAS INTRODUCED IN 1992 AND CONTINUES TODAY TO BE THE BEST IN THIS SECTOR.

## Key features

The CONFIDEX® warranty is clear and simple and, in the case of defective coating, unlike many other warranties, offers a complete corrective action.

Its major characteristics are:

- No need of yearly inspection or maintenance to make the warranty effective.
- The sharp edges are covered for the entire warranty period.
- Based on years of product verifications, made all over the world.
- Provides a coverage of slopes until 1° without differences between the slopes above this level.
- Direct contractual relationship between tata steel and the building owner.
- Full transferability in case of building ownership transfer.
- Reduced risks of each ring of the supply chain.
- Quick and easy online registration form.

## Benefits of the CONFIDEX® registration

As a rule, the CONFIDEX® Warranty can be offered to the building owner, to the facing supplier or to the covering system manufacturer.

In the improbable case of a defect on the coating, we can be directly contacted, regardless of the contract supply chain. Without a direct contact with tata steel, it may occur, in the worst case, that some of the supply chain rings are no longer active, making it difficult, if not impossible, to file a claim.



**The CONFIDEX® Warranty is a tool to ensure direct contact between the building owner and Tata Steel.**



## VALIDITY OF THE CONFIDEX® WARRANTY FOR THE ZONES 1 AND 2



### Note

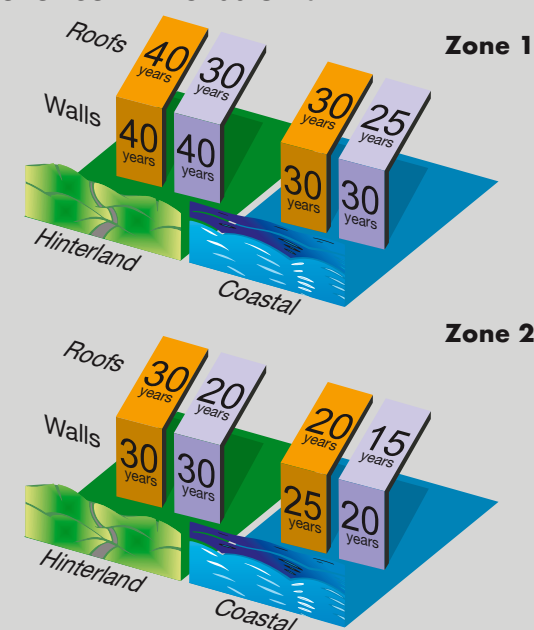
1. The values relative to the "Coastal" area refer to the buildings included within a radius of 1 km from the coast.
  2. For altitudes higher than 900 m there will be a 20% reduction of the duration of the warranty.
  3. The complete terms and conditions of the CONFIDEX® warranty are available online on [www.colorcoat-online.com](http://www.colorcoat-online.com).
  4. To ensure its validity, the CONFIDEX® warranty must be registered within three months from the date of completion of the building.
  5. The periods of validity of the CONFIDEX® warranty shown in the figure above refer to those in zones 1 and 2.
- For more information on other areas, please visit [www.colorcoatonline.com/confidexmap](http://www.colorcoatonline.com/confidexmap).

Yellow: Northern Europe - Zone 1

Orange: Southern Europe - Zone 2

Green: For more information on areas not listed in the CONFIDEX® zones, please contact Tata Steel.

## COLORCOAT HPS200 Ultra®



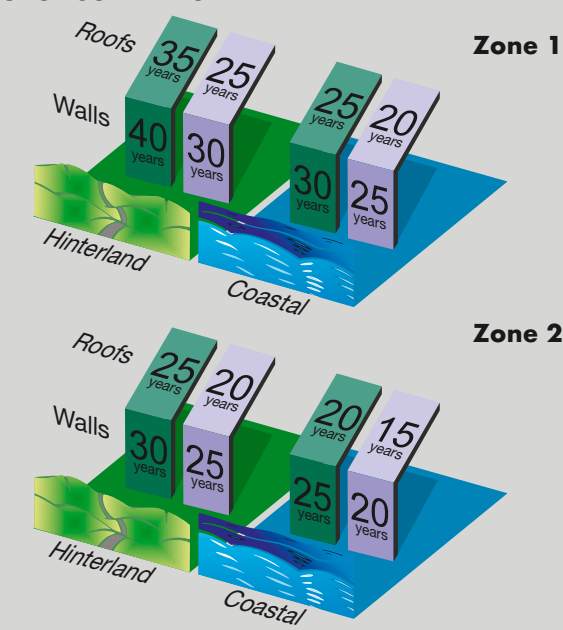
Yellow: Signature colours

Purple: Classic and matte colours

Green: Plain or metallic colours

Light blue: Matte colours

## COLORCOAT PRISMA®







## RESIDENTIAL WARRANTY COLORCOAT®

FOR APPLICATIONS ON INDIVIDUAL RESIDENTIAL BUILDINGS, TATA STEEL PROVIDES, THROUGH THE SYSTEM SUPPLIER, A WARRANTY THAT ENSURES THE ADHERENCE OF THE COATING TO THE STEEL FACING FOR THE ENTIRE PERIOD OF TIME ESTABLISHED BY THE WARRANTY.

### COLORCOAT HPS200 Ultra®

The warranty period changes depending on the following factors: geographical location, environment where the building is constructed, the application and the colour. In order to rely on a 25 years protection, please ask for a copy of the warranty when ordering. In the improbable case of a complaint, a full traceability of the supply chain will be required.

### COLORCOAT Prisma®

The warranty period changes depending on the following factors: geographical location, environment where the building is constructed, the application and the colour. In order to rely on a 15 years protection, please ask for a copy of the warranty when ordering. In the improbable case of a complaint, a full traceability of the supply chain will be required.

COLORCOAT HPS200 Ultra®  
COLORCOAT Prisma®



### VALIDITY OF THE CONFIDEX® WARRANTY FOR THE ZONES 1 AND 2

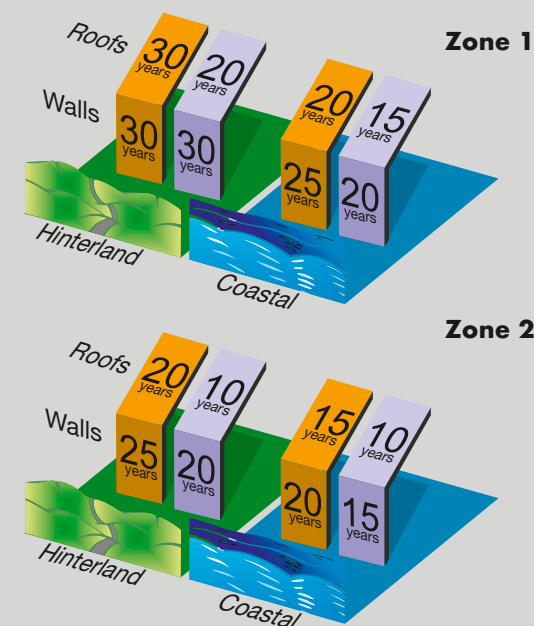


#### Note

1. The values related to "Coastal" areas refer to the buildings included within a radius of 1 km from the coast.
2. For altitudes higher than 900 m there will be a 20% reduction of the duration of the warranty.

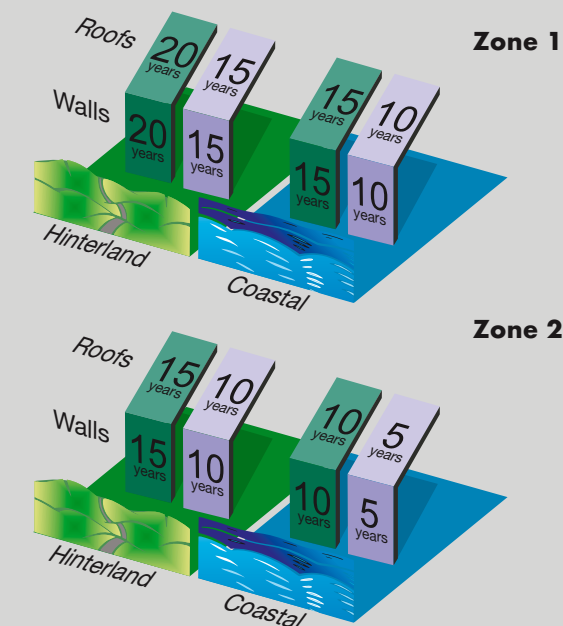
- Northern Europe - Zone 1
- Southern Europe - Zone 2

### COLORCOAT HPS200 Ultra®



- Signature colours
- Classic and matte colours

### COLORCOAT PRISMA®



- Plain or metallic colours
- Matte colours



# Three good reasons for using ArcelorMittal's prepainted steels on Lattonedil®'s products

The pre-painted steel of ArcelorMittal offers to architects, designers and planners a unique range of products able to meet the most stringent criteria required by the construction industry in terms of aesthetics, performance and respect of the environment.

## AESTHETICS

the richest colours available in the market, with matt satin finish, smooth or grainy and impression, with surface textures of high aesthetic appeal can give a unique identity to each building.

## PERFORMANCE

guaranteed pre-painted steel, able to withstand the most extreme conditions in terms of temperature and weathering. Suitable for marine environments and other corrosive environments, offer scratch-resistance and colour brilliance with a minimal amount of maintenance.

## ENVIRONMENTAL PROTECTION

the **Nature** collection includes the full range of ArcelorMittal's pre-painted steel, free of heavy metals and already complies with present and future REACH regulations (Registration, Evaluation, Authorisation and Restriction of Chemical Substances) of the European Union. The REACH regulation on the registration, evaluation, authorisation and restriction of chemicals, aims to ensure greater protection of human health and the environment through a more timely and effective identification of properties of chemicals. Playing in advance, the **Nature** collection of ArcelorMittal is already at 100% free of hexavalent chromium and heavy metals.

## SPECIFIC AUTOMATIC WARRANTY ON GRANITE® PRODUCTS

Specific Automatic Warranty on Granite® products. ArcelorMittal has many years of experience in delivering high quality coated products. Thanks to our know-how and skills acquired, we are able to offer long-term warranties on our steels for external applications with a validity of up to 30 years.

Our steels are subjected to comprehensive tests by our expert team of R&D under extreme conditions of corrosion and weathering, both in the laboratory and on external sites.

After running our internal testing, we turn to independent institutes and laboratories that process a wide variety of tests, in order to obtain external certification by bodies such as CSTB in France, BBA in the United Kingdom and many more. So our products can be chosen safely.

### DEFINITION OF "ENVIRONMENT"

**Rural:** external environment for buildings located in the countryside, in the absence of specific sources of pollution, such as leakage of fumes containing sulphur vapour (e.g. heating oil).

**Urban/industrial:** external environment for buildings in urban areas and/or industrial environments consisting of one or more factories that produce gas or fumes such as to result in a significant increase in air pollution without being a source of corrosion due to the high concentration of chemical compounds.

### Maritime:

- buildings situated between 3 km and 20 km from the coast.
- buildings located between 1 km and 3 km from the coast.
- buildings located less than 1 km from the coast, with the exception of direct exposure to sea water (300 m from seafront)

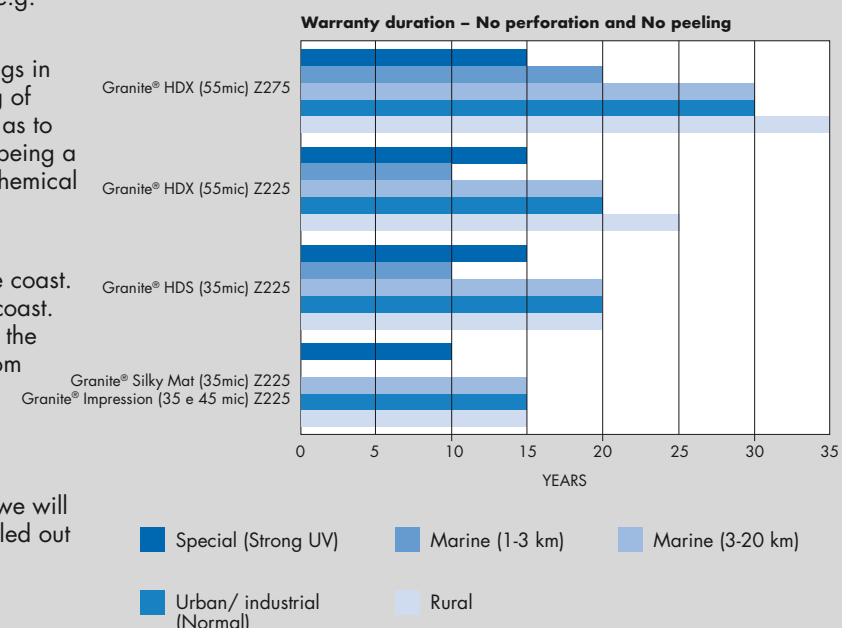
**Intense UV radiation:** buildings located at altitudes above 900 m.

For other environments and/or special requirements, we will grant a customized warranty after the customer has filled out an environmental questionnaire.

## THE MAIN FEATURES OF THE AUTOMATIC GRANITE® WARRANTY

- Granite® products warranty products is granted automatically:
- for the whole product range (from standard products to high-end ones) to answer every requirement
  - against perforation of metal support
  - against paint detachment
  - against the proliferation of corrosion and peeling of the paint film over the cut edges 10 mm
  - for aesthetic appearance: against the "chalking" of the paint

Concerning the aesthetics, our Automatic Warranty guarantees excellent colour stability and a high gloss retention (> 80%) in all kinds of environment, even in the case of intense an intense UV radiation such as in southern Europe and at high altitudes (> 900 m). The period of validity of the warranty depends on the specific painting system. Details are available on the website: [industry.arcelormittal.com](http://industry.arcelormittal.com).







## GRANITE® HDS



Sandwich panel



Profiled sheet



Roof panels

### APPLICATIONS

Granite® HDS is ideal for roof coverings and exterior facades and can be subjected to profiling to create sandwich panels and profiled sheets.

### AESTHETICS

Granite® HDS is available in a rich colour chart that includes metallic hues: this is one of the great advantages of pre-painted steel. Customized colours are available upon request. All Granite® HDS colours have a smooth satin finish with 30GU (Gloss unit Gardner 60°).

### PERFORMANCE

Good UV and corrosion resistance, very good colour stability, suitable for buildings exposed to normal and severe environments.  
Sunny regions with intense UV radiation.  
Industrial and urban areas normal and severe.

### THE MAIN CHARACTERISTICS OF GRANITE® HDS

SUPERIOR LIFE THANKS TO A 20-YEAR WARRANTY

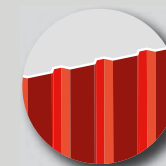
IMPROVED PERFORMANCE (EN 10169)  
UV RESISTANCE CLASS RUV 4  
CORROSION RESISTANCE CLASS RC4

PAINTING SYSTEM WITH THICKNESS OF 35µM ON METALLIC SUPPORT Z225g/sq.m.

## GRANITE® HDX



Sandwich panel



Profiled sheet



Roof panels

### APPLICATIONS

Granite® HDX is ideal for roof coverings and exterior facades and can be subjected to profiling to create sandwich panels, boxes, plates profiled sheets, elements of solar shields, blades, fins and other narrow profiles.

### AESTHETICS

Granite® HDX is available in a rich colour chart that includes metallic hues: this is one of the great advantages of pre-painted steel. Customized colours are available upon request. All colours Granite® HDX have a granulated satin finish with 30GU (Gloss unit Gardner 60°) but are also available with a mat finish.

### PERFORMANCE

High UV and corrosion resistance, excellent colour stability, solid surface coating, suitable for buildings exposed to challenging climatic and environmental conditions.

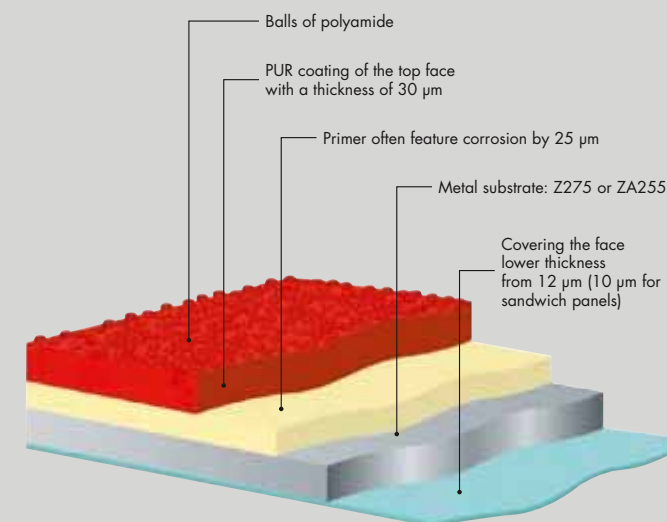
- Cold and humid environments
- Coastal areas (up to 300 m from the sea)
- Sunny regions with intense UV radiation, such as Africa, the Middle East and Caribbean
- Industrial and polluted areas

### THE MAIN CHARACTERISTICS OF GRANITE® HDX

SUPERIOR LIFE THANKS TO A 35-YEAR WARRANTY

IMPROVED PERFORMANCE (EN 10169)  
UV RESISTANCE CLASS RUV 4  
CORROSION RESISTANCE CLASS RC5

PAINTING SYSTEM WITH THICKNESS OF 55µM ON METALLIC SUPPORT (FROM Z225 TO Z275G/sq.m.)





## GRANITE® SILKY MAT



### APPLICATIONS

Granite® Silky Mat is designed for architectural facades, but can be used for different applications in construction projects. Granite® Silky Mat is suitable for any kind of profiling used for facade systems and lends itself perfectly to the production of sandwich panels. For Granite® Silky Mat a dedicated offer is introduced in terms of logistics and production, which allows creating small coils for specific design requirements.

### AESTHETICS

Two different finishes are available:  
Smooth finish: lightly grained. Available in 5 colours.  
Wrinkled finish: slightly shiny. With 6 natural colours

### PERFORMANCE

Granite® Silky Mat boasts excellent mechanical properties thanks to the steel support, as well as a particularly thick but flexible paint system which makes it scratch-resistant, formable and able to resist over time.  
The product is covered by the ArcelorMittal's automatic warranty up to 15 years.  
For specific projects higher lifetime warranties can be granted.



**THE MAIN CHARACTERISTICS OF GRANITE® SILKY MAT**  
WIDE RANGE WITH 2 AESTHETIC FINISHES AND 11 COLOURS

UNIQUE AESTHETIC PROTECTED BY AN EXTERNAL BODY (OHMI)

PAINTING SYSTEM WITH THICKNESS OF 35µM ON METALLIC SUPPORT (from Z225 to Z275g/sq.m.)

## GRANITE® IMPRESSION



### APPLICATIONS

Granite® Impression is designed specifically for prestigious architectural facades, but can be used for many other applications. It can be subjected to profiling to create sandwich panels, boxes, solar screens, blades, fins and other narrow sections.

For Granite® Impression a dedicated offer is introduced in terms of logistics and production, which allows creating small coils for specific design requirements.

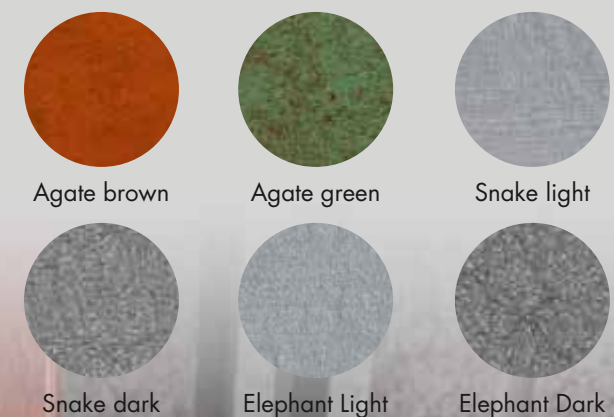
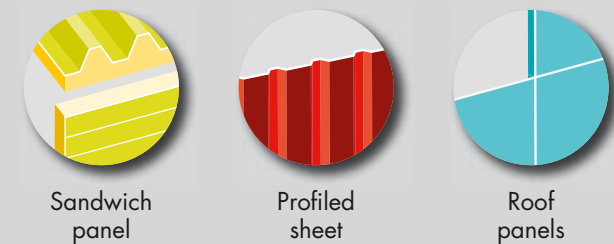
### AESTHETICS

Surface textures and motifs inspired by nature, which make your building unique.

- Snake: similar to snake skin, this motif develops according to a random arrangement of scales with different shades and longitudinal variables forms, all clearly visible. The slightly textured surface gives to every building an extraordinary surface look.
- Elephant: similar to the elephant's skin, the wrinkled appearance and very solid air creates a structural surface with a strong visual impact on each building.
- Green & Brown Agate: our Green & Brown Agate finishes, with their half-glossy motifs, seem to be covered by iron oxide inlays. The unusual mineral beauty of these two shades offers a rich aesthetic appeal and prestige to the facades.

### PERFORMANCE

Aesthetics does not exclude the performance of Granite® Impression, which boasts a solid, but flexible, painting system able to guarantee resistance to scratches, formability and durability. The product is covered by ArcelorMittal's automatic warranty up to 15 years ArcelorMittal.  
For specific projects higher lifetime warranties can be granted.



**THE MAIN CHARACTERISTICS OF GRANITE® IMPRESSION**

STURDY AND DETECTABLE FINISHES

UNIQUE AESTHETIC PROTECTED BY AN EXTERNAL BODY (OHMI)

FLEXIBLE PAINTING SYSTEM WITH THICKNESS OF 35µM (AGATE GREEN & BROWN) AND 45µM (SNAKE ED ELEPHANT) ON METALLIC SUPPORT (from Z225 to Z275g/sq.m.)

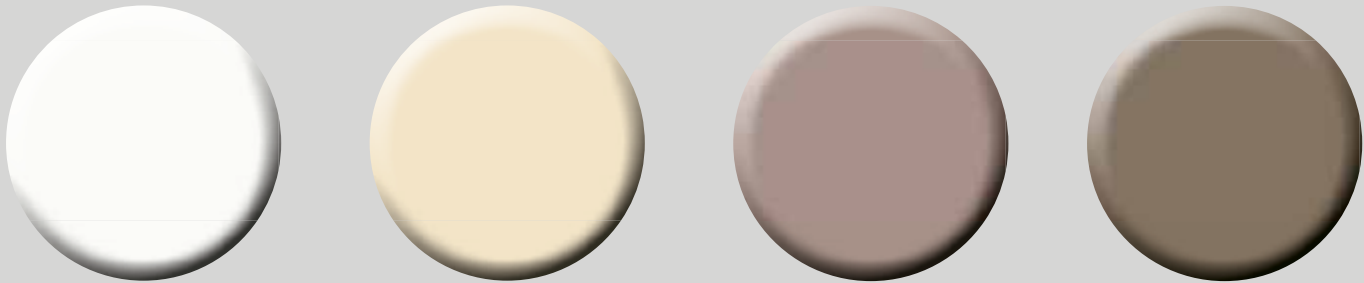


STANDARD COLOURS EXTERNAL SIDE

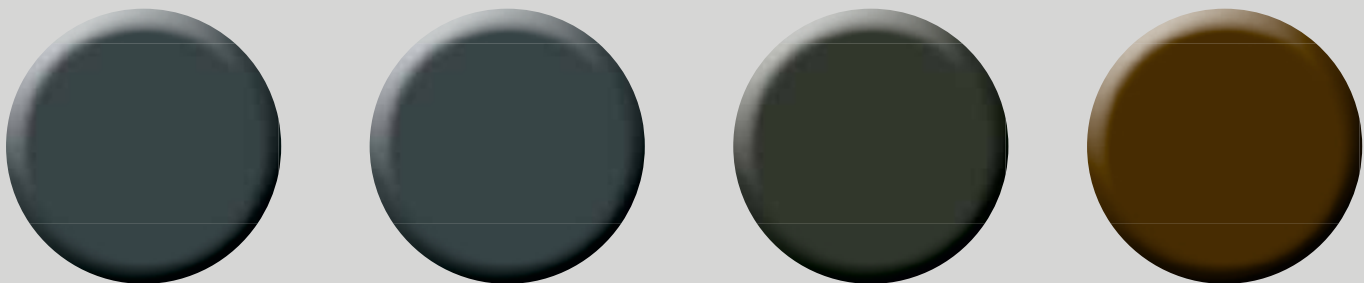


White-grey      Siena red      Testa di Moro

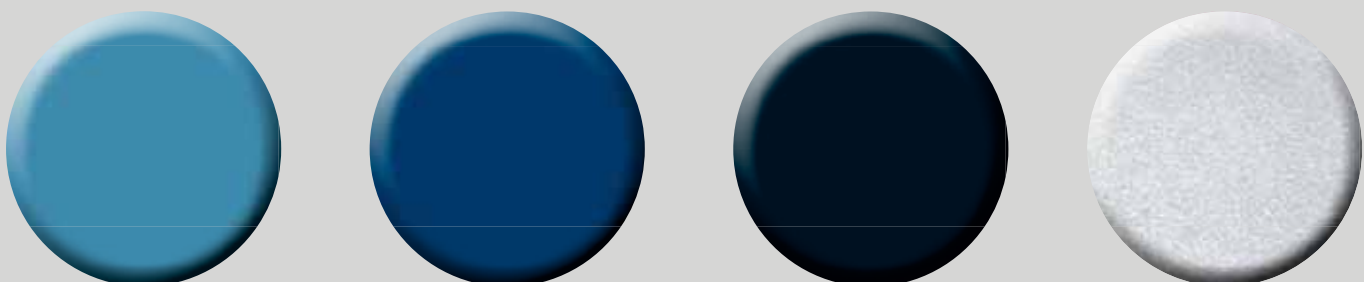
SPECIAL COLOURS EXTERNAL SIDE



RAL 9010      RAL 1015      RAL 1019      RAL 7006



RAL 7015      RAL 7016      RAL 7022      RAL 8011



RAL 5024      RAL 5010      RAL 5008      RAL 9006



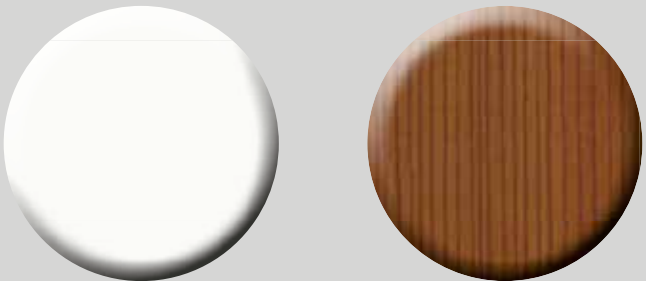
RAL 6021      RAL 6011      RAL 6005      RAL 9007

STANDARD COLOURS INTERNAL SIDE



White-grey

SPECIAL COLOURS INTERNAL SIDE



RAL 9010      Wood colour

WOOD COLOURS FOR THE INTERNAL SIDE OF THE SUPPORT



Teak      Birch      Cherry panelling      Walnut Cream



Wood Brown Oak      Oak indoor      Walnut

SPECIAL FINISHES FOR THE INTERNAL SIDE OF THE SUPPORT

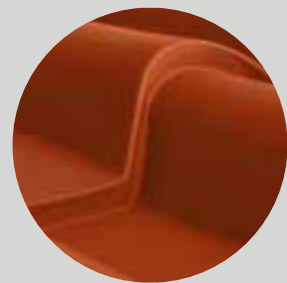


Paper-felt      Natural centesimal aluminium      White centesimal aluminium      Wood colour fibreglass



Fibreglass

COLOURS TTCOPPO®  
STANDARD COLOURS



Pantile red

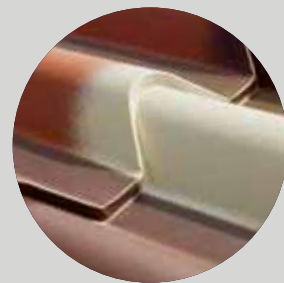
SPECIAL COLOURS (UPON REQUEST)



Aged tile red



Aged copper red



Aged cream red



Aged beige



Aged yellow



Copper

COPPER



EUROCINQUE® AND ISOCOPRE®  
ARE ALSO AVAILABLE WITH THE  
EXTERNAL FACING IN  
REAL COPPER.

THE COMPLETE RAL COLOUR PALETTE IS AVAILABLE UPON REQUEST

You can build Eurocinque® panel in any RAL colour, request  
information at our offices.





# CHAPTER 10

## TECHNICAL DATA



# FIXING INSTRUCTIONS

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, fixes the roof or wall panel to the supporting structure of the building and must guarantee the capacity to support the applied loads.

The second, on the other hand, only fixes 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 sq.m.. On the ridge on the roof, the eaves and any front overlapping, the fixing groups must be applied on all the panel ribs.



## STRUCTURAL FIXING OF LATTONEDIL 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.

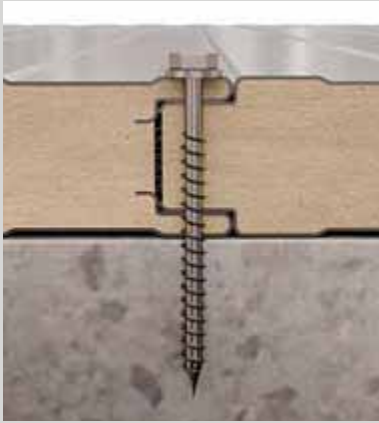
| PANEL THICKNESS (mm) | SCREW LENGTH (RECOMMENDED) |
|----------------------|----------------------------|
| 30                   | Ø 6,3 x 100 mm.            |
| 40                   | Ø 6,3 x 110 mm.            |
| 50                   | Ø 6,3 x 120 mm.            |
| 60                   | Ø 6,3 x 130 mm.            |
| 80                   | Ø 6,3 x 140 mm.            |
| 100                  | Ø 6,3 x 160 mm.            |
| 120                  | Ø 6,3 x 180 mm.            |
| 150                  | Ø 6,3 x 210 mm.            |
| 160                  | Ø 6,3 x 220 mm.            |
| 180                  | Ø 6,3 x 240 mm.            |
| 200                  | Ø 6,3 x 260 mm.            |



## STRUCTURAL FIXING OF LATTONEDIL 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 (mm) | SCREW LENGTH (RECOMMENDED) |
|----------------------|----------------------------|
| 30                   | Ø 6,5 x 110 mm.            |
| 40                   | Ø 6,5 x 120 mm.            |
| 50                   | Ø 6,5 x 130 mm.            |
| 60                   | Ø 6,5 x 140 mm.            |
| 80                   | Ø 6,5 x 160 mm.            |
| 100                  | Ø 6,5 x 180 mm.            |
| 120                  | Ø 6,5 x 200 mm.            |
| 150                  | Ø 6,5 x 230 mm.            |
| 160                  | Ø 6,5 x 240 mm.            |
| 180                  | Ø 6,5 x 260 mm.            |
| 200                  | Ø 6,5 x 280 mm.            |



## STRUCTURAL FIXING FOR ISOPAR® 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.

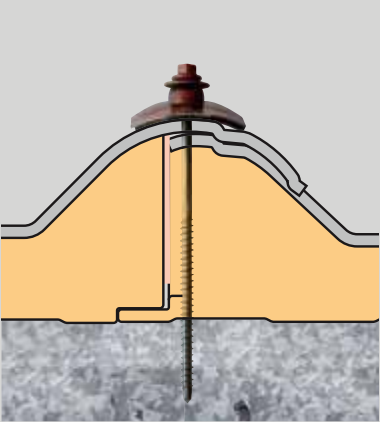
| PANEL THICKNESS (mm) | SCREW LENGTH (RECOMMENDED) |
|----------------------|----------------------------|
| 30                   | Ø 6,3 x 60 mm.             |
| 40                   | Ø 6,3 x 70 mm.             |
| 50                   | Ø 6,3 x 80 mm.             |
| 60                   | Ø 6,3 x 90 mm.             |
| 80                   | Ø 6,3 x 110 mm.            |
| 100                  | Ø 6,3 x 130 mm.            |
| 120                  | Ø 6,3 x 150 mm.            |
| 150                  | Ø 6,3 x 180 mm.            |
| 160                  | Ø 6,3 x 190 mm.            |
| 180                  | Ø 6,3 x 210 mm.            |
| 200                  | Ø 6,3 x 230 mm.            |
| 220                  | Ø 6,3 x 250 mm.            |
| 240                  | Ø 6,3 x 270 mm.            |

# FIXING INSTRUCTIONS

FOR TTCOPPO®, TTONDA® E TTONDAFIBRO® 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, fixes the roof or wall panel to the supporting structure of the building and must guarantee the capacity to support the applied loads.

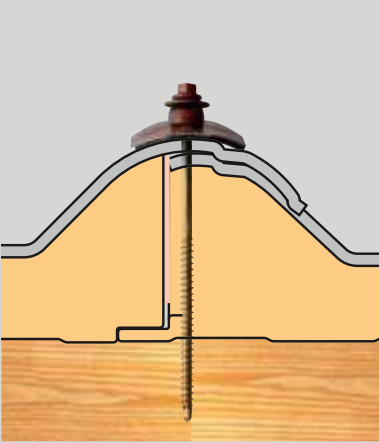
The second, on the other hand, only fixes the tinsmithery systems or the panel sheets together. The place and number of the roof structural fixing elements is established on the basis of the number of supports, the slope of the pitch and the windiness, but must not, however, be less than 3 for every sq.m. On the ridge on the roof, the eaves and any front overlapping, the fixing groups must be applied on all the panel ribs.



## STRUCTURAL FIXING OF TTCOPPO®, TTONDA® ET TTONDAFIBRO® LATTONEDIL 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 (mm) | SCREW LENGTH (RECOMMENDED) |
|----------------------|----------------------------|
| 30                   | Ø 6,3 x 110 mm.            |
| 40                   | Ø 6,3 x 120 mm.            |
| 50                   | Ø 6,3 x 130 mm.            |
| 60                   | Ø 6,3 x 140 mm.            |
| 80                   | Ø 6,3 x 160 mm.            |
| 100                  | Ø 6,3 x 180 mm.            |



## STRUCTURAL FIXING OF TTCOPPO®, TTONDA® ET TTONDAFIBRO® LATTONEDIL PANELS ON A 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 (mm) | SCREW LENGTH (RECOMMENDED) |
|----------------------|----------------------------|
| 30                   | Ø 6,5 x 120 mm.            |
| 40                   | Ø 6,5 x 130 mm.            |
| 50                   | Ø 6,5 x 140 mm.            |
| 60                   | Ø 6,5 x 150 mm.            |
| 80                   | Ø 6,5 x 170 mm.            |
| 100                  | Ø 6,5 x 190 mm.            |



# ACCESSORIES

FOR FIXING ROOFING PANELS AND WALLS



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 edpm gasket with colour matching the roof colour. (for minimum quantities, please contact our offices).



CAP NUT FOR TTCOPPO®, TTONDA® AND TTONDAFIBRO®  
Available in different colours and materials, depending on the client's requirements.



SCREW FOR TTCOPPO®, TTONDA® E TTONDAFIBRO®  
Self-tapping screw for wood or steel with edpm gasket and cap nut.



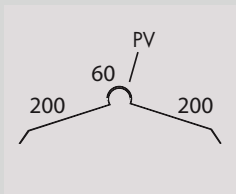
SCREW WITH EPDM GASKET FOR TTCOPPO®, TTONDA® AND TTONDAFIBRO®  
Self-tapping screw for wood or steel with edpm gasket.



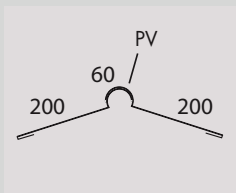
THREATED INSERT WITH METRIC SCREW  
Special fixing element in steel than allows putting a thread on the particular elements with low thickness. Really fast and easy to apply, it has also high resistance.



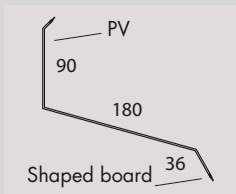
FLOWER RIVET  
This rivet is adapted for fixing of any stuffs, the bushing of the fastener opens in more parts during assembling thereby ensuring an excellent fixing.



SHAPED RIDGE FOR G9  
Double hinged ridge, shaped as the external panel profile.



SMOOTH RIDGE FOR G9  
Double hinged element



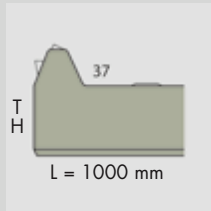
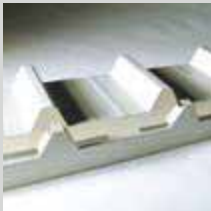
FRONT FLASHING FOR G9  
Front flashing for G9 to be used in case of joint between the roof made of panels and an existing wall, placed in frontal position.

# ACCESSORIES

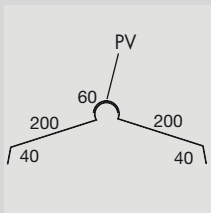
FINISHING COMPONENTS FOR RIBBED ROOF AND WALL PANELS

Serie of finishing elements for lattonedil roof panel, able to satisfy all design requirements.

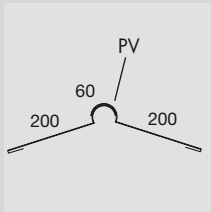
- Material:** 0.5 mm thick prepainted steel or on demand  
0.6 mm prepainted aluminium or on demand  
0.6 mm natural copper.
- Colour:** White grey, chocolate brown, siena red, other colours on demand
- Dimensions:** Standard length 3 m



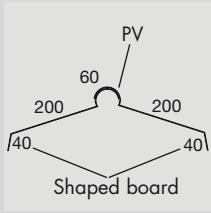
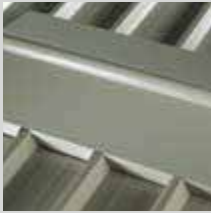
**SILUETTE**  
Closing element for the head of roof panels up to 50 mm thick, which ensures excellent aesthetic appearance and better protection.  
Available in prepainted steel.



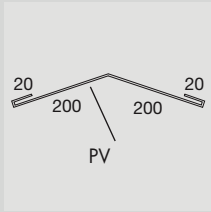
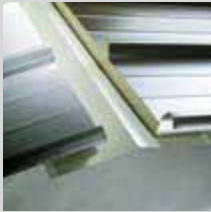
**RIDGE CAP TO BE SHAPED**  
Hinged cap to be shaped during installation, designed for the external joint of pitched roofs.



**SMOOTH RIDGE CAP**  
Double hinged element.



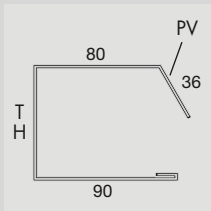
**SHAPED RIDGE CAP**  
Double hinged element.



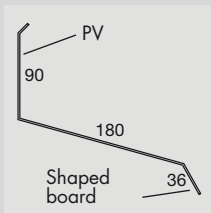
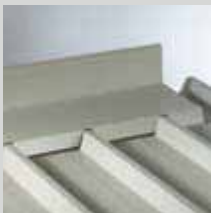
**SUBRIDGE**  
Essential element designed for the internal joint of the pitches on steel constructions.



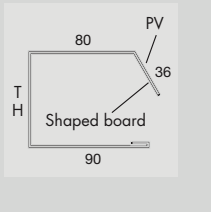
**SUBRIDGE CAP LINING**  
This is a spongy lining to be applied under the metal ridge cap; it is primarily recommended for slightly sloping pitches, in order to prevent infiltration caused by strong wind.



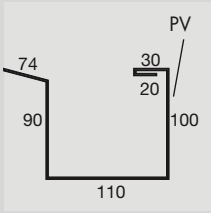
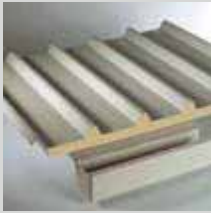
**SIDE FLASHING**  
To cover the side edge of the panel, can be used for both the full rib and the overlapping rib.



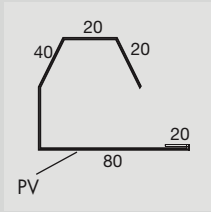
**FRONT FLASHING**  
To be used in case of joint between the roof made of panels and an existing wall, placed in frontal position.



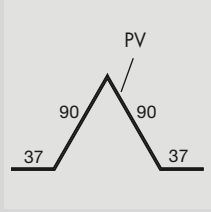
**TAIL FLASHING**  
To cover the upper edge of the panels, to be used in single protruding single pitch roofs.



**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

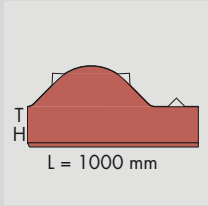
FINISHING COMPONENTS FOR TTCOPPO®

Accessories finishing components for Ttcoppo® serie of finishing elements for TTCOPPO® roof panel, able to satisfy all design requirements.

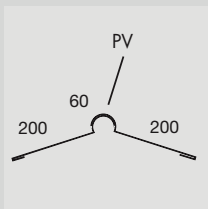
**MATERIAL:** 0.5 mm thick prepainted steel or on demand  
0.6 mm thick prepainted aluminium or on demand  
0.6 mm thick natural copper.

**COLOUR:** Standard tile red, other colours on demand

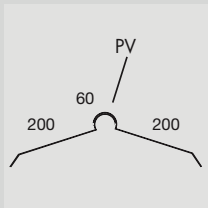
**DIMENSIONS:** Standard length 3 m.



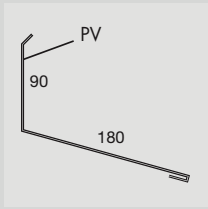
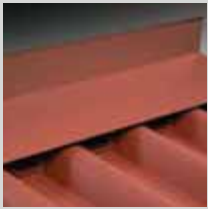
**SILUETTE**  
Closing element for the head of TTCOPPO® panels up to 50 mm thick, which ensures excellent aesthetic appearance and better protection. Available in prepainted steel for 30, 40 and 50 mm thick panels. Different thicknesses on demand.



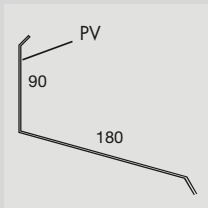
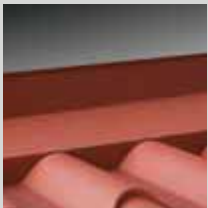
**SMOOTH RIDGE CAP**  
Double hinged element, without shaped fin.



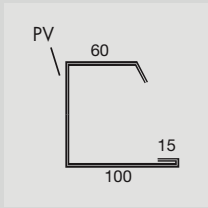
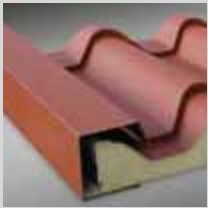
**SHAPED RIDGE**  
Double hinged ridge, shaped as the external panel profile.



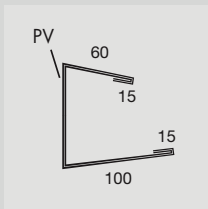
**FRONT FLASHING**  
To be used in case of joint between the roof made of panels and an existing wall, placed in frontal position.



**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 an 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

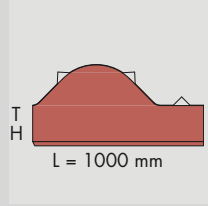
FINISHING COMPONENTS FOR TTONDA®, TTONDAFIBRO®

Serie of finishing elements for TTONDA® and TTONDAFIBRO® roof panel, able to satisfy all design requirements.

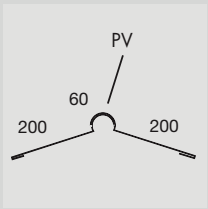
**MATERIAL:** 0.5 mm thick prepainted steel or on demand  
0.6 mm thick prepainted aluminium or on demand  
0.6 mm thick natural copper.

**COLOUR:** Standard white grey, other colours on demand.

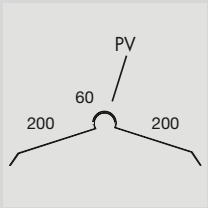
**DIMENSIONS:** Standard length 3 m.



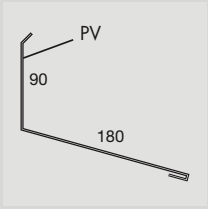
**SILUETTE**  
closing element for the head of TTONDA® and TTONDAFIBRO® panels up to 50 mm thick, which ensures excellent aesthetic appearance and better protection. Available in prepainted steel for 30, 40 and 50 mm thick panels. Different thicknesses on demand.



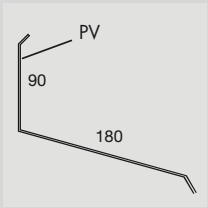
**SMOOTH RIDGE CAP**  
Double hinged element, without shaped fin.



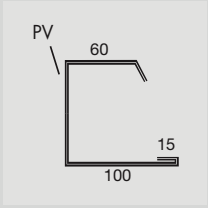
**SHAPED RIDGE**  
Double hinged ridge, shaped as the external panel profile.



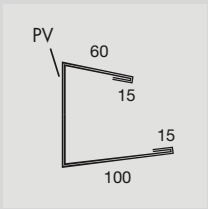
**FRONT FLASHING**  
To be used in case of joint between the roof made of panels and an existing wall, placed in frontal position.



**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 an 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.



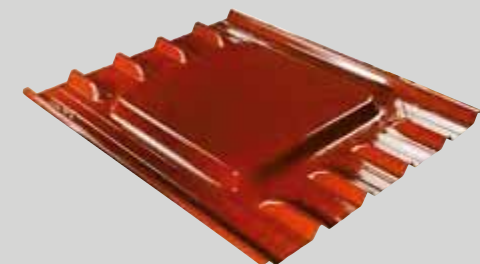
**TAIL FLASHING**  
To cover the upper edge of the panels.

Serie of finishing elements for lattonedil® 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



**OPENABLE ROOFLIGHT**  
It is a practical and solid model of window, useful for roofs with a attic 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 ISOCOPRE® 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 was designed to connect other technical elements with the ISOCOPRE® panels roof. 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 ISOCOPRE® 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.



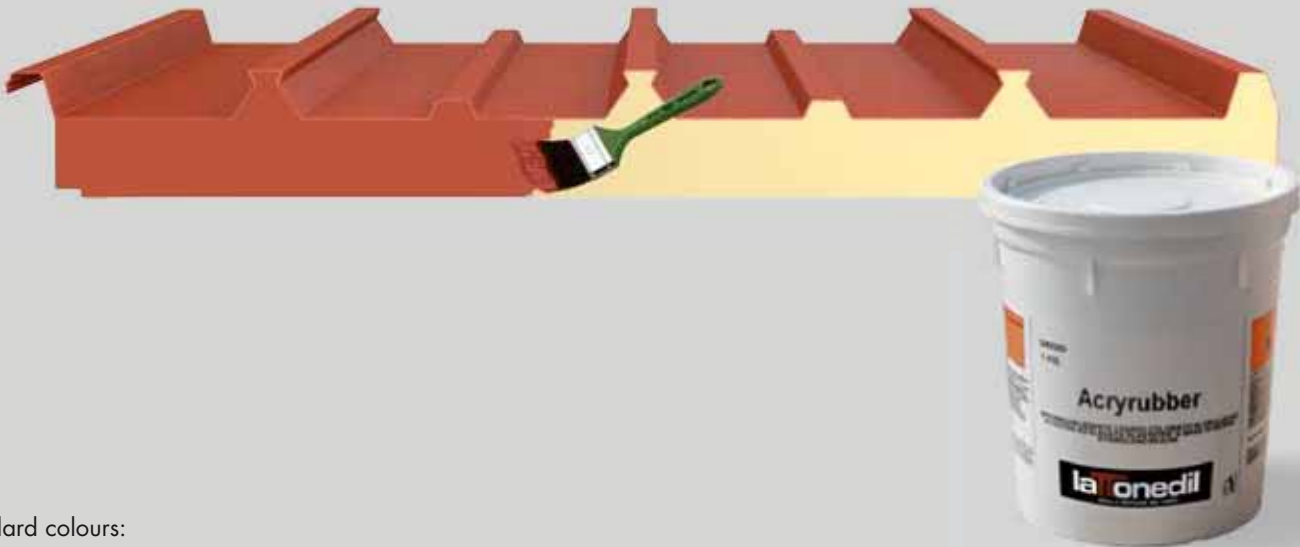
**PORTHOLE**  
The industrial building sector requires integrated systems and innovative products. The pre-installed porthole in ISOPAR® insulated panels, with sizes on demand and with the use of materials like unbreakable tempered crystal, double glass and polycarbonate is able to considerably optimize the design times and the installation costs. It is available for 30 to 60 mm thick panels.

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:

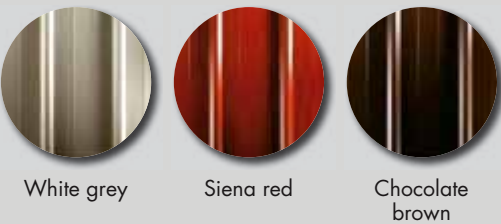
- Protect the polyurethane resins of the insulating panels from UV degradation;
- Quickly waterproof the metal panels joined with different insulating cores (polyurethane resins, mineral fibres) along the cutting surface, thus preventing harmful cracks and water infiltrations;
- Quickly seal the cutting and contact surface between metal-insulating cores 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 hues;
- Act as decorative-protective finish with very high covering properties, to apply on the insulating core or metal surface, even inside;
- Available in packs of 1 kg;
- kg = 1 sq.m. = approximately 10 linear meters of edge, for a 40 mm thick panel;

Decorative sealant along the cutting surface



Standard colours:







# LINEA VITA

ANTI-FALL SYSTEMS FOR LATTONEDIL® PRODUCTS

Lattonedil® offers a complete range of lifeline systems that can be adapted to the coating products available in this catalogue. Our lifeline systems are produced to avoid perforating the panel, thus ensuring greater water resistance in the hooking points of the anti-fall system.

Example of LINEA VITA hooking system for SOLARPAN® PLUS panels



We offer a complete range for any type of coating and need. Our technical office is available to formulate a detailed project according to your requests.

Plate suitable for TTCOPPO®



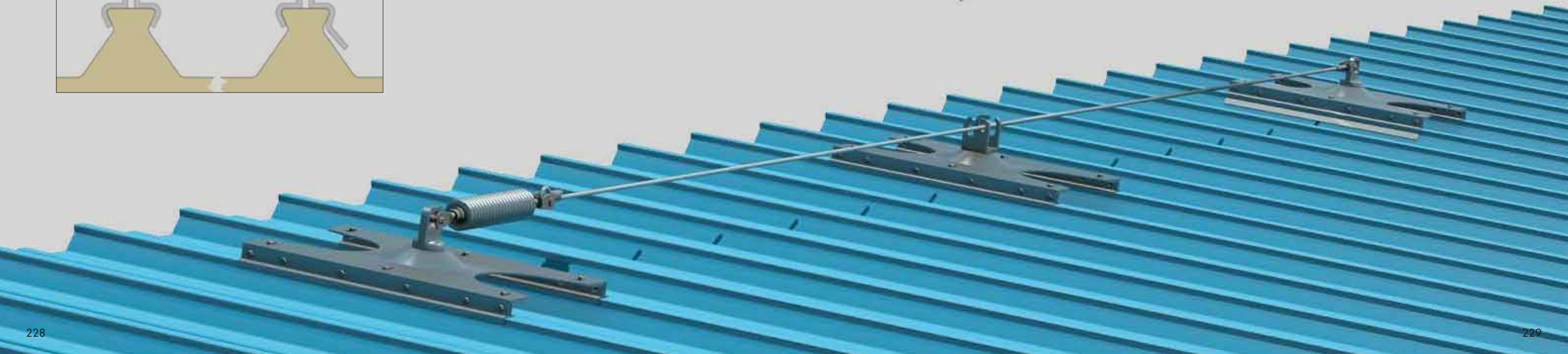
Plates that adapt to all Lattonedil® panels



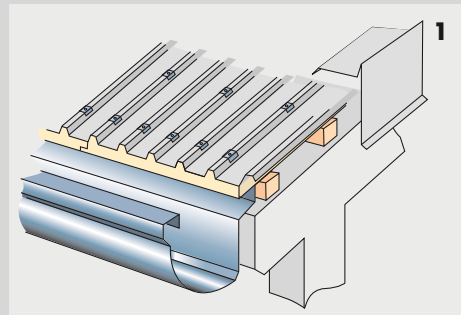
Plate for SOLARPAN® PLUS



Absorber



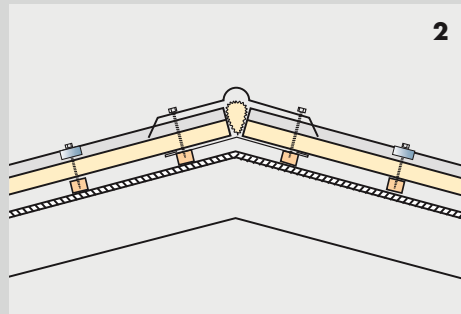




## CIVIL ROOFS

### 1) TWO REGULAR PITCHES

For this type of common roofs, the lattonedil 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 the 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 silhouette profiles is also recommended to protect the panel heads from atmospheric agents and guarantee roof durability.



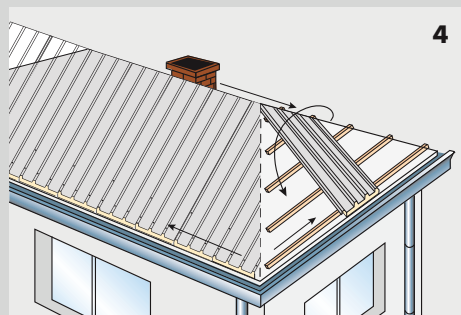
### 2) FOUR REGULAR PITCHES

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). By using this method the production of 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.



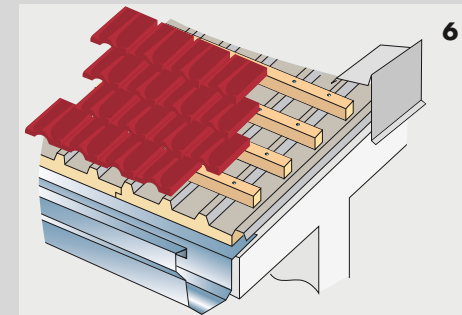
### 3) IRREGULAR PITCHES

Follow the indications described for the two cases above. The difference consists in the size 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. It 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

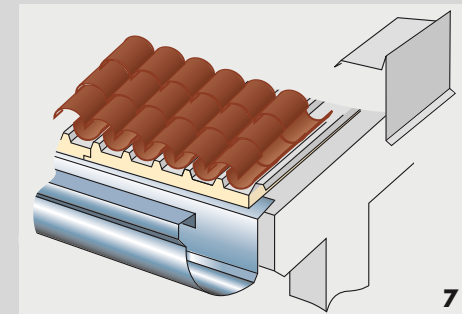
Thanks to its thermal insulation properties, the roof panel can also be used in brick roof systems, particularly as a sub-tile element. As regards the model, we recommend the use of a panel with the external ribbed metal facing and the internal facing made of roofing felt, to be applied directly to the slab. There are two recommended installation methods: either install the lattonedil 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 ISOCOPRE® 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 silhouette profile must be used also in this case.



## INDUSTRIAL ROOF

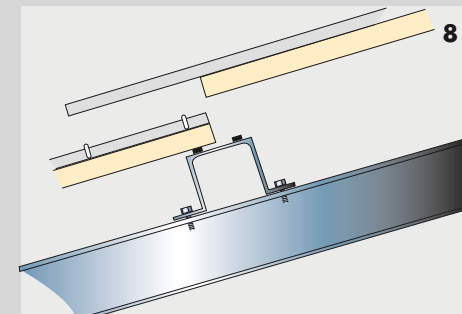
### 1) TWO PITCHES- STEEL STRUCTURE

For this type of architectural structure it is advisable to use roof panels with external 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 instructions for this type of work: apply a suitable linear seal lining on the panel joints or ask to lattonedil to apply it 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).



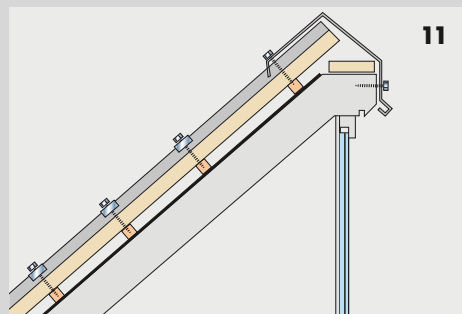
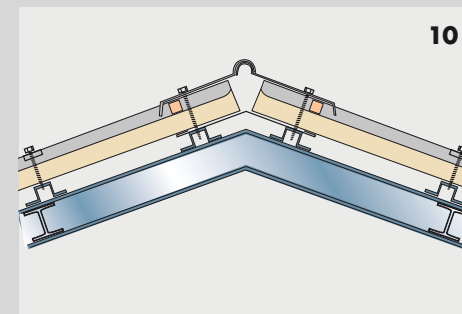
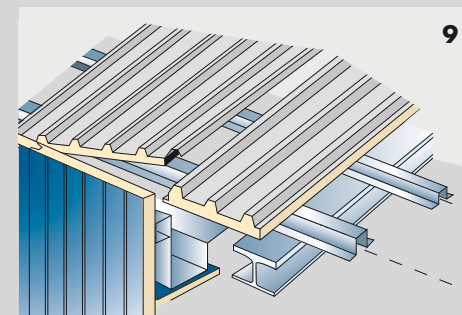
### 2) SHED ROOF

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 (which can be directly requested to lattonedil with the panels supply), according to the customer's design, and shaped to be combined with the ribbed panel (drawing 11).

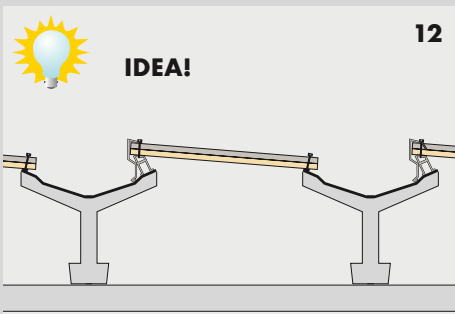


### 3) ROOF FOR PREFABRICATED STRUCTURE

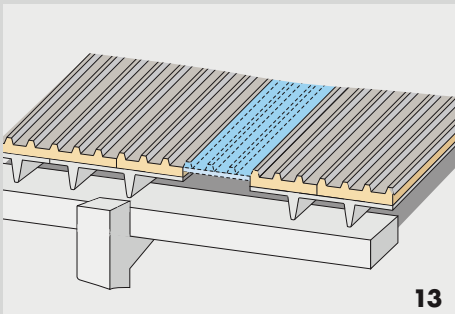
In the field of concrete prefabricated building construction the insulating panel can be used as an alternative to curved connection panels between "y" beams, with considerable savings (drawing 12) or to cover the whole roof, often in combination with fixed polycarbonate or glass-reinforced plastic rooflights. In the latter case, it may be necessary to bend the panel slightly to adapt them to the structure of the prefabricated building tiled roof. Therefore, it is possible to exploit the elastic characteristics of the panel components and adapt them 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 overlapping operations have to be carried out, as it frequently occurs 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.



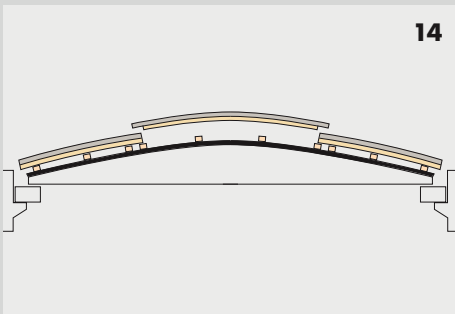




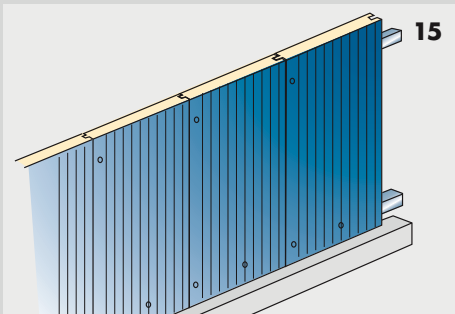
12



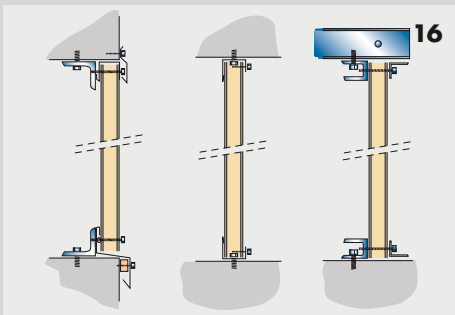
13



14



15



16

## EXTERNAL CLADDING

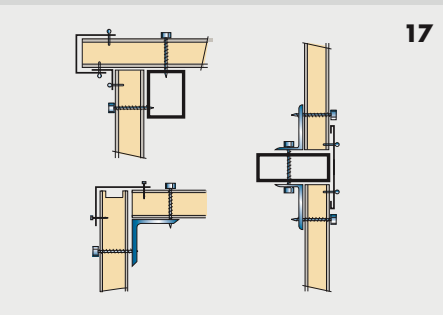
### 1) ASSEMBLY INSTRUCTIONS

The assembly of a wall made with ISOPAR® panels calls for 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 moreover, in proximity of end (external and internal) supports, it is suggested to apply a safety screw at the centre (drawing 15). Particular attention must be paid to the power of the electric screwdriver, because an excessive force towards the interior could scratch the panel external surface. Regardless of the panel thickness, the support structure must anyhow take into account horizontal currents located at a maximum distance of 3.5 m in case of possible cuts to perform during the installation, the edges 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

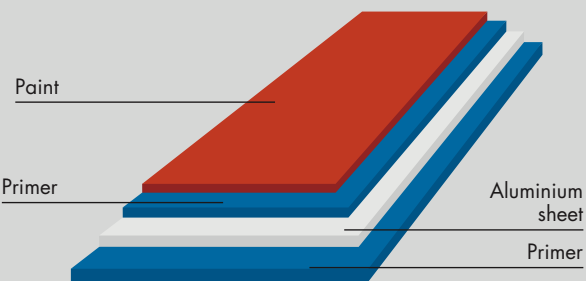
The use of the wall panel calls for a series of finishes that must be carried out in order to render the covering work functional and aesthetic. These finishes, made with prepainted steel or aluminium profiles (not necessarily of the same colour of the panel) are of two types. The first one includes support structural profiles, such as horizontal elements on the ground and on the 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 call for 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).



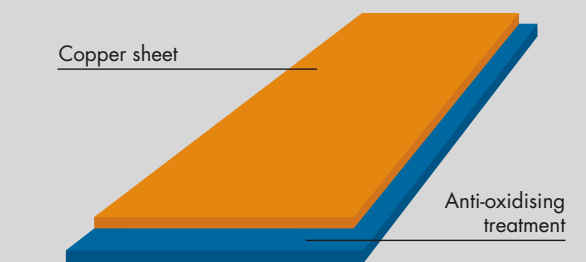
17

## METAL FACINGS



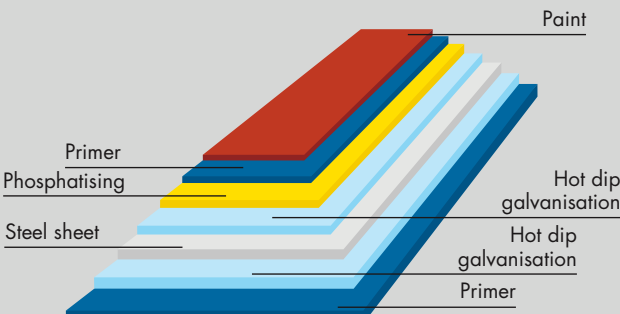
### ALUMINIUM

- 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.



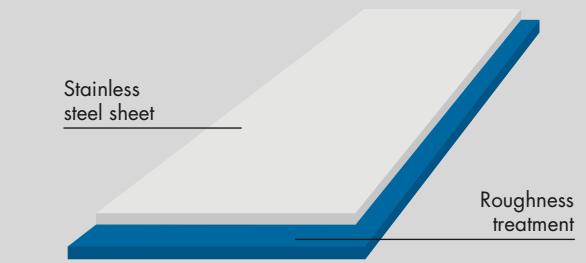
### COPPER

- 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) Phosphatisation 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 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 and, thus, they have better 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 respect to the plane of the supports.

- Reaction to fire: incombustibility, 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  $\lambda$ : 0.041 W/mK
- Permeability to water vapour: thanks to its fibre structure, rock wool is permeable to water vapour
- Watertightness: fibres have a permanent watertightness
- Non harmful to human health and the environment
- Resistance to microorganisms

### THERMAL INSULATION

It reduces 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 that causes the passage of heat. In other words, 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 expressed by the fact that the coefficient of transmission of sound power increases with the decreasing of the mass of the wall per area unit and the sound frequency.

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 (i.e. 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 to 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, starting from the heating period until the test component ceases to meet the criteria 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: understood as the ability of a material 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: understood 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 per 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 national registration is required, except for products for which there is a European standard, so with the requirement of EC 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 dated 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 smokes 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 not to let 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 maintain for a specified period “N” mechanical strength, to flames and hot gases, and 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 the 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 according to 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

### REFERENCE REGULATIONS

Obsolete Regulations  
Circular No. 91 of 14.09.1961  
D.M. of 30.11.1983  
D.P.R. n. 577 of 29.07.1982

### NEW STANDARDS

UNI EN 13501  
implemented in Italy by the D.M.16-02- 07  
UNI EN 1634-1 and (only until the entry into force of the EC marking) UNI 9723.





Certified company:  
UNI EN ISO 9001:2008  
certificate n° 4674



Certified quality system  
ISO 9001:2008



Certified quality system  
UNI EN ISO 9001:2008  
certificate No. 4674



Certificate of manufacturing conformity to EC quality standards.



Product certificate  
German standard



Product certificate  
German standard









Certified company:  
UNI EN ISO 9001:2008  
certificate no. 4674

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