# IZ 8 Insulation fastener

## Anchor version

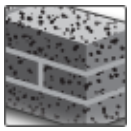
IZ

## Benefits

- Insulation fastener especially for plastered surfaces
- 30mm setting depth
- Perfect flush setting

## Base material

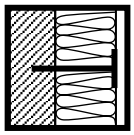
Concrete (non-cracked)



Solid brick

Hollow brick

## Other information



Fastening of insulation

## Basic loading data for short term acting loads e.g. wind (for a single anchor)

**All data in this section applies to:**

- Correct setting (see setting instruction)
- No edge distance and spacing influence
- Redundant fastenings in the base materials as specified in the tables
- Minimum base material thickness or greater
- Transmission of wind suction loads only
- Anchor and its plate is not exposed to UV-radiation for more than 6 weeks

### Recommended loads

| Base material | | | IZ 8 |
|---|---|---|---|
| Concrete ≥ C16/20 | $N_{Rec}$ | [kN] | 0,2 |
| Solid clay brick Mz 12/2,0 | $N_{Rec}$ | [kN] | 0,2 |
| Solid sand-lime brick KS 12/1,8 | $N_{Rec}$ | [kN] | 0,2 |
| Vertically perforated clay brick Hlz 12/1,0 | $N_{Rec}$ | [kN] | 0,13[a)] |
| Vertically perforated sand-lime brick KSL 12/1,4 | $N_{Rec}$ | [kN] | 0,17 |

a) Rotary drilling only - no hammer action

**Recommended pull-through loads and minimum number of fasteners[a)]**

| Base material | Thickness [mm] | Plate-∅ [mm] | Pull-through load [kN] | Minimum number of fasteners [pcs/m²] |
|---|---|---|---|---|
| Expanded polystyrene EPS | ≥40 | ≥ 60 | 0,15 | 5 |
| Mineral wool, type HD | | ≥ 60 | 0,15 | 5 |
| Mineral wool, type WV | | ≥ 90 | 0,15[b)] | 4 |
| Mineral wool, type lamella | | ≥ 140 | 0,167[c)] | 4 |

a) Recommended values in case that the insulation material to be fixed is not covered by a European Technical Assessment (ETA) or any national approval document. If the ETICS to be fixed is covered by an ETA or any national approval document, the given pull-through resistance in the ETA or national approval document is applicable for the indicated anchors only. Contact HILTI to find out which HILTI insulation fasteners can be used!

b) HILTI slip-on plate HDT 90 must be used

c) HILTI slip-on plate HDT 140 must be used

## Basic provisions for fixing insulation on the bottom side of ceilings

**All data in this section applies to**

- Correct setting (see setting instruction)
- No edge distance and spacing influence
- Redundant fastening in non-cracked concrete
- Minimum base material thickness or greater
- Transmission of quasi-static permanent loads only
- Anchor and its plate is not exposed to UV-radiation for more than 6 weeks

Note: Each panel shall be supported by 4 anchors at least e.g. by T-joint fixing.

**Recommended number of anchors for fixing panels to ceilings w/o consideration of wind load[a)]:**

| Specific panels weight | Number of anchors per m² |
|---|---|
| EPS (≤30 kg/m³, TR≥100 kPa, 60mm≤thickness≤260) | 4 |
| Mineral wool (≤120 kg/m³, TR≥3.5 kPa, 60mm≤thickness≤120mm | |
| Mineral wool (≤150 kg/m³, TR≥3.5 kPa, 60mm≤thickness≤100mm | |
| Mineral wool (≤200 kg/m³, TR≥3.5 kPa, 60mm≤thickness≤70mm | 5 |

a) A safety factor for dead load $\gamma_F$=1,35, a safety factor $\gamma_{M,EPS}$=1,50, a safety factor $\gamma_{M,Mineralwool}$=2,00 for material is considered.

**Service temperature range**

| | Base material temperature | Maximum long term base material temperature | Maximum short term base material temperature |
|---|---|---|---|
| Temperature range | 0 °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**

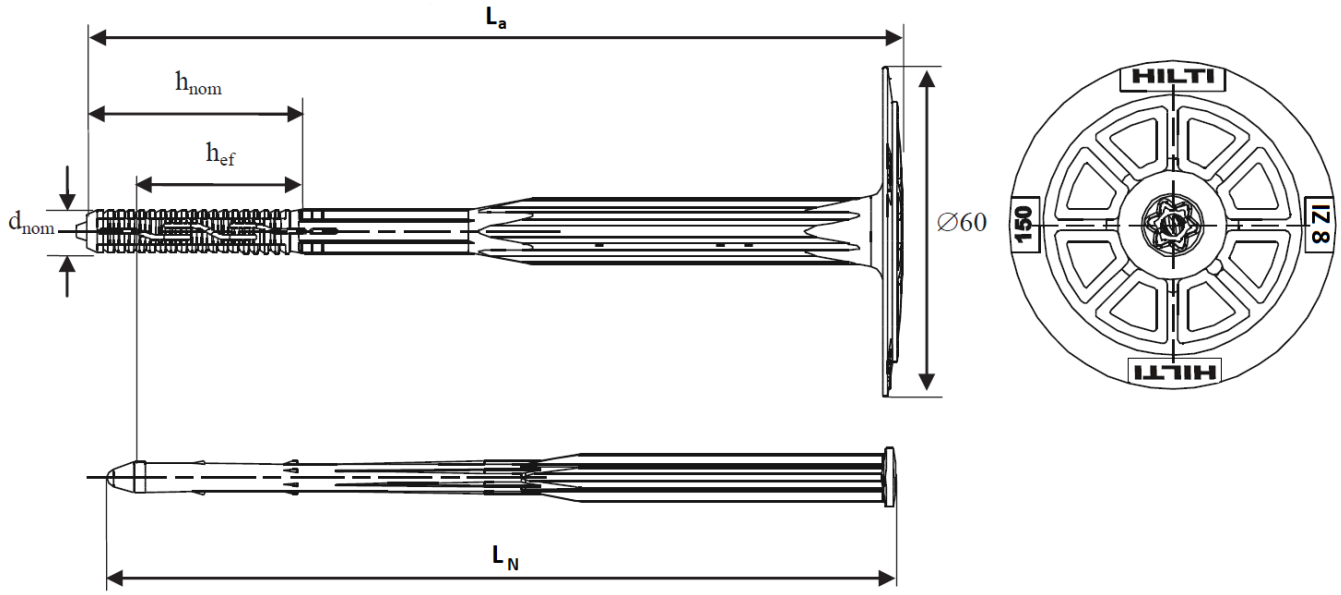
Long-term elevated base material temperatures are roughly constant over significant periods of time.

## Materials

**Material quality**

| Part | Material |
|---|---|
| Anchor sleeve and plate | Polyethylene |
| Expansion pin | Polyamide, fiber reinforced 50% |

**IZ 8**



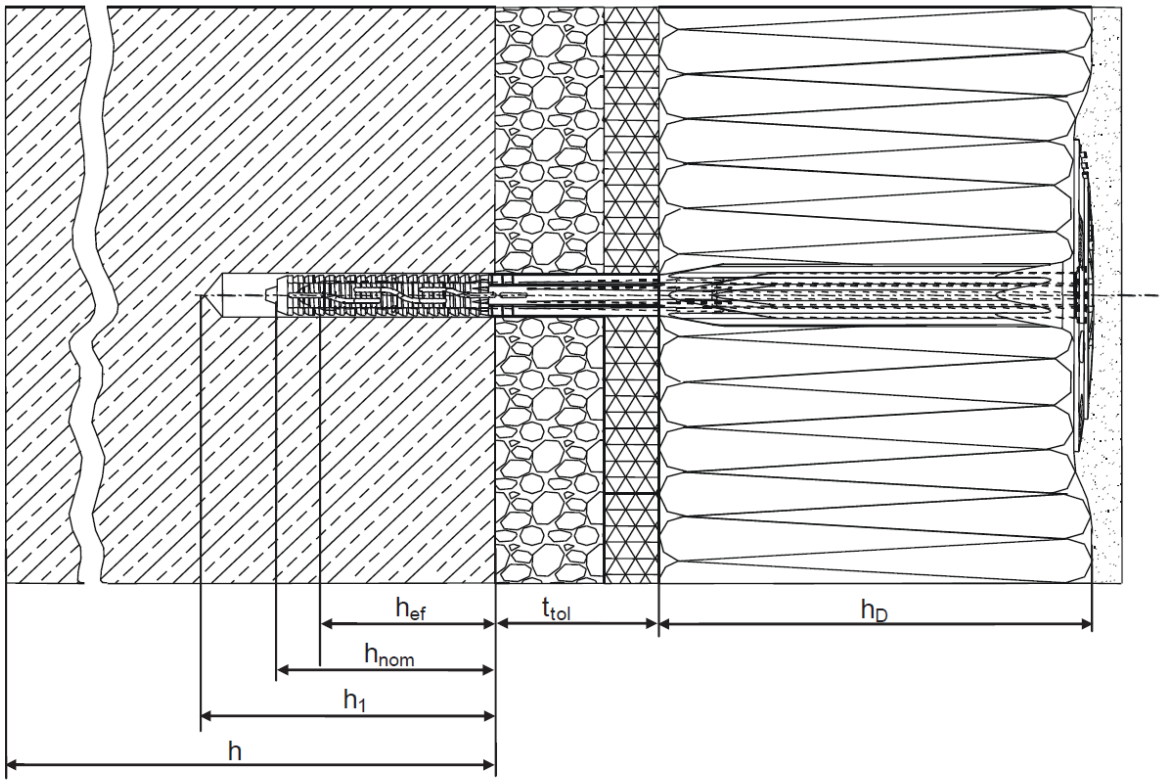

**Anchor dimensions**

| | | | IZ 8 |
|---|---|---|---|
| Diameter of sleeve | $d_{nom}$ | [mm] | 8 |
| Minimum length of anchor body | $L_{a,min}$ | [mm] | 70 |
| Maximum length of anchor body | $L_{a,max}$ | [mm] | 210 |
| Minimum length of pin | $L_{N,min}$ | [mm] | 65 |
| Maximum length of pin | $L_{N,max}$ | [mm] | 205 |

**Anchor designations**

| | IZ 8 |
|---|---|
| Top of plate | Producer: HILTI |
| | Anchor type: IZ 8 |
| | Anchor length [mm]: e.g. 150 mm |

## Setting information




**Setting details:**

| | | | IZ 8 |
|---|---|---|---|
| Nominal diameter of drill bit | $d_o$ | [mm] | 8 |
| Cutting diameter of drill bit | $d_{cut} \leq$ | [mm] | 8,45 |
| Depth of drill hole | $h_1 \geq$ | [mm] | 50 |
| Effective anchorage depth | $h_{ef}$ | [mm] | 30 |
| Overall embedment depth | $h_{nom}$ | [mm] | 40 |
| Thickness of insulation | $h_D$ | [mm] | 20 to 170 |
| Maximum thickness of tolerance layer | $t_{tol,max}$ | [mm] | $L_a$ - $h_{nom}$ - $h_D$ a) |
| Installation temperature | | [°C] | 0 to +40 |
| UV exposure | | | ≤ 6 weeks |

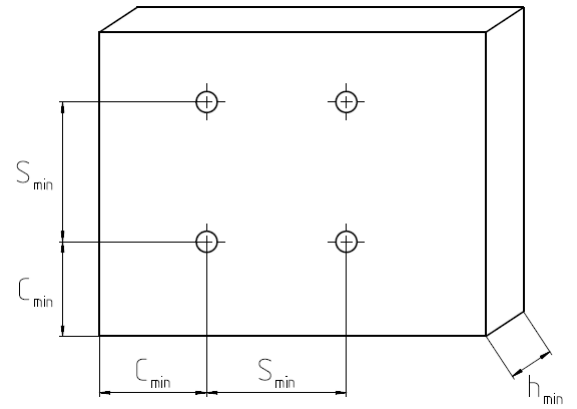
a) $L_a$ … Anchor length, $h_{nom}$ … Overall embedment depth, $h_D$ … Thickness of insulation
Example:
IZ 8 x 150-P: $L_a$ = 150mm; $h_{nom}$ = 40mm; $h_D$ = 100mm
$t_{tol,max}$ = 150mm – 40mm – 100mm = 10mm
Note: If $t_{tol}$ is greater than 30mm a stepped drill bit must be used. Please contact HILTI for detailed information!

**Installation equipment**

| Anchor size | IZ 8 |
|---|---|
| Rotary hammer | Corded: HILTI TE 2 – TE 7<br>Battery: HILTI TE2-A22, TE4-A22, TE6-A36 |
| Installation | Hammer 500g to 1500g |

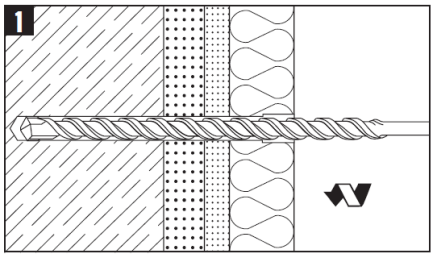
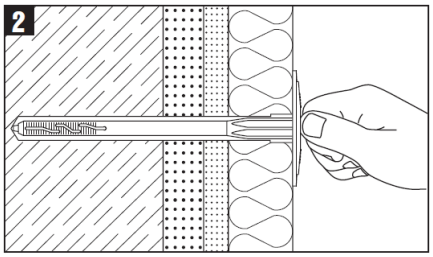
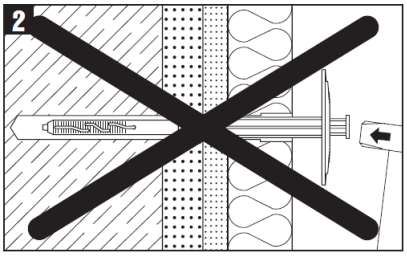
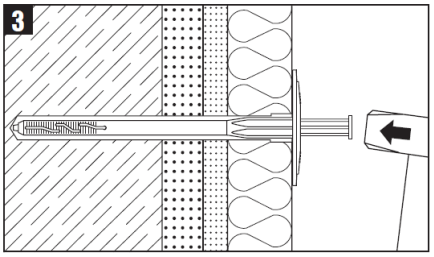
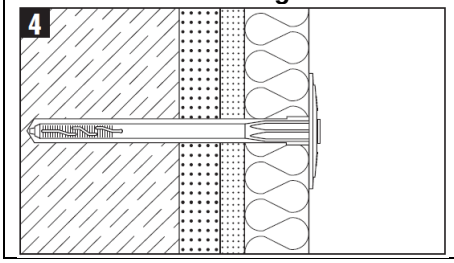
**Minimum edge distance, minimum spacing and minimum base material thickness**

| | | | IZ 8 |
|---|---|---|---|
| Minimum base material thickness | $h_{min}$ | [mm] | 100 |
| Minimum spacing | $s_{min}$ | [mm] | 100 |
| Minimum edge distance | $c_{min}$ | [mm] | 100 |



**Setting instruction***

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

| Setting instructions | |
|---|---|
| **Drill hole with drill bit**<br>  | |
| **Insert the fastener by hand**<br>  | **Do not hammer on expansion pin**<br>  |
| **Tap fastener with a hammer**<br>  | |
| **Check correct setting**<br>  | |