



... eine starke Verbindung

DECLARACIÓN DE PRESTACIONES  
DoP No. MKT-121 - es

1. Código de identificación única del producto tipo: **MKT Anclaje para cargas pesadas SZ**
2. Tipo, lote o número de serie o cualquier otro elemento que permita la identificación del producto de construcción como se establece en el artículo 11, apartado 4:

**ETA-02/0030, Anexo A2**  
**Número de partida: ver embalaje**

3. Uso o usos previstos del producto de construcción, con arreglo a la especificación técnica armonizada aplicable, tal como lo establece el fabricante:

<b>Producto tipo</b>	Anclaje de expansión controlada por el par de giro (tipo casquillo)
<b>Para uso en</b>	hormigón fisurado y no fisurado C20/25 - C50/60 (EN 206)
<b>Opción</b>	1
<b>Carga</b>	Estática o casi-estática; Sísmica, categoría C1 + C2: Tamaños incluidos: SZ-B & SZ-S (M8, M10, M12, M16, M16L, M20)
<b>Material</b>	<u>Acero galvanizado:</u> sólo en espacios interiores secos Tamaños incluidos: SZ-B (M6, M8, M10, M12, M16, M16L, M20); SZ-S (M6, M8, M10, M12, M16, M16L, M20); SZ-SK (M6, M8, M10, M12) <u>Acero inoxidable (marcado A4):</u> En espacios interiores y exteriores no expuestos a condiciones especialmente agresivas Tamaños incluidos: SZ-B (M8, M10, M12, M16); SZ-S (M8, M10, M12, M16); SZ-SK (M8, M10, M12)
<b>Rango de temperaturas (eventualmente)</b>	--

4. Nombre, nombre o marca registrados y dirección de contacto del fabricante según lo dispuesto en el artículo 11, apartado 5:

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

5. En su caso, nombre y dirección de contacto del representante autorizado, cuyo mandato abarca las tareas especificadas en el artículo 12, apartado 2: --
6. Sistema o sistemas de evaluación y verificación de la constancia de las prestaciones del producto de construcción tal como figura en el anexo V: **Sistema 1**
7. En caso de declaración de prestaciones relativa a un producto de construcción cubierto por una norma armonizada:  
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8. En caso de declaración de prestaciones relativa a un producto de construcción para el que se ha emitido una evaluación técnica europea:

**Deutsches Institut für Bautechnik, Berlin**

emitido

**ETA-02/0030**

sobre la base de

**ETAG 001-2**

El organismo notificado para la certificación de productos 1343-CPR ha efectuado lo siguiente de acuerdo con el sistema 1:

- i) la determinación del producto tipo sobre la base de ensayos de tipo (incluido el muestreo), cálculos de tipo, valores tabulados o documentación descriptiva del producto,
- ii) la inspección inicial de la planta de producción y del control de producción en fábrica,
- iii) la vigilancia, evaluación y supervisión permanentes del control de producción en fábrica.

y ha emitido el documento siguiente: certificado de constancia de prestaciones 1343-CPR-M 550-9

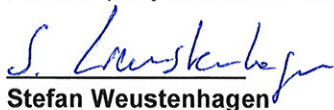
9. Prestaciones declaradas:

Características esenciales	Método de verificación	Prestaciones		Especificaciones técnicas armonizadas
		Acero galvanizado	Acero inoxidable (marcado A4)	
Resistencia característica a esfuerzos de tracción	ETAG 001, Annex C CEN/TS 1992-4	Annex C1, C2	Annex C1, C3	ETAG 001
Resistencia característica a los esfuerzos transversales	ETAG 001, Annex C CEN/TS 1992-4	Annex C4	Annex C5	
Resistencia característica a los efectos sísmicos	TR 045	Annex C6	Annex C7	
Cambio en el uso	ETAG 001, Annex C CEN/TS 1992-4	Annex C9, C10	Annex C9, C10	
Resistencia característica bajo exposición al fuego	ETAG 001, Annex C CEN/TS 1992-4	Annex C8	Annex C8	

Cuando en virtud de los artículos 37 o 38 la documentación técnica específica ha sido utilizada, los requisitos que cumple el producto: --

10. Las prestaciones del producto identificado en los puntos 1 y 2 son conformes con las prestaciones declaradas en el punto 9. La presente declaración de prestaciones se emite bajo la sola responsabilidad del fabricante identificado en el punto 4.

Firmado por y en nombre del fabricante por:



**Stefan Weustenhagen**  
(Director general)  
**Weilerbach, 28.10.2015**

i.V. 

**Dipl.-Ing. Detlef Bigalke**  
(Director de Desarrollo de Productos)



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

Anchor size			10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20	
Installation safety factor	$\gamma_2 = \gamma_{inst}$	[-]	1,0							
<b>Steel failure</b>										
Characteristic resistance	$N_{Rk,s}$	[kN]	16	29	46	67	126	126	196	
Partial safety factor	$\gamma_{Ms}$	[-]	1,5							
<b>Pull-out failure</b>										
Characteristic resistance in cracked concrete C20/25	$N_{Rk,p}$	[kN]	5	12	16	1)	1)	1)	1)	
Increasing factor for $N_{Rk,p}$	$\psi_C$	[-]	$\left(\frac{f_{ck,cube}}{25}\right)^{0,5}$							
<b>Concrete cone failure</b>										
Effective anchorage depth	$h_{ef}$	[mm]	50	60	71	80	100	115	125	
Factor acc. to CEN/TS 1992-4	$k_{cr}$	[-]	7,2							

1) Pull-out is not decisive.

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

Anchor size			12/M8	15/M10	18/M12	24/M16
Installation safety factor	$\gamma_2 = \gamma_{inst}$	[-]	1,0			
<b>Steel failure</b>						
<b>SZ-B</b>						
Characteristic resistance	$N_{Rk,s}$	[kN]	26	41	60	110
Partial safety factor	$\gamma_{Ms}$	[-]	1,5			
<b>SZ-S and SZ-SK</b>						
Characteristic resistance	$N_{Rk,s}$	[kN]	26	41	60	110
Partial safety factor	$\gamma_{Ms}$	[-]	1,87			
<b>Pull-out failure</b>						
Characteristic resistance in cracked concrete C20/25	$N_{Rk,p}$	[kN]	9	16	1)	1)
Increasing factor for $N_{Rk,p}$	$\psi_C$	[-]	$\left(\frac{f_{ck,cube}}{25}\right)^{0,5}$			
<b>Concrete cone failure</b>						
Effective anchorage depth	$h_{ef}$	[mm]	60	71	80	100
Factor acc. to CEN/TS 1992-4	$k_{cr}$	[-]	7,2			

1) Pull-out is not decisive.

### Highload Anchor SZ

#### Performance

Characteristic values for **tension load in cracked concrete** under static or quasi-static action

**Annex C1**

**Table C3: Characteristic values for tension load in non-cracked concrete, under static or quasi-static action, steel zinc plated**

Anchor size			10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20	
Installation safety factor	$\gamma_2 = \gamma_{inst}$	[-]	1,0							
<b>Steel failure</b>										
Characteristic resistance	$N_{Rk,s}$	[kN]	16	29	46	67	126	126	196	
Partial safety factor	$\gamma_{Ms}$	[-]	1,5							
<b>Pull-out failure</b>										
Characteristic resistance in non-cracked concrete C20/25	$N_{Rk,p}$	[kN]	1 <sup>1)</sup>	20	30	1 <sup>1)</sup>	1 <sup>1)</sup>	1 <sup>1)</sup>	1 <sup>1)</sup>	
<b>Splitting failure</b> (The higher resistance of Case 1 and Case 2 may be applied.)										
Case 1										
Characteristic resistance in concrete C20/25	$N^0_{Rk,sp}$	[kN]	12 <sup>2)</sup>	16 <sup>2)</sup>	25 <sup>2)</sup>	30 <sup>2)</sup>	40 <sup>2)</sup>	70	50 <sup>2)</sup>	
Spacing	$S_{cr,sp}$	[mm]	3 $h_{ef}$							
Edge distance	$C_{cr,sp}$	[mm]	1,5 $h_{ef}$							
Case 2 (acc. to ETAG 001, Annex C, equation (5.3))										
Spacing	$S_{cr,sp}$	[mm]	5 $h_{ef}$					3 $h_{ef}$	5 $h_{ef}$	
Edge distance	$C_{cr,sp}$	[mm]	2,5 $h_{ef}$					1,5 $h_{ef}$	2,5 $h_{ef}$	
Increasing factor for $N_{Rk,p}$ and $N^0_{Rk,sp}$	$\psi_C$	[-]	$\left(\frac{f_{ck,cube}}{25}\right)^{0,5}$							
<b>Concrete cone failure</b>										
Effective Anchorage depth	$h_{ef}$	[mm]	50	60	71	80	100	115	125	
Factor acc. to CEN/TS 1992-4	$k_{ucr}$	[-]	10,1							

<sup>1)</sup> Pull-out is not decisive.

<sup>2)</sup> For the proof against splitting failure,  $N^0_{Rk,c}$  has to be replaced by  $N^0_{Rk,sp}$ .

## Highload Anchor SZ

### Performance

Characteristic values for **tension load in non-cracked concrete**, under static or quasi-static action, **steel zinc plated**

**Annex C2**

**Table C4:** Characteristic values for **tension load** in **non-cracked concrete** under static or quasi-static action, **stainless steel A4**

<b>Anchor size</b>			<b>12/M8</b>	<b>15/M10</b>	<b>18/M12</b>	<b>24/M16</b>
Installation safety factor	$\gamma_2 = \gamma_{inst}$	[-]	1,0			
<b>Steel failure</b>						
<b>SZ-B</b>						
Characteristic resistance	$N_{Rk,s}$	[kN]	26	41	60	110
Partial safety factor	$\gamma_{Ms}$	[-]	1,5			
<b>SZ-S and SZ-SK</b>						
Characteristic resistance	$N_{Rk,s}$	[kN]	26	41	60	110
Partial safety factor	$\gamma_{Ms}$	[-]	1,87			
<b>Pull-out failure</b>						
Characteristic resistance in non-cracked concrete C20/25	$N_{Rk,p}$	[kN]	16	25	35	1)
Increasing factor for $N_{Rk,p}$	$\psi_C$	[-]	$\left(\frac{f_{ck,cube}}{25}\right)^{0,5}$			
<b>Splitting failure</b>						
Spacing	$S_{cr,sp}$	[mm]	360	470	530	600
Edge distance	$C_{cr,sp}$	[mm]	180	235	265	300
<b>Concrete cone failure</b>						
Effective anchorage depth	$h_{ef}$	[mm]	60	71	80	100
Factor acc. to CEN/TS 1992-4	$k_{ucr}$	[-]	10,1			

1) Pull-out is not decisive.

### Highload Anchor SZ

#### Performance

Characteristic values for **tension loads** in **non-cracked concrete** under static or quasi-static action, **stainless steel A4**

**Annex C3**

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

Anchor size			10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20
<b>Steel failure without lever arm</b>									
<b>SZ-B</b>									
Characteristic resistance	$V_{Rk,s}$	[kN]	16	25	36	63	91	91	122
Ductility factor	$k_2$	[-]	1,0						
Partial safety factor	$\gamma_{Ms}$	[-]	1,25						
<b>SZ-S and SZ-SK</b>									
Characteristic resistance	$V_{Rk,s}$	[kN]	18	30	48	73	126	126	150
Ductility factor	$k_2$	[-]	0,8						
Partial safety factor	$\gamma_{Ms}$	[-]	1,25						
<b>Steel failure with lever arm</b>									
Characteristic resistance	$M^0_{Rk,s}$	[Nm]	12	30	60	105	266	266	519
Partial safety factor	$\gamma_{Ms}$	[-]	1,25						
<b>Concrete pry-out failure</b>									
Factor k acc. to ETAG 001, Annex C or $k_3$ acc. to CEN/TS 1992-4	$k_{(3)}$	[-]	1,8	2,0					
<b>Concrete edge failure</b>									
Effective length of anchor in shear loading	$l_f$	[mm]	50	60	71	80	100	115	125
Outside diameter of anchor	$d_{nom}$	[mm]	10	12	15	18	24	24	28

**Highload Anchor SZ**

**Performance**  
 Characteristic values for **shear load** under static or quasi-static action, **steel zinc plated**

**Annex C4**

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

Anchor size		12/M8	15/M10	18/M12	24/M16
<b>Steel failure without lever arm</b>					
<b>SZ-B</b>					
Characteristic resistance	$V_{Rk,s}$ [kN]	24	37	62	92
Ductility factor	$k_2$ [-]	1,0			
Partial safety factor	$\gamma_{Ms}$ [-]	1,25			
<b>SZ-S and SZ-SK</b>					
Characteristic resistance	$V_{Rk,s}$ [kN]	24	37	62	92
Ductility factor	$k_2$ [-]	0,8			
Partial safety factor	$\gamma_{Ms}$ [-]	1,36			
<b>Steel failure with lever arm</b>					
<b>SZ-B</b>					
Characteristic resistance	$M^0_{Rk,s}$ [Nm]	26	52	92	232
Ductility factor	$k_2$ [-]	1,0			
Partial safety factor	$\gamma_{Ms}$ [-]	1,25			
<b>SZ-S and SZ-SK</b>					
Characteristic resistance	$M^0_{Rk,s}$ [Nm]	26	52	92	232
Ductility factor	$k_2$ [-]	0,8			
Partial safety factor	$\gamma_{Ms}$ [-]	1,56			
<b>Concrete pry-out failure</b>					
Factor k acc. to ETAG 001, Annex C or $k_3$ acc. to CEN/TS 1992-4	$k_{(3)}$ [-]	2,0			
<b>Concrete edge failure</b>					
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** under 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	
<b>Tension load</b>								
Installation safety factor	$\gamma_2 = \gamma_{inst}$	[-]	1,0					
<b>Steel failure</b>								
Characteristic tension resistance category <b>C1</b>	$N_{Rk,s,seis,C1}$	[kN]	29	46	67	126	126	196
Characteristic tension resistance category <b>C2</b>	$N_{Rk,s,seis,C2}$	[kN]	29	46	67	126	126	196
Partial safety factor	$\gamma_{Ms,seis}$	[-]	1,5					
<b>Pull-out failure</b>								
Characteristic tension resistance category <b>C1</b>	$N_{Rk,p,seis,C1}$	[kN]	12	16	25	36	44,4	50,3
Characteristic tension resistance category <b>C2</b>	$N_{Rk,p,seis,C2}$	[kN]	5,4	16,4	22,6	29,0	41,2	43,6
Increasing factor for $N_{Rk,p,seis}$	$\psi_c$	[-]	1,0					
<b>Shear load</b>								
<b>Steel failure without lever arm</b>								
<b>SZ-B</b>								
Characteristic shear resistance category <b>C1</b>	$V_{Rk,s,seis,C1}$	[kN]	18,0	27,1	43,4	51,9	51,9	96,4
Characteristic shear resistance category <b>C2</b>	$V_{Rk,s,seis,C2}$	[kN]	12,7	20,5	31,5	50,1	50,1	67,1
<b>SZ-S</b>								
Characteristic shear resistance category <b>C1</b>	$V_{Rk,s,seis,C1}$	[kN]	18,0	27,1	43,4	51,9	51,9	96,4
Characteristic shear resistance category <b>C2</b>	$V_{Rk,s,seis,C2}$	[kN]	12,7	20,5	31,5	69,3	69,3	67,1
Partial safety factor	$\gamma_{Ms,seis}$	[-]	1,25					
<b>Steel failure with lever arm</b>								
Characteristic resistance	$M^0_{Rk,s,seis}$	[Nm]	no performance determined					

**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
<b>Tension load</b>						
Installation safety factor	$\gamma_2 = \gamma_{inst}$	[-]	1,0			
<b>Steel failure</b>						
Characteristic tension resistance, category <b>C1</b>	$N_{Rk,s,seis,C1}$	[kN]	26	41	60	110
Characteristic tension resistance, category <b>C2</b>	$N_{Rk,s,seis,C2}$	[kN]	26	41	60	110
Partial safety factor <b>SZ-B</b>	$\gamma_{Ms,seis}$	[-]	1,5			
Partial safety factor <b>SZ-S</b>	$\gamma_{Ms,seis}$	[-]	1,87			
<b>Pull-out failure</b>						
Characteristic tension resistance, category <b>C1</b>	$N_{Rk,p,seis,C1}$	[kN]	9	16	26	36
Characteristic tension resistance, category <b>C2</b>	$N_{Rk,p,seis,C2}$	[kN]	4,8	16,5	24,8	44,5
Increasing factor for $N_{Rk,p,seis}$	$\psi_c$	[-]	1,0			
<b>Shear load</b>						
<b>Steel failure without lever arm</b>						
Characteristic shear resistance, category <b>C1</b>	$V_{Rk,s,seis,C1}$	[kN]	9,6	13,3	25,4	75,4
Characteristic shear resistance, category <b>C2</b>	$V_{Rk,s,seis,C2}$	[kN]	9,7	14,0	18,0	32,2
Partial safety factor <b>SZ-B</b>	$\gamma_{Ms,seis}$	[-]	1,25			
Partial safety factor <b>SZ-S</b>	$\gamma_{Ms,seis}$	[-]	1,36			
<b>Steel failure with lever arm</b>						
Characteristic resistance	$M^0_{Rk,s,seis}$	[Nm]	no performance determined			

**Highload Anchor SZ**

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

**Annex C7**

**Table C9:** Characteristic values for **tension and shear load** under **fire exposure** in cracked and non-cracked concrete C20/25 to C50/60

Anchor size		10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20		
<b>Tension load</b>										
<b>Steel failure</b>										
<b>Steel zinc plated</b>										
Characteristic resistance	R30	$N_{Rk,s,fi}$	[kN]	1,0	1,9	4,3	6,3	11,6	18,3	
	R60			0,8	1,5	3,2	4,6	8,6	13,5	
	R90			0,6	1,0	2,1	3,0	5,0	7,7	
	R120			0,4	0,8	1,5	2,0	3,1	4,9	
<b>Stainless steel A4</b>										
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	-	-
<b>Shear load</b>										
<b>Steel failure without lever arm</b>										
<b>Steel zinc plated</b>										
Characteristic resistance	R30	$V_{Rk,s,fi}$	[kN]	1,0	1,9	4,3	6,3	11,6	18,3	
	R60			0,8	1,5	3,2	4,6	8,6	13,5	
	R90			0,6	1,0	2,1	3,0	5,0	7,7	
	R120			0,4	0,8	1,5	2,0	3,1	4,9	
<b>Stainless steel A4</b>										
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	-	-
<b>Steel failure with lever arm</b>										
<b>Steel zinc plated</b>										
Characteristic resistance	R30	$M^0_{Rk,s,fi}$	[Nm]	0,8	2,0	5,6	9,7	24,8	42,4	
	R60			0,6	1,5	4,1	7,2	18,3	29,8	
	R90			0,4	1,0	2,7	4,7	11,9	17,1	
	R120			0,3	0,8	1,9	3,1	6,6	10,7	
<b>Stainless steel A4</b>										
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	-	-

The characteristic resistances for pull-out failure, concrete cone failure, concrete pry-out and concrete edge failure can be calculated according to TR020 / CEN/TS 1992-4.

### Highload Anchor SZ

#### Performance

Characteristic values for **tension and shear loads** under **fire exposure**

**Annex C8**

**Table C10: Displacements under tension load**

Anchor size			10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20
<b>Steel, zinc plated</b>									
Tension load in cracked concrete	N	[kN]	2,4	5,7	7,6	12,3	17,1	21,1	24
Displacement	$\delta_{N0}$	[mm]	0,5	0,5	0,5	0,7	0,8	0,7	0,9
	$\delta_{N\infty}$	[mm]	2,0	2,0	1,3	1,3	1,3	1,3	1,4
Tension load in non-cracked concrete	N	[kN]	8,5	9,5	14,3	17,2	24	29,6	34
Displacement	$\delta_{N0}$	[mm]	0,8	1,0	1,1			1,3	0,3
	$\delta_{N\infty}$	[mm]	3,4		1,7			2,3	1,4
<b>Seismic action C2</b>									
Displacement for DLS	$\delta_{N,seis,C2(DLS)}$	[mm]	-	3,3	3,0	5,0	3,0	3,0	4,0
Displacement for ULS	$\delta_{N,seis,C2(ULS)}$	[mm]	-	12,2	11,3	16,0	9,2	9,2	13,8
<b>Stainless steel A4</b>									
Tension load in cracked concrete	N	[kN]	-	4,3	7,6	12,1	17,0	-	-
Displacement	$\delta_{N0}$	[mm]	-	0,5	0,5	1,3	0,5	-	-
	$\delta_{N\infty}$	[mm]	-	1,2	1,6	1,8	1,6	-	-
Tension load in non-cracked concrete	N	[kN]	-	7,6	11,9	16,7	24,1	-	-
Displacement	$\delta_{N0}$	[mm]	-	0,2	0,3	1,2	1,5	-	-
	$\delta_{N\infty}$	[mm]	-	1,1				-	-
<b>Seismic action C2</b>									
Displacement for DLS	$\delta_{N,seis,C2(DLS)}$	[mm]	-	4,7	4,5	4,3	4,9	-	-
Displacement for ULS	$\delta_{N,seis,C2(ULS)}$	[mm]	-	13,3	12,7	9,7	10,1	-	-

**Highload Anchor SZ**

**Performance**  
Displacements under **tension load**

**Annex C9**

**Table C11: Displacements under shear load**

Anchor size			10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20
<b>Steel, zinc plated</b>									
<b>SZ-B</b>									
Shear load in cracked and non-cracked concrete	V	[kN]	9,1	14	20,7	35,1	52,1	52,1	77
Displacement	$\delta_{V0}$	[mm]	2,5	2,1	2,7	3,0	5,1	5,1	4,3
	$\delta_{V\infty}$	[mm]	3,8	3,1	4,1	4,5	7,6	7,6	6,5
Seismic action C2									
Displacement for DLS	$\delta_{V,seis,C2(DLS)}$	[mm]	-	2,3	3,1	3,0	2,6	2,6	1,6
Displacement for ULS	$\delta_{V,seis,C2(ULS)}$	[mm]	-	4,8	6,4	6,1	6,6	6,6	4,8
<b>SZ-S and SZ-SK</b>									
Shear load in cracked and non-cracked concrete	V	[kN]	10,1	17,1	27,5	41,5	72	72	77
Displacement	$\delta_{V0}$	[mm]	2,9	2,5	3,6	3,5	7,0	7,0	4,3
	$\delta_{V\infty}$	[mm]	4,4	3,8	5,4	5,3	10,5	10,5	6,5
Seismic action C2 (SZ-S)									
Displacement for DLS	$\delta_{V,seis,C2(DLS)}$	[mm]	-	2,3	3,1	3,0	3,3	3,3	1,6
Displacement for ULS	$\delta_{V,seis,C2(ULS)}$	[mm]	-	4,8	6,4	6,1	8,2	8,2	4,8
<b>Stainless steel A4</b>									
Shear load in cracked and non-cracked concrete	V	[kN]	-	13,9	21,1	34,7	50,8	-	-
Displacement	$\delta_{V0}$	[mm]	-	3,4	4,9	4,8	6,7	-	-
	$\delta_{V\infty}$	[mm]	-	5,1	7,4	7,1	10,1	-	-
Seismic action C2									
Displacement for DLS	$\delta_{V,seis,C2(DLS)}$	[mm]	-	2,8	3,1	2,6	3,3	-	-
Displacement for ULS	$\delta_{V,seis,C2(ULS)}$	[mm]	-	5,6	5,8	5,0	6,9	-	-

**Highload Anchor SZ**

**Performance**  
Displacements under **shear load**

**Annex C10**