

# PURICOMPACT



outdoor collection  
*technical manual*



PURICELLI

# Compact

outdoor collection

Compact laminates for outdoor use represent nowadays a worldwide well accepted and strong growing product in the facade industry. SUPER Compact for outdoor use is made of synthetic thermosetting resins. The balanced product can be always used both sides which display the same colour and same surface that can be made available with a matt and a scratch-resistant finish. As the perfect coat of a building, compact laminates are used for private and public objects. Due to approved strength panels are also well accepted as balcony claddings.

A specific feature of this product is its high resistance to UV radiation and all weather conditions, thanks to a special choice of raw materials and to a specific production process. This product is used for new buildings or for refurbishing purposes, with or without thermal insulation. Always refer to the local building industry regulations in force, prescribing application conditions for materials designed for outdoor use.



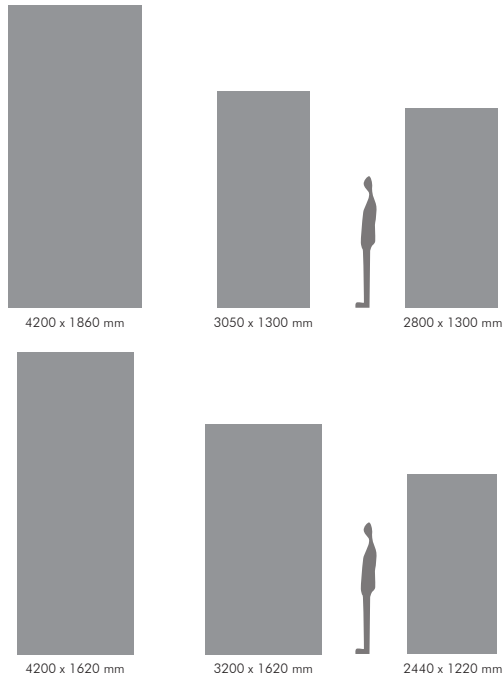
# Quality

Puricelli facade panels are manufactured in modern facilities, in compliance with the valid standards, according to the current state of the art. The operation of the production follows an environmental management system which fulfils the requirements of ISO 14001: 2004. We strive to minimize the environmental burden as low as possible through production, packaging and shipping. Each plate is checked technically and optically during the production run before it will be ready for shipment.

#### Note

If you have doubts about the statements in this brochure, please contact Puricelli or your distributor. For more information you can also refer to the Puricelli product brochure. Any information or products contained in this manual must be reviewed by the user and tested for their suitability for the particular use, or its special application. The circumstances and facts at site, such as climatic conditions, wind loads and local building regulations must be considered. We reserve the right to change specifications at any time without prior notice. The information contained in this brochure represents the current state of technic at the time of printing. As we continue to develop and improve our products continuously, the product details are subject to change over time. We strive to adhere to the highest ethical standards as we constantly strive to obtain vital resources for the future.

# Formats an finish



Puricelli Compact panels are available in the following size:

## Standard sizes

2800 x 1300 mm;  
3050 x 1300 mm;  
4200 x 1860 mm;

## Sizes on request

2440 x 1220 mm;  
3200 x 1620 mm;  
4200 x 1620 mm;

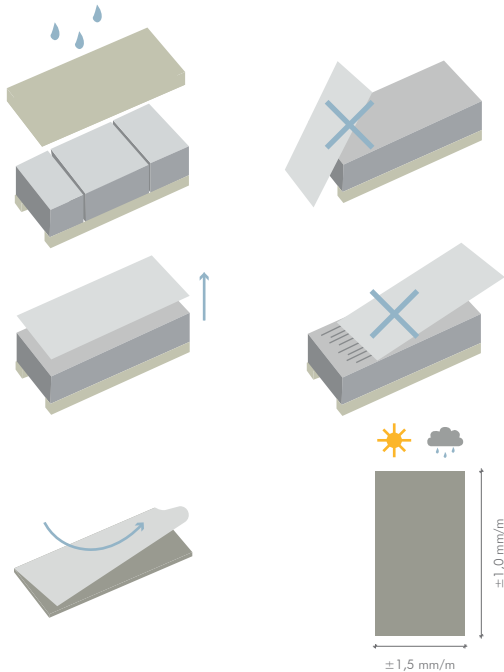
and in the following finishes:

NC\_Cera  
IS\_Pietra  
SN\_Sand  
FK\_Kristall  
YM\_Yosemite  
AR\_Ardesia

Thicknesses: 6, 8, 10, 12 mm and others.



## Transport and Storage



During transport and storage, the general processing recommendations for laminated boards has to be considered. Store sheltered outdoors on site and shield the protective film from solar radiation and other heat sources. In the meaning of transport regulations Puricelli is not classified as hazardous materials, a labeling is not required. Store horizontally on the pallet with a cover sheet. Ensure adequate ventilation. Standing water on plates or film must be avoided otherwise panels maybe bend.

Lift the sheets straight up. Do not slide the sheets against each other. Sheets have to be covered.

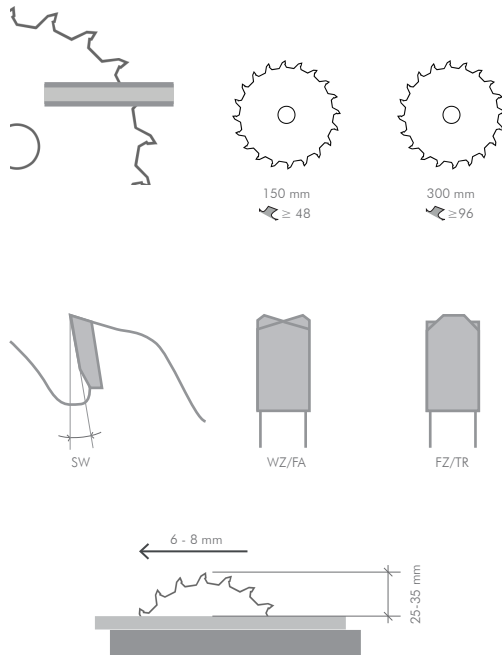
Puricelli panels change dimensions depending on humidity. A pre-conditioning of 72 hours on site is required. Shield the protective film from solar radiation and other heat sources.

The protective film should be removed from both sides simultaneously before installation otherwise sheet maybe bend.

Typical values for dimensional movement in the longitudinal and transverse direction due to extreme change in relative humidity.



# Sawing



To cut Puricelli panels use carbide-tipped saw blades. For long life we recommend to use diamond-tipped tools. The following tooth forms have proven:

alternating tooth chamfered (WZ/FA), trapezoidal/flat teeth (FZ/TR).

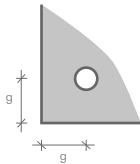
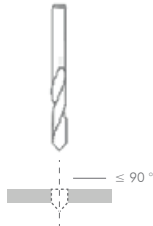
Cutting speed: 50 - 60 m/s, feed 0,02 - 0,04 mm/tooth. High cutting speed gives an excellent edge quality but reduces the service life of saw blades.

Feed speed depends on panel thickness, 6-8 m/min will give good results. Trimming cuts length and width side of at least 1 cm must be done.

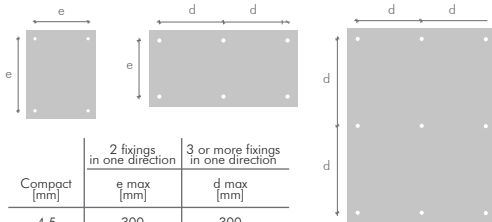
Saw blade projection: 25 -35 mm, the larger the supernatant of the saw blade is selected on the panel surface, the better the upper or worse the lower cut edge. When cutting Puricelli Compact with hand circular saw a guide rail has to be used. When sawing with jigsaws reworking of the edges is required. Inner cutting edges have to be rounded. Look for smooth feeding speed to avoid branding at the edges. All internal corners and square cut-outs must be rounded. Deburr edges with a file, sandpaper or hand router.



# Drilling



Compact [mm]	g [mm] min max
4,5	20-45
6	20-60
8	20-80
10	20-100



Compact [mm]	2 fixings in one direction		3 or more fixings in one direction	
	e max [mm]	d max [mm]	e max [mm]	d max [mm]
4,5	300	300	300	300
6	450	600	450	600
8	600	750	600	750
10	750	900	750	900

You can drill Puricelli Compact with hand drill, CNC or pillar drill HSS (high speed steel) or carbide drill bit.

Long spiral Type H drill point  $\le 90^\circ$ .

When drilling with hand drill use drill pad to avoid disruption (don't drill in emptiness).

VHM (solid carbide) cladding panels drill with centring point for HPL suitable for freehand drilling without backing, no outbreak.

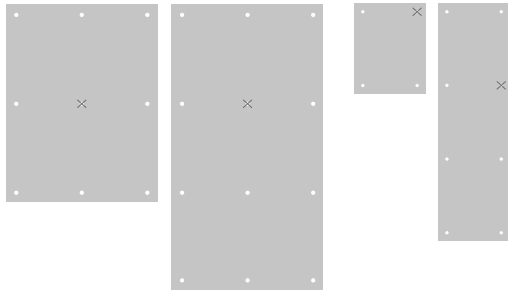
For centralised drilling of panel and aluminium substructure use step drill with stop ring for rivet fixing, spring drill device or centralise drill device. Minimum and maximum distance between panel edge and hole.

The maximum distance between fastening points depends on the thickness of Puricelli panel.

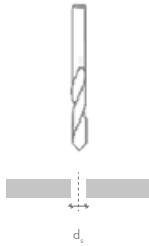
Fixing point should be the nearest (upper) fastening point to the middle of the sheet.

$\varnothing 5,3$  mm for facade screws 5,5 T20 on wood substructure

$\varnothing 5,1$  mm for rivet fixing 5/xxK14 on aluminium substructure



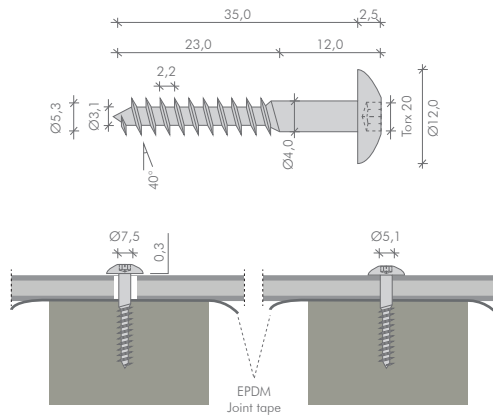
Sliding points guarantee that the different stretching between substructure and Puricelli will be compensated. Use fixing elements and drill diameters according to list below or similar. It is not enough to drill correct diameter for sliding points only, you also need correct fixing of rivets and/or screws. Diameter of sliding point depends on head and shaft diameter of rivet or screw.



	sliding point	$\varnothing d_s$ [mm]
Substructure	wood	7,5
	aluminium	8,5



# Fixing elements

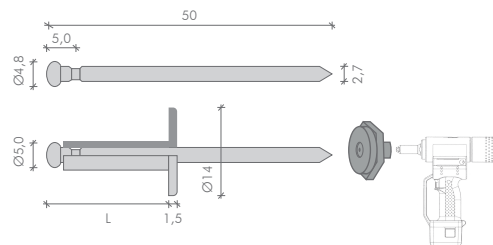


## STAINLESS STEEL SCREWS

To fix panels on wood substructure stainless steel screws have to be used. Choose diameter of screw head that it covers complete drill hole of sliding point in all positions. If screws are fixed with battery screwdriver turn back  $\frac{1}{4}$  turn to secure that sheet will be possible to slide without bending.

### NEVER FASTEN SCREWS TIGHTLY IN SLIDING POINTS

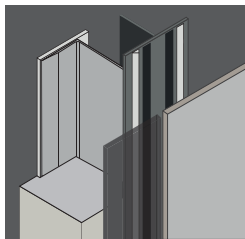
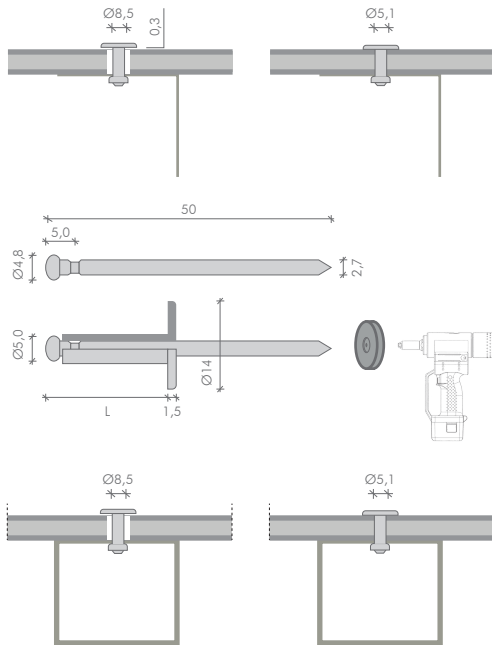
otherwise sheets will bend between screws.



## ALUMINUM RIVETS

To fix panels on aluminium substructure use aluminium rivets with stainless steel pin. Choose diameter of rivet head that it covers complete drill hole of sliding point in all positions.

Before setting of sliding points a mouth piece has to be mounted on riveting machine, it secures space of 0,3 mm between substructure and panel when rivet is set and guarantees that difference of expansion between substructure and panel can be



compensated in sliding points.  
Otherwise sliding points will not work and sheets will bend between riveting points.

### STAINLESS STEEL RIVETS

To fix panels on steel- and stainless steel substructure use stainless steel rivets with stainless steel pin (Niro/Niro).

Diameter of rivet head must cover complete drill hole of fixing and sliding points.

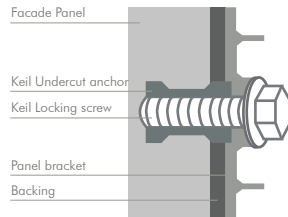
Before setting of sliding points a mouth piece has to be mounted on riveting machine, it secures space

of 0,3 mm between substructure and panel when rivet is set and guarantees that difference of expansion between substructure and panel can be compensated in sliding points. Otherwise sliding points will not work and sheets will bend between riveting points.

### GLUING-SYSTEM SIKA TACK®

Sika Tack®- Panel System is used for invisible fixing of Puricelli-panels and consists of 4 components products for substrate pre-treatment (activator, primer)

double-sided tape Sika Tack®- Panel mounting tape  
permanently elastic adhesive Sika Tack®- Panel  
With Sika Tack®- Panel System Compact-Panels

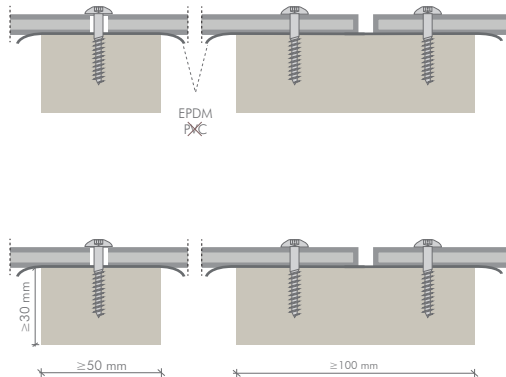


will be glued invisible on conventional substructures like aluminium or wood. Changes in length, due to temperature and moisture, between Puricelli-panels and substructure, will be compensated by Sika Tack®- Panel System. Sika Tack®- Panel System may only be used by trained and certified persons. To activate the guarantee for the system, a special protocol has to be prepared and at the end of realisation transmitted to the building contractor.

#### MOUNTING WITH UNDERCUT ANCHORS

With a plate thickness of at least 8 mm also undercut anchors can be used for invisible fixing. We are happy to assist in the selection.

# Wood Substructure



Wood is a renewable resource and is since ever used in house construction, it is also suitable as a substructure for back-ventilated facades if you care about a few points.

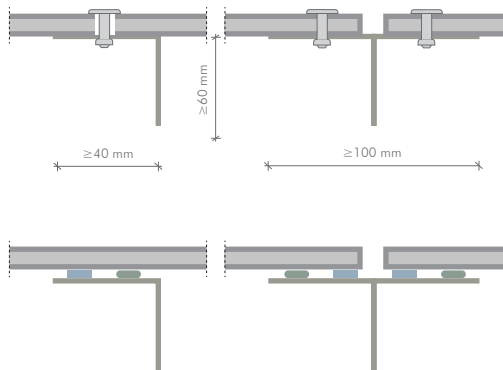
Generally standing moisture on the battens is not allowed. Persistent moisture must be prevented as well as to ensure appropriate wood preservative (fungus, rising damp, etc.). Rainwater entering the roof area must be prevented (corresponding roof overhang must be guaranteed).

The top layer of the substructure shall be vertical to ensure working ventilation.

Between Puricelli Compact and the vertical wooden slats an EPDM (no PVC) joint tape, min. 0,8 mm thickness, has to be installed. The overlap of the EPDM tape on the wooden slats should be min. 5mm.

For the support laths of the substructure use all sides planed slats according to DIN 4074, grade S10, max moisture content 15%.

# Aluminium Substructure



Aluminium substructures are mainly used for compact laminate facades.

Several producers on international markets offer a wide range of different systems. Compact panels always have to be ventilated, the profiles next to the panel have to be vertical to guarantee an optimal

ventilation. You can easily secure successful interaction between panels and substructure when you

care about following points:

- back ventilation should have min. 3 cm
- length of aluminium profiles should be max. 3 m
- fixing elements or system must be able to compensate expansion clearance between panel and substructure.

Between Puricelli Compact and the vertical aluminium profiles a PVC tape can be installed on the T-profiles to show a black gap between the panels (for rivet fixing only).

# Cleaning

Facades are exposed for decades all weather conditions and even with the best surface technology different particles will show their tracks on the panels.

Pollution by particulate matter over the years, as well as calcium deposits along the joints by acid rain spoil the entire look, often to abrasion come from vehicles, graffiti and other deliberate impurities. Many of these impurities can be removed easily. Clean your facade every 2-3 years, it will secure a perfect appearance and value retention of the building, the facade will thank you. To remove air contaminants use water with diluted soap and wipe dry using a soft cloth. Avoid other detergents since they can damage the UV film on the panel.

Remove calcium deposits with diluted lime remover. Test before on a sample not to damage the surface due to too high concentration.

Remove pencil drawings with soft eraser. Remove graffiti with Isopropanol.

Never use steel wool or abrasive detergents. Be careful with the rubbing pressure to avoid polishing and thus damaging the surface. Please ask your distributor to remove special impurity.

# Specifics

In rare cases, it may come to a sign-off of the substructure on the facade panel with rainscreen facades. This phenomenon is usually observed at sunrise or sunset and occurs in varied materials and not only on compact laminate. It shows the condensation on the facade panel in the field of the substructure profiles. Due to the mostly poor thermal conductivity of the substructure (aluminum, wood) the façade panels need some time longer to accommodate this range of ambient temperature. If the panel is colder than the ambient temperature and there is a rapid temperature rise, the plate is warmed up more quickly in the rear-ventilated area than in the region of the profiles. It makes no difference whether the plates glued, riveted or screwed, only the thermal conductivity of the panel and its thickness is crucial.

# Notes





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La storia del Gruppo Puricelli nasce nel 1948 per opera del Cav. Luigi Puricelli, tra i primi a intuire le potenzialità di sviluppo del laminato plastico. Da allora, Puricelli ha intrapreso un deciso percorso di crescita e internazionalizzazione.

Nel 1962 Puricelli costruisce la nuova fabbrica di Costa Masnaga (Lecco), dove tuttora hanno sede gli uffici direzionali del gruppo. Oggi, con una struttura industriale articolata in cinque insediamenti produttivi (in Italia, Grecia, Spagna e Tunisia), Puricelli è una delle più importanti realtà imprenditoriali attive nella produzione di laminati plastici decorativi, una multinazionale, ma con cuore e cervello Made in Italy.

Un'organizzazione e un servizio commerciale di prim'ordine, attento e capillare sul territorio, permettono all'azienda di penetrare in modo incisivo in nuove aree di mercato e di affrontare tutti i settori produttivi che richiedano elevati standard tecnologici e di affidabilità.

Un laboratorio tecnico all'avanguardia e un centro ricerca e sviluppo costantemente dedicato all'innovazione a tutto campo consentono a Puricelli di rispondere con tempestività e competenza alle richieste specifiche della clientela.

The story of the Puricelli Group dates back to 1948, the year it was founded by Cav. Luigi Puricelli, who was one of the first to realise the development potential of plastic laminate. Since then, Puricelli has expanded and its market is now international.

In 1962, Puricelli built a new factory in Costa Masnaga, Lecco, where the group's management offices are still located. Today, with five production facilities (in Italy, Greece, Spain and Tunisia), its industrial set-up has made it one of the leading businesses in the decorative plastic laminates sector - a multinational whose head and heart, however, remain consummately Italian.

Its first-rate organisation and sales service, attentive and widespread across the country, enables the company to incisively penetrate new market areas and operate in all production sectors that call for high technological standards and reliability.

Its state-of-the-art technical lab and research and development centre that investigates all kinds of innovative possibilities ensure that Puricelli can meet the specific demands of its clients promptly and with great expertise.

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