



The world's thinnest and best performing insulation



CZ panel - Data sheet

CZ - Vacuum panel

Description



Vacuum panels usually consist of a pressed mineral component which is vacuum-packed by a special casing. The CZ panel is composed of a core mainly made of glass fiber and a special casing made of glass fiber fabric and aluminum, which makes it much more resistant to cut and erosion, compared to all other vacuum panels currently on the market. This special cover makes the panel impermeable to gas and steam and 3 times longer over time than a traditional insulation panel. Panels are deprived of the air inside them to obtain very low pressures: this process greatly reduces the mobility of the few air molecules remaining. In this way, the thermal conductivity decrease reaching values even lower than 0.002 W/mK

Reducing the air inside the panels the result is a reduction in energy transmission by thermal conduction, radiation and convection which is due to the high insulation standard of the product.

This process removes the air's thermal conductivity and the warm transfer obtaining a highly insulating product.

Where to place it

Cz panel is highly recommended in the construction field to insulate:

- Exterior walls (behind a false wall - total figure of thickness 3-3.5 cm)
- Interior walls (behind a false wall - total figure of thickness 2.5 cm)
- Terraces floors
- Ceiling/garage

Besides, CZ panels can be used in many different sectors as the refrigeration ones.

Advantages

The main advantages are the following:

- its high insulating performances (20 times higher than those of traditional insulation products) - its low energy costs
- its low depth
- its thermal performance are 3 times longer over the time than traditional insulation products
- it can be placed also on those buildings that must follow some restrictions related to the landscape they are located in, their history or to the environment laws of their Country

Technical data

Thicknesses available (others on request)	10-13-20-30 mm
Density	400 kg/m ³
Weight	4 kg/m ²
Compressive strength	140 - 180 kPa
Thermal Conductivity λ_D	0,002 W/mK *
Cold/heat resistance	da -50 a +90°C
Resistance to steam	1688 μ +/- 253 **
Fire resistance	class A2 fl -S1***
Specific heat	1000 J/kgK
Standard formats (in mm) (others on request)	1000x550 600x550 350x550 350x250 1000x350 550x350 250x350 150x350 + special format 50 x 350; 2 pieces can cover the distance between the two spacers placed under the structure where they can be placed using the 5 cm panels. On packages of 3 or 3.5 cm thick, Nanofelt is the best solution to be placed under the structure

Thickness (mm)	λ_D W/mK	Rd m ² K/W	Ud W/m ² K
CZ 10 (10mm)	0,002	5,00	0,20
CZ 13 (13mm)		6,50	0,15
CZ 20 (20mm)		10,00	0,10
CZ 30 (30mm)		15,00	0,07

Test run by CMR institute (Vicenza -ACCREDIA) - Test report no. 1497-1-19 . (This high value guarantees the maintenance of the thermal performance of the panel as there is no loss of vacuum).

*** Test run by Istituto Giordano (ACCREDIA) - Test report no. 366625; 366626; 366627; 366628

CAM certification according to ISO 14021 - Certified by SGS

Restrictions

It is highly recommended not to use sharp objects on the ISOLCORE CZ panel and not to cut it. Moreover, it is necessary to pay attention to the way it is handled on the building site and on the way it is transported since the product's characteristics may be compromised.

Warning: read carefully the installation manual and the data sheet before placing the product.

This data sheet replaces and cancels any previous version. The data and information contained herein are representative of typical material characteristics and correspond to the best of our present knowledge and belief. However, no liability and no recourse to New Zealand Company S.R.L. can arise from them. It is the responsibility of the user to verify the suitability of the product for his specific use, assuming all responsibility inherent in and deriving from the use of the product itself. Our technicians are at your disposal for information, clarifications and questions on the use and processing of our products. Updated information sheets are available on the website www.isolcore.com or can be requested from our offices.

Rev. del 24/04/2021

