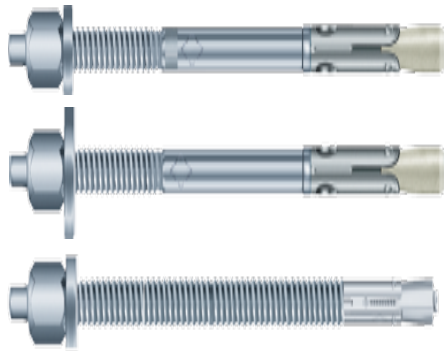


# Wedge Anchor BZ plus

Steel, zinc plated



Wedge Anchor BZ plus

Wedge Anchor BZ-U plus

Wedge Anchor BZ plus M24

## Description

The Wedge Anchor BZ plus (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, base plates, channels, tracks, wood structures.

**Range of Loading:** 2,4 kN - 65,1 kN  
**Range of concrete quality:** C20/25 - C50/60

## Wedge Anchor BZ plus



- Steel, zinc plated
- Approved for cracked and non-cracked concrete

Description	Ref. No.	Drill Hole Øxdepth mm	Setting- 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	06115101	8x60	52	10	75	M8x20	100	3,05
BZ 8-15/80	06120101	8x60	52	15	80	M8x25	100	3,20
BZ 8-30/95	06135101	8x60	52	30	95	M8x40	100	3,69
BZ 8-50/115	06145101	8x60	52	50	115	M8x60	100	4,01
BZ 8-100/165	06160101	8x60	52	100	165	M8x80	50	2,81
BZ 10-10/90	06210101	10x75	67	10	90	M10x20	50	3,02
BZ 10-15/95	06215101	10x75	67	15	95	M10x25	50	3,14
BZ 10-20/100	06220101	10x75	67	20	100	M10x30	50	3,26
BZ 10-30/110	06225101	10x75	67	30	110	M10x40	50	3,52
BZ 10-50/130	06235101	10x75	67	50	130	M10x60	50	4,02
BZ 10-75/155	06240101	10x75	67	75	155	M10x80	50	4,65
BZ 10-100/180	06250101	10x75	67	100	180	M10x80	50	5,90
BZ 10-150/230	06260101	10x75	67	150	230	M10x80	25	3,54
BZ 12-15/110	06315101	12x90	80	15	110	M12x30	25	2,57
BZ 12-20/115	06320101	12x90	80	20	115	M12x35	25	2,65
BZ 12-30/125	06325101	12x90	80	30	125	M12x45	25	2,82
BZ 12-50/145	06330101	12x90	80	50	145	M12x65	25	3,19
BZ 12-65/160	06335101	12x90	80	65	160	M12x80	25	3,46
BZ 12-85/180	06340101	12x90	80	85	180	M12x80	25	3,81
BZ 12-105/200	06345101	12x90	80	105	200	M12x80	25	4,60
BZ 12-125/220	06350101	12x90	80	125	220	M12x80	25	5,03
BZ 12-145/240	06355101	12x90	80	145	240	M12x80	20	4,40
BZ 12-160/255	06365101	12x90	80	160	255	M12x80	20	4,46
BZ 12-190/285	06370101	12x90	80	190	285	M12x80	20	5,12
BZ 16-15/135	06510101	16x110	100	15	135	M16x35	20	4,42
BZ 16-25/145	06515101	16x110	100	25	145	M16x45	20	4,68
BZ 16-50/170	06520101	16x110	100	50	170	M16x70	20	5,33
BZ 16-80/200	06525101	16x110	100	80	200	M16x80	10	3,00
BZ 16-100/220	06530101	16x110	100	100	220	M16x80	10	3,70
BZ 16-140/260	06535101	16x110	100	140	260	M16x80	10	4,40
BZ 16-180/300	06540101	16x110	100	180	300	M16x80	10	5,77
BZ 20-30/165	06615101	20x125	114	30	165	M20x50	10	4,83
BZ 20-60/195	06625101	20x125	114	60	195	M20x70	10	5,45
BZ 20-100/235	06630101	20x125	114	100	235	M20x80	5	3,53
BZ 20-130/265	06635101	20x125	114	130	265	M20x80	5	3,65
BZ 20-150/285	06640101	20x125	114	150	285	M20x80	5	3,75
BZ 24-30/190	06715101	24x145	133	30	190	M24x55	10	6,90
BZ 24-60/220	06725101	24x145	133	60	220	M24x85	5	4,00
BZ 24-75/235	06735101	24x145	133	75	235	M24x100	5	4,15
BZ 24-100/260	06745101	24x145	133	100	260	M24x125	5	4,52

Other lengths on demand.



## Wedge Anchor BZ-U plus



- 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	Setting- 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	06115701	8x60	52	10	75	24	M8x20	100	3,49
BZ-U 8-15/80	06120701	8x60	52	15	80	24	M8x25	100	3,64
BZ-U 8-30/95	06135701	8x60	52	30	95	24	M8x40	100	4,13
BZ-U 8-50/115	06145701	8x60	52	50	115	24	M8x60	100	4,45
BZ-U 10-10/90	06210701	10x75	67	10	90	30	M10x20	50	3,45
BZ-U 10-15/95	06215701	10x75	67	15	95	30	M10x25	50	3,57
BZ-U 10-20/100	06220701	10x75	67	20	100	30	M10x30	50	3,70
BZ-U 10-30/110	06225701	10x75	67	30	110	30	M10x40	50	3,95
BZ-U 10-50/130	06235701	10x75	67	50	130	30	M10x60	50	4,45
BZ-U 10-100/180	06250701	10x75	67	100	180	30	M10x80	50	6,33
BZ-U 10-150/230	06260701	10x75	67	150	230	30	M10x80	50	7,63
BZ-U 12-15/110	06315701	12x90	80	15	110	37	M12x30	25	2,96
BZ-U 12-30/125	06325701	12x90	80	30	125	37	M12x45	25	3,22
BZ-U 12-50/145	06330701	12x90	80	50	145	37	M12x65	25	3,59
BZ-U 12-125/220	06350701	12x90	80	125	220	37	M12x80	25	5,42
BZ-U 12-160/255	06365701	12x90	80	160	255	37	M12x80	20	4,77
BZ-U 16-25/145	06515701	16x110	100	25	145	50	M16x45	20	5,27
BZ-U 16-100/220	06530701	16x110	100	100	220	50	M16x80	10	4,01
BZ-U 16-140/260	06535701	16x110	100	140	260	50	M16x80	10	4,71
BZ-U 16-180/300	06540701	16x110	100	180	300	50	M16x80	10	6,08
BZ-U 20-30/165	06615701	20x125	114	30	165	60	M20x50	10	5,43
BZ-U 20-60/195	06625701	20x125	114	60	195	60	M20x70	10	6,05
BZ-U 20-100/235	06630701	20x125	114	100	235	60	M20x80	5	4,13
BZ-U 20-130/265	06635701	20x125	114	130	265	60	M20x80	5	4,22
BZ-U 20-150/285	06640701	20x125	114	150	285	60	M20x80	5	4,35
BZ-U 24-30/190	06720701	24x145	133	30	190	72	M24x55	10	7,95
BZ-U 24-60/220	06725701	24x145	133	60	220	72	M24x85	5	5,05

Other lengths on demand.





**Extract from Permissible Service Conditions of ETA-03/0017**

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 plus	M 8	M 10	M 12	M 16	M 20	M 24	
cracked concrete								
Mean ultimate loads, tension	C25/30 $N_{um}$	[kN]	10,5	14,7	20,3	35,1	79,8	
Mean ultimate loads, shear	C25/30 $V_{um}$	[kN]	19,0	26,9	40,5	73,3	157,7	
Approved loads, tension	C20/25 appr. N	[kN]	2,4	4,3	5,7	11,9	21,1	
	C25/30 appr. N	[kN]	2,6	4,7	6,3	13,1	23,3	
	C30/37 appr. N	[kN]	2,9	5,2	7,0	14,5	25,8	
	C40/50 appr. N	[kN]	3,4	6,0	8,1	16,8	29,8	
	C50/60 appr. N	[kN]	3,7	6,6	8,9	18,5	32,8	
non-cracked concrete								
Approved loads, tension	C20/25 appr. N	[kN]	5,7	7,6	9,5	16,7	29,6	
	C25/30 appr. N	[kN]	6,3	8,4	10,5	18,3	32,6	
	C30/37 appr. N	[kN]	7,0	9,3	11,6	20,3	36,1	
	C40/50 appr. N	[kN]	7,5	10,7	13,4	23,5	41,7	
	C50/60 appr. N	[kN]	7,5	11,8	14,8	25,8	45,9	
cracked / non-cracked concrete								
Approved loads, shear	C20/25 appr. V	[kN]	8,6	12,6	18,0/18,9	26,9/34,3	34,3/37,1	42,3/59,2
	$\geq$ C25/30 appr. V	[kN]	8,6	12,6	18,9	29,6/34,3	37,1	46,5/65,1
Approved bending moments	appr. M	[Nm]	13,1	26,9	46,9	119,4	195,0	513,1

**Spacing and edge distance**

Effective anchorage depth	$h_{ef}$	[mm]	46	60	65	85	100	115
Characteristic spacing	$s_{cr,N}$	[mm]	138	180	195	255	300	345
Characteristic edge distance	$c_{cr,N}$	[mm]	69	90	97,5	127,5	150	172,5

**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	45 / 70	60 / 100	60 / 100	95 / 150	100 / 180
Minimum edge distance / for spacing s	$c_{min} / s$	[mm]	40 / 80	45 / 90	60 / 140	60 / 180	95 / 200	100 / 220
non-cracked concrete								
Minimum spacing / for edge distance c	$s_{min} / c$	[mm]	40 / 80	45 / 70	60 / 120	65 / 120	90 / 180	100 / 180
Minimum edge distance / for spacing s	$c_{min} / s$	[mm]	50 / 100	50 / 100	75 / 150	80 / 150	130 / 240	100 / 220
Standard thickness of concrete slab	$h_{std}$	[mm]	100	120	130	170	200	230

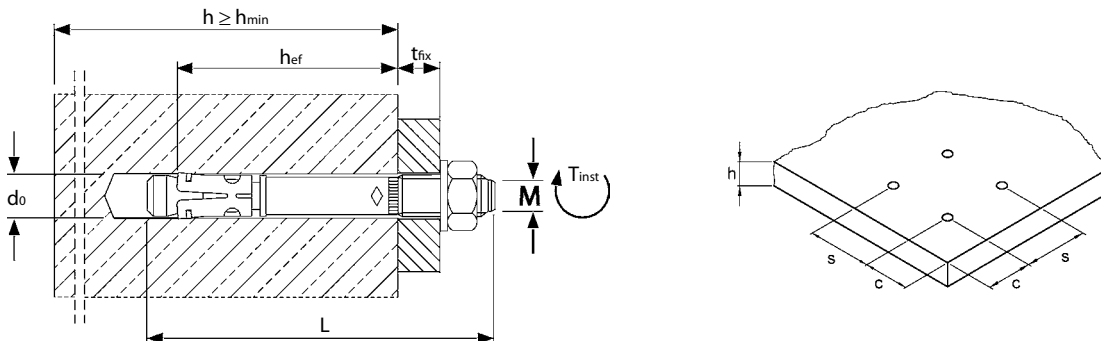
**Respective minimum spacing and edge distance for minimum thickness of concrete member**

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

**Installation parameters**

Drill hole diameter	$d_o$	[mm]	8	10	12	16	20	24
Diameter of clearance hole in the fixture	$d_r$	[mm]	9	12	14	18	22	26
Depth of drill hole	$h_1$	[mm]	60	75	90	110	125	145
Installation torque	$T_{inst}$	[Nm]	20	25	45	90	160	200
Width across nut	SW	[mm]	13	17	19	24	30	36

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**

