CELO

**Insulation
fixings**

Insulation plug
IPL

Advantages

IPL 60

IPL 95
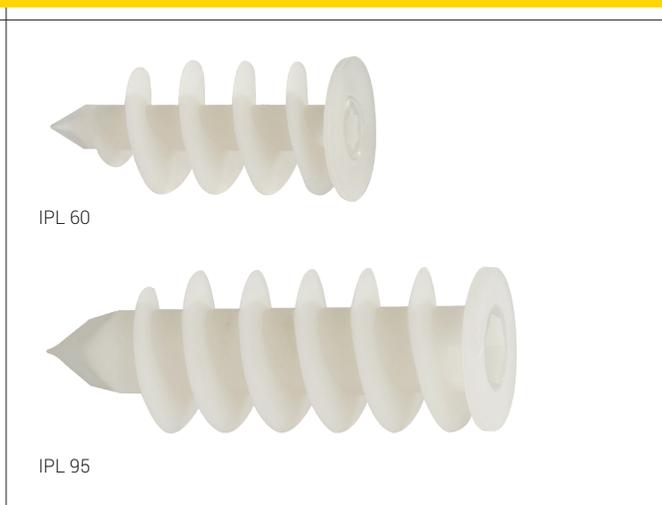
Fast, easy-to-use and durable

BEST NYLON QUALITY

No predrilling thanks to the **sharp cutting tip** even through hard plaster (≤ 7 mm)

Ageaing, weather-, and UV-resistant **nylon**

Mounting of IPL 60 with Duo-Bit: no bit change necessary, **saves time and money**

Duo-Bit for IPL 60: PZ2/TX40 TX20/TX40 TX25/TX40

Colour: semi-transparent good appearance, **paintable**

High load values
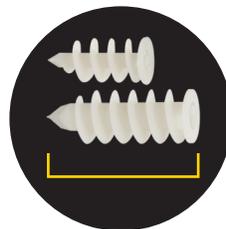
Total length 58 and 95 mm suitable for **most insulation thicknesses**

IPL 95 incl. 1 screw M8x30 as **setting tool**

Suitable building materials
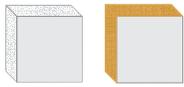
Very suitable
- External Thermal Insulation Composite Systems (ETICS)
- Polystyrene boards
- Hard foam boards
- Heraklith boards
- Wood fibre insulation boards (pre-drilling: 8 mm for IPL60, 13 mm for IPL95, HSS-drill or wood drill recommended)

Approvals and certificates

BEST NYLON QUALITY

MADE IN GERMANY

Mounting

Mounting IPL 60
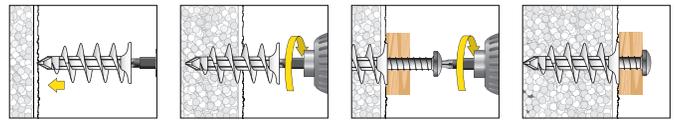
Mounting IPL 95
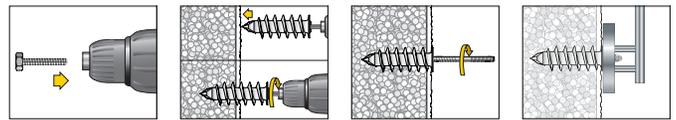
Recommendation: Seal plug collar after setting with silicone/acryl to prevent the entry of water into the insulation material. Use **CELO StickFX CL**

IPL

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	$30 + t_{fix}$	25	300
IPL 95	995IPL	95	SW 13	8 / 10 / M8	$40 + t_{fix}$	25	200

IPL 60: Head-Ø 25 mm

IPL 95: Head-Ø 32 mm, **incl. 1x screw M8 x 30 as setting tool**

Blister IPL

Type	Art-No	L_d [mm]	Recess	d_s [mm]	L_s [mm]	[pcs]	[Blister]
IPL 60	560IPL4	58	TX 40	4,5 - 5,0	$30 + t_{fix}$	4	10
IPL 95	595IPL2	95	SW 13	8 / 10 / M8	$40 + t_{fix}$	2	10

IPL 60: Head-Ø 25 mm

IPL 95: Head-Ø 32 mm, **incl. 1x screw M8 x 30 as setting tool**

Blister IPL incl. screw PZ2

Type	Art-No	L_d [mm]	Recess	$d_s \times L_s$ [mm]	Type of screw	[pcs]	[Blister]
IPL 60	560IPLPZ4	58	TX 40	4,5 x 40	⟨screw symbol⟩	4	10

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

Duo-Bit for 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

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

Loads and dimensions

Type	Applications in Polystyrene EPS [PS15, PS20] F_{rec} [kN]	Applications in Polystyrene XPS F_{rec} [kN]	For use with	Screw insertion depth min. [mm]	Screw insertion depth max. [mm]
IPL 60	0,07	0,14	Chipboard screws Ø 4,5 - 5,0	30	50
IPL 95	0,14	0,28	Hanger bolts Ø8, Ø10 and M8 Screws	40	80

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

Plug length L_d Thickness of fixture t_{fix}

d_s Screw Ø

Screw length L_s
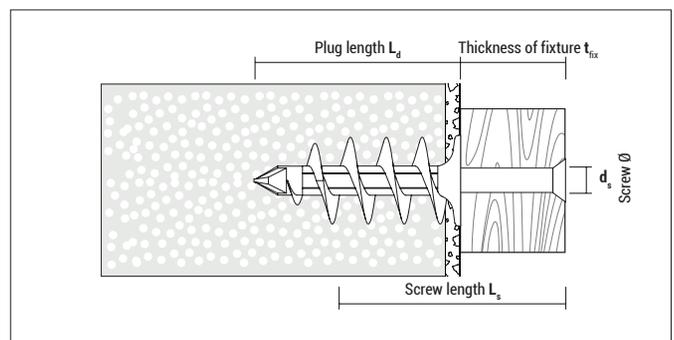
Insulation plug
IPL 95DS

Advantages

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

Distance to the wall adjustable, **wide adjustment of 25 mm**
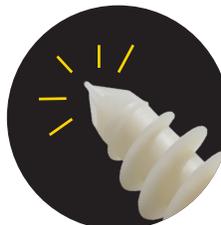
No predrilling thanks to the **sharp cutting tip** even through hard plaster (≤ 7 mm)

A2 STAINLESS STEEL

Threaded stud M8/ M10 zinc flake coating or **stainless steel A2**, high corrosion resistance

Length 95 mm, usable in almost all **insulated facades** (≥ 100 mm)

Colour: semi-transparent good appearance, **paintable**
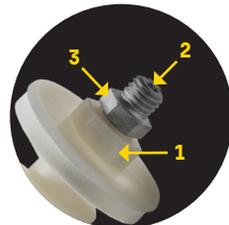
Many mounting options
1 Outer hexagon (SW17)
2 TX25-drive
3 Outer hexagon (SW13)
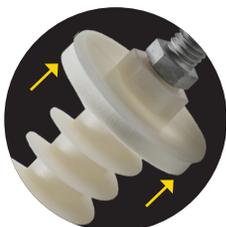
Foamed EPDM sealing ring, UV-resistant, **Permanent sealing**

Pre-mounted special threaded stud, **no losable parts, extremely fast mounting**

BEST NYLON QUALITY

Material: hard polyamide, for perfect drilling through the plaster, **very ageing resistant**

Suitable building materials

Very suitable
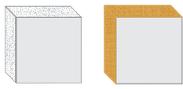
- External Thermal Insulation Composite Systems (ETICS)
- Hard foam boards
- Polystyrene boards
- Heraklith boards
- Wood fibre insulation boards (pre-drilling: 13 mm, HSS-drill or wood drill recommended)

Approvals and certificates

BEST NYLON QUALITY · PATENTED · MADE IN GERMANY · A2 STAINLESS STEEL

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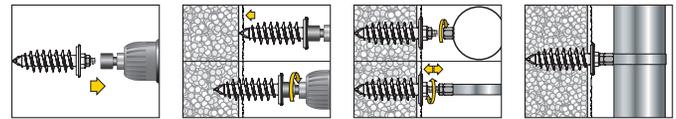
- The IPL 95DS can be installed with a hexagon SW17 (recommended), hexagon SW13 socket or TX25 bit
- The special threaded stud can be adjusted up to 25 mm.
- Tip: If the plug should rotate, fixate it with a wrench SW17.

Plug length L_d

Drive/Recess:
Plug SW17
Stud SW13/TX25

d_s Screw Ø

Screw insertion depth l_s

Special threaded stud: M10x60 with connecting thread M8 or M10
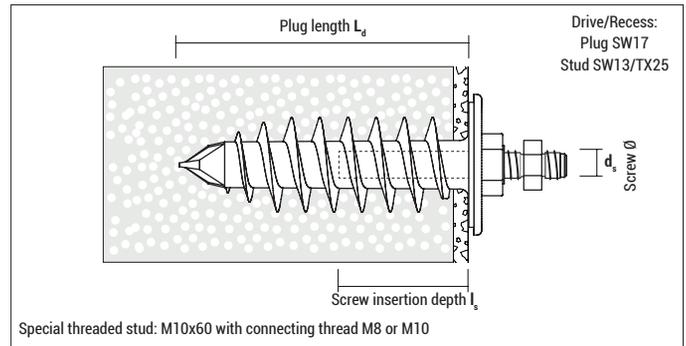
IPL 95DS sealing cap Ø = 44,5 mm

Type	Art-No	L_d [mm]	Internal thread d_s	Connecting thread	Material threaded stud	[pcs]	[pcs]
IPL 95DS M8	ZG895IPLDS4	95	M10	M8	Zinc flake coating	4	80
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 sealing cap Ø = 44,5 mm

Type	Art-No	L_d [mm]	Internal thread d_s	Drive	[pcs]	[pcs]
IPL 95D	995IPLD	95	M10	SW17	20	160

Loads and dimensions

Type	Applications in Polystyrene EPS [PS15, PS20] F_{rec} [kN]	Applications in Polystyrene XPS F_{rec} [kN]	Special threaded stud	Screw insertion depth l_s	
				min [mm]	max [mm]
IPL 95DS / IPL 95D	0,14	0,28	Total length 60 mm Thread inside the plug: 50 mm	20	50

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

Insulation screw IPS

Advantages

IPS 80 Signal white

IPS 80 Telegrey

IPS 80 Anthracite grey

IPS 80 Traffic black

IPS 80 Copper brown

IPS 80 Sepia brown

IPS 80 Chocolate brown

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

Extremely fast direct mounting of wall connection profiles

BEST NYLON QUALITY

Made out of **glass fibre reinforced nylon**, ageing, weather and UV-resistant
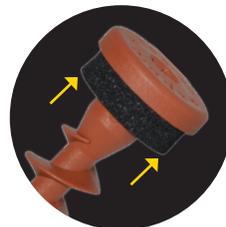
Flat head with EPDM-sealing, permanent sealing
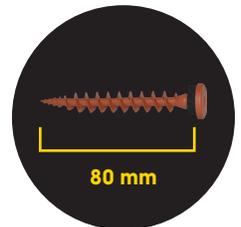
80 mm

Length 80 mm, suitable for nearly all insulated facades (from 80 mm)

7 colours, matching the most common sheet colours
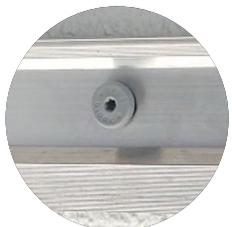
Fits through **holes ≥ 8 mm** (common for wall connection profiles or metal sheets)

TX25-drive for a fast and easy installation
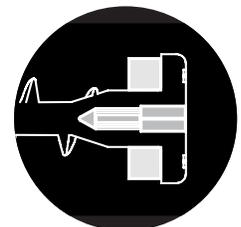
Head hole allows light duty fixings in combination with a screw Ø 3,5 mm

Suitable building materials

Very suitable

- External Thermal Insulation Composite Systems (ETICS)
- Styrofoam boards
- Hard foam boards
- Polystyrene boards
- Wood fibre boards (IPS-H is recommended)

Approvals and certificates
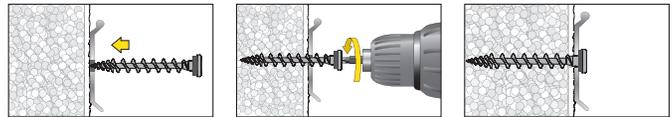
BEST NYLON QUALITY — PATENT PENDING — UTILITY MODEL — MADE IN GERMANY

Mounting

Wall connection profiles

Light duty fixings with screw

Usable with: Screw Ø 3,5 mm;
Screw length L_s = 10 mm + Thickness of fixture

Screw insertion depth I_s = 10 mm
Plug length L_d
Clearance hole-Ø
d_f
Recommended thickness of fixture t_{fix} ≤ 10 mm
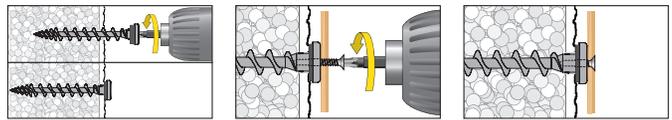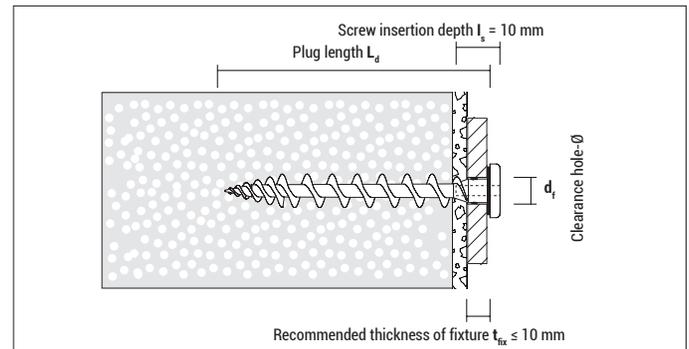
IPS 80 with EPDM sealing, head Ø = 16,0 mm

Type	Art-No	RAL-Code	L_d [mm]	Drive	d_f [mm]	[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

A2 STAINLESS STEEL

Blister IPS 80 incl. screws made of stainless steel A2, PH2

Type	Art-No	L_d [mm]	Plug Recess	d_f [mm]	$d_s \times L_s$ [mm]	Type of screw	[pcs]	[Blister]
IPS 80 PH	5180IPSPH4	80	TX 25	8 – 10	3,5 x 13 + 3,5 x 16		4	10

Loads and dimensions

Type	Applications in Polystyrene EPS (PS15, PS20) unplastered F_{rec}[kN]	Applications in Polystyrene EPS (PS15, PS20) plastered F_{rec}[kN]	Application in Rockwool, Coverrock Plus unplastered F_{rec}[kN]	Applications in Polystyrene 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**

Advantages

Fast and flexible direct mounting without thermal bridges in ETICS!

BEST NYLON QUALITY

80 mm

Extremely fast direct mounting of wall connection profiles

Made out of **glass fibre reinforced nylon**, ageing, weather and UV-resistant

Perfect combination with **plumber screws 4,5x25 mm**
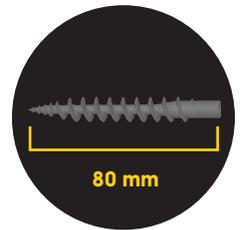
Length 80 mm, suitable for nearly all insulated facades (from 80 mm)
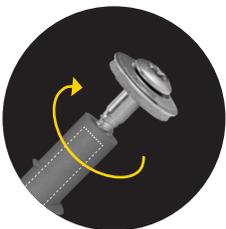
Perfectly matched internal geometry allows easy screwing in of the plumber screw
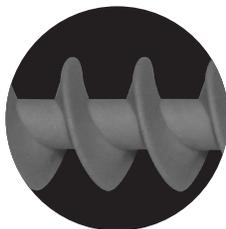
Very distinctive thread ensures good hold in insulation boards

Fits through **holes ≥ 8 mm** (common for wall connection profiles or metal sheets)
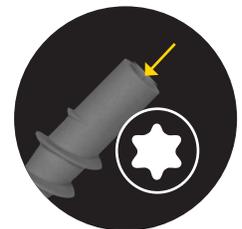
TX25 drive for fast mounting without changing bits

Suitable building materials

Very suitable

- External Thermal Insulation Composite Systems (ETICS)
- Styrofoam boards
- Hard foam boards
- Polystyrene boards
- Wood fibre boards (IPSD-H is recommended)

Mounting

Wall connection profiles
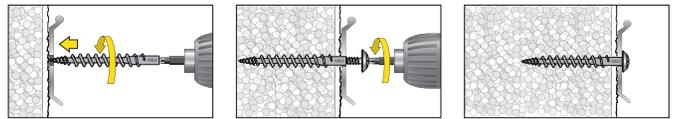
Recommended plumber screw: 4,5x25 mm

Light duty fixings with screw
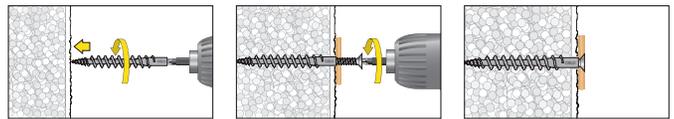
The IPSD 80 can be installed using a TX25 bit.
Usable with screw Ø 4,0 mm;
Screw length L_s = 15 - 20 mm + Thickness of fixture

Approvals and certificates

BEST NYLON QUALITY

MADE IN GERMANY

Screw insertion depth l_s = 20 mm

Plug length L_d

Clearance hole-Ø

d_f
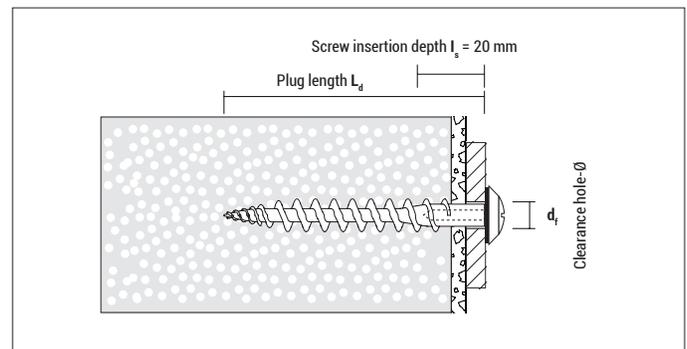
IPSD 80

Type	Art-No	L_d [mm]	Drive	d_f [mm]	[pcs]	[pcs]
IPSD 80	9GR80IPSD	80	TX 25	min. 8	50	1.350

A2 STAINLESS STEEL

Plumber screw PLS TX

Type d_0 x L_s	Art-No	Material	d_0 [mm]	L_s [mm]	Drive	[pcs]	[pcs]
4,5 x 25	9X4525PLST	stainless steel A2	4,5	25	TX 25	50	1.200
4,5 x 25	9XCO4525PLST	stainless steel A2, copper plated	4,5	25	TX 25	50	1.200

Loads and dimensions

Type	Applications in Polystyrene EPS (PS15, PS20) unplastered F_{rec}[kN]	Applications in Polystyrene EPS (PS15, PS20) plastered F_{rec}[kN]	Application in Rockwool, Coverrock Plus unplastered F_{rec}[kN]	Applications in Polystyrene XPS (perimeter insulation) F_{rec}[kN]	Thickness of insulation material ≥ [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**

Advantages

IPS-H Signal white

IPS-H Telegrey

IPS-H Anthracite grey

IPS-H Traffic black

IPS-H Copper brown

IPS-H Sepia brown

IPS-H Chocolate brown
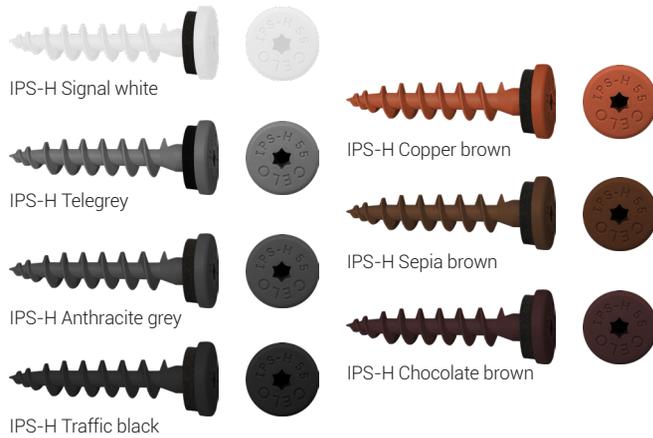
Direct fastening into wood fibre insulation boards and perimeter insulation panels – extremely fast and without thermal bridges

Extremely fast direct mounting of wall connection profiles
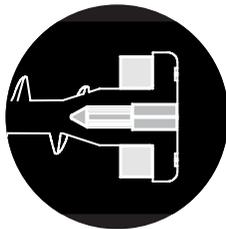
Head hole allows light duty fixings in combination with a screw Ø 3,5 mm
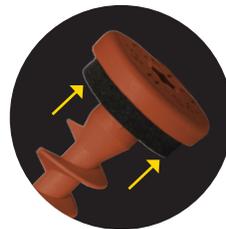
Flat head with EPDM-sealing, permanent sealing
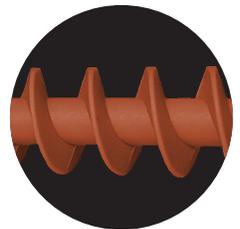
Very distinctive thread ensures good hold in wood fibre insulation boards
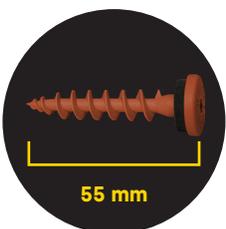
55 mm

Length of only 55 mm, especially developed for wood fibre insulation boards (from 60 mm)

TX25-drive for a fast and easy installation

Fits through **holes ≥ 8 mm** (common for wall connection profiles or metal sheets)

BEST NYLON QUALITY

Made out of **glass fibre reinforced nylon**, ageing, weather and UV-resistant

Suitable building materials

Very suitable

- Wood fibre boards
- Perimeter insulation panels

### Approvals and certificates

BEST NYLON QUALITY

MADE IN GERMANY

Mounting

Wall connection profiles

Light duty fixings with screw

Usable with: Screw Ø 3,5 mm;
Screw length L_s = 10 mm + Thickness of fixture

Screw insertion depth l_s = 10 mm

Plug length L_d

Clearance hole-Ø

d_f

Recommended thickness of fixture t_{fix} ≤ 10 mm
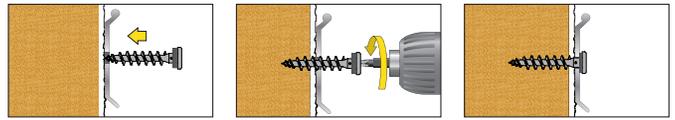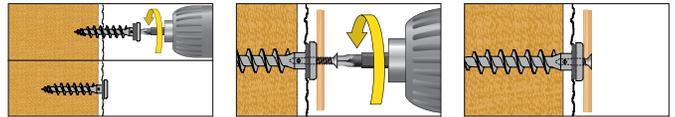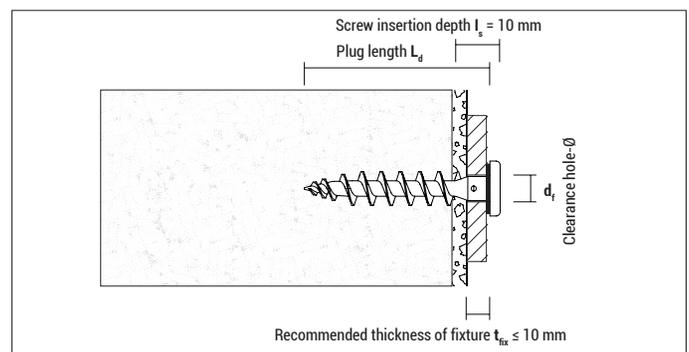
IPS-H with EPDM sealing, head-Ø = 16,0 mm

Type	Art-No	RAL-Code	L_d [mm]	Drive	d_f [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	Applications in wood fibre insulation boards unplastered F_{rec}[kN]	Applications in wood fibre insulation boards plastered F_{rec}[kN]	Applications in Polystyrene XPS (perimeter insulation) F_{rec}[kN]	Thickness of insulation material ≥ [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**

Advantages

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

Extremely fast direct mounting of wall connection profiles

BEST NYLON QUALITY

Made out of **glass fibre reinforced nylon**, ageing, weather and UV-resistant

Perfect combination with **plumber screws 4,5x25 mm**

55 mm

Length of only 55 mm, especially developed for wood fibre insulation boards (from 60 mm)

Perfectly matched internal geometry allows easy screwing in of the plumber screw

Very distinctive thread ensures good hold in wood fibre insulation boards

Fits through **holes ≥ 8 mm** (common for wall connection profiles or metal sheets)

**TX25 drive** for fast mounting without changing bits

Suitable building materials

Very suitable

- Wood fibre boards
- Perimeter insulation panels

Approvals and certificates

BEST NYLON QUALITY

MADE IN GERMANY

Mounting

Wall connection profiles

Recommended plumber screw: 4,5x25 mm

Light duty fixings with screw

Usable with: Screw Ø 3,5 mm;
Screw length L_s = 10 mm + Thickness of fixture

Screw insertion depth I_s = 20 mm

Plug length L_d

Clearance hole-Ø

d_f
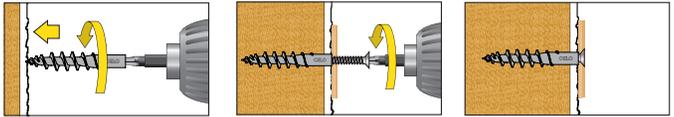
IPSD-H

Type	Art-No	L_d [mm]	Drive	d_f [mm]	[pcs]	[pcs]
IPSD-H	9GR55IPSDH	55	TX 25	min. 8	50	1.350

Plumber screw PLS TX

A2 STAINLESS STEEL

Type d_0 x L_s	Art-No	Material	d_0 [mm]	L_s [mm]	Drive	[pcs]	[pcs]
4,5 x 25	9X4525PLST	Stainless steel A2	4,5	25	TX 25	50	–
4,5 x 25	9XCO4525PLST	Stainless steel A2, copper plated	4,5	25	TX 25	50	–

Loads and dimensions

Type	Applications in wood fibre insulation boards unplastered F_{rec}[kN]	Applications in wood fibre insulation boards plastered F_{rec}[kN]	Applications in Polystyrene XPS (perimeter insulation) F_{rec}[kN]	Thickness of insulation material ≥ [mm]
IPSD-H	0,1*	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

13

Universal Spreading Nail **USN**

Advantages

USN Signal white

USN Telegrey

USN Anthracite grey

USN Traffic black

USN Copper brown

USN Sepia brown

USN Chocolate brown

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

Extremely fast mounting of wall connection profiles
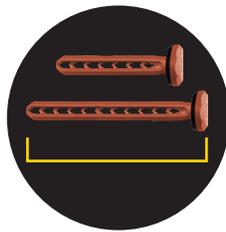
Lenths 40 and 60 mm for clamping thicknesses from 5-25 mm or install deeper for higher load values

BEST NYLON QUALITY

Made out of **glass fibre reinforced nylon**, ageing, weather and UV-resistant
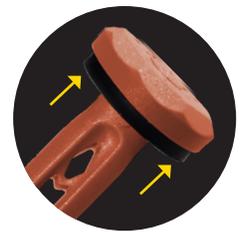
Visually attractive head with **high quality EPDM sealing ring** for optimal sealing and adaption to the ground
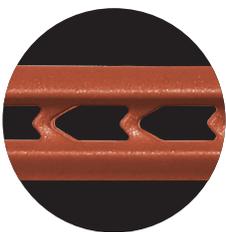
Elastic V-shaped spring elements ensures a high spreading force
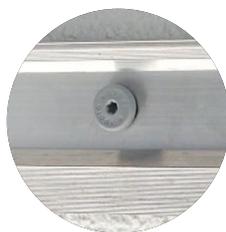
Fits through **holes ≥ 8 mm** (common for wall connection profiles or metal sheets)
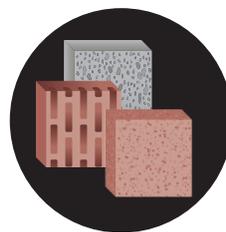
Good pull-out values in almost all common building materials like **concrete, solid bricks and perforated bricks**

Electrical contact protection for various applications in the electrical sector

Suitable building materials

Very suitable

- Concrete
- Natural stone
- Solid brick
- Solid sand-lime brick
- Lightweight solid concrete blocks

- Aerated concrete (only AAC6)
- Hollow brick
- Hollow sand-lime brick
- Lightweight hollow concrete blocks

Approvals and certificates

BEST NYLON QUALITY

MADE IN GERMANY

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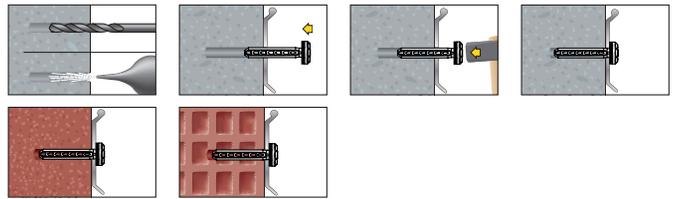
The USN can be removed in two ways:
1. **Knock off the head** using a chisel or a screwdriver.
2. **Drill out the head** with a drill bit that it falls apart (The USN has a small notch on the head which helps to guide a drill bit).

Anchorage depth h_{nom}
Plug length L_d
Drill hole Ø
d_0
d_f
Clearance hole-Ø
Drill hole depth h_1
Thickness of fixture t_{fix}
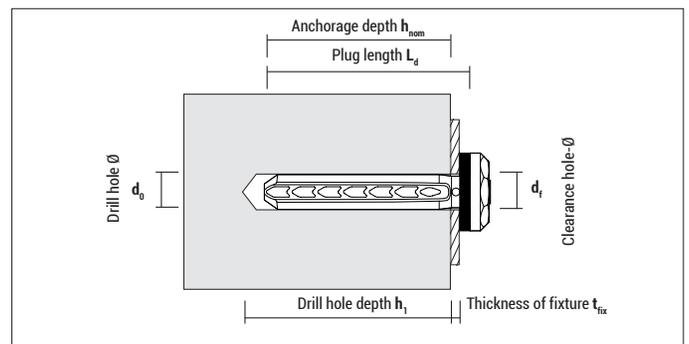
USN 6-40

USN 40 with EPDM sealing, head Ø = 15,0 mm

Type	Art-No	RAL-Code	d_0 [mm]	L_d [mm]	$h_1 \geq$ [mm]	$h_{nom} \geq$ [mm]	$t_{fix} \leq$ [mm]	d_f [mm]	[pcs]	[pcs]
USN 40 Signal white	9140USN	RAL 9003	6	40	40	35	5	8 - 10	100	1.800
USN 40 Telegrey	9GR40USN	RAL 7045	6	40	40	35	5	8 - 10	100	1.800
USN 40 Anthracite grey	9AN40USN	RAL 7016	6	40	40	35	5	8 - 10	100	1.800
USN 40 Traffic black	9440USN	RAL 9017	6	40	40	35	5	8 - 10	100	1.800
USN 40 Copper brown	9CO40USN	RAL 8004	6	40	40	35	5	8 - 10	100	1.800
USN 40 Sepia brown	9M40USN	RAL 8014	6	40	40	35	5	8 - 10	100	1.800
USN 40 Chocolate brown	9MO40USN	RAL 8017	6	40	40	35	5	8 - 10	100	1.800

USN 6-60

USN 60 with EPDM sealing, head Ø = 15,0 mm

Type	Art-No	RAL-Code	d_0 [mm]	L_d [mm]	$h_1 \geq$ [mm]	$h_{nom} \geq$ [mm]	$t_{fix} \leq$ [mm]	d_f [mm]	[pcs]	[pcs]
USN 60 Signal white	9160USN	RAL 9003	6	60	60	35	25	8 - 10	75	1.350
USN 60 Telegrey	9GR60USN	RAL 7045	6	60	60	35	25	8 - 10	75	1.350
USN 60 Anthracite grey	9AN60USN	RAL 7016	6	60	60	35	25	8 - 10	75	1.350
USN 60 Traffic black	9460USN	RAL 9017	6	60	60	35	25	8 - 10	75	1.350
USN 60 Copper brown	9CO60USN	RAL 8004	6	60	60	35	25	8 - 10	75	1.350
USN 60 Sepia brown	9M60USN	RAL 8014	6	60	60	35	25	8 - 10	75	1.350
USN 60 Chocolate brown	9MO60USN	RAL 8017	6	60	60	35	25	8 - 10	75	1.350

Loads and dimensions F_{rec}

Type	h_{nom} [mm]	Concrete		Hollow brick HLz 12		Poroton T10		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	0,13	0,93	0,08	0,55	0,03	0,20	0,08	0,60	0,04	0,32
USN 60	55	0,15	1,09	0,08	0,55	0,04	0,30	0,08	0,60	0,06	0,46

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

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

CELO

Small Things Matter

Überreicht durch: