

Wedge Anchor B A4 / B HCR

Stainless steel A4/316 and Stainless steel 1.4529



Range of loading: 1,6 kN–45,2 kN
Range of concrete quality: C20/25–C50/60

Description

The proven B A4 and B HCR Wedge Anchors with European Technical Assessment, Option 7, are suitable for uncracked concrete and time-saving push-through assemblies in interior and exterior areas. The Wedge Anchor B HCR can also be used under particularly aggressive environmental conditions, such as in swimming pools, in road tunnels or in contact with seawater.

Thanks to their three anchorage depths, they can be flexibly adapted to the respective installation requirements. The use with minimum anchorage depth reduces the drilling and installation effort, as well as the risk of reinforcement hits. When using a suction drill, the need for blowing out the drill hole is eliminated.

In size M6 the Wedge Anchors B A4 and B HCR from an anchorage depth of 30 mm, additionally have the European Technical Assessment for multiple fixings and can therefore be used for suspended ceilings and comparable fixings.

Advantages

- Approved for use in uncracked concrete (option 7)
- Very high permissible loads and small edge and center distances
- Three anchorage depths for optimum flexibility
- Installation with minimum anchorage depth saves drilling effort and time
- Installation with maximum anchorage depth for maximum, permissible loads
- Suitable for push-in, push-through and spaced installation
- Particularly economical: the short versions with minimum anchorage depth
- Fire tested F30-F120
- FM approval for installation of sprinkler systems (M10 to M16)
- Diameter M6 (hef ≥ 30mm) approved for multiple fastenings
- An impact cap prevents the thread from being damaged when hammering into the drill hole

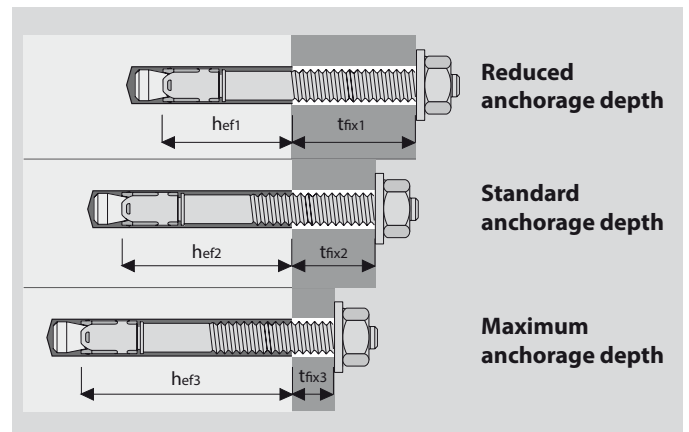


Applications

Medium to heavy duty indoor and outdoor use, metal structures, brackets, machines.

Wedge Anchor B M6 A4 and HCR: Multiple use for non-structural applications and similar fixtures in tunnels and or external atmospheric exposures.

Example of Installation



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

Wedge Anchor B A4



- Stainless steel
- ETA assessment 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 A4 ¹⁾	01005501	6	-	-	5	18	-	-	h _{ef} + 9	40	M6x16	100	1,06
B 6-5/52 A4	01006501	6	-	-	5	30	-	-	h _{ef} + 9	52	M6x20	100	1,27
B 6-10-20/67 A4	01010501	6	10	40	20	30	-	-	h _{ef} + 9	67	M6x30	100	1,56
B 6-25-35/82 A4	01015501	6	25	40	35	30	5	60	h _{ef} + 9	82	M6x35	100	1,80
B 6-40-50/97 A4	01025501	6	40	40	50	30	20	60	h _{ef} + 9	97	M6x35	100	2,08
B 8-5/50 A4 ¹⁾	01105501	8	-	-	5	24	-	-	h _{ef} + 11	50	M8x22	100	2,34
B 8-4/60 A4	01110501	8	-	-	4	35	-	-	h _{ef} + 12	60	M8x25	100	2,64
B 8-10-19/75 A4	01115501	8	10	44	19	35	-	-	h _{ef} + 12	75	M8x40	100	3,10
B 8-15-24/80 A4	01120501	8	15	44	24	35	-	-	h _{ef} + 12	80	M8x45	100	3,28
B 8-20-29/85 A4	01125501	8	20	44	29	35	-	-	h _{ef} + 12	85	M8x50	100	3,42
B 8-30-39/95 A4	01135501	8	30	44	39	35	4	70	h _{ef} + 12	95	M8x60	100	3,73
B 8-45-54/110 A4	01145501	8	45	44	54	35	19	70	h _{ef} + 12	110	M8x75	100	4,20
B 8-55-64/120 A4	01150501	8	55	44	64	35	29	70	h _{ef} + 12	120	M8x85	100	4,57
B 10-10/60 A4 ¹⁾	01205501	10	-	-	10	25	-	-	h _{ef} + 15	60	M10x25	50	2,30
B 10-10-16/85 A4	01210501	10	10	48	16	42	-	-	h _{ef} + 14	85	M10x40	50	2,85
B 10-15-21/90 A4	01215501	10	15	48	21	42	-	-	h _{ef} + 14	90	M10x45	50	2,97
B 10-20-26/95 A4	01220501	10	20	48	26	42	-	-	h _{ef} + 14	95	M10x50	50	3,10
B 10-30-36/105 A4	01225501	10	30	48	36	42	-	-	h _{ef} + 14	105	M10x60	50	3,33
B 10-45-51/120 A4	01230501	10	45	48	51	42	13	80	h _{ef} + 14	120	M10x75	50	3,75
B 10-50-56/125 A4	01235501	10	50	48	56	42	18	80	h _{ef} + 14	125	M10x80	50	3,87
B 10-70-76/145 A4	01240501	10	70	48	76	42	38	80	h _{ef} + 14	145	M10x80	50	4,38
B 10-100-106/175 A4	01245501	10	100	48	106	42	68	80	h _{ef} + 14	175	M10x80	50	5,15
B 10-140-146/215 A4	01250501	10	140	48	146	42	108	80	h _{ef} + 14	215	M10x80	25	3,10
B 12-5/75 A4 ¹⁾	01305501	12	-	-	5	38	-	-	h _{ef} + 17	75	M12x30	25	1,96
B 12-14/95 A4	01310501	12	-	-	14	50	-	-	h _{ef} + 17	95	M12x50	25	2,33
B 12-10-25/105 A4	01312501	12	10	65	25	50	-	-	h _{ef} + 17	105	M12x60	25	2,53
B 12-15-30/110 A4	01315501	12	15	65	30	50	-	-	h _{ef} + 17	110	M12x65	25	2,62
B 12-20-35/115 A4	01320501	12	20	65	35	50	-	-	h _{ef} + 17	115	M12x70	25	2,70
B 12-30-45/125 A4	01325501	12	30	65	45	50	-	-	h _{ef} + 17	125	M12x80	25	2,88
B 12-50-65/145 A4	01330501	12	50	65	65	50	15	100	h _{ef} + 17	145	M12x100	25	3,28
B 12-65-80/160 A4	01335501	12	65	65	80	50	30	100	h _{ef} + 17	160	M12x100	25	3,55
B 12-85-100/180 A4	01340501	12	85	65	100	50	50	100	h _{ef} + 17	180	M12x100	25	3,90
B 12-105-120/200 A4	01345501	12	105	65	120	50	70	100	h _{ef} + 17	200	M12x100	25	4,28
B 12-145-160/240 A4	01355501	12	145	65	160	50	110	100	h _{ef} + 17	240	M12x80	20	4,39
B 16-5/90 A4 ¹⁾	01505501	16	-	-	5	47	-	-	h _{ef} + 18	90	M16x35	20	3,37
B 16-14/115 A4	01510501	16	-	-	14	64	-	-	h _{ef} + 20	115	M16x60	20	3,98
B 16-10-26/130 A4	01512501	16	10	80	26	64	-	-	h _{ef} + 20	130	M16x70	20	4,34
B 16-30-46/150 A4	01515501	16	30	80	46	64	-	-	h _{ef} + 20	150	M16x90	20	4,87
B 16-60-76/180 A4	01520501	16	60	80	76	64	22	120	h _{ef} + 20	180	M16x110	20	5,66
B 16-80-96/200 A4	01525501	16	80	80	96	64	42	120	h _{ef} + 20	200	M16x110	10	3,26
B 16-100-116/220 A4	01530501	16	100	80	116	64	62	120	h _{ef} + 20	220	M16x80	10	3,59
B 16-130-146/250 A4	01535501	16	130	80	146	64	92	120	h _{ef} + 20	250	M16x80	10	3,99
B 16-200-216/320 A4	01545501	16	200	80	216	64	162	120	h _{ef} + 20	320	M16x80	10	5,16
B 20-5-27/150 A4	01605501	20	5	100	27	78	-	-	h _{ef} + 21	150	M20x70	10	3,86
B 20-35-57/180 A4	01610501	20	35	100	57	78	20	115	h _{ef} + 21	180	M20x70	10	4,47
B 20-60-82/205 A4	01612501	20	60	100	82	78	45	115	h _{ef} + 21	205	M20x70	10	5,03
B 20-95-117/240 A4	01615501	20	95	100	117	78	80	115	h _{ef} + 21	240	M20x70	10	6,26

¹⁾ Not part of assessment.

Wedge Anchor B HCR



- High corrosion resistant steel 1.4529 (HCR)
- Approved for multiple use for non-structural applications

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 6-0-10/57 HCR	01007651	6	0	40	10	30	-	-	h _{ef} + 9	57	M6x20	100	1,58
B 6-10-20/67 HCR	01010651	6	10	40	20	30	-	-	h _{ef} + 9	67	M6x20	100	1,78
B 6-25-35/82 HCR	01015651	6	25	40	35	30	5	60	h _{ef} + 9	82	M6x20	100	2,13
B 6-40-50/97 HCR	01025651	6	40	40	50	30	20	60	h _{ef} + 9	97	M6x20	100	2,35

Other length on demand.





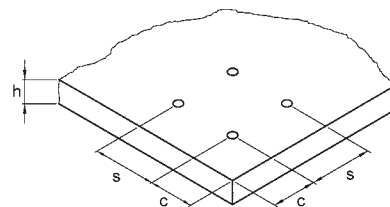
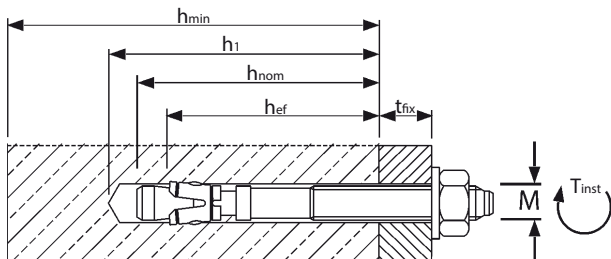
Extract from Permissible Service Conditions of European Technical Assessment ETA-01/0013 for use in uncracked concrete (Option 7)

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_p) is included. Load capacities under fire exposure see page 197.

Loads and performance data		Wedge Anchor B A4 / HCR		M 6		M 8		M 10		M 12		M 16		M 20							
Reduced anchorage depth	h_{ef1}	[mm]	30 ¹⁾			35 ¹⁾		42		50		64		78							
Standard anchorage depth	h_{ef2}	[mm]	40		44		48		65		80		100		115						
Maximum anchorage depth	h_{ef3}	[mm]		60		70		80		100		120		115							
uncracked concrete																					
Mean ultimate loads, tension	C25/30	Num	[kN]	10,2	11,0	11,0	12,4	19,6	19,6	17,5	23,1	23,1	22,6	36,4	39,7	53,5	53,5	53,1	73,0	73,0	
Mean ultimate loads, shear	C25/30	Vum	[kN]	9,7	9,7	9,7	19,5	19,5	19,5	31,9	31,9	31,9	42,6	42,6	76,9	76,9	76,9	110,4	110,4	110,4	
Approved loads, tension	C20/25	appr. N	[kN]	3,1	3,8	3,8	4,3	6,8	7,1	5,7	7,8	7,8	8,3	11,9	11,9	12,0	16,8	20,0	16,1	23,4	28,6
	C25/30	appr. N	[kN]	3,5	4,3	4,3	4,8	7,6	8,0	6,4	8,7	8,7	9,3	13,3	13,3	13,4	18,7	22,4	18,0	26,2	31,9
	C30/37	appr. N	[kN]	3,8	4,7	4,7	5,2	8,4	8,6	7,0	9,5	9,6	10,1	14,6	14,6	14,7	20,5	24,5	19,8	28,7	35,0
	C40/50	appr. N	[kN]	4,4	4,8	4,8	6,1	8,6	8,6	8,1	11,0	11,0	11,7	16,8	16,8	17,0	23,7	28,3	22,8	33,1	40,4
	C50/60	appr. N	[kN]	4,8	4,8	4,8	6,8	8,6	8,6	9,0	12,3	12,3	13,1	18,8	18,8	19,0	26,5	31,6	25,5	37,0	45,2
Approved loads, shear	\geq C20/25	appr. V	[kN]	3,8	4,0	4,0	6,9	6,9	6,9	10,9	10,9	10,9	15,4	15,4	28,6	28,6	28,6	43,9	43,9	43,9	43,9
Approved bending moments		appr. M	[Nm]	5,7	5,7	5,7	13,7	13,7	13,7	28,0	28,0	28,0	48,6	48,6	48,6	113,7	113,7	113,7	231,6	231,6	231,6
Spacing and edge distance																					
Effective anchorage depth		[mm]	30	40	60	35	44	70	42	48	80	50	65	100	64	80	120	78	100	115	
Minimum thickness	h_{min}	[mm]	80	100	120	80	100	126	100	100	132	100	130	165	130	160	200	160	200	215	
Characteristic spacing	$s_{cr,N}$	[mm]	90	120	180	105	132	210	126	144	240	150	195	300	192	240	360	234	300	345	
Characteristic edge distance	$c_{cr,N}$	[mm]	45	60	90	52,5	66	105	63	72	120	75	97,5	150	96	120	180	117	150	172,5	
	s_{min}	[mm]	35	35	35	60	35	35	55	45	45	100	60	60	110	80	80	140	100	100	
Minimum spacing	for $c \geq$	[mm]	40	40	40	60	65	65	65	70	70	100	100	100	110	120	120	140	150	150	
	c_{min}	[mm]	40	35	35	60	45	45	65	55	55	100	70	70	110	80	80	140	100	100	
Minimum edge distance	for $s \geq$	[mm]	35	60	60	60	110	110	55	80	80	100	100	100	110	140	140	140	180	180	
		[mm]	35	60	60	60	110	110	55	80	80	100	100	100	110	140	140	140	180	180	
Installation parameters																					
Drill hole diameter	d_o	[mm]	6	6	6	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]	7	7	7	9	9	9	12	12	12	14	14	14	18	18	18	22	22	22	
Depth of drill hole	$h_1 \geq$	[mm]	45	55	75	55	65	91	65	70	102	75	90	125	95	110	148	110	130	145	
Installation torque	T_{inst}	[Nm]	6	6	6	15	15	15	25	25	25	50	50	50	100	100	100	160	160	160	
Width across nut	SW	[mm]	10	10	10	13	13	13	17	17	17	19	19	19	24	24	24	30	30	30	
Height of the hexagon nut		[mm]	5	5	5	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]	12 x 1,6	12 x 1,6	12 x 1,6	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	
		[mm]	1,6	1,6	1,6	1,6	1,6	1,6	2	2	2	2,5	2,5	2,5	3	3	3	3	3	3	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.



Mechanical Heavy Duty Anchors



Extract from Permissible Service Conditions of ETA-06/0155 for use in concrete for redundant non-structural systems

Use as multiple fastening of non-structural systems according to ETAG001, part 6. Total safety factor according to ETAG 001 is taken into account (γ_{M1} and γ_F). The maximum permissible load per fixing point may, depending on national regulations, be lower than the permissible loads of the anchor. The permissible loads per fixing point are regulated for the respective countries in ETAG 001, Part 6.

Loads and performance data	Wedge Anchor B A4 / HCR		M 6		
Reduced anchorage depth	hef1	[mm]	30		
Standard anchorage depth	hef2	[mm]		40	
cracked / uncracked concrete \geq C25/30					
Approved loads (any direction)	appr. N	[kN]	1,6	2,4	
Approved bending moments	appr. M	[Nm]	5,7	5,7	
Spacing and edge distance					
Effective anchorage depth		[mm]	30	40	
Minimum thickness of concrete slab	h _{min}	[mm]	80	80	
Characteristic spacing	s _{cr, N}	[mm]	260	370	
Characteristic edge distance	c _{cr, N}	[mm]	130	185	
Minimum spacing	s _{min}	[mm]	50	50	
Minimum edge distance	c _{min}	[mm]	50	50	
Loads under stress (C20/25 bis C50/60)					
Approved loads (any direction)	R30	appr. N _{fi}	[kN]	0,6	0,6
	R60	appr. N _{fi}	[kN]	0,5	0,5
	R90	appr. N _{fi}	[kN]	0,3	0,3
	R120	appr. N _{fi}	[kN]	0,3	0,3
Characteristic spacing	s _{cr, fi}	[mm]	120	160	
Characteristic edge distance	c _{cr, fi}	[mm]	60	80	
Installation parameters					
Drill hole diameter	d _o	[mm]	6	6	
Diameter of clearance hole in the fixture	d _f	[mm]	7	7	
Depth of drill hole	h ₁	[mm]	45	55	
Installation torque	T _{inst}	[Nm]	8	8	
Width across nut	SW	[mm]	10	10	
Height of the hexagon nut		[mm]	5	5	
Outer diameter x washer thickness	d2 x s	[mm]	12 x 1,6	12 x 1,6	

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

Installation

