ETA-Danmark A/S
Göteborg Plads 1
DK-2150 Nordhavn
Tel. +45 72 24 59 00
Internet www.etadanmark.dk

Authorised and notified according to Article 29 of the Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011

European Technical Assessment ETA-26/0113 of 2026/02/25

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S	
Trade name of the construction product:	J-FIX Q SPIN
Product family to which the above construction product belongs:	Bonded capsule anchor for use in concrete: Sizes M8, M10, M12, M14, M16, M20, M22, M24 and M30.
Manufacturer:	Hexstone Ltd T/A JCP Construction Products Opal Way, Stone Business Park Stone Staffordshire, ST15 0SW United Kingdom
Manufacturing plant:	Plant 1, The Netherlands Plant 2, The Netherlands
This European Technical Assessment contains:	16 pages including 9 annexes which form an integral part of the document
This European Technical Assessment is issued in accordance with Article 95(4) of Regulation (EU) 2024/3110, on the basis of:	EOTA EAD 330499-02-0601, “Bonded fasteners for use in concrete”
This version replaces:	-

II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of product

The Hexstone J-FIX Q SPIN adhesive system is a bonded anchor (capsule type) for concrete consisting of a glass capsule with a threaded rod with hexagon nut and washer of sizes M8, M10, M12, M14, M16, M20, M22, M24 and M30.
The standard threaded rod can be made of zinc plated carbon steel, stainless steel or high corrosion resistant stainless steel.
The glass capsule is placed into a rotary/percussion previously drilled hole and the threaded rod is driven by machine with simultaneous hammering and turning. The anchor rod is anchored via the bond between anchor rod, chemical mortar and concrete.

The product specification is given in Annex A1.

The characteristic material values, dimensions and tolerances of the anchors not indicated in Annexes shall correspond to the respective values laid down in the technical documentation[1] of this European Technical Assessment.

2 Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

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 provisions made in this European Technical Assessment are based on an assumed intended working life of the anchor of 50 years.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or Assessment Body, 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.

1 The technical documentation of this European Technical Assessment is deposited at ETA-Danmark and, as far as relevant for the tasks of the Notified bodies involved in the attestation of conformity procedure, is handed over to the notified bodies.

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

Characteristic	Assessment of characteristic
3.1 Mechanical resistance and stability (BWR1)	
Characteristic resistance to tension load (static and quasi-static loading)	
Resistance to steel failure	**See Annex C**
Resistance to combined pull-out and concrete failure	**See Annex C**
Resistance to pull-out failure	**See Annex C**
Resistance to concrete cone failure	**See Annex C**
Edge distance to prevent splitting under load	**See Annex C**
Robustness	**See Annex C**
Maximum installation torque	**See Annex B**
Installation torque	**See Annex B**
Minimum edge distance and spacing	**See Annex B**
Characteristic resistance to shear load (static and quasi-static loading)	
Resistance to steel failure	**See Annex C**
Resistance to pry-out failure	**See Annex C**
Resistance to concrete edge failure	**See Annex C**
Displacements under short-term and long-term loading	
Displacements under short-term and long-term loading	**See Annex C**
Resistance in steel fibre reinforced concrete	No Performance assessed
Characteristic resistance and displacements for seismic performance categories C1 and C2	
Resistance to tension for seismic performance category C1	No performance assessed
Resistance to tension and displacements for seismic performance category C2	No performance assessed
Resistance to shear load for seismic performance category C1	No performance assessed
Resistance to shear load and displacements for seismic performance categories C2	No performance assessed

Characteristic	Assessment of characteristic
3.2 Safety in case of fire (BWR2)	
Reaction to fire	Class A1
	Resistance to fire
Fire resistance to steel failure under tension loading	No performance assessed
Fire resistance to bond failure under tension loading	No performance assessed
Fire resistance to steel failure under shear loading	No performance assessed
3.3 Hygiene, health and the environment (BWR3)	
Content, emission and/or release of dangerous substances	No performance assessed

See additional information in section 3.9.

3.9 General aspects related to the performance of the product.

The European Technical Assessment is issued for the product on the basis of agreed data/information, deposited with ETA-Danmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to ETA-Danmark before the changes are introduced. ETA-Danmark will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

The assessment of fitness of the anchor for the intended use in relation to the requirements for mechanical resistance and stability in the sense of the Basic Requirements 1 has been made in accordance with EAD 330499-02-0601, “Bonded fasteners for use in concrete” option 1 and 7.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base.

4.1 AVCP system

According to the decision 96/582/EC of the European Commission, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 1.

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

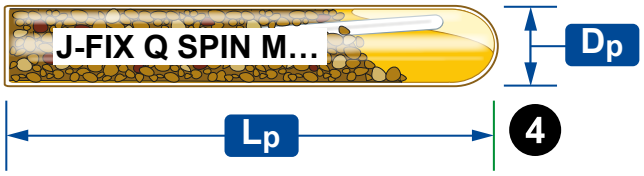
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking.

Issued in Copenhagen on 2026-02-25 by

Thomas Bruun
Managing Director, ETA-Danmark

J-FIX Q Spin In Capsules

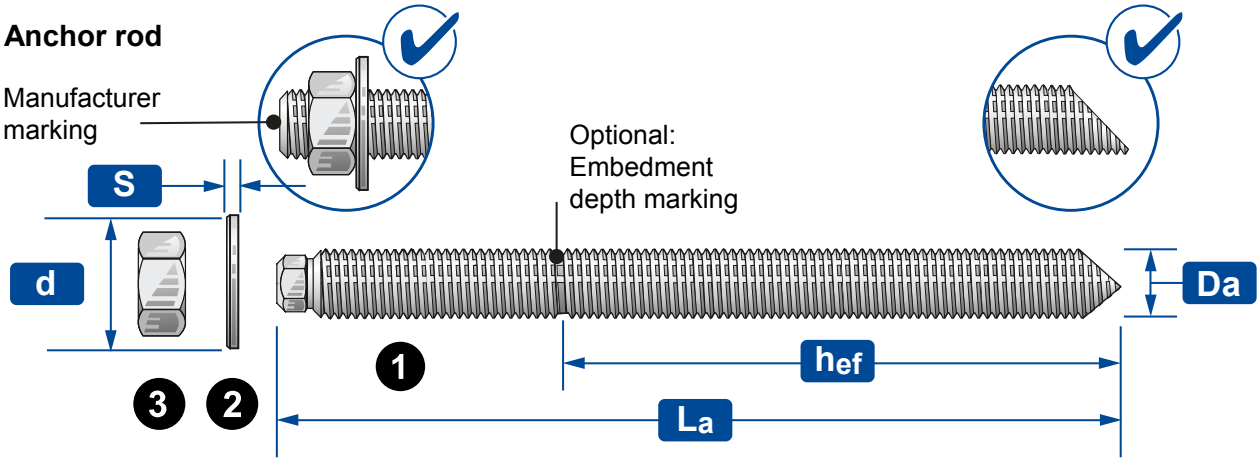
Mortar Capsule J-FIX Q SPIN



Marking

Manufacturer:	JCP Construction Products
Capsule type:	J-FIX Q SPIN
Capsule size:	M…

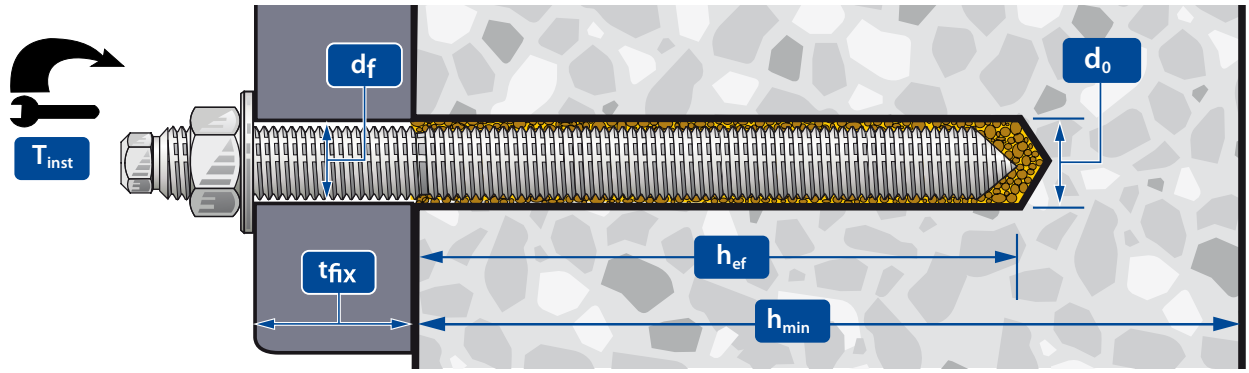
Anchor rod



Marking anchor rod: **e.g. B16A**

Manufacturer	B		
Size	8, 10, 12, 14, 16, 20, 22, 24, 30		
Material			
Galvanised property class 5.8 Galvanised property class 8.8 Hot dipped galvanised property class 5.8 Hot dipped galvanised property class 8.8	A B H I	Stainless steel 1.4401, property class 70 Stainless steel 1.4404, property class 70 Stainless steel 1.4529, property class 70 Stainless steel 1.4565, property class 70 Stainless steel 1.4571, property class 70 Stainless steel 1.4401, property class 80 Stainless steel 1.4404, property class 80 Stainless steel 1.4571, property class 80	C K E R D M P O

Installation



J-FIX Q Spin In Capsules	**Annex A1**
System Description and Installation	

J-FIX Q Spin In Capsules

Table A1: Materials

Part	Description	Material			
1	Threaded rod	Carbon steel property class 5.8 or 8.8 EN ISO 898-1		Stainless steel A2-50, A2-70 or A2-80 A4-50, A4-70 or A4-80 EN ISO 3506-1	High corrosion resistant steel 1.4529 or 1.4565 property class 50, 70, 80 EN ISO 3506-1
		Galvanised steel ≥ 5µm acc. to EN ISO 4042	Hot dip galvanised steel EN ISO 10684		
2	Washer	Carbon steel		Stainless steel A2 or A4	High corrosion resistant steel 1.4529 or 1.4565
		Galvanised steel ≥ 5µm acc. to EN ISO 4042	Hot dip galvanised steel EN ISO 10684		
		EN ISO 887 or EN ISO 7089 up to EN ISO 7094			
3	Hexagon nut	Carbon steel property class 4 to 8 EN ISO 20898-2		Stainless steel A2-50, A2-70 or A2-80 A4-50, A4-70 or A4-80 EN ISO 3506-2	High corrosion resistant steel 1.4529 or 1.4565 property class 70 EN ISO 3506-2
		Galvanised steel ≥ 5µm acc. to EN ISO 4042	Hot dip galvanised steel EN ISO 10684		
		EN ISO 4032 or EN ISO 4034			
4	Glass capsule	Glass Quartz Resin Hardener			

Table A2: Dimensions in mm

Part	Description		M8	M10	M12	M12 L	M14	M16	M16 L	M20	M20 L	M22	M24	M24 L	M30
1	Threaded rod	D_a	M8	M10	M12		M14	M16		M20		M22	M24		M30
		L_a ≥	95	100	120	175	135	140	205	190	275	210	235	340	320
		h_{ef}	80	90	110	165	120	125	190	170	255	190	210	315	280
2	Washer	S	1.6	2.1	2.5		2.5	3.0		3.0		3.0	4.0		4.0
		d	16	21	24		28	30		37		39	44		56
3	Hexagon nut	SW	13	17	19		22	24		30		32	36		46
4	Glass capsule	D_p	9	11	13		15	17		17		22	22		25
		L_p	80	80	95	125	95	95	125	160	250	160	175	245	230

Specifications of intended use

Table B1: Overview use categories and performance categories

Use conditions		J-FIX Q Spin In Capsules with …	
		Threaded rods 	
hammer drilling or compressed air drilling mode. 		✓	
diamond core drilling 		✓	
Static and quasi static loading, in non-cracked concrete		M8 to M30 Tables C1, C2, C3, C4, C5, C6, C7	
Static and quasi static loading, in cracked concrete		M10 to M24 Tables C1, C2, C3, C4, C5, C6, C7	
Use category: dry, wet or flooded concrete		✓	
Installation temperature (minimum)		mortar +5°C, concrete -20°C	
In-service temperature	Temperature range I:	-40°C to +40°C	(max long term temperature +24°C and max short term temperature +40°C)
	Temperature range II:	-40°C to +80°C	(max long term temperature +50°C and max short term temperature +80°C)

Base materials:

- Reinforced or unreinforced normal weight concrete according to EN 206-1:2000-12.
- Strength classes C20/25 to C50/60 according to EN 206-1:2000-12.
- Maximum chloride concrete of 0,40% (CL 0.40) related to the cement content according to EN 206-1:2000-12.

Use conditions (Environmental conditions):

- Structures subject to dry internal conditions (zinc coated steel, stainless steel(1) or high corrosion resistant steel(2)).
- Structures subject to all other conditions according to EN 1993-1-4:2006+A1:2015 corresponding CRC (Corrosion Resistance Class):
  (1)Stainless steel A2 according to EN 1993-1-4, Annex A4, Table A1: CRC II
  (1)Stainless steel A4 according to EN 1993-1-4, Annex A4, Table A1: CRC III
  (2)High corrosion resistance steel HCR according to EN 1993-1-4, Annex A4, Table A1: CRC V
- Overhead installations are permitted

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 forces to be transmitted. 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 under static or quasi-static actions are designed in accordance with EN 1992-4-5.

Table B2: Installation parameters

Anchor size			M8	M10	M12	M12 L	M14	M16	M16 L	M20	M20 L	M22	M24	M24 L	M30
Nominal drill hole Ø	d_0	[mm]	10	12	14		16	18		22		24	26		32
Cutting diameter	$d_{cut} \leq$	[mm]	10.5	12.5	14.5		16.5	18.5		22.5		24.5	26.5		32.5
Depth of drill hole	h_0	[mm]	80	90	110	165	120	125	190	170	255	190	210	315	280
Ø of clearance hole in the fixture[1)]	d_f	[mm]	9	12	14		16	18		22		24	26		33
Steel brush Ø	D	[mm]	11	13	16		18	20		24		26	28		34
Torque moment	T_{inst}	[Nm]	10	20	40		60	80		120		135	180		300

[1)] for larger clearance hole in the fixture see EN 1992-4:2018, section 6.2.2.2.

Steel brush and installation procedure

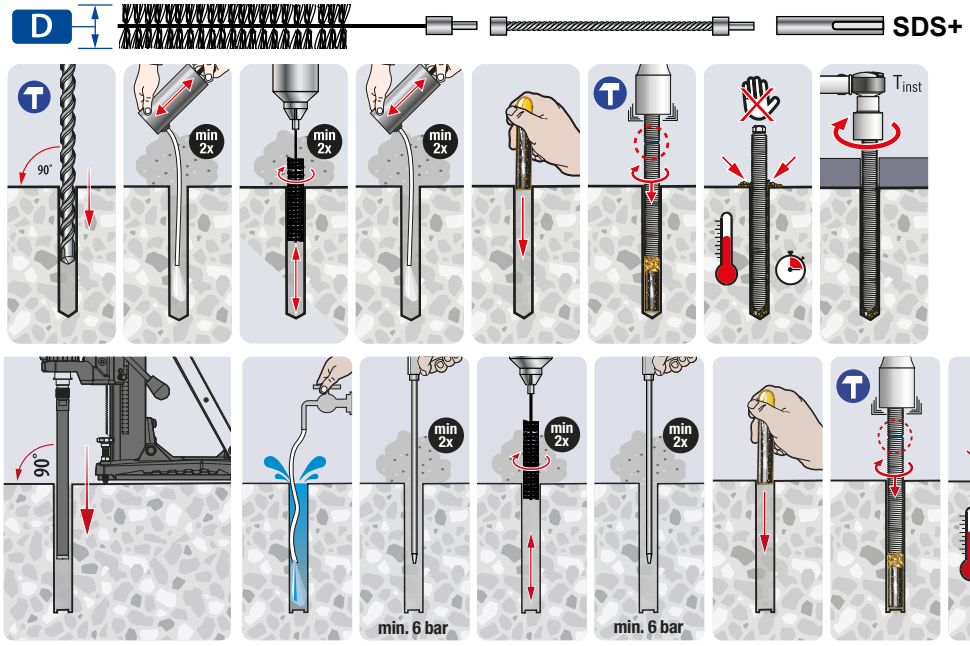


Table B3: Minimum member thickness, edge distance and spacing

Anchor size			M8	M10	M12	M12 L	M14	M16	M16 L	M20	M20 L	M22	M24	M24 L	M30
Min. member thickness	h_{min}	[mm]	110	120	140	195	150	160	225	220	300	240	260	370	340
Min. edge distance	c_{min}	[mm]	40	45	55	55	60	65	65	85	85	95	105	105	140
Min. spacing	s_{min}	[mm]	40	45	55	55	60	65	65	85	85	95	105	105	140

Table B4: Minimum curing time

Concrete temperature	Minimum curing time	
	in dry concrete	in wet concrete
≥ - 20 °C	30 hrs.	60 hrs.
≥ - 10 °C	10 hrs.	20 hrs.
≥ - 5 °C	5 hrs.	10 hrs.

Concrete temperature	Minimum curing time	
	in dry concrete	in wet concrete
≥ + 5 °C	60 min.	120 min.
≥ + 20 °C	20 min.	40 min.
≥ + 30 °C	10 min.	20 min.

J-FIX Q Spin In Capsules

Annex B2

Installation data

Table C1: Characteristic values of steel resistance to tension loads.										
Anchor size			**M8**	**M10**	**M12**	**M14**	**M16**	**M20**	**M22**	**M24**	**M30**
Cross section area	A_s	[mm^2]	36,6	58	84,3	115	157	245	303	353	561
Characteristic resistance, Steel failure [1]											
Steel, Property class 5.8	$N_{Rk,S}$	[kN]	18	29	42	57	78	122	151	176	280
Steel, Property class 8.8			29	46	67	92	125	196	242	282	448
Stainless steel A2, A4 and HCR, class 50			18	29	42	57	78	122	151	176	280
Stainless steel A2, A4 and HCR, class 70			25	40	59	80	109	171	212	247	392
Stainless steel A2, A4 and HCR, class 80			29	46	67	92	125	196	242	282	448
Partial factor [2]											
Steel, Property class 5.8 & 8.8	γ_{Ms}	[-]	1.5								
Stainless steel A2, A4 and HCR, class 50			2.86								
Stainless steel A2, A4 and HCR, class 70			1.87								
Stainless steel A2, A4 and HCR, class 80			1.60								

Table C2: Characteristic values of steel resistance to shear loads.										
Anchor size			**M8**	**M10**	**M12**	**M14**	**M16**	**M20**	**M22**	**M24**	**M30**
Steel failure without lever arm [1]											
Steel, Property class 5.8	$V_{Rk,S}$	[kN]	9	15	21	29	39	61	76	88	140
Steel, Property class 8.8			15	23	34	46	63	98	121	141	224
Stainless steel A2, A4 and HCR, class 50			9	15	21	29	39	61	76	88	140
Stainless steel A2, A4 and HCR, class 70			13	20	30	40	55	86	106	124	196
Stainless steel A2, A4 and HCR, class 80			15	23	34	46	63	98	121	141	224
Steel failure with lever arm [1]											
Steel, Property class 5.8	$M_{Rk,S}$	[Nm]	19	37	65	105	166	324	448	560	1123
Steel, Property class 8.8			30	60	105	168	266	519	716	898	1799
Stainless steel A2, A4 and HCR, class 50			19	37	66	104	167	325	448	560	1123
Stainless steel A2, A4 and HCR, class 70			26	52	92	146	232	454	627	784	1574
Stainless steel A2, A4 and HCR, class 80			30	59	105	167	266	519	717	896	1799
Partial factor [2]											
Steel, Property class 5.8 & 8.8	γ_{Ms}	[-]	1.25								
Stainless steel A2, A4 and HCR, class 50			2.38								
Stainless steel A2, A4 and HCR, class 70			1.56								
Stainless steel A2, A4 and HCR, class 80			1.33								

[1] Values are only valid for given section area A_s.

[2] In absence of other national regulations

J-FIX Q Spin In Capsules

Annex C1

Performances
Characteristic values of steel resistance
to tension and shear loads under static and quasi-static action

Table C3: Characteristic values of resistance to tension loads for Hammer Drilling (HD)														
Anchor size			**M8**	**M10**	**M12**	**M12 L**	**M14**	**M16**	**M16 L**	**M20**	**M20 L**	**M22**	**M24**	**M24 L**	**M30**
Steel failure															
Characteristic resistance	$N_{Rk,S}$	[kN]	See table C1												
Partial safety factor	γ_{Ms} 1)	[-]	See table C1												
Combined Pull-out and Concrete cone failure															
Characteristic bond resistance in non-cracked concrete C20/25															
Temp. range I: 40°C/24°C 2)	$\tau_{Rk,ucr}$	[N/mm²]	12							11					10
Temp. range II: 80°C/50°C 2)	$\tau_{Rk,ucr}$	[N/mm²]	10							9.5					9.0
Increasing factors for non- cracked concrete.	$\Psi_{c,ucr}$	C25/30	1.06												
		C30/37	1.14												
		C35/45	1.22												
		C40/50	1.26												
		C45/55	1.30												
		C50/60	1.34												
Characteristic bond resistance in cracked concrete C20/25															
Temp. range I: 40°C/24°C 2)	$\tau_{Rk,cr}$	[N/mm²]	N.A.	6			N.A.	6		7		N.A.	7.5		N.A.
Temp. range II: 80°C/50°C 2)	$\tau_{Rk,cr}$	[N/mm²]		5				5		6			6.5		
Reduction factor Ψ^0_{sus} in cracked and uncracked concrete C20/25															
Temp. range I: 40°C/24°C 2)	Ψ^0_{sus}	[-]	0,72												
Temp. range II: 80°C/50°C 2)			0,69												
Increasing factors for cracked concrete.	$\Psi_{c,cr}$	C25/30	N.A.	1.05			N.A.	1.05		1.04		N.A.	1.03		N.A.
		C30/37		1.09				1.09		1.08			1.05		
		C35/45		1.12				1.12		1.11			1.08		
		C40/50		1.16				1.16		1.13			1.09		
		C45/55		1.19				1.19		1.16			1.11		
		C50/60		1.21				1.21		1.18			1.13		
Effective anchorage depth	h_{ef}	[mm]	80	90	110	165	120	125	190	170	255	190	210	315	280
Concrete cone failure															
Non-cracked concrete	k_{ucr}	[-]	11												
Cracked concrete	k_{cr}	[-]	7.7												
Edge distance	$c_{cr,N}$	[-]	1.5 h_{ef}												
Spacing	$s_{cr,N}$	[-]	3 h_{ef}												
Splitting failure															
Char. edge distance	$c_{cr,sp}$	[mm]	160	135	140	205	150	160	240	215	320	240	265	395	350
Char. spacing	$s_{cr,sp}$	[mm]	$2 \cdot c_{cr,sp}$												
Installation factor															
Partial safety factor dry/wet holes	γ_{inst}	[-]	1.0												1.2
Partial safety factor flooded holes	γ_{inst}	[-]	N.A.												

1) In absence of other national regulations

2) Maximum short and long term temperatures

J-FIX Q Spin In Capsules

Annex C2

Performances
Characteristic values of tension loads under static and quasi-static action

Table C4: Characteristic values of resistance to tension loads for Diamond core Drilling (DD)												
Anchor size			**M10**	**M12**	**M12 L**	**M16**	**M16 L**	**M20**	**M20 L**	**M24**	**M24 L**	**M30**
Steel failure												
Characteristic resistance	$N_{Rk,S}$	[kN]	See table C1									
Partial safety factor	γ_{Ms} 1)	[-]	See table C1									
Combined Pull-out and Concrete cone failure												
Characteristic bond resistance in non-cracked concrete C20/25												
Temp. range I: 40°C/24°C 2)	$\tau_{Rk,ucr}$	[N/mm²]	12					11				10
Temp. range II: 80°C/50°C 2)	$\tau_{Rk,ucr}$	[N/mm²]	10					9.5				9.0
Increasing factors for non- cracked concrete.	$\Psi_{c,ucr}$	C25/30	1.06									
		C30/37	1.14									
		C35/45	1.22									
		C40/50	1.26									
		C45/55	1.30									
		C50/60	1.34									
Characteristic bond resistance in cracked concrete C20/25												
Temp. range I: 40°C/24°C 2)	$\tau_{Rk,cr}$	[N/mm²]	6			6.5		7				N.A.
Temp. range II: 80°C/50°C 2)	$\tau_{Rk,cr}$	[N/mm²]	5.5			6		6				
Reduction factor Ψ^0_{sus} in cracked and uncracked concrete C20/25												
Temp. range I: 40°C/24°C 2)	Ψ^0_{sus}	[-]	0,72									
Temp. range II: 80°C/50°C 2)			0,69									
Increasing factors for cracked concrete.	$\Psi_{c,cr}$	C25/30	1.05			1.05		1.04		1.03		N.A.
		C30/37	1.09			1.09		1.08		1.05		
		C35/45	1.12			1.12		1.11		1.08		
		C40/50	1.16			1.16		1.13		1.09		
		C45/55	1.19			1.19		1.16		1.11		
		C50/60	1.21			1.21		1.18		1.13		
Effective anchorage depth	h_{ef}	[mm]	90	110	165	125	190	170	255	210	315	280
Concrete cone failure												
Non-cracked concrete	k_{ucr}	[-]	11									
Cracked concrete	k_{cr}	[-]	7.7									
Edge distance	$c_{cr,N}$	[-]	1.5 h_{ef}									
Spacing	$s_{cr,N}$	[-]	3 h_{ef}									
Splitting failure												
Char. edge distance	$c_{cr,sp}$	[mm]	135	140	205	160	240	215	320	265	395	350
Char. spacing	$s_{cr,sp}$	[mm]										
Installation factor												
Partial safety factor dry/wet holes	γ_{inst}	[-]	1.0									
Partial safety factor flooded holes	γ_{inst}	[-]	1.4									N.A.

1) In absence of other national regulations

2) Maximum short and long term temperatures

J-FIX Q Spin In Capsules

Annex C3

Performances
Characteristic values of shear loads under static and quasi-static action

Table C5: Characteristic values of resistance to shear loads.															
Anchor size			**M8**	**M10**	**M12**	**M12 L**	**M14**	**M16**	**M16 L**	**M20**	**M20 L**	**M22**	**M24**	**M24 L**	**M30**
Steel failure without lever arm															
Characteristic resistance	$V_{Rk,S}$	[kN]	See table C2												
Partial safety factor	γ_{Ms}	[-]	See table C2												
Ductility factor	k_7	[-]	0.8												
Steel failure with lever arm															
Characteristic resistance	$M_{Rk,S}$	[Nm]	See table C2												
Partial safety factor	γ_{Ms}	[-]	See table C2												
Concrete pryout failure															
Factor	k_8	[-]	2.0												
Partial safety factor	γ_{inst}	[-]	1.0												
Concrete edge failure															
Partial safety factor	γ_{inst}	[-]	1.0												

Table C6: Displacements under tension loads Hammer Drilling

Anchor size			M8	M10	M12	M12 L	M14	M16	M16 L	M20	M20 L	M22	M24	M24 L	M30
Tension load	N	[kN]	9.6	13.5	19.7	29.6	25.1	29.9	45.5	48.3	72.5	59.4	71.6	107.4	94.2
Displacement Non-cracked concrete	δ_{N0}	[mm]	0.17	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.21
	$\delta_{N\infty}$	[mm]	0.50												
Tension load	N	[kN]	N.A.	13.5	19.7	29.6	N.A.	29.9	45.5	48.3	72.5	N.A.	71.6	107.4	N.A.
Displacement Cracked concrete	δ_{N0}	[mm]		0.49	0.49	0.49		0.49	0.49	0.49	0.49		0.49	0.49	
	$\delta_{N\infty}$	[mm]	0.54												

Table C7: Displacements under tension loads Diamond core Drilling

Anchor size			M8	M10	M12	M12 L	M14	M16	M16 L	M20	M20 L	M22	M24	M24 L	M30
Tension load	N	[kN]	N.A.	13.5	19.7	29.6	N.A.	29.9	45.5	48.3	72.5	N.A.	71.6	107.4	94.2
Displacement Non-cracked concrete	δ_{N0}	[mm]		0.19	0.19	0.19		0.19	0.19	0.27	0.27		0.27	0.27	0.36
	$\delta_{N\infty}$	[mm]		0.50				0.50					0.50		
Tension load	N	[kN]		13.5	19.7	29.6		29.9	45.5	48.3	72.5		71.6	107.4	N.A.
Displacement Cracked concrete	δ_{N0}	[mm]		0.57	0.48	0.48		0.29	0.29	0.36	0.36		0.27	0.27	
	$\delta_{N\infty}$	[mm]		0.54				0.54					0.54		

Table C8: Displacements under shear loads

Anchor size			M8	M10	M12	M12 L	M14	M16	M16 L	M20	M20 L	M22	M24	M24 L	M30
Shear load	V	[kN]	5.2	8.3	12.0	12.0	16.4	22.4	22.4	35.0	35.0	43.3	50.4	50.4	80.1
	δ_{N0}	[mm]	2.0	2.1	2.2	2.2	2.3	2.5	2.5	2.6	2.6	2.8	2.8	2.8	3.0
Displacement	$\delta_{N\infty}$ "	[mm]	2.9	3.1	3.3	3.3	3.5	3.7	3.7	4.0	4.0	4.1	4.1	4.1	4.4