

## Section 1. PRODUCT DESCRIPTION

### UNIVERSAL PLUG WITH COUNTERSUNK HEAD SCREW – KW

Universal plug KW comprises sleeve made of polyamide and countersunk head steel screw with protective zinc coating. It is designed for fixing of light-duty interior finish systems, wooden strips and lightweight installations on most building substrates. The sleeve has anti-rotation lugs which keep the plug-in place when screwing in the screw.

Types of substrates on which universal plug KW can be installed:

- Concrete
- Solid clay brick and sand-lime brick
- Hollow clay brick and sand-lime brick
- Plasterboard

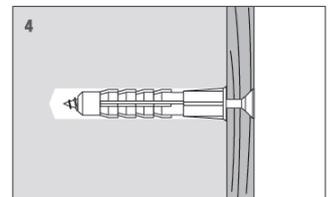
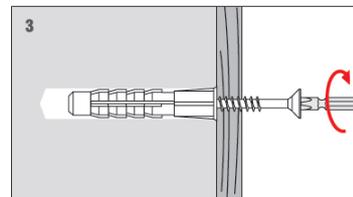
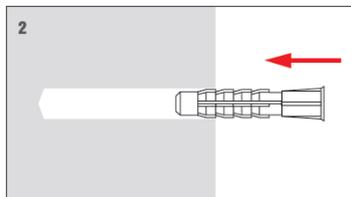
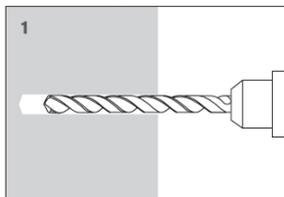


Płetwy przytrzymujące



## Section 2. METHOD OF INSTALLATION

1. Original 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 Technical Approval
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 hollow 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 through the element being fixed until it completely penetrates the sleeve (pre-fastening installation)



### Section 3. TECHNICAL DATA

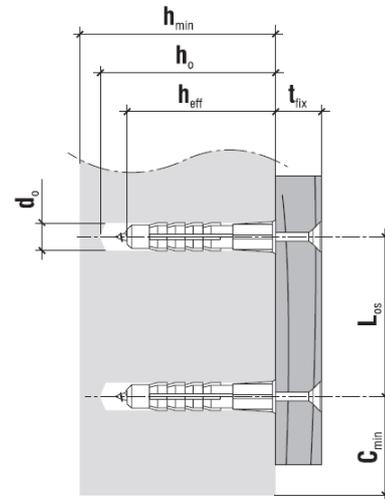
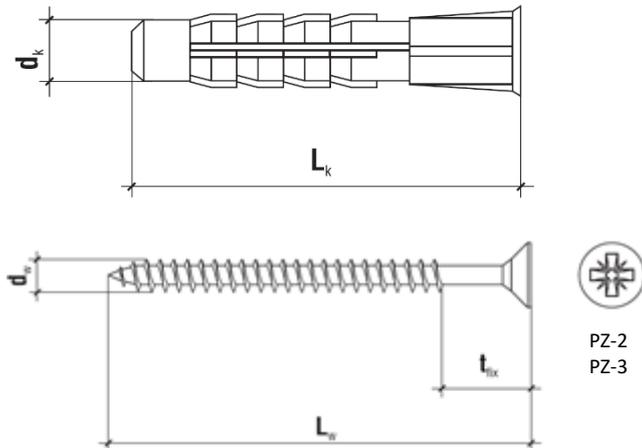
TECHNICAL PARAMETERS		
Parameter	Unit	Value
Plug diameter	$d_k$ [mm]	6/8/10
Hole/drill diameter	$d_o$ [mm]	6/8/10
Effective anchorage depth	$h_{eff}$ [mm]	35/50/60*
Drilled hole depth	$h_o$ [mm]	45/60/70*
Drive type	[-]	PZ-2/PZ-3**
Sleeve material	[-]	PA – polyamide
Screw material	[-]	Zinc-plated steel

\*for KW 6/8/10

\*\*for KW-10

Substrate type	RESISTANCE		
	Design pull-out resistance [kN]		
	KW-6	KW-8	KW-10
Concrete C20/25	0,48	0,79	1,01
Solid clay brick	0,33	0,52	0,70
Hollow brick	0,20	0,22	0,24
Plasterboard 12.5mm	0,23	0,28	0,29

Plug type	INSTALLATION PARAMETERS		
	Min. substrate thickness	Min. distance from edge	Min. axial distance
	$h_{min}$ [mm]	$c_{min}$ [mm]	$L_{os}$ [mm]
KW-6	70	70	140
KW-8	100	100	200
KW-10	120	120	240



SELECTION TABLE					
Product code	Sleeve diameter and length	Screw diameter and length	Max. usable length	Drive type	Number of pieces in a box
	$d_k \times L_k$ [mm]	$d_w \times L_w$ [mm]	$t_{fix}$ [mm]	[-]	[pcs]
KW-06045	6x35	3,5x45	5	PZ-2	100
KW-06060	6x50	3,5x60	20	PZ-2	100
KW-08060	8x50	4,5x60	5	PZ-2	100
KW-08080	8x50	4,5x80	25	PZ-2	100
KW-10080	10x60	6,0x80	15	PZ-3	100
KW-10100	10x60	6,0x100	35	PZ-3	100

### Section 4. REMARKS

- All previous versions of this Product Data Sheet shall cease to be valid
- 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.