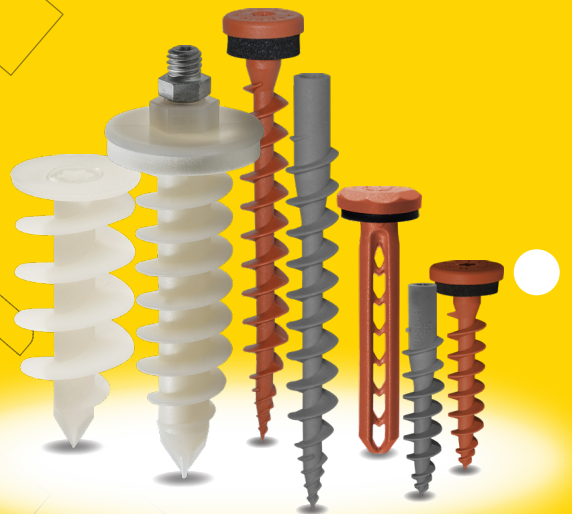


CELO

Insulation- fixings



Insulation plug *IPL*

ETICS-Insulation plug *IPL* – Fast, easy-to-use and durable

Material: Nylon

- ageing, weather-, and UV-resistant
- paintable

Direct fastening

- into the insulation material
- no thermal bridge

Total length IPL 60: 58 mm IPL 95: 95 mm

- for high pull-out values
- suitable for most current insulation thicknesses

Sharp cutting tip and hard polyamid/nylon

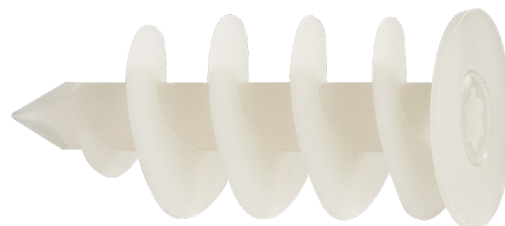
- no predrilling necessary; drills reliably even through hard ETICS plaster (≤ 7 mm)
- saves time, no additional setting tool needed
- fast, with low pressure

IPL 60 installation with duo-bit

- no bit change is necessary
- saves time and money
- PZ2/TX40, TX20/TX40 and TX25/TX40

Colour white, semi-transparent

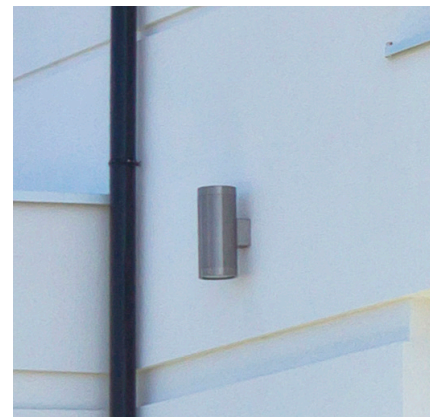
- good appearance



Application coat hook, lamp



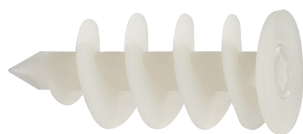
Application house number sign



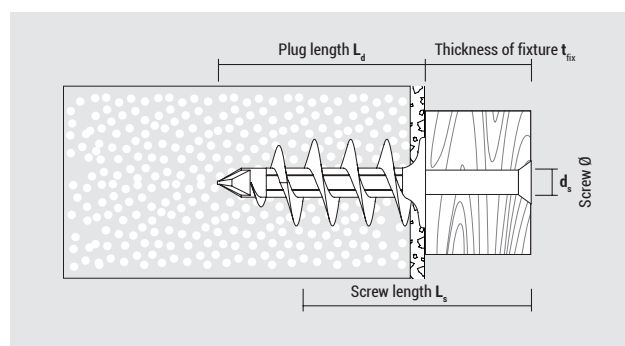
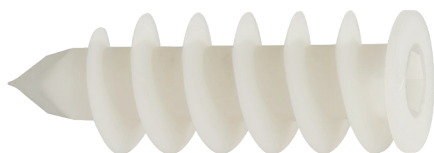
Application lamp



IPL 60
Head Ø 25 mm



IPL 95
head Ø 32 mm, incl. 1x screw
M8 x 30 as setting tool



Suitable building materials

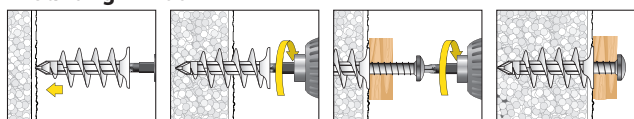
- ✓ External Thermal Insulation Composite Systems (ETICS)
- ✓ Polystyrene boards
- ✓ Heraklith boards
- ✓ Hard foam boards
- ✓ Wood fibre insulation boards (Pre-drill: 8mm for IPL60, 13mm for IPL95)

Typical applications

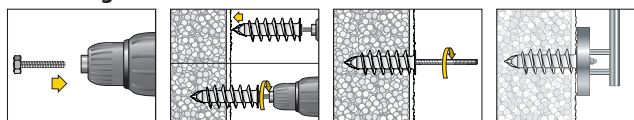
- ▶ Wall connection profiles
- ▶ Base protection profiles
- ▶ Cornice covers
- ▶ Lamps
- ▶ Signs, metal sheets
- ▶ Motion detectors

Mounting

Mounting IPL 60



Mounting IPL 95



Recommendation: Seal plug collar after setting with silicone/acryl to prevent the entry of water into the insulation material

IPL (in box)

Type	Art-No	L _d [mm]	Recess	d _s [mm]	L _s [mm]	[pcs]	[pcs]
IPL 60	960IPL	58	TX 40	4,5 - 5,0	30 + t _{fx}	25	300
IPL 95	995IPL	95	SW 13	8 / 10 / M8	40 + t _{fx}	25	200



IPL (in blister)

Type	Art-No	L _d [mm]	Recess	d _s [mm]	L _s [mm]	[pcs]	[blister]
IPL 60 Blister	560IPL4	58	TX 40	4,5 - 5,0	30 + t _{fx}	4	10
IPL 60 Blister with screw	560IPLPZ4	58	TX 40	4,5 x 40	30 + t _{fx}	4	10
IPL 95 Blister	595IPL2	95	SW 13	8, 10, M8	40 + t _{fx}	2	10

Loads and dimensions

Type	Applications in Polystyrene EPS (PS15, PS20) F _{rec} [kN]	Applications in Polystyrene XPS F _{rec} [kN]	Use with	Screw insertion depth	
				min. [mm]	max. [mm]
IPL 60	0,05	0,10	chipboard screws Ø 4,5 - 5,0	30	50
IPL 95	0,10	0,20	hanger bolts Ø8, Ø10 and M8 screws	40	80

F_{rec}: Recommended load in all directions incl. safety factor of 7

Duo-Bit TX20/TX40, TX25/TX40 Duo-Bit PZ2/TX40

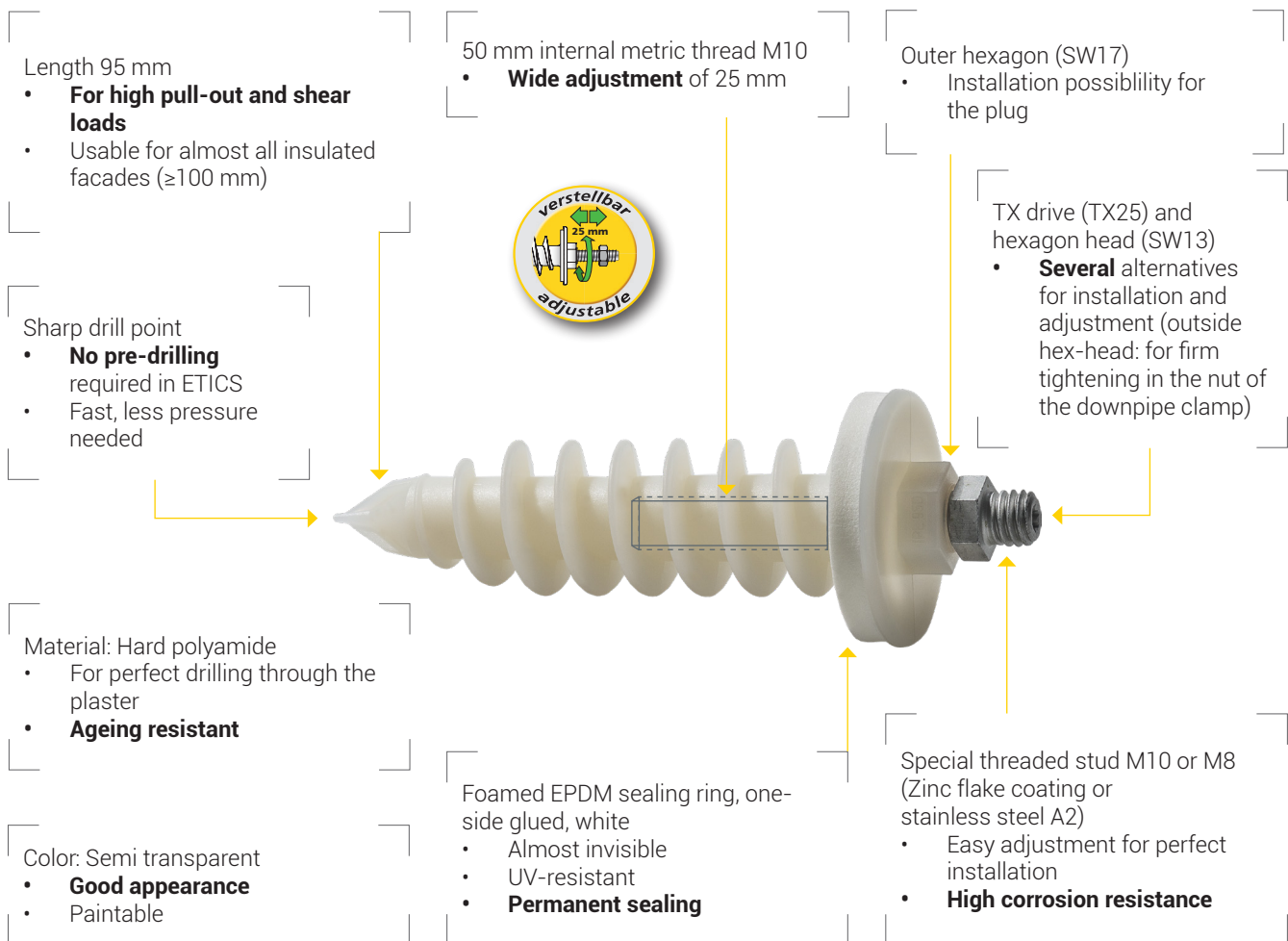
Duo-Bit für IPL 60

Type	Art-No	Dimensions	For use with	[pcs]	[blister]
TX20/TX40	7DTX20TX40	1/4" x 43 mm	IPL60 and TX20 screw	2	10
TX25/TX40	7DTX25TX40	1/4" x 43 mm	IPL60 and TX25 screw	2	10
PZ2/TX40	7DPZ2TX40	1/4" x 43 mm	IPL60 and PZ2 screw	2	10

Packed 2 pcs in a robust plastic box with EURO-punching

Insulation plug *IPL 95DS*

The perfect solution for fixing rainwater downpipes without a thermal bridge in ETICS

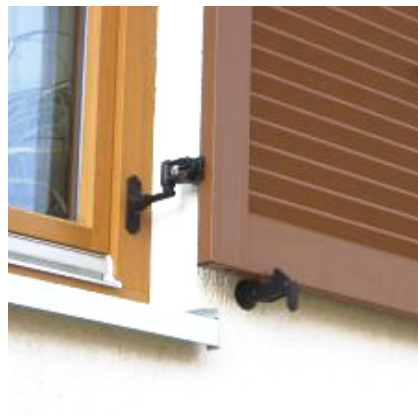


The special threaded stud is pre-assembled in the plug up to the cap. The downpipe will have the usual distance from the wall of about 30 mm

- Extremely fast in installation
- No loose parts



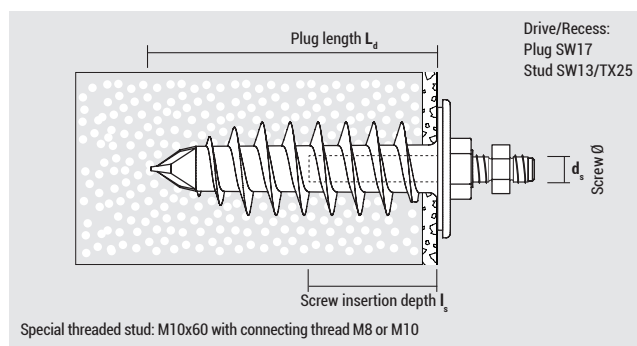
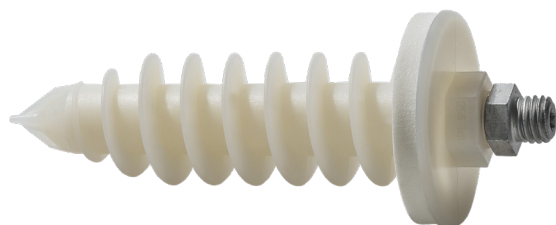
IPL 95DS installed



Application holder for window shutters



Application downpipes



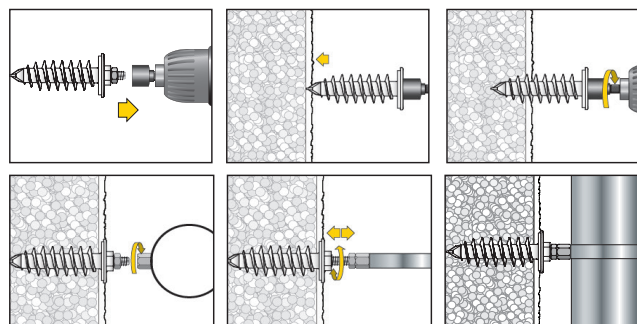
Suitable building materials

- ✓ External Thermal Insulation Composite Systems (ETICS)
- ✓ Wood fibre insulation boards (pre-drilling: 13mm)
- ✓ Hard foam boards
- ✓ Polystyrene boards
- ✓ Heraklith boards

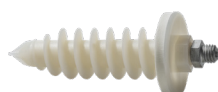
Typical applications

- ▶ Wall connection profiles
- ▶ Base protection profiles
- ▶ Cornice covers
- ▶ Holder for window shutters
- ▶ Lamps
- ▶ Signs, metal sheets
- ▶ Motion detectors

Mounting



- The IPL 95DS can be installed with a hexagon SW17 (recommended), hexagon SW13 socket or TX25 bit
- The special threaded stud can be adjusted up to 25 mm.
- Tip: If the plug should rotate, fixate it with a wrench SW17.



IPL 95DS (in bag) sealing cap Ø = 44,5 mm

Type	Art-No	L _d [mm]	Recess	Internal thread d _s [mm]	Connecting thread	Material threaded stud	Packing	
IPL 95DS M8	ZG895IPLDS4	95	plug: SW17 stud: SW13/TX25	M10	M8	Zinc flake coating	[pcs]	[pcs]
IPL 95DS	ZG95IPLDS4	95		M10	M10	Zinc flake coating	4	80
IPL 95DS A2	X95IPLDS4	95		M10	M10	Stainless steel A2	4	80

Packed by 4 pcs incl. installation instruction in a bag



IPL 95D (in box) sealing cap Ø = 44,5 mm

Type	Art-No	L _d [mm]	Internal thread d _s	Drive	Packing	
IPL 95D	995IPLD	95	M10	SW17	[pcs]	[pcs]
					20	160

Loads and dimensions

Type	Application in Polystyrene EPS (PS15, PS20) F _{rec} [kN]	Application in Polystyrene XPS F _{rec} [kN]	Special threaded stud	Screw insertion depth l _s	
				min [mm]	max [mm]
IPL 95DS	0,10	0,20	M10, Total length 60 mm Thread inside the plug: 50 mm	20	50

F_{rec}: Recommended load in all directions incl. safety factor of 7

Insulation screw *IPS*

Special screw for direct fastening into external thermal insulation composite systems (ETICS) – extremely fast and without thermal bridges!

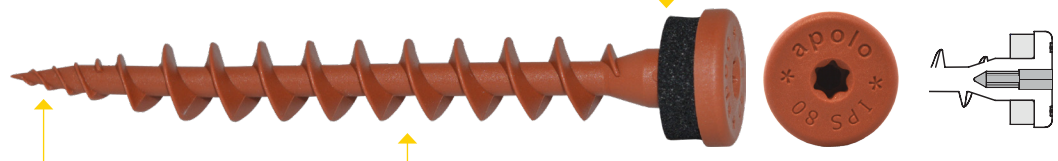
Length 80 mm
– suitable for nearly all insulated facades (from 80 mm) out of polystyrene boards etc.

The IPS is available in **different colours** to match with the most common materials

Screw made out of **glass fibre reinforced nylon**; ageing, weather and UV-resistant

Stylish flat head with EPDM sealing for optimal sealing and adaption to the ground

TX-Drive (TX25) for a fast and easy installation



No pre-drilling in plaster (≤ 7 mm) due to **sharp drilling tip**; extremely fast mounting

A distinctive thread ensures good hold in insulation boards, furthermore the IPS fits through a $\varnothing 8$ hole

Head hole; allows light duty fixings in combination with a screw $\varnothing 3,5$ mm

Insulation screw IPS is perfectly suitable for **direct fastening into insulation materials without thermal bridges** of wall connection profiles, metal sheets, base protection profiles, cornice covers, motion detectors, lamps, signs, etc.



IPS installed

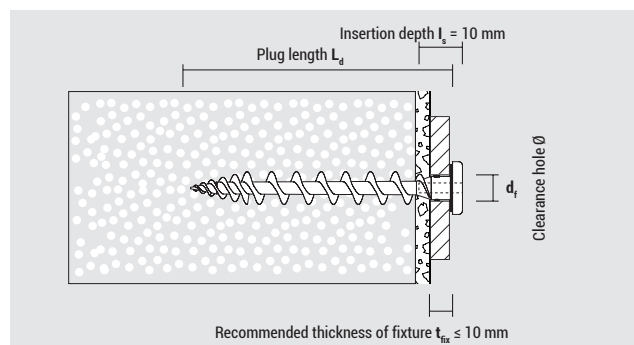
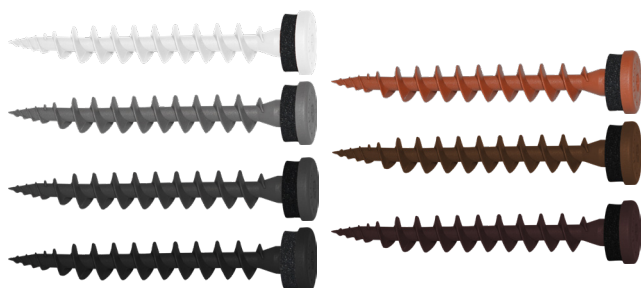


Application motion detector



Application wall connection profiles

CELO



Suitable building materials

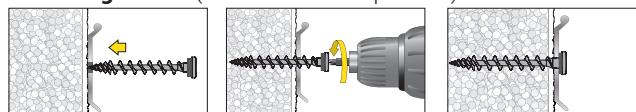
- ✓ External Thermal Insulation Composite Systems (ETICS)
- ✓ Styrofoam boards
- ✓ Hard foam boards
- ✓ Polystyrene boards
- ✓ Wood fibre boards

Typical applications

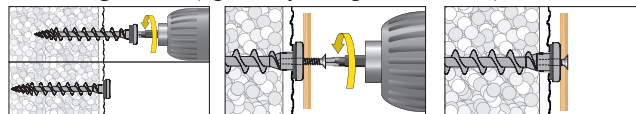
- ▶ Wall connection profiles
- ▶ Base protection profiles
- ▶ Cornice covers
- ▶ Lamps
- ▶ Signs, metal sheets
- ▶ Motion detectors

Mounting

Mounting IPS 80 (wall connection profiles):



Mounting IPS 80 (light duty fixings with screw):



Usable with: Screw-Ø 3,5 mm;
screw length $L_s = 10 \text{ mm} + \text{thickness of fixture}$

▶ Watch video at
www.celofixings.com



IPS 80 (in box) with EPDM sealing, head Ø = 16,0 mm

Type	Art-No	RAL-Code	L_d [mm]	Drive	d_i [mm]	Packing	
						[pcs]	[pcs]
IPS 80 Signal white	9180IPS	RAL 9003	80	TX 25	8 – 10	50	900
IPS 80 Telegrey	9GR80IPS	RAL 7045	80	TX 25	8 – 10	50	900
IPS 80 Anthracite grey	9AN80IPS	RAL 7016	80	TX 25	8 – 10	50	900
IPS 80 Traffic black	9480IPS	RAL 9017	80	TX 25	8 – 10	50	900
IPS 80 Copper brown	9CO80IPS	RAL 8004	80	TX 25	8 – 10	50	900
IPS 80 Sepia brown	9M80IPS	RAL 8014	80	TX 25	8 – 10	50	900
IPS 80 Chocolate brown	9MO80IPS	RAL 8017	80	TX 25	8 – 10	50	900



IPS 80 (in blister) incl. stainless steel A2 screws, PH2

Type	Art-No	plug length L_d [mm]	plug recess	clearance hole d_i [mm]	screw-Ø x length $d_s \times L_s$ [mm]	type of screw	Packing	
							[pcs]	[blister]
IPS 80 PH	5180IPSPH4	80	TX 25	8 – 10	3,5 x 13 x 3,5 x 16		4	10

Loads and dimensions

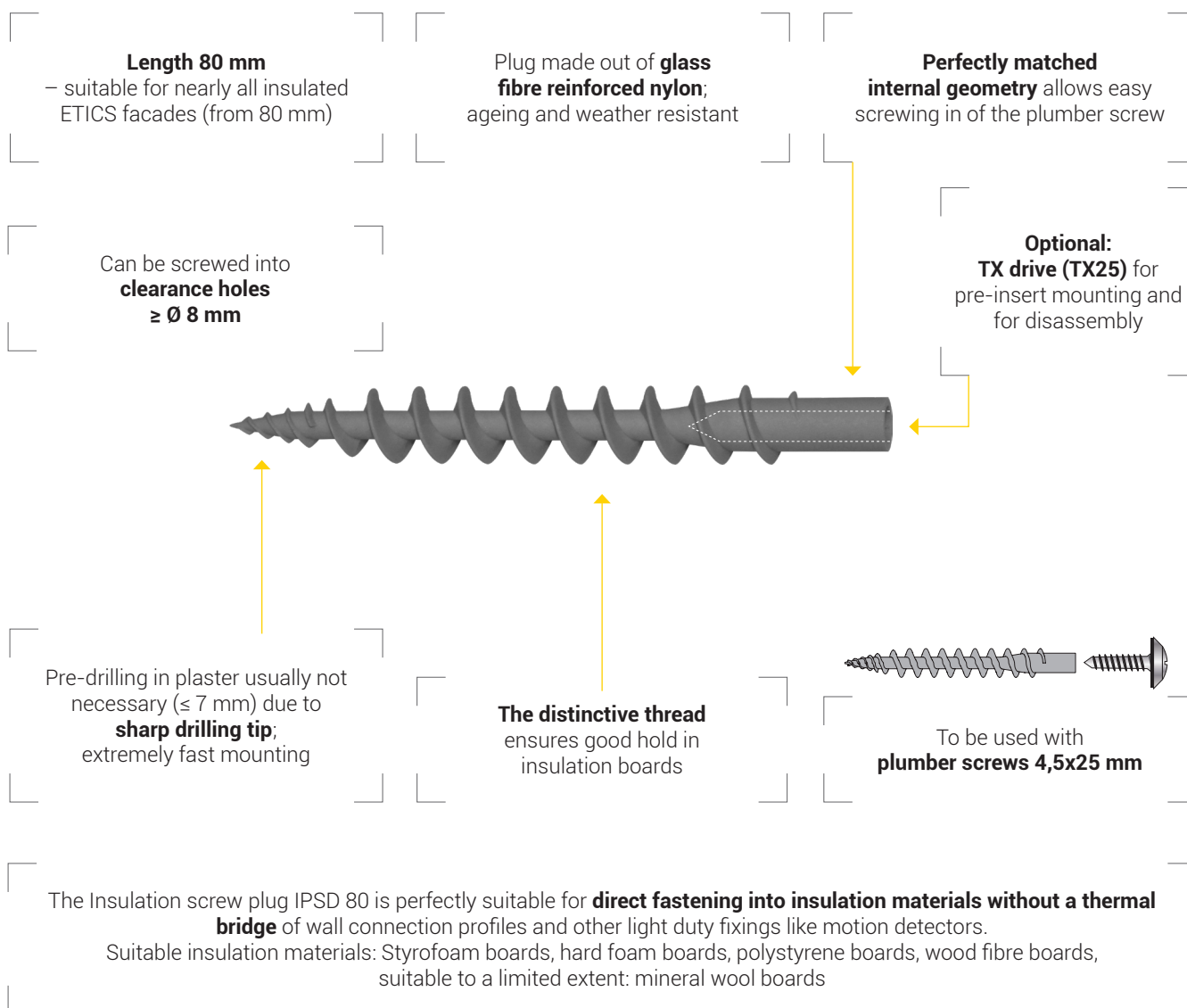
Type	Application in Polystyrene EPS (PS15, PS20) unplastered F_{rec} [kN]	Application in Polystyrene EPS (PS15, PS20) plastered F_{rec} [kN]	Application in Rockwool, Coverrock Plus unplastered F_{rec} [kN]	Application in Polystyrene EPS + XPS (perimeter insulation) F_{rec} [kN]	Thickness of insulation material ≥ [mm]
IPS 80	0,04	ca. 0,06*	0,02	0,09*	80

F_{rec} : Recommended load in all directions incl. safety factor of 5

* Value may differ depending on the type and thickness of the plaster

Insulation screw plug *IPSD*

Fast and flexible direct mounting without thermal bridges in ETICS!



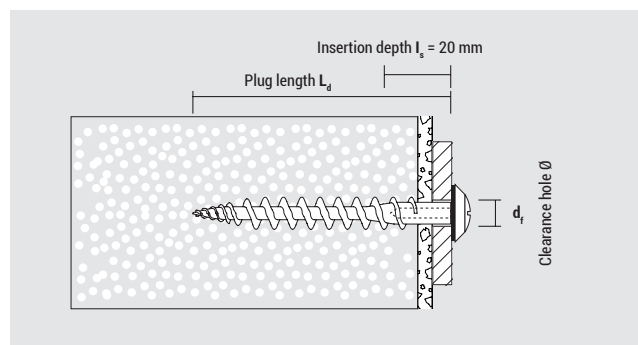
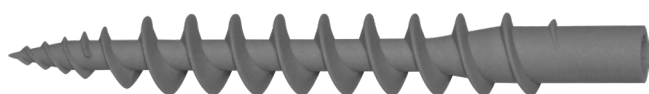
IPSD installed with plumber screw



Application outdoor lamp



Application wall connection profile



Suitable building materials

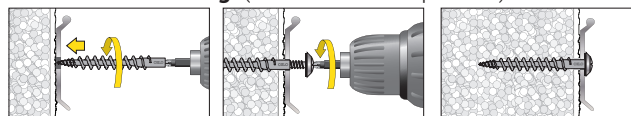
- ✓ External Thermal Insulation Composite Systems (ETICS)
- ✓ Styrofoam boards
- ✓ Hard foam boards
- ✓ Polystyrene boards
- ✓ Wood fibre boards

Typical applications

- Wall connection profiles
- Base protection profiles
- Cornice covers
- Small lamps
- Signs, metal sheets
- Motion detectors

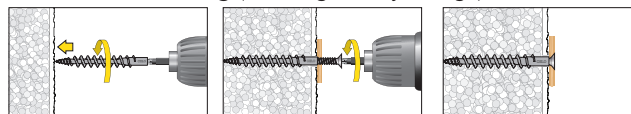
Mounting

Pre-insert mounting (wall connection profiles):



Recommended plumber screw: 4,5x25 mm

Pre-insert mounting (other light duty fixings):



The IPSD 80 can be installed using a TX25 bit.
Usable with screw Ø 4,0 mm;
Screw length $L_s = 15 - 20 \text{ mm} + \text{thickness of fixture}$



IPSD 80 (in box)

IPSD 80 (in box)					Packing	
Type	Art-No	L_d [mm]	Drive*	d_r [mm]	[pcs]	[pcs]
IPSD 80	9GR80IPSD	80	TX 25	min. 8	50	1.350

Loads and dimensions

Type	Application in Polystyrene EPS (PS15, PS20) unplastered F_{rec} [kN]	Application in Polystyrene EPS (PS15, PS20) plastered F_{rec} [kN]	Application in Rockwool, Coverrock Plus unplastered F_{rec} [kN]	Application in Polystyrene EPS + XPS (perimeter insulation) F_{rec} [kN]	Thickness of insulation material \geq [mm]
IPSD 80	0,04	ca. 0,06*	0,02	0,09*	80

F_{rec} : Recommended load in all directions incl. safety factor of 5

* Value may differ depending on the type and thickness of the plaster

Insulation screw *IPS-H*

Direct fastening into wood fibre insulation boards and perimeter insulation panels – extremely fast and without thermal bridges

7 colours

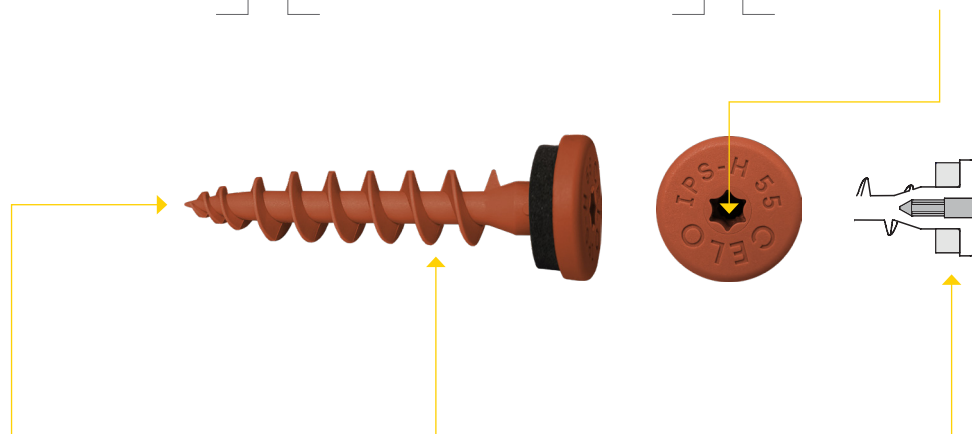
- Matched to the most common metal colours
- Great look

Stylish flat head with EPDM sealing

- for optimal sealing and adaption to the ground

TX-Drive (TX25)

- for a fast and easy installation



Extremely fast mounting due to sharp drilling tip

- Direct mounting in plastered insulation possible
- No pre-drilling in plaster (≤ 7 mm)
- **Enormous time saving**

Very distinctive thread

- **Very good hold in wood fibre insulation boards**
- Can be screwed into holes $\varnothing 8$ (usual hole diameter for wall connection profiles!)
- **No thermal bridge**

Head hole; allows light duty fixings in combination with a screw $\varnothing 3,5$ mm

Head hole

- additional application options with chipboard screws $\varnothing 3,5$ mm

The insulation screw IPS-H is perfectly suitable for **direct fixing without thermal bridges** in wood fibre insulation boards of wall connection profiles, protection panels, cornice covers as well as other panels such as signs (can also be fixed with a 3.5 mm screw in the head hole of the IPS-H. Screw length: $L_s = 10\text{mm} + t_{\text{fix}}$), lamps and letter boxes



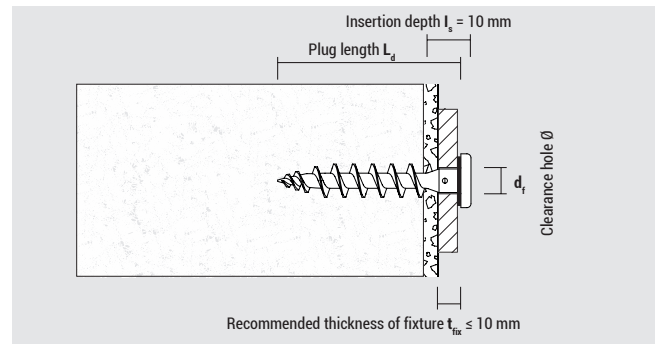
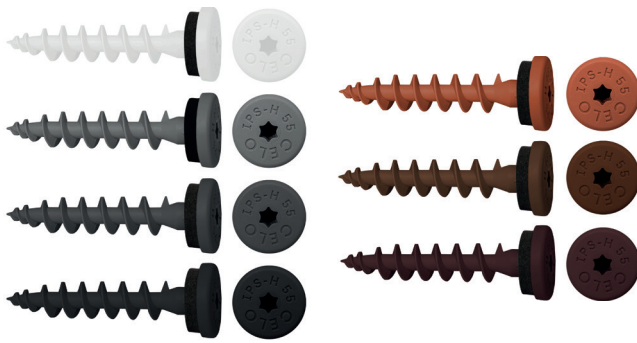
IPS-H installed



Application wall connection terrace



Application wall connection profile



Suitable building materials

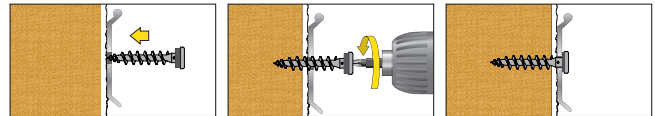
- ✓ Wood fibre insulation boards
- ✓ Perimeter insulation panels

Typical applications

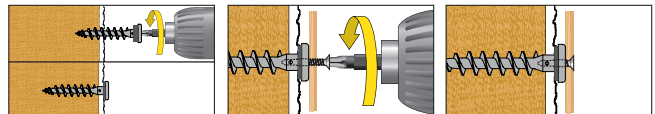
- ▶ Wall connection profiles
- ▶ Base protection profiles
- ▶ Cornice covers
- ▶ Small lamps
- ▶ Signs, metal sheets
- ▶ Motion detectors
- ▶ Letterboxes

Mounting

Through mounting (wall connection profiles)



Pre-insert mounting (light duty fixings with screw)



Usable with: Screw $\varnothing 3,5\text{ mm}$
Screw length $L_s = 10\text{ mm} + \text{thickness of fixture}$



IPS-H (in box) with EPDM sealing, head $\varnothing = 16,0\text{ mm}$						Packing	
Type	Art-No	RAL-Code	L_d [mm]	Drive	d_i [mm]	[pcs]	[pcs]
IPS-H Signal white	9155IPSH	RAL 9003	55	TX 25	8 – 10	50	1.350
IPS-H Telegrey	9GR55IPSH	RAL 7045	55	TX 25	8 – 10	50	1.350
IPS-H Anthracite grey	9AN55IPSH	RAL 7016	55	TX 25	8 – 10	50	1.350
IPS-H Traffic black	9455IPSH	RAL 9017	55	TX 25	8 – 10	50	1.350
IPS-H Copper brown	9CO55IPSH	RAL 8004	55	TX 25	8 – 10	50	1.350
IPS-H Sepia brown	9M55IPSH	RAL 8014	55	TX 25	8 – 10	50	1.350
IPS-H Chocolate brown	9MO55IPSH	RAL 8017	55	TX 25	8 – 10	50	1.350

Loads and dimensions

Type	Application in wood fibre insulation boards unplastered	Application in wood fibre insulation boards plastered	Application in perimeter insulation panels	Thickness of insulation material
	F_{rec} [kN]	F_{rec} [kN]	F_{rec} [kN]	\geq [mm]
IPS-H	0,10*	ca. 0,12*	0,07*	60

F_{rec} : Recommended load in all directions incl. safety factor of 5

* Value may differ depending on the type and thickness of the plaster

Insulation screw plug *IPSD-H*

Direct fastening into wood fibre insulation boards – extremely fast and without thermal bridges

Glass fibre reinforced nylon;

- Ageing resistant
- Weather resistant
- Stable and robust

Perfectly matched internal geometry

- Allows easy screwing in of the plumber screw

Optional: TX drive (TX25)

- For pre-insert mounting, and for disassembly

Sharp drilling tip

- Direct mounting into plastered insulation material usually possible
- No pre-drilling
- **Enormous time saving**

Very distinctive thread

- **Very good hold in wood fibre insulation boards**
- Can be screwed into **clearance holes $\geq \varnothing 8$ mm** (usual hole diameter for wall profiles)
- **No thermal bridge**



Optimal combination

- To be used with **plumber screws 4,5x25 mm**

The insulation screw plug IPSD-H is perfectly suitable for direct fastening into **wood fibre insulation boards without thermal bridge** or fastening of wall connection profiles, metal sheets, base protection profiles, cornice covers, motion detectors, lamps, signs, etc. into the insulation material.



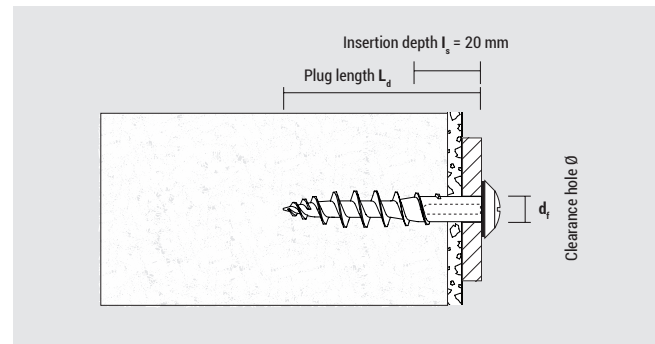
IPSD-H installed with plumber screw



Application wall connection profile



Application wall connection profile



Suitable building materials

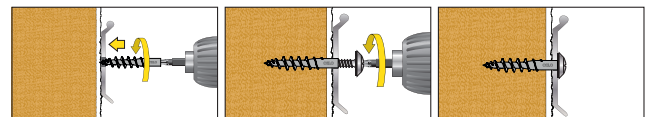
- ✓ Wood fibre insulation boards
- ✓ Perimeter insulation panels

Typical applications

- ▶ Wall connection profiles
- ▶ Base protection profiles
- ▶ Cornice covers
- ▶ Small lamps
- ▶ Signs, metal sheets
- ▶ Motion detectors
- ▶ Letterboxes

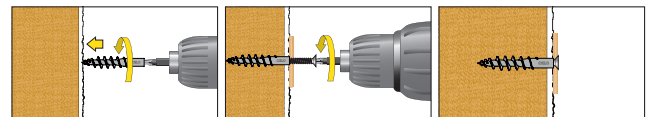
Mounting

Pre-insert mounting (wall connection profiles)



Recommended plumber screw: 4,5x25 mm

Pre-insert mounting (light duty fixings with chipboard screw)



The IPSD-H can be installed using a TX25 bit.

Usable with screw Ø 4,0 mm;

Screw length $L_s = 15 - 20 \text{ mm} + \text{thickness of fixture}$



IPSD-H (in box)					Packing	
Type	Art-No	L_d [mm]	Drive*	d_i [mm]	[pcs]	[pcs]
IPSD-H	9GR55IPSDH	55	TX 25	min. 8	50	1.350

Loads and dimensions

Type	Application in wood fibre insulation boards unplastered	Application in wood fibre insulation boards plastered	Application in perimeter insulation panels	Thickness of insulation material
	F_{rec} [kN]	F_{rec} [kN]	F_{rec} [kN]	\geq [mm]
IPSD-H	0,10*	ca. 0,12*	0,07*	60

F_{rec} : Recommended load in all directions incl. safety factor of 5

* Value may differ depending on the type and thickness of the plaster

Universal Spreading Nail *USN*

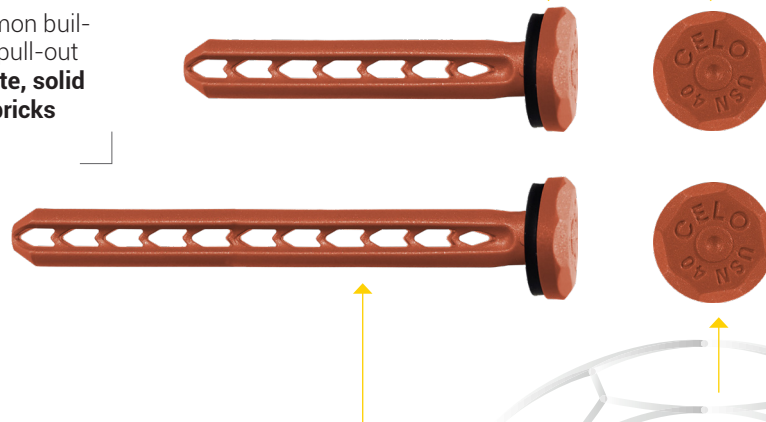
Innovative fastening for wall connection profiles in non-insulated façades – simple and quick

Available in 2 lengths (40 or 60) for clamping thicknesses from 5-25 mm or install deeper for higher load values, especially in perforated bricks

Spreading nail made out of **glass-fibre reinforced nylon** „Made in Germany“; ageing, weather, and UV- resistant

Visually attractive head with high quality EPDM sealing ring for optimal sealing and adaption to the ground

Suitable in almost all common building materials with good pull-out values; suitable for **concrete, solid bricks and perforated bricks**



The USN is available in **different colours**

Electrical contact protection through the use of plastics

The **patented elastic V-shaped spring elements** ensure a high spreading force

Easy disassembly by **knocking off** or **drilling out** the head

Innovative **direct fastening** of wall connection profiles, metal sheets, base protection profiles, cornice covers, motion detectors, small lamps, signs, etc. **without thermal bridge**



Application wall connection profile above garage

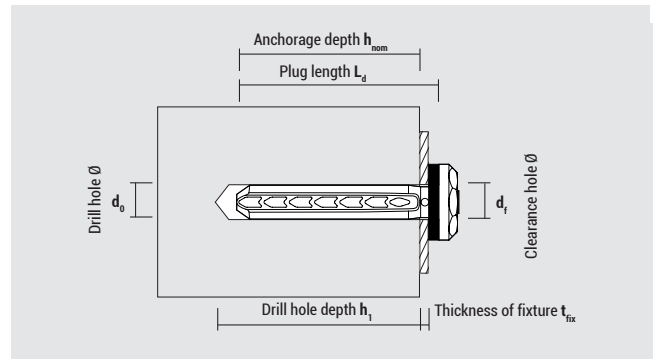
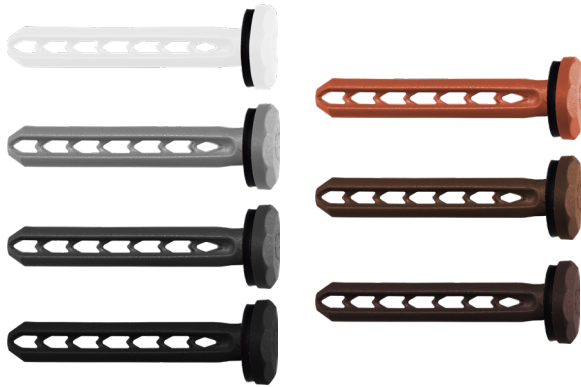


Application wall connection on canopy



Application wall connection profile

CELO



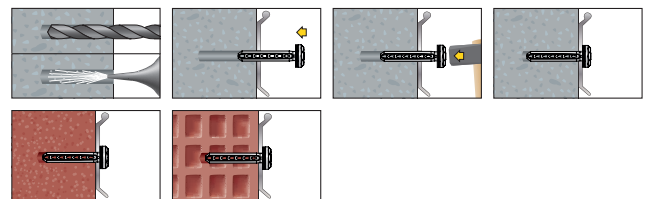
Suitable building materials

- ✓ Concrete
- ✓ Natural stone
- ✓ Solid brick
- ✓ Solid sand-lime brick
- ✓ Lightweight solid concrete blocks
- ✓ Aerated concrete (only P6)
- ✓ Hollow brick
- ✓ Hollow sand-lime brick
- ✓ Lightweight hollow concrete blocks

Typical applications

- Wall connection profiles
- Base protection profiles
- Cornice covers
- Lamps
- Signs, metal sheets
- Motion detectors
- Other lightweight fixings

Mounting



The USN can be removed in two ways:

1. **Knock off the head** using a chisel or a screwdriver.
2. **Drill out the head** with a drill bit that it falls apart (The USN has a small notch on the head which helps to guide a drill bit).



Profile USN with EDPM-sealing ring, head Ø = 15,0 mm

Type	RAL-Code
USN Signal white	RAL 9003
USN Telegrey	RAL 7045
USN Anthracite grey	RAL 7016
USN Traffic black	RAL 9017
USN Copper brown	RAL 8004
USN Sepia brown	RAL 8014
USN Chocolate brown	RAL 8017

USN 40 (in box)

Art.-No.	d ₀ - L _d [mm]	h ₁ ≥ [mm]	h _{nom} ≥ [mm]	t _{fix} ≤ [mm]	[pcs]	[pcs]
9140USN	6-40	40	35	5	100	1.800
9GR40USN	6-40	40	35	5	100	1.800
9AN40USN	6-40	40	35	5	100	1.800
9440USN	6-40	40	35	5	100	1.800
9CO40USN	6-40	40	35	5	100	1.800
9M40USN	6-40	40	35	5	100	1.800
9MO40USN	6-40	40	35	5	100	1.800

Packing

USN 60 (in box)

Art.-No.	d ₀ - L _d [mm]	h ₁ ≥ [mm]	h _{nom} ≥ [mm]	t _{fix} ≤ [mm]	[pcs]	[pcs]
9160USN	6-60	60	35	25	75	1.350
9GR60USN	6-60	60	35	25	75	1.350
9AN60USN	6-60	60	35	25	75	1.350
9460USN	6-60	60	35	25	75	1.350
9CO60USN	6-60	60	35	25	75	1.350
9M60USN	6-60	60	35	25	75	1.350
9MO60USN	6-60	60	35	25	75	1.350

Loads and dimensions F_{empf}

Type	h _{nom} [mm]	Concrete		Hollow brick HLZ 12		Hollow brick HLZ 6 (Poroton T10)		Hollow brick HLZ 6 (Poroton T8)		Aerated concrete AAC6	
		F _{rec} [kN]	F _{eff} [kN]	F _{rec} [kN]	F _{eff} [kN]	F _{rec} [kN]	F _{eff} [kN]	F _{rec} [kN]	F _{eff} [kN]	F _{rec} [kN]	F _{eff} [kN]
USN 40	35	0,10	0,70	0,08	0,56	0,05	0,35	0,06	0,42	0,04	0,30
USN 60	55	0,13	0,91	0,09	0,61	0,06	0,43	0,06	0,45	0,04	0,31

F_{rec}: Recommended loads incl. safety factor of 7

F_{eff}: Effective pull out loads excl. safety factor



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Small Things Matter

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