AIS

AIS-C

AIS-S

AIS-R

AIS-W

AIS-M

AIS-AM

TE

CHARACTERISTICS AND APPLICATIONS

- Plugs for fixing of external thermal insulation systems.
- Different lengths (from 70 mm until 300 mm), diameters (Ø8 y Ø10) and thicknesses to be fixed.
- Variety of washers for different kinds of insulation.
- Two different materials, steel and polypropylene.
- Quick fixing, through the insulations, hammer installation by hitting the nylon plug and then the nylon or steel nail.
- Screw for fixing on insulation panels avoiding thermal bridges (TE).
- Suitable for a several base materials: concrete, stone, solid bricks, hollow bricks, concrete hollow blocks, etc.
- European Technical Assessment, ETA-21/0823, for use in concrete, aerated concrete, silicate bricks, clay bricks and hollow concrete blocks.
- Valid for fixing of external thermal insulation systems of different types: mineral wool, polystyrenes, glass wool, rock wool, cellulose panels, etc.
- Examples: façade rehabilitation (ETICS) and all kind of façade systems.

BASE MATERIALS

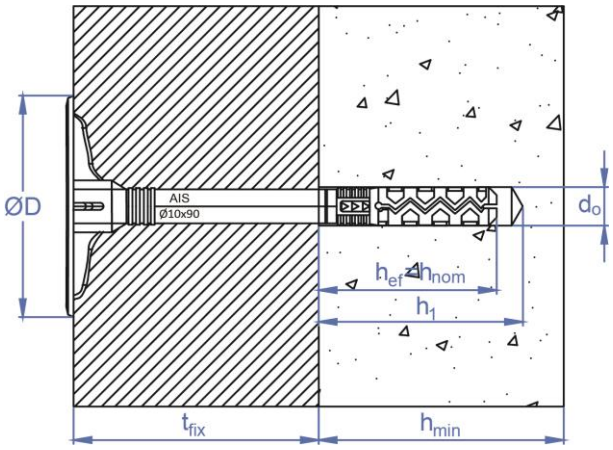
1. RANGE

ITEM	CODE	PHOTO	COMPONENT	MATERIAL
1	**AIS**		Expansion plastic plug monocomponent	Polypropylene
2	**AIS-C**		Expansion plastic plug	Polypropylene
			Expansion plastic nail	Polyamide 6 reinforced with glass fiber
3	**AIS-S**		Expansion plastic plug	Polypropylene
			Expansion metal nail	Carbon steel Zinc plated ≥ 5µm
4	**AIS-R**		Plastic washer	Polypropylene
5	**AIS-W**		Plastic washer	Polypropylene
6	**AIS-M**		Expansion metal plug monocomponent	Carbon steel pregalvanized
7	**AIS-AM**		Metal washer	Carbon steel Zinc plated ≥ 7µm
8	**TE**		Plastic screw	Polyamide 6

2. INSTALLATION DATA

AIS / AIS-C / AIS-S / AIS-M

d_0 x l_t: plug dimensions	[mm]
Ød x l_v: nail dimensions	[mm]
d_o: drillhole diameter / drill bit size	[mm]
h_{ef} = h_{nom}: effective depth = installation depth	[mm]
h_1: drill hole minimum depth	[mm]
h_{min}: minimum thickness of material base	[mm]
t_{fix}: maximum thickness to be fixed	[mm]
ØD: washer diameter	[mm]
S_{min}: minimum spacing between anchors	[mm]
C_{min}: minimum base material edge distance	[mm]

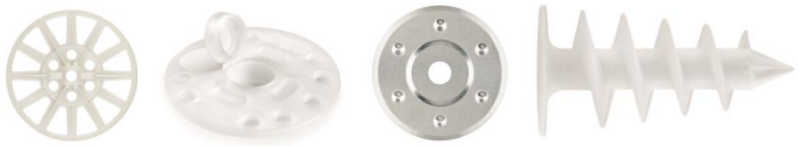


Installation data

CODE	ETA	d_0 x l_t	Ød x l_v	d_0	h_{ef} = h_{nom}	h_1	h_{min}	t_{fix}	ØD	S_{min}	C_{min}
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
AIS08080		8 x 80	--	8	30	30	50	50	34	100	100
AIS08100		8 x 100	--	8				70			
AIS08120		8 x 120	--	8				90			
AIS08140		8 x 140	--	8				110			
AISC10070 / AISS10070	✓	10 x 70	5,7 / 5,5 x 75	10	50	60	100	20	60	100	100
AISC10090 / AISS10090	✓	10 x 90	5,7 / 5,5 x 95	10				40			
AISC10100 / AISS10100	✓	10 x 100	5,7 / 5,5 x 105	10				50			
AISC10110*		10 x 110	5,7 / 5,5 x 115	10				60			
AISC10120 / AISS10120	✓	10 x 120	5,7 / 5,5 x 125	10				70			
AISC10130*		10 x 130	5,7 / 5,5 x 135	10				80			
AISC10140 / AISS10140	✓	10 x 140	5,7 / 5,5 x 145	10				90			
AISC10160 / AISS10160	✓	10 x 160	5,7 / 5,5 x 165	10				110			
AISC10180 / AISS10180	✓	10 x 180	5,7 / 5,5 x 185	10				130			
AISC10200 / AISS10200	✓	10 x 200	5,7 / 5,5 x 205	10				150			
AISC10220 / AISS10220	✓	10 x 220	5,7 / 5,5 x 225	10				170			
AISC10260 / AISS10260	✓	10 x 260	5,7 / 5,5 x 265	10				210			
AISM08090		8 x 90	--	8	40	50	100	50	60	100	100
AISM08110		8 x 110	--	8				70			
AISM08120		8 x 120	--	8				80			
AISM08140		8 x 140	--	8				100			
AISM08170		8 x 170	--	8				130			
AISM08200		8 x 200	--	8				160			
AISM08250		8 x 250	--	8				210			
AISM08300		8 x 300	--	8				260			

* whilst stocks last

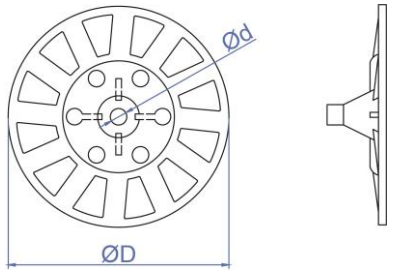
AIS-R / AIS-W / AIS-AM / TE



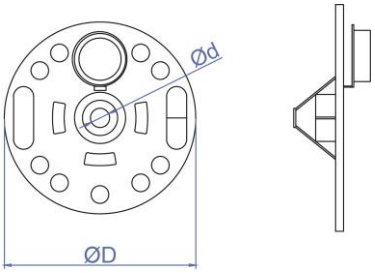
Installation data

CODE	ØD	Ød	L	L1
	[mm]	[mm]	[mm]	[mm]
AISR140	Ø140	11	--	--
AISW060	Ø60	6	--	--
AISAM085	Ø85	9	--	0,5
TE25050	25	--	50	--
TE25090		--	90	--

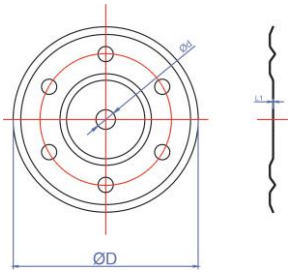
AIS-R



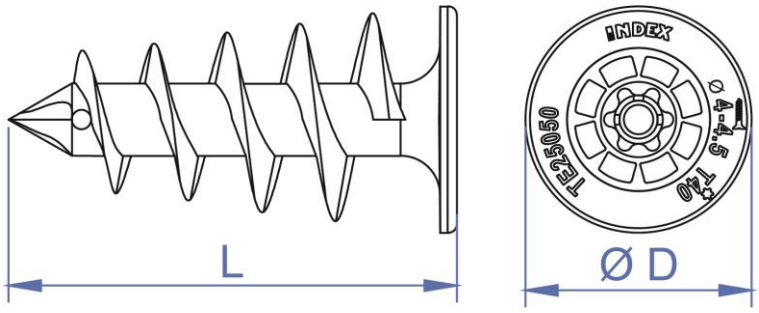
AIS-W



AIS-AM

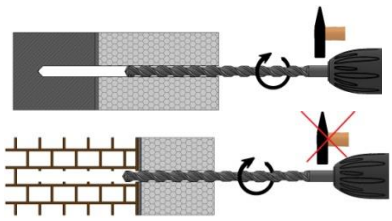


TE

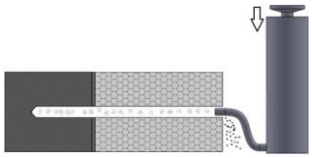


3. PRODUCT INSTALLATION

HOLLOW AND SOLID MATERIALS

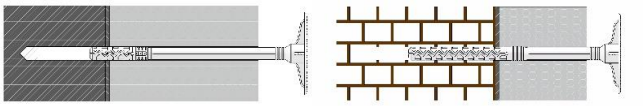


Drill to the specified diameter and depth values in previous tables. Drill position in rotary or hammer mode in case of solid material. In case of hollow materials do not use hammer mode to prevent damaging the inside of the base material. Reduce the drill speed when it seems that the drill bit is close to the inside of the base material.

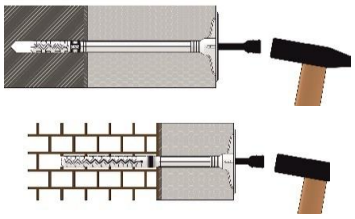
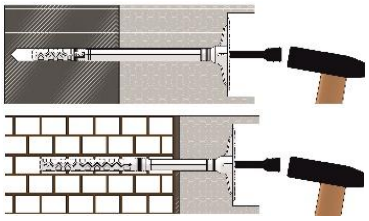


Clear the drill holes completely of dust and fragments.
Use air pump and brush.

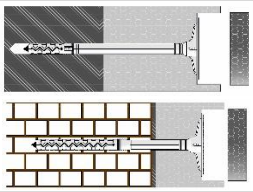
* In case of a countersunk installation use a cutting tool to make a hole in the insulation material.



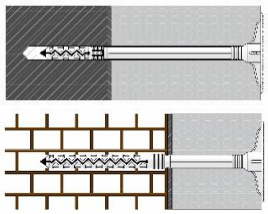
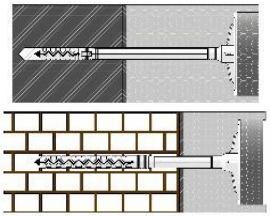
Set-in the anchor through the material to be fixed, without inserting manually, if possible, if not use a hammer.

STANDARD	CONTERSUNK
	

Nail-in the expansion pin by hitting it until the collar of the plug gets on the same level of the surface of the material to be fixed.



*In case of a countersunk installation set-in a plug or the cut part of the insulation.

STANDARD	CONTERSUNK
	

Correctly installed anchor.

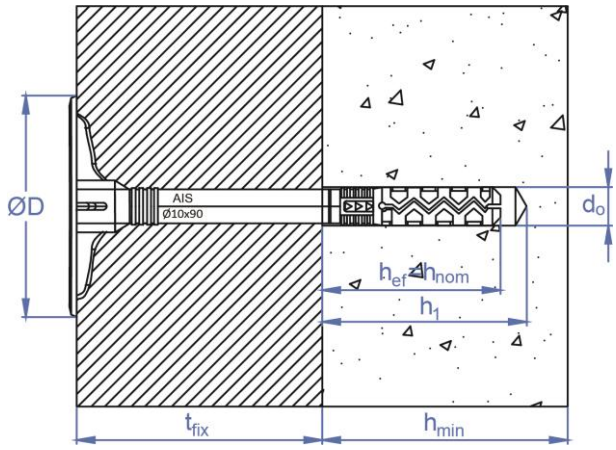
4. MATERIAL BASE

MATERIAL	PICTURE	DRILLING METHOD	STANDARD	DENSITY ρ [kg/m³]	MINIMUM COMPRESSIVE STRENGTH (N/mm²)
Concrete		Rotary + hammer	EN 206	--	C12/15
Concrete		Rotary + hammer	EN 206	--	C16/20 to C50/60
Clay brick MZ		Rotary + hammer	EN 771-1	≥ 2,00	≥ 20
Silicate KS		Rotary + hammer	EN 771-2	≥ 2,00	≥ 20
Vertically perforated clay bricks Porotherm		Rotary	EN 771-1	≥ 0,80	≥ 20
Calcium silicate hollow blocks KSL		Rotary	EN 771-2	≥ 1,60	≥ 20
Lightweight concrete blocks		Rotary	EN 771-3	≥ 0,88	≥ 20
Aerated Concrete AAC2		Rotary	EN 771-4	≥ 0,35	≥ 2

5. RESISTANCES

CHARACTERISTIC RESISTANCES [kN]

Characteristic resistances in materials shown, for an isolated anchor (without effects of edge distances and spacing between anchors) it is indicated in the next table:



MATERIAL	PICTURE	CHARACTERISTIC RESISTENCE N_{Rk} [kN]				MAXIMUM RECOMMENDE LOAD N_{rec} [kN]			
		AIS	AIS-C	AIS-S	AIS-M	AIS	AIS-C	AIS-S	AIS-M
Concrete C12/15		0,03	0,55	0,40	0,30	0,01	0,20	0,14	0,10
Concrete C16/20 to C50/60		0,03	0,80	0,55	0,30	0,01	0,29	0,20	0,10
Clay brick MZ		--	1,00	0,65	--	--	0,36	0,23	--
Silicate KS		--	0,40	0,35	--	--	0,14	0,13	--
Vertically perforated clay bricks Porotherm		--	0,10	0,10	--	--	0,04	0,04	--
Calcium silicate hollow blocks KSL		--	0,65	0,40	--	--	0,23	0,14	--
Lightweight concrete blocks		--	0,20	0,30	--	--	0,07	0,11	--
Aerated Concrete AAC2		--	--	0,10	--	--	--	0,04	--

1kN ≈100kg

6. OFFICIAL DOCUMENTATION

The following documents are available through our Sales Department or on our official website: www.indexfix.com:

- European technical Assessments ETA-21/0823 plastic anchor for diameter 10 mm for fixing of external thermal insulation systems