



# X-IE-H DATA SHEET

Insulation fastener for hard board

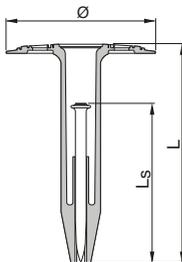
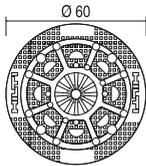


# X-IE-H Insulation fastener for hard board

## Product data

### Dimensions

X-IE-H



### General information

#### Material specifications

Plate: HDPE, white

Nail: Carbon steel shank: HRC 58

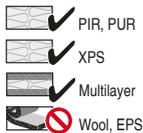
Zinc coating: 5–20 µm

#### Recommended fastening tools

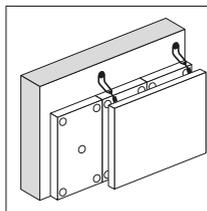
DX 460 IE, DX 460 IE XL, DX 5 IE, DX 5 IE XL

See **X-IE fastener program** in the next pages and **Tools and equipment** chapter for more details.

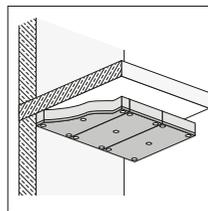
## Applications and suitable insulation materials



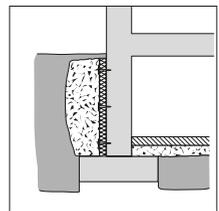
**Barriers:**  
All materials are suitable



Insulation behind curtain walls



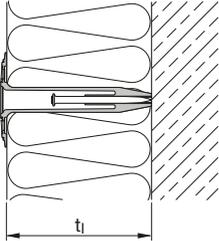
Insulation in ceilings



Temporary fixing of insulation of moisture barriers / drainage plates

**In general:** the fastener is intended to be used with insulation boards of type hard boards (PIR, PUR, XPS, Phenolic) produced according to the standard EN 13165 table 2 with tolerance classes T2 or T3.

## Fastener program

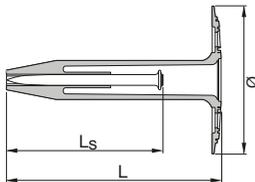


Select Fastener with Designation equivalent to the insulation thickness  $t_i$

### Exceptions:

For intermediate thicknesses, use the next longer X-IE-H.

For convenience, pre-core the insulation boards before installation.



### Fastener selection table

Designation	Fastener X-PH, Ls	Item no.	Insulation thickness $t_i$ [mm]
<b>X-IE-H 40</b>	<b>X-PX 62</b>	2207195	40
<b>X-IE-H 50</b>	<b>X-PX 62</b>	2162046	50
<b>X-IE-H 60</b>	<b>X-PX 62</b>	2162047	60
<b>X-IE-H 75</b>	<b>X-PX 62</b>	2207196	75
<b>X-IE-H 80</b>	<b>X-PX 62</b>	2162048	80
<b>X-IE-H 100</b>	<b>X-PX 62</b>	2162049	100
<b>X-IE-H 125</b>	<b>X-PX 62</b>	2207197	125
<b>X-IE-H 150</b>	<b>X-PX 62</b>	2207198	150
<b>X-IE-H 175</b>	<b>X-PX 62</b>	2207194	175

**Note:** the fastener length **L** is not equal to the insulation thickness  $t_i$  due to the intention of avoiding any countersunk effect of the fastener into the insulation board,  $L = t_i + 6 \text{ mm}$ .

## System recommendation

### Tool

DX 460 IE, DX 460 IEXL, DX 5 IE, DX 5 IEXL

### Cartridge selection and tool energy setting

**Cartridge recommendation:** Steel: **6.8/11M yellow or red** cartridge  
Concrete: **6.8/11M yellow or red** cartridge

Tool energy adjustment by setting tests on site.

## Application requirements

### Thickness of base material

**Concrete:**  $h_{\min} = 80 \text{ mm}$

**Steel:**  $t_{\parallel} \geq 4 \text{ mm}$

### Thickness of fastened material

Insulation thickness:  $t_{\perp} = 40 - 175 \text{ mm}$

### Edge distances and minimum number of X-IE-H

For minimum distances to insulation edges please inquire at the insulation material supplier. Please use minimum 4 pcs of X-IE-H fasteners per insulation plate and  $\geq 5$  pcs of X-IE-H fasteners per  $\text{m}^2$

## Application limits

**Concrete:**  $f_{\text{cc}} = 15 - 45 \text{ N/mm}^2$  (aggregate size  $\leq 32 \text{ mm}$ )

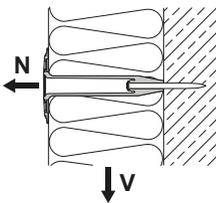
**Sand-lime masonry:**  $f_{\text{cc}} = 15 - 45 \text{ N/mm}^2$

**Clinker brick work:**  $f_{\text{cc}} = 28 - 45 \text{ N/mm}^2$

**Steel:**  $f_u = 360 - 540 \text{ N/mm}^2$  ( $t_{\parallel} = 4 - 6 \text{ mm}$ )

## Load data

### Recommended loads



	Insulation thickness $t_{\perp}$ [mm]			
	40-50	60	75-80	100-175
Shear, $V_{\text{rec}}$ [N]	250	300	350	350
Tension, $N_{\text{rec}}$ [N]	290	300	300	300

When base material properties are questionable, jobsite qualification is necessary.