... eine starke Verbindung

IZJAVA O SVOJSTVIMA
DoP-br. MKT-123- hr

1. Jedinstvena identifikacijska oznaka vrste proizvoda: **MKT sidro velikih nosivosti SZ**

2. Tip, serija ili serijski broj ili bilo koji drugi element kojim se omogućuje identifikacija građevnog proizvoda, kako je potrebno sukladno članku 11. stavku 4.:

ETA-02/0030, Annex A2
Broj proizvodne serije: pogledajte pakiranje

3. Namjeravana uporaba ili uporabe građevnog proizvoda, u skladu s primjenjivim usklađenim tehničkim specifikacijama, kako je predvidio proizvođač:

Vrsta proizvoda	sidro aktivirano zateznom silom
Za uporabu u	g napuknuti i nenapuknuti beton C20/25 - C50/60 (EN 206)
Izbor	1
Opterećenje	statički ili kvazi-statički: sve dimenzije seizmički, kategorija C1 + C2: - važeće dimenzije: SZ-B (12/M8, 15/M10, 18/M12, 24/M16, 24/M16L, 28/M20, 32/M24) SZ-S (12/M8, 15/M10, 18/M12, 24/M16, 24/M16L, 28/M20, 32/M24) SZ-SK (12/M8, 15/M10, 18/M12)
Materijal	<u>Pocinčani čelik:</u> samo u suhim interijerima - važeće dimenzije: SZ-B (10/M6, 12/M8, 15/M10, 18/M12, 24/M16, 24/M16L, 28/M20, 32/M24) SZ-S (10/M6, 12/M8, 15/M10, 18/M12, 24/M16, 24/M16L, 28/M20, 32/M24) SZ-SK (10/M6, 12/M8,15/M10, 18/M12) <u>Nehrđajući čelik (oznaka A4)</u> u unutarnjim i vanjskim prostorima, bez posebno agresivnim uvjetima - važeće dimenzije: SZ-B (12/M8, 15/M10, 18/M12, 24/M16) SZ-S (12/M8, 15/M10, 18/M12, 24/M16) SZ-SK (12/M8,15/M10, 18/M12)
Raspon temperature (možda)	--

4. Ime, registrirani trgovački naziv ili registrirani žig i kontaktna adresa proizvođača, kako je potrebno sukladno članku 11. stavku 5.:

MKT Metall-Kunststoff-Technik GmbH & Co. KG
Auf dem Immel 2
D - 67685 Weilerbach

5. Prema potrebi, ime i kontaktna adresa ovlaštenog predstavnika čije ovlaštenje obuhvaća zadatke pobliže označene u članku 12. stavku 2.:   --

6. Sustav ili sustavi ocjenjivanja i provjere stalnosti svojstava građevnog proizvoda, kako je utvrđeno u Prilogu V.:   **Sustav 1**

7. U slučaju Izjave o svojstvima u vezi s građevnim proizvodom obuhvaćenim usklađenom normom:
--

27.02.2018

8. U slučaju izjave o svojstvima koja se odnosi na građevni proizvod za koji je izdana europska tehnička ocjena:

Deutsches Institut für Bautechnik, Berlin

izdan:

ETA-02/0030

na temelju

EAD 330232-00-0601

Ovlaštena kuča izdaje: 1343-CPR, prema sustavu 1:

i) utvrđivanja vrste proizvoda na temelju ispitivanja tipa (uključujući uzorkovanje), izračuna tipa, tabličnih vrijednosti ili opisne dokumentacije proizvoda;

ii) početnu inspekciju proizvodnog pogona i kontrolu tvorničke proizvodnje;

iii) stalni nadzor, ocjenjivanje i vrednovanje kontrole tvorničke proizvodnje

i izdano: Certifikat o stalnosti svojstava 1343-CPR-M 550-9/08.14

9. Objavljeno svojstvo:

Bitne značajke	Metoda	Svojstva		Usklađena tehnička specifikacija
		Pocinčani čelik	A4	
Karakteristična otpornost na vlačne sile	FprEN 1992-4 & TR 055	Annex C1, C2	Annex C1, C3	EAD 330232-00-0601
Karakteristična otpornost sile na odrez	FprEN 1992-4 & TR 055	Annex C4	Annex C5	
Karakteristična otpornost na seizmička opterećenja	FprEN 1992-4 & TR 055	Annex C6	Annex C7	
Pomak u korištenju	FprEN 1992-4 & TR 055	Annex C9	Annex C10	
Karakterističan otpor prema izloženosti vatri	FprEN 1992-4 & TR 055	Annex C8	Annex C8	

U slučaju kada je sukladno članku 37. ili 38. upotrijebljena specifična tehnička dokumentacija, zahtjevi s kojima je proizvod usklađen: --

10. Svojstvo proizvoda utvrđeno u točkama 1. i 2. u skladu je s objavljenim svojstvom u točki 9.

Ova izjava o svojstvima objavljena je pod isključivom odgovornošću proizvođača identificiranog u točki 4.

Za proizvođača i u njegovo ime potpisao:

i.V.

Stefan Weustenhagen
(Managing Director)
Weilerbach, 27.02.2018

Dipl.-Ing. Detlef Bigalke
(Head of Product Development)

Table C1: Characteristic values for **tension load, cracked concrete,** static or quasi-static action, **steel zinc plated**

Anchor size			10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20	32/M24
Installation safety factor	γ_{inst}	[-]					1,0			
Steel failure										
Characteristic resistance	$N_{Rk,s}$	[kN]	16	29	46	67	126	126	196	282
Partial safety factor	γ_{Ms}	[-]					1,5			
Pull-out failure										
Characteristic resistance in cracked concrete C20/25	$N_{Rk,p}$	[kN]	5	12	16	1)	1)	1)	1)	1)
Increasing factor for $N_{Rk,p}$	ψ_C	[-]				$\left(\dfrac{f_{ck}}{20}\right)^{0,5}$				
Concrete cone failure										
Effective anchorage depth	h_{ef}	[mm]	50	60	71	80	100	115	125	150
Factor $k_1 =$	$k_{cr,N}$	[-]					7,7			

1) Pull-out is not decisive

Table C2: Characteristic values for **tension load**, **cracked concrete,** static or quasi-static action**, stainless steel A4**

Anchor size			12/M8	15/M10	18/M12	24/M16
Installation safety factor	γ_{inst}	[-]		1,0		
Steel failure						
SZ-B						
Characteristic resistance	$N_{Rk,s}$	[kN]	26	41	60	110
Partial safety factor	γ_{Ms}	[-]		1,5		
SZ-S and SZ-SK						
Characteristic resistance	$N_{Rk,s}$	[kN]	26	41	60	110
Partial safety factor	γ_{Ms}	[-]		1,87		
Pull-out failure						
Characteristic resistance in cracked concrete C20/25	$N_{Rk,p}$	[kN]	9	16	1)	1)
Increasing factor for $N_{Rk,p}$	ψ_C	[-]		$\left(\dfrac{f_{ck}}{20}\right)^{0,5}$		
Concrete cone failure						
Effective anchorage depth	h_{ef}	[mm]	60	71	80	100
Factor $k_1 =$	$k_{cr,N}$	[-]		7,7		

1) Pull-out is not decisive

Highload Anchor SZ

Performance
Characteristic values for **tension load**, **cracked concrete,** static or quasi-static action

Annex C1

Table C3: Characteristic values for **tension load, uncracked concrete**, static or quasi-static action, **steel zinc plated**

Anchor size			10/M6	12/M8	15/M10	18/M12	24/M16	24/ M16L	28/M20	32/M24
Installation safety factor	γ_{inst}	[-]	1,0
Steel failure										
Characteristic resistance	$N_{Rk,s}$	[kN]	16	29	46	67	126	126	196	282
Partial safety factor	γ_{Ms}	[-]	1,5
Pull-out failure										
Characteristic resistance in uncracked concrete C20/25	$N_{Rk,p}$	[kN]	1)	20	1)	1)	1)	1)	1)	1)
Increasing factor for $N_{Rk,p}$	ψ_C	[-]	$\left(\dfrac{f_{ck}}{20}\right)^{0,5}$
Splitting failure (The higher resistance of case 1 and case 2 may be applied)										
Case 1										
Characteristic resistance in uncracked concrete C20/25	$N^0_{Rk,sp}$	[kN]	12	16	25	30	40	70	50	70
Edge distance	$c_{cr,sp}$	[mm]	1,5 h_{ef}
Increasing factor for $N^0_{Rk,sp}$	ψ_C	[-]	$\left(\dfrac{f_{ck}}{20}\right)^{0,5}$
Case 2										
Characteristic resistance in uncracked concrete	$N^0_{Rk,sp}$	[kN]	min ($N_{Rk,p}$; $N^0_{Rk,c}$)
Edge distance	$c_{cr,sp}$	[mm]	\multicolumn{5}{c}{2,5 h_{ef}}	1,5 h_{ef}	2,5 h_{ef}	2 h_{ef}
Concrete cone failure										
Effective Anchorage depth	h_{ef}	[mm]	50	60	71	80	100	115	125	150
Edge distance	$c_{cr,N}$	[mm]	1,5 h_{ef}
Factor k_1 =	$k_{ucr,N}$	[-]	11,0

1) Pull-out is not decisive

Highload Anchor SZ	
Performance Characteristic values for **tension load**, **uncracked concrete,** static or quasi-static action, **steel zinc plated**	**Annex C2**

Table C4: Characteristic values for **tension load, uncracked concrete**, static or quasi-static action, **stainless steel A4**

Anchor size			12/M8	15/M10	18/M12	24/M16
Installation safety factor	γ_{inst}	[-]	1,0
Steel failure						
SZ-B						
Characteristic resistance	$N_{Rk,s}$	[kN]	26	41	60	110
Partial safety factor	γ_{Ms}	[-]	1,5
SZ-S and SZ-SK						
Characteristic resistance	$N_{Rk,s}$	[kN]	26	41	60	110
Partial safety factor	γ_{Ms}	[-]	1,87
Pull-out failure						
Characteristic resistance in uncracked concrete C20/25	$N_{Rk,p}$	[kN]	16	25	35	[1]
Increasing factor for $N_{Rk,p}$	ψ_C	[-]	$\left(\dfrac{f_{ck}}{20}\right)^{0,5}$
Splitting failure						
Edge distance	$c_{cr,sp}$	[mm]	180	235	265	300
Concrete cone failure						
Effective anchorage depth	h_{ef}	[mm]	60	71	80	100
Edge distance	$c_{cr,N}$	[mm]	1,5 h_{ef}
Factor k_1 =	$k_{ucr,N}$	[-]	11,0

[1] Pull-out is not decisive.

Highload Anchor SZ

Performance
Characteristic values for **tension loads, uncracked concrete,** static or quasi-static action, **stainless steel A4**

Annex C3

Table C5: Characteristic values of **shear load,** static or quasi-static action, **steel zinc plated**

Anchor size			10/M6	12/M8	15/M10	18/M12	24/M16	24/ M16L	28/M20	32/M24
Steel failure without lever arm										
SZ-B										
Characteristic resistance	$V^0_{Rk,s}$	[kN]	16	25	36	63	91	91	122	200
Factor	k_7	[-]	1,0							
SZ-S and SZ-SK										
Characteristic resistance	$V^0_{Rk,s}$	[kN]	18	30	48	73	126	126	150	200
Factor	k_7	[-]	1,0							
Partial safety factor	γ_{Ms}	[-]	1,25							
Steel failure with lever arm										
Characteristic resistance	$M^0_{Rk,s}$	[Nm]	12	30	60	105	266	266	519	898
Partial safety factor	γ_{Ms}	[-]	1,25							
Concrete pry-out failure										
Factor	k_8	[-]	1,8	2,0						
Concrete edge failure										
Effective length of anchor in shear loading	l_f	[mm]	50	60	71	80	100	115	125	150
Outside diameter of anchor	d_{nom}	[mm]	10	12	15	18	24	24	28	32

Highload Anchor SZ	
Performance Characteristic values for **shear load**, static or quasi-static action, **steel zinc plated**	**Annex C4**

Table C6: Characteristic values for **shear load**, static or quasi-static action, **stainless steel A4**

Anchor size			12/M8	15/M10	18/M12	24/M16
Steel failure without lever arm						
Characteristic resistance	$V^0_{Rk,s}$	[kN]	24	37	62	92
SZ-B						
Factor	k_7	[-]	1,0			
Partial safety factor	γ_{Ms}	[-]	1,25			
SZ-S						
Factor	k_7	[-]	1,0			
Partial safety factor	γ_{Ms}	[-]	1,36			
SZ-SK						
Factor	k_7	[-]	0,8			-
Partial safety factor	γ_{Ms}	[-]	1,36			-
Steel failure with lever arm						
Characteristic resistance	$M^0_{Rk,s}$	[Nm]	26	52	92	232
SZ-B						
Partial safety factor	γ_{Ms}	[-]	1,25			
SZ-S and SZ-SK						
Partial safety factor	γ_{Ms}	[-]	1,56			
Concrete pry-out failure						
Factor	k_8	[-]	2,0			
Concrete edge failure						
Effective length of anchor in shear loading	l_f	[mm]	60	71	80	100
Outside diameter of anchor	d_{nom}	[mm]	12	15	18	24

Highload Anchor SZ	
Performance Characteristic values for **shear load,** static or quasi-static action, **stainless steel A4**	**Annex C5**

Table C7: Characteristic values for **seismic action, Category C1 and C2, steel zinc plated**

Anchor size			12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20	32/M24
Tension load									
Installation safety factor	γ_{inst}	[-]	1,0						
Steel failure									
Characteristic tension resistance category **C1**	$N_{Rk,s,eq,C1}$	[kN]	29	46	67	126	126	196	280
Characteristic tension resistance category **C2**	$N_{Rk,s,eq,C2}$	[kN]	29	46	67	126	126	196	280
Partial safety factor	γ_{Ms}	[-]	1,5						
Pull-out failure									
Characteristic tension resistance category **C1**	$N_{Rk,p,eq,C1}$	[kN]	12	16	25	36	44,4	50,3	63,3
Characteristic tension resistance category **C2**	$N_{Rk,p,eq,C2}$	[kN]	5,4	16,4	22,6	29,0	41,2	43,6	63,3
Shear load									
Steel failure without lever arm									
SZ-B									
Characteristic shear resistance category **C1**	$V_{Rk,s,eq,C1}$	[kN]	18,0	27,1	43,4	51,9	51,9	96,4	160,1
Characteristic shear resistance category **C2**	$V_{Rk,s,eq,C2}$	[kN]	12,7	20,5	31,5	50,1	50,1	67,1	108,1
SZ-S									
Characteristic shear resistance category **C1**	$V_{Rk,s,eq,C1}$	[kN]	18,0	27,1	43,4	51,9	51,9	96,4	160,1
Characteristic shear resistance category **C2**	$V_{Rk,s,eq,C2}$	[kN]	12,7	20,5	31,5	69,3	69,3	67,1	108,1
SZ-SK									
Characteristic shear resistance category **C1**	$V_{Rk,s,eq,C1}$	[kN]	25,2	36,5	50,4	-	-	-	-
Characteristic shear resistance category **C2**	$V_{Rk,s,eq,C2}$	[kN]	19,2	29,3	39,4	-	-	-	-
Partial safety factor	γ_{Ms}	[-]	1,25						

Highload Anchor SZ

Performance
Characteristic values for **seismic action, steel zinc plated**

Annex C6

Table C8: Characteristic values for **seismic action, Category C1 and C2, stainless steel A4**

Anchor size			12/M8	15/M10	18/M12	24/M16
Tension load						
Installation safety factor	γ_{inst}	[-]	1,0			
Steel failure						
Characteristic tension resistance, category **C1**	$N_{Rk,s,eq,C1}$	[kN]	26	41	60	110
Characteristic tension resistance, category **C2**	$N_{Rk,s,eq,C2}$	[kN]	26	41	60	110
Partial safety factor **SZ-B**	γ_{Ms}	[-]	1,5			
Partial safety factor **SZ-S and SZ-SK**	γ_{Ms}	[-]	1,87			
Pull-out failure						
Characteristic tension resistance, category **C1**	$N_{Rk,p,eq,C1}$	[kN]	9	16	26	36
Characteristic tension resistance, category **C2**	$N_{Rk,p,eq,C2}$	[kN]	4,8	16,5	24,8	44,5
Shear load						
Steel failure without lever arm						
SZ-B						
Characteristic shear resistance, category **C1**	$V_{Rk,s,eq,C1}$	[kN]	9,6	13,3	25,4	75,4
Characteristic shear resistance, category **C2**	$V_{Rk,s,eq,C2}$	[kN]	9,7	14,0	18,0	32,2
Partial safety factor	γ_{Ms}	[-]	1,25			
SZ-S						
Characteristic shear resistance, category **C1**	$V_{Rk,s,eq,C1}$	[kN]	9,6	13,3	25,4	75,4
Characteristic shear resistance, category **C2**	$V_{Rk,s,eq,C2}$	[kN]	9,7	14,0	18,0	32,2
Partial safety factor	γ_{Ms}	[-]	1,36			
SZ-SK						
Characteristic shear resistance, category **C1**	$V_{Rk,s,eq,C1}$	[kN]	11,5	23,3	31,6	-
Characteristic shear resistance, category **C2**	$V_{Rk,s,eq,C2}$	[kN]	10,8	17,4	15,4	-
Partial safety factor	γ_{Ms}	[-]	1,36			-

Highload Anchor SZ

Performance
Characteristic values for **seismic action, stainless steel A4**

Annex C7

Table C9: Characteristic values under **fire exposure** in cracked and uncracked concrete C20/25 to C50/60

Anchor size				10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20	32/M24
Tension load											
Steel failure											
Steel zinc plated											
Characteristic resistance	R30	$N_{Rk,s,fi}$	[kN]	1,0	1,9	4,3	6,3	11,6		18,3	26,3
	R60			0,8	1,5	3,2	4,6	8,6		13,5	19,5
	R90			0,6	1,0	2,1	3,0	5,0		7,7	12,6
	R120			0,4	0,8	1,5	2,0	3,1		4,9	9,2
Stainless steel A4											
Characteristic resistance	R30	$N_{Rk,s,fi}$	[kN]	-	6,1	10,2	15,7	29,2	-	-	-
	R60			-	4,4	7,3	11,1	20,6	-	-	-
	R90			-	2,6	4,3	6,4	12,0	-	-	-
	R120			-	1,8	2,8	4,1	7,7	-	-	-
Shear load											
Steel failure without lever arm											
Steel zinc plated											
Characteristic resistance	R30	$V_{Rk,s,fi}$	[kN]	1,0	1,9	4,3	6,3	11,6		18,3	26,3
	R60			0,8	1,5	3,2	4,6	8,6		13,5	19,5
	R90			0,6	1,0	2,1	3,0	5,0		7,7	12,6
	R120			0,4	0,8	1,5	2,0	3,1		4,9	9,2
Stainless steel A4											
Characteristic resistance	R30	$V_{Rk,s,fi}$	[kN]	-	14,3	22,7	32,8	61,0	-	-	-
	R60			-	11,1	17,6	25,5	47,5	-	-	-
	R90			-	7,9	12,6	18,3	34,0	-	-	-
	R120			-	6,3	10,0	14,6	27,2	-	-	-
Steel failure with lever arm											
Steel zinc plated											
Characteristic resistance	R30	$M^0_{Rk,s,fi}$	[Nm]	0,8	2,0	5,6	9,7	24,8		42,4	83,6
	R60			0,6	1,5	4,1	7,2	18,3		29,8	61,9
	R90			0,4	1,0	2,7	4,7	11,9		17,1	40,1
	R120			0,3	0,8	1,9	3,1	6,6		10,7	29,2
Stainless steel A4											
Characteristic resistance	R30	$M^0_{Rk,s,fi}$	[Nm]	-	6,2	13,2	24,4	61,8	-	-	-
	R60			-	4,5	9,4	17,2	43,6	-	-	-
	R90			-	2,7	5,6	10,0	25,3	-	-	-
	R120			-	1,8	3,6	6,4	16,2	-	-	-

If pull-out is not decisive in equation D.4 and D.5, FprEN 1992-4:2016 $N_{Rk,p}$ must be replaced by $N^0_{Rk,c}$.

Highload Anchor SZ

Performance
Characteristic values under **fire exposure**

Annex C8

Table C10: Displacements under tension and shear load, **steel zinc plated**

Anchor size			10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20	32/M24
Tension load										
Tension load in cracked concrete	N	[kN]	2,4	5,7	7,6	12,3	17,1	21,1	24	26,2
Displacement	δ_{N0}	[mm]	0,5	0,5	0,5	0,7	0,8	0,7	0,9	1,4
	$\delta_{N\infty}$	[mm]	2,0	2,0	1,3	1,3	1,3	1,3	1,4	1,9
Tension load in uncracked concrete	N	[kN]	8,5	9,5	14,3	17,2	24	29,6	34	43
Displacement	δ_{N0}	[mm]	0,8	1,0	1,1			1,3	0,3	0,7
	$\delta_{N\infty}$	[mm]	3,4		1,7			2,3	1,4	0,7
Seismic action C2										
Displacement for DLS	$\delta_{N,eq\,(DLS)}$	[mm]	-	3,3	3,0	5,0	3,0	3,0	4,0	5,3
Displacement for ULS	$\delta_{N,eq\,(ULS)}$	[mm]	-	12,2	11,3	16,0	9,2	9,2	13,8	12,4
Shear load										
SZ-B										
Shear load in cracked and uncracked concrete	V	[kN]	9,1	14	20,7	35,1	52,1	52,1	77	86,6
Displacement	δ_{V0}	[mm]	2,5	2,1	2,7	3,0	5,1	5,1	4,3	10,5
	$\delta_{V\infty}$	[mm]	3,8	3,1	4,1	4,5	7,6	7,6	6,5	15,8
Seismic action C2										
Displacement for DLS	$\delta_{V,eq\,(DLS)}$	[mm]	-	2,3	3,1	3,0	2,6	2,6	1,6	6,1
Displacement for ULS	$\delta_{V,eq\,(ULS)}$	[mm]	-	4,8	6,4	6,1	6,6	6,6	4,8	9,5
SZ-S										
Shear load in cracked and uncracked concrete	V	[kN]	10,1	17,1	27,5	41,5	72	72	77	86,6
Displacement	δ_{V0}	[mm]	2,9	2,5	3,6	3,5	7,0	7,0	4,3	10,5
	$\delta_{V\infty}$	[mm]	4,4	3,8	5,4	5,3	10,5	10,5	6,5	15,8
Seismic action C2										
Displacement for DLS	$\delta_{V,eq\,(DLS)}$	[mm]	-	2,3	3,1	3,0	3,3	3,3	1,6	6,1
Displacement for ULS	$\delta_{V,eq\,(ULS)}$	[mm]	-	4,8	6,4	6,1	8,2	8,2	4,8	9,5
SZ-SK										
Shear load in cracked and uncracked concrete	V	[kN]	10,1	17,1	27,5	41,5	-	-	-	-
Displacement	δ_{V0}	[mm]	2,9	2,5	3,6	3,5	-	-	-	-
	$\delta_{V\infty}$	[mm]	4,4	3,8	5,4	5,3	-	-	-	-
Seismic action C2										
Displacement for DLS	$\delta_{V,eq\,(DLS)}$	[mm]	-	3,1	3,9	3,9	-	-	-	-
Displacement for ULS	$\delta_{V,eq\,(ULS)}$	[mm]	-	10,2	11,8	13,0	-	-	-	-

Highload Anchor SZ	**Annex C9**
Performance Displacements under tension and shear load, **steel zinc plated**	

Table C11: Displacements under tension and shear load, **stainless steel A4**

Anchor size			12/M8	15/M10	18/M12	24/M16
Tension load						
Tension load in cracked concrete	N	[kN]	4,3	7,6	12,1	17,0
Displacement	δ_{N0}	[mm]	0,5	0,5	1,3	0,5
	$\delta_{N\infty}$	[mm]	1,2	1,6	1,8	1,6
Tension load in uncracked concrete	N	[kN]	7,6	11,9	16,7	24,1
Displacement	δ_{N0}	[mm]	0,2	0,3	1,2	1,5
	$\delta_{N\infty}$	[mm]	1,1	1,1	1,1	1,1
Seismic action C2						
Displacement for DLS	$\delta_{N,eq\,(DLS)}$	[mm]	4,7	4,5	4,3	4,9
Displacement for ULS	$\delta_{N,eq\,(ULS)}$	[mm]	13,3	12,7	9,7	10,1
Shear load						
Shear load in cracked concrete	V	[kN]	13,9	21,1	34,7	50,8
Displacement	δ_{V0}	[mm]	3,4	4,9	4,8	6,7
	$\delta_{V\infty}$	[mm]	5,1	7,4	7,1	10,1
Seismic action C2						
SZ-B, SZ-S						
Displacement for DLS	$\delta_{V,eq\,(DLS)}$	[mm]	2,8	3,1	2,6	3,3
Displacement for ULS	$\delta_{V,eq\,(ULS)}$	[mm]	5,6	5,8	5,0	6,9
SZ-SK						
Displacement for DLS	$\delta_{V,eq\,(DLS)}$	[mm]	2,5	2,8	2,9	-
Displacement for ULS	$\delta_{V,eq\,(ULS)}$	[mm]	5,8	5,9	6,9	-

Highload Anchor SZ

Performance
Displacements under tension and shear load, **stainless steel A4**

Annex C10