

## Section 1. PRODUCT DESCRIPTION

### HAMMER DRIVE PLUG – SM/SMN

Hammer drive plug SM/SMN comprises a polyethylene or polyamide sleeve and a countersunk head screw made of electroplated coatings or non-electrolytically applied zinc flake coatings steel. It is designed for fixing of wood and wood-based members. Increased head diameter ensures much better holding power of the elements being installed, and countersunk section provides reliable installation and eliminates damage to the screw when driving.

Types of substrates on which hammer drive plug SM/SMN can be installed:

- Normal concrete (use category A)
- Solid masonry (use category B)
- Hollow or perforated masonry (use category C)
- Lightweight aggregate concrete (use category D)
- Autoclaved aerated concrete (use category E)



Hammer drive plugs hold European Technical Assessment: ETA-19/0156

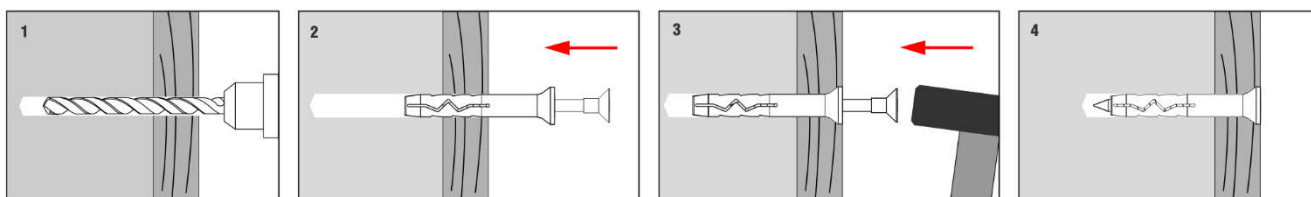


SM (PE-HD)

SMN (PA6)

## Section 2. METHOD OF INSTALLATION

1. Original hammer drive plugs delivered by the manufacturer can be used only
2. Before installation identify a substrate in which the plug will be installed and compare loads which the plug will carry to resistance values given in Product Data Sheet or European Technical Assessment
3. Select an adequate length of the plug so that expansion zone is in the construction material of the wall (thickness of member being fixed matches max. usable length of the plug –  $t_{fix}$ )
4. Use proper method of drilling according to a substrate type (holes in masonry substrate made of autoclaved aerated concrete blocks should be drilled using a drill without impact)
5. Diameter of drilled holes should match diameter of the plugs used
6. Drilled holes in substrates of solid materials should be deeper by min. 10mm compared to the plug anchorage depth
7. Clean the holes in solid materials of drillings with a back and forth motion of the drill at a reduced speed
8. Then insert the plug into a drilled hole, and drive the screw until it completely penetrates the sleeve



**PRODUCT DATA SHEET – SMø8 and SMNø8**

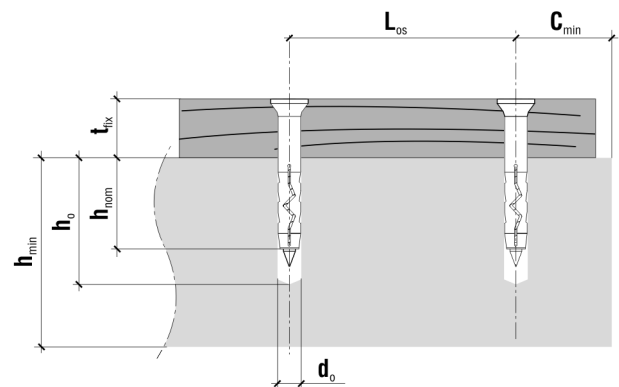
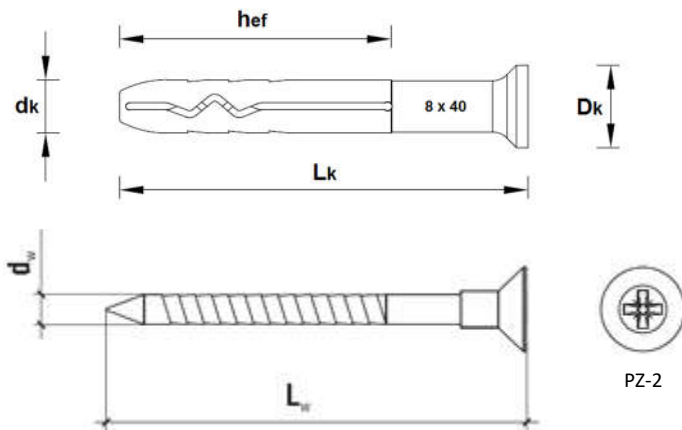
**Section 3. TECHNICAL DATA**

Characteristic resistance [kN] / Design resistance [kN]								
Substrate type	Concrete C12/15 (use category A)	Concrete C16/20 ÷ C50/60 (use category A)	Clay bricks MZ (use category B)	Calcium silicate bricks KS (use category B)	Calcium silicate hollow blocks KSL (use category C)	Lightweight concrete blocks LAC (use category D)	Autoclaved concrete blocks AAC 2 (use category E)	Autoclaved concrete blocks AAC 7 (use category E)
<b>SMø8</b>	0,40/0,20	0,60/0,30	0,60/0,30	0,60/0,30	0,40/0,20	0,35/0,17	0,10/0,05	0,25/0,12
<b>SMNø8</b>	0,75/0,37	1,00/0,50	1,00/0,50	1,00/0,50	1,00/0,50	0,60/0,30	0,50/0,25	0,70/0,35

Partial safety factor for anchor resistance  $\gamma_M = 2,0$

TECHNICAL PARAMETERS		
Parameter	Unit	Value
		SM ø8   SMN ø8
Plug diameter	$d_k$ [mm]	8
Hole/drill diameter	$d_o$ [mm]	8
Effective anchorage depth	$h_{eff}$ [mm]	40
Drilled hole depth	$h_o$ [mm]	50
Drive type	[-]	PZ-2
Sleeve material	[-]	PE-HD   PA6
Screw material	[-]	steel with electroplated coatings or non-electrolytically applied zinc flake coatings
European Technical Assessment	[-]	ETA-19/0156

INSTALLATION PARAMETERS			
Plug type	Min. substrate thickness	Min. distance from edge	Min. axial distance
	$h_{min}$ [mm]	$c_{min}$ [mm]	$L_{os}$ [mm]
SM/SMN ø8	100	100	100



**PRODUCT DATA SHEET – SMø8 and SMNø8**

Anchor index <i>electroplated coatings</i>		Anchor sleeve				Expansion nail			t <sub>fix</sub>
		h <sub>ef</sub> (ABCDE)	L <sub>k</sub>	d <sub>k</sub>	D <sub>k</sub>	L <sub>w</sub>	d <sub>w</sub>	D <sub>s</sub>	-
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
SM-08045	SMN-08045	40	45	8	11,5	50	4,9	11	5
SM-08050	SMN-08050		50			55			10
SM-08060	SMN-08060		60			65			20
SM-08080	SMN-08080		80			85			40
SM-08100	SMN-08100		100			105			60
SM-08120	SMN-08120		120			125			80
SM-08140	SMN-08140		140			145			100
SM-08160	SMN-08160		160			165			120

Anchor index <i>zinc flake</i>		Anchor sleeve				Expansion nail			t <sub>fix</sub>
		h <sub>ef</sub> (ABCDE)	L <sub>k</sub>	d <sub>k</sub>	D <sub>k</sub>	L <sub>w</sub>	d <sub>w</sub>	D <sub>s</sub>	-
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
SM-08045-D	SMN-08045-D	40	45	8	11,5	50	4,9	11	5
SM-08050-D	SMN-08050-D		50			55			10
SM-08060-D	SMN-08060-D		60			65			20
SM-08080-D	SMN-08080-D		80			85			40
SM-08100-D	SMN-08100-D		100			105			60
SM-08120-D	SMN-08120-D		120			125			80
SM-08140-D	SMN-08140-D		140			145			100
SM-08160-D	SMN-08160-D		160			165			120

**Section 4. REMARKS**

1. All previous versions of this Product Data Sheet shall cease to be valid
2. Data given in this Product Data Sheet is in accordance with current knowledge and published in good faith. KLIMAS Sp. z o.o. is not responsible for correctness and quality of the fixing if recommendations regarding method of use and installation are not followed.