HIF

Insulation fastener

Technical Datasheet

Update: Jan-23

HIF Insulation fastener

Anchor version

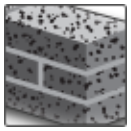
HIF

Benefits

- Especially for soft insulation material
- Plate diameter 90mm is ideal not to sink in the surface
- No slip-on plate must be used
- Drilling, hammering, done
- Speed due to less drilling effort
- With anchors up to 240mm insulation thickness the whole application is covered

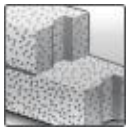
Base material

Concrete (non-cracked)



Solid brick

Hollow brick



Autoclaved aerated concrete

Other information

Fastening of insulation at the wall only

Basic loading data (for a single anchor)

All data in this section applies to:

- Correct setting (see setting instruction)
- No edge distance and spacing influence
- Base material as specified in table
- Minimum base material thickness or greater
- Tensile loads only
- Anchor and its plate is not exposed to UV-radiation for more than 6 weeks

Anchorage depth

Anchor			HIF
Overall plastic anchor embedment depth in the base material	$h_{nom} \geq$	[mm]	25

Recommended loads

Base material			HIF
Concrete ≥ C16/20	N_{Rec}	[kN]	0,03
Solid clay brick Mz 20 – 1,8 – NF	N_{Rec}	[kN]	0,03
Solid sand-lime brick KS 12 – 1,6 – 2DF	N_{Rec}	[kN]	0,03
Hollow clay brick c) Hlz 12 – 0,8 – 6DF	N_{Rec}	[kN]	0,025 b)
Hollow sand-lime brick c) KSL 12 – 1,4 – 3DF	N_{Rec}	[kN]	0,03
Autoclaved aerated concrete AAC 4	N_{Rec}	[kN]	0,015 b)

a) Recommended loads N_{rec} are based on a global safety factor γ = 3 to the characteristic resistance. Design resistance N_{Rd} can be derived by multiplying N_{rec} with a partial safety factor of γ_F = 1,5.

b) Drilling without hammer action

c) Thickness of web for Hlz ≥ 18mm, for KSL ≥ 25mm

Additional technical parameters

Point thermal transmittance

Base material			HIF
Point thermal transmittance	χ	[W/K]	0,000 a)

a) According EOTA Technical Report TR 025

Fire classification

According to	Classification
DIN 4102	B2
EN 13501-1	E-d2

Materials

Material quality

Part	Material
Anchor shaft and anchor plate	Polypropylene

Setting information

Installation temperature range:
0°C to +40°C

Service temperature range
Hilti HIF insulation fastener may be applied in the temperature ranges given below.

Service temperature range

Temperature range	Base material temperature	Maximum long term base material temperature	Maximum short term base material temperature
Temperature range	-40 °C to +40 °C	+24 °C	+40 °C

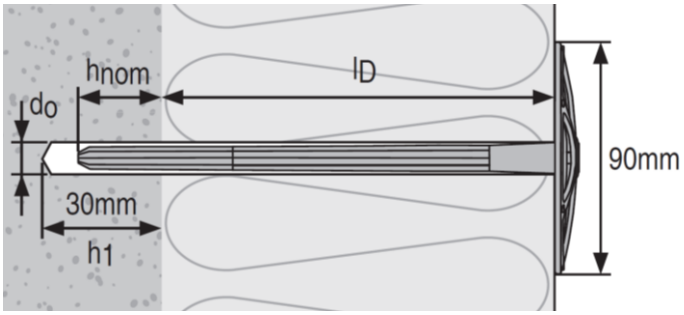
Maximum short term base material temperature
Short-term elevated base material temperatures are those that occur over brief intervals, e.g. because of diurnal cycling.

Maximum long term base material temperature
Long-term elevated base material temperatures are roughly constant over significant periods of time.

The anchor shall not be exposed to UV-radiation for more than 6 weeks

Setting details

HIF			60	80	100	120	140	160	180	200	220	240
Nominal diameter of drill bit	d_0	[mm]	8									
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	8,45									
Depth of drill hole	$h_1 \geq$	[mm]	$L_a - l_D + 5 \geq 30$mm									
Overall plastic anchor embedment depth in the base material	$h_{nom} \geq$	[mm]	25									
Anchor length	L_a	[mm]	85	105	125	145	165	185	205	225	245	265
Fixture thickness	l_D	[mm]	40-60	60-80	80-100	100-120	120-140	140-160	160-180	180-200	200-220	220-240



Setting parameters

HIF			60	80	100	120	140	160	180	200	220	240
Minimum base material thickness	h_{min}	[mm]	100									
Minimum spacing	s_{min}	[mm]	100									
Minimum edge distance	c_{min}	[mm]	100									

Installation equipment

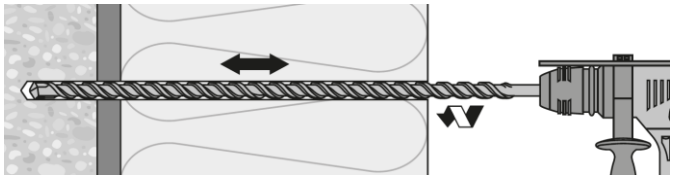
Anchor size	HIF
Rotary hammer	Corded: HILTI TE 2 – TE 7 Battery: HILTI TE2-A22, TE4-A22, TE6-A36
Other tools	Hammer

Setting instruction*

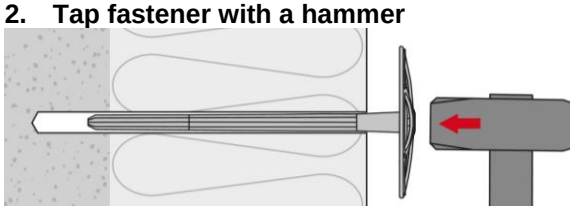
*For detailed information on installation see instruction for use given with the package of the product.

Setting instructions

1. Drill hole with drill bit



2. Tap fastener with a hammer



3. Check correct setting