

# Concrete screw BSZ-B A4

Stainless steel A4



Concrete screw BSZ-B A4

**Range of loading:** 2,4 kN–19,6 kN  
**Range of concrete quality:** C20/25–C50/60

## Description

Option 1 approved concrete screw BSZ-B A4 cut a positive thread in the concrete when being screwed in and enable attachment to be made close to the edge through the expansion-free operating principle (=undercut). Installation with an impact screwdriver means that you do not need to use a torque wrench. It is quick, reliable and reduces assembly errors. The BSZ A4 concrete screw is suitable for applications indoors and outdoors.



## Advantages

- European Technical Assessment for anchoring in cracked and uncracked concrete (Option 1)
- With up to 3 embedment depths, it is versatile for high loads or low levels of drilling and installation effort
- Approved for use under seismic conditions of category C1<sup>1)</sup>
- Approved for use under fire exposure (R30-R120)
- Small drill hole diameter, small edge and axial gap
- No curing times, can be loaded immediately

- Adjustable to compensate for unevenness
- Can be fully removed

## Applications

To anchor moderate to heavy loads outside and inside in cracked and uncracked concrete: Railings and handrails, steel beans, supports and braces etc.

## Concrete screw BSZ-B A4



- With metric connection thread and hex drive
- Stainless steel A4
- For pre-setting and through-setting installation and for distance mounting

Description	Ref. No.	Embedment depth 1				Embedment depth 2				Embedment depth 3				Anchor length L	Pressed disk Ø	Drive	Pkg. content	Weight per pkg.
		Fixture thickness t <sub>fix</sub> mm	Drill hole Ø x depth mm	Embedment depth h <sub>nom</sub> 1 mm	Seismic C1	Fixture thickness t <sub>fix</sub> mm	Drill hole Ø x depth mm	Embedment depth h <sub>nom</sub> 2 mm	Seismic C1	Fixture thickness t <sub>fix</sub> mm	Drill hole Ø x depth mm	Embedment depth h <sub>nom</sub> 3 mm	Seismic C1					
BSZ-B 8x105 A4	59834001	39	8x55	45	-	29	8x65	55	-	19	8x75	65	✓	105	M10x30	SW 7	50	2,30
BSZ-B 10x140 A4	59845001	59	10x65	55	✓	39	10x85	75	-	29	10x95	85	✓	140	M12x35	SW 9	50	4,58
BSZ-B 10x160 A4	59846001	79	10x65	55	✓	59	10x85	75	-	49	10x95	85	✓	160	M12x55	SW 9	50	5,30

## Recommended impact screwdriver

- Milwaukee C 18 IW (Square drive, Battery operation, max. torque 250 Nm)
- Bosch GDS 18E (Square drive, Mains operation, max. torque 250 Nm)
- Makita 6905H (Square drive, Mains operation, max. torque 300 Nm)
- Würth ASS 18 (1/2 inch drive, Battery operation, max. torque 180 Nm)
- Würth ESS (1/2 inch drive, Mains operation, max. torque 250 Nm)

<sup>1)</sup>For restrictions see ETA-16/0204

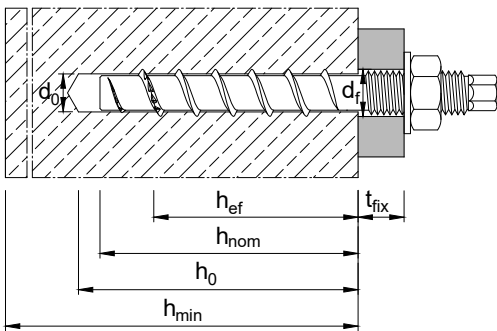


**Extract from Permissible Service Conditions of European Technical Assessment ETA-16/0204 for use in cracked and uncracked concrete (Option 1)**

Approved loads according to EN 1992-4 for single anchors without the influence of spacing and edge distances. The total safety factor ( $\gamma_M$  und  $\gamma_r$ ) is included. Load capacities under fire exposure see page 198.

Loads and performance data	Concrete screw size		BSZ 8 A4			BSZ 10 A4			
Nominal embedment depth 1	$h_{nom 1}$	[mm]	45	-	-	55	-	-	
Nominal embedment depth 2	$h_{nom 2}$	[mm]	-	55	-	-	75	-	
Nominal embedment depth 3	$h_{nom 3}$	[mm]	-	-	65	-	-	85	
cracked concrete									
Approved loads, tension	C20/25	appr. N	[kN]	2,4	4,3	5,7	4,3	7,6	9,2
	C25/30	appr. N	[kN]	2,7	4,8	6,4	4,8	8,5	10,3
	C30/37	appr. N	[kN]	2,9	5,2	7,0	5,2	9,3	11,3
	C40/50	appr. N	[kN]	3,4	6,1	8,1	6,1	10,8	13,0
	C50/60	appr. N	[kN]	3,8	6,8	9,0	6,8	12,0	14,5
uncracked concrete									
Approved loads, tension	C20/25	appr. N	[kN]	3,6	5,7	7,6	5,7	9,5	12,4
	C25/30	appr. N	[kN]	4,0	6,4	8,5	6,4	10,6	13,8
	C30/37	appr. N	[kN]	4,4	7,0	9,3	7,0	11,7	15,2
	C40/50	appr. N	[kN]	5,1	8,1	10,8	8,1	13,5	17,5
	C50/60	appr. N	[kN]	5,6	9,0	12,0	9,0	15,1	19,6
cracked / uncracked concrete									
Approved loads, shear	C20/25	appr. V	[kN]	3,4/4,9	4,6/6,6	6,1/8,8	4,6/6,6	15,2/19,4	18,4/19,4
	$\geq C25/30$	appr. V	[kN]	3,8/5,4	5,2/7,4	6,9/9,7	5,2/7,4	17,0/19,4	19,4/19,4
Approved bending moments		appr. M	[Nm]	14,9	14,9	14,9	32	32	32
<b>Spacing and edge distance</b>									
Effective anchorage depth	$h_{ef}$	[mm]	35	43	52	43	60	68	
Characteristic spacing	$s_{cr, N}$	[mm]	105	129	156	129	180	204	
Characteristic edge distance	$c_{cr, N}$	[mm]	52,5	64,5	78	64,5	90	102	
Minimum thickness of concrete slab	$h_{min}$	[mm]	80	80	80	80	90	102	
Minimum spacing	$s_{min}$	[mm]	40	50	50	50	50	50	
Minimum edge distance	$c_{min}$	[mm]	40	50	50	50	50	50	
<b>Installation parameters</b>									
Drill hole diameter	$d_o$	[mm]	8	8	8	10	10	10	
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	12	12	12	14	14	14	
Depth of drill hole	$h_0 \geq$	[mm]	55	65	75	65	85	95	
Installation torque for metric connection thread	$T_{inst} \leq$	[Nm]	20	20	20	40	40	40	
Tangential impact screwdriver <sup>1)</sup>	$T_{imp, max}$	[Nm]	300	300	300	400	400	400	

<sup>1)</sup>It is possible to fit with a tangential screwdriver with maximum output of  $T_{imp, max}$  in accordance with the manufacturer's specifications



**Installation**

