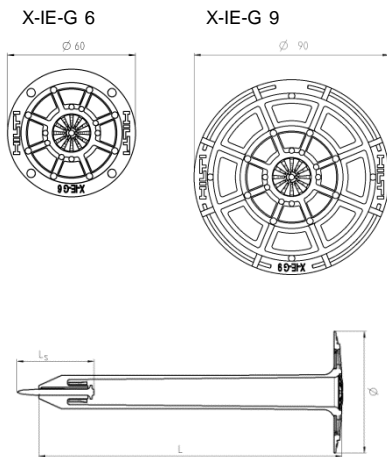


X-IE-G 6 and X-IE-G 9 Insulation fasteners

Product Data

Dimensions



General information

Material specifications

Plate:	X-IE-G 6 – HDPE, colorless X-IE-G 9 – HDPE, black
Nail	Carbon steel shank: HRC 57.5 Zinc coating: 2 – 13 μm

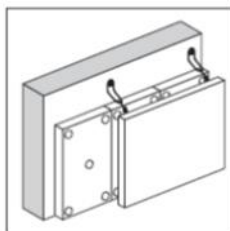
Recommended fastening tools

GX IE, GX IE XL

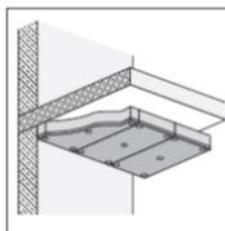
See **X-IE-G fastener program** in the next pages and **Tools and equipment** chapter for more details.

Applications and suitable insulation materials

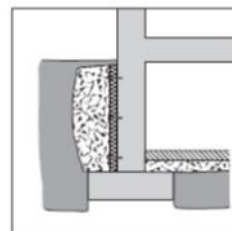
- Mineral wool
- EPS
- XPS
- PIR
- PUR
- Multilayer



Insulation behind curtain walls



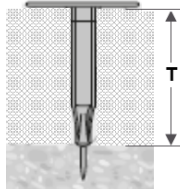
Insulation in ceilings



Temporary fixing of insulation of moisture barriers / drainage plates

Fastener program
X-IEG 6

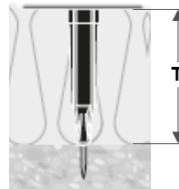
Ø 60mm



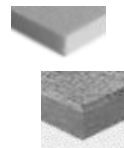
T =
fastenable
insulation
thickness

X-IE-G 9

Ø 90mm



X-IE-G 6: For use with mineral wool, EPS, XPS, PIR, PUR and soft core multilayer boards *



T (mm)	Designation	Item no.	T (mm)	Designation	Item no.
25	X-IE-G 6- 25	2192914	100	X-IE-G 6- 100	2163816
30	X-IE-G 6- 30	2163810	120	X-IE-G 6- 120	2192917
40	X-IE-G 6- 40	2163811	130	X-IE-G 6- 130	2192918
50	X-IE-G 6- 50	2163812	140	X-IE-G 6- 140	2163817
60	X-IE-G 6- 60	2163813	150	X-IE-G 6- 150	2163818
70	X-IE-G 6- 70	2163814	160	X-IE-G 6- 160	2163819
75	X-IE-G 6- 75	2192915	180	X-IE-G 6- 180	2163820
80	X-IE-G 6- 80	2163815	200	X-IE-G 6- 200	2163821
90	X-IE-G 6- 90	2192916			

* Soft core multilayer are boards with hard top layer and mineral wool insulation core

X-IE 9: For use with soft mineral wool



T (mm)	Designation	Item no.	T (mm)	Designation	Item no.
40	X-IE-G 9- 40	2172154	140	X-IE-G 9- 140	2163823
50	X-IE-G 9- 50	2172155	150	X-IE-G 9- 150	2192919
60	X-IE-G 9- 60	2172156	160	X-IE-G 9- 160	2163824
80	X-IE-G 9- 80	2172157	180	X-IE-G 9- 180	2163825
100	X-IE-G 9- 100	2172158	200	X-IE-G 9- 200	2163826
120	X-IE-G 9- 120	2172159			

Fastener program
X-IE 6: For use with stiff core multilayer boards *


T (mm)	Designation	Item no.	T (mm)	Designation	Item no.
31	X-IE-G 6- 40	2163811	76	X-IE-G 6- 80	2163815
36	X-IE-G 6- 40	2163811	86	X-IE-G 6- 90	2192916
46	X-IE-G 6- 50	2163812	91	X-IE-G 6- 100	2163816
56	X-IE-G 6- 60	2163813	96	X-IE-G 6- 100	2163816
66	X-IE-G 6- 70	2163814	116	X-IE-G 6- 120	2192917
71	X-IE-G 6- 75	2192915			

Must pre-drill holes of \varnothing 20 mm


* Stiff core multilayer are boards with hard top layer and insulation core of EPS, XPS, PIR, PUR

Notes

Maximum allowable insulation compressive strength 500 kN/m²

Mineral wool, soft mineral wool: For intermediate thicknesses, not covered, use next shorter fastener.

Example: for mineral wool insulation thickness 110 mm, use X-IE-G 6-100

EPS, XPS, PIR, PUR: For intermediate thicknesses, not covered, use next longer fastener.

Example: for PIR insulation thickness 110 mm, use X-IE-G 6-120

Multilayer: For sizes not covered with above portfolio, please contact Hilti

System recommendation

Tool: GX-IE , GX-IE XL. Gas can: GC52

Application limits

Thickness of base material

Concrete thickness ≥ 80 mm

Base material

Concrete	$f_{cc} = 15-45$ N/mm ²	(aggregate size ≤ 32 mm)
Sand-lime masonry	$f_{cc} = 15-45$ N/mm ²	
Clinker brick work	$f_{cc} = 28-45$ N/mm ²	

Insulation

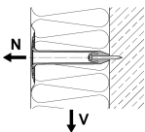
Insulation thickness	20 – 200 mm
Insulation max compressive strength	500 kN/m ²
Insulation board thickness tolerance (max)	+/- 3mm

Spacing and edge distance

For number and spacing of fasteners, please inquire at insulation material supplier. If recommendations from suppliers are not available, use minimum 3 pcs of X-IE fasteners per insulation panel and ≥ 5 pcs of X-IE fasteners per m²

Performance Data (Base material: concrete)

Recommended loads



Tension (N)
0.1

Shear (V)
0.1

Conditions

- Minimum of 5 fasteners per m². All visible setting failures must be replaced with a new fastening, not in the same hole
- Soft concrete up to $f_{cc} = 45$ N/mm²
- When base material properties are questionable, jobsite qualification is necessary

Thermal efficiency Point thermal transmittance χ [W/K]

Basement perimeter insulation	60 mm:	$\chi = 0.003$
	70 – 100mm:	$\chi = 0.002$
	120 – 200 mm:	$\chi = 0.001$
Curtain wall insulation	60 – 90 mm:	$\chi = 0.002$
	100 – 200mm:	$\chi = 0.001$