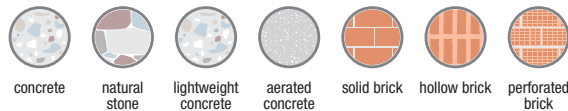


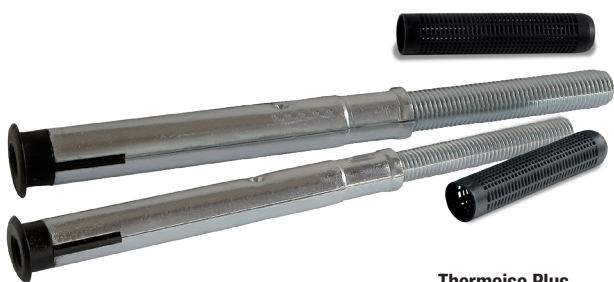
universal and frame fixings

# Vorpa Thermoiso Plus

Anchorage system for masonry coated by heat-insulating panels - ETICS



## products group



Thermoiso Plus

### Suitable for

- concrete
- natural stone
- lightweight concrete
- aerated concrete
- solid brick
- hollow brick
- perforated brick

### To fix

- blinds
- hinges
- rain descendants
- shelters
- curtains

## product information

- innovative anchorage system for masonry coated by heat-insulating panels and insulation materials.
- high mechanical strength even on panels lined with panels high thickness insulators.
- elimination of the so-called "thermal bridge" internal-external, ie prevents thermal dispersions in edifices, condensates and molds.
- Thermoiso Plus is universal, it can be used on any type of masonry, both full and perforated.
- quick, practical and intuitive application does not require any particulars equipment, only one drill-machine, a drill bit and a chemical cartridge
- drilling diameter reduced compared to conventional methodologies.
- the thermoiso system is convenient because it offers a solution to
- ideal fixation at a low cost. it is advisable to use an adhesive sealant on the back of the support ring to prevent any water infiltration in the panel.

### Fixing system consisting of:

1. 2mm thick wrought iron sheet structure and punched M12 and M16 threaded rod, welded to provide extra load resistance. Zinc coating electrolytic for corrosion protection.
2. The system allows applications on insulated walls with a thickness of 60 mm to 160 mm (205 mm on compact walls). It is also possible to use it on larger coats reducing the shear load; polyamide sleeve specially designed to accommodate M8, M10 or M12 accessories and Ø 6 to Ø12 wood screws. Avoids the contact of the threaded with the bearing structure in metal, eliminating the thermal bridge between the interior and exterior of the building.
3. The support ring gives a pleasant aesthetic finish and allows perfect alignment to the wall; special perforated sleeve for anchoring with injection resins on perforated walls (on compact masonry is not required)

### Hinges and general frames



Wall parabolic dishes



### Roofs and canopies



External air conditioners



### Rainwater pipes



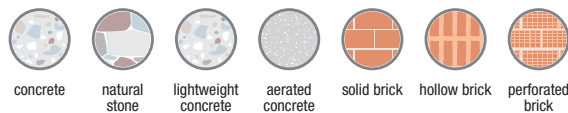
Wall heaters



universal and frame fixings

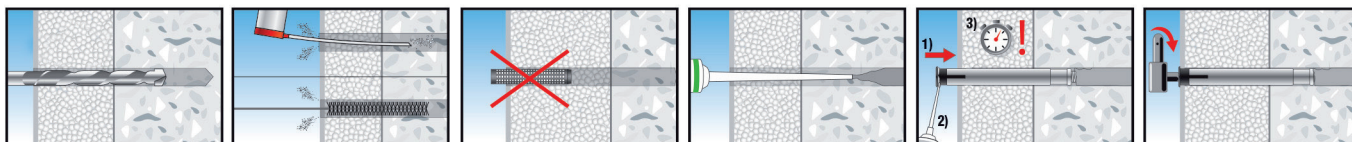
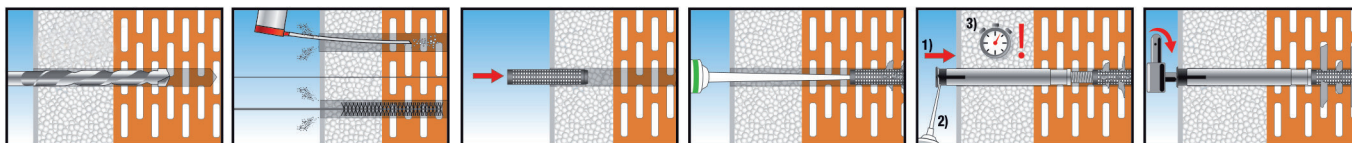
# Vorpa Thermoiso Plus

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## installation sequence

### Application sequence of Thermoiso Plus on hollow materials with perforated sleeve

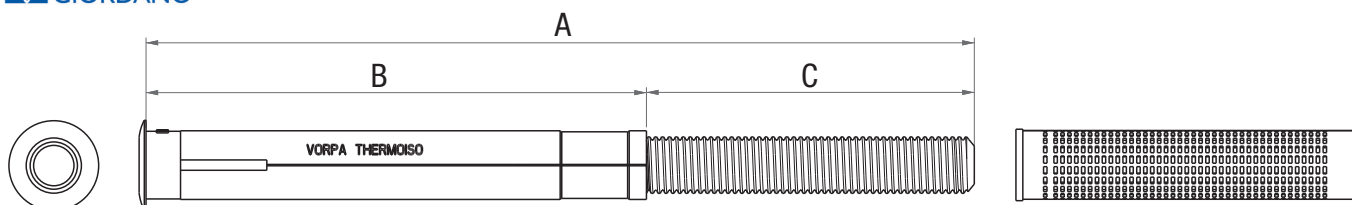


### Application sequence of Thermoiso Plus on solid materials

## product code and technical data

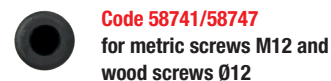
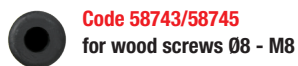


### Test report for thermal transmittance



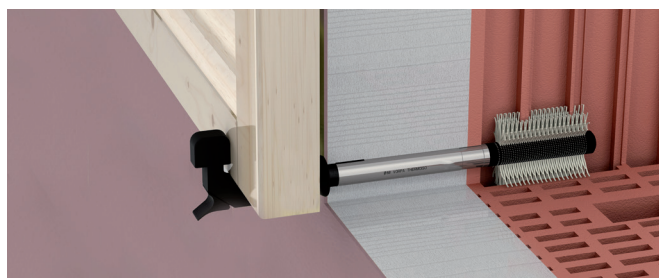
Code	Description	A) Total length mm	B) Max insulation panel thickness mm	C) Thread length mm	Ø Hole on hollow brick mm	Ø Hole on solid brick mm
58742	Thermoiso Plus Ø6 - Ø16x215 - 140	220	140	80	16	16
58744	Thermoiso Plus Ø6 - Ø16x260 - 185	260	185	125	16	16
58743	Thermoiso Plus Ø8 - Ø16x215 - 140	220	140	80	16	16
58745	Thermoiso Plus Ø8 - Ø16x260 - 185	260	185	125	16	16
58740	Thermoiso Plus M10 - Ø20x240 - 145	240	145 (160)*	95	20	20
58746	Thermoiso Plus M10 - Ø20x285 - 190	285	190 (205)*	135	20	20
58741	Thermoiso Plus M12 - Ø20x240 - 145	240	145 (160)*	95	20	20
58747	Thermoiso Plus M12 - Ø20x285 - 190	285	190 (205)*	135	20	20

\* On solid brick, the threaded bar can be inserted into the supporting masonry with a minimum depth of 75 mm. so you can consider a max thickness of insulation panel of 160 mm and 205 mm.



### Accessories

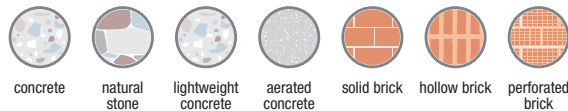
Hinges	Firm shutters	Threaded screw	Threaded bar	Wood screws	Double thread screw
M10 - M12	Ø6 - Ø7 - Ø8	M8 - M10 - M12	M8 - M10 - M12	Ø7 - Ø8 - Ø10 - Ø12	Ø6 - Ø8 - Ø10 - Ø12



universal and frame fixings

# Vorpa Thermoiso Plus

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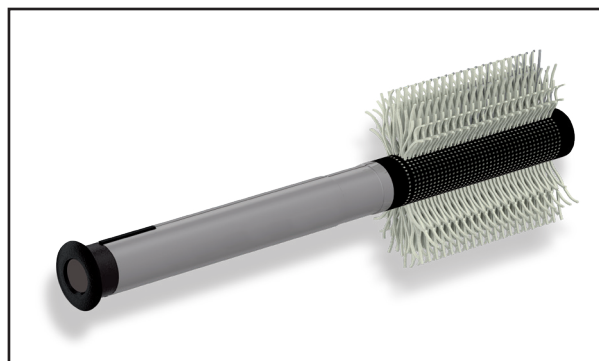
accessories

### Perforated sleeves CVX N

### Adhesive sealant



Code	Description	Content ml
58732	Perforated sleeve CVX N Ø16x85 Thermoiso Plus 6 e 8	
58731	Perforated sleeve CVX N Ø20x100 Thermoiso Plus M10 e M8	
1478	Adhesive sealant POLYMER 600 STEEL	290



### Chemical anchor PSF



ETAG 001-05  
non cracked concrete  
M8-M16

EAD 330076-00-0604  
masonry cat.b,c,w/w M6-M12

Test report nr. 276986 14/12/2010  
on wood substrates

Steel elements according to  
ETA-19/0496

Code	Description	Content ml	Mixer n°
1124	PSF 300	300	1
1002P	PSF 400	410	1
1005	Mixer		



Store upright

### Manual caulking gun



Code	Description	Suitable for
1009	Metal caulking gun 300 ml professional 2,5 kN	PSF 300
1101	Metal caulking gun 410 ml professional 2,5 kN	PSF 400

### Dust cleaning manual pump



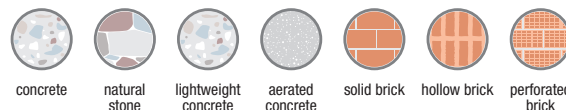
Code	Description
1072	Dust cleaning manual pump length mm. 225
1049	Cleaning brush holes Ø 10 - Ø 20 brush length mm 100
1059	Cleaning brush holes Ø 20 - Ø 30 brush length mm 100

### Cleaning brush



# Vorpa Thermoiso Plus

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technical data

## Thermoiso Plus - anchorage system for masonry coated by heat-insulating panels

Loads on concrete and solid material														
	Pull out 1)	Shear 2)											Minimum axial spacing	Edge distance
		Tfix 50 mm	Tfix 60 mm	Tfix 70 mm	Tfix 80 mm	Tfix 90 mm	Tfix 100 mm	Tfix 110 mm	Tfix 120 mm	Tfix 130 mm	Tfix 140 mm	Tfix 150 mm		
		Tamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm		
		daN	daN	daN	daN	daN	daN	daN	daN	daN	daN	daN	mm	mm
Thermoiso Plus 6-Ø16 - Wood screws Ø6x50	20													
Thermoiso Plus 6-Ø16 - Wood screws Ø6x60	50	60	56	53	50	48	46	44	42	28	25	20	80	80
Thermoiso Plus 6-Ø16 - Wood screws Ø7x85	80													
Thermoiso Plus 8-Ø16 - Hex.head screw Ø8x80	90	90	80	70	60	40	50	45	40	35	30	25	80	80
Thermoiso Plus M10-Ø20 - Metric hex.screw M10x80 <sup>3)</sup>	90													
Thermoiso Plus M12-Ø20 - Metric hex.screw M12x80 <sup>3)</sup>	90	165	155	145	135	125	117	110	105	95	80	65	100	100

1daN ≈ 1Kg

Tfix ≈ insulation panel thickness

universal and frame fixings

Load perforated brick (Poroton)														
	Pull out 1)	Shear 2)											Minimum axial spacing	Edge distance
		Tfix 50 mm	Tfix 60 mm	Tfix 70 mm	Tfix 80 mm	Tfix 90 mm	Tfix 100 mm	Tfix 110 mm	Tfix 120 mm	Tfix 130 mm	Tfix 140 mm	Tfix 150 mm		
		Tamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm	Vamm		
		daN	daN	daN	daN	daN	daN	daN	daN	daN	daN	daN	mm	mm
Thermoiso Plus 6-Ø16 - Wood screws Ø6x50	20													
Thermoiso Plus 6-Ø16 - Wood screws Ø6x60	50	60	56	53	50	48	46	44	42	28	25	20	80	80
Thermoiso Plus 6-Ø16 - Wood screws Ø7x85	65													
Thermoiso Plus 8-Ø16 - Hex.head screw Ø8x70	75	90	80	70	60	40	50	45	40	35	30	25	80	80
Thermoiso Plus M10-Ø20 - Metric hex.screw M10x80 <sup>3)</sup>	60													
Thermoiso Plus M12-Ø20 - Metric hex.screw M12x80 <sup>3)</sup>	60	120	112	105	97	90	85	80	75	70	62	45	100	100

1daN ≈ 1Kg

Tfix ≈ insulation panel thickness

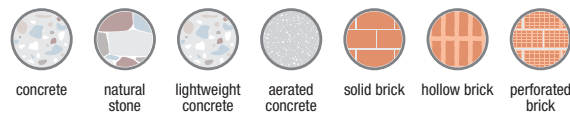


Test report available

1) Tensile loads include an appropriate safety coefficient

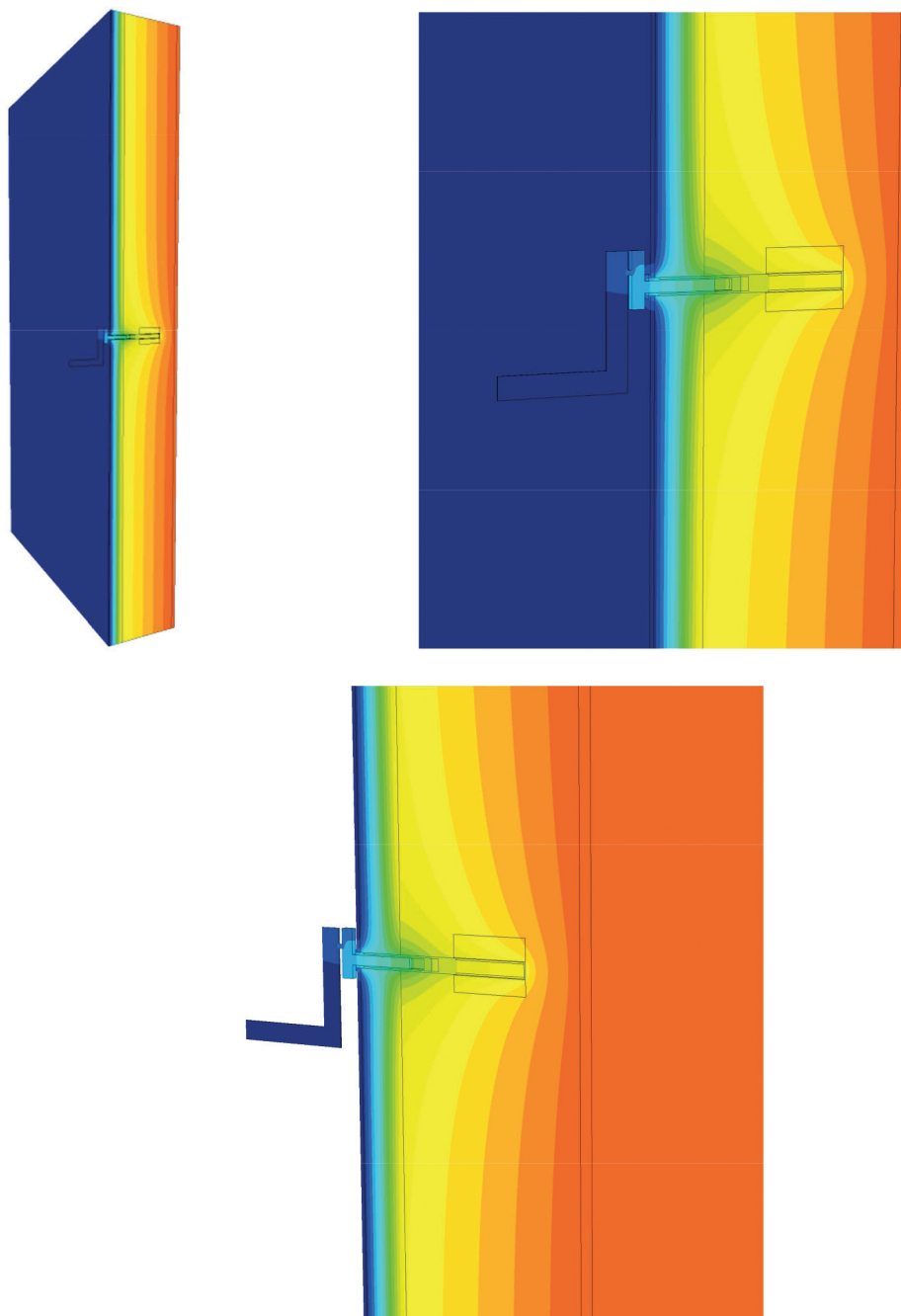
2) Cut-off loads are considered as a function of a maximum displacement of 3mm. For more information on higher displacement, contact Vorpa Technical Support.

3) Data refer to tests performed with UNI metric screws 5739 class 8.8 with insertion depth inside the 60 mm thermal insulation sleeve.



## EXTRACT FROM TEST REPORT N. 337967 OF 25/11/2016

Calculation of thermal transmittance for thermal insulation coat (Ethics) by means of the Finite Element Method, in accordance with UN in EN 6946: 2008 and UN and EN ISO 10211: 2008



The exact thermal transmittance value present at the anchorage system, in a masonry plastered internally and externally with a thickness of 15 and 5 mm respectively, with a total thickness of 330 mm (made of 250 mm thick brick elements and with 60 mm of thick external insulation panels) and thermal conductivity 0.034 W / (m · K); It results to be

$$X = 0,012 \text{ W/K}$$