

TRUTEK TCM 100 INJECTION RESIN Pure Epoxy

Usage:

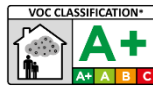
- Installation of threaded studs
- Approved for cracked and non-cracked concrete
- Can be used in dry wet and flooded holes
- Class A1 reaction to fire
- High loading capacity
- C1 & C2 Seismic performance

Advantages:

- Suitable for high loads featuring large diameters and deep embedments.
- Longer working times make it suitable for large holes, and high temperatures.
- No shrinkage, good for large diameter fixings.
- Use in wet or flooded environments and fixing holes, or underwater.
- High durability, resistance to chemicals.
- Used for diamond drilled holes.
- Solvent free resin.
- Fixings in concrete, wood, or other high strength materials.

Physical Properties:

- Mixed Colour - Red or Grey
- Density - 1.45 kg/m³
- Compressive Strength - 95.0 (MPa) (EN 196)
- Tensile Strength - 21.5 N/mm² (ASTM D638)
- Flexural Strength - 34.0 N/mm² (EN 196)



Concrete Temperature	Gel / working time	Minimum Curing time
+5°C	70 min	60 hrs
+10°C	32 min	40 hrs
+15°C	28 min	30 hrs
+20°C	25 min	18 hrs
+25°C	22 min	17 hrs
+30°C	20 min	16 hrs
+40°C	18 min	12 hrs

Concrete Ranges:	C20/25 to C0/60 according to EN 206:2013+A1:2016
Certification:	European Technical Assessment ETA 20/0059 & 20/0150

Installation Data

Threaded Stud Diameter			M8	M10	M12	M16	M20	M24	M30
Nominal drill hole diameter	d _o	[mm]	10	12	14	18	22	24	35
Diameter of steel brush	d _b	[mm]	12	14	16	20	26	30	37
Minimum Effective Anchorage Depth	h _{ef,min}	[mm]	60	60	70	80	90	96	120
Maximum Effective Anchorage Depth	h _{ef,max}	[mm]	160	200	240	320	400	480	600
Standard Effective Anchorage Depth	h _{ef,std}	[mm]	80	90	110	125	170	210	280
Fixture Clearance Hole	d _f	[mm]	9	12	14	18	22	26	33
Minimum Concrete Thickness	h _{min}	[mm]	h _{ef} + 30mm ≥ 100mm				h _{ef} + 2d _o		
Spacing - Tension (Standard Embedment) 5.8 studs	S _{std}	[mm]	40	105	160	375	510	630	780
Spacing - Tension (Standard Embedment) 8.8 studs	S _{std}	[mm]	155	270	330	375	510	630	780
Spacing - Tension (Standard Embedment) A4 studs	S _{std}	[mm]	45	155	220	375	510	630	780
Edge Distance - Tension (Standard Embedment) 5.8 Studs	C _{std}	[mm]	80	80	110	190	255	315	390
Edge Distance - Tension (Standard Embedment) 8.8 Studs	C _{std}	[mm]	95	135	165	190	255	315	390
Edge Distance - Tension (Standard Embedment) A4 Studs	C _{std}	[mm]	55	100	130	190	255	315	390
Edge Distance - Shear (Standard Embedment) 5.8 Studs	C _{v,std}	[mm]	75	105	125	190	250	345	560
Edge Distance - Shear (Standard Embedment) 8.8 Studs	C _{v,std}	[mm]	105	140	180	270	420	605	975
Edge Distance - Shear (Standard Embedment) A4 Studs	C _{v,std}	[mm]	80	110	140	210	275	400	640
Minimum Spacing	S _{min}	[mm]	40	40	60	75	95	115	140
Minimum Edge Distance	C _{min}	[mm]	35	40	45	50	60	65	80
Maximum Torque Moment	T _{inst}	[Nm]	10	20	40	60	120	160	300

Load Data

Standard Embedment Depth **Grade 5.8 Studs** *(C20/25 Non-Cracked concrete, Hammer Drilling and Compressed Air Drilling)*

Threaded Stud Diameter				M8	M10	M12	M16	M20	M24	M30
Tensile Characteristics Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	18.0	29.0	42.0	68.7	109.0	149.7	206.2
	Flooded bore holes		[kN]	18.0	29.0	42.0	68.7	109.0	149.7	206.2
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	18.0	29.0	42.0	68.7	109.0	149.7	206.2
	Flooded bore holes		[kN]	18.0	29.0	42.0	68.7	109.0	149.7	206.2
Tensile Design Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	12.0	19.3	28.0	45.8	72.6	99.8	137.5
	Flooded bore holes		[kN]	12.0	19.3	28.0	38.2	51.9	71.2	98.2
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	12.0	19.3	28.0	45.8	72.6	99.8	137.5
	Flooded bore holes		[kN]	12.0	19.3	28.0	38.2	51.9	71.2	98.2
Tensile Recommended Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	8.6	13.8	20.0	32.7	51.9	71.3	98.2
	Flooded bore holes		[kN]	8.6	13.8	20.0	27.3	37.1	50.9	70.1
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	8.6	13.8	20.0	32.7	51.9	71.3	98.2
	Flooded bore holes		[kN]	8.6	13.8	20.0	27.3	37.1	50.9	70.1

Standard Embedment Depth **Grade 8.8 Studs** *(C20/25 Non-Cracked concrete, Hammer Drilling and Compressed Air Drilling)*

Tensile Characteristics Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	29.0	42.0	56.7	68.7	109.0	149.7	206.2
	Flooded bore holes		[kN]	29.0	42.0	56.7	68.7	109.0	149.7	206.2
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	29.0	42.0	56.7	68.7	109.0	149.7	206.2
	Flooded bore holes		[kN]	29.0	42.0	56.7	68.7	109.0	149.7	206.2
Tensile Design Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	19.3	28.0	37.8	45.8	72.6	99.8	137.5
	Flooded bore holes		[kN]	19.3	23.3	31.5	38.2	51.9	71.2	98.2
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	19.3	28.0	37.8	45.8	72.7	99.8	137.5
	Flooded bore holes		[kN]	19.3	23.3	31.5	38.2	51.9	71.2	98.2
Tensile Recommended Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	13.8	20.0	27.0	32.7	51.9	71.3	98.2
	Flooded bore holes		[kN]	13.8	16.6	22.5	27.3	37.1	50.9	70.1
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	13.8	20.0	27.0	32.7	51.9	71.3	98.2
	Flooded bore holes		[kN]	13.8	16.6	22.5	27.3	37.1	50.9	70.1

Standard Embedment Depth **A4/70 Stainless Steel** *(C20/25 Non-Cracked concrete, Hammer Drilling and Compressed Air Drilling)*

Tensile Characteristics Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	26.0	41.0	59.0	68.7	109.0	149.7	206.2
	Flooded bore holes		[kN]	26.0	41.0	59.0	68.7	109.0	149.7	206.2
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	26.0	41.0	59.0	68.7	109.0	149.7	206.2
	Flooded bore holes		[kN]	26.0	41.0	59.0	68.7	109.0	149.7	206.2
Tensile Design Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	13.9	21.9	31.5	45.8	72.6	99.8	137.5
	Flooded bore holes		[kN]	13.9	21.9	31.5	38.2	51.9	71.2	98.2
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	13.9	21.9	31.5	45.8	72.6	99.8	137.5
	Flooded bore holes		[kN]	13.9	21.9	31.5	38.2	51.9	71.2	98.2
Tensile Recommended Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	9.9	15.6	22.5	32.7	51.9	71.3	98.2
	Flooded bore holes		[kN]	9.9	15.6	22.5	27.3	37.1	50.9	70.1
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	9.9	15.6	22.5	32.7	51.9	71.3	98.2
	Flooded bore holes		[kN]	9.9	15.6	22.5	27.3	37.1	50.9	70.1

Recommended Resistance Includes Partial Safety Factor $\gamma = 1.4$ in the absence of national regulations and type of loading Data is for Static and Quasi Static Loads for a single anchor

Load Data

Standard Embedment Depth

Grade 5.8 Studs

(C20/25 Cracked concrete, Hammer Drilling and Compressed Air Drilling)

Threaded Stud Diameter	M8	M10	M12	M16	M20	M24	M30
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Tensile Characteristics Resistance

Temperature range 1: 40°C/24°C	Dry and wet concrete	[kN]	18.0	26.8	37.3	48.1	76.3	104.8	144.3
	Flooded bore holes	[kN]	18.0	26.8	37.3	48.1	76.3	104.8	144.3
Temperature range 2: 60°C/40°C	Dry and wet concrete	[kN]	18.0	25.4	32.2	48.1	76.3	104.8	144.3
	Flooded bore holes	[kN]	18.0	25.4	35.2	47.1	74.7	95.0	122.5

Tensile Design Resistance

Temperature range 1: 40°C/24°C	Dry and wet concrete	[kN]	12.0	17.9	24.8	32.0	50.8	69.8	96.2
	Flooded bore holes	[kN]	12.0	14.9	20.4	26.7	36.3	49.8	68.7
Temperature range 2: 60°C/40°C	Dry and wet concrete	[kN]	12.0	16.9	23.5	32.0	50.8	69.8	96.2
	Flooded bore holes	[kN]	12.0	14.1	18.4	26.1	35.6	45.2	58.3

Tensile Recommended Resistance

Temperature range 1: 40°C/24°C	Dry and wet concrete	[kN]	8.6	12.8	17.7	22.9	36.3	49.9	68.7
	Flooded bore holes	[kN]	8.6	10.6	14.6	19.1	25.9	35.6	49.1
Temperature range 2: 60°C/40°C	Dry and wet concrete	[kN]	8.6	12.1	16.8	22.9	36.3	49.9	68.7
	Flooded bore holes	[kN]	8.6	10.1	13.1	18.6	25.4	32.3	41.6

Standard Embedment Depth

Grade 8.8 Studs

(C20/25 Cracked concrete, Hammer Drilling and Compressed Air Drilling)

Threaded Stud Diameter	M8	M10	M12	M16	M20	M24	M30
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Tensile Characteristics Resistance

Temperature range 1: 40°C/24°C	Dry and wet concrete	[kN]	20.1	26.8	37.3	48.1	76.3	104.8	144.3
	Flooded bore holes	[kN]	20.1	26.8	37.3	48.1	76.3	102.9	144.3
Temperature range 2: 60°C/40°C	Dry and wet concrete	[kN]	18.1	25.4	35.2	48.1	76.3	104.8	144.3
	Flooded bore holes	[kN]	18.1	25.4	33.1	47.1	74.7	95.0	122.5

Tensile Design Resistance

Temperature range 1: 40°C/24°C	Dry and wet concrete	[kN]	13.4	17.9	24.8	32.0	50.8	69.8	96.2
	Flooded bore holes	[kN]	13.4	14.9	20.7	26.7	36.3	49.0	68.7
Temperature range 2: 60°C/40°C	Dry and wet concrete	[kN]	12.0	16.9	23.5	32.0	50.8	69.8	96.2
	Flooded bore holes	[kN]	12.0	14.1	18.4	26.1	35.6	45.2	58.3

Tensile Recommended Resistance

Temperature range 1: 40°C/24°C	Dry and wet concrete	[kN]	9.6	12.8	17.7	22.9	36.3	49.9	68.7
	Flooded bore holes	[kN]	9.6	10.6	14.8	19.1	25.9	35.0	49.1
Temperature range 2: 60°C/40°C	Dry and wet concrete	[kN]	8.6	12.1	16.8	22.9	36.3	49.9	68.7
	Flooded bore holes	[kN]	8.6	10.1	13.1	18.6	25.4	32.3	41.6

Standard Embedment Depth

A4/70 Stainless Steel

(C20/25 Cracked concrete, Hammer Drilling and Compressed Air Drilling)

Threaded Stud Diameter	M8	M10	M12	M16	M20	M24	M30
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Tensile Characteristics Resistance

Temperature range 1: 40°C/24°C	Dry and wet concrete	[kN]	20.1	26.8	37.3	48.1	76.3	104.7	144.3
	Flooded bore holes	[kN]	20.1	26.8	37.3	48.1	76.3	102.9	144.3
Temperature range 2: 60°C/40°C	Dry and wet concrete	[kN]	18.1	25.4	35.2	48.1	76.3	104.7	144.3
	Flooded bore holes	[kN]	18.1	25.4	33.1	47.1	74.7	95.0	122.5

Tensile Design Resistance

Temperature range 1: 40°C/24°C	Dry and wet concrete	[kN]	13.4	17.9	24.8	32.0	50.8	69.8	96.2
	Flooded bore holes	[kN]	13.4	14.9	20.7	26.7	36.3	49.0	68.7
Temperature range 2: 60°C/40°C	Dry and wet concrete	[kN]	12.0	16.9	23.5	32.0	50.8	69.8	96.2
	Flooded bore holes	[kN]	12.0	14.1	18.4	26.1	35.6	45.2	58.3

Tensile Recommended Resistance

Temperature range 1: 40°C/24°C	Dry and wet concrete	[kN]	9.6	12.8	17.7	22.9	36.3	49.9	68.7
	Flooded bore holes	[kN]	9.6	10.6	14.8	19.1	25.9	35.0	49.1
Temperature range 2: 60°C/40°C	Dry and wet concrete	[kN]	8.6	12.1	16.8	22.9	36.3	49.9	68.7
	Flooded bore holes	[kN]	8.6	10.1	13.1	18.6	25.4	32.3	41.6

Recommended Resistance Includes Partial Safety Factor $\gamma = 1.4$ in the absence of national regulations and type of loading Data is for Static and Quasi Static Loads for a single anchor

Load Data SEISMIC C1 LOADS

Standard Embedment Depth		Grade 5.8 Studs		(C20/25 Cracked / Non-cracked concrete, Hammer Drilling and Compressed Air Drilling)						
Threaded Stud Diameter				M8	M10	M12	M16	M20	M24	M30
Tensile Characteristics Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	18.0	24.3	39.7	48.1	76.3	104.8	144.3
	Flooded bore holes		[kN]	18.0	24.3	39.7	48.1	76.3	104.8	105.3
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	18.0	23.1	33.1	48.1	76.3	104.8	144.3
	Flooded bore holes		[kN]	18.0	23.1	33.1	48.1	76.3	104.8	95.5
Tensile Design Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	12.0	16.2	22.5	27.2	43.2	59.3	81.8
	Flooded bore holes		[kN]	12.0	13.5	18.7	22.7	30.9	42.4	50.1
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	12.0	15.4	22.1	27.2	43.2	59.3	81.8
	Flooded bore holes		[kN]	12.0	12.8	18.4	22.7	30.9	42.4	45.5
Tensile Recommended Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	8.6	11.6	16.1	19.4	30.9	42.4	58.4
	Flooded bore holes		[kN]	8.6	9.6	13.4	16.2	22.1	30.3	35.8
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	8.6	11.0	15.8	19.4	30.9	42.4	58.4
	Flooded bore holes		[kN]	8.6	9.1	13.1	16.2	22.1	30.3	32.5

Standard Embedment Depth			Grade 8.8 Studs		(C20/25 Cracked / Non-cracked concrete, Hammer Drilling and Compressed Air Drilling)					
Tensile Characteristics Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	20.1	24.3	39.7	48.1	76.3	104.8	144.3
	Flooded bore holes		[kN]	20.1	24.3	39.7	48.1	76.3	104.8	105.3
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	18.1	23.1	33.1	48.1	76.3	104.8	144.3
	Flooded bore holes		[kN]	18.1	23.1	33.1	48.1	76.3	104.8	95.5
Tensile Design Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	13.4	16.2	22.5	27.2	43.2	59.3	81.8
	Flooded bore holes		[kN]	13.4	13.5	18.7	22.7	30.9	42.4	50.1
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	12.0	15.4	22.1	27.2	43.2	59.3	81.8
	Flooded bore holes		[kN]	12.0	12.8	18.7	22.7	30.9	42.4	45.5
Tensile Recommended Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	9.6	11.6	16.1	19.4	30.9	42.4	58.4
	Flooded bore holes		[kN]	9.6	9.6	13.4	16.2	22.1	30.3	35.8
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	8.6	11.0	15.8	19.4	30.9	42.4	58.4
	Flooded bore holes		[kN]	8.6	9.1	13.4	16.2	22.1	30.3	32.5

Standard Embedment Depth		A4/70 Stainless Steel		(C20/25 Cracked / Non-cracked concrete, Hammer Drilling and Compressed Air Drilling)						
Tensile Characteristics Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	20.1	24.3	39.7	48.1	76.3	104.8	144.3
	Flooded bore holes		[kN]	20.1	24.3	39.7	48.1	76.3	104.8	105.3
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	18.1	23.1	33.1	48.1	76.3	104.8	144.3
	Flooded bore holes		[kN]	18.1	23.1	33.1	48.1	76.3	104.8	95.5
Tensile Design Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	13.4	16.2	22.5	27.2	43.2	59.3	81.8
	Flooded bore holes		[kN]	13.4	13.5	18.7	22.7	30.9	42.4	50.1
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	12.0	15.4	22.1	27.2	43.2	59.3	81.8
	Flooded bore holes		[kN]	12.0	12.8	18.4	22.7	30.9	42.4	45.5
Tensile Recommended Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	9.6	11.6	16.1	19.4	30.9	42.4	58.4
	Flooded bore holes		[kN]	9.6	9.6	13.4	16.2	22.1	30.3	35.8
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	8.6	11.0	15.8	19.4	30.9	42.4	58.4
	Flooded bore holes		[kN]	8.6	9.1	13.1	16.2	22.1	30.3	32.5

Recommended Resistance Includes Partial Safety Factor $\gamma = 1.4$ in the absence of national regulations and type of loading Data is for Static and Quasi Static Loads for a single anchor

Load Data SEISMIC C2 LOADS

Standard Embedment Depth		Grade 5.8 Studs		(C20/25 Cracked / Non-cracked concrete, Hammer Drilling and Compressed Air Drilling)						
Threaded Stud Diameter				M8	M10	M12	M16	M20	M24	M30
Tensile Characteristics Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	-	-	17.0	15.0	27.7	68.0	-
	Flooded bore holes		[kN]	-	-	17.0	15.0	24.5	52.2	-
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	-	-	15.3	13.8	25.6	61.7	-
	Flooded bore holes		[kN]	-	-	15.3	13.8	22.4	47.5	-
Tensile Design Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	-	-	11.3	10.0	18.5	45.4	-
	Flooded bore holes		[kN]	-	-	9.4	8.3	11.7	24.8	-
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	-	-	10.2	9.2	17.0	41.1	-
	Flooded bore holes		[kN]	-	-	8.5	7.6	10.6	22.6	-
Tensile Recommended Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	-	-	8.1	7.1	13.2	32.4	-
	Flooded bore holes		[kN]	-	-	6.7	5.9	8.4	17.7	-
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	-	-	7.3	6.6	12.1	29.4	-
	Flooded bore holes		[kN]	-	-	6.1	5.4	7.6	16.1	-

Standard Embedment Depth		Grade 8.8 Studs		(C20/25 Cracked / Non-cracked concrete, Hammer Drilling and Compressed Air Drilling)						
Tensile Characteristics Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	-	-	17.0	15.0	27.7	68.0	-
	Flooded bore holes		[kN]	-	-	17.0	15.0	24.5	52.2	-
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	-	-	15.3	13.8	25.6	61.7	-
	Flooded bore holes		[kN]	-	-	15.3	13.8	22.4	47.5	-
Tensile Design Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	-	-	11.3	10.0	18.5	45.4	-
	Flooded bore holes		[kN]	-	-	9.4	8.3	11.7	24.8	-
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	-	-	10.2	9.2	17.0	41.1	-
	Flooded bore holes		[kN]	-	-	8.5	7.6	10.6	22.6	-
Tensile Recommended Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	-	-	8.1	7.1	13.2	32.4	-
	Flooded bore holes		[kN]	-	-	6.7	5.9	8.4	17.7	-
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	-	-	7.3	6.6	12.1	29.4	-
	Flooded bore holes		[kN]	-	-	6.1	5.4	7.6	16.1	-

Standard Embedment Depth		A4/70 Stainless Steel		(C20/25 Cracked / Non-Cracked concrete, Hammer Drilling and Compressed Air Drilling)						
Tensile Characteristics Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	-	-	17.0	15.0	27.7	68.0	-
	Flooded bore holes		[kN]	-	-	17.0	15.0	24.5	52.2	-
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	-	-	15.3	13.8	25.6	61.7	-
	Flooded bore holes		[kN]	-	-	15.3	13.8	22.4	47.5	-
Tensile Design Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	-	-	11.3	10.0	18.5	45.4	-
	Flooded bore holes		[kN]	-	-	9.4	8.3	11.7	24.8	-
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	-	-	10.2	9.2	17.0	41.1	-
	Flooded bore holes		[kN]	-	-	8.5	7.6	10.6	22.6	-
Tensile Recommended Resistance										
Temperature range 1: 40°C/24°C	Dry and wet concrete		[kN]	-	-	8.1	7.1	13.2	32.4	-
	Flooded bore holes		[kN]	-	-	6.7	5.9	8.4	17.7	-
Temperature range 2: 60°C/40°C	Dry and wet concrete		[kN]	-	-	7.3	6.6	12.1	29.4	-
	Flooded bore holes		[kN]	-	-	6.1	5.4	7.6	16.1	-

Recommended Resistance Includes Partial Safety Factor $\gamma = 1.4$ in the absence of national regulations and type of loading Data is for Static and Quasi Static Loads for a single anchor

Increasing Factor

Increasing factor for non-cracked concrete

Threaded Stud Diameter		M8	M10	M12	M16	M20	M24	M30
ψc C25/30	[-]	1.05						1.11
ψc C30/37	[-]	1.10						1.21
ψc C35/45	[-]	1.15						1.30
ψc C40/50	[-]	1.18						1.38
ψc C45/55	[-]	1.22						1.45
ψc C50/60	[-]	1.25						1.52

Increasing factor for cracked concrete

Threaded Stud Diameter		M8	M10	M12	M16	M20	M24	M30
ψc C25/30	[-]	1.05	1.07					1.11
ψc C30/37	[-]	1.09	1.13					1.22
ψc C35/45	[-]	1.13	1.18					1.32
ψc C40/50	[-]	1.16	1.23					1.41
ψc C45/55	[-]	1.19	1.28					1.49
ψc C50/60	[-]	1.22	1.32					1.58

When using increasing factors care must be taken not to exceed steel limits

Steel Limits

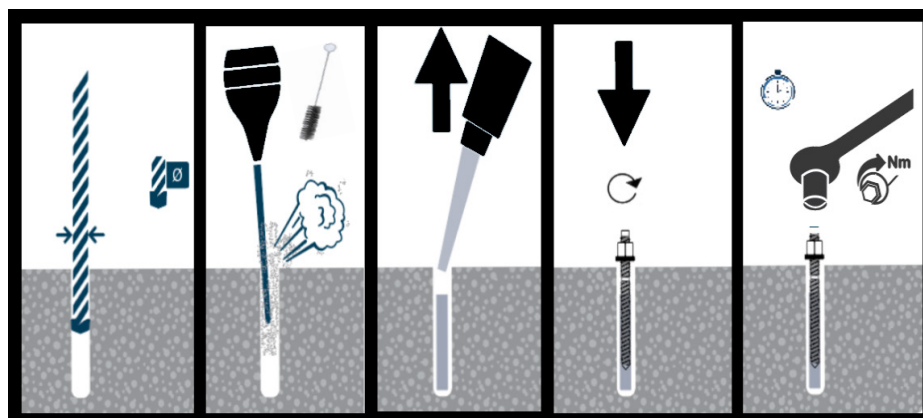
Threaded Stud Diameter			M8	M10	M12	M16	M20	M24	M30
Characteristic Tensile Resistance	$N_{Rk,S}$	[kN]	18.0	29.0	42.0	78.0	122.0	176.0	281.0
Partial safety factor	γ_{MsN}	[-]	1.5						
Characteristic Shear Resistance	$V_{Rk,S}$	[kN]	9.0	15.0	21.0	39.0	61.0	88.0	140.0
Partial Safety Factor	γ_{MsV}	[-]	1.25						

Grade 8.8

Threaded Stud Diameter			M8	M10	M12	M16	M20	M24	M30
Characteristic Tensile Resistance	$N_{Rk,S}$	[kN]	29.0	46.0	67.0	125.0	196.0	282.0	449.0
Partial safety factor	γ_{MsN}	[-]	1.5						
Characteristic Shear Resistance	$V_{Rk,S}$	[kN]	15.0	23.0	34.0	63.0	98.0	141.0	224.0
Partial Safety Factor	γ_{MsV}	[-]	1.25						

Stainless Steel A4-70/50

Threaded Stud Diameter			M8	M10	M12	M16	M20	M24	M30
Characteristic Tensile Resistance	$N_{Rk,S}$	[kN]	26.0	41.0	59.0	110.0	171.0	247.0	393.0
Partial safety factor	γ_{MsN}	[-]	1.87						
Characteristic Shear Resistance	$V_{Rk,S}$	[kN]	13.0	20.0	30.0	55.0	86.0	124.0	196.0
Partial Safety Factor	γ_{MsV}	[-]	1.56						



Accessories:



Cartridge Nozzle
& Extension
TCN01 & TCN03



TCM31BTP

