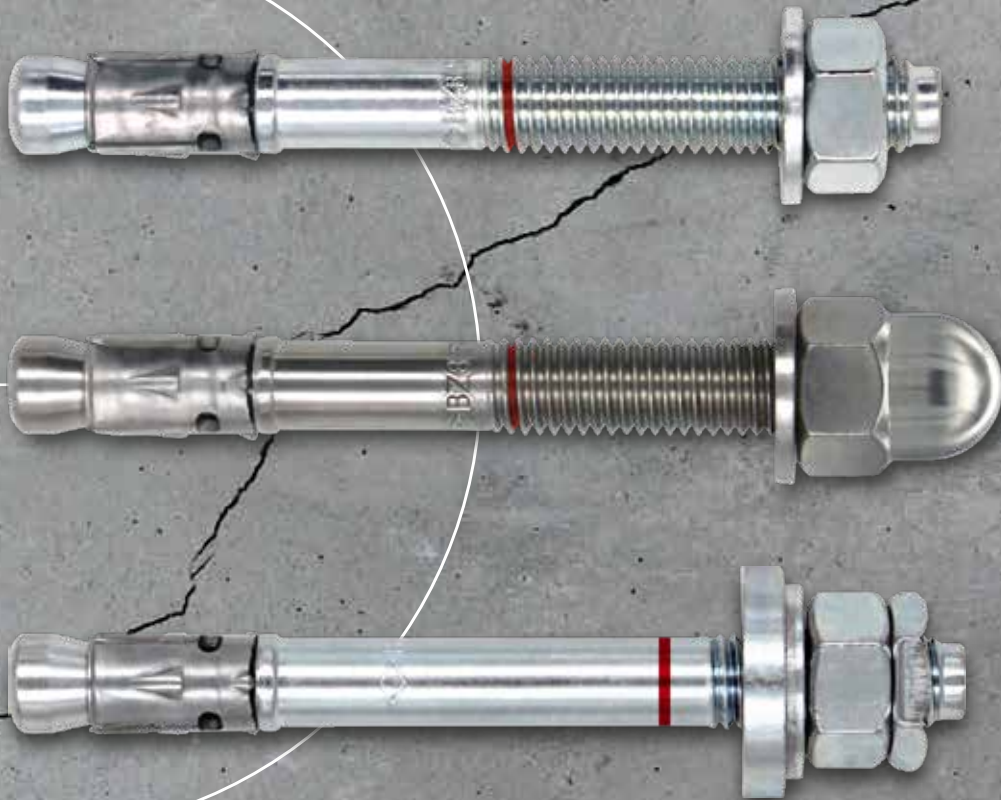


NEW
with BZ3 A4

Wedge Anchor BZ3 Wedge Anchor BZ3 dynamic



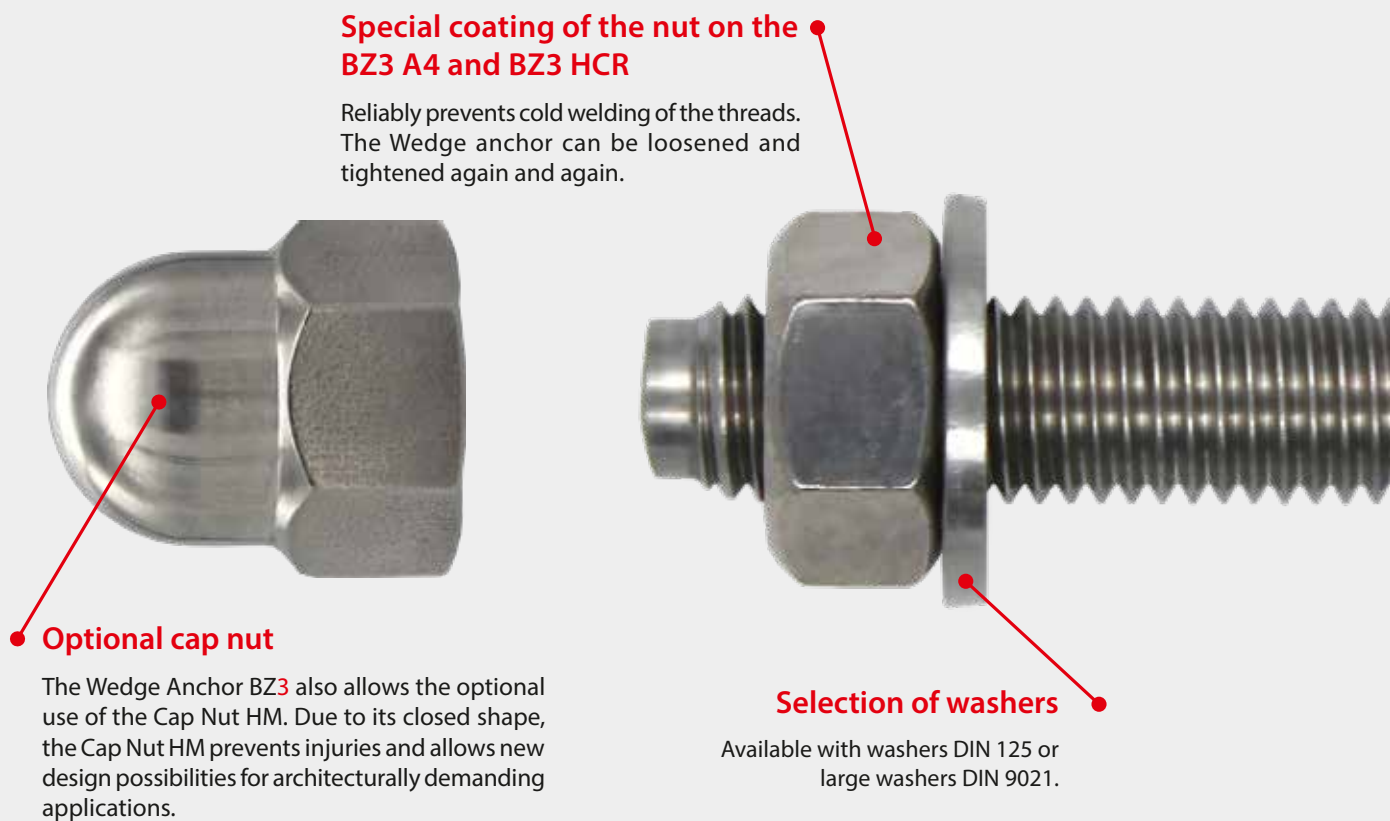
Made in
Germany

MKT[®]

... a solid connection

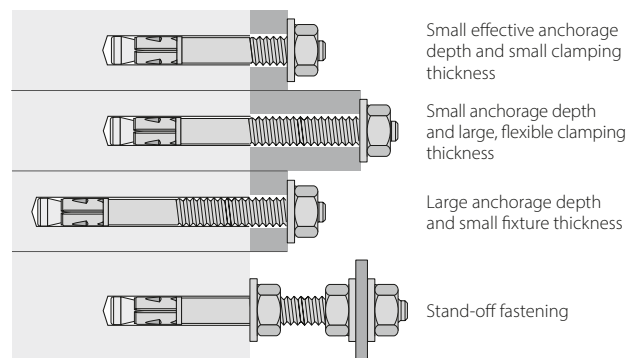
Wedge Anchor BZ3

The Wedge Anchor BZ3 offers the highest load capacity of a Wedge Anchor in cracked and uncracked concrete. It allows unique flexibility in anchorage depth, edge distances and spacing already at the design stage. It is easy and safe to install.



The stepless, variable anchoring depth

allows the exact adjustment of the setting depth to the user's needs. Setting with minimum anchorage depth reduces drilling and setting effort as well as the risk of reinforcement scatter. Stepless, deeper setting increases the permissible load and allows the anchorage depth to be adjusted to the millimetre. The new possibility to increase permissible loads beyond the standard anchorage depth allows fixings that were previously not possible with a Wedge Anchor.





Option 1 for cracked concrete



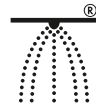
Seismic C1 & C2 from 40 mm anchorage depth



Fire resistance tested according to standard temperature curve R30–R120



Shock approval by „Bundesamt für Bevölkerungsschutz“ in Bern, Switzerland from Standard anchorage depth



Suitable for installation of sprinkler systems in concrete

Optimisation of geometry, material and manufacturing process

By optimising the material, the geometry and the manufacturing process, it was possible to significantly increase the performance under earthquake action.

Long thread

Allows flexible use, whether for small or large fixture thickness or for stand-off fastening.

Coloured marking

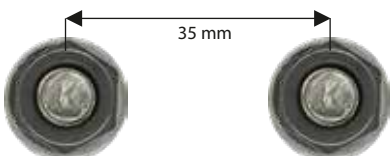
shows whether the Wedge Anchor BZ3 has already been driven in to the minimum anchorage depth during pre-setting installation.

High-performance expansion clip made of Stainless steel

Grips immediately. Only a few turns of the nut are needed to reach the tightening torque.

Smallest spacings and edge distances

The new, innovative design method allows the smallest spacings and edge distances depending on anchorage depth and concrete thickness. Thus, the MKT Wedge Anchor BZ3 can be used from 35 mm spacing and from 40 mm edge distance.



Earthquake safety

From 40 mm anchorage depth permissible for seismic actions of performance category C1 and C2.

Extra short versions

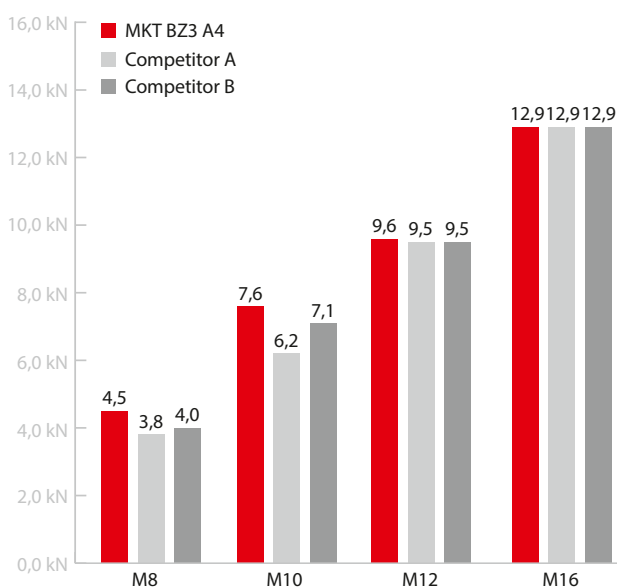
Extra short versions are inexpensive and quick to install.



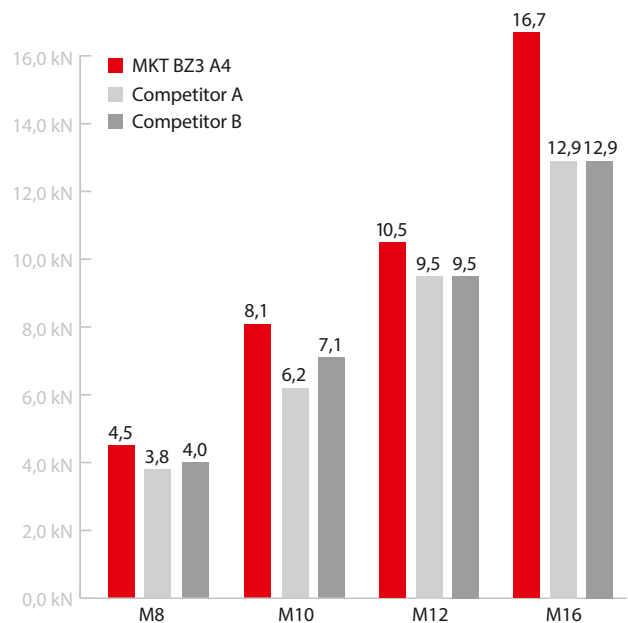
LOAD COMPARISON with the best

The BZ3 and BZ3 A4 Wedge Anchors have among the highest permissible loads of all Wedge Anchors available on the market at minimum and standard anchorage depths. By setting the BZ3 and BZ3 A4 Wedge Anchors deeper to the maximum anchorage depth, the loads can be further increased. As a result, fastening points can be saved or fastenings can be carried out that were previously not possible with a Wedge Anchor.

**Approved tensile load cracked concrete C20/25
at standard anchorage depth**



**Approved tensile load cracked concrete C20/25
at maximum anchorage depth**



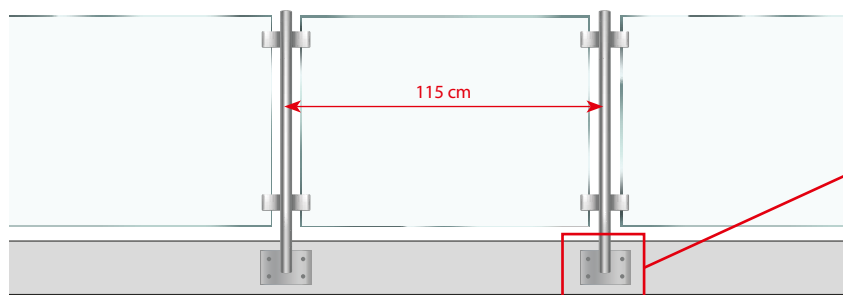
APPLICATIONS in cracked and uncracked concrete

- ✓ Shelves and steel beams
- ✓ Cable routes
- ✓ Loading ramps
- ✓ Wooden constructions
- ✓ Railings
- ✓ Facades

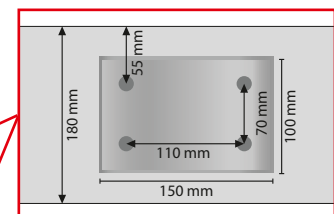
INSTALLATION ADVANTAGES in comparison

The combination of very high permissible tensile and shear loads of the Wedge Anchor BZ3 in conjunction with the large maximum anchorage depths allows for smaller anchor dimensions, smaller anchor plates or, as in comparison, significantly larger post spacing.

MKT BZ plus M10

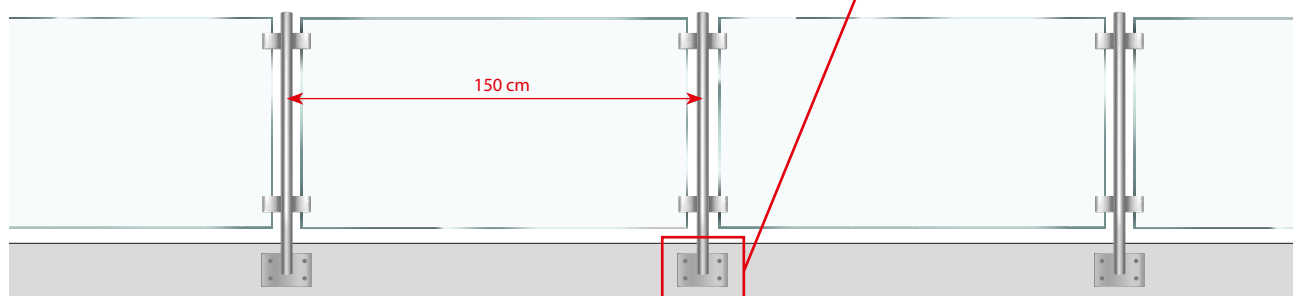


Border conditions



Front fastening
Beam Load: 0,5 kN/m
Railing height: 100 cm above concrete edge

MKT BZ3 M10



DIMENSIONS

Wedge Anchor BZ3

Wedge Anchor BZ3



- Steel, zinc plated
- Approved for cracked and uncracked concrete
- Variable anchorage depths

Description	Ref. No.	Drill hole-Ø do mm	Standard anchorage depth		Minimum anchorage depth		Variable anchorage depth				Seismic C1 / C2	Anchor length l mm	Thread mm	Pkg. content pcs.	Weight per pkg. kg
			Fixture thickness t _{fix,std} mm	Anchorage depth hef _{std} mm	Fixture thickness t _{fix,min} mm	Anchorage depth hef _{min} mm	Usable length B mm	Fixture thickness t _{fix} mm	Depth of drill hole h ₁ mm	Setting depth h _{nom}					
BZ3 M8x60/0-5	20105001	8	-	-	5	35	40	B-hef	hef + 10	hef + 8	- / -	60	M8x18	100	2,55
BZ3 M8x65/0-10	20110001	8	-	-	10	35	45	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	65	M8x23	100	2,71
BZ3 M8x75/0-20	20115001	8	10	45	20	35	55	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	75	M8x33	100	3,01
BZ3 M8x80/0-25	20125001	8	15	45	25	35	60	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	80	M8x38	100	3,17
BZ3 M8x95/0-40	20140001	8	30	45	40	35	75	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	95	M8x53	100	3,64
BZ3 M8x115/5-60	20150001	8	50	45	60	35	95	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	115	M8x73	100	4,36
BZ3 M8x165/55-110	20170001	8	100	45	110	35	145	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	165	M8x123	50	2,96
BZ3 M10x70/0-10	20205001	10	-	-	10	40	50	B-hef	hef + 11	hef + 9	✓ / ✓	70	M10x25	50	2,58
BZ3 M10x80/0-20	20210001	10	-	-	20	40	60	B-hef	hef + 11	hef + 9	✓ / ✓	80	M10x35	50	2,80
BZ3 M10x90/0-30	20215001	10	10	60	30	40	70	B-hef	hef + 11	hef + 9	✓ / ✓	90	M10x45	50	3,05
BZ3 M10x95/0-35	20220001	10	15	60	35	40	75	B-hef	hef + 11	hef + 9	✓ / ✓	95	M10x50	50	3,16
BZ3 M10x100/0-40	20225001	10	20	60	40	40	80	B-hef	hef + 11	hef + 9	✓ / ✓	100	M10x55	50	3,31
BZ3 M10x110/0-50	20230001	10	30	60	50	40	90	B-hef	hef + 11	hef + 9	✓ / ✓	110	M10x65	50	3,55
BZ3 M10x130/10-70	20235001	10	50	60	70	40	110	B-hef	hef + 11	hef + 9	✓ / ✓	130	M10x85	50	4,07
BZ3 M10x155/35-95	20250001	10	75	60	95	40	135	B-hef	hef + 11	hef + 9	✓ / ✓	155	M10x110	50	4,73
BZ3 M10x180/60-120	20260001	10	100	60	120	40	160	B-hef	hef + 11	hef + 9	✓ / ✓	180	M10x135	50	5,34
BZ3 M12x85/0-10	20305001	12	-	-	10	50	60	B-hef	hef + 13	hef + 10	✓ / ✓	85	M12x29	25	2,16
BZ3 M12x95/0-20	20310001	12	-	-	20	50	70	B-hef	hef + 13	hef + 10	✓ / ✓	95	M12x39	25	2,34
BZ3 M12x105/0-30	20313001	12	10	70	30	50	80	B-hef	hef + 13	hef + 10	✓ / ✓	105	M12x49	25	2,53
BZ3 M12x110/0-35	20315001	12	15	70	35	50	85	B-hef	hef + 13	hef + 10	✓ / ✓	110	M12x54	25	2,61
BZ3 M12x115/0-40	20320001	12	20	70	40	50	90	B-hef	hef + 13	hef + 10	✓ / ✓	115	M12x59	25	2,69
BZ3 M12x125/0-50	20325001	12	30	70	50	50	100	B-hef	hef + 13	hef + 10	✓ / ✓	125	M12x69	25	2,89
BZ3 M12x145/0-70	20330001	12	50	70	70	50	120	B-hef	hef + 13	hef + 10	✓ / ✓	145	M12x89	25	3,24
BZ3 M12x160/10-85	20335001	12	65	70	85	50	135	B-hef	hef + 13	hef + 10	✓ / ✓	160	M12x104	25	3,50
BZ3 M12x180/30-105	20340001	12	85	70	105	50	155	B-hef	hef + 13	hef + 10	✓ / ✓	180	M12x124	25	3,86
BZ3 M12x200/50-125	20345001	12	105	70	125	50	175	B-hef	hef + 13	hef + 10	✓ / ✓	200	M12x134	25	4,22
BZ3 M16x105/0-5	20502001	16	-	-	5	65	70	B-hef	hef + 17	hef + 14	✓ / ✓	105	M12x29	20	3,62
BZ3 M16x115/0-15	20510001	16	-	-	15	65	80	B-hef	hef + 17	hef + 14	✓ / ✓	115	M16x39	20	3,88
BZ3 M16x125/0-25	20515001	16	5	85	25	65	90	B-hef	hef + 17	hef + 14	✓ / ✓	125	M16x49	20	4,14
BZ3 M16x135/0-35	20520001	16	15	85	35	65	100	B-hef	hef + 17	hef + 14	✓ / ✓	135	M16x59	20	4,41
BZ3 M16x145/0-45	20525001	16	25	85	45	65	110	B-hef	hef + 17	hef + 14	✓ / ✓	145	M16x69	20	4,65
BZ3 M16x170/0-70	20530001	16	50	85	70	65	135	B-hef	hef + 17	hef + 14	✓ / ✓	170	M16x94	20	5,38
BZ3 M16x200/5-100	20535001	16	80	85	100	65	165	B-hef	hef + 17	hef + 14	✓ / ✓	200	M16x124	10	3,08

¹⁾Seismic C1 and C2 for anchorage depth hef ≥ 40mm

Cap nut HM



- Steel zinc plated, extra high design
- For visually demanding requirements
- Protection against injuries

Description	Ref. No.	Thread	Cap nut height mm	Width across nut SW	Suitable for	Package content pcs.	Weight per pkg. kg
Cap nut HM M10	56102101	M10	22	17	BZ3 M10	20	0,48
Cap nut HM M12	56122101	M12	26,5	19	BZ3 M12	20	0,69

Wedge Anchor BZ3-U



- Steel, zinc plated
- With large washer DIN EN ISO 7093-1 (DIN 9021)
- Approved for cracked and uncracked concrete
- Variable anchorage depths

Description	Ref. No.	Drill hole-Ø _{do} mm	Standard anchorage depth		Minimum anchorage depth		Variable anchorage depth			Seismic C1 / C2	Anchor length ¹⁾ mm	Washer ²⁾	Thread	Pkg. content pcs.	Weight per pkg. kg	
			Fixture thickness _{t_{fix, std}} mm	Anchorage depth _{hef, std} mm	Fixture thickness _{t_{fix, min}} mm	Anchorage depth _{hef, min} mm	Usable length _B mm	Fixture thickness _{t_{fix}} mm	Depth of drill hole _{h_i} mm							Setting depth _{h_{nom}}
BZ3-U M8x65/0-10	20110301	8	-	-	10	35	45	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	65	24x2	M8x23	100	2,71
BZ3-U M8x75/0-20	20115301	8	10	45	20	35	55	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	75	24x2	M8x33	100	3,01
BZ3-U M8x80/0-25	20125301	8	15	45	25	35	60	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	80	24x2	M8x38	100	3,17
BZ3-U M10x70/0-10	20205301	10	-	-	10	40	50	B-hef	hef + 11	hef + 9	✓ / ✓	70	30x2,5	M10x25	50	2,58
BZ3-U M10x80/0-20	20210301	10	-	-	20	40	60	B-hef	hef + 11	hef + 9	✓ / ✓	80	30x2,5	M10x35	50	2,80
BZ3-U M10x90/0-30	20215301	10	10	60	30	40	70	B-hef	hef + 11	hef + 9	✓ / ✓	90	30x2,5	M10x45	50	3,05
BZ3-U M10x95/0-35	20220301	10	15	60	35	40	75	B-hef	hef + 11	hef + 9	✓ / ✓	95	30x2,5	M10x50	50	3,10
BZ3-U M10x100/0-40	20225301	10	20	60	40	40	80	B-hef	hef + 11	hef + 9	✓ / ✓	100	30x2,5	M10x55	50	3,31
BZ3-U M10x110/0-50	20230301	10	30	60	50	40	90	B-hef	hef + 11	hef + 9	✓ / ✓	110	30x2,5	M10x65	50	3,55
BZ3-U M10x130/10-70	20235301	10	50	60	70	40	110	B-hef	hef + 11	hef + 9	✓ / ✓	130	30x2,5	M10x85	50	4,07
BZ3-U M12x85/0-10	20305301	12	-	-	10	50	60	B-hef	hef + 13	hef + 10	✓ / ✓	85	37x3	M12x29	25	2,16
BZ3-U M12x95/0-20	20310301	12	-	-	20	50	70	B-hef	hef + 13	hef + 10	✓ / ✓	95	37x3	M12x39	25	2,34
BZ3-U M12x105/0-30	20313301	12	10	70	30	50	80	B-hef	hef + 13	hef + 10	✓ / ✓	105	37x3	M12x49	25	2,53
BZ3-U M12x115/0-40	20320301	12	20	70	40	50	90	B-hef	hef + 13	hef + 10	✓ / ✓	115	37x3	M12x59	25	2,69
BZ3-U M12x125/0-50	20325301	12	30	70	50	50	100	B-hef	hef + 13	hef + 10	✓ / ✓	125	37x3	M12x69	25	2,89
BZ3-U M16x145/0-45	20525301	16	25	85	45	65	110	B-hef	hef + 17	hef + 14	✓ / ✓	145	50x3	M16x69	20	4,65
BZ3-U M16x170/0-70	20530301	16	50	85	70	65	135	B-hef	hef + 17	hef + 14	✓ / ✓	170	50x3	M16x94	20	5,38

¹⁾Seismic C1 and C2 for anchorage depth $hef \geq 40$ mm

²⁾Outer diameter x height

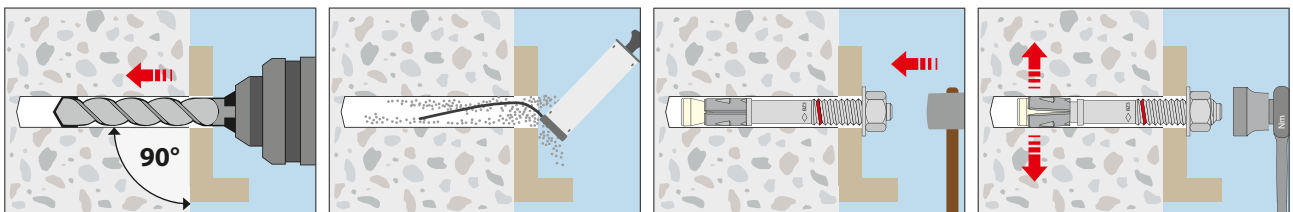
Wedge Anchor-Setting Tool BSW



- 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

Installation



DIMENSIONS

Wedge Anchor BZ3 A4

Wedge Anchor BZ3 A4



- Stainless steel A4
- Approved for cracked and non-cracked concrete
- Variable anchorage depths

Description	Ref. No.	Drill hole-Ø do mm	Standard anchorage depth		Minimum anchorage depth		Variable anchorage depth				Seismic C1 / C2	Anchor length l mm	Thread mm	Pkg. content pcs.	Weight per pkg. kg
			Fixture thickness t _{fix,std} mm	Anchorage depth hef, _{std} mm	Fixture thickness t _{fix,min} mm	Anchorage depth hef, _{min} mm	Usable length B mm	Fixture thickness t _{fix} mm	Depth of drill hole h _i mm	Setting depth h _{nom}					
BZ3 M8x60/0-5 A4	19105001	8	-	-	5	35	40	B-hef	hef + 10	hef + 8	- / -	60	M8x18	100	2,57
BZ3 M8x65/0-10 A4	19110001	8	-	-	10	35	45	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	65	M8x23	100	2,73
BZ3 M8x75/0-20 A4	19115001	8	10	45	20	35	55	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	75	M8x33	100	3,05
BZ3 M8x80/0-25 A4	19125001	8	15	45	25	35	60	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	80	M8x38	100	3,22
BZ3 M8x95/0-40 A4	19140001	8	30	45	40	35	75	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	95	M8x53	100	3,68
BZ3 M8x115/5-60 A4	19150001	8	50	45	60	35	95	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	115	M8x73	100	4,41
BZ3 M8x165/55-110 A4	19170001	8	100	45	110	35	145	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	165	M8x123	50	3,00
BZ3 M10x70/0-10 A4	19205001	10	-	-	10	40	50	B-hef	hef + 11	hef + 9	✓ / ✓	70	M10x25	50	2,64
BZ3 M10x80/0-20 A4	19210001	10	-	-	20	40	60	B-hef	hef + 11	hef + 9	✓ / ✓	80	M10x35	50	2,82
BZ3 M10x90/0-30 A4	19215001	10	10	60	30	40	70	B-hef	hef + 11	hef + 9	✓ / ✓	90	M10x45	50	3,13
BZ3 M10x95/0-35 A4	19220001	10	15	60	35	40	75	B-hef	hef + 11	hef + 9	✓ / ✓	95	M10x50	50	3,19
BZ3 M10x100/0-40 A4	19225001	10	20	60	40	40	80	B-hef	hef + 11	hef + 9	✓ / ✓	100	M10x55	50	3,13
BZ3 M10x110/0-50 A4	19230001	10	30	60	50	40	90	B-hef	hef + 11	hef + 9	✓ / ✓	110	M10x65	50	3,60
BZ3 M10x130/10-70 A4	19235001	10	50	60	70	40	110	B-hef	hef + 11	hef + 9	✓ / ✓	130	M10x85	50	4,09
BZ3 M10x155/35-95 A4	19250001	10	75	60	95	40	135	B-hef	hef + 11	hef + 9	✓ / ✓	155	M10x110	50	4,82
BZ3 M10x180/60-120 A4	19260001	10	100	60	120	40	160	B-hef	hef + 11	hef + 9	✓ / ✓	180	M10x135	50	5,41
BZ3 M12x85/0-10 A4	19305001	12	-	-	10	50	60	B-hef	hef + 13	hef + 10	✓ / ✓	85	M12x29	25	2,17
BZ3 M12x95/0-20 A4	19310001	12	-	-	20	50	70	B-hef	hef + 13	hef + 10	✓ / ✓	95	M12x39	25	2,36
BZ3 M12x105/0-30 A4	19313001	12	10	70	30	50	80	B-hef	hef + 13	hef + 10	✓ / ✓	105	M12x49	25	2,55
BZ3 M12x110/0-35 A4	19315001	12	15	70	35	50	85	B-hef	hef + 13	hef + 10	✓ / ✓	110	M12x54	25	2,65
BZ3 M12x115/0-40 A4	19320001	12	20	70	40	50	90	B-hef	hef + 13	hef + 10	✓ / ✓	115	M12x59	25	2,71
BZ3 M12x125/0-50 A4	19325001	12	30	70	50	50	100	B-hef	hef + 13	hef + 10	✓ / ✓	125	M12x69	25	2,91
BZ3 M12x145/0-70 A4	19330001	12	50	70	70	50	120	B-hef	hef + 13	hef + 10	✓ / ✓	145	M12x89	25	3,28
BZ3 M12x160/10-85 A4	19335001	12	65	70	85	50	135	B-hef	hef + 13	hef + 10	✓ / ✓	160	M12x104	25	3,55
BZ3 M12x180/30-105 A4	19340001	12	85	70	105	50	155	B-hef	hef + 13	hef + 10	✓ / ✓	180	M12x124	25	3,91
BZ3 M12x200/50-125 A4	19345001	12	105	70	125	50	175	B-hef	hef + 13	hef + 10	✓ / ✓	200	M12x134	25	4,27
BZ3 M16x105/0-5 A4	19505001	16	-	-	5	65	70	B-hef	hef + 17	hef + 14	✓ / ✓	105	M12x29	20	3,64
BZ3 M16x115/0-15 A4	19510001	16	-	-	15	65	80	B-hef	hef + 17	hef + 14	✓ / ✓	115	M16x39	20	3,91
BZ3 M16x125/0-25 A4	19515001	16	5	85	25	65	90	B-hef	hef + 17	hef + 14	✓ / ✓	125	M16x49	20	4,18
BZ3 M16x135/0-35 A4	19520001	16	15	85	35	65	100	B-hef	hef + 17	hef + 14	✓ / ✓	135	M16x59	20	4,44
BZ3 M16x145/0-45 A4	19525001	16	25	85	45	65	110	B-hef	hef + 17	hef + 14	✓ / ✓	145	M16x69	20	4,71
BZ3 M16x170/0-70 A4	19530001	16	50	85	70	65	135	B-hef	hef + 17	hef + 14	✓ / ✓	170	M16x94	20	5,43
BZ3 M16x200/5-100 A4	19535001	16	80	85	100	65	165	B-hef	hef + 17	hef + 14	✓ / ✓	200	M16x124	10	3,11

¹⁾Seismic C1 and C2 for anchorage depth hef ≥ 40mm

BZ3 HCR on demand

Cap nut HM A4



- Stainless steel A4, extra high design
- For visually demanding requirements
- Protection against injuries

Description	Ref. No.	Thread	Cap nut height mm	Width across nut SW	Suitable for	Package content pcs.	Weight per pkg. kg
Cap nut HM M10 A4	56102501	M10	22	17	BZ3 M10 A4	20	0,52
Cap nut HM M12 A4	56122501	M12	26,5	19	BZ3 M12 A4	20	0,73

Wedge Anchor BZ3-U A4



- Stainless steel A4
- With large washer DIN EN ISO 7093-1 (DIN 9021)
- Approved for cracked and uncracked concrete
- Variable anchorage depths

Description	Ref. No.	Drill hole-Ø do mm	Standard anchorage depth		Minimum anchorage depth		Variable anchorage depth			Seismic C1 / C2	Anchor length l mm	Thread 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	Usable length B mm	Fixture thickness t _{fix} mm	Depth of drill hole h ₁ mm						Setting depth h _{nom}	
BZ3-U M8x75/0-20 A4	19115301	8	10	45	20	35	55	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	75	24x2	M8x33	100	3,49
BZ3-U M8x80/0-25 A4	19125301	8	15	45	25	35	60	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	80	24x2	M8x38	100	3,66
BZ3-U M8x95/0-40 A4	19140301	8	30	45	40	35	75	B-hef	hef + 10	hef + 8	✓ / ✓ ¹⁾	95	24x2	M8x53	100	4,12
BZ3-U M10x90/0-30 A4	19215301	10	10	60	30	40	70	B-hef	hef + 11	hef + 9	✓ / ✓	90	30x2,5	M10x45	50	3,56
BZ3-U M10x95/0-35 A4	19220301	10	15	60	35	40	75	B-hef	hef + 11	hef + 9	✓ / ✓	95	30x2,5	M10x50	50	3,62
BZ3-U M10x110/0-50 A4	19230301	10	30	60	50	40	90	B-hef	hef + 11	hef + 9	✓ / ✓	110	30x2,5	M10x65	50	4,03
BZ3-U M10x130/10-70 A4	19235301	10	50	60	70	40	110	B-hef	hef + 11	hef + 9	✓ / ✓	130	30x2,5	M10x85	50	4,52
BZ3-U M12x110/0-35 A4	19315301	12	15	70	35	50	85	B-hef	hef + 13	hef + 10	✓ / ✓	110	37x3	M12x54	25	3,05
BZ3-U M12x125/0-50 A4	19325301	12	30	70	50	50	100	B-hef	hef + 13	hef + 10	✓ / ✓	125	37x3	M12x69	25	3,31
BZ3-U M16x145/0-45 A4	19525301	16	25	85	45	65	110	B-hef	hef + 17	hef + 14	✓ / ✓	145	50x3	M16x69	20	5,23

¹⁾Seismic C1 and C2 for anchorage depth h_{ef} ≥ 40mm

²⁾Outer diameter x height

BZ3-U HCR on demand

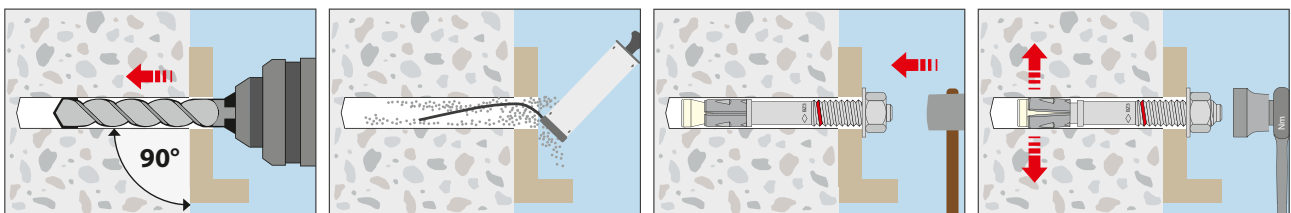
Wedge Anchor-Setting Tool BSW



- 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

Installation



LOADS AND PERFORMANCE DATA



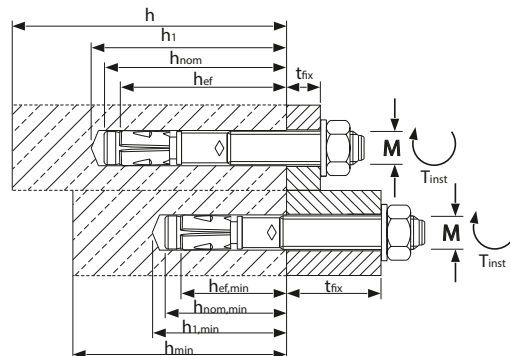
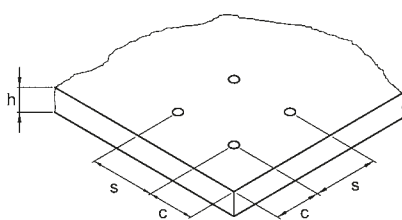
Extract from Permissible Service Conditions of European Technical Assessment ETA-19/0619 for use in cracked and uncracked concrete (Option 1)

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 Product Range.

Loads and performance data		Wedge Anchor BZ3		M8			M10			M12			M16		
Minimum anchorage depth ¹⁾		[mm]	35				40			50			65		
Standard anchorage depth		[mm]		45			60			70			85		
Maximum anchorage depth		[mm]			90		100		125			160			
cracked concrete															
Approved loads, tension	C20/25	appr. N	[kN]	3,4	4,5	4,5	4,1	7,1	7,1	5,8	9,6	10,5	8,6	12,9	14,3
	C25/30	appr. N	[kN]	3,8	5,0	5,0	4,6	7,6	7,6	6,5	10,7	11,7	9,6	14,4	15,4
	C30/37	appr. N	[kN]	4,2	5,4	5,4	5,1	8,0	8,0	7,1	11,8	12,8	10,5	15,7	16,4
	C40/50	appr. N	[kN]	4,8	6,1	6,1	5,9	8,6	8,6	8,2	13,6	14,8	12,2	18,1	18,1
	C50/60	appr. N	[kN]	5,4	6,8	6,8	6,6	9,1	9,1	9,2	15,2	16,6	13,6	19,5	19,5
uncracked concrete															
Approved loads, tension ¹⁾	C20/25	appr. N	[kN]	4,9	6,7	6,7	5,9	10,9	11,4	8,3	13,7	14,3	12,3	18,4	23,8
	C25/30	appr. N	[kN]	5,4	7,4	7,4	6,6	12,2	12,6	9,3	15,3	16,0	13,7	20,5	24,9
	C30/37	appr. N	[kN]	5,9	8,1	8,1	7,3	13,3	13,7	10,1	16,8	17,5	15,0	22,5	25,9
	C40/50	appr. N	[kN]	6,9	9,4	9,4	8,4	14,5	14,5	11,7	19,4	20,2	17,4	26,0	27,4
	C50/60	appr. N	[kN]	7,7	9,4	9,4	9,4	14,5	14,5	13,1	21,4	21,4	19,4	28,7	28,7
cracked concrete															
Approved loads, shear	C20/25	appr. V	[kN]	9,0	9,0	9,0	12,9	15,3	15,3	17,4	21,9	21,9	30,9	34,3	34,3
	≥ C25/30	appr. V	[kN]	9,0	9,0	9,0	14,4	15,3	15,3	19,4	21,9	21,9	34,3	34,3	34,3
uncracked concrete															
Approved loads, shear	C20/25	appr. V	[kN]	9,0	9,0	9,0	15,3	15,3	15,3	21,9	21,9	21,9	34,3	34,3	34,3
	≥ C25/30	appr. V	[kN]	9,0	9,0	9,0	15,3	15,3	15,3	21,9	21,9	21,9	34,3	34,3	34,3
Approved bending moments		appr. M	[Nm]	17,1	17,1	17,1	34,3	34,3	34,3	60,0	60,0	60,0	137,1	137,1	137,1
Spacing and edge distance²⁾															
Effective anchorage depth		h_{ef}	[mm]	35	45	90	40	60	100	50	70	125	65	85	160
Minimum thickness of concrete slab		h_{min}	[mm]	80	80	135	80	90	150	100	105	187,5	120	127,5	240
Minimum spacing		s_{min}	[mm]	35	35	35	40	40	40	50	50	50	65	65	65
Minimum edge distance		c_{min}	[mm]	40	40	40	45	45	45	55	55	55	65	65	65
Installation parameters															
Drill hole diameter		d_o	[mm]	8	8	8	10	10	10	12	12	12	16	16	16
Diameter of clearance hole in the fixture		$d_r \leq$	[mm]	9	9	9	12	12	12	14	14	14	18	18	18
Drill hole depth		h_1	[mm]	45	55	100	51	71	111	63	83	138	82	102	177
Installation torque		T_{inst}	[Nm]	15	15	15	40	40	40	60	60	60	110	110	110
Width across nut		SW	[mm]	13	13	13	17	17	17	19	19	19	24	24	24
Height of hexagon nut			[mm]	6,5	6,5	6,5	8	8	8	10	10	10	13	13	13
High of the Cap nut			[mm]	-	-	-	22	22	22	26,5	26,5	26,5	-	-	-
Outer diameter x Washer height BZ3			[mm]	16x1,6	16x1,6	16x1,6	20x2	20x2	20x2	24x2,5	24x2,5	24x2,5	30x3	30x3	30x3
Outer diameter x Washer height BZ3-U			[mm]	24x2	24x2	24x2	30x2,5	30x2,5	30x2,5	37x3	37x3	37x3	50x3	50x3	50x3

¹⁾Fastenings with anchorage depths $h_{ef} < 40$ mm are constricted to use of statically indeterminate components under indoor conditions

²⁾For anchor groups and near-edge anchorages, the minimum values of thickness, spacing and edge distance cannot be applied simultaneously but have to be determined according to ETA-19/0619, Table B2.





Extract from Permissible Service Conditions of European Technical Assessment ETA-19/0619 for use in cracked and uncracked concrete (Option 1)

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 Product Range.

Loads and performance data	Wedge Anchor BZ3 A4			M8			M10			M12			M16		
Minimum anchorage depth ¹⁾		[mm]	35				40			50			65		
Standard anchorage depth		[mm]		45			60			70			85		
Maximum anchorage depth		[mm]		90			100			125			160		
cracked concrete															
Approved loads, tension	C20/25	appr. N	[kN]	3,4	4,5	4,5	4,1	7,6	8,1	5,8	9,6	10,5	8,6	12,9	16,7
	C25/30	appr. N	[kN]	3,8	5,0	5,0	4,6	8,5	9,1	6,5	10,7	11,5	9,6	14,4	18,0
	C30/37	appr. N	[kN]	4,2	5,5	5,5	5,1	9,3	9,9	7,1	11,8	12,5	10,5	15,7	19,2
	C40/50	appr. N	[kN]	4,8	6,3	6,3	5,9	10,8	11,4	8,2	13,6	14,2	12,2	18,2	21,2
	C50/60	appr. N	[kN]	5,4	7,1	7,1	6,6	12,0	12,8	9,2	15,2	15,6	13,6	20,3	23,0
uncracked concrete															
Approved loads, tension ¹⁾	C20/25	appr. N	[kN]	4,9	7,1	9,4	5,9	10,9	11,9	8,3	13,7	20,0	12,3	18,4	23,8
	C25/30	appr. N	[kN]	5,4	7,9	9,4	6,6	12,2	12,9	9,3	15,3	21,0	13,7	20,5	24,9
	C30/37	appr. N	[kN]	5,9	8,7	9,4	7,3	13,3	13,8	10,1	16,8	21,4	15,0	22,5	25,8
	C40/50	appr. N	[kN]	6,9	9,4	9,4	8,4	14,5	14,5	11,7	19,4	21,4	17,4	26,0	27,3
	C50/60	appr. N	[kN]	7,7	9,4	9,4	9,4	14,5	14,5	13,1	21,4	21,4	19,4	28,5	28,5
cracked concrete															
Approved loads, shear	C20/25	appr. V	[kN]	9,2	9,6	9,6	11,6	15,9	15,9	19,1	22,7	22,7	29,2	39,7	39,7
	≥ C25/30	appr. V	[kN]	9,6	9,6	9,6	13,0	15,9	15,9	21,4	22,7	22,7	32,7	39,7	39,7
uncracked concrete															
Approved loads, shear	C20/25	appr. V	[kN]	9,6	9,6	9,6	15,9	15,9	15,9	22,7	22,7	22,7	39,7	39,7	39,7
	≥ C25/30	appr. V	[kN]	9,6	9,6	9,6	15,9	15,9	15,9	22,7	22,7	22,7	39,7	39,7	39,7
Approved bending moments		appr. M	[Nm]	15,4	15,4	15,4	31,4	31,4	31,4	56,6	56,6	56,6	127,4	127,4	127,4
Spacing and edge distance²⁾															
Effective anchorage depth		h _{ef}	[mm]	35	45	90	40	60	100	50	70	125	65	85	160
Minimum thickness of concrete slab		h _{min}	[mm]	80	80	135	80	90	150	100	105	187,5	120	127,5	240
Minimum spacing		s _{min}	[mm]	35	35	35	40	40	40	50	50	50	65	65	65
Minimum edge distance		c _{min}	[mm]	40	40	40	45	45	45	55	55	55	65	65	65
Installation parameters															
Drill hole diameter		d _o	[mm]	8	8	8	10	10	10	12	12	12	16	16	16
Diameter of clearance hole in the fixture		d _{r ≤}	[mm]	9	9	9	12	12	12	14	14	14	18	18	18
Drill hole depth		h ₁	[mm]	45	55	100	51	71	111	63	83	138	82	102	177
Installation torque		T _{inst}	[Nm]	15	15	15	40	40	40	55	55	55	100	100	100
Width across nut		SW	[mm]	13	13	13	17	17	17	19	19	19	24	24	24
Height of hexagon nut			[mm]	6,5	6,5	6,5	8	8	8	10	10	10	13	13	13
High of the Cap nut HM A4			[mm]	-	-	-	22	22	22	26,5	26,5	26,5	-	-	-
Outer diameter x Washer height BZ3 A4			[mm]	16x1,6	16x1,6	16x1,6	20x2	20x2	20x2	24x2,5	24x2,5	24x2,5	30x3	30x3	30x3
Outer diameter x Washer height BZ3-U A4			[mm]	24x2	24x2	24x2	30x2,5	30x2,5	30x2,5	37x3	37x3	37x3	50x3	50x3	50x3

¹⁾Fastenings with anchorage depths h_{ef} < 40mm are constricted to use of statically indeterminate components under indoor conditions

²⁾For anchor groups and near-edge anchorages, the minimum values of thickness, spacing and edge distance cannot be applied simultaneously but have to be determined according to ETA-19/0619, Table B2.

Wedge Anchor BZ3 dynamic

The Wedge Anchor BZ3 *dynamic* is the world's first mechanical expansion anchor with ETA for fatigue cyclic loading. It is quickly installed and immediately statically loadable. This makes it an economical alternative to injection systems and undercut anchors.

Lock nut

Reliably prevents the hexagon nut from loosening under dynamic stress.

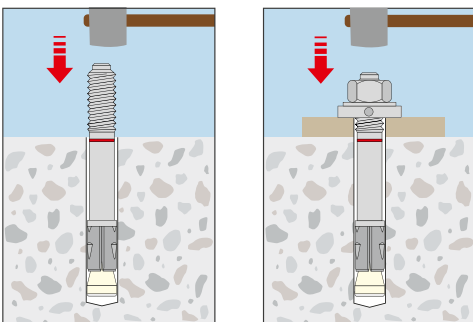
Coloured marking

Simple, visual control of the required anchorage depth.

Filling Washer with hole

For filling the annular gap between the attachment and the Wedge Anchor BZ3 *dynamic* with Injection mortar.

One anchor suitable for pre- and through-setting installation



Small bore diameters and low minimum component thicknesses, spacings and edge distances

Compared to other anchors for dynamic loads, the BZ3 *dynamic* requires smaller spacings and edge distances as well as smaller concrete thicknesses. The size of the connection thread is sufficient for the drill diameter.



Under fatigue loading



Option 1 for cracked concrete



Seismic C1 & C2



DYNAMIC



Fire resistance tested according to standard temperature curve R30-R120



Long shaft

prevents the thread from dipping into the concrete and prevents fracture in the thread area.

High-performance expansion clip made of Stainless steel

Grips immediately. Only a few turns of the nut are needed to reach the tightening torque.

Drilling with Hollow drill bit

When using a Hollow drill bit, there is no need to blow out the drill hole and the formation of drilling dust is avoided. This reduces the health impact on employees and allows the BZ3 **dynamic** to be installed in dust-sensitive areas.

Quick and easy installation, immediately statically loadable

The quick and easy installation of the Wedge Anchor BZ3 **dynamic** significantly improves economic efficiency. As the ideal anchor for anchorages with low dynamic loads, it is the economical alternative to injection and undercut systems.



APPLICATIONS under fatigue loading

✓ Industrial robots

✓ Elevator guides

DIMENSIONS, LOADS AND CHARACTERISTIC VALUES

Wedge Anchor BZ3 dynamic

Wedge Anchor BZ3 dynamic



→ Steel, zinc plated

→ Approved for loads with fatigue cyclic loading

→ There are 5 mixer tips per 25-pack and 2 mixer tips per 10-pack in each assembly package

Description	Ref. No.	Fixture thickness		Anchorage depth h _{ef} mm	Drill hole-Ø		Depth of drill hole h ₁ ≥ mm	Bohrlochtiefe durch Anbauteil h _d mm	Anchor length l mm	Thread mm	Pkg. content pcs.	Weight per pkg. kg
		t _{fix,min} mm	t _{fix,max} mm		d ₀ mm	h ₁ ≥ mm						
BZ3 dyn M10x100/5-10	18210001	5	10	60	10	71	81	100	M10x26	25	2,07	
BZ3 dyn M10x120/10-30	18220001	10	30	60	10	71	101	120	M10x31	25	2,33	
BZ3 dyn M10x140/30-50	18230001	30	50	60	10	71	121	140	M10x51	25	2,64	
BZ3 dyn M12x115/6-10	18310001	6	10	70	12	83	93	115	M12x31	25	3,17	
BZ3 dyn M12x135/10-30	18320001	10	30	70	12	83	113	135	M12x35	25	3,73	
BZ3 dyn M12x155/30-50	18330001	30	50	70	12	83	133	155	M12x55	25	4,01	
BZ3 dyn M16x155/8-25	18520001	8	25	85	16	102	127	155	M16x37	10	2,77	
BZ3 dyn M16x180/25-50	18530001	25	50	85	16	102	152	180	M16x54	10	3,17	

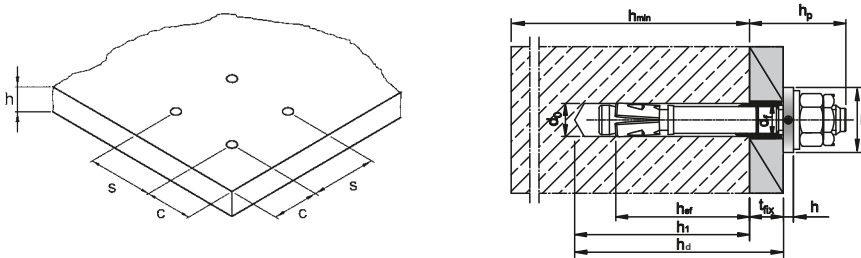


Extract from Permissible Service Conditions of European Technical Assessment ETA-20/0117 for use under fatigue cyclic loading in cracked and uncracked concrete

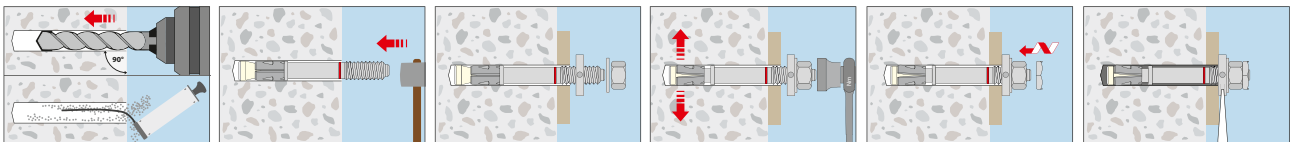
Approved loads according to EN 1992-4 for single anchors without the influence of spacing and edge distances. The total safety factor (γ_M und γ_p) is included.

Loads and performance data	Wedge Anchor BZ3 dynamic			M10	M12	M16
Single fixing						
cracked and uncracked concrete						
Approved loads, tension	\geq C20/25	appr. N	[kN]	3,4	4,6	7,2
Approved loads, shear	\geq C20/25	appr. V	[kN]	1,9	3,0	5,6
Multiple use (per anchor)						
cracked and uncracked concrete						
Approved loads, tension	\geq C20/25	appr. N	[kN]	1,7	2,3	3,6
Approved loads, shear	\geq C20/25	appr. V	[kN]	0,9	1,5	2,8
Spacing and edge distance						
Effective anchorage depth	h_{ef}	[mm]		60	70	85
Minimum thickness of concrete slab	h_{min}	[mm]		90	105	127,5
Minimum spacing	s_{min}	[mm]		40	50	65
Minimum edge distance	c_{min}	[mm]		45	55	65
Installation parameters						
Drill hole diameter	d_o	[mm]		10	12	16
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]		12	14	18
Drill hole depth ¹⁾	$h_1 \geq$	[mm]		71	83	102
Installation torque	T_{inst}	[Nm]		40	60	110
Width across nut	SW	[mm]		17	19	24
Outer diameter x height of filling washer	D x h	[mm]		26x5	28x5	34x5
Overstand	h_p	[mm]		21,5 + t_{fix}	25,5 + t_{fix}	29,5 + t_{fix}

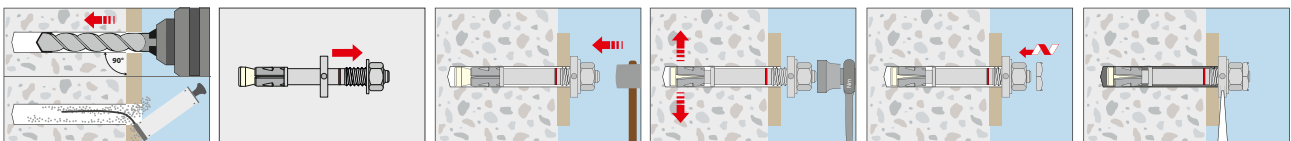
¹⁾If the maximum fixture thickness t_{fix} is not fully utilized, the drill hole depth can be increased by the corresponding amount and the anchor set deeper ($h_1 = h_d - t_{fix}$)

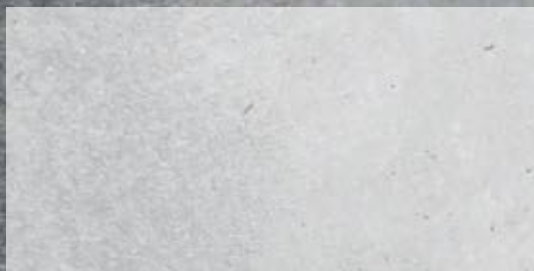


Pre-setting installation



Through-setting installation





... a solid connection

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