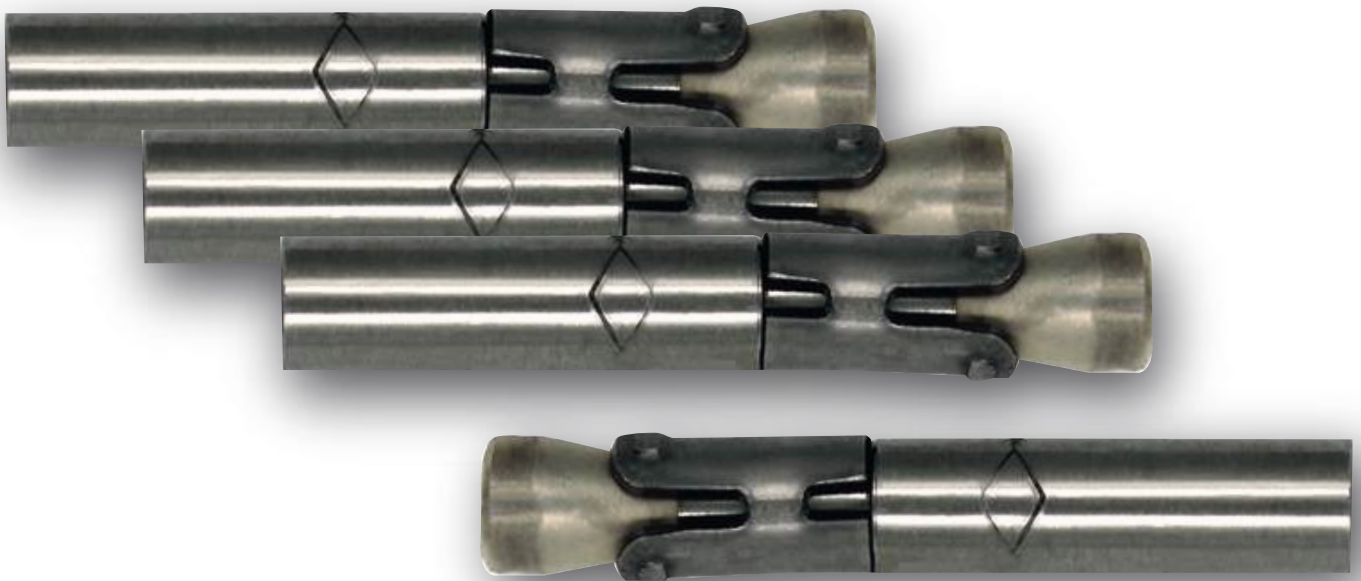


CFBZ-IG A4

Wedge Anchor



The ground-breaking, internal-thread Wedge Anchor designed for cracked and uncracked concrete.

PRODUCT DESCRIPTION

Designed to carry heavy loads, especially in cracked concrete, the Certifix CFBZ-IG A4 fastening system is the first ETA approved wedge anchor with internal thread.

Breaking new ground in both design and application, the versatile CFBZ-IG combines the advantages of a mechanical anchor with easy installation and the major benefits of an internal thread.

Highly cost-effective, it now makes it possible – for the first time – to fasten everything from stadium seats to stair railings using a countersunk head screw. And because the system is also approved for use with hexagon head screws and standard threading rods, a wider than usual range of applications is possible.

PRODUCT FEATURES

- Internal thread for maximum versatility and performance
- Designed to be highly effective even in cracked concrete (from C20/25 to C50/60)
- Carries significantly higher loads compared to a drop-in anchor from 2,0kN to 18,8 kN)
- Ideal for railings, seating in sports arenas, facade substructures, suspended ceilings, ladders, doors, sprinkler systems and pipe hangers.
- With pre-installation, the anchor is flush with the concrete surface, also making it ideal for temporary fastenings.

DESCRIPTION

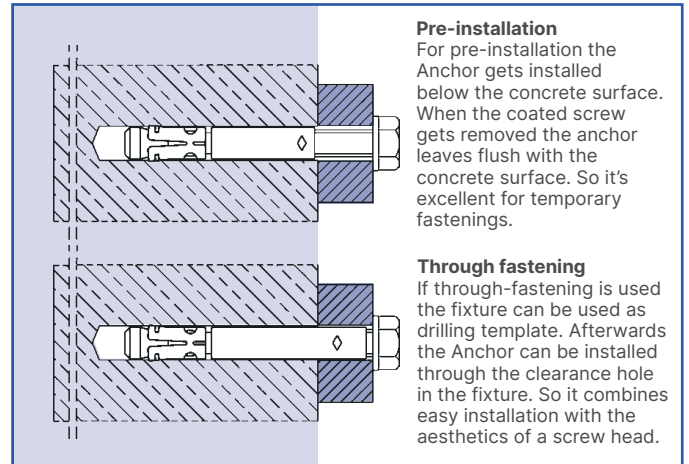
The fastening system Certifix CFBZ-IG A4 is the first ETA approved wedge anchor for cracked concrete with internal thread. It combines the benefits of a mechanical anchor with an easy installation and the flexibility of an internal thread. For the first time it is possible to fasten balcony and stair railings or stadium seats using a countersunk head screw at favourable costs. Since this anchor system is also approved for use with hexagon head screws and standard threaded rods a wide range of applications is possible. Compared to a drop in anchor the fastening system Certifix CFBZ-IG A4 can carry significant higher loads, even in cracked concrete. The versatility of the Certifix Fastening System CFBZ-IG breaks new ground in design and application.

Range of loading	2,0 kN - 18,8 kN
Range of concrete quality	C20/25 - C50/60



APPLICATIONS

Medium to heavy duty fastenings in cracked and uncracked concrete: Railings, chairs in sports arenas, facade substructures, suspended ceilings, ladders, doors, sprinkler systems, pipe hangers and all kinds of temporary fastenings.



Examples of Installation Certifix CFBZ-IG-A4



PRE-INSTALLATION WEDGE ANCHOR CFBZ-IG A4¹⁾



- Stainless steel A4/316; Pre-Installation
- Approved for cracked and uncracked concrete

Description	Ref. No.	Drill hole Ø x depth mm	Anchor length mm	Thread Ø x length mm	Pkg. content. pcs.	Weight per pkg. kg
CFBZ-IG M 6-0 A4	CFBZIG4-6/0	8 x 60	50	M6x20	100	1,42
CFBZ-IG M 8-0 A4	CFBZIG4-8/0	10 x 75	62	M8x22	50	1,31
CFBZ-IG M 10-0 A4	CFBZIG4-10/0	12 x 90	70	M10x23	25	1,08
CFBZ-IG M 12-0 A4	CFBZIG4-12/0	16 x 105	86	M12x27	20	2,03

COATED SCREW DIN 933 WITH WASHER DIN EN ISO 7089 (DIN 125)¹⁾



Description	Ref. No.	Fixture thickn. t _{fix} mm	Pkg. content pcs.	Weight per pkg. kg
CFS-IG 6x25 A4	CFSIG4-6*25	4-12	100	0,80
CFS-IG 8x25 A4	CFSIG4-8*25	2-8	50	0,79
CFS-IG 10x40 A4	CFSIG4-10*40	15-19	25	0,90
CFS-IG 12x45 A4	CFSIG4-12*45	16-21	20	1,13

COATED HEX NUT DIN 933 WITH WASHER DIN EN ISO 7089 (DIN 125)¹⁾



Description	Ref. No.	Fixture thickn. t _{fix} mm	Pkg. content pcs.	Weight per pkg. kg
CFMU-IG 6 A4	CFMUIG4-6	4-12	100	0,32
CFMU-IG 8 A4	CFMUIG4-8	2-8	50	0,35
CFMU-IG 10 A4	CFMUIG4-10	15-19	25	0,36
CFMU-IG 12 A4	CFMUIG4-12	16-21	20	0,45

¹⁾Screws or hex nuts and washers to be ordered separately.



COATED COUNTERSUNK SCREW ISO 10642 WITH COUNTERSUNK WASHER¹⁾



Description	Ref. No.	Fixture thickn. t _{fix} mm	Pkg. content pcs.	Weight per pkg. kg
CFSK-IG 6x25 A4 ²⁾	CFSKIG4-6*25	6-14	100	0,53
CFSK-IG 8x30 A4 ²⁾	CFSKIG4-8*30	9-15	50	0,59
CFSK-IG 10x30 A4	CFSKIG4-10*30	8-11	25	0,48
CFSK-IG 12x35 A4	CFSKIG4-12*35	9-14	20	0,64

¹⁾ Screws or hex nuts and washers to be ordered separately.

²⁾ Screw similar to ISO 10642 with Torx®-drive.

Anchor system in high corrosion resistant steel grade 1.4529 on demand. Other screw lengths on demand.

SETTING TOOL CFBZ-IG FOR PRE-INSTALLATION



Description	Ref. No.	Pkg. content pcs.	Weight per pkg. kg
CFBZ-IGS M 6V	CFBZIGS-6	1	0,43
CFBZ-IGS M 8V	CFBZIGS-8	1	0,44
CFBZ-IGS M 10V	CFBZIGS-10	1	0,46
CFBZ-IGS M 12V	CFBZIGS-12	1	0,56

THROUGH FASTENING WEDGE ANCHOR CFBZ-IG A4¹⁾



- Stainless steel A4/316; Through Fastening
- Approved for cracked and uncracked concrete

Description	Ref. No.	Drill hole Ø x depth mm	Drill hole depth Through fixture mm	Fixture thickness t _{fix} mm		Anchor length l mm	Thread Ø x length mm	Pkg. content pcs	Weight per pkg. kg
				Typ S-IG	Typ SK-IG				
CFBZ-IG M 6-10 A4	CFBZIG4-6/10	8 x 60	74	10	14	60	M6 x 20	100	1,80
CFBZ-IG M 6-20 A4	CFBZIG4-6/20	8 x 60	84	20	24	70	M6 x 20	100	2,20
CFBZ-IG M 6-30 A4	CFBZIG4-6/30	8 x 60	94	30	34	80	M6 x 20	100	2,60
CFBZ-IG M 8-10 A4	CFBZIG4-8/10	10 x 75	90	10	15	72	M8 x 22	50	1,65
CFBZ-IG M 8-20 A4	CFBZIG4-8/20	10 x 75	100	20	25	82	M8 x 22	50	1,95
CFBZ-IG M 8-30 A4	CFBZIG4-8/30	10 x 75	110	30	35	92	M8 x 22	50	2,25
CFBZ-IG M 10-10 A4	CFBZIG4-10/10	12 x 90	106	10	16	80	M10 x 23	25	1,32
CFBZ-IG M 10-20 A4	CFBZIG4-10/20	12 x 90	116	20	26	90	M10 x 23	25	1,48
CFBZ-IG M 10-30 A4	CFBZIG4-10/30	12 x 90	126	30	36	100	M10 x 23	25	1,76
CFBZ-IG M 12-10 A4	CFBZIG4-12/10	16 x 105	122	10	17	96	M12 x 27	20	2,34
CFBZ-IG M 12-20 A4	CFBZIG4-12/20	16 x 105	132	20	27	106	M12 x 27	20	2,66
CFBZ-IG M 12-30 A4	CFBZIG4-12/30	16 x 105	142	30	37	116	M12 x 27	20	2,97

¹⁾ Screws to be ordered separately. Anchor system in high corrosion resistant steel grade 1.4529 on demand.

COATED SCREW DIN 933 WITH WASHER DIN EN ISO 7089 (DIN 125)¹⁾



Description	Ref. No.	Pkg. content pcs.	Weight per pkg. kg
CFS-IG 6x16 A4	CFSIG4-6*16	100	0,64
CFS-IG 8x18 A4	CFSIG4-8*18	50	0,68
CFS-IG 10x20 A4	CFSIG4-10*20	25	0,64
CFS-IG 12x25 A4	CFSIG4-12*25	20	0,67

¹⁾ Screws to be ordered separately. Anchor system in high corrosion resistant steel grade 1.4529 on demand.

COATED COUNTERSUNK SCREW ISO 10642 WITH COUNTERSUNK WASHER¹⁾



Description	Ref. No.	Pkg. content pcs.	Weight per pkg. kg
CFSK-IG 6x16 A4 ²⁾	CFSKIG4-6*16	100	0,64
CFSK-IG 8x20 A4 ²⁾	CFSKIG4-8*20	50	0,60
CFSK-IG 10x25 A4	CFSKIG4-10*25	25	0,62
CFSK-IG 12x30 A4	CFSKIG4-12*30	20	0,80

¹⁾ Screws or hex nuts and washers to be ordered separately.

²⁾ Screw similar to ISO 10642 with Torx®-drive.

Anchor system in high corrosion resistant steel grade 1.4529 on demand. Other screw lengths on demand.

SETTING TOOL CFBZ-IG FOR THROUGH FASTENING¹⁾



Description	Ref. No.	Weight per pkg. kg
CFBZ-IGS M 6D	CFBZIGS-6	0,32
CFBZ-IGS M 8D	CFBZIGS-8	0,33
CFBZ-IGS M 10D	CFBZIGS-10	0,33
CFBZ-IGS M 12D	CFBZIGS-12	0,35



EXTRACT FROM PERMISSIBLE SERVICE CONDITIONS OF EUROPEAN TECHNICAL ASSESSMENT FOR USE IN CRACKED AND UNCRACKED CONCRETE (OPTION 1)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.

Loads and performance data	Wedge Anchor CFBZ-IG A4			M 6	M 8	M 10	M 12
cracked concrete							
Mean ultimate loads, tension	C25/30	Num	[kN]	14,1	19,8	28,3	45,9
Mean ultimate loads, shear	C25/30	Vum	[kN]	12,0	12,2	14,9	45,4
Approved loads, tension	C20/25	appr. N	[kN]	2,0	3,6	4,8	7,9
	C25/30	appr. N	[kN]	2,2	4,0	5,3	8,9
	C30/37	appr. N	[kN]	2,4	4,4	5,8	9,7
	C40/50	appr. N	[kN]	2,8	5,1	6,7	11,2
	C50/60	appr. N	[kN]	3,1	5,6	7,5	12,5
uncracked concrete							
Approved loads, tension	C20/25	appr. N	[kN]	4,8	6,3	7,9	11,9
	C25/30	appr. N	[kN]	5,3	7,1	8,9	13,3
	C30/37	appr. N	[kN]	5,4	7,8	9,7	14,6
	C40/50	appr. N	[kN]	5,4	9,0	11,2	16,8
	C50/60	appr. N	[kN]	5,4	9,8	12,5	18,8
cracked / uncracked concrete							
Approved loads, shear (Pre-Installation)	\geq C20/25	appr. V	[kN]	3,3	5,3	6,1	13,5
Approved loads, shear (Through Fastening)	\geq C20/25	appr. V	[kN]	4,2	4,3	5,5	16,9
Approved bending moments (Pre-Installation)		appr. M	[Nm]	4,9	12,0	23,9	41,9
Approved bending moments (Through Fastening)		appr. M	[Nm]	16,1	25,3	39,9	109,3
Spacing and edge distance							
Effective anchorage depth		hef	[mm]	45	58	65	80
Characteristic spacing		Scr, N	[mm]	135	174	195	240
Characteristic edge distance		Ccr, N	[mm]	67,5	87	97,5	120
cracked concrete							
Minimum spacing / for edge distance c		Smin / C	[mm]	50 / 60	60 / 80	70 / 100	80 / 120
Minimum edge distance / for spacing s		Cmin / S	[mm]	50 / 75	60 / 100	70 / 100	80 / 120
uncracked concrete							
Minimum spacing / for edge distance c		Smin / C	[mm]	50 / 80	60 / 100	65 / 120	80 / 160
Minimum edge distance / for spacing s		Cmin / S	[mm]	50 / 115	60 / 155	70 / 170	100 / 210
Minimum thickness		hmin	[mm]	100	120	130	160
Installation parameters							
Drill hole diameter		do	[mm]	8	10	12	16
Diameter of clearance hole in the fixture - Pre-Installation		df	[mm]	7	9	12	14
Diameter of clearance hole in the fixture - Through Fastening		df	[mm]	9	12	14	18
Depth of drill hole		h1	[mm]	60	75	90	105
Installation torque	Screw DIN 933	Tinst	[Nm]	15	40	50	100
	Countersunk screw	Tinst	[Nm]	12	25	45	60
	Threaded rod	Tinst	[Nm]	8	25	40	80
Width across nut	Screw DIN 933	SW	[mm]	10	13	17	19
Internal hexagon size	Countersunk screw	SW	[mm]	-	-	6	8
Torx® size	Countersunk screw			T30	T40	-	-
Min. thickness of fixture		tfix \geq	[mm]	1 / 5 ¹⁾	1 / 7 ¹⁾	1 / 8 ¹⁾	1 / 9 ¹⁾
Min. thickness of fixture	Countersunk screw	tfix \geq	[mm]	5 / 9 ¹⁾	7 / 12 ¹⁾	8 / 14 ¹⁾	9 / 16 ¹⁾

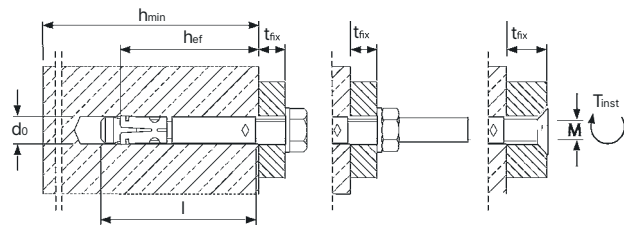
¹⁾Pre-Installation / Through Installation.



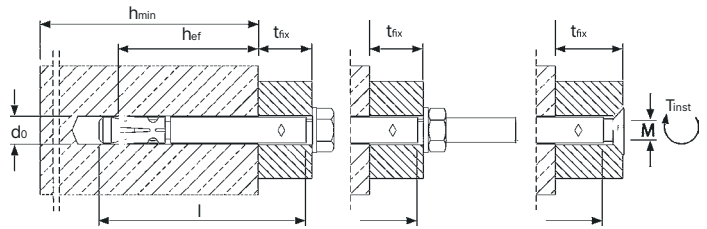


INSTALLATION

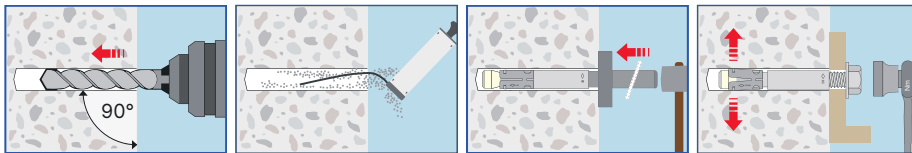
PRE-INSTALLATION



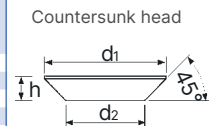
THROUGH FASTENING



INSTALLATION (PRE-INSTALLATION)



Dimension countersunk washer [mm]			
	d1	d2	h
CFSK M 6	16,5	9,5	3,9
CFSK M 8	20,5	11,5	5,0
CFSK M 10	24,5	14,5	5,7
CFSK M 12	29,5	17,5	6,7



INSTALLATION (THROUGH FASTENING)

