

**PRODUCT DATA SHEET – KPR-STRONG 10 K/
KPS-STRONG 10 S**

Section 1. PRODUCT DESCRIPTION

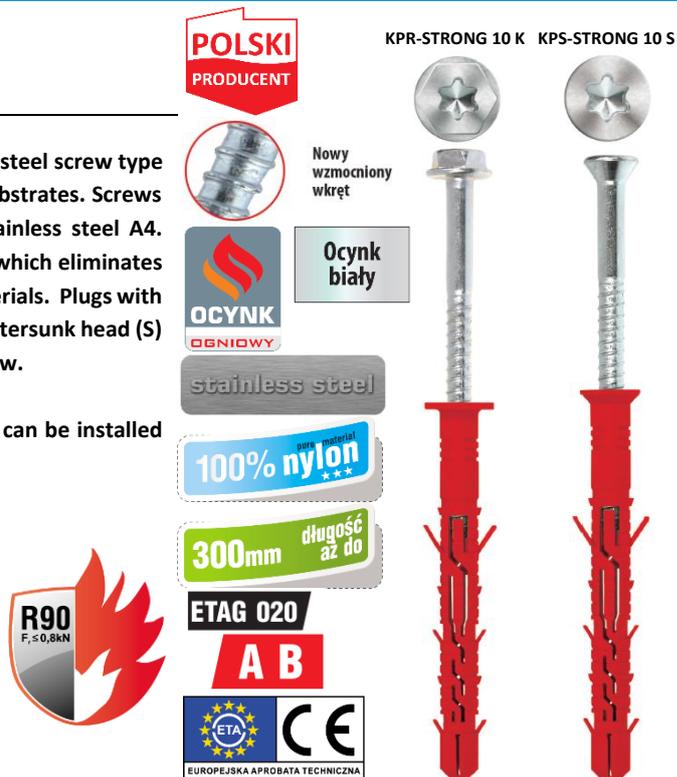
**FRAME PLUG WITH HEX/COUNTERSUNK HEAD SCREW
AND TX DRIVE – KPR-STRONG 10 K/KPS-STRONG 10 S**

Sleeves of frame plugs are made of polyamide with a specially shaped steel screw type K (hex head) or S (countersunk head) for fixing of members in solid substrates. Screws are made of zinc-plated or hot-dip galvanized hardened steel or stainless steel A4. Improved, hardened screw has better torsional and bending strength which eliminates the problem of head failure when installing the screw in very hard materials. Plugs with hex head (K) are used for fixing of metal members, and plugs with countersunk head (S) for fixing of wood members. The sleeve is pre-assembled with the screw.

Substrates on which frame plug KPR-STRONG 10 K/KPS-STRONG 10 S can be installed according to ETAG 020:

- Category A – concrete
- Category B – solid clay brick and sand-lime brick

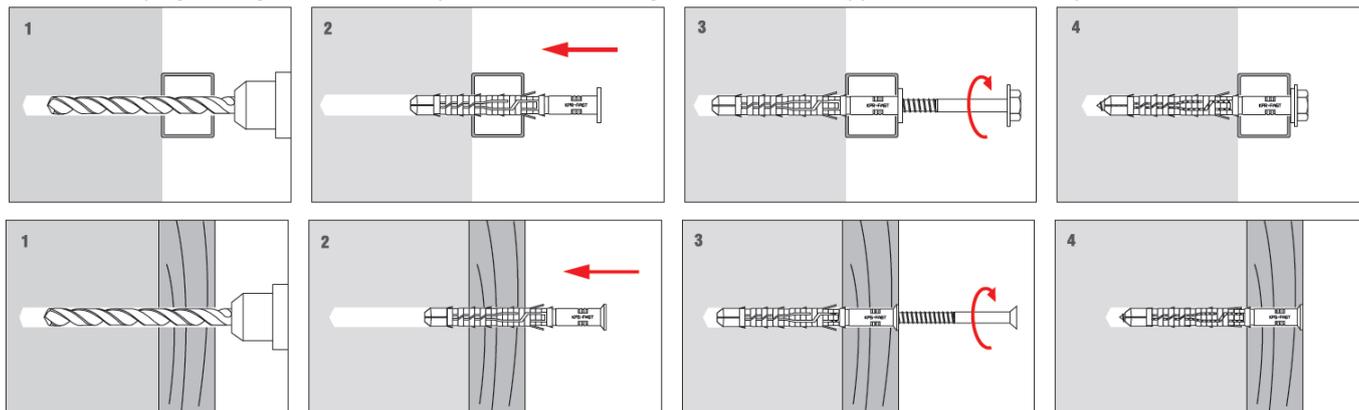
For assembling façade systems the fastener has a sufficient resistance of at least 90 minutes (R90), if the permissible design load for a single anchorage is $N_{Rk} < 0,8$ kN (without permanent longitudinal axial load).



Frame plugs hold European Technical Assessment: ETA-12/0272

Section 2. METHOD OF INSTALLATION

1. Original frame plugs delivered by the manufacturer can be used only
2. Before installation identify a substrate on 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. Diameter of drilled holes should match diameter of the plugs used
5. Drilled holes in substrates of solid materials should be deeper by min. 10mm compared to the plug anchorage depth
6. Clean the holes in solid materials of drillings with a back and forth motion of the drill at a reduced speed
7. Then insert the plug into a drilled hole, and drive the screw until it completely penetrates the sleeve
8. Forceful tightening of the screw can result in its failure which is not covered by the manufacturer's warranty
9. While the plug is being installed the temperature should be higher than 0°C (this applies to substrate temperature)

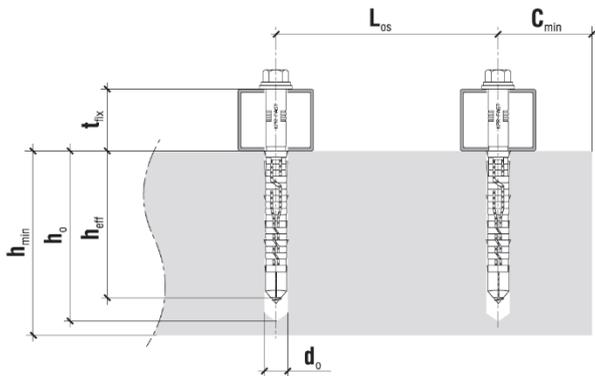


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Section 3. TECHNICAL DATA

TECHNICAL PARAMETERS		
Parameter	Unit	Value
Plug diameter	d_k [mm]	10
Hole/drill diameter	d_o [mm]	10
Effective anchorage depth	h_{eff} [mm]	70
Drilled hole depth	h_o [mm]	80
Drive type	[-]	(TX-40/SW-13)/(TX-40)*
Use categories	[-]	A B
Sleeve material	[-]	PA – polyamide
Screw material	[-]	Hot-dip galvanized steel, A4
European Technical Assessment	[-]	ETA-12/0272

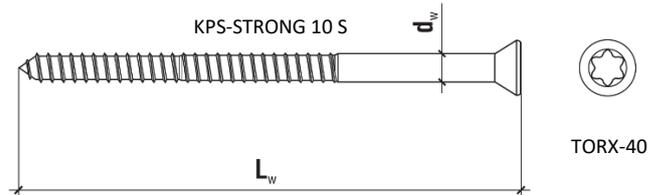
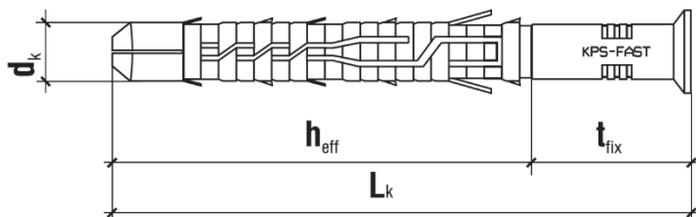
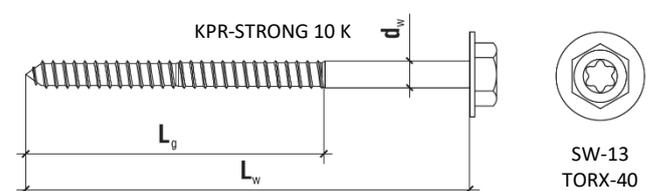
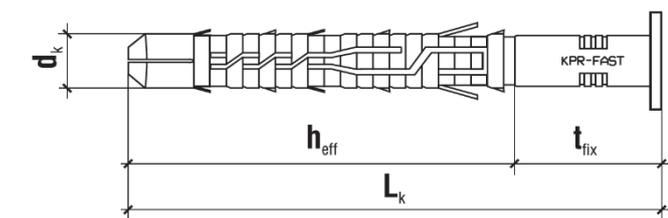
*for KPR-STRONG 10 K/KPS-STRONG 10 S



RESISTANCE				
Use categories	Substrate type	Density [kg/dm ³]	Characteristic resistance [kN]	
			KPR-STRONG K	KPS-STRONG S
A	Concrete C12/15	≥ 2,25	4,5*	
A	Concrete C16/20	≥ 2,30	6,0*	
B	Solid clay brick	≥ 2,00	3,5	
B	Solid sand-lime brick	≥ 2,00	3,5	

*cracked concrete

INSTALLATION PARAMETERS			
Substrate type	Min. substrate thickness	Min. distance from edge	Min. axial distance
	h_{min} [mm]	c_{min} [mm]	L_{os} [mm]
Concrete C12/15	100	80	80
Concrete C16/20	100	60	60
Solid clay brick	120	100	200
Solid sand-lime brick	120	100	200



**PRODUCT DATA SHEET – KPR-STRONG 10 K/
 KPS-STRONG 10 S**

SELECTION TABLE – KPR-STRONG 10 K							
Product code			Sleeve diameter and length	Screw diameter and length	Max. usable length	Drive type	Number of pieces in a box
Blue zinc	Stainless steel A4	Hot-dip galvanized	$d_k \times L_k$ [mm]	$d_w \times L_w$ [mm]	t_{fix} [mm]	[-]	[pcs]
KPR-STRONG-10080K*	KPR-STRONG-10080K-A4*	KPR-STRONG-10080K-00*	10x80	7x85	10	TX-40/SW-13	50
KPR-STRONG-10100K*	KPR-STRONG-10100K-A4*	KPR-STRONG-10100K-00*	10x100	7x105	30	TX-40/SW-13	50
KPR-STRONG-10120K*	KPR-STRONG-10120K-A4*	KPR-STRONG-10120K-00*	10x120	7x125	50	TX-40/SW-13	50
KPR-STRONG-10140K*	KPR-STRONG-10140K-A4*	KPR-STRONG-10140K-00*	10x140	7x145	70	TX-40/SW-13	50
KPR-STRONG-10160K*	KPR-STRONG-10160K-A4*	KPR-STRONG-10160K-00*	10x160	7x165	90	TX-40/SW-13	50
KPR-STRONG-10180K*	KPR-STRONG-10180K-A4*	KPR-STRONG-10180K-00*	10x180	7x185	110	TX-40/SW-13	25
KPR-STRONG-10200K*	KPR-STRONG-10200K-A4*	KPR-STRONG-10200K-00*	10x200	7x205	130	TX-40/SW-13	25
KPR-STRONG-10230K*	KPR-STRONG-10230K-A4*	KPR-STRONG-10230K-00*	10x230	7x235	160	TX-40/SW-13	25
KPR-STRONG-10260K*	KPR-STRONG-10260K-A4*	KPR-STRONG-10260K-00*	10x260	7x265	190	TX-40/SW-13	25
KPR-STRONG-10300K*	KPR-STRONG-10300K-A4*	KPR-STRONG-10300K-00*	10x300	7x305	230	TX-40/SW-13	25

*on request and to order

SELECTION TABLE – KPS-STRONG 10 S							
Product code			Sleeve diameter and length	Screw diameter and length	Max. usable length	Drive type	Number of pieces in a box
Blue zinc	Stainless steel A4	Hot-dip galvanized	$d_k \times L_k$ [mm]	$d_w \times L_w$ [mm]	t_{fix} [mm]	[-]	[pcs]
KPS-STRONG-10080S*	KPS-STRONG-10080S-A4*	KPS-STRONG-10080S-00*	10x80	7x85	10	TX-40	50
KPS-STRONG-10100S*	KPS-STRONG-10100S-A4*	KPS-STRONG-10100S-00*	10x100	7x105	30	TX-40	50
KPS-STRONG-10120S*	KPS-STRONG-10120S-A4*	KPS-STRONG-10120S-00*	10x120	7x125	50	TX-40	50
KPS-STRONG-10140S*	KPS-STRONG-10140S-A4*	KPS-STRONG-10140S-00*	10x140	7x145	70	TX-40	50
KPS-STRONG-10160S*	KPS-STRONG-10160S-A4*	KPS-STRONG-10160S-00*	10x160	7x165	90	TX-40	50
KPS-STRONG-10180S*	KPS-STRONG-10180S-A4*	KPS-STRONG-10180S-00*	10x180	7x185	110	TX-40	25
KPS-STRONG-10200S*	KPS-STRONG-10200S-A4*	KPS-STRONG-10200S-00*	10x200	7x205	130	TX-40	25
KPS-STRONG-10230S*	KPS-STRONG-10230S-A4*	KPS-STRONG-10230S-00*	10x230	7x235	160	TX-40	25
KPS-STRONG-10260S*	KPS-STRONG-10260S-A4*	KPS-STRONG-10260S-00*	10x260	7x265	190	TX-40	25
KPS-STRONG-10300S*	KPS-STRONG-10300S-A4*	KPS-STRONG-10300S-00*	10x300	7x305	230	TX-40	25

*on request and to order



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.