

ISOLCORE[®]

The world's thinnest and best performing insulation



// THE THERMAL INSULATION REVOLUTION HAS BEGUN ISOLCORE PANEL CZ IS THE WORLD'S NO. 1



ADHERED OUTER WALL
ONLY 3.5 CM THICK



VENTILATED OUTER WALL
ONLY 5.5 CM THICK



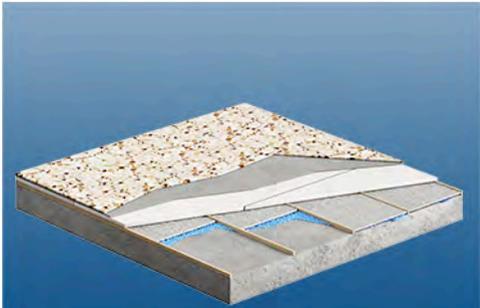
INTERIOR WALL IN STUDS
ONLY 3 CM THICK



CONCRETE DECK WITH CZ
BETWEEN WOODEN PROFILES



TIMBER DECK WITH CZ
BETWEEN TIMBER PROFILES



INSULATION UNDER SUBFLOOR
OR FLOATING FLOOR



- 1) LOW THICKNESS
(1CM CZ = 17 CM EP;
1CM CZ = 7.5 CM AEROGEL)
- 2) 2000% INSULATING
- 3) LAMBDA: 0.002 W/MK
- 4) FIRE REACTION CLASS: A2 S1
- 5) CONSUMPTION SAVINGS UP TO 60%
- 6) RESISTANT TO HAILSTORMS,
TORNADOES AND HITTINGS

The CZ Isolcore panel re-defines the standards bringing thermal insulation values to the highest level using the lowest thickness. Indeed, 1 cm of our CZ corresponds to 17 cm of EPS.

// CZ PANEL DESCRIPTION



The CZ VIP (Vacuum Insulated Panels) consist of a pressed mineral component, vacuum-packed by a special casing. This panel is composed of a core mainly made of glass fibre and aluminium fabric cover which makes it much more resistant to cutting and erosion than all other vacuum insulated panels currently on the market. This special film makes it impermeable to gas and vapour, preserving performance up to 3 times longer than other traditional insulation panels.

The CZ panels are deprived of the air inside them until very low pressures are obtained: this process reduces the mobility of the few air molecules remained, decreasing thermal conductivity which reaches values even lower than 0.002 W/mK.

Its high insulating capacity results in a reduction of energy transmission by thermal conduction, radiation and convection. This process suppresses both the thermal conductivity of air and the heat transfer. The result is a highly insulating material.

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	from -50 to +90°C
Resistenza to steam	1688 μ +/- 253 **
Fire resistance	Category A2 fl -S1***
Specific heat	1000 J/kgK
Standard format (In mm) (also on demand)	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 3.5cm thick, Nanofelt is the best solution to be placed under the structur.

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

*Value certified by CMR laboratory (ACCREDIA). Thermal resistance and thermal conductivity tested using the hot plate method according to UNI EN 12667:2002: tests performed on several tests (by Ist. Giordano and CMR). The declared thermal conductivity value complies with UNI EN 10456:2008.

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

***Test performed by the Istituto Giordano (ACCREDIA) - Test Report No. 3666625; 366626;366627;366628

CAM certificate (ISO 14021) ensured by SGS

// THE ADVANTAGES OF ISOLCORE CZ INSULATION PANELS ARE:



THEIR SMALL FOOTPRINT (1 CM THICK) ON THE WALL AND ON THE CEILING IT IS INSTALLED BEHIND A 1.2 CM PLASTERBOARD OR FIBRE CEMENT SHEET (OR OTHER PANELS) THEIR TOTAL THICKNESS OF INSULATION PACKAGE + FINISH FROM (ONLY 2.6 CM)



NO COST FOR ALTERING THE SILLS, THE ELECTRICITY CABLES, THE GAS PIPES NO NEED TO REMOVE AIR CONDITIONERS



THE FAST IMPLEMENTATION OF THE JOB



THEIR EXCELLENT FIRE REACTION CLASS (A2 S1)



THEIR RESISTANCE TO HEAVY IMPACTS AND HAILSTORMS



IDEAL FOR BUILDINGS SUBJECTED TO LANDSCAPE, HISTORICAL AND ENVIRONMENTAL RESTRICTIONS



A DOUBLE INSULATION COMPARED TO THE TRADITIONAL 10 CM MINERAL WOOL ONE OFFERED BY COMPETITORS



IMPROVEMENT OF AT LEAST 2-3 ENERGY CLASSES WITH ONLY 1CM THICKNESS OF CZ



DURATION OF THERMAL PERFORMANCE 3 TIMES HIGHER THAN THAT OF TRADITIONAL INSULATION MATERIALS



APPLICATION POSSIBILITIES ON INTERIOR WALLS, CEILINGS, FLOORS, WITHOUT LOSING VALUABLE INTERIOR SPACE.



THEY CAN ALSO BE APPLIED ON ROOFS WITH NO NEED TO MODIFY EAVES LINES



10 TIMES SMALLER STORAGE SPACE THAN A 10 CM OF EPS PANEL

// DESCRIPTION INSULATING FELT - NANOFELT



Nanofelt is nanotechnology felt made of aerogel with excellent insulation performances. Aerogel is a thousand times less dense than glass and three times heavier than air. It withstands very high temperatures and is an excellent thermal insulator. Its extremely low thermal conductivity, flexibility, resistance to compression, hydrophobicity, breathability and ease of use make Nanofelt one of the best-performing insulators on the market.



Available thicknesses	10 mm (from 15 to 50 mm)
Available sizes	>Rotolo 30 mq (h 1,5m x 20m) >Pannello 0,5 mq (1m x 0,5m)
Density	200 (+/- 10%) Kg/m ³
Thermal conductivity	0 Kg/m ²
Compressive strength	55 al 10%-100 al 20% KPa
Thermal conductivity	0,016 W/mK
Hot/cold resistance	from -30 to +300° C
Resistance to water vapour (μ)	13
Fire reaction class	B s1 d0
Thermal resistance R	0,625 m ² ·K/W (10mm)
Specific heat	1.000 J/kgK
Short-term partial immersion water absorption term (Wp)	0 Kg/m ²

// INSTALLATION METHOD



EXTERIOR WALLS

It is placed behind a false wall made of fibre cement or of gypsum fibre. The total thickness is about 3cm (3.5 cm including the levelling and the colour)



INTERIOR WALLS

You need just the CZ panel (1 cm) for the best thermal insulation with the lowest thickness (equal to 20 cm of rock wool) to be placed behind a false wall made of fibre cement. The total thickness is about 2 cm (2.5 cm including the levelling and the colour



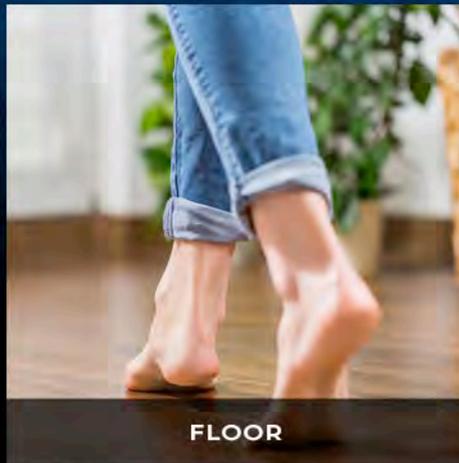
ATTICS AND CEILINGS

Ideal for flats placed on the top floor of a building or for the attics without giving up precious cm of height.



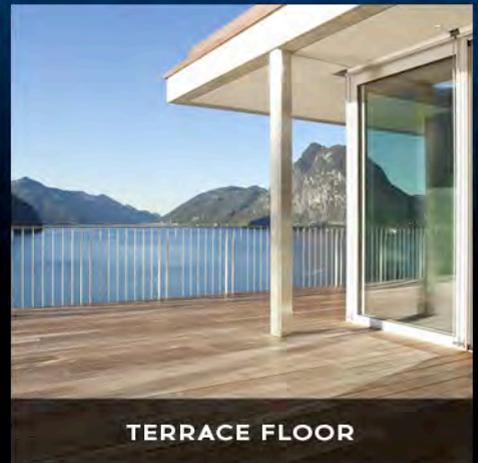
ROOFS

Easier and quicker installation than classical insulation panels. No gutter lines, dormers or flashings need to be changed, no project required. Ideal for constrained areas. Discover the Installation solutions.



FLOOR

Ideal for the insulation of flats situated on the first floor of a building or for houses with underfloor heating that need excellent insulation without having problems with the minimum living heights regulations that need to be observed.

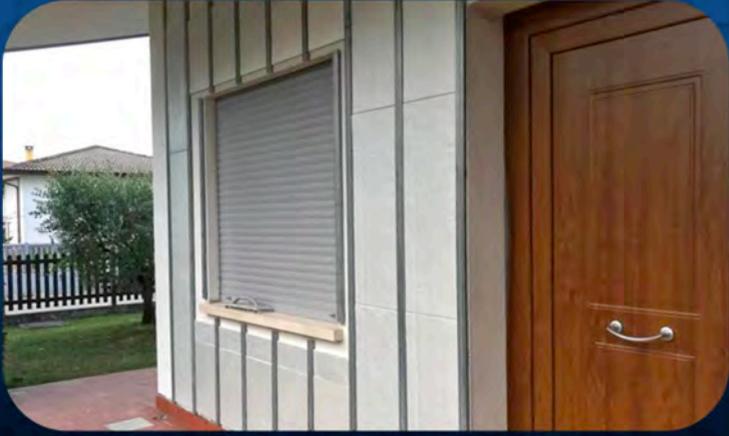


TERRACE FLOOR

You don't need to reduce the height of the parapets that otherwise might no longer be compliant.

// WHY CHOOSING ISOLCORE CZ PANELS?

- YOU WILL GET A THERMAL INSULATION NEVER SEEN (17 CM OF EPS = 1 CM OF CZ PANEL)
- YOU WILL OFTEN AVOID COSTS FOR MODIFYING SILL THRESHOLDS, POWER CABLES, GAS PIPES, AIR CONDITIONER, ETC.
- THE DURATION OF THE INSTALLATION WILL BE FAST
- YOU WILL HAVE ALL THE BENEFITS OF A VENTILATED WALL, INCLUDING RESISTANCE TO HAIL OR HITTINGS
- AN AIR CHAMBER THAT INCREASES THERMAL AND ACOUSTIC INSULATION
- AN INCREASE UP TO 2-3 ENERGY CLASSES (ALSO FOR INSULATION ON INTERIOR WALLS)
- YOU WILL FEEL SAFETY THANKS TO THE OUTSTANDING FIRE REACTION CLASS (A2)
- YOU WILL ENJOY AN INSULATION SYSTEM WHOSE LENGHT OVER TIME IS LONGER THAN THE TRADITIONAL ONE



www.isolcore.com | info@isolcore.com



Authorised dealer:

