

Wedge Anchor B

Hot dip galvanized



Range of loading: 4,9 kN–41,4 kN

Range of concrete quality: C20/25–C50/60

Description

The hot-dip galvanized Wedge Anchor B fvz with European Technical Assessment, option 7, combines the advantages of the galvanized version with additional corrosion protection.

This means that the B fvz can also be used in uncracked concrete for pre-placement and time-saving push-through installations, and thanks to its three anchorage, it can be flexibly adapted to the respective installation requirements.

Advantages

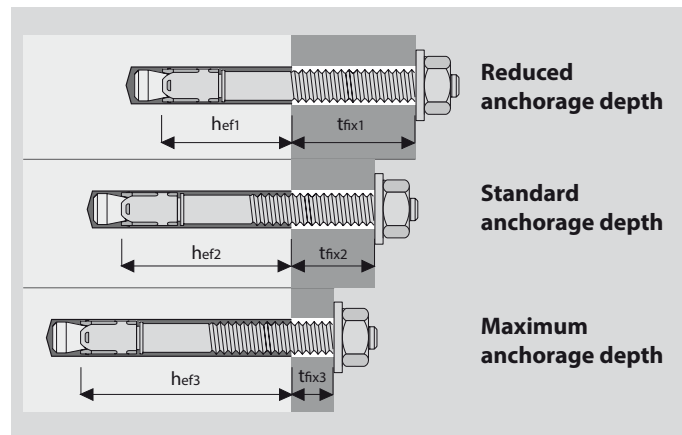
- Approved for use in uncracked concrete (option 7)
- Very high permissible loads and small edge and center distances
- Hot-dip galvanizing $\geq 50 \mu\text{m}^1$ for increased corrosion protection vs. Wedge anchor B
- Three anchorage depths for optimum flexibility
- Installation with minimum anchorage depth saves drilling effort and time
- Installation with maximum anchorage depth for maximum, high-permissible loads
- Suitable for push-in, push-through and spaced installation
- Particularly economical: The short versions with minimum anchorage depth
- Stainless steel expansion sleeve
- Fire tested F30-F120
- An impact cap prevents damage to the thread during hammering into the drill hole

Applications

Indoor medium to heavy duty applications: metal constructions, channels, brackets, supports, cladding systems, hand rails, cable trays, ducts.



Example of Installation



¹⁾Applies to average plating thickness according to EN ISO 10684

Wedge Anchor B fvz



- Steel, hot dip galvanized $\geq 50 \mu\text{m}$ (average plating thickness according to EN ISO 10684)
- Improved corrosion protection
- Approved for uncracked concrete
- Three anchorage depths

Description	Ref. No.	Drill hole- Ø do mm	Standard anchorage depth		Reduced anchorage depth		Maximum anchorage depth		Setting depth h ₁ mm	Anchor length l mm	Thread ØxL mm	Pkg. content pcs.	Weight per pkg. kg
			Fixture thickness t _{fix,std} mm	Anchorage depth h _{ef,std} mm	Fixture thickness t _{fix,min} mm	Anchorage depth h _{ef,min} mm	Fixture thickness t _{fix,max} mm	Anchorage depth h _{ef,max} mm					
B 6-5/40 fvz ¹⁾	01005201	6	-	-	5	18	-	-	h _{ef} + 9	40	M6x16	100	1,06
B 6-10-20/67 fvz ¹⁾	01010201	6	10	40	20	30	-	-	h _{ef} + 9	67	M6x30	100	1,57
B 6-25-35/82 fvz ¹⁾	01015201	6	25	40	35	30	5	60	h _{ef} + 9	82	M6x35	100	1,90
B 6-40-50/97 fvz ¹⁾	01025201	6	40	40	50	30	20	60	h _{ef} + 9	97	M6x35	100	2,09
B 8-5/50 fvz ¹⁾	01105201	8	-	-	5	35	-	-	h _{ef} + 11	50	M8x22	100	2,36
B 8-4/60 fvz	01110201	8	-	-	4	35	-	-	h _{ef} + 12	60	M8x25	100	2,76
B 8-10-19/75 fvz	01115201	8	10	44	19	35	-	-	h _{ef} + 12	75	M8x40	100	3,17
B 8-15-24/80 fvz	01120201	8	15	44	24	35	-	-	h _{ef} + 12	80	M8x45	100	3,36
B 8-20-29/85 fvz	01125201	8	20	44	29	35	-	-	h _{ef} + 12	85	M8x50	100	3,50
B 8-30-39/95 fvz	01135201	8	30	44	39	35	4	70	h _{ef} + 12	95	M8x60	100	3,83
B 8-45-54/110 fvz	01145201	8	45	44	54	35	19	70	h _{ef} + 12	110	M8x75	100	4,29
B 8-55-64/120 fvz	01150201	8	55	44	64	35	29	70	h _{ef} + 12	120	M8x85	100	4,59
B 10-10/60 fvz ¹⁾	01205201	10	-	-	10	24	-	-	h _{ef} + 15	60	M10x25	50	2,32
B 10-10-16/85 fvz	01210201	10	10	48	16	42	-	-	h _{ef} + 14	85	M10x40	50	2,90
B 10-15-21/90 fvz	01215201	10	15	48	21	42	-	-	h _{ef} + 14	90	M10x45	50	3,01
B 10-20-26/95 fvz	01220201	10	20	48	26	42	-	-	h _{ef} + 14	95	M10x50	50	3,15
B 10-30-36/105 fvz	01225201	10	30	48	36	42	-	-	h _{ef} + 14	105	M10x60	50	3,35
B 10-45-51/120 fvz	01230201	10	45	48	51	42	13	80	h _{ef} + 14	120	M10x75	50	3,77
B 10-50-56/125 fvz	01235201	10	50	48	56	42	18	80	h _{ef} + 14	125	M10x80	50	3,93
B 10-70-76/145 fvz	01240201	10	70	48	76	42	38	80	h _{ef} + 14	145	M10x80	50	4,50
B 10-100-106/175 fvz	01245201	10	100	48	106	42	68	80	h _{ef} + 14	175	M10x80	50	4,93
B 10-140-146/215 fvz	01250201	10	140	48	146	42	108	80	h _{ef} + 14	215	M10x80	25	3,10
B 12-5/75 fvz ¹⁾	01305201	12	-	-	5	25	-	-	h _{ef} + 17	75	M12x30	25	1,99
B 12-13/95 fvz	01310201	12	-	-	13	50	-	-	h _{ef} + 17	95	M12x50	25	2,38
B 12-15-30/110 fvz	01315201	12	15	65	30	50	-	-	h _{ef} + 17	110	M12x65	25	2,66
B 12-20-35/115 fvz	01320201	12	20	65	35	50	-	-	h _{ef} + 17	115	M12x70	25	2,71
B 12-30-45/125 fvz	01325201	12	30	65	45	50	-	-	h _{ef} + 17	125	M12x80	25	2,92
B 12-50-65/145 fvz	01330201	12	50	65	65	50	15	100	h _{ef} + 17	145	M12x100	25	3,25
B 12-65-80/160 fvz	01335201	12	65	65	80	50	30	100	h _{ef} + 17	160	M12x100	25	3,54
B 12-85-100/180 fvz	01340201	12	85	65	100	50	50	100	h _{ef} + 17	180	M12x100	25	3,85
B 12-105-120/200 fvz	01345201	12	105	65	120	50	70	100	h _{ef} + 17	200	M12x100	25	4,28
B 16-13/115 fvz	01510201	16	-	-	13	38	-	-	h _{ef} + 20	115	M16x60	20	3,96
B 16-10-28/130 fvz	01512201	16	10	82	28	64	-	-	h _{ef} + 20	130	M16x70	20	4,41
B 16-30-48/150 fvz	01515201	16	30	82	48	64	-	-	h _{ef} + 20	150	M16x90	20	4,92
B 20-5-27/150 fvz	01605201	20	5	100	27	78	-	-	h _{ef} + 21	150	M20x70	10	3,84
B 20-35-57/180 fvz	01610201	20	35	100	57	78	20	115	h _{ef} + 21	180	M20x70	10	4,44
B 20-60-82/205 fvz	01612201	20	60	100	82	78	45	115	h _{ef} + 21	205	M20x70	10	5,00
B 20-95-117/240 fvz	01615201	20	95	100	117	78	80	115	h _{ef} + 21	240	M20x70	10	6,26

¹⁾Not part of assessment.

²⁾Layer thickness: 8-10 μm

Wedge Anchor-Setting Tool BSW



- Setting Tool for Wedge Anchor M6 – M16
- With SDS plus connection

Description	Ref. No.	Suitable for Wedge Anchor	Length mm	Package content pcs.	Weight per pkg. kg
BSW M6-M16	43990101	BZ3/BZ plus/B M6 – M16	140	1	0,13

Mechanical Heavy Duty Anchors



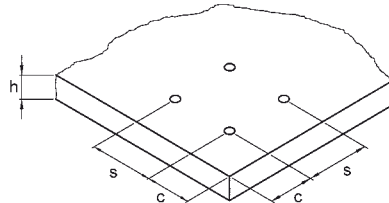
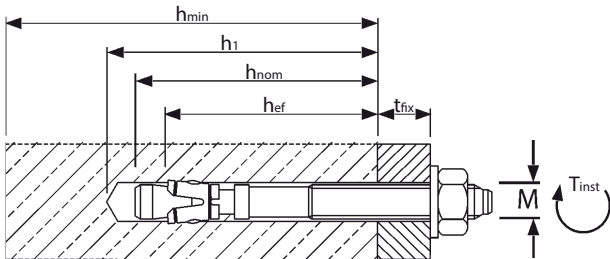
Extract from Permissible Service Conditions of European Technical Assessment ETA-01/0013 for use in uncracked concrete (Option 7)

Approved loads according to EN 1992-4 for single anchors without the influence of spacing and edge distances. The total safety factor (γ_M und γ_F) is included. Load capacities under fire exposure see page 197.

Loads and performance data	Wedge Anchor B fvz			M8	M 10	M 12	M 16	M 20									
Reduced anchorage depth	h_{ef1}	[mm]	35 ¹⁾	42	50	64	78										
Standard anchorage depth	h_{ef2}	[mm]	44	48	65	82	100										
Maximum anchorage depth	h_{ef3}	[mm]	70	80	100	120	115										
non-crackend concrete																	
Mean ultimate loads, tension	C25/30 Num	[kN]	12,3	18,7	18,7	19,2	23,6	26,1	34,5	34,5	43,6	51,4	51,4	53,6	70,0	70,0	
Mean ultimate loads, shear	C25/30 Vum	[kN]	19,3	19,3	19,3	28,1	28,1	28,1	41,3	41,3	41,3	73,0	73,0	73,0	103,6	103,6	
Approved loads, tension	C20/25 appr. N	[kN]	4,9	6,2	6,2	6,4	7,8	7,8	8,3	12,3	12,4	12,0	17,4	19,0	16,1	23,4	26,2
	C25/30 appr. N	[kN]	5,4	6,9	6,9	7,1	8,7	8,7	9,3	13,7	13,8	12,9	18,7	20,5	18,0	26,2	29,3
	C30/37 appr. N	[kN]	5,9	7,3	7,3	7,8	9,5	9,6	10,1	15,0	15,2	13,7	19,9	21,8	19,8	28,7	32,1
	C40/50 appr. N	[kN]	6,9	7,3	7,3	9,0	11,0	11,0	11,7	16,7	16,7	15,1	21,8	23,9	22,8	33,1	37,0
	C50/60 appr. N	[kN]	7,3	7,3	7,3	10,1	12,3	12,3	13,1	16,7	16,7	16,2	23,5	25,8	25,5	37,0	41,4
Approved loads, shear	\geq C20/25 appr. V	[kN]	6,3	6,3	6,3	9,7	9,7	9,7	14,3	14,3	14,3	23,6	23,6	23,6	37,1	37,1	
Approved bending moments	appr. M	[Nm]	13,1	13,1	13,1	25,7	25,7	25,7	44,6	44,6	44,6	99,9	99,9	99,9	195,0	195,0	
Spacing and edge distance																	
Effective anchorage depth		[mm]	35	44	70	42	48	80	50	65	100	64	82	120	78	100	115
Minimum thickness	h_{min}	[mm]	80	100	126	100	100	132	100	130	165	130	170	208	160	200	215
Characteristic spacing	$s_{cr, N}$	[mm]	105	132	210	126	144	240	150	195	300	192	246	360	234	300	345
Characteristic edge distance	$c_{cr, N}$	[mm]	52,5	66	105	63	72	120	75	97,5	150	96	123	180	117	150	172,5
Minimum spacing	s_{min}	[mm]	40	40	40	55	55	55	100	75	75	100	90	90	140	105	105
Minimum edge distance	c_{min}	[mm]	45	45	45	65	65	65	100	90	90	100	105	105	140	125	125
Installation parameters																	
Drill hole diameter	d_o	[mm]	8	8	8	10	10	10	12	12	12	16	16	16	20	20	20
Diameter of clearance hole in the fixture	$d_{r \leq}$	[mm]	9	9	9	12	12	12	14	14	14	18	18	18	22	22	22
Depth of drill hole	$h_1 \geq$	[mm]	55	65	91	65	70	102	75	90	125	95	110	148	110	130	145
Installation torque	T_{inst}	[Nm]	15	15	15	30	30	30	40	40	40	90	90	90	120	120	120
Width across nut	SW	[mm]	13	13	13	17	17	17	19	19	19	24	24	24	30	30	30
Height of the hexagon nut		[mm]	6,5	6,5	6,5	8	8	8	10	10	10	13	13	13	16	16	16
Outer diameter x washer thickness	$d_2 \times s$	[mm]	16 x 1,6	16 x 1,6	16 x 1,6	20 x 2	20 x 2	20 x 2	24 x 2,5	24 x 2,5	24 x 2,5	30 x 3	30 x 3	30 x 3	37 x 3	37 x 3	37 x 3

¹⁾Application limited to statically indetermined systems.

For anchor designing, an easy to operate software on CD-ROM is available on request or can be downloaded at www.mkt.de.



Installation

