

TRUTEK TIF – PINS FOR DYNAMIC INSTALLATION OF INSULATION BOARDS

Usage:

- dowels with a 60mm diameter plate are intended for fixing hard insulation boards, e.g. expanded polystyrene Styrofoam
- dowels with a diameter of 90mm are intended for fixing soft mineral wool insulation boards
- fixing thermal insulation boards in solid materials such as concrete, silicate block and solid brick

Advantages:

- quick assembly without drilling holes
- no requirement for electric for installation of pins to insulation panels
- dowel deposition using a gas nailer is a capacity of approx. 1000 seats per 1 gas load
- excellent insulating qualities with a flap closing the inside of the dowel



Pin Material:

TIF pins are made of PE-HD polyethylene and nails made of Zinc coated tempered carbon steel with core hardness of 56 - 59 HRC & Non-electrolytically applied zinc flake coating > 5 µm according to EN ISO 10683

Substrate material:

Concrete class min. C20 / 25 to C50 / 60, silicate blocks, solid brick

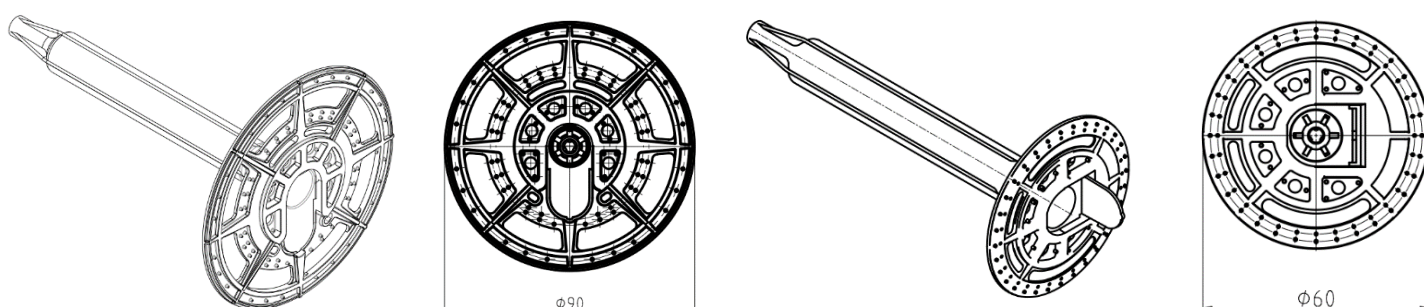


Method for marking TIF pins

Trutek Insulation Fastener	Disc plate size d [mm]	Insulation thickness or stud length L [mm]
TIF	60	080

Technical parameters of the TIF60 and TIF90 pins

Product Code	Substrate material	Insulation material	Pin color	Disc/Plate diameter	Insulation thickness	Nail diameter and length	Effective nail depth	Pin length
				d [mm]	t _{fix} [mm]	d _g x L _{g,red} [mm]	h _{ef} [mm]	L [mm]
TIF60080SP	concrete block silicate full brick	expanded polystyrene styrofoam	white	60	80	stepped nail 3,2/3,7x52	18-25	75
TIF60100SP					100			95
TIF60120SP					120			115
TIF60140SP					140			135
TIF60150SP					150			145
TIF60160SP					160			155
TIF60180SP					180			175
TIF60200SP					200			195
TIF90080SP	concrete block silicate full brick	mineral wool	black	90	80	stepped nail 3,2/3,7x52	18-25	80
TIF90100SP					100			100
TIF90120SP					120			120
TIF90140SP					140			140
TIF90150SP					150			150
TIF90160SP					160			160
TIF90180SP					180			180
TIF90200SP					200			200



Characteristics

	TIF90 / TIF60	
Resistance to pull-out failure in uncoated concrete	NR _{k,p} (KN)	0,75
Resistance to pull-out failure in coated concrete ¹	NR _{k,p} (KN)	0,50
Partial Safety Factor - fastener pull-out ²	γ _M	2,0
Resistance to Failure of Plastic Part	NR _{k,PI} (KN)	0,80
Partial Safety Factor - plastic part	γ _{MPI}	1,3
Minimum Spacing	S _{min} (mm)	200
Minimum Edge Distance	C _{min} (mm)	100
Minimum Thickness of Concrete	H _{min} (mm)	100

¹Applicable for concrete coated with plastering mortar (GP) of compressive strength category CS III according to EN998-1

²In the Absence of other national regulations

Displacement

	TIF90 / TIF60	
Tension Load	N (kn)	0,25
Displacement	δ ₀	0,90

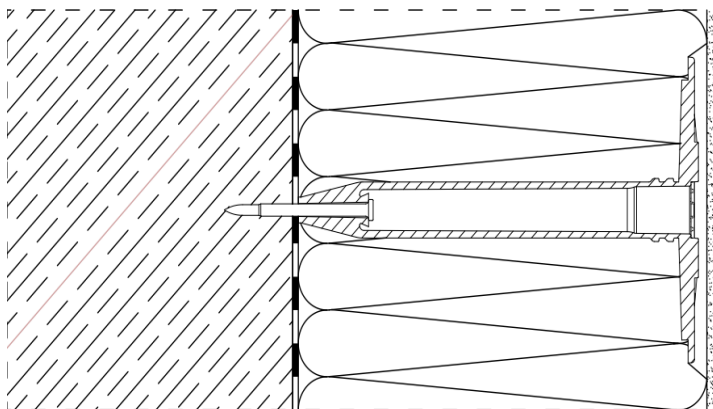
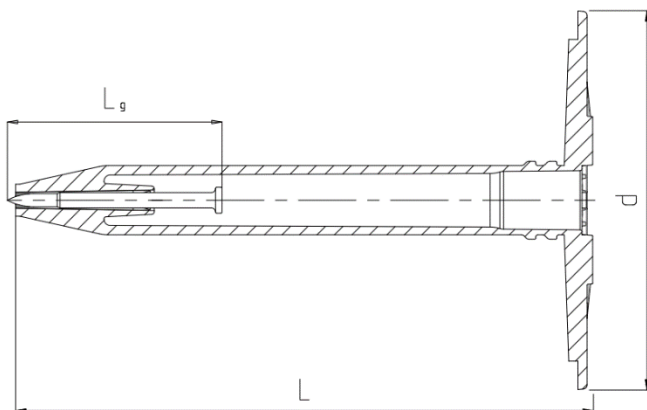
Plate Stiffness

	Diameter of the Plate (mm)	Load Resistance of the plate (mm)	Plate Stiffness c (kN/mm)
TIF90	90	1,7	0,1
TIF60	60	1,7	0,3

Point Thermal Transmittion

	Insulation Thickness h ₀ (mm)	Point Thermal Transmittance x (W/K)
TIF90	100	0,0004
	150	0,0003
	200	0,0003
TIF60	100	0,0003
	150	0,0003
	200	0,0002

Diagram of fixing TIF pins



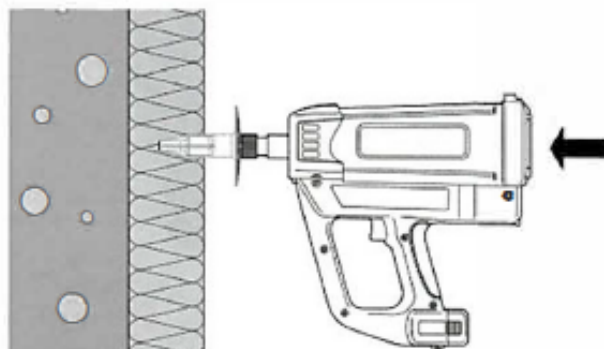
1)



Place the fastener on the guide of the fastening tool.

The fastening tool has to be properly prepared for operation, i.e. it has to be equipped with a charged battery and an appropriate gas cartridge.

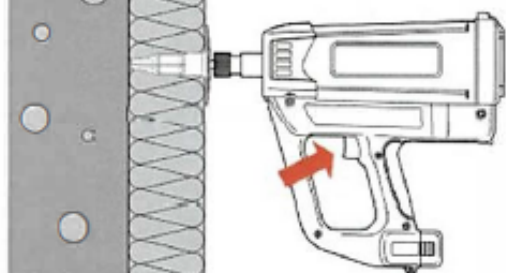
2)



Firmly press the fastening tool with the fastener placed on the guide, piercing the thermal insulation layer / board.

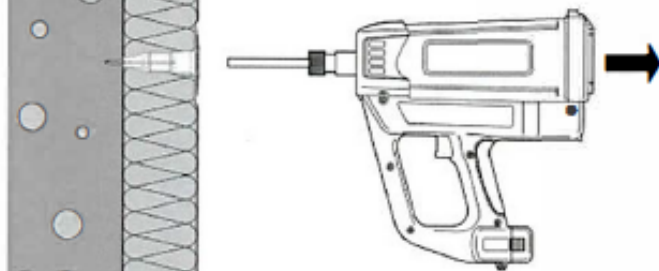
The fastener has to be inserted perpendicular to the substrate surface and fully sink into insulation material.

3)



Press the trigger when the fastening tool is fully pressed (to the stop).

4)



After fixing, withdraw the fastening tool and close the flap closing the inner space of the fastener.

The plate of properly fixed fastener should slightly sink into the insulation material.