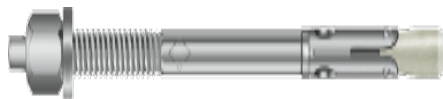


# Wedge Anchor BZ plus A4

Stainless Steel A4/316



Wedge Anchor BZ plus A4



Wedge Anchor BZ-U plus A4

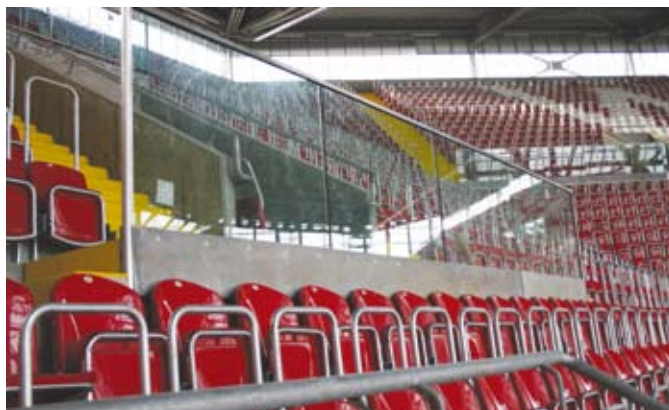


## Description

The Wedge Anchor BZ plus A4 (ETA, Option 1) combines high ultimate loads with close anchor spacing and edge distances. The special coating covering the expansion cone is heat resistant and durable enough to prevent cold welding of the expansion mechanism. This MKT patented invention also provides the proper friction between the stainless steel clip and the expansion cone throughout the entire service life of the anchor, which is a requirement for reliable crack-tested anchors.

## Applications

Medium to heavy duty anchoring in cracked and non-cracked concrete: Steel beams, channels, facade substructures, chairs in sports arenas, wood structures.



**Range of Loading:** 2,4 kN - 43,9 kN  
**Range of concrete quality:** C20/25 - C50/60



## Wedge Anchor BZ plus A4



→ Stainless steel A4/316

→ Approved for cracked and non-cracked concrete

Description	Ref. No.	Drill Hole Øxdepth mm	Set- ting- depth mm	Fixture- thickness t <sub>fix</sub> mm	Anchor- length l mm	Thread mm	Pkg. content pcs.	Weight per pkg. kg
BZ 8-10/75 A4	02115501	8x60	52	10	75	M8x20	100	3,05
BZ 8-15/80 A4	02120501	8x60	52	15	80	M8x25	100	3,20
BZ 8-30/95 A4	02135501	8x60	52	30	95	M8x40	100	3,69
BZ 8-50/115 A4	02145501	8x60	52	50	115	M8x60	100	4,01
BZ 10-10/90 A4	02210501	10x75	67	10	90	M10x20	50	3,02
BZ 10-15/95 A4	02215501	10x75	67	15	95	M10x25	50	3,14
BZ 10-30/110 A4	02225501	10x75	67	30	110	M10x40	50	3,52
BZ 10-50/130 A4	02235501	10x75	67	50	130	M10x60	50	4,02
BZ 10-100/180 A4	02250501	10x75	67	100	180	M10x80	50	5,25
BZ 12-15/110 A4	02315501	12x90	80	15	110	M12x30	25	2,57
BZ 12-20/115 A4	02320501	12x90	80	20	115	M12x35	25	2,65
BZ 12-30/125 A4	02325501	12x90	80	30	125	M12x45	25	2,82
BZ 12-50/145 A4	02330501	12x90	80	50	145	M12x65	25	3,19
BZ 12-85/180 A4	02340501	12x90	80	85	180	M12x80	25	3,81
BZ 12-125/220 A4	02350501	12x90	80	125	220	M12x80	25	5,03
BZ 12-160/255 A4	02365501	12x90	80	160	255	M12x80	20	4,67
BZ 12-180/275 A4	02368501	12x90	80	180	275	M12x80	20	5,01
BZ 12-190/285 A4	02370501	12x90	80	190	285	M12x80	20	5,18
BZ 16-25/145 A4	02515501	16x110	100	25	145	M16x45	20	4,90
BZ 16-50/170 A4	02520501	16x110	100	50	170	M16x70	20	5,80
BZ 16-100/220 A4	02530501	16x110	100	100	220	M16x80	10	3,70
BZ 20-30/165 A4	02615501	20x125	114	30	165	M20x50	10	4,83
BZ 20-60/195 A4	02625501	20x125	114	60	195	M20x70	10	5,45
BZ 20-100/235 A4	02630501	20x125	114	100	235	M20x80	5	3,53
BZ 20-130/265 A4	02635501	20x125	114	130	265	M20x80	5	3,65
BZ 20-150/285 A4	02640501	20x125	114	150	285	M20x80	5	3,75

Other lengths on demand.

## Wedge Anchor BZ-U plus A4

→ With large washer DIN EN ISO 7093-1  
(formerly DIN 9021)

→ Approved for cracked and non-cracked concrete

Description	Ref. No.	Drill Hole Øxdepth mm	Set- ting- depth mm	Fixture- thickness t <sub>fix</sub> mm	Anchor- length l mm	Ø Washer mm	Thread mm	Pkg. content pcs.	Weight per pkg. kg
BZ-U 8-10/75 A4	02115541	8x60	52	10	75	24	M8x20	100	3,49
BZ-U 8-15/80 A4	02120541	8x60	52	15	80	24	M8x25	100	3,64
BZ-U 8-30/95 A4	02135541	8x60	52	30	95	24	M8x40	100	4,13
BZ-U 8-50/115 A4	02145541	8x60	52	50	115	24	M8x60	100	4,45
BZ-U 10-10/90 A4	02210541	10x75	67	10	90	30	M10x20	50	3,45
BZ-U 10-15/95 A4	02215541	10x75	67	15	95	30	M10x25	50	3,57
BZ-U 10-30/110 A4	02225541	10x75	67	30	110	30	M10x40	50	3,95
BZ-U 10-50/130 A4	02235541	10x75	67	50	130	30	M10x60	50	4,45
BZ-U 12-15/110 A4	02315541	12x90	80	15	110	37	M12x30	25	2,96
BZ-U 12-30/125 A4	02325541	12x90	80	30	125	37	M12x45	25	3,22
BZ-U 12-50/145 A4	02330541	12x90	80	50	145	37	M12x65	25	3,59
BZ-U 12-125/220 A4	02350541	12x90	80	125	220	37	M12x80	25	5,42
BZ-U 12-160/255 A4	02365541	12x90	80	160	255	37	M12x80	20	5,07
BZ-U 12-180/275 A4	02368541	12x90	80	180	275	37	M12x80	20	5,41
BZ-U 12-190/285 A4	02370541	12x90	80	190	285	37	M12x80	20	5,58
BZ-U 16-25/145 A4	02515541	16x110	100	25	145	50	M16x45	20	5,27
BZ-U 16-100/220 A4	02530541	16x110	100	100	220	50	M16x80	10	4,01
BZ-U 20-30/165 A4	02615541	20x125	114	30	165	60	M20x50	10	5,43
BZ-U 20-60/195 A4	02625541	20x125	114	60	195	60	M20x70	10	6,05
BZ-U 20-100/235 A4	02630541	20x125	114	100	235	60	M20x80	5	4,13
BZ-U 20-130/265 A4	02635541	20x125	114	130	265	60	M20x80	5	4,22
BZ-U 20-150/285 A4	02640541	20x125	114	150	285	60	M20x80	5	4,35

Other lengths on demand.

**Extract from Permissible Service Conditions of ETA-99/0010**

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

Total safety factor as per ETAG 001 included ( $\gamma_M$  und  $\gamma_p$ ).

Loads and performance data	Wedge Anchor BZ <b>plus</b> A4		M 8	M 10	M 12	M 16	M 20
	cracked concrete						
Mean ultimate loads, tension	C25/30 N <sub>um</sub>	[kN]	10,8	16,7	21,1	40,0	54,3
Mean ultimate loads, shear	C25/30 V <sub>um</sub>	[kN]	18,4	32,9	35,5	85,8	121,5
Approved loads, tension	C20/25 appr. N	[kN]	2,4	4,3	5,7	11,9	17,1
	C25/30 appr. N	[kN]	2,6	4,7	6,3	13,1	18,9
	C30/37 appr. N	[kN]	2,9	5,2	7,0	14,5	20,9
	C40/50 appr. N	[kN]	3,4	6,0	8,1	16,8	24,2
	C50/60 appr. N	[kN]	3,7	6,6	8,9	18,5	26,6
	non-cracked concrete						
Approved loads, tension	C20/25 appr. N	[kN]	5,7	7,6	9,5	16,7	24,0
	C25/30 appr. N	[kN]	6,3	8,4	10,5	18,3	26,4
	C30/37 appr. N	[kN]	7,0	9,3	11,6	20,3	29,3
	C40/50 appr. N	[kN]	7,6	10,7	13,4	23,5	33,8
	C50/60 appr. N	[kN]	7,6	11,8	14,8	25,8	37,2
	cracked / non-cracked concrete						
Approved loads, shear	C20/25 appr. V	[kN]	7,4	11,4	17,1	26,9/31,4	34,3/43,9
	≥ C25/30 appr. V	[kN]	7,4	11,4	17,1	29,6/31,4	37,7/43,9
Approved bending moments	appr. M	[Nm]	14,9	29,7	52,6	133,1	231,6

**Spacing and edge distance**

Effective anchorage depth	$h_{ef}$	[mm]	46	60	65	85	100
Characteristic spacing	$s_{cr,N}$	[mm]	138	180	195	255	300
Characteristic edge distance	$c_{cr,N}$	[mm]	69	90	97,5	127,5	150

**Respective minimum spacing and edge distance for standard thickness of concrete member**

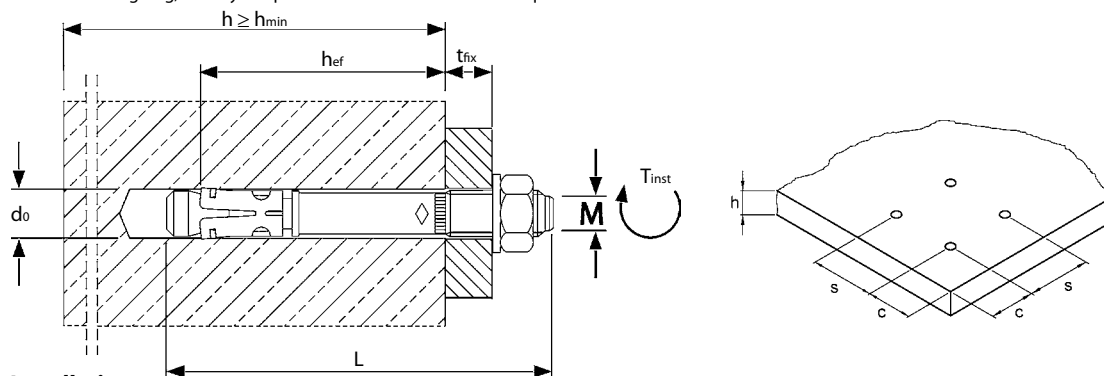
			cracked concrete				
Minimum spacing / for edge distance c	$s_{min} / c$	[mm]	40 / 70	50 / 75	60 / 100	60 / 100	95 / 150
Minimum edge distance / for spacing s	$c_{min} / s$	[mm]	40 / 80	55 / 90	60 / 140	60 / 180	95 / 200
			non-cracked concrete				
Minimum spacing / for edge distance c	$s_{min} / c$	[mm]	40 / 80	50 / 75	60 / 120	65 / 120	90 / 180
Minimum edge distance / for spacing s	$c_{min} / s$	[mm]	50 / 100	60 / 120	75 / 150	80 / 150	130 / 240
Standard thickness of concrete slab	$h_{std}$	[mm]	100	120	130	160	200

**Respective minimum spacing and edge distance for minimum thickness of concrete member**

respective minimum spacing and edge distance for minimum thickness of concrete member							
			cracked concrete				
Minimum spacing / for edge distance c	$s_{min} / c$	[mm]	40 / 70	45 / 90	60 / 100	70 / 160	95 / 150
Minimum edge distance / for spacing s	$c_{min} / s$	[mm]	40 / 80	50 / 115	60 / 140	80 / 180	95 / 200
			non-cracked concrete				
Minimum spacing / for edge distance c	$s_{min} / c$	[mm]	40 / 80	60 / 140	60 / 120	80 / 180	90 / 180
Minimum edge distance / for spacing s	$c_{min} / s$	[mm]	50 / 100	90 / 140	75 / 150	90 / 200	130 / 240
Minimum thickness of concrete slab	$h_{min}$	[mm]	80	100	110	140	200

**Installation parameters**

Drill hole diameter	$d_o$	[mm]	8	10	12	16	20
Diameter of clearance hole in the fixture	$d_f$	[mm]	9	12	14	18	22
Depth of drill hole	$h_1$	[mm]	60	75	90	110	125
Installation torque	$T_{inst}$	[Nm]	20	35	50	110	200
Width across nut	SW	[mm]	13	17	19	24	30

For anchor designing, an easy to operate CD-ROM is available on request or can be downloaded at [www.mkt-duebel.de](http://www.mkt-duebel.de).**Installation**