

## Section 1. PRODUCT DESCRIPTION

### CONCRETE FRAME SCREW WITH FLAT/PAN HEAD – WHO/WHOW

Concrete frame screws WHO – for fixing of window and door frames PCV and WHOW – for fixing of woodwork are made of carbon steel with protective zinc coating. Screws comprise threaded section on the whole length and flat head (WHO) or pan head (WHOW). Thread design ensures reliable and long-lasting connection. Screws are designed for fixing of window and door frames in timber and masonry.

Types of substrates on which concrete frame screw WHO/WHOW can be installed:

- Normal concrete
- Solid clay brick
- Autoclaved aerated concrete



WHO WHO



PCV

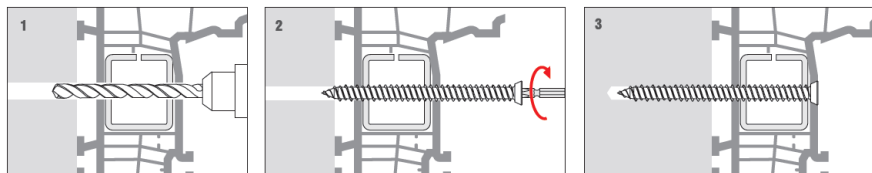
Wood



Concrete frame screws hold National Technical Assessment: ITB-KOT-2017/0308

## Section 2. METHOD OF INSTALLATION

1. Original screws delivered by the manufacturer can be used only
2. Before installation identify a substrate in which the screw will be installed and compare loads which the screw will carry to resistance values given in Product Data Sheet or National Technical Assessment
3. Select adequate screw length, depending on thickness of members being fixed
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 hole recommended by the manufacturer
6. Drilled holes in substrates of solid materials should be deeper by min. 10mm compared to the screw 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. Fixing is executed by driving the screw using screw gun with adequate bit (TORX-30)



## Section 3. TECHNICAL DATA

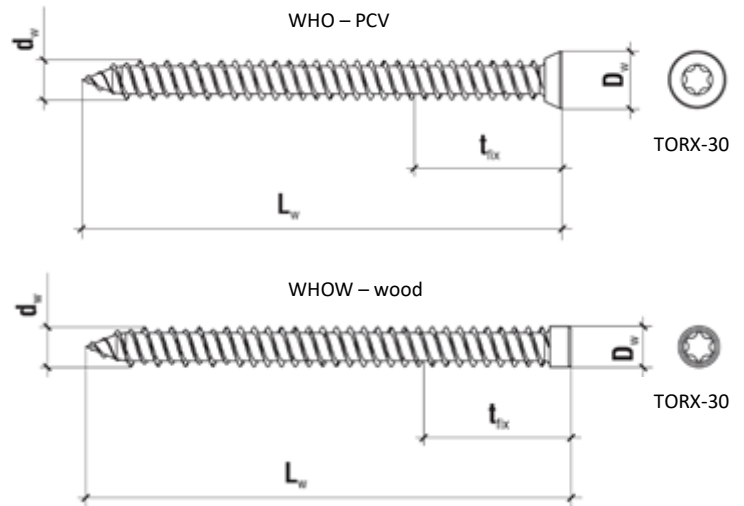
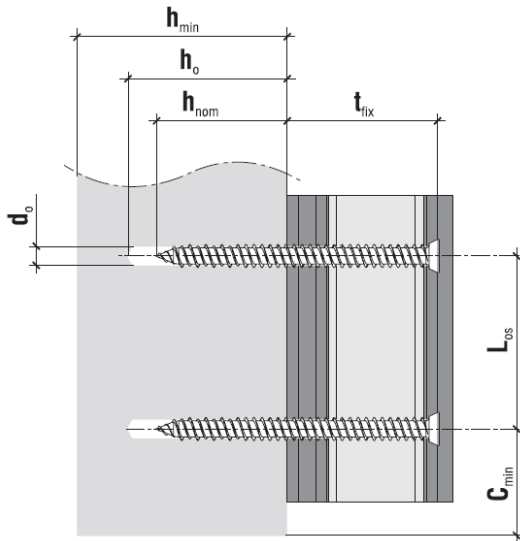
TECHNICAL PARAMETERS			
Parameter	Unit	Value	
		WHO	WHOW
Screw diameter	$d_k$ [mm]	7,5	
Hole/drill diameter	$d_o$ [mm]	6	
Effective anchorage depth	$h_{eff}$ [mm]	30/40/60*	
Drilled hole depth	$h_o$ [mm]	40/50/70*	
Drive type	[-]	TORX-30	
Screw material	[-]	Zinc-plated steel	
National Technical Assessment	[-]	ITB-KOT-2017/0308	

\*for concrete / solid brick / autoclaved aerated concrete

RESISTANCE		
Substrate type	Design resistance – WHO/WHOW	
	Pull-out [kN]	Shear [kN]
Concrete C20/25 – C50/60	1,19	2,40
Solid clay brick	0,80	1,60
Autoclaved aerated concrete	0,20	0,40

INSTALLATION PARAMETERS			
Substrate type	Min. substrate thickness	Min. distance from edge	Min. axial distance
	$h_{min}$ [mm]	$c_{min}$ [mm]	$L_{os}$ [mm]
Concrete C20/25 – C50/60	80	45	250
Solid clay brick	80	60	250
Autoclaved aerated concrete	90	90	250

**PRODUCT DATA SHEET – WHO/WHOW**



SELECTION TABLE – WHO				
Product code	Screw diameter and length	Head diameter	Drive type	Number of pieces in a box
	$d_w \times L_w$ [mm]	$D_w$ [mm]	[-]	[pcs]
WHO-75042	7,5x42	11	TORX-30	200
WHO-75062	7,5x62	11	TORX-30	200
WHO-75082	7,5x82	11	TORX-30	100
WHO-75102	7,5x102	11	TORX-30	100
WHO-75112	7,5x112	11	TORX-30	100
WHO-75132	7,5x132	11	TORX-30	100
WHO-75152	7,5x152	11	TORX-30	100
WHO-75182	7,5x182	11	TORX-30	100
WHO-75212	7,5x212	11	TORX-30	100

SELECTION TABLE – WHOW				
Product code	Screw diameter and length	Head diameter	Drive type	Number of pieces in a box
	$d_w \times L_w$ [mm]	$D_w$ [mm]	[-]	[pcs]
WHOW-75042	7,5x42	8,5	TORX-30	200
WHOW-75062	7,5x62	8,5	TORX-30	200
WHOW-75082	7,5x82	8,5	TORX-30	100
WHOW-75102	7,5x102	8,5	TORX-30	100
WHOW-75112	7,5x112	8,5	TORX-30	100
WHOW-75132	7,5x132	8,5	TORX-30	100
WHOW-75152	7,5x152	8,5	TORX-30	100
WHOW-75182	7,5x182	8,5	TORX-30	100
WHOW-75212	7,5x212	8,5	TORX-30	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.