

Wedge Anchor B

Steel, zinc plated



Description

The Wedge Anchor B (ETA, Option 7) is a highly efficient throughbolt with excellent load bearing capacity in non-cracked concrete and close anchor spacing and edge distances. A broad range of more than 150 types, sizes and lengths make it a universal use anchor for medium to heavy duty applications. The ETA for Wedge Anchor B with stainless steel expansion clip has been expanded to include reduced embedment depths in all diameters.

Long Wedge Anchor B-U with large washer see page 24.

Applications

Suspended ceilings (M6-M10), metal constructions, channels, brackets, supports, hand rails, cable trays, ducts, shelf feet.



Range of loading:

2,9 kN - 37,2 kN

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



Wedge Anchor B



→ Steel zinc plated

→ Approved for non-cracked concrete

Description	Ref. No.	Drill hole Ø mm	Drill hole depth mm		Setting-depth mm		Fixture thickness t _{fix} mm		Anchor-length mm	Thread	Packg. content pcs.	Weight per pkg. kg
			h ₁	h _{1,red} ²⁾	h _{nom}	h _{nom,red} ²⁾	t _{fix}	t _{fix,red} ²⁾				
B 6-5/40 ¹⁾	01005101	6	-	35	-	27	-	5	40	M6x16	100	1,05
B 6-5/52	01006101	6	-	45	-	39	-	5	52	M6x20	100	1,26
B 6-10-20/67	01010101	6	55	45	49	39	10	20	67	M6x30	100	1,55
B 6-15-25/72	01013101	6	55	45	49	39	15	25	72	M6x35	100	1,63
B 6-25-35/82	01015101	6	55	45	49	39	25	35	82	M6x35	100	1,81
B 6-30-40/87	01020101	6	55	45	49	39	30	40	87	M6x35	100	1,91
B 6-40-50/97	01025101	6	55	45	49	39	40	50	97	M6x35	100	2,07
B 8-5/50 ¹⁾	01105101	8	-	45	-	35	-	5	50	M8x22	100	2,32
B 8-4/60	01110101	8	-	45	-	47	-	4	60	M8x25	100	2,62
B 8-10-19/75	01115101	8	65	55	56	47	10	19	75	M8x40	100	3,10
B 8-15-24/80	01120101	8	65	55	56	47	15	24	80	M8x45	100	3,26
B 8-20-29/85	01125101	8	65	55	56	47	20	29	85	M8x50	100	3,40
B 8-25-34/90	01130101	8	65	55	56	47	25	34	90	M8x55	100	3,59
B 8-30-39/95	01135101	8	65	55	56	47	30	39	95	M8x60	100	3,72
B 8-35-44/100	01140101	8	65	55	56	47	35	44	100	M8x65	100	3,89
B 8-45-54/110	01145101	8	65	55	56	47	45	54	110	M8x75	100	4,22
B 8-55-64/120	01150101	8	65	55	56	47	55	64	120	M8x85	100	4,54
B 8-100-109/165	01158101	8	65	55	56	47	100	109	165	M8x85	50	2,99
B 10-10/60 ¹⁾	01205101	10	-	50	-	40	-	10	60	M10x25	50	2,29
B 10-10-16/85	01210101	10	70	65	62	56	10	16	85	M10x40	50	2,83
B 10-15-21/90	01215101	10	70	65	62	56	15	21	90	M10x45	50	2,94
B 10-20-26/95	01220101	10	70	65	62	56	20	26	95	M10x50	50	3,06
B 10-30-36/105	01225101	10	70	65	62	56	30	36	105	M10x60	50	3,32
B 10-45-51/120	01230101	10	70	65	62	56	45	51	120	M10x75	50	3,72
B 10-50-56/125	01235101	10	70	65	62	56	50	56	125	M10x80	50	3,85
B 10-70-76/145	01240101	10	70	65	62	56	70	76	145	M10x80	50	4,35
B 10-100-106/175	01245101	10	70	65	62	56	100	106	175	M10x80	50	5,10
B 10-140-146/215	01250101	10	70	65	62	56	140	146	215	M10x80	25	3,06

¹⁾ Not part of approval, expansion clip steel, zinc plated.

²⁾ Reduced anchorage depth (observe reduced loads).

Wedge Anchor B-U see page 24.

Description	Ref. No.	Drill hole Ø mm	Drill hole depth mm		Setting-depth mm		Fixture thickness t _{fix} mm		Anchor-length mm	Thread	Packg. content pcs.	Weight per pkg. kg
			h ₁	h _{1,red} ²⁾	h _{nom}	h _{nom,red} ²⁾	t _{fix}	t _{fix,red} ²⁾				
B 12-5/75 ¹⁾	01305101	12	-	65	-	55	-	5	75	M12x30	25	1,98
B 12-13/95	01310101	12	-	75	-	67	-	13	95	M12x50	25	2,33
B 12-10-25/105	01312101	12	90	75	82	67	10	25	105	M12x60	25	2,55
B 12-15-30/110	01315101	12	90	75	82	67	15	30	110	M12x65	25	2,60
B 12-20-35/115	01320101	12	90	75	82	67	20	35	115	M12x70	25	2,70
B 12-30-45/125	01325101	12	90	75	82	67	30	45	125	M12x80	25	2,88
B 12-50-65/145	01330101	12	90	75	82	67	50	65	145	M12x100	25	3,26
B 12-65-80/160	01335101	12	90	75	82	67	65	80	160	M12x100	25	3,49
B 12-85-100/180	01340101	12	90	75	82	67	85	100	180	M12x100	25	3,90
B 12-105-120/200	01345101	12	90	75	82	67	105	120	200	M12x100	25	4,22
B 12-125-140/220	01350101	12	90	75	82	67	125	140	220	M12x80	25	5,04
B 12-145-160/240	01355101	12	90	75	82	67	145	160	240	M12x80	20	4,38
B 12-160-175/255	01365101	12	90	75	82	67	160	175	255	M12x80	20	4,68
B 12-190-205/285	01370101	12	90	75	82	67	190	205	285	M12x80	20	5,21
B 12-230-245/325	01375101	12	90	75	82	67	230	245	325	M12x80	20	5,90
B 12-260-275/355	01380101	12	90	75	82	67	260	275	355	M12x80	20	6,53
B 12-335-350/430	01390101	12	90	75	82	67	335	350	430	M12x120	20	7,00
B 16-5/90 ¹⁾	01505101	16	-	75	-	65	-	5	90	M16x35	20	3,32
B 16-13/115	01510101	16	-	95	-	84	-	13	115	M16x60	20	3,98
B 16-10-28/130	01512101	16	110	95	102	84	10	28	130	M16x70	20	4,50
B 16-30-48/150	01515101	16	110	95	102	84	30	48	150	M16x90	20	4,87
B 16-60-78/180	01520101	16	110	95	102	84	60	78	180	M16x110	20	5,66
B 16-80-98/200	01525101	16	110	95	102	84	80	98	200	M16x110	10	3,12
B 16-100-118/220	01530101	16	110	95	102	84	100	118	220	M16x80	10	3,64
B 16-130-148/250	01535101	16	110	95	102	84	130	148	250	M16x80	10	4,10
B 16-165-183/285	01540101	16	110	95	102	84	165	183	285	M16x80	10	4,68
B 16-200-218/320	01545101	16	110	95	102	84	200	218	320	M16x80	10	5,23
B 20-10/120 ¹⁾	01604101	20	-	100	-	90	-	10	120	M20x50	10	3,17
B 20-5-27/150	01605101	20	130	110	121	99	5	27	150	M20x70	10	3,78
B 20-20-42/165	01607101	20	130	110	121	99	20	42	165	M20x70	10	4,12
B 20-35-57/180	01610101	20	130	110	121	99	35	57	180	M20x70	10	4,44
B 20-60-82/205	01612101	20	130	110	121	99	60	82	205	M20x70	10	4,94
B 20-95-117/240	01615101	20	130	110	121	99	95	117	240	M20x70	10	6,10
B 20-120-142/265	01622101	20	130	110	121	99	120	142	265	M20x70	10	6,65



Extract from Permissible Service Conditions of ETA-01/0013 and Z-21.1-1598

Approved loads for single anchor without influence of spacing and edge distance.

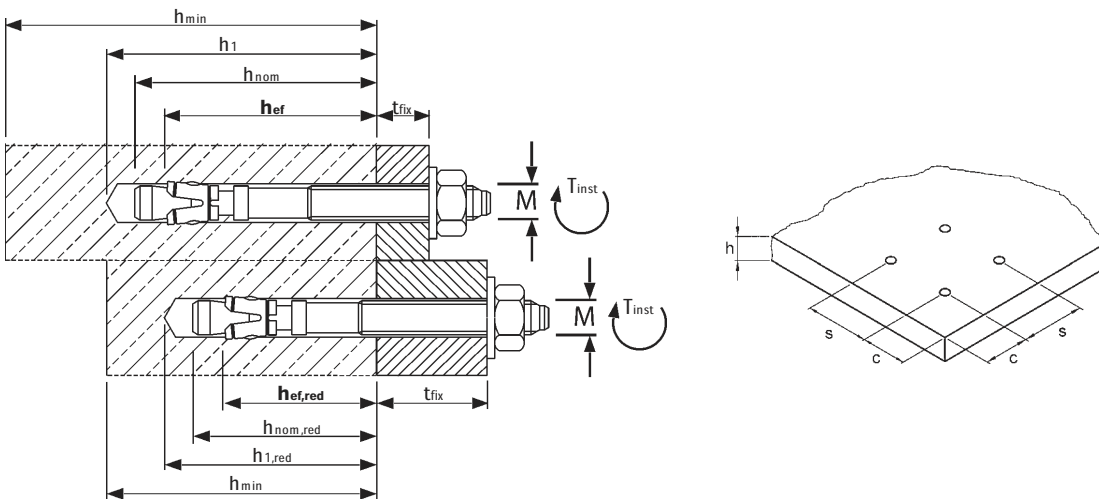
Total safety factor as per ETAG 001 included (γ_M and γ_R).

Loads and performance data			Wedge Anchor B		M 6		M 8		M 10		M 12		M 16		M 20	
Effective anchorage depth	h_{ef}	[mm]	40	30 ¹⁾	44	35 ¹⁾	48	42	65	50	82	64	100	78		
Reduced anchorage depth	$h_{ef,red}$	[mm]	-	30 ¹⁾	-	35 ¹⁾	-	42	-	50	-	64	-	78		
non-cracked concrete																
Mean ultimate loads, tension	C25/30 N_{um}	[kN]	12	9,6	18,7	12,3	23,6	19,2	34,5	26,1	51,4	43,6	70,0	53,6		
Mean ultimate loads, shear	C25/30 V_{um}	[kN]	7,3	7,3	19,3	19,3	28,1	28,1	41,3	41,3	73,0	73,0	103,6	103,6		
cracked concrete (multiple use only)																
Approved loads (any direction)	C20/25 to C50/60	appr.F [kN]	0,8	0,5	0,8	-	0,8	-	-	-	-	-	-	-	-	-
non-cracked concrete																
Approved loads, tension	C20/25	appr.N [kN]	4,1	2,9	5,7	5,0	7,6	6,5	12,6	8,5	17,8	12,3	24,0	16,5		
	C25/30	appr.N [kN]	4,1	3,1	6,3	5,5	8,4	7,2	13,8	9,3	19,6	13,5	26,4	18,2		
	C30/37	appr.N [kN]	4,1	3,5	7,0	6,1	9,3	8,0	15,3	10,4	21,7	15,0	29,3	20,2		
	C40/50	appr.N [kN]	4,1	4,0	7,3	7,0	10,7	9,2	16,7	12,0	25,1	17,3	33,8	23,3		
	C50/60	appr.N [kN]	4,1	4,1	7,3	7,3	11,8	10,1	16,7	13,2	27,6	19,0	37,2	25,6		
Approved loads, shear	C20/25	appr.V [kN]	2,9	2,9	6,3	5,0	8,0	6,5	14,3	8,5	23,6	23,6	37,1	33,1		
	\geq C25/30	appr.V [kN]	2,9	2,9	6,3	5,5	8,8	7,2	14,3	9,3	23,6	23,6	37,1	36,4		
Approved bending moments		appr.M [Nm]	5,1	5,1	13,1	13,1	25,7	25,7	44,6	44,6	99,9	99,9	195,0	195,0		
Spacing and edge distance																
Effective anchorage depth	h_{ef}	[m m]	40	30 ¹⁾	44	35 ¹⁾	48	42	65	50	82	64	100	78		
Characteristic spacing	$c_{cr,N}$	[m m]	120	90	132	105	144	126	195	150	246	192	300	234		
Characteristic edge distance	$c_{cr,N}$	[m m]	60	45	66	52,5	72	63	97,5	75	123	96	150	117		
cracked concrete (multiple use only)																
Minimum spacing	s_{min}	[m m]	160	160	200	-	200	-	-	-	-	-	-	-		
Minimum edge distance	c_{min}	[m m]	80	80	100	-	100	-	-	-	-	-	-	-		
Minimum thickness of concrete slab	h_{min}	[m m]	100	100	150	-	200	-	-	-	-	-	-	-		
non-cracked concrete																
Minimum spacing	s_{min}	[m m]	35	35	40	40	55	55	75	100	90	100	105	140		
Minimum edge distance	c_{min}	[m m]	40	40	45	45	65	65	90	100	105	100	125	140		
Minimum thickness of concrete slab	h_{min}	[m m]	100	80	100	80	100	100	130	100	170	130	200	160		
Installation parameters																
Drill hole diameter	d_o	[m m]	6	6	8	8	10	10	12	12	16	16	20	20		
Diameter of clearance hole in the fixture	d_f	[m m]	7	7	9	9	12	12	14	14	18	18	22	22		
Depth of drill hole	h_1	[m m]	55	45	65	55	70	65	90	75	110	95	130	110		
Installation torque	T_{inst}	[Nm]	8	8	15	15	30	30	50	50	100	100	200	200		
Width across nut	SW	[m m]	10	10	13	13	17	17	19	19	24	24	30	30		

¹⁾ Application limited to statically indeterminated system s.

Z-21.1-1598: DIBt approval for suspended ceilings (sizes M 6, M 8 and M 10).

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



Installation

