

# Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment	UKTA-0836-22/6207 of 21/10/2022
Technical Assessment Body issuing the UK Technical Assessment:	British Board of Agrément
Trade name of the construction product:	Wedge Anchor B / B fvz / B sh / B A2 / B A4 / B HCR
Product family to which the construction product belongs:	Mechanical fasteners for use in concrete
Manufacturer:	MKT-Metall-Kunststoff-Technik GmbH & Co. KG Auf dem Immel 2 67685 Weilerbach Germany
Manufacturing plant(s):	MKT-Metall-Kunststoff-Technik GmbH & Co. KG Auf dem Immel 2 67685 Weilerbach Germany
This UK Technical Assessment contains:	16 pages including 3 annexes which form an integral part of this assessment
This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 on the basis of:	UKAD 330232-00-0601: Mechanical fasteners for use in concrete

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#### 1 Technical description of the product

The Wedge Anchor B / B fvz / B sh / B A2 / B A4 / B HCR is a fastener manufactured of zinc coated steel or stainless steel which is placed into a drilled hole and anchored by application of the installation torque.

The product description is given in Annex A.

# 2 Specification of the intended use(s) in accordance with the applicable UK Assessment Document (hereinafter UKAD)

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The verifications and assessment methods on which this UK Technical Assessment is based lead to the assumption of a working life of the anchor of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

#### 3 Performance of the product and references to the methods used for its assessment

#### 3.1 Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance
Characteristic resistance to tension load (static and quasi static loading) Method A	See Annex B4, C1 and C2
Characteristic resistance to shear load (static and quasi static loading)	See Annex C3
Displacements	See Annex C4
Characteristic resistance and displacements for seismic performance categories C1 and C2	No performance assessed
Durability	See Annex B1

#### 3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Resistance to fire	No performance assessed

#### 3.3 Health, hygiene and the environment (BWR 3)

Not relevant

#### 3.4 Safety and accessibility in use (BWR 4)

Not relevant

### 3.5 Protection against noise (BWR 5)

Not relevant

#### 3.6 Energy economy and heat retention (BWR 6)

Not relevant

### 3.7 Sustainable use of natural resources (BWR 7)

No performance assessed

# 4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied

According to UKAD No. 330232-00-0601 and Annex V of the Construction Products Regulation (Regulation (EU) 305/2011) as brought into UK law and amended, the system of assessment and verification of constancy of performance (AVCP) 1 applies.

# 5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable UKAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the British Board of Agrément and made available to the UK Approved Bodies involved in the conformity attestation process.

#### 5.1 UKCA marking for the product/ system must contain the following information:

- Identification number of the Approved Body
- Name/address of the manufacturer of the product/ system
- Marking with intention of clarification of intended use
- Date of marking
- Number of certificate of constancy of performance
- UKTA number.

On behalf of the British Board of Agrément

Date of Issue: 21 October 2022

Hardy Giesler Chief Executive Officer

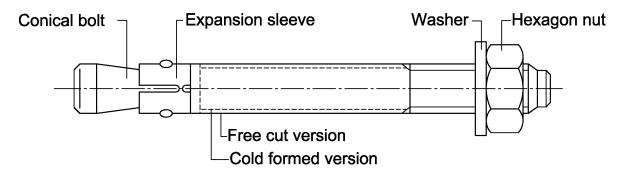


### British Board of Agrément,

1<sup>st</sup> Floor Building 3, Hatters Lane, Croxley Park Watford WD18 8YG

# ANNEX A1 Product description / Marking and dimensions

### Wedge Anchor B / B fvz / B sh / B A2 / B A4 / B HCR



**Table A1: Dimensions** 

Anchoroine		Wrongh oize		
Anchor size	Embedment depth hef,1	Embedment depth hef,2	Embedment depth hef,3	Wrench size
M6	t <sub>fix hef.1</sub> + 47.4	t <sub>fix.hef.2</sub> + 57.4	t <sub>fix.hef.3</sub> + 77.4	10
M8	$t_{fix hef.1} + 57.4$	$t_{fix.hef.2} + 66.4$	t <sub>fix.hef.3</sub> + 92.4	13
M10	$t_{fix hef.1} + 68.0$	$t_{fix.hef.2} + 74.0$	t <sub>fix.hef.3</sub> + 106.0	17
M12	$t_{\text{fix hef.}1} + 82.3$	t <sub>fix.hef.2</sub> + 97.3	t <sub>fix.hef.3</sub> + 132.3	19
M16	$t_{\text{fix hef.1}} + 103.0$ $(t_{\text{fix hef.1}} + 101.8)^{1)}$	$t_{\text{fix.hef.2}} + 121.0$ $(t_{\text{fix.hef.2}} + 117.8)^{1)}$	$t_{\text{fix.hef.3}} + 159.0$ $(t_{\text{fix.hef.3}} + 157.8)^{1)}$	24
M20	$t_{fix hef.1} + 120.7$	t <sub>fix.hef.2</sub> + 142.7	t <sub>fix.hef.3</sub> + 157.7	30

<sup>1)</sup> Anchor version B A2 / B A4 / B HCR

**Marking**: e.g.: ○ 15/21 -

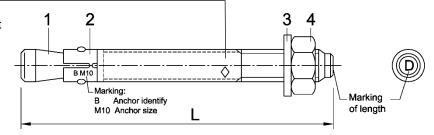
Identifying mark of manufacturing plant

15 maximum thickness of fixture for h<sub>ef,2</sub>

21 maximum thickness of fixture for  $h_{\text{ef},1}$ 

additional marking:A2 stainless steelA4 stainless steel

HCR high corrosion resistant steel



Marking of length	Α	В	С	D	Е	F	G	Н	-	J	K	L	M
Length of anchor min ≥	38.1	50.8	63.5	76.2	88.9	101.6	114.3	127.0	139.7	152.4	165.1	177.8	190.5
Length of anchor max <	50.8	63.5	76.2	88.9	101.6	114.3	127.0	139.7	152.4	165.1	177.8	190.5	203.2

Marking of length	N	0	Р	Q	R	S	T	U	٧	W	X	Υ	Z
Length of anchor min ≥	203.2	215.9	228.6	241.3	254.0	279.4	304.8	330.2	355.6	381.0	406.4	431.8	457.2
Length of anchor max <	215.9	228.6	241.3	254.0	279.4	304.8	330.2	355.6	381.0	406.4	431.8	457.2	483.0

Dimensions in mm

### ANNEX A2 Product description / Materials

**Table A2: Materials** 

Part	Designation	Material
Zinc p	lated steel	
В	electroplated	≥ 5 µm according to EN ISO 4042:1999
B fvz	hot-dip galvanized	≥ 50 µm (average coating thickness according to EN ISO 10684:2004+AC:2009 or EN ISO 1461:2009)
B sh	sherardized	≥ 45 µm according to EN ISO 17668:2016
1	Conical bolt	Cold formed or machined steel
2	Expansion sleeve	Stainless steel
3	Washer	Steel, zinc plated
4	Hexagon nut	Steel, zinc plated
Stainle	ess steel	
<b>B A2</b> s	tainless steel CRC II 1)	
1	Conical bolt	Stainless steel
2	Expansion sleeve	Stainless steel
3	Washer	Stainless steel
4	Hexagon nut	Stainless steel
<b>B A4</b> s	tainless steel CRC III	1)
1	Conical bolt	Stainless steel
2	Expansion sleeve	Stainless steel
3	Washer	Stainless steel
4	Hexagon nut	Stainless steel
B HCR	R High corrosion resista	ant steel CRC V 1)
1	Conical bolt	High corrosion resistant steel
2	Expansion sleeve	Stainless steel
3	Washer	High corrosion resistant steel
4	Hexagon nut	High corrosion resistant steel

<sup>1)</sup> Corrosion resistance class according to EN 1993-1-4:2015, Annex A, Table A.3

ANNEX B1 Intended Use / Specifications of intended use

B / B fvz / B s	sh / B A2 / B A4 / B HCR	М6	M8	M10	M12	M16	M20			
	B (electroplated)	✓	✓	✓	✓	✓	✓			
zinc plated steel	<b>B fvz</b> (hot-dip galvanized)	ı	<b>✓</b>	✓	<b>✓</b>	✓	<b>✓</b>			
	B sh (sherardized)	✓	✓	✓	✓	✓	✓			
	B A2	✓	✓	✓	✓	✓	✓			
stainless steel	B A4	✓	✓	✓	✓	✓	✓			
otoo.	B HCR	✓	✓	✓	✓	✓	✓			
	static or quasi-static action	✓								
all versions	uncracked concrete	✓								

#### Base materials:

- Reinforced or unreinforced normal weight concrete without fibres according to EN 206:2013 + A1:2016
- Strength classes C20/25 to C50/60 according to EN 206:2013 + A1:2016

#### Use conditions (Environmental conditions):

- Structures subject to dry internal conditions (all materials)
- For all other conditions:

Anchor version	Use according to EN 1993-1-4:2015 corresponding to the corrosion resistance class CRC according to Annex A, Table A2
B A2	CRC II
B A4	CRC III
B HCR	CRC V

#### Design:

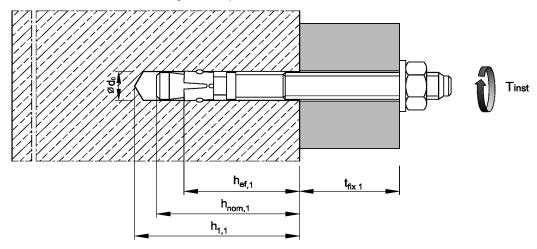
- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchor is indicated on the design drawings (e.g. position of the anchor relative to reinforcement or to supports, etc.).
- Anchorages are designed according to EN 1992-4:2018 or TR 055:2018.

#### Installation:

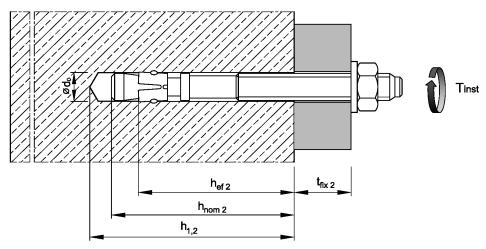
 Hole drilling by hammer drill bit or vacuum drill bit. Use of the fastener only as supplied by the manufacturer without exchanging the components of the fastener

# ANNEX B2 Intended Use / Installation parameters

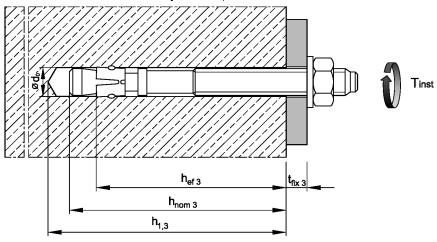
### Effective embedment depths hef,1



### Effective embedment depths h<sub>ef,2</sub>



### Effective embedment depths hef,3



**ANNEX B3** 

Intended Use / Installation Data Table B1 : Installation parameters

Ancho	Anchor size			М6	М8	M10	M12	M16	M20
Nomin	al drill hole diameter	d <sub>0</sub> =	[mm]	6	8	10	12	16	20
Cutting diameter of drill bit		d <sub>cut</sub> ≤	[mm]	6.40	8.45	10.45	12.5	16.5	20.55
_	В	T <sub>inst</sub> =	[Nm]	8	15	30	50	100	200
stallatio torque	B fvz	T <sub>inst</sub> =	[Nm]	-	15	30	40	90	120
Installation torque	B sh	T <sub>inst</sub> =	[Nm]	5	15	30	40	90	120
	B A2 / B A4 / B HCR	T <sub>inst</sub> =	[Nm]	6	15	25	50	100	160
Diame in the f	ter of clearance hole ixture	$d_f \! \leq \!$	[mm]	7	9	12	14	18	22
Embed	dment depth h <sub>ef,1</sub>	-						<del></del>	
Effectiv	ve embedment depth	$h_{\text{ef},1} \geq$	[mm]	30	35	42	50	64	78
Depth	of drill hole	$h_{1,1}\geq$	[mm]	45	55	65	75	95	110
Embed	lment depth	$h_{\text{nom},1} \geq$	[mm]	39	47	56	67	84	99
Embed	dment depth h <sub>ef,2</sub>								
Effectiv	ve embedment depth	h <sub>ef,2</sub> ≥	[mm]	40	44	48	65	82 (80)1)	100
Depth	of drill hole	h <sub>1,2</sub> ≥	[mm]	55	65	70	90	110	130
Embed	lment depth	$h_{\text{nom},2} \geq$	[mm]	49	56	62	82	102	121
Embed	dment depth h <sub>ef,3</sub>								
Effectiv	ve embedment depth	h <sub>ef,3</sub> ≥	[mm]	60	70	80	100	120	115
Depth	of drill hole	h <sub>1,3</sub> ≥	[mm]	75	91	102	125	148	145
Embed	lment depth	h <sub>nom,3</sub> ≥	[mm]	69	82	94	117	140	136

<sup>1)</sup> Anchor version B A2 / B A4 / B HCR

# ANNEX B4 Intended Use / Minimum spacing and edge distances

Table B2: Minimum spacings and edge distances, zinc plated steel 1)

Anchor size			M6	M8	M10	M12	M16	M20
Embedment depth h <sub>ef,1</sub>			•	•	•	•		-
Minimum member thickness	h <sub>min</sub>	[mm]	80	80	100	100	130	160
Minimum spacing	S <sub>min</sub>	[mm]	35	40	55	100	100	140
Minimum edge distance	Cmin	[mm]	40	45	65	100	100	140
Embedment depth h <sub>ef,2</sub>	-		•	•	•	•		•
Minimum member thickness	h <sub>min</sub>	[mm]	100	100	100	130	170	200
Minimum spacing	S <sub>min</sub>	[mm]	35	40	55	75	90	105
Minimum edge distance	C <sub>min</sub>	[mm]	40	45	65	90	105	125
Embedment depth h <sub>ef,3</sub>								
Minimum member thickness	h <sub>min</sub>	[mm]	120	126	132	165	208	215
Minimum spacing	Smin	[mm]	35	40	55	75	90	105
Minimum edge distance	C <sub>min</sub>	[mm]	40	45	65	90	105	125

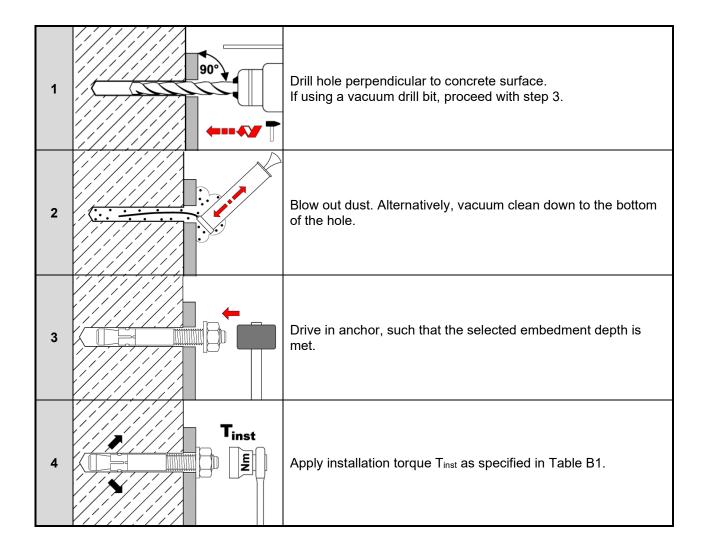
<sup>1)</sup> Anchor version B fvz: M8-M20

Table B3 : Minimum spacings and edge distances, stainless steel

Anchor size			М6	M8	M10	M12	M16	M20
Embedment depth h <sub>ef,1</sub>								
Minimum member thickness	h <sub>min</sub>	[mm]	80	80	100	100	130	160
Minimum spacing	Smin	[mm]	35	60	55	100	110	140
Minimum edge distance	C <sub>min</sub>	[mm]	40	60	65	100	110	140
Embedment depth h <sub>ef,2</sub>								
Minimum member thickness	$h_{\text{min}} \\$	[mm]	100	100	100	130	160	200
Minimum	Smin	[mm]	35	35	45	60	80	100
Minimum spacing	for c ≥	[mm]	40	65	70	100	120	150
National and a distance	Cmin	[mm]	35	45	55	70	80	100
Minimum edge distance	for s ≥	[mm]	60	110	80	100	140	180
Embedment depth hef,3								
Minimum member thickness	$h_{\text{min}}$	[mm]	120	126	132	165	200	215
N. discission and a single	Smin	[mm]	35	35	45	60	80	100
Minimum spacing	for c ≥	[mm]	40	65	70	100	120	150
Minimum adap diatama	Cmin	[mm]	35	45	55	70	80	100
Minimum edge distance	for s ≥	[mm]	60	110	80	100	140	180

Intermediate values by linear interpolation.

# ANNEX B5 Intended Use / Installation instructions



# ANNEX C1 Performance / Characteristics values for tensions loads for B / B fvz / B sh

Table C1: Characteristic values for tension loads, zinc plated steel 1)

Anchor size				М6	М8	M10	M12	M16	M20				
Installation factor	tion factor $\gamma_{inst}$					1.0							
Steel failure				=									
Characteristic resistance		$N_{Rk,s}$	[kN]	8.7	15.3	26	35	65	107				
Partial factor <sup>4)</sup> γ <sub>Ms</sub>			[-]		1.	.5		1	.6				
Pull-out													
Characteristic resistance	for h∈	ef,1 NRk,p	[kN]	6.5 <sup>2)</sup>	10.2 2)	13.4	17.4	25.2	33.9				
in uncracked concrete	for h∈	ef,2 NRk,p	[kN]	10	13	16.4	25.8	36.5	49.2				
C20/25	for h∈	ef,3 N <sub>Rk,p</sub>	[kN]	10	13	16.4	26	40	55				
Increasing factor $N_{Rk,p} = \psi_C \cdot N_{Rk,p} (C20/25)$	31(0			$\left(\frac{f_{ck}}{20}\right)^{0,5}$ $\left(\frac{f_{ck}}{20}\right)^{0,33}$ $\left(\frac{f_{ck}}{2}\right)^{0,33}$					$\left(\frac{f_{ck}}{20}\right)^{0.5}$				
Splitting													
Characteristic resistance N <sup>0</sup> <sub>Rk,sp</sub>				min [ N <sub>Rk,p</sub> ; N <sup>0</sup> <sub>Rk,c</sub> <sup>3)</sup> ]									
Embedment depth h <sub>ef,1</sub>													
Spacing		S <sub>cr,sp</sub>	[mm]	180	210	230	240	320	400				
Edge distance		C <sub>cr,sp</sub>	[mm]	90	105	115	120	160	200				
Embedment depth h <sub>ef,2</sub>													
Spacing		S <sub>cr,sp</sub>	[mm]	160	220	240	330	410	500				
Edge distance		<b>C</b> cr,sp	[mm]	80	110	120	165	205	250				
Embedment depth h <sub>ef,3</sub>													
Spacing		S <sub>cr,sp</sub>	[mm]	160	220	240	330	410	520				
Edge distance		C <sub>cr,sp</sub>	[mm]	80	110	120	165	205	260				
Concrete cone failure													
		for h <sub>ef,1</sub>	[mm]	30 <sup>2)</sup>	35 <sup>2)</sup>	42	50	64	78				
Effective embedment depth		for h <sub>ef,2</sub>	[mm]	40	44	48	65	82	100				
		for h <sub>ef,3</sub>	[mm]	60	70	80	100	120	115				
Spacing S <sub>cr,N</sub>				3 h <sub>ef (1,2,3)</sub>									
Edge distance c <sub>cr,N</sub>				1.5 h <sub>ef (1,2,3)</sub>									
Factor uncracked co	ncrete	k <sub>ucr,N</sub>	[-]			1	1.0						
cracked co	ncrete	k <sub>cr,N</sub>	[-]		No	performa	nce asse	essed					

<sup>1)</sup> Anchor version B fvz: M8-M20

 $<sup>^{2)}</sup>$  Restricted to the use of structural components with  $h_{\text{ef}}$  < 40mm which are statically indeterminate and subject to internal exposure conditions only

 $<sup>^{3)}\,</sup>N^0_{\text{Rk,c}}$  according to EN 1992-4:2018

<sup>&</sup>lt;sup>4)</sup> In absence of other national regulations

# ANNEX C2 Performance / Characteristics values for tensions loads for B A2 / B A4 / B HCR

Table C2: Characteristic values for tension loads, stainless steel

Anchor size					M6	M8	M10	M12	M16	M20		
Installation factor $\gamma_{inst}$					1.0							
Ste	eel failure	[-]	_									
Ch	aracteristic resistance		N <sub>Rk,s</sub>	[kN]	10	18	30	44	88	134		
Partial factor <sup>3)</sup> γ <sub>Ms</sub>				[-]			1.50			1.68		
Pull-out												
Ch	aracteristic resistance	for h <sub>ef,1</sub>	$N_{Rk,p}$	[kN]	6.5 <sup>1)</sup>	9 1)	12	17.4	25.2	33.9		
	uncracked concrete	for h <sub>ef,2</sub>	$N_{Rk,p}$	[kN]	8	15	16.4	25	35.2	49.2		
C2	0/25	for h <sub>ef,3</sub>	$N_{Rk,p}$	[kN]	8	15	16.4	25	42	60		
	reasing factor <sub>κ,p</sub> = ψc • N <sub>Rk,p</sub> (C20/25)		ψc	[-]	$\left(\frac{f_{ck}}{20}\right)^{0.5}$							
Sp	litting											
Ch	aracteristic resistance		$N^0_{Rk,sp}$	[kN]	$min [N_{Rk,p}; N^{0}_{Rk,c}^{2}]$							
Em	bedment depth h <sub>ef,1</sub>											
_	acing		Scr,sp	[mm]	180	210	230	300	320	400		
Ed	ge distance		C <sub>cr,sp</sub>	[mm]	90	105	115	150	160	200		
	bedment depth h <sub>ef,2</sub>											
The higher one of the decisive resistances of C					and Case 2 is applicable							
	Characteristic resistance	•	$N^0_{\text{Rk},\text{sp}}$	[kN]	6	9	12	20	30	40		
_	Spacing		Scr,sp	[mm]	3 h <sub>ef</sub>							
Case	Edge distance		C <sub>cr,sp</sub>	[mm]	1,5 h <sub>ef</sub>							
Ö	Increasing factor $N^{0}_{Rk,sp} = \psi_{C} \cdot N^{0}_{Rk,sp} (C2)$	0/25)	ψc	[-]	$\left(\frac{f_{ck}}{20}\right)^{0.5}$							
se 2	Spacing		S <sub>cr,sp</sub>	[mm]	160	220	240	340	410	560		
Cas	Edge distance		C <sub>cr,sp</sub>	[mm]	80	110	120	170	205	280		
Em	nbedment depth h <sub>ef,3</sub>											
Sp	acing		Scr,sp	[mm]	160	220	240	340	410	620		
Ed	ge distance		C <sub>cr,sp</sub>	[mm]	80	110	120	170	205	310		
Со	ncrete cone failure											
Ett	ective embedment	fc	or h <sub>ef,1</sub> ≥	[mm]	30 <sup>1)</sup>	35 <sup>1)</sup>	42	50	64	78		
de			or h <sub>ef,2</sub> ≥	[mm]	40	44	48	65	80	100		
		fc	or h <sub>ef,3</sub> ≥	[mm]	60	70	80	100	120	115		
				[mm]	3 hef							
Ed	ge distance		C <sub>cr,N</sub>	[mm]	1.5 h <sub>ef</sub>							
Fa	uncracked ctor		k <sub>ucr,N</sub>	[-]	11.0							
	cracked	concrete	$k_{cr,N}$	[-]	No performance assessed							

 $<sup>^{1)}</sup>$  Restricted to the use of structural components with  $h_{\text{ef}}$  < 40mm which are statically indeterminate and subject to internal exposure conditions only

 $<sup>^{2)}\,</sup>N^0_{\text{Rk,c}}$  according to EN 1992-4:2018

<sup>3)</sup> In absence of other national regulations

# ANNEX C3 Performance / Characteristics values for shear loads

Table C3: Characteristic values for shear loads

Characteristic	er arm zinc plated stainless s		γinst V0 <sub>Rk.s</sub>	[-]			1	.0						
Characteristic resistance s  Ductility factor	zinc plated		V <sup>0</sup> Rk.s					1.0						
resistance s  Ductility factor	-		$V^0_{Rk.s}$											
Suctility factor	stainless s			[kN]	5	11	17	25	44	69				
		teel	$V^0_{Rk,s}$	[kN]	7	12	19	27	50	86				
Steel failure with lever a	k <sub>7</sub> [-]			[-]			1	1.0						
	arm													
zinc plated Characteristic bending		steel 1)	M <sup>0</sup> Rk.s	[Nm]	9	23	45	78	186	363				
resistance s	stainless s	teel	$M^0_{Rk,s}$	[Nm]	10	24	49	85	199	454				
Partial factor <sup>4)</sup> for	zinc plated	γMs	[-]	1.25				1.3	1.33					
$V^0_{\text{Rk,s}}$ and $M^0_{\text{Rk,s}}$	stainless steel			[-]	1.25					1.4				
Concrete pry-out failure	9													
zinc plated steel 1)		steel 1)	<b>k</b> 8	[-]	1.0	2.3	2.5	2.9	2.8	3.1				
Factor for h <sub>ef</sub> — s	stainless steel		<b>k</b> 8	[-]	1.0	2.3	2.8	2.8	3.0	3.3				
Concrete edge failure		<del>-</del>												
		for <b>h</b> <sub>ef,1</sub>	I <sub>f</sub>	[mm]	30 <sup>2)</sup>	35 <sup>2)</sup>	42	50	64	78				
		for <b>h</b> <sub>ef,2</sub>	l <sub>f</sub>	[mm]	40	44	48	65	82 (80) <sup>3)</sup>	100				
		for <b>h</b> <sub>ef,3</sub>	lf	[mm]	60	70	80	100	120	115				
Outside diameter of anch	nor		$d_{nom}$	[mm]	6	8	10	12	16	20				

<sup>&</sup>lt;sup>1)</sup> Anchor version B fvz: M8-M20

<sup>&</sup>lt;sup>2)</sup> Restricted to the use of structural components which are statically indeterminate and subject to internal exposure conditions only

<sup>3)</sup> Anchor version stainless steel

<sup>&</sup>lt;sup>4)</sup> In absence of other national regulations

### ANNEX C4 Performance / Displacements

Table C4: Displacements under tension load

Anchor size			М6	М8	M10	M12	M16	M20
Embedment depth h <sub>ef,1</sub>						-	-	
zinc plated steel 1)								
Tension load	N	[kN]	2.9	5.0	6.5	8.5	12.3	16.6
Displacement	δηο	[mm]	0.3			0.4		
Displacement -	$\delta_{N\infty}$	[mm]	0.6			1.8		
stainless steel								
Tension load	N	[kN]	2.9	4.3	5.7	8.5	12.3	16.6
Diaplacement	δηο	[mm]	0.4	0.7	0.4	0.4	0.6	1.5
Displacement -	$\delta_{N\infty}$	[mm]			1.3			2.9
Embedment depth h <sub>ef,2</sub> and h <sub>ef,3</sub>								
zinc plated steel 1)								
Tension load	N	[kN]	4.3	5.8	7.6	11.9	16.7	23.8
Dianlacement	$\delta_{\text{N0}}$	[mm]	0.4	0.5				
Displacement -	δ <sub>N∞</sub>	[mm]	0.7	2.3				
stainless steel								
Tension load	N	[kN]	3.6	5.7	7.6	11.9	17.2	24.0
Dianlocoment	$\delta_{\text{N0}}$	[mm]	0.7	0.9	0.5	0.6	0.9	2.1
Displacement -	δn∞	[mm]			1.8			4.2

<sup>1)</sup> Anchor version B fvz: M8-M20

Table C5: Displacements under shear loads

Anchor size			М6	М8	M10	M12	M16	M20
zinc plated steel 1)								
Shear load	V	[kN]	2.9	6.3	9.7	14.3	23.6	37.0
Displacement	δνο	[mm]	1.2	1.5	1.6	2.6	3.1	4.4
	δν∞	[mm]	2.4	2.2	2.4	3.9	4.6	6.6
stainless steel								
Shear load	V	[kN]	4.0	6.9	10.9	15.4	28.6	43.7
Displacement	δνο	[mm]	1.1	2.0	1.2	2.0	2.2	2.1
	δν∞	[mm]	1.7	3.0	1.8	3.0	3.3	3.2

<sup>1)</sup> Anchor version B fvz: M8-M20



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