Concrete screw BTS

Advantages

BTS B, hex-head
- zinc flake coating
- stainless steel A4

BTS ST, countersunk head
- zinc plated
- stainless steel A4

- Approved for cracked and non-cracked concrete
- High loads combined with an easy application (the use of a suitable impact wrench is recommended)
- Variable, because of three setting depths
- The BTS may be adjusted
- Big range, also in stainless steel and different head shapes available
- The BTS is also ideal for temporary fixings as it can be removed completely
- Zinc flake coating (ZnAl) for improved corrosion resistance and higher application security

Suitable building materials

Very suitable

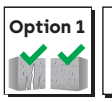
- Concrete

Suitable to a limited extent

- Dense natural stone

Approvals and certificates

European Technical Assessment
Option 1 for cracked concrete

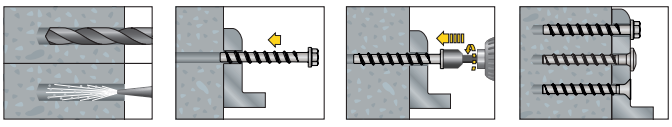


see assessment

from Ø8

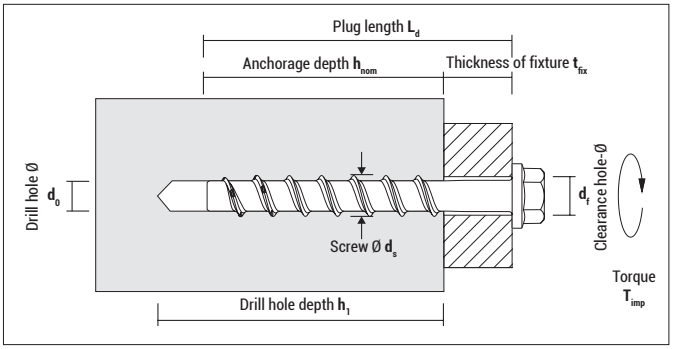
see assessment

Mounting



BTS 8: Impact wrench max. 300 Nm
BTS 10: Impact wrench max. 400 Nm
BTS 14: Impact wrench max. 650 Nm

The BTS may be adjusted up to two times for max. 10 mm in order to use shims - for details see assessment.



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BTS B, zinc flake coating with hex-head and integral washer (washer-Ø: BTS 8: Ø 16,2 mm; BTS 10: Ø 20,0 mm; BTS 14: Ø 30,0 mm)

Type d_0 - L_d	Art-No	d_s x L_d [mm]	$h_1 \geq$ [mm]	$h_{nom} \geq$ [mm]	$t_{fix} \leq$ [mm]	Recess	ETA	€ / 100 pcs	[pcs]	[pcs]
8-50/-	9ZG850BTSB	10,6 x 50	55 / - / -	45 / - / -	5 / - / -	SW 13	●		50	250
8-70/5	9ZG870BTSB	10,6 x 70	55 / 65 / 75	45 / 55 / 65	25 / 15 / 5	SW 13	●		50	250
8-80/15	9ZG880BTSB	10,6 x 80	55 / 65 / 75	45 / 55 / 65	35 / 25 / 15	SW 13	●		50	250
8-90/25	9ZG890BTSB	10,6 x 90	55 / 65 / 75	45 / 55 / 65	45 / 35 / 25	SW 13	●		50	250
8-100/35	9ZG8100BTSB	10,6 x 100	55 / 65 / 75	45 / 55 / 65	55 / 45 / 35	SW 13	●		50	250
8-120/55	9ZG8120BTSB	10,6 x 120	55 / 65 / 75	45 / 55 / 65	75 / 65 / 55	SW 13	●		50	250
10-60/-	9ZG1060BTSB	12,6 x 60	65 / - / -	55 / - / -	5 / - / -	SW 15	●		50	250
10-70/-	9ZG1070BTSB	12,6 x 70	65 / - / -	55 / - / -	15 / - / -	SW 15	●		40	200
10-80/-	9ZG1080BTSB	12,6 x 80	65 / 85 / -	55 / 57/ -	25 / 5 / -	SW 15	●		40	200
10-90/5	9ZG1090BTSB	12,6 x 90	65 / 85 / 95	55 / 75 / 85	35 / 15 / 5	SW 15	●		40	200
10-100/15	9ZG10100BTSB	12,6 x 100	65 / 85 / 95	55 / 75 / 85	45 / 25 / 15	SW 15	●		40	200
10-120/35	9ZG10120BTSB	12,6 x 120	65 / 85 / 95	55 / 75 / 85	65 / 45 / 35	SW 15	●		40	200
10-140/55	9ZG10140BTSB	12,6 x 140	65 / 85 / 95	55 / 75 / 85	85 / 65 / 55	SW 15	●		30	150
10-160/75	9ZG10160BTSB	12,6 x 160	65 / 85 / 95	55 / 75 / 85	105 / 85 / 75	SW 15	●		30	150
14-80/-	9ZG1480BTSB	16,6 x 80	85 / - / -	75 / - / -	5 / - / -	SW 21	●		20	100
14-110/-	9ZG14110BTSB	16,6 x 110	85 / 110 / -	75 / 100 / -	35 / 10 / -	SW 21	●		20	100


zinc flake coating

zinc plated

BTS B, zinc flake coating with hex-head and integral washer (washer-Ø: BTS 10: Ø 20,0 mm) with large washer according to ISO 7094 (DIN 440) for woodworking (included in packing, outer Ø = 44 mm)

Type d_0 - L_d	Art-No	d_s x L_d [mm]	$h_1 \geq$ [mm]	$h_{nom} \geq$ [mm]	$t_{fix} \leq$ [mm]	Recess	ETA	€ / 100 pcs	[pcs]	[pcs]
10-180/95*	9ZG10180BTSB	12,6 x 180	65 / 85 / 95	55 / 75 / 85	125 / 105 / 95	SW 15	●		20	100
10-200/115*	9ZG10200BTSB	12,6 x 200	65 / 85 / 95	55 / 75 / 85	145 / 125 / 115	SW 15	●		20	80
10-240/155*	9ZG10240BTSB	12,6 x 240	65 / 85 / 95	55 / 75 / 85	185 / 165 / 155	SW 15	●		20	80
10-280/195*	9ZG10280BTSB	12,6 x 280	65 / 85 / 95	55 / 75 / 85	225 / 205 / 195	SW 15	●		20	80

BTS B, stainless steel A4 with hex-head and integral washer (washer-Ø: BTS 8: Ø 16,2 mm; BTS 10: Ø 20,0 mm)

A4 STAINLESS STEEL

Type d_0 - L_d	Art-No	d_s x L_d [mm]	$h_1 \geq$ [mm]	$h_{nom} \geq$ [mm]	$t_{fix} \leq$ [mm]	Recess	ETA	€ / 100 pcs	[pcs]	[pcs]
8-80/15	9X880BTSB	10,6 x 80	55 / 65 / 75	45 / 55 / 65	35 / 25 / 15	SW 13	●		50	250
10-90/5	9X1090BTSB	12,6 x 90	65 / 85 / 95	55 / 75 / 85	35 / 15 / 5	SW 15	●		40	200
10-100/15	9X10100BTSB	12,6 x 100	65 / 85 / 95	55 / 75 / 85	45 / 25 / 15	SW 15	●		40	200

BTS ST zinc plated with countersunk head (Head-Ø: BTS ST 8: Ø 19,5 mm; BTS ST 10: Ø 21,5 mm)

Type d_0 - L_d	Art-No	d_s x L_d [mm]	$h_1 \geq$ [mm]	$h_{nom} \geq$ [mm]	$t_{fix} \leq$ [mm]	Drive	ETA	€ / 100 pcs	[pcs]	[pcs]
8-80/15	9880BTSST	10,6 x 80	55 / 65 / 75	45 / 55 / 65	35 / 25 / 15	TX 40	●		50	250
10-90/5	91090BTSST	12,6 x 90	65 / 85 / 95	55 / 75 / 85	35 / 15 / 5	TX 50	●		40	200

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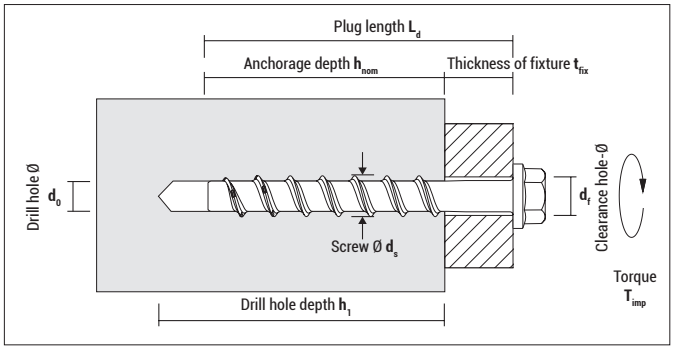

BTS ST stainless steel A4 with countersunk head (Head-Ø: BTS ST 8: Ø 19,5 mm; BTS ST 10: Ø 21,5 mm)

A4 STAINLESS STEEL

Type d_0 - L_d	Art-No	d_s x L_d [mm]	$h_1 \geq$ [mm]	$h_{nom} \geq$ [mm]	$t_{fix} \leq$ [mm]	Drive	ETA	€ / 100 pcs	[pcs]	[pcs]
8-80/15	9X880BTSST	10,6 x 80	55 / 65 / 75	45 / 55 / 65	35 / 25 / 15	TX 40	●		50	250
10-90/5	9X1090BTSST	12,6 x 90	65 / 85 / 95	55 / 75 / 85	35 / 15 / 5	TX 50	●		40	200

Loads and installation parameters (values are valid for BTS in carbon steel and stainless steel)

			BTS 8			BTS 10			BTS 14		
Drill hole Ø	d_0	[mm]	8			10			14		
Thread Ø	d_s	[mm]	10,6			12,6			16,6		
Ø of clearance hole in fixture	$d_f \leq$	[mm]	12			14			18		
Anchorage depth	h_{hom}	[mm]	45	55	65	55	75	85	75	100	115
Permissible tension load in cracked concrete[1), 2), 3)]											
C20/25	N_{per}	[kN]	2,4	4,3	5,7	4,3	8,0	9,6	7,6	12,0	15,1
Permissible tension load in non-cracked concrete[1), 2), 3)]											
C20/25	N_{per}	[kN]	3,6	5,7	7,6	5,7	9,5	11,9	10,6	16,9	21,2
Permissible shear load in cracked concrete											
C20/25	V_{per}	[kN]	3,5	4,8	6,4	4,8	15,9	19,2	7,6	24,1	30,3
Permissible shear load in non-cracked concrete											
C20/25	V_{per}	[kN]	5,0	6,8	9,0	6,8	19,4	19,4	10,6	32,0	32,0
Permissible bending moment	M_{per}	[Nm]	15			32			106		
Spacing and edge distance											
Spacing[4)]	$s_{cr,N}$	[mm]	105	129	156	129	180	204	174	237	276
Edge distance[4)]	$c_{cr,N}$	[mm]	53	65	78	65	90	102	87	119	138
Minimum spacing[4)]	s_{min}	[mm]	40	50	50	50	50	50	50	70	70
Min. edge distance[4)]	c_{min}	[mm]	40	50	50	50	50	50	50	70	70
Min. thickness of structural part	h_{min}	[mm]	100	100	120	100	130	130	130	150	170
Max. installation torque for impact wrench	$T_{imp} \leq$	[Nm]	300			400			650		

[1)] Permissible loads for single anchor without influence of spacing and edge distance.
[2)] Load figures include the resistances´ partial safety factors as per ETA assessment and a partial factor on the action of $\gamma_F = 1,4$.
[3)] For higher concrete strengths up to C50/60 the values increase by max. 55% compared with C20/25.
[4)] If underrun the char. spacing or edge distance (C_{cr} or S_{cr}) the loads must be reduced. h_{min}, S_{min} and C_{min} must be observed.