

WTB7 Throughbolt Anchor

High performance expansion anchor for non-cracked concrete

Anchor types



WTB7 8x75
WTB7 8x95
WTB7 8x115
WTB7 10x95
WTB7 10x115
WTB7 10x130
WTB7 12x100
WTB7 12x120
WTB7 12x150
WTB7 12x180
WTB7 16x150

- The **WTB7** throughbolts are torque-controlled through-fixings for medium to heavy loads. They are approved for use in non-cracked concrete.

Features and benefits

- ETA Option 7 approval for non-cracked concrete
- Two embedment depths provide installation flexibility
- High Load Capacity
- Pre- and through fixing

Approvals and certificates

- European Technical Assessment

ETA-17/0344, 12 April 2017



Suitable base materials

- Non-cracked concrete
- Stone

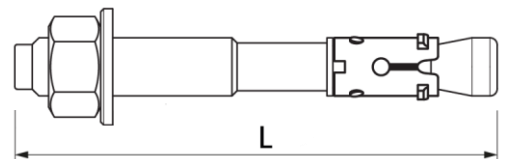
Typical applications

- Hand rails
- Curtain walls
- Racking
- Machinery

Product details

Article	Description	Size	Length	Max. fixture thickness ¹⁾	Fixture hole clearance
		[-]	L [mm]	t _{fix,max} [mm]	d _f [mm]
609837080	WTB7 8x75	M8	75	25 / 10	9
609837081	WTB7 8x95	M8	95	45 / 30	9
609837082	WTB7 8x115	M8	115	65 / 50	9
609837100	WTB7 10x95	M10	95	35 / 25	11
609837101	WTB7 10x115	M10	115	55 / 45	11
609837102	WTB7 10x130	M10	130	70 / 60	11
609837120	WTB7 12x100	M12	100	25 / 5	13
609837121	WTB7 12x120	M12	120	45 / 25	13
609837122	WTB7 12x150	M12	150	75 / 55	13
609837123	WTB7 12x180	M12	180	105 / 85	13
609837160	WTB7 16x150	M16	150	50 / 30	18

1) Max. fixture thickness is indicated at reduced / standard embedment depths



Packaging details

Article	Description	Pack 1		Pack 2	
		[pcs]	EAN13	[pcs]	EAN13
609837080	WTB7 8x75	100	8712993156818	-	-
609837081	WTB7 8x95	100	8712993156825	-	-
609837082	WTB7 8x115	100	8712993156832	-	-
609837100	WTB7 10x95	50	8712993156849	-	-
609837101	WTB7 10x115	50	8712993156856	-	-
609837102	WTB7 10x130	50	8712993156863	-	-
609837120	WTB7 12x100	50	8712993156870	-	-
609837121	WTB7 12x120	50	8712993156887	-	-
609837122	WTB7 12x150	50	8712993156894	-	-
609837123	WTB7 12x180	50	8712993156900	-	-
609837160	WTB7 16x150	25	8712993156917	-	-

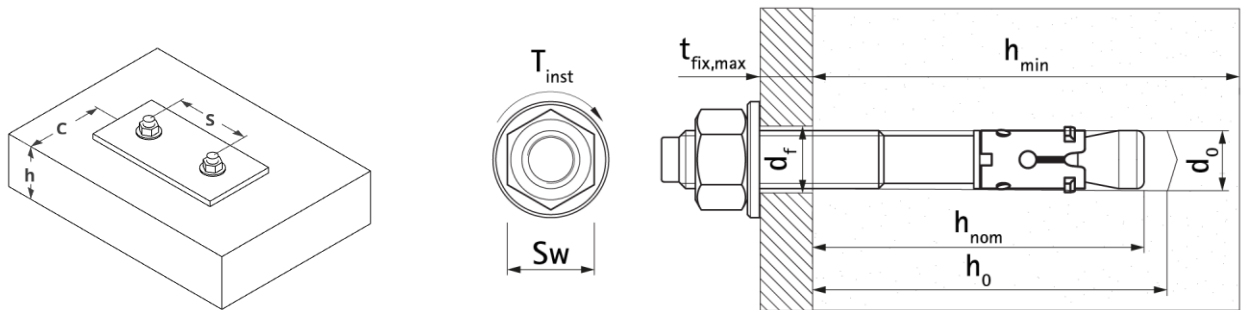
Mechanical properties

Component	Material	Coating
Anchor body	Steel grade C17C, EN 10263-2	Electroplated $\geq 5 \mu\text{m}$ and clear chromate film Cr3
Expansion sleeve	Steel grade DC03, EN 10139. M8-M12 C590 M16-M20 C490	
Hexagonal nut	According DIN 934	
Washer	According DIN 125A or DIN 9021	

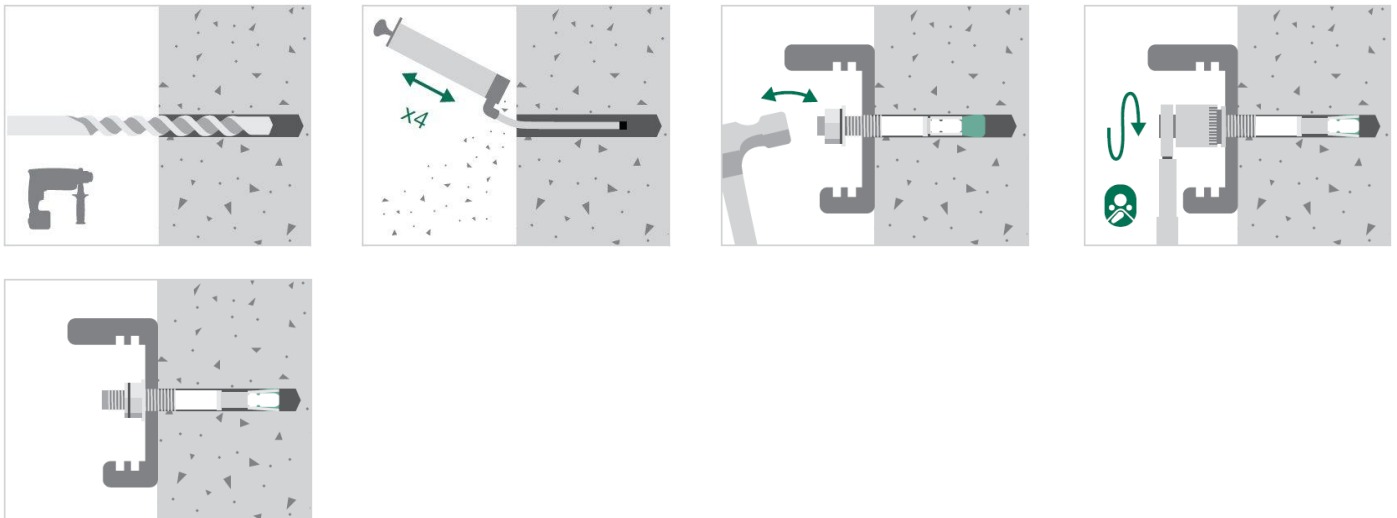
Component	Material properties	
Anchor body	M8 - M16	M20
Ultimate tensile strength [N/mm ²]	400 - 480	480 - 530
Expansion sleeve	M8 - M12	M16 - M20
Hardness [HV]	185 - 215	155 - 185

Installation parameters

Anchor Type		WTB7			
Anchor Size		M8	M10	M12	M16
Drill hole diameter	d_0 [mm]	8	10	12	16
Installation torque	T_{inst} [Nm]	10	20	40	100
Wrench Size	SW [mm]	13	17	19	24
Standard embedment depth					
Depth of drill hole	h_0 [mm]	55	59	80	100
Nominal embedment depth	h_{nom} [mm]	55	59	80	100
Min. concrete member thickness	h_{min} [mm]	100	100	136	170
Min. edge distance in non-cracked concrete	C_{min} [mm]	40	50	65	80
Min. anchor spacing in non-cracked concrete	S_{min} [mm]	50	55	75	90
Reduced embedment depth					
Depth of drill hole	h_0 [mm]	40	49	60	80
Nominal embedment depth	h_{nom} [mm]	40	49	60	80
Min. concrete member thickness	h_{min} [mm]	100	100	100	130
Min. edge distance in non-cracked concrete	C_{min} [mm]	40	65	100	100
Min. anchor spacing in non-cracked concrete	S_{min} [mm]	45	55	100	100



Instructions for installation in concrete



Recommended loads in C20/25 concrete for single anchors¹⁾

Anchor Type				WTB7				
Anchor size				M8	M10	M12	M16	
Standard embedment depth		h_{nom}	[mm]	55	59	80	100	
Reduced embedment depth		h_{nom}	[mm]	40	49	60	80	
Tension								
Non-cracked concrete	$h_{nom} = \text{standard}$		N_{Rec}	[kN]	4.76	4.76	9.92	15.70
	$h_{nom} = \text{reduced}$		N_{Rec}	[kN]	3.60	3.60	6.40	10.50
Shear								
Non-cracked concrete	$h_{nom} = \text{standard}$		V_{Rec}	[kN]	5.77	6.87	13.31	24.57
	$h_{nom} = \text{reduced}$		V_{Rec}	[kN]	3.67	4.88	6.66	21.00

1) Single anchors are anchors not affected by concrete edge and anchor spacing influence.

2) Recommended load includes partial safety factor and an overall partial safety factor for action of 1.4. The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design.