KLIMAS Sp. z o.o. ul. W. Witosa 135/137
Kuźnica Kiedrzyńska 42-233 Mykanów
tel. +48 34 377 71 00, fax. +48 34 328 01 73 Hotline: 801 477 477, www.wkret-met.com

PRODUCT DATA SHEET – WBSW

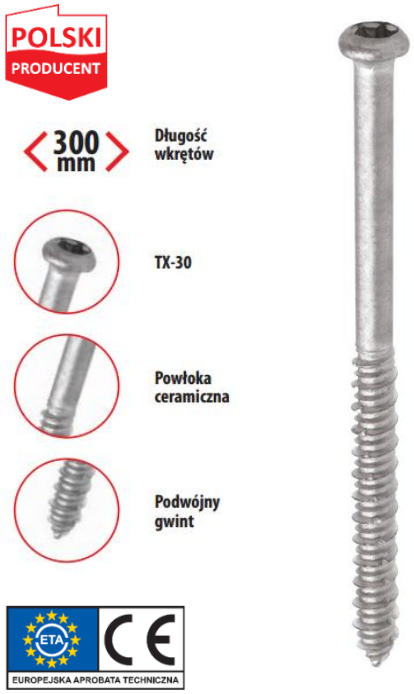
Section 1. PRODUCT DESCRIPTION

SELF-TAPPING SCREW FOR FASTENING OF FLAT ROOF THERMAL INSULATION AND WATERPROOFING SYSTEMS TO CONCRETE, TIMBER, OSB, PLYWOOD – WBSW

Self-tapping screw WBSW in combination with LINO 13, LINO K 13, LINO 15 plastic sleeve is used for fastening thermal insulation and waterproofing systems with use of telescopic connections or KD steel washer with use of fixed connections (no thermal insulation or hard thermal insulation materials, e.g. PIR, PUR). The screw is made of carbon steel, coated with a special SQ ceramic coating, meeting stringent requirements of corrosion resistance (15 Kesternich cycles), thanks to which screws have the highest corrosion protection. The screw has double thread which facilitates installation in concrete substrate.

Types of substrates on which screw WBSW can be installed according to ETAG 006:

- **concrete C12/15, concrete C20/25, thin-wall concrete panel**
- **timber C24, OSB board, plywood**



Kesternich Cycles 15

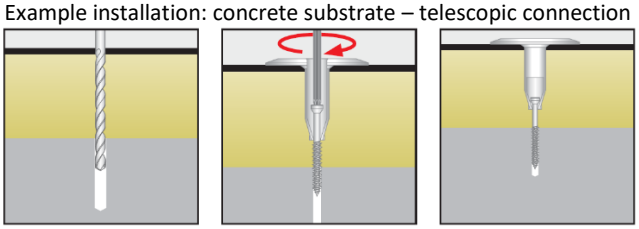
ETA CE EUROPEJSKA APROBATA TECHNICZNA

Fasteners hold European Technical Assessment: ETA-15/0578

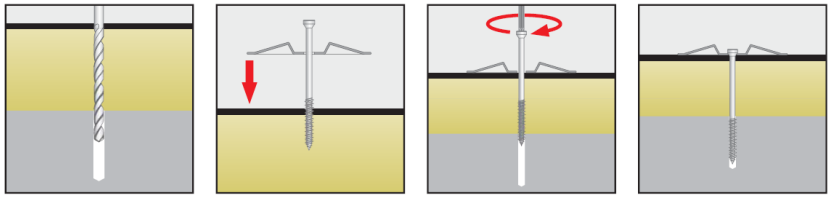
Section 2. METHOD OF INSTALLATION

1. Before installation identify the substrate (concrete, timber substrate), and its thickness and select suitable fasteners. Pay particular attention to select suitable fastener type for renovation of flat roofs on a concrete substrate (in special cases perform fastener pull-out resistance tests)
2. Identify thermal insulation thickness and type (mineral wool, polystyrene, PIR foam, PUR foam, EPS roofing membrane).
3. Identify waterproofing material type and width (1.0; 1.5; 2.0; 2.5 rm.)
4. Based on items 1-3 select adequate length of plastic sleeve – by min. 15mm shorter than thermal insulation thickness
5. Due to telescopic connection of the screw, effective width of plastic sleeve is: L_k-15mm
6. Select adequate length of a screw according to a substrate, so that its effective depth of anchorage conforms with European Technical Assessment and relevant Product Data Sheet
7. It is recommended to keep the distance of support washer of the sleeve or KD steel washers of min. 10mm from the edge of the waterproofing (on the overlap, for oval washers in parallel with the longer side to the waterproofing edge)
8. If the waterproofing layer is installed only (without thermal insulation layer) or if thermal insulation system of high density is installed, it is recommended to use a combination: KD + WBSW screw – fixed connection
9. Once plastic sleeve/washer is combined with a suitable screw, drill a 5.0mm hole in the substrate (only for concrete substrate), screw the fastener in the substrate using dedicated driver bits
10. After installation, roof fastener should maintain effective pressure on the waterproofing and thermal insulation systems, and the support washer of the plastic sleeve/washer should prevent rotation about steel fastener axis
11. 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 – telescopic connection



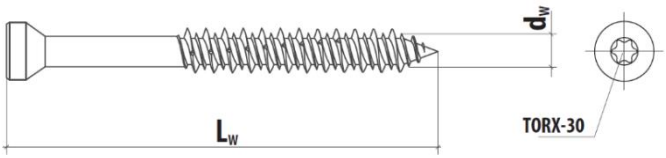
Example installation: concrete substrate – fixed connection



All rights reserved The sheet may be disclosed only in the form as delivered. No part (contents such as text, graphics, logos, figures, pictures, and any other data) given in this document may be modified or published whatsoever in part, without prior authorisation. Any trademarks, graphic symbols, trade names, logos and other data are protected by copyright and are property of their owner. Created: 2016-08-22 Updated: 2021-03-15

Section 3. TECHNICAL DATA

TECHNICAL PARAMETERS		
Parameter	Unit	Value
Screw diameter	d_w [mm]	6.3
Screw head diameter	D_w [mm]	9.0
Screw drive	-	TORX-30
Screw material	[-]	carbon steel
Corrosion protection	[-]	ceramic coating SQ
European Technical Assessment	[-]	ETA-15/0578



INSTALLATION PARAMETERS					
Substrate	Min. substrate thickness	Min. effective anchorage depth	Min. total anchorage depth	Min. distance from edge	Min. spacing
	h_{min} [mm]	h_{eff} [mm]	h_{Σ} [mm]	c_{min} [mm]	L_{os} [mm]
Concrete C12/15	50	30	30	30	120
Concrete C20/25	50	30	30	30	120
Thin wall concrete slab	20	30	30*	30	120
Timber C24	30	40	40*	30	120
OSB board	18	28	28*	30	120
Plywood	20	30	30*	30	120

*The screw should protrude 10 mm beyond the thickness of the substrate (thin wall concrete slab, timber C24, OSB board, plywood)

STRENGTH PARAMETERS			
Substrate	LINO 13/LINO K 13 + WBSW	LINO 15 + WBSW	KD + WBSW
Characteristic load-bearing capacity [kN]			
Timber C24	2.32	2.16	3.04
OSB board	1.68	1.68	1.68
Plywood	2.32	2.16	3.30
Concrete C12/15	1.64	1.64	1.64
Concrete C20/25	2.12	2.12	2.12
Thin wall concrete slab	1.92	1.92	1.92

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-W7 KD-03-WW7 KD-07-WW

SELECTION TABLE		
Product code	Screw dimensions (d_w x L_w)	Number of pieces in a box
WBSW-63060-D	6.3 x 60	100
WBSW-63070-D	6.3 x 70	100
WBSW-63080-D	6.3 x 80	100
WBSW-63090-D	6.3 x 90	100
WBSW-63100-D	6.3 x 100	100
WBSW-63120-D	6.3 x 120	100
WBSW-63140-D	6.3 x 140	100
WBSW-63160-D	6.3 x 160	100
WBSW-63180-D	6.3 x 180	100
WBSW-63200-D	6.3 x 200	100
WBSW-63220-D	6.3 x 220	100
WBSW-63240-D	6.3 x 240	100
WBSW-63300-D	6.3 x 300	100

Example combination:
LINO + WBSW



Example combination:
KD + WBSW



All rights reserved The sheet may be disclosed only in the form as delivered. No part (contents such as text, graphics, logos, figures, pictures, and any other data) given in this document may be modified or published whatsoever in part, without prior authorisation. Any trademarks, graphic symbols, trade names, logos and other data are protected by copyright and are property of their owner. Created: 2016-08-22 Updated: 2021-03-15

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.

All rights reserved The sheet may be disclosed only in the form as delivered. No part (contents such as text, graphics, logos, figures, pictures, and any other data) given in this document may be modified or published whatsoever in part, without prior authorisation. Any trademarks, graphic symbols, trade names, logos and other data are protected by copyright and are property of their owner. Created: 2016-08-22 Updated: 2021-03-15