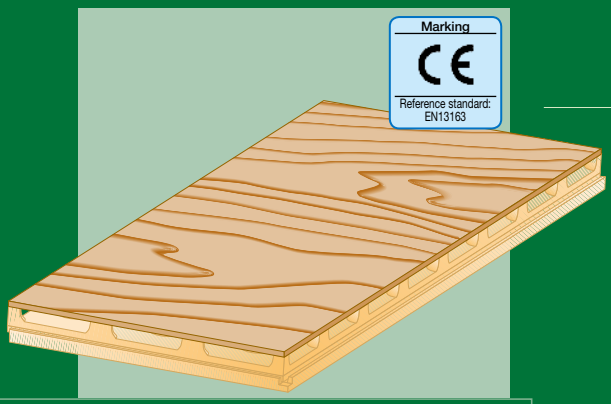
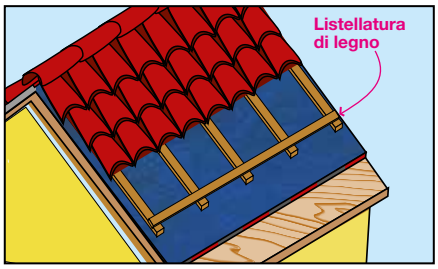


WINDEX

**LARGE COMPOSITE PANEL
FOR VENTILATED AND INSULATED ROOF SYSTEMS
MADE OF MOULDED SINTERED SELF-EXTINGUISHING PSE
AND SELF-EXTINGUISHING WOOD (OSB)**

GRANTS *LEED* CREDITS

1 PROBLEMA

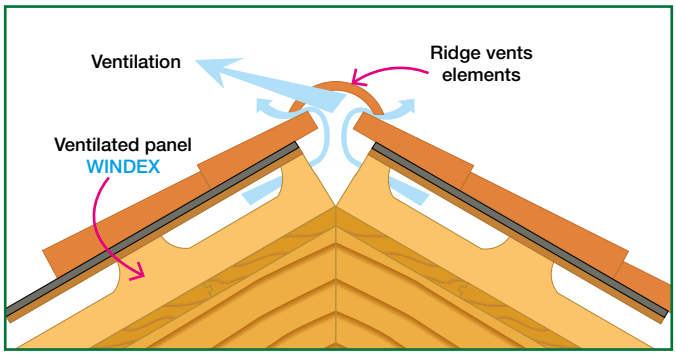


HOW TO REDUCE ASSEMBLY OPERATIONS AND THERMAL BRIDGES ON A VENTILATED ROOF

The assembly of a ventilated roof is a long and laborious process and classic assembly with wood battens resting on the floor causes thermal bridges.

2 SOLUCIÓN

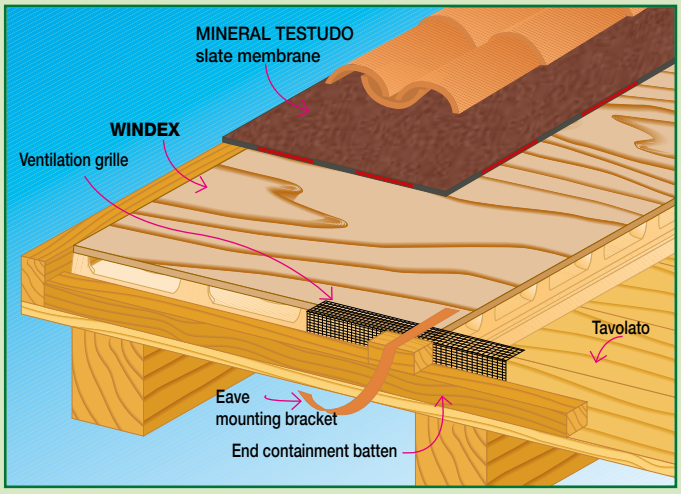
The insulating and ventilating **WINDEX** panel, made of moulded sintered polystyrene, is marked by its simplicity to install, since it only needs a ratchet tooth in the eaves equal to the thickness of the insulating material and, on the edges, a lateral plinth the same height as the panel to be applied.
It offers the possibility to install both the layer of thermal insulation and the ventilation in a single application, as well as the pre-coupled OSB panel, which constitutes a single support layer of the covering, resistant to foot traffic during the roof application process. The layer of ventilation allows the thermal behaviour of the rooms below the roof to be improved, removing excessive heat in summer and constituting a layer of stationary, hence insulating, air in winter (as shown by experimental research performed by the Department of Architecture of the University of Venice).



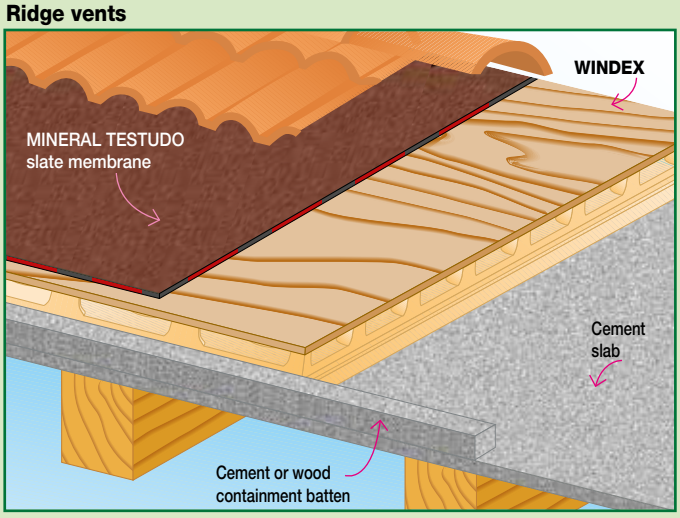
The **WINDEX** panel also prevents the formation of condensation and mould due to thermal bridges, problems that damage both the insulating material and the other layers of the roof. In fact, there are no thermal bridges owing to the rabbet on the four sides and the fact that application takes place straight onto the floor without wood battens.
Its **large size (240x120 cm)** makes application quicker and guarantees greater insulation continuity.
The ventilation is enhanced by the shape of the panel. In fact, the presence of small elements supporting the OSB, shaped to prevent air stagnation areas, creates a very free ventilation chamber within which the air moves more quickly.
Special care must be taken in creating the ridge, in order to allow air from the pitches to be let out effectively.

DETAILS

Lateral and end containment battens

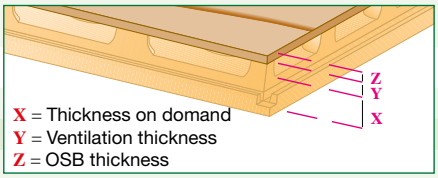


Ridge vents



CARATTERISTICHE TECNICHE

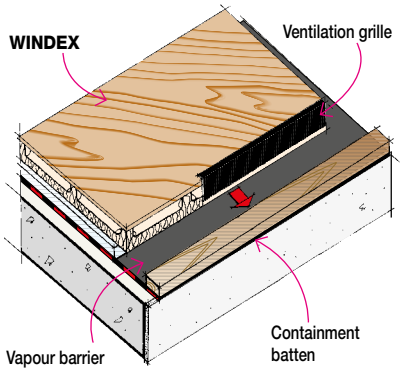
	Standard	WINDEX	
Specific insulation properties			
Intended uses		- Thermal insulation for building ThIB -	
Designation code	**EN 13163**	EPS - EN EPS - EN 13163 - T1 - DS(N)2 - BS(200) - TR 150 - CS(10)150	
Compressive strength at 10% compression	**EN 826**	≥150 KPa [CS(10)150]	
Dimensional stability 48 h at 23°C at 90% R.H.	**EN 1604**	±0,2% [DS(N)2]	
Bending strength	**EN 12089**	≥200 KPa [BS200]	
Thermal conductivity λ_D	**EN 12667**	0.033 W/mK	
Vapour permeability	**EN 12086**	0.018 mg/Pahm	
Reaction to fire	**EN 13501-1**	Euroclasse E	
Specific properties of the OSB panel			
Thermal resistance R_D	**EN 826**	0.100 m²K/W	
Specific properties of the WINDEX panel			
Panel size		240×120 cm	
OSB panel thickness (Z)		1.2 cm	
Ventilation thickness (Y)		4.0 cm	
T2 insulation thickness (X)		**6.0 cm**	**8.0 cm**
Total thickness		11.2 cm	13.2 cm
Total thermal resistance R_D (*)		2.15 m²K/W	2.74 m²K/W



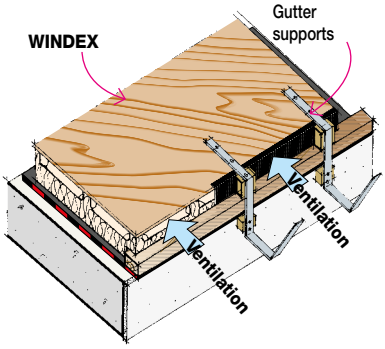
(*) Heat calculation in compliance with EN-ISO 6946 obtained using ANIT PAN software rel. 4.0

METHOD OF USE

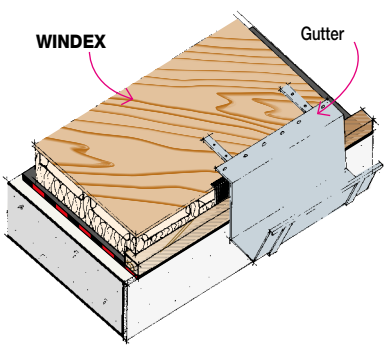
1. Positioning of ventilation grille



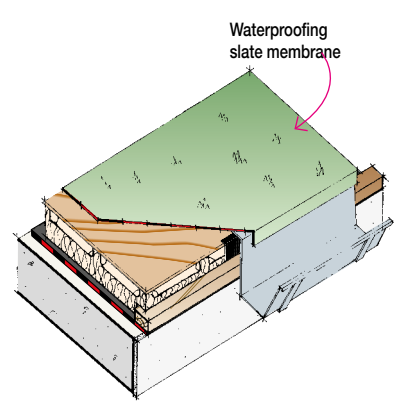
2. Fastening gutter supports



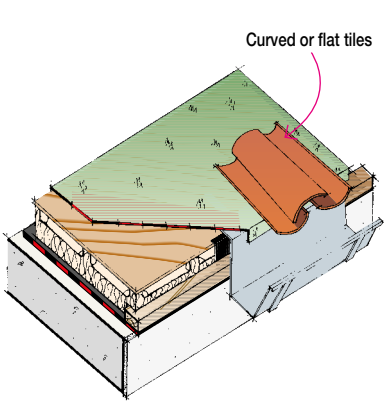
3. Applying gutter



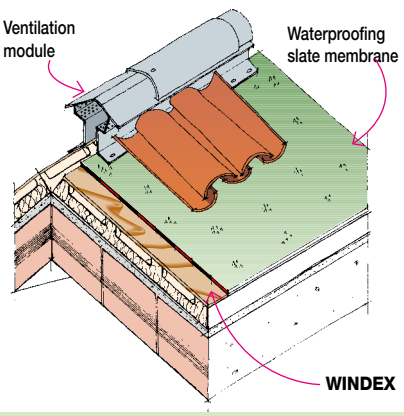
4. Applying waterproofing membrane



5. Applying curved tile or flat tile covering



6. Detail of ridge



• FOR ANY FURTHER INFORMATION OR ADVICE ON PARTICULAR APPLICATIONS, CONTACT OUR TECHNICAL OFFICE • IN ORDER TO CORRECTLY USE OUR PRODUCTS, REFER TO INDEX TECHNICAL SPECIFICATIONS •

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