
TXE


TXA


TXT


TXP


TXF


TXD

CHARACTERISTICS

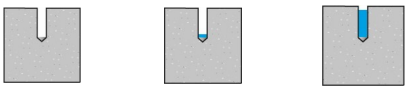
- Pilot hole in concrete needed, thread is created by the anchor during the Installation process.
- Use for high loads.
- Assessed for 2 installation depths.
- Use in cracked and non-cracked concrete.
- Comply with guideline VdS CEA 4001:2021-01(07) “Guidelines for sprinklers systems. Planning and installation” Ø8 to Ø12.
- Suitable when reduced edge distances or spacing required.
- Qualified for static or quasi-static and seismic C1 loads.
- Easy installation.
- Installation through the fixture.
- Posibility of installation by drill bit cleaning
- Reusable
- Removable, leaving concrete surface flat.
- Variety of lengths and sizes, assembly flexibility.
- Base material temperatura range: -40ºC to +80 ºC
- Available in INDEXcal

BASE MATERIAL

SIZE RANGE

Ø6 - Ø12

DRILL CONDITION



SECO HUMEDO INUNDADO

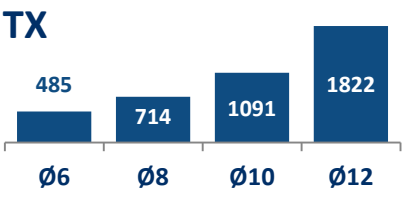
APPLICATION

- Structural fixings in cracked and uncracked concrete for indoor and outdoor conditions.
- Glazing, windows and storefronts
- Racking and shelving
- Attaching railings, handrails and ledgers
- Fixings wood structures in concrete

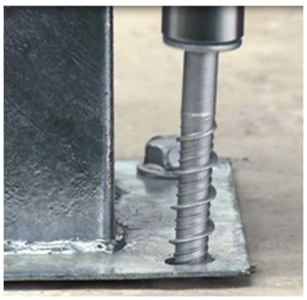
ASSESMENTS

CE STRUCTURAL FIXINGS IN CRACKED & UNCRACKED CONCRETE ETA 20/0046 · FIRE RESISTANCE · VdS CEA 4001 compliant · SEISMIC C1

MAXIMUMUM LOADS RECOMMENDED FOR CRACKED AND UNCRACKED CONCRETE [kg]



APPLICATION EXAMPLES

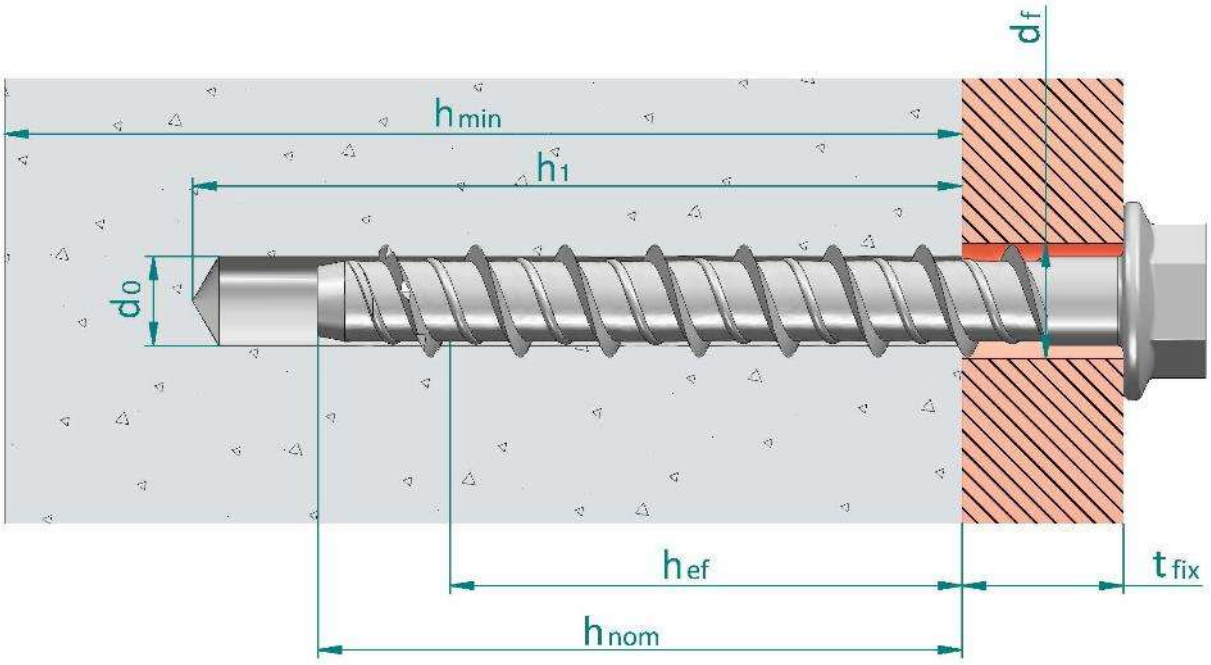


1. RANGE

ITEM	CODE	SIZES	PHOTO	DESCRIPTION	MATERIAL	COVERING
1	**TXE**	Ø6 - Ø12		Hexagonal head with flange screw anchor	Stainless steel A4	A4 INOX AISI 316 C5
2	**TXA**	Ø6 - Ø10		Countersunk head	Stainless steel A4	A4 INOX AISI 316 C5
3	**TXT**	Ø6		“Truss” head	Stainless steel A4	A4 INOX AISI 316 C5
4	**TXP**	Ø6 – Ø8		“Pan” head	Stainless steel A4	A4 INOX AISI 316 C5
5	**TXF**	Ø6		Rod hanger internal thread	Stainless steel A4	A4 INOX AISI 316 C5
6	**TXD**	Ø6 - Ø12		“Dome” head	Stainless steel A4	A4 INOX AISI 316 C5

2. INSTALLATION DATA

2.1. INSTALLATION DRAWING



d_0: Nominal diameter of drill bit
d_f: Fixture clearance hole diameter
h_{ef}: Effective anchorage depth
h_1: Depth of drilled hole
h_{nom}: Overall fastener embedment depth in the concrete
h_{min}: Minimum thickness of concrete member
t_{fix}: Fixture thickness

2.2. SEISMIC LOAD ASSESSMENT

Family	Code	Size	Assessed	C1	C2
[--]	[--]	[--]	ETA	[--]	[--]
TXE	TXE06040	Ø6 x 40	✓	--	--
	TXE06060	Ø6 x 60	✓	✓	--
	TXE08070	Ø8 x 70	✓	✓	--
	TXE08080	Ø8 x 80	✓	✓	--
	TXE08090	Ø8 x 90	✓	✓	--
	TXE08105	Ø8 x 105	✓	✓	--
	TXE10070	Ø10 x 70	✓	✓	--
	TXE10090	Ø10 x 90	✓	✓	--
	TXE10100	Ø10 x 100	✓	✓	--
	TXE10120	Ø10 x 120	✓	✓	--
	TXE12080	Ø12 x 80	✓	✓	--
	TXE12110	Ø12 x 110	✓	✓	--
TXA	TXA06050	Ø6 x 50	✓	--	--
	TXA06060	Ø6 x 60	✓	✓	--
	TXA06080	Ø6 x 80	✓	✓	--
	TXA06100	Ø6 x 100	✓	✓	--
	TXA08060	Ø8 x 60	✓	✓	--
	TXA08080	Ø8 x 80	✓	✓	--
	TXA08120	Ø8 x 120	✓	✓	--
	TXA10070	Ø10 x 70	✓	✓	--
	TXA10090	Ø10 x 90	✓	✓	--
	TXA10120	Ø10 x 120	✓	✓	--
TXT	TXT06040	Ø6 x 40	✓	--	--
	TXT06050	Ø6 x 50	✓	--	--
	TXT06060	Ø6 x 60	✓	✓	--
	TXT06080	Ø6 x 80	✓	✓	--
	TXT06100	Ø6 x 100	✓	✓	--
TXP	TXP06050	Ø6 x 50	✓	--	--
	TXP06060	Ø6 x 60	✓	✓	--
	TXP06080	Ø6 x 80	✓	✓	--
	TXP06100	Ø6 x 100	✓	✓	--
	TXP08060	Ø8 x 60	✓	✓	--
	TXP08080	Ø8 x 80	✓	✓	--
TXF	TXF06040C	Ø6 x 40 (M8-M10)	✓	--	--
TXD	TXD06050	Ø6 x 50	✓	--	--
	TXD08075	Ø8 x 75	✓	✓	--
	TXD10075	Ø10 x 75	✓	✓	--
	TXD12100	Ø12 x 100	✓	✓	--

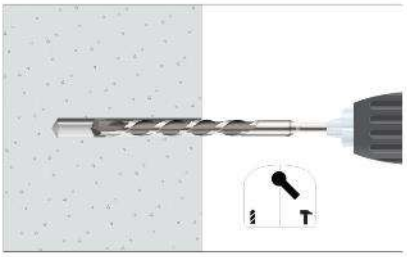
3. INSTALLATION PARAMETERS

General Installation parameters										Standard Installation depth ($h_{ef,std}$)									Reduced Installation depth ($h_{ef,red}$)								
Family	Code	Size	Assessed	Drill bit diameter	Fixture clearance hole	Spanner	Maximum torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole/ Depth for drill bit cleaning	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing(splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole/ Depth for drill bit cleaning	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing(splitting)	Critical edge distance (splitting)
[--]	[--]	[--]	ETA	d_0	d_f	SW/Tx	T_{inst}	S_{min}	C_{min}	h_{min}	h_1 / $h_{1,bit}$	h_{nom}	h_{ef}	t_{fix}	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$	h_{min}	h_1 / $h_{1,bit}$	h_{nom}	h_{ef}	t_{fix}	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$
				[mm]	[mm]	[--]	[Nm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
TXE	TXE06040	Ø6 x 40	✓	6	7,5 - 9	SW 10	10	35	35	--	--	--	--	--	--	--	--	--	80	45/57	35	26,0	5	78	39	90	45
	TXE06060	Ø6 x 60	✓							80	65/77	55	43,0	5	129	65	190	95					25				
	TXE08070	Ø8 x 70	✓	8	10,1 - 12	SW 13	20	35	35	80	75/91	65	50,5	5	152	76	220	110	80	60/76	50	37,5	20	113	57	130	65
	TXE08080	Ø8 x 80	✓											15									30				
	TXE08090	Ø8 x 90	✓											25									40				
	TXE08105	Ø8 x 105	✓											40									55				
	TXE10070	Ø10 x 70	✓	10	12,3 - 14	SW 15	30	50	40	--	--	--	--	--	--	--	--	--	80	65/85	55	41,5	15	125	63	140	70
	TXE10090	Ø10 x 90	✓							100	95/115	85	67,0	5	201	101	230	115					35				
	TXE10100	Ø10 x 100	✓											15									45				
	TXE10120	Ø10 x 120	✓											35									65				
	TXE12080	Ø12 x 80	✓	12	14,4 - 16	SW 18	50	75	45	--	--	--	--	--	--	--	--	--	90	90/114	75	58,0	5	174	87	190	95
	TXE12110	Ø12 x 110	✓							160	120/144	105	83,5	5	251	126	240	120					35				
TXA	TXA06050	Ø6 x 50	✓	6	7,5 - 9	TX30	10	35	35	--	--	--	--	--	--	--	--	--	80	45/57	35	26,0	15	78	39	90	45
	TXA06060	Ø6 x 60	✓							80	65/77	55	43,0	5	129	65	190	95					25				
	TXA06080	Ø6 x 80	✓											25									45				
	TXA06100	Ø6 x 100	✓											45									65				
	TXA08060	Ø8 x 60	✓	8	10,1 - 12	TX45	20	35	35	--	--	--	--	--	--	--	--	--	80	60/76	50	37,5	10	113	57	130	65
	TXA08080	Ø8 x 80	✓							80	75/91	65	50,5	15	152	76	220	110					30				
	TXA08120	Ø8 x 120	✓											25									40				
	TXA10070	Ø10 x 70	✓	10	12,3 - 14	TX50	30	50	40	--	--	--	--	--	--	--	--	--	80	65/85	55	41,5	15	125	63	140	70
	TXA10090	Ø10 x 90	✓							100	95/115	85	67,0	5	201	101	230	115					35				
	TXA10120	Ø10 x 120	✓											35									65				
TXT	TXT06040	Ø6 x 40	✓	6	7,5 - 9	TX30	10	35	35	--	--	--	--	--	--	--	--	--	80	45/57	35	26,0	5	78	39	90	45
	TXT06050	Ø6 x 50	✓							--	--	--	--	--	--	--	--	--					15				
	TXT06060	Ø6 x 60	✓							80	65/77	55	43,0	5	129	65	190	95					25				
	TXT06080	Ø6 x 80	✓											25									45				
	TXT06100	Ø6 x 100	✓											45									65				

General Installation parameters										Standard Installation depth ($h_{ef,std}$)									Reduced Installation depth ($h_{ef,red}$)							
Family	Code	Size	Assessed	Drill bit diameter	Fixture clearance hole	Spanner	Maximum torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole/ Depth for drill bit cleaning	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing(splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole/ Depth for drill bit cleaning	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing(splitting)	Critical edge distance (splitting)
[--]	[--]	[--]	ETA	d_0	d_f	SW/Tx	T_{inst}	S_{min}	C_{min}	h_{min}	h_1 / $h_{1,bit}$	h_{nom}	h_{ef}	t_{fix}	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$	h_{min}	h_1 / $h_{1,bit}$	h_{nom}	h_{ef}	t_{fix}	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$
				[mm]	[mm]	[--]	[Nm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
TXP	TXP06050	Ø6 x 50	✓	6	7,5 - 9	TX40	10	35	35	--	--	--	--	--	--	--	--	--	80	45/57	35	26,0	5	78	39	90	45
	TXP06060	Ø6 x 60	✓							80	65/77	55	43,0	5	129	65	190	95					15				
	TXP06080	Ø6 x 80	✓											25									35				
	TXP06100	Ø6 x 100	✓											45									55				
	TXP08060	Ø8 x 60	✓	8	10,1 - 12	TX45	20	35	35	80	75/91	65	50,5	5	152	76	220	110	80	60/76	50	37,5	20	113	57	130	65
	TXP08080	Ø8 x 80	✓											25									40				
TXF	TXF06040C	Ø6 x 40 (M8-M10)	✓	6	--	SW 13	10	35	35	--	--	--	--	--	--	--	--	--	80	45/57	35	26,0	5	78	39	90	45
TXD	TXD06050	Ø6 x 50	✓	6	7,5 - 9	SW 10	10	35	35	--	--	--	--	--	--	--	--	--	80	45/57	35	26,0	15	78	39	90	45
	TXD08075	Ø8 x 75	✓	8	10,1 - 12	SW 13	20	35	35	80	75/91	65	50,5	10	152	76	220	110	80	60/76	50	37,5	25	113	57	130	65
	TXD10075	Ø10 x 75	✓	10	12,3 - 14	SW 15	30	50	40	--	--	--	--	--	--	--	--	--	80	65/85	55	41,5	20	125	63	140	70
	TXD12100	Ø12 x 100	✓	12	14,4 - 16	SW 18	50	75	45	--	--	--	--	--	--	--	--	--	120	90/114	75	58,0	25	174	87	190	95

4. INSTALLATION PROCEDURE

4.1. CONCRETE INSTALLATION

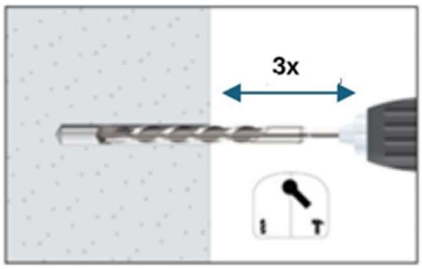


1. DRILLING

Check the concrete is well compacted and without significant porosity.
Suitable for dry, wet and flooded holes.
Use drill in hammer mode.
Drill according to specified depths in previous tables.

2. BLOW AND CLEAN

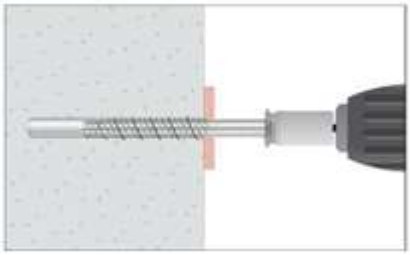
Clean the hole from dust and concrete remains.
Use blow pump and brush.



2. b) CLEAN WITH DRILL BIT

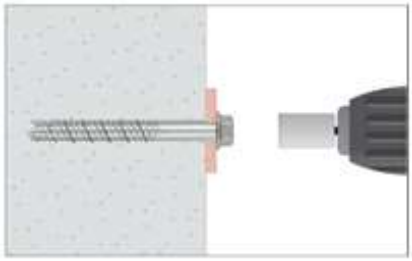
Alternatively, to 2.a):

- Upward installation direction: no cleaning is needed.
- Downward or horizontal installation direction: no cleaning is needed if drilling depth is h1,bit, and after the drilling process the drill bit is moved in and out of the hole for 3 times with both rotary and hammer modes of the drilling machine activated.



3. INSTALL

Select a powered impact wrench or a torque wrench that does not exceed the maximum torque indicated in previous tables.
Attach an appropriate size hex socket to the wrench.
Mount the screw anchor head in the socket.



4. APPLY THE TORQUE

Drive the anchor with an impact driver or a torque wrench through the fixture and into the hole until the anchor head washer comes in contact with the fixture. The anchor must be snug after installation. Do not spin the hex socket off the anchor to disengage.

5. RESISTANCES

Resistances in concrete class C20/25 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

Values *underlined and in italics* show Steel failure, **bold** values concrete failure and other indicate pull out failure.
1 KN ≈ 100 kg

5.1 CHARACTERISTIC RESISTANCE (STRUCTURAL APPLICATIONS) [kN]

General Parameter				Non-cracked concrete				Cracked concrete			
Family	Code	Size	ETA Assessed	Tension $N_{Rk,\,ucr}$		Shear $V_{Rk,\,ucr}$		Tension $N_{Rk,\,cr}$		Shear $V_{Rk,\,cr}$	
				($h_{ef,\,std}$)	($h_{ef,\,red}$)	($h_{ef,\,std}$)	($h_{ef,\,red}$)	($h_{ef,\,std}$)	($h_{ef,\,red}$)	($h_{ef,\,std}$)	($h_{ef,\,red}$)
TXE	TXE06040	Ø6 x 40	✓	--	5,50	--	*8,79*	--	1,00	--	**8,54**
	TXE06060	Ø6 x 60	✓	12,00	5,50	*8,79*	*8,79*	7,50	1,00	**10,20**	**8,54**
	TXE08070	Ø8 x 70	✓	**17,65**	10,00	*14,65*	*14,65*	**12,36**	5,00	**17,18**	**13,52**
	TXE08080	Ø8 x 80	✓								
	TXE08090	Ø8 x 90	✓								
	TXE08105	Ø8 x 105	✓								
	TXE10070	Ø10 x 70	✓	--	**13,15**	--	**24,07**	--	**9,21**	--	**16,85**
	TXE10090	Ø10 x 90	✓	**26,98**	**13,15**	*24,06*	**24,07**	**18,89**	**9,21**	*24,06*	**16,85**
	TXE10100	Ø10 x 100	✓								
	TXE10120	Ø10 x 120	✓								
	TXE12080	Ø12 x 80	✓	--	**21,73**	--	*34,84*	--	14,10	--	**33,31**
	TXE12110	Ø12 x 110	✓	**37,54**	**21,73**	*34,84*	*34,84*	**26,27**	14,10	*34,84*	**33,31**
TXA	TXA06050	Ø6 x 50	✓	--	5,50	--	*8,79*	--	1,00	--	**8,54**
	TXA06060	Ø6 x 60	✓	12,00	5,50	*8,79*	*8,79*	7,50	1,00	**10,20**	**8,54**
	TXA06080	Ø6 x 80	✓								
	TXA06100	Ø6 x 100	✓								
	TXA08060	Ø8 x 60	✓	--	10,00	--	*14,65*	--	5,00	--	**17,18**
	TXA08080	Ø8 x 80	✓	**17,65**	10,00	*14,65*	*14,65*	**12,36**	5,00	**13,52**	**17,18**
	TXA08120	Ø8 x 120	✓								
	TXA10070	Ø10 x 70	✓	--	**13,15**	--	**24,07**	--	**9,21**	--	**16,85**
	TXA10090	Ø10 x 90	✓	**26,98**	**13,15**	*24,06*	**24,07**	**18,89**	**9,21**	*24,06*	**16,85**
	TXA10120	Ø10 x 120	✓								
TXT	TXT06040	Ø6 x 40	✓	--	5,50	--	*8,79*	--	1,00	--	**8,54**
	TXT06050	Ø6 x 50	✓								
	TXT06060	Ø6 x 60	✓	12,00	5,50	*8,79*	*8,79*	7,50	1,00	**10,20**	**8,54**
	TXT06080	Ø6 x 80	✓								
	TXT06100	Ø6 x 100	✓								
TXP	TXP06050	Ø6 x 50	✓	--	5,50	--	*8,79*	--	1,00	--	**8,54**
	TXP06060	Ø6 x 60	✓	12,00	5,50	*8,79*	*8,79*	7,50	1,00	**10,20**	**8,54**
	TXP06080	Ø6 x 80	✓								
	TXP06100	Ø6 x 100	✓								
	TXP08060	Ø8 x 60	✓	--	10,00	--	*14,65*	--	5,00	--	**13,52**
	TXP08080	Ø8 x 80	✓	**17,65**	10,00	*14,65*	*14,65*	**12,36**	5,00	**17,18**	**13,52**
TXF	TXF06040C	Ø6 x 40 (M8-M10)	✓	--	5,50	--	--	--	1,00	--	--
TXD	TXD06050	Ø6 x 50	✓	--	5,50	--	*8,79*	--	1,00	--	**8,54**
	TXD08075	Ø8 x 75	✓	**17,65**	10,00	*14,65*	*14,65*	**12,36**	5,00	**17,18**	**13,52**
	TXD10075	Ø10 x 75	✓	--	**13,15**	--	**24,07**	--	**9,21**	--	**16,85**
	TXD12100	Ø12 x 100	✓	--	**21,73**	--	*34,84*	--	14,10	--	**33,31**

5.2 DESIGN RESISTANCE (STRUCTURAL APPLICATIONS) [kN]

General Parameter				Non-cracked concrete				Cracked concrete			
Family	Code	Size	ETA Assessed	Tension $N_{Rd,\ ucr}$		Shear $V_{Rd,\ ucr}$		Tension $N_{Rd,\ cr}$		Shear $V_{Rd,\ cr}$	
				($h_{ef,\ std}$)	($h_{ef,\ red}$)	($h_{ef,\ std}$)	($h_{ef,\ red}$)	($h_{ef,\ std}$)	($h_{ef,\ red}$)	($h_{ef,\ std}$)	($h_{ef,\ red}$)
TXE	TXE06040	Ø6 x 40	✓	--	3,06	--	7,03	--	0,56	--	**5,69**
	TXE06060	Ø6 x 60	✓	6,67	3,06	7,03	7,03	4,17	0,56	**6,80**	**5,69**
	TXE08070	Ø8 x 70	✓	**9,81**	5,56	11,72	11,72	**6,87**	2,78	**11,45**	**9,01**
	TXE08080	Ø8 x 80	✓								
	TXE08090	Ø8 x 90	✓								
	TXE08105	Ø8 x 105	✓								
	TXE10070	Ø10 x 70	✓	--	**7,31**	--	**16,04**	--	**5,11**	--	**11,23**
	TXE10090	Ø10 x 90	✓	**14,99**	**7,31**	19,25	**16,04**	**10,49**	**5,11**	19,25	**11,23**
	TXE10100	Ø10 x 100	✓								
	TXE10120	Ø10 x 120	✓								
	TXE12080	Ø12 x 80	✓	--	**12,07**	--	27,87	--	7,83	--	**22,21**
	TXE12110	Ø12 x 110	✓	**25,02**	**12,07**	27,87	27,87	**17,52**	7,83	27,87	**22,21**
TXA	TXA06050	Ø6 x 50	✓	--	3,06	--	7,03	--	0,56	--	**5,69**
	TXA06060	Ø6 x 60	✓	6,67	3,06	7,03	7,03	4,17	0,56	**6,80**	**5,69**
	TXA06080	Ø6 x 80	✓								
	TXA06100	Ø6 x 100	✓								
	TXA08060	Ø8 x 60	✓	--	5,56	--		--	2,78	--	**9,01**
	TXA08080	Ø8 x 80	✓	**9,81**	5,56	11,72	11,72	**6,87**	2,78	**11,45**	**9,01**
	TXA08120	Ø8 x 120	✓								
	TXA10070	Ø10 x 70	✓	--	**7,31**	--	**16,04**	--	**5,11**	--	**11,23**
	TXA10090	Ø10 x 90	✓	**14,99**	**7,31**	19,25	**16,04**	**10,49**	**5,11**	19,25	**11,23**
	TXA10120	Ø10 x 120	✓								
TXT	TXT06040	Ø6 x 40	✓	--	3,06	--	7,03	--	0,56	--	**5,69**
	TXT06050	Ø6 x 50	✓								
	TXT06060	Ø6 x 60	✓	6,67	3,06	7,03	7,03	4,17	0,56	**6,80**	**5,69**
	TXT06080	Ø6 x 80	✓								
	TXT06100	Ø6 x 100	✓								
TXP	TXP06050	Ø6 x 50	✓	--	3,06	--	7,03	--	0,56	--	**5,69**
	TXP06060	Ø6 x 60	✓	6,67	3,06	7,03	7,03	4,17	0,56	**6,80**	**5,69**
	TXP06080	Ø6 x 80	✓								
	TXP06100	Ø6 x 100	✓								
	TXP08060	Ø8 x 60	✓	--	5,56	--	11,72	--	2,78	--	**9,01**
	TXP08080	Ø8 x 80	✓	**9,81**	5,56	11,72	11,72	**6,87**	2,78	**11,45**	**9,01**
TXF	TXF06040C	Ø6 x 40 (M8-M10)	✓	--	3,06	--	--	--	0,56	--	--
TXD	TXD06050	Ø6 x 50	✓	--	3,06	--	7,03	--	0,56	--	**5,69**
	TXD08075	Ø8 x 75	✓	**9,81**	5,56	11,72	11,72	**6,87**	2,78	**11,45**	**9,01**
	TXD10075	Ø10 x 75	✓	--	**7,31**	--	**16,04**	--	**5,11**	--	**11,23**
	TXD12100	Ø12 x 100	✓	--	**12,07**	--	27,87	--	7,83	--	**22,21**

5.3 MAXIMUM LOADS RECOMMENDED (STRUCTURAL APPLICATIONS) [kN] (with γ_F= 1.4)

General Parameter				Non-cracked concrete				Cracked concrete			
Family	Code	Size	ETA Assessed	Tension $N_{rec, ucr}$		Shear $V_{rec, ucr}$		Tension $N_{rec, cr}$		Shear $V_{rec, cr}$	
				($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)
TXE	TXE06040	Ø6 x 40	✓	--	2,18	--	5,02	--	0,40	--	**4,07**
	TXE06060	Ø6 x 60	✓	4,76	2,18	5,02	5,02	2,98	0,40	**4,85**	**4,07**
	TXE08070	Ø8 x 70	✓	**7,01**	3,97	8,37	8,37	**4,90**	1,98	**8,18**	**6,44**
	TXE08080	Ø8 x 80	✓								
	TXE08090	Ø8 x 90	✓								
	TXE08105	Ø8 x 105	✓								
	TXE10070	Ø10 x 70	✓	--	**5,22**	--	**11,46**	--	**3,65**	--	**8,02**
	TXE10090	Ø10 x 90	✓	**10,71**	**5,22**	13,75	**11,46**	**7,49**	**3,65**	13,75	**8,02**
	TXE10100	Ø10 x 100	✓								
	TXE10120	Ø10 x 120	✓								
	TXE12080	Ø12 x 80	✓	--	**8,62**	--	19,91	--	5,60	--	**15,86**
	TXE12110	Ø12 x 110	✓	**17,87**	**8,62**	19,91	19,91	**12,51**	5,60	19,91	**15,86**
TXA	TXA06050	Ø6 x 50	✓	--	2,18	--	5,02	--	0,40	--	**4,07**
	TXA06060	Ø6 x 60	✓	4,76	2,18	5,02	5,02	2,98	0,40	**4,85**	**4,07**
	TXA06080	Ø6 x 80	✓								
	TXA06100	Ø6 x 100	✓								
	TXA08060	Ø8 x 60	✓	--	3,97	--	8,37	--	1,98	--	**6,44**
	TXA08080	Ø8 x 80	✓	**7,01**	3,97	8,37	8,37	**4,90**	1,98	**8,18**	**6,44**
	TXA08120	Ø8 x 120	✓								
	TXA10070	Ø10 x 70	✓	--	**5,22**	--	**11,46**	--	**3,65**	--	**8,02**
	TXA10090	Ø10 x 90	✓	**10,71**	**5,22**	13,75	**11,46**	**7,49**	**3,65**	13,75	**8,02**
	TXA10120	Ø10 x 120	✓								
TXT	TXT06040	Ø6 x 40	✓	--	2,18	--	5,02	--	0,40	--	**4,07**
	TXT06050	Ø6 x 50	✓								
	TXT06060	Ø6 x 60	✓	4,76	2,18	5,02	5,02	2,98	0,40	**4,85**	**4,07**
	TXT06080	Ø6 x 80	✓								
	TXT06100	Ø6 x 100	✓								
TXP	TXP06050	Ø6 x 50	✓	--	2,18	--	5,02	--	0,40	--	**4,07**
	TXP06060	Ø6 x 60	✓	4,76	2,18	5,02	5,02	2,98	0,40	**4,85**	**4,07**
	TXP06080	Ø6 x 80	✓								
	TXP06100	Ø6 x 100	✓								
	TXP08060	Ø8 x 60	✓	--	3,97	--	8,37	--	1,98	--	**6,44**
	TXP08080	Ø8 x 80	✓	**7,01**	3,97	8,37	8,37	**4,90**	1,98	**8,18**	**6,44**
TXF	TXF06040C	Ø6 x 40 (M8-M10)	✓	--	2,18	--	--	--	0,40	--	--
TXD	TXD06050	Ø6 x 50	✓	--	2,18	--	5,02	--	0,40	--	**4,07**
	TXD08075	Ø8 x 75	✓	**7,01**	3,97	8,37	8,37	**4,90**	1,98	**8,18**	**6,44**
	TXD10075	Ø10 x 75	✓	--	**5,22**	--	**11,46**	--	**3,65**	--	**8,02**
	TXD12100	Ø12 x 100	✓	--	**8,62**	--	19,91	--	5,60	--	**15,86**

PULL OUT INCREASING FACTOR FOR TENSION LOADS IN HIGH RESISTANCE CONCRETE Ψ_c

Diameter	Ø6		Ø8		Ø10		Ø12	
Installation depth	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, 1}$)	($h_{ef, 3}$)	($h_{ef, red}$)	($h_{ef, std}$)
C30/37	1,12	1,06	1,10	1,08	1,08	1,08	1,10	1,08
C40/50	1,21	1,10	1,17	1,15	1,14	1,14	1,18	1,15
C50/60	1,29	1,14	1,23	1,19	1,19	1,18	1,25	1,19

6. OFFICIAL DOCUMENTATION

The following documents are available on our official website www.indexfix.com:

- European assessment ETA 20/0046 for Installation in cracked and non-cracked concrete according to guideline EAD 330232-02-0601, option 1, from Ø6 to Ø12.
- Declaration of performance DoP THE.
- VdS certificate CEA 4001:2021-01(07) *Guidelines for sprinklers systems. Planning and installation for applications of water extinguising systems on concrete elements* from Ø8 to Ø12.
- Available in the anchor design software INDEXcal.