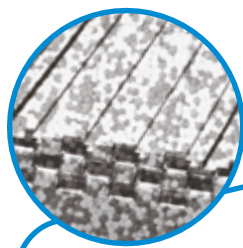
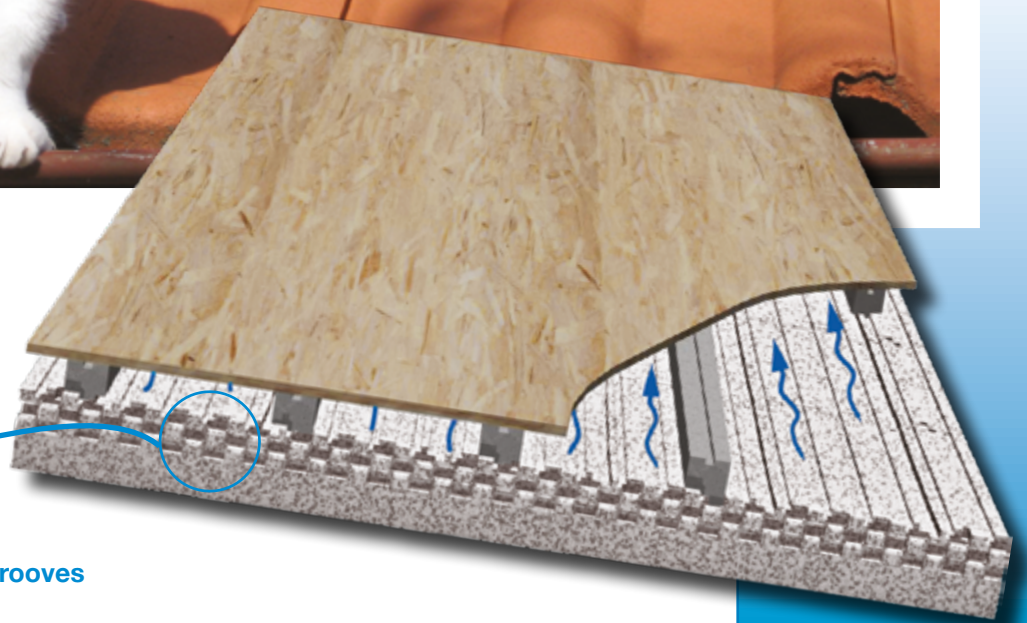


And the roof is no longer hot to the touch



Condensate drain grooves



Ventilated roof panels with condensate drain grooves

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System for the construction of ventilated and insulated roofs for new structures and renovations.



Innovation: the Ventus grooves

1. CONDENSATE COLLECTION FUNCTION

On the side facing up, the Ventus insulating panel has a series of small grooves which must be positioned from top to bottom when laying. These grooves have the important purpose of collecting and conveying to the gutter below any condensation formed in the ventilation chamber.

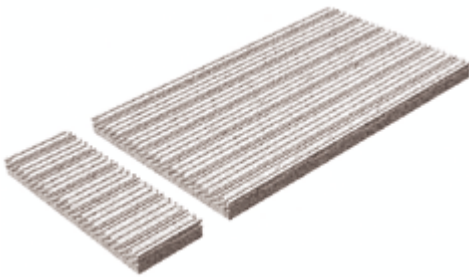


2. GRIP FUNCTION FOR CONCRETE

The Ventus insulating panel is optimal as underfloor insulation or for roofs capable of receiving the casting from the upper screed as the grooves have the function of creating and guaranteeing a mechanical connection between Ventus and the screed, thus avoiding movements and slipping of the concrete slab due to vibrations attributable to traffic or seismic activity.

The Ventus System

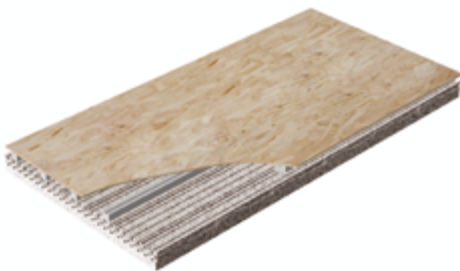
Ventus basic element:



Moulded element in white-black sintered expanded polystyrene (EPS) with excellent thermal insulation and vapour permeability characteristics. Unique of its kind, Ventus is made with the particular groove shape that allows ventilation, collection and downward channeling of any condensation that may form. Furthermore, the grooves, if the casting is performed directly, allow optimum anchoring of the concrete, giving the roof both insulation and mass.

The element is supplied in 120 x 40 cm panels equipped with attachment anchors and is available in a variety of thicknesses of EPS to give the necessary insulation to the roof. The elements can be used both in roofs and in sub-floor slabs.

Ventus + OSB:



Ventus + OSB fixed directly

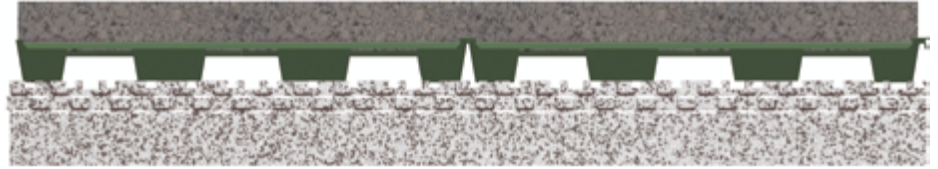
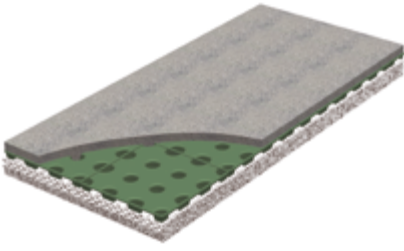


Ventus + OSB fixed with battens

Pre-assembled system consisting of the basic Ventus element on which an OSB panel is placed with the function of supporting the roof covering. Ventus + OSB used to thermally insulate the roof and to make it ventilated. The insulation offered by the EPS allows, in winter, the attic rooms to be kept at comfortable temperatures while, in the summer, it provides natural ventilation that is created which promotes cooling. The OSB can be glued directly onto the Ventus surface or onto battens that allow the creation of ventilation channels whose height can vary depending on the various ventilation requirements.

The Ventus + OSB panels are available with different EPS thicknesses for various thermal insulation requirements.

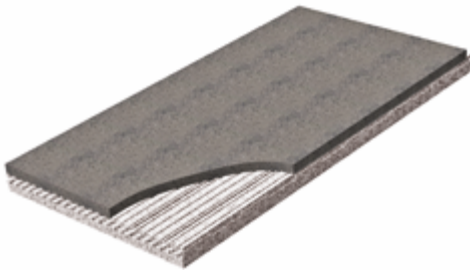
Ventus + Windi:



System consisting of the Ventus element on which the Windi system is placed. Windi is a polypropylene element with a height of 5 and 10 cm equipped with support feet which, positioned above Ventus, creates a ventilation chamber. The Windi element is designed to receive the concrete casting which forms a mass capable of conferring thermal inertia to the roof. Ventus is available in a variety of thicknesses of EPS to provide the necessary thermal insulation to the roof.

The Ventus and Windi elements are supplied loose and must be assembled at the final location before the concrete casting is performed on site.

Ventus + Concrete:



System consisting of the Ventus element with upper concrete slab. The particular shape of Ventus allows better adhesion of the casting and the roof is both thermally insulated and has a high thermal inertia. Ventus is available in a variety of thicknesses of EPS to provide the necessary thermal insulation to the roof. The concrete will be cast on site after having positioned the basic Ventus elements on the roof.

Installation

The supply of Ventus takes place, for the basic elements, in pieces of 120 x 40 cm, while for the pre-assembled elements, in panels of dimensions 120 x 240 cm. Thanks to its light weight, Ventus can also be unloaded from the truck by hand and can also be moved simply and safely. Even the installation phases are facilitated. The elements must be arranged over the roof, whether it is made of wood, concrete or masonry, and their position can be corrected directly by hand, further speeding up the work.

The Ventus panels must be placed side by side and worked according to the needs and characteristics of the commissioned panel.

Ventus Base Element: lay the elements side by side, position the desired upper cover.

Ventus + OSB: lay the panels side by side, spread out a waterproofing sheath and proceed with the desired upper covering.

Ventus + Windi: lay the basic elements of Ventus side by side, position the Windi system proceeding in horizontal rows, starting from left to right and from top to bottom. Any piping can be placed underneath the Windi. Arrange the appropriate reinforcements and proceed with the concrete casting using a double loop pump and first filling the cups of the Windi element, finish by positioning the desired upper cover.

Ventus + Concrete : lay the Ventus base elements side by side, position the appropriate reinforcements and proceed with the construction of the concrete slab.



Specification item

Creation of thermally insulated roofing package equipped with a ventilation chamber performed with the use of preassembled panels of the VENTUS® type by Pontarolo Engineering S.p.A., consisting of an OSB support with a thickness of 9, 12, 15, 18 mm, glued to an EPS 100 (or 150) element of the Twinpor type with a thickness of 64, 94, 124, 184 mm by means of battens in EPS of variable height, according to the design request.

The EPS panels, 2400x1200 mm in size, are hammered at the head and equipped with dedicated anchors along the short sides, consisting of connecting teeth attached with interference elements, capable of avoiding the seepage of water between one panel and the next. The upper surface of the EPS has special groove shapes which allow collection and evacuation of the condensate.

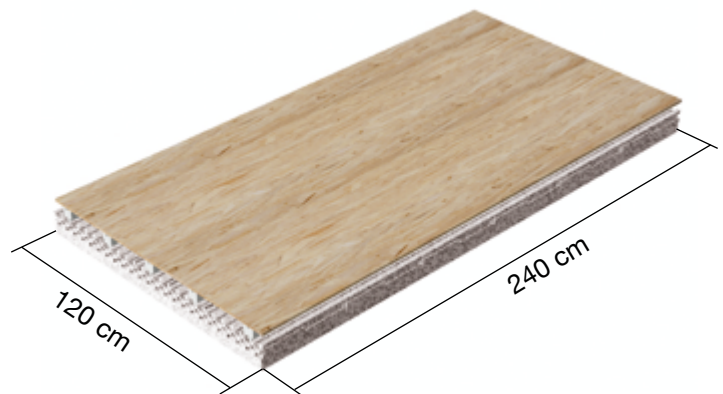
The panels will be laid with the condensate evacuation grooves placed in the direction of the roof pitch such as to guarantee correct outflow of the condensate itself.

Technical Datasheet

Ventus is made to order according to customer requirements. The panels can be supplied with different combinations and thicknesses to meet the design needs and the characteristics of the intervention to be performed.



Element	Height	Eps	Declared thermal resistance	Trasmittance
VENTUS BASIC ELEMENT 120 X 40	6,4 cm	100	1,90 m ² K/W	0,516 W/m ² K
		150	2,05 m ² K/W	0,484 W/m ² K
	9,4 cm	100	2,85 m ² K/W	0,351 W/m ² K
		150	3,00 m ² K/W	0,330 W/m ² K
	12,4 cm	100	3,75 m ² K/W	0,266 W/m ² K
		150	4,00 m ² K/W	0,250 W/m ² K
18,4 cm	100	5,55 m ² K/W	0,179 W/m ² K	
	150	5,90 m ² K/W	0,168 W/m ² K	
VENTILATION CHANNELS	0 cm			
	4 cm			
	6 cm			
	8 cm			
	10 cm			
OSB PANEL	0,9 cm			
	1,2 cm			
	1,8 cm			
WINDI	5 cm			
	10 cm			



* Values refer to compressive strength, expressed in kPa

Assistance

Our Energy Experts and our Technical Team are at your disposal to provide you with advice in choosing the insulation values and with assistance for the Ventus installation operations.

For any information, please contact us at the e-mail address:
assistenza@pontarolo.com.