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PRODUCT DATA SHEET – SMN

Section 1. PRODUCT DESCRIPTION

EXPANSION ANCHOR FOR USE WITH KD STEEL WASHERS KD – SMN

Hammer driven expansion anchor SMN comprises a polyamide sleeve and a countersunk head screw made of galvanized steel. In combination with KD steel washer it is used for fixing of flat roof thermal insulation and waterproofing systems with use of fixed connections. 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 expansion anchor SMN can be installed according to ETAG 006:

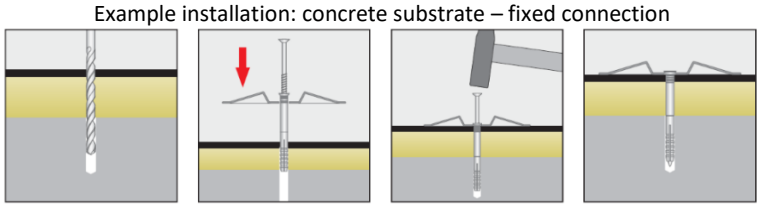
- **concrete C12/15, concrete C20/25**

Fasteners hold European Technical Assessment: ETA-15/0578

Section 2. METHOD OF INSTALLATION

1. Before installation identify the substrate and select suitable expansion anchors (in special cases perform fastener pull-out resistance tests)
2. Identify waterproofing material type and width (1.0; 1.5; 2.0; 2.5 rm.)
3. Based on items 1-2 select adequate KD washer (dedicated for a particular SMN expansion anchor)
4. Select adequate length of expansion anchor according to a substrate, so that its effective depth of anchorage conforms with European Technical Assessment and relevant Product Data Sheet
5. It recommended to keep a distance of KD washer min. 10mm from the edge of the waterproofing (on the overlap, for oval washers in parallel with the longer side to the waterproofing edge)
6. Once adequate KD washer is combined with SMN expansion anchor, drill a 6.0mm or 8.0mm hole in concrete substrate, drive the anchor in the substrate using a hammer
7. After installation, roof fastener should maintain effective pressure on the waterproofing system, and the support washer should prevent its rotation about axis
8. Number of fasteners per 1m^2 should be defined in the facility technical design – the design should include division of a flat roof into individual wind zones (corner, outer side, inner side, central)

Example installation: concrete substrate – fixed connection



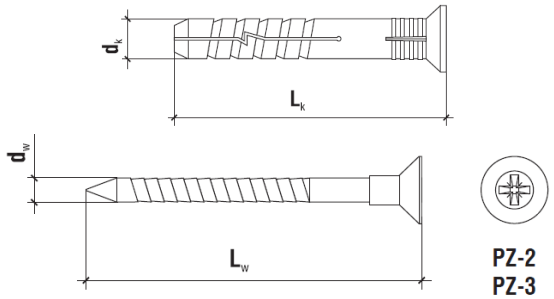
Section 3. TECHNICAL DATA

TECHNICAL PARAMETERS		
Parameter	Unit	Value
Plug diameter	d_k	6/8*
Plug length	L_k	50/60*
Screw diameter	d_w	3.9/4.9*
Screw length	L_w	55/65*
Drilled hole diameter	d_0	6/8*
Effective depth of anchorage	h_{eff}	50/60*
Drilled hole depth	h_0	60/70*
Screw drive	[-]	PZ-2
Screw material	[-]	carbon steel
Sleeve material	[-]	PA - polyamide
Corrosion protection	[-]	galvanized coating
European Technical Assessment	[-]	ETA-15/0578

*SMN-6x50/SMN-8x60

INSTALLATION PARAMETERS			
Substrate	Min. substrate thickness	Min. distance from edge	Min. spacing
	h_{min} [mm]	c_{min} [mm]	L_{os} [mm]
Concrete	50/70*	30	120
Concrete	50/70*	30	120

*SMN-6x50/SMN-8x60



STRENGTH PARAMETERS		
Substrate	KD + SMN-6x50	KD + SMN-8x60
Characteristic load-bearing capacity [kN]		
Concrete C12/15	0.79	1.18
Concrete C20/25	1.02	1.52
Design resistance [kN] – γ_M=2.0		
Concrete C12/15	0.40	0.59
Concrete C20/25	0.51	0.76

KD-07-WW + SMN-6x50

KD-03-W9 + SMN-8x60

WASHER TYPES			
Washer marking	Washer type	Drilled hole diameter [mm]	Washer dimensions [mm]
KD-03-W7*	oval	7.0	80 x 40
KD-03-WW7*	oval	7.0	80 x 40
KD-07-WW*	round	6.5	70
KD-03-W9**	oval	9.0	80 x 40

*SMN-6x50
**SMN-8x60

SELECTION TABLE			
Product code	Plug dimensions (d_k x L_k)	Screw dimensions (d_w x L_w)	Number of pieces in a box
SMN-06050	6 x 50	3.9 x 55	200
SMN-08060	8 x 60	4.9 x 65	100

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.