ICCONS®
Serious Connections

Pure-Epoxy GEN 3

NEW! NEXT GENERATION PURE-EPOXY ADHESIVES

100+ YEAR DESIGN LIFE

DONE AND DUSTLESS

ETA - 19/0850

NCC NATIONAL CODE COMPLIANT

C1 SEISMIC

C2 SEISMIC

F120

POTABLE WATER APPROVED

LEED

ÉMISSIONS DANS L'AIR INTÉRIEUR A+ A+ A B C

COMPLIES WITH AS 5216:2018 FOR POST-INSTALLED FASTENINGS

TECHNICAL MANUAL

TDS 2021.2

BIS-PE GEN3

B+BTec

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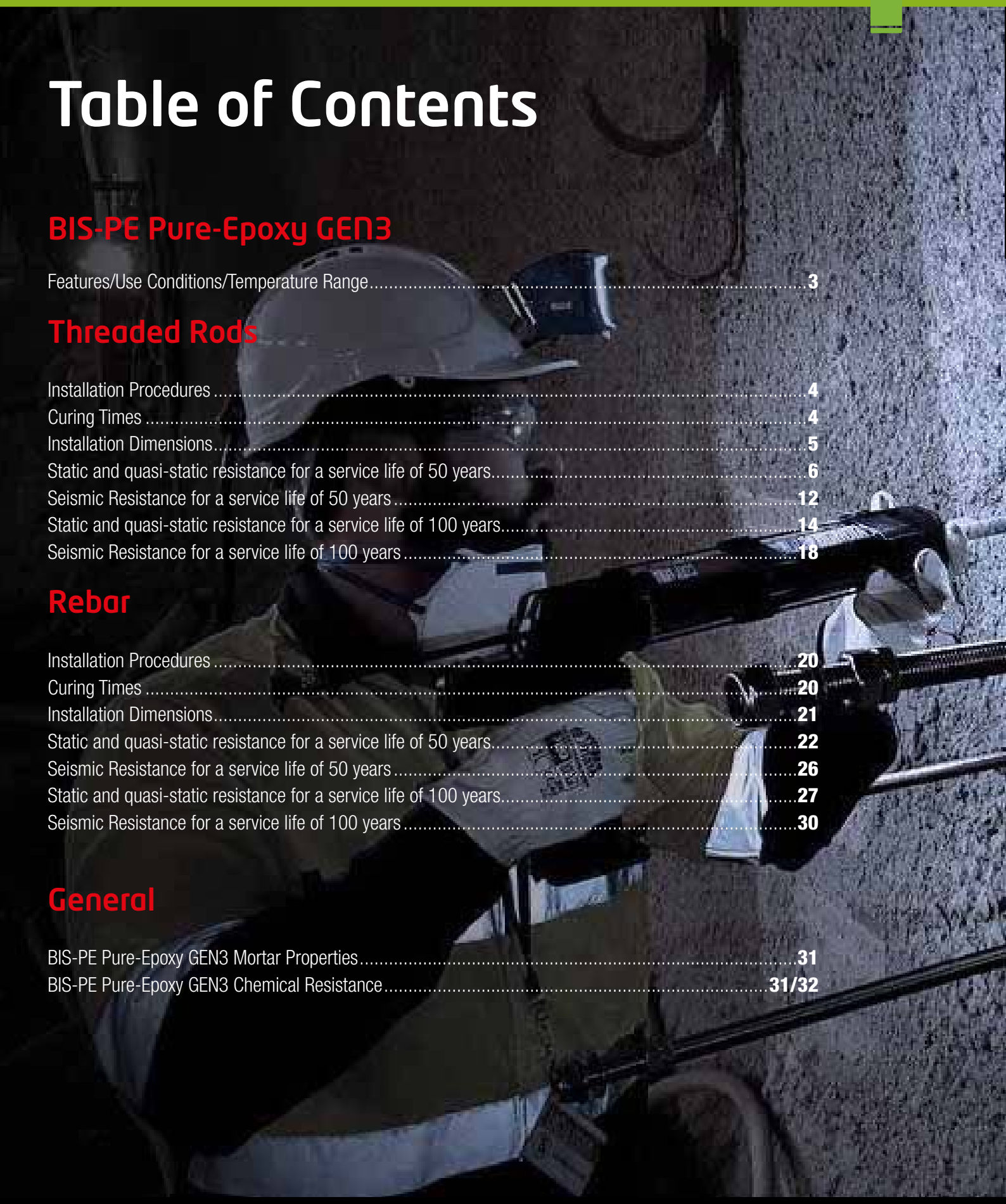
BIS



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BIS-PE Pure-Epoxy GEN3

Threaded Rods

Rebar

General

Pure-Epoxy Injection Adhesive ETA Option 1 Assessed for Cracked & Non-Cracked Concrete

Threaded Rods/Rebar M8 - M30/Ø8 - 32 mm

RODS: Steel 5.8 and 8.8 Zinc Plated and Hot Dip Galvanized, Stainless Steel A4-50 and A4-70, High Corrosion Resistant Steel 1.4529
Rebar: EN 1992-1-1:2004 + AC:2010 Annex C

Features

- NEW! ETA Assessed for the Installation in Flooded Holes
- NEW! No Cleaning required for Hollow Drilling
- NEW! Extended Seismic C2 Range: M12 - M24
- NEW! Significantly Higher Loads especially @ Higher Temperatures
- NEW! 100 Year Design Life
- NEW! Increased Embedment Depths
- Slow Curing
- Low VOC: A+ Rating
- Fire Rated
- Leed Tested
- Potable Water Approved
- B+BTec DesignFix® support

Use Conditions

- Installation in Cracked & Non-Cracked Concrete C20/25 to C50/60
- For Anchor Rods M8-M30, Rebar Ø8-32 mm and Threaded Sleeves M6-M20
- Seismic Action C1: M8-M30, Ø8-32 mm
- Seismic Action C2: M12 - M24
- For Hammer/Air drilled Holes
- NEW! For Hollow Drilled Holes
- NEW! For Diamond Drilled Holes
- Installation in Dry and Wet Holes
- Installation in Flooded Holes
- Overhead Installation allowed.

Approvals & Test Reports

ETA - 19/0850
NCC NATIONAL CODE COMPLIANT
C1 SEISMIC
C2 SEISMIC
F120
POTABLE WATER APPROVED
LEED
ÉMISSIONS DANS L'AIR INTÉRIEUR A+
COMPLIES WITH AS 5216:2018 FOR POST-INSTALLED FASTENINGS
100+ YEAR DESIGN LIFE
DONE AND DUSTLESS

Temperature Range

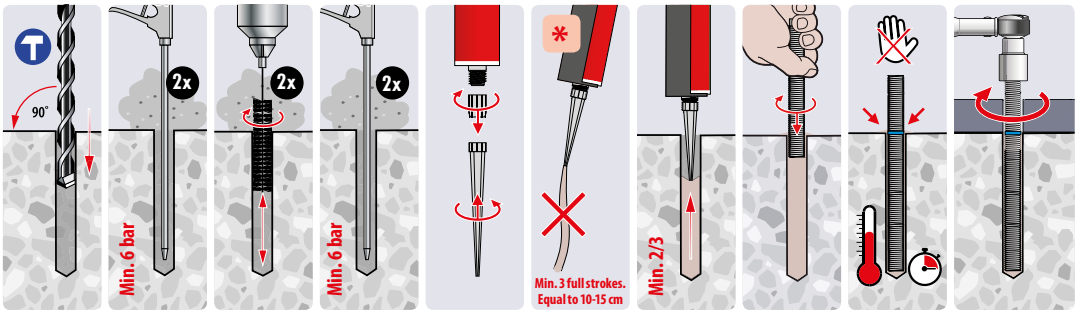
B+BTec BIS-PE GEN3 injection mortar may be applied in the temperature ranges given below. An elevated base material temperature leads to a reduction of the bond resistance.

Max. long term base material temperature: Long term elevated base material temperatures are roughly constant over significant periods of time.
Max. short term base material temperature: Short term elevated base material temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling.

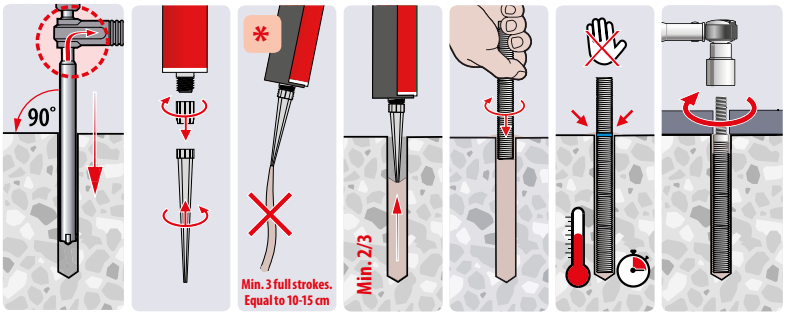
Temperature Range	Temperature Base Material	Max. Long Term Base Material Temperature	Max. Short Term Base Material Temperature
Temp. Range I	-40°C to +40°C	+24°C	+40°C
Temp. Range II	-40°C to +72°C	+50°C	+72°C

THREADED RODS

Installation Procedures (Hammer Drilling)

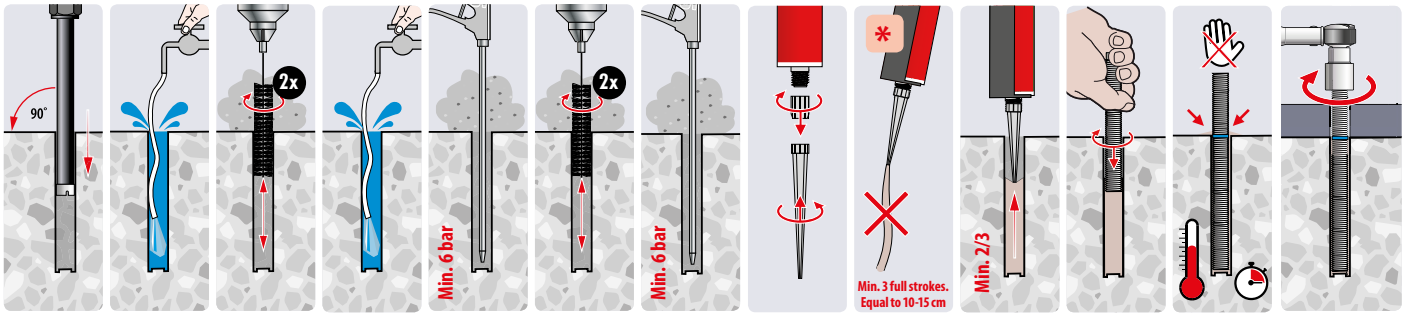


Installation Procedures (Hollow Drilling)



* Sqeeze out seperately a minimum of 3 full strokes (Equal to 10-15 cm) until the mortar shows a consistent colour.

Installation Procedures (Diamond Drilling)



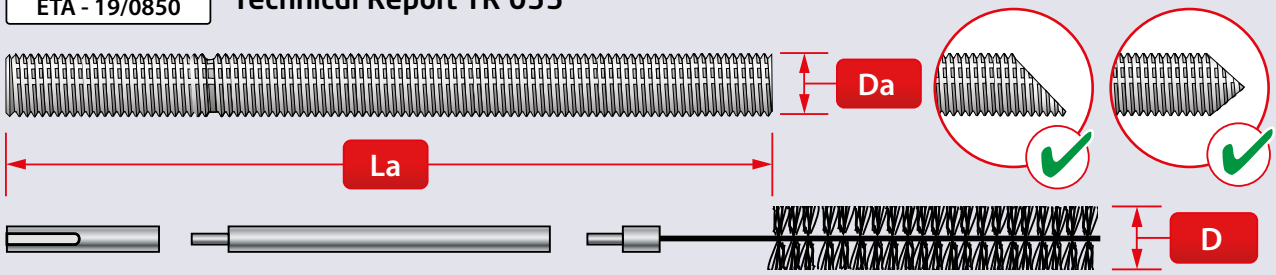
Curing Times[1)]

Temperature[2)] °C	+5 to +9	+10 to +14	+15 to +19	+20 to + 24	+25 to +34	+35 to +39	+40
Processing/Working Time	80 min	60 min	40 min	30 min	12 min	8 min	8 min
Curing Time Dry Holes	48 h	28 h	18 h	12 h	9 h	6 h	4 h
Curing Time Wet Holes	96 h	56 h	36 h	24 h	18 h	12 h	8 h

1) Cartridge Temperature must be between +5°C and +40°C. 2) Concrete Temperature

ETA - 19/0850

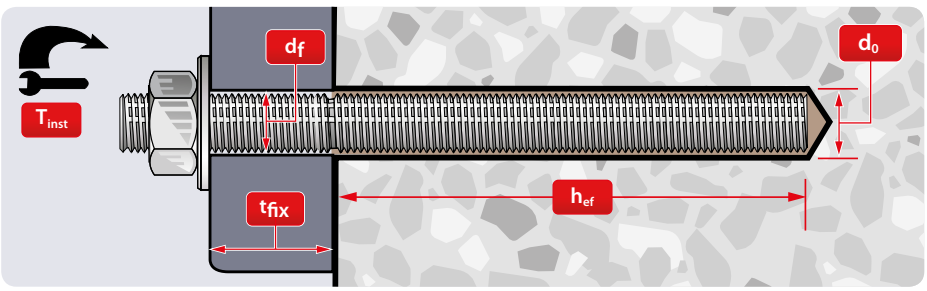
Specification Data for the use in Cracked & Uncracked Concrete according to EN 1992-4:2018, AS 5216:2018 and Technical Report TR 055

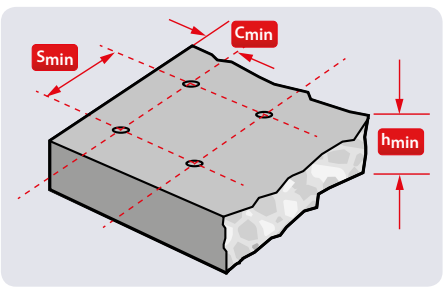


Installation Dimensions

Anchor Size	Da		M8	M10	M12	M16	M20	M24	M27	M30
Anchor Rod Length	L_a	[mm]	110	130	160	190	260	300	340	360
Min. Eff. Anchorage Depth	$h_{ef,min}$	[mm]	60	60	70	80	90	96	108	120
Max. Eff. Anchorage Depth	$h_{ef,max}$	[mm]	160	200	240	320	400	480	540	600
Anch. Depth for Calculation	$h_{ef,calc}$	[mm]	80	90	110	125	170	210	250	280
Hole Diameter	d_0	[mm]	10	12	14	18	22	28	30	35
Diameter Clearance Hole in the Fixture[1)]										
- Prepositioned Installation	d_f	[mm]	9	12	14	18	22	26	30	33
- Push through installation	d_f	[mm]	12	14	16	20	24	30	33	40
Max. Fixture Height	$t_{fix} \leq$	[mm]	20	30	35	45	70	65	70	50
Max. Torque Moment[2)]	$T_{inst} \leq$	[Nm]	10	20	40	60	100	170	250	300
Required Volume per cm Embedment Depth	V_s	[ml/cm]	0,44	0,59	0,75	1,09	1,53	2,87	3,72	4,37

1) For application under seismic loading the diameter of clearance hole in the fixture shall be at maximum d + 1mm or alternatively the annular gap between fixture and anchor rod shall be filled force-fit with mortar. 2) Max. recommended torque moment to avoid splitting failure during installation with minimum spacing and edge distance





Member Thickness, Edge Distance & Spacing

Anchor Size	Da		M8	M10	M12	M16	M20	M24	M27	M30
Min. Member Thickness	h_{min}	[mm]	h_{ef} + 30 mm ≥100 mm			h_{ef} + $2d_0$				
Min. Edge Distance	C_{min}	[mm]	35	40	45	50	60	65	75	80
Min. Spacing	S_{min}	[mm]	40	50	60	75	95	115	125	140

Steel Brush Dimensions

Anchor Size	Da		M8	M10	M12	M16	M20	M24	M27	M30
Brush Diameter	D	[mm]	11,5	13,5	15,5	20	24	30	31,8	37
Min. Brush Diameter	D_{min}	[mm]	10,5	12,5	14,5	18,5	22,5	28,5	30,5	35,5
Piston Plug	#	[-]	No piston plug required			18	22	28	30	35

Static and quasi-static resistance for a service life of 50 years (for a single anchor)

All data in this section subject to:
- Correct setting (see setting instructions).
- No edge distance and spacing influence.
- Standard embedment depth ($h_{ef,calc}$), as specified in the 'Installation Dimensions' table.
- Concrete C20/25, f_{ck} = 20 N/mm².
- Temperature range I: (max. long/short term temperature +24°C/+40°C).
- Shear loads are calculated without the influence of a lever arm.
- ψ_{sus} = 1,0 according EN 1992-4:2018; eq. 7.14a.
- Recommended loads are with overal partial safety factor for action γ_G = 1,4. The partial safety factors for action depend on the type of loading and shall be taken from national regulations.

HD HAMMER

Design Resistance Dry/Wet Holes (Hammer Drilled)

Steel Decisive

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	19,3	28,0	37,8	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,6	45,8	72,7	99,8	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	9,4	13,2	23,5	32,1	50,9	69,9	90,7	107,6
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	9,4	13,2	23,5	32,1	50,9	69,9	90,7	107,6
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	9,4	13,2	23,5	32,1	50,9	69,9	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Design Resistance Flooded Holes (Hammer Drilled)

Steel Decisive

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	38,2	60,6	83,2	108,0	128,0
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	19,3	23,3	31,5	38,2	60,6	83,2	108,0	128,0
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,5	38,2	60,6	83,2	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	7,8	11,0	19,6	26,7	42,4	58,2	75,6	89,6
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	7,8	11,0	19,6	26,7	42,4	58,2	75,6	89,6
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	26,7	42,4	58,2	75,6	89,6
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	7,8	11,0	19,6	26,7	42,4	58,2	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Recommended Loads Dry/Wet Holes (Hammer Drilled)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	13,8	20,0	27,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	32,7	51,9	71,3	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	6,7	9,4	16,8	22,9	36,3	49,9	64,8	76,8
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	6,7	9,4	16,8	22,9	36,3	49,9	64,8	76,8
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	6,7	9,4	16,8	22,9	36,3	49,9	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

HD HAMMER

Recommended Loads Flooded Holes (Hammer Drilled)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	27,3	43,3	59,4	77,2	91,5
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	13,8	16,7	22,5	27,3	43,3	59,4	77,2	91,5
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	27,3	43,3	59,4	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	5,6	7,9	14,0	19,1	30,3	41,6	54,0	64,0
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	5,6	7,9	14,0	19,1	30,3	41,6	54,0	64,0
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,1	30,3	41,6	54,0	64,0
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	5,6	7,9	14,0	19,1	30,3	41,6	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

HD B HAMMER

Design Resistance Dry/Wet Holes (Hollow Drilling)

Steel Decisive

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	19,3	28,0	37,8	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,6	45,8	72,7	99,8	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	9,4	13,2	23,5	32,1	50,9	69,9	90,7	107,6
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	9,4	13,2	23,5	32,1	50,9	69,9	90,7	107,6
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	9,4	13,2	23,5	32,1	50,9	69,9	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Design Resistance Flooded Holes (Hollow Drilling)

Steel Decisive

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	38,2	60,6	83,2	108,0	128,0
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	17,9	23,3	31,5	38,2	60,6	83,2	108,0	128,0
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,5	38,2	60,6	83,2	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	7,8	11,0	19,6	26,7	42,4	58,2	75,6	89,6
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	7,8	11,0	19,6	26,7	42,4	58,2	75,6	89,6
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	26,7	42,4	58,2	75,6	89,6
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	7,8	11,0	19,6	26,7	42,4	58,2	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Recommended Loads Dry/Wet Holes (Hollow Drilling)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	13,8	20,0	27,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	32,7	51,9	71,3	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	6,7	9,4	16,8	22,9	36,3	49,9	64,8	76,8
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	6,7	9,4	16,8	22,9	36,3	49,9	64,8	76,8
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	6,7	9,4	16,8	22,9	36,3	49,9	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

HAMMER

Recommended Loads Flooded Holes (Hollow Drilling)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	31,8	50,5	69,3	90,0	106,7
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	12,8	18,0	26,3	31,8	50,5	69,3	90,0	106,7
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	31,8	50,5	69,3	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	5,6	7,9	14,0	19,1	30,3	41,6	54,0	64,0
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	5,6	7,9	14,0	19,1	30,3	41,6	54,0	64,0
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,1	30,3	41,6	54,0	64,0
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	5,6	7,9	14,0	19,1	30,3	41,6	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

DD DIAMOND

Design Resistance Dry/Wet Holes (Diamond Drilling)

Steel Decisive

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	19,3	26,4	37,8	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,6	45,8	72,7	99,8	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Design Resistance Flooded Holes (Diamond Drilled)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	16,8	22,0	31,5	32,7	51,9	71,3	92,6	109,8
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,5	32,7	51,9	71,3	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Recommended Loads Dry/Wet Holes (Diamond Drilled)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	13,8	18,8	27,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	32,7	51,9	71,3	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Recommended Loads Flooded Holes (Diamond Drilled)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	23,4	37,1	50,9	66,1	78,4
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	12,0	15,7	22,5	23,4	37,1	50,9	66,1	78,4
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	23,4	37,1	50,9	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Seismic resistance for a service life of 50 years (for a single anchor)

All data in this section subject to:
- Correct setting (see setting instructions).
- No edge distance and spacing influence.
- Standard embedment depth, as specified in the 'Installation Dimensions' table.
- Concrete C20/25, f_{ck} = 20 N/mm².
- Temperature range I: (max. long/short term temperature +24°C/+40°C).
- Shear loads are calculated without the influence of a lever arm.
- α_{gap} = 1,0 (using special filling washer according ETA-19/0850 Annex A 3).
- Increasing factor for concrete ψ_c: C25/30 to C50/60 = 1,0

Design Resistance Dry/Wet Holes in case of seismic performance category C1 (Hammer/Hollow Drilling)

Steel Decisive

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	$N_{Rd,eq,C1}$	[kN]	9,4	13,2	22,5	27,3	43,3	59,4	77,1	91,4
	Shear	$V_{Rd,eq,C1}$	[kN]	6,2	9,5	14,0	26,3	41,4	59,4	77,3	94,1
Steel 8.8	Tensile	$N_{Rd,eq,C1}$	[kN]	9,4	13,2	22,5	27,3	43,3	59,4	77,1	91,4
	Shear	$V_{Rd,eq,C1}$	[kN]	8,4	12,9	19,0	35,3	54,9	79,0	103,0	125,4
A4-50	Tensile	$N_{Rd,eq,C1}$	[kN]	6,3	10,1	14,7	27,3	43,0	59,4	77,1	91,4
	Shear	$V_{Rd,eq,C1}$	[kN]	2,6	4,4	6,2	11,5	17,9	25,9	33,8	41,2
A4-70	Tensile	$N_{Rd,eq,C1}$	[kN]	9,4	13,2	22,5	27,3	43,3	59,4	-	-
	Shear	$V_{Rd,eq,C1}$	[kN]	5,8	9,0	13,5	24,7	38,6	55,6	-	-

Design Resistance Flooded Holes in case of seismic performance category C1 (Hammer/Hollow Drilling)

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	$N_{Rd,eq,C1}$	[kN]	7,8	11,0	18,8	22,7	36,0	49,5	64,3	76,2
	Shear	$V_{Rd,eq,C1}$	[kN]	6,2	9,5	14,0	26,3	41,4	59,4	77,3	94,1
Steel 8.8	Tensile	$N_{Rd,eq,C1}$	[kN]	7,8	11,0	18,8	22,7	36,0	49,5	64,3	76,2
	Shear	$V_{Rd,eq,C1}$	[kN]	8,4	12,9	19,0	35,3	54,9	79,0	103,0	125,4
A4-50	Tensile	$N_{Rd,eq,C1}$	[kN]	6,3	10,1	14,7	22,7	36,0	49,5	64,3	76,2
	Shear	$V_{Rd,eq,C1}$	[kN]	2,6	4,4	6,2	11,5	17,9	25,9	33,8	41,2
A4-70	Tensile	$N_{Rd,eq,C1}$	[kN]	7,8	11,0	18,8	22,7	36,0	49,5	-	-
	Shear	$V_{Rd,eq,C1}$	[kN]	5,8	9,0	13,5	24,7	38,6	55,6	-	-

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Design Resistance Dry/Wet Holes in case of seismic performance category C2 (Hammer/Hollow Drilling)

Steel Decisive

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 8.8	Tensile	$N_{Rd,eq,C2}$	[kN]	-	-	16,0	20,1	35,6	53,8	-	-
	Shear	$V_{Rd,eq,C2}$	[kN]	-	-	19,0	34,2	54,9	79,0	-	-
A4-70	Tensile	$N_{Rd,eq,C2}$	[kN]	-	-	16,0	20,1	35,6	53,8	-	-
	Shear	$V_{Rd,eq,C2}$	[kN]	-	-	13,5	24,7	38,6	55,6	-	-

Design Resistance Flooded Holes in case of seismic performance category C2 (Hammer/Hollow Drilling)

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 8.8	Tensile	$N_{Rd,eq,C2}$	[kN]	-	-	13,4	16,8	29,7	44,9	-	-
	Shear	$V_{Rd,eq,C2}$	[kN]	-	-	19,0	34,2	54,9	79,0	-	-
A4-70	Tensile	$N_{Rd,eq,C2}$	[kN]	-	-	13,4	16,8	29,7	44,9	-	-
	Shear	$V_{Rd,eq,C2}$	[kN]	-	-	13,5	24,7	38,6	55,6	-	-

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Static and quasi-static resistance for a service life of 100 years (for a single anchor)

All data in this section subject to:
- Correct setting (see setting instructions).
- No edge distance and spacing influence.
- Standard embedment depth ($h_{ef,calc}$), as specified in the 'Installation Dimensions' table.
- Concrete C20/25, f_{ck} = 20 N/mm².
- Temperature range I: (max. long/short term temperature +24°C/+40°C).
- Shear loads are calculated without the influence of a lever arm.
- ψ_{sus} = 1,0 according EN 1992-4:2018; eq. 7.14a.
- Recommended loads are with overal partial safety factor for action γ_G = 1,4.
  The partial safety factors for action depend on the type of loading and shall be taken from national regulations.

HD HAMMER

100+ YEAR DESIGN LIFE

Design Resistance Dry/Wet Holes (Hammer Drilled)

Steel Decisive

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	19,3	28,0	37,8	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,6	45,8	72,7	99,8	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Design Resistance Flooded Holes (Hammer Drilled)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	38,2	60,6	83,2	108,0	128,0
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	19,3	23,3	31,5	38,2	60,6	83,2	108,0	128,0
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,5	38,2	60,6	83,2	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Recommended Loads Dry/Wet Holes (Hammer Drilled)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	13,8	20,0	27,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	32,7	51,9	71,3	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Recommended Loads Flooded Holes (Hammer Drilled)

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	31,8	50,5	69,3	90,0	106,7
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	12,8	18,0	26,3	31,8	50,5	69,3	90,0	106,7
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	31,8	50,5	69,3	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

HD B HAMMER

100+ YEAR DESIGN LIFE

Design Resistance Dry/Wet Holes (Hollow Drilling)

Steel Decisive

Non-Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	19,3	28,0	37,8	45,8	72,7	99,8	129,6	153,7
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,6	45,8	72,7	99,8	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

HAMMER
100+ YEAR DESIGN LIFE

Design Resistance Flooded Holes (Hollow Drilling)

Steel Decisive

Non-Cracked Concrete	Da			M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	12,0	19,3	28,0	38,2	60,6	83,2	108,0	128,0
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	17,9	23,3	31,5	38,2	60,6	83,2	108,0	128,0
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	13,9	21,9	31,5	38,2	60,6	83,2	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Recommended Loads Dry/Wet Holes (Hollow Drilling)

Non-Cracked Concrete	Da			M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	13,8	20,0	27,0	32,7	51,9	71,3	92,6	109,8
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	32,7	51,9	71,3	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Recommended Loads Flooded Holes (Hollow Drilling)

Non-Cracked Concrete	Da			M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	8,6	13,8	20,0	31,8	50,5	69,3	90,0	106,7
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	12,8	18,0	26,3	31,8	50,5	69,3	90,0	106,7
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	9,9	15,7	22,5	31,8	50,5	69,3	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Design Resistance Dry/Wet Holes (Hammer/Hollow Drilling)

Steel Decisive

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	8,7	12,3	20,7	31,4	50,9	69,9	90,7	107,6
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	8,7	12,3	20,7	31,4	50,9	69,9	90,7	107,6
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	27,6	43,0	61,9	80,4	98,3
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	8,7	12,3	20,7	31,4	50,9	69,9	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Design Resistance Flooded Holes (Hammer/Hollow Drilling)

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{Rd}	[kN]	7,3	10,2	17,3	26,2	42,4	58,2	75,6	89,6
	Shear	V_{Rd}	[kN]	8,8	13,6	20,0	37,6	59,2	84,8	110,4	134,4
Steel 8.8	Tensile	N_{Rd}	[kN]	7,3	10,2	17,3	26,2	42,4	58,2	75,6	89,6
	Shear	V_{Rd}	[kN]	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-50	Tensile	N_{Rd}	[kN]	6,3	10,1	14,7	26,2	42,4	58,2	75,6	89,6
	Shear	V_{Rd}	[kN]	3,8	6,3	8,8	16,4	25,6	37,0	48,3	58,8
A4-70	Tensile	N_{Rd}	[kN]	7,3	10,2	17,3	26,2	42,4	58,2	-	-
	Shear	V_{Rd}	[kN]	8,3	12,8	19,2	35,3	55,1	79,5	-	-

Recommended Loads Dry/Wet Holes (Hammer/Hollow Drilling)

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	6,2	8,8	14,8	22,4	36,3	49,9	64,8	76,8
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	6,2	8,8	14,8	22,4	36,3	49,9	64,8	76,8
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	19,7	30,7	44,2	57,4	70,2
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	6,2	8,8	14,8	22,4	36,3	49,9	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Recommended Loads Flooded Holes (Hammer/Hollow Drilling)

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	N_{rec}	[kN]	5,2	7,3	12,3	18,7	30,3	41,6	54,0	64,0
	Shear	V_{rec}	[kN]	6,3	9,7	14,3	26,9	42,3	60,6	78,9	96,0
Steel 8.8	Tensile	N_{rec}	[kN]	5,2	7,3	12,3	18,7	30,3	41,6	54,0	64,0
	Shear	V_{rec}	[kN]	8,6	13,1	19,4	36,0	56,0	80,6	105,1	128,0
A4-50	Tensile	N_{rec}	[kN]	4,5	7,2	10,5	18,7	30,3	41,6	54,0	64,0
	Shear	V_{rec}	[kN]	2,7	4,5	6,3	11,7	18,3	26,4	34,5	42,0
A4-70	Tensile	N_{rec}	[kN]	5,2	7,3	12,3	18,7	30,3	41,6	-	-
	Shear	V_{rec}	[kN]	6,0	9,2	13,7	25,2	39,4	56,8	-	-

Seismic resistance for a service life of 100 years (for a single anchor)

All data in this section subject to:
- Correct setting (see setting instructions).
- No edge distance and spacing influence.
- Standard embedment depth, as specified in the 'Installation Dimensions' table.
- Concrete C20/25, f_{ck} = 20 N/mm².
- Temperature range I: (max. long/short term temperature +24°C/+40°C).
- Shear loads are calculated without the influence of a lever arm.
- α_{gap} = 1,0 (using special filling washer according ETA-19/0850 Annex A 3).
- Increasing factor for concrete ψ_c: C25/30 to C50/60 = 1,0

Design Resistance Dry/Wet Holes in case of seismic performance category C1 (Hammer/Hollow Drilling)

Steel Decisive

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	$N_{Rd,eq,C1}$	[kN]	9,4	13,2	22,5	27,3	43,3	59,4	77,1	91,4
	Shear	$V_{Rd,eq,C1}$	[kN]	6,2	9,5	14,0	26,3	41,4	59,4	77,3	94,1
Steel 8.8	Tensile	$N_{Rd,eq,C1}$	[kN]	9,4	13,2	22,5	27,3	43,3	59,4	77,1	91,4
	Shear	$V_{Rd,eq,C1}$	[kN]	8,4	12,9	19,0	35,3	54,9	79,0	103,0	125,4
A4-50	Tensile	$N_{Rd,eq,C1}$	[kN]	6,3	10,1	14,7	27,3	43,0	59,4	77,1	91,4
	Shear	$V_{Rd,eq,C1}$	[kN]	2,6	4,4	6,2	11,5	17,9	25,9	33,8	41,2
A4-70	Tensile	$N_{Rd,eq,C1}$	[kN]	9,4	13,2	22,5	27,3	43,3	59,4	-	-
	Shear	$V_{Rd,eq,C1}$	[kN]	5,8	9,0	13,5	24,7	38,6	55,6	-	-

Seismic resistance for a service life of 100 years (for a single anchor)

Design Resistance Flooded Holes in case of seismic performance category C1 (Hammer/Hollow Drilling)

Steel Decisive

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 5.8	Tensile	$N_{Rd,eq,C1}$	[kN]	7,8	11,0	18,8	22,7	36,0	49,5	64,3	76,2
	Shear	$V_{Rd,eq,C1}$	[kN]	6,2	9,5	14,0	26,3	41,4	59,4	77,3	94,1
Steel 8.8	Tensile	$N_{Rd,eq,C1}$	[kN]	7,8	11,0	18,8	22,7	36,0	49,5	64,3	76,2
	Shear	$V_{Rd,eq,C1}$	[kN]	8,4	12,9	19,0	35,3	54,9	79,0	103,0	125,4
A4-50	Tensile	$N_{Rd,eq,C1}$	[kN]	6,3	10,1	14,7	22,7	36,0	49,5	64,3	76,2
	Shear	$V_{Rd,eq,C1}$	[kN]	2,6	4,4	6,2	11,5	17,9	25,9	33,8	41,2
A4-70	Tensile	$N_{Rd,eq,C1}$	[kN]	7,8	11,0	18,8	22,7	36,0	49,5	-	-
	Shear	$V_{Rd,eq,C1}$	[kN]	5,8	9,0	13,5	24,7	38,6	55,6	-	-

HD HAMMER | HD B HAMMER | CRACKED CONCRETE | SEISMIC C2 | 100+ YEAR DESIGN LIFE

Design Resistance Dry/Wet Holes in case of seismic performance category C2 (Hammer/Hollow Drilling)

Steel Decisive

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 8.8	Tensile	$N_{Rd,eq,C2}$	[kN]	-	-	16,0	20,1	35,6	53,8	-	-
	Shear	$V_{Rd,eq,C2}$	[kN]	-	-	19,0	34,2	54,9	79,0	-	-
A4-70	Tensile	$N_{Rd,eq,C2}$	[kN]	-	-	16,0	20,1	35,6	53,8	-	-
	Shear	$V_{Rd,eq,C2}$	[kN]	-	-	13,5	24,7	38,6	55,6	-	-

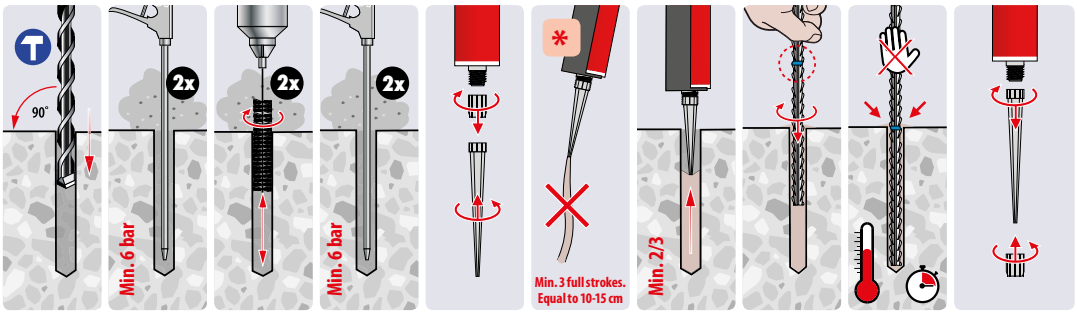
Design Resistance Flooded Holes in case of seismic performance category C2 (Hammer/Hollow Drilling)

Cracked Concrete		Da		M8	M10	M12	M16	M20	M24	M27	M30
Steel 8.8	Tensile	$N_{Rd,eq,C2}$	[kN]	-	-	13,4	16,8	29,7	44,9	-	-
	Shear	$V_{Rd,eq,C2}$	[kN]	-	-	19,0	34,2	54,9	79,0	-	-
A4-70	Tensile	$N_{Rd,eq,C2}$	[kN]	-	-	13,4	16,8	29,7	44,9	-	-
	Shear	$V_{Rd,eq,C2}$	[kN]	-	-	13,5	24,7	38,6	55,6	-	-

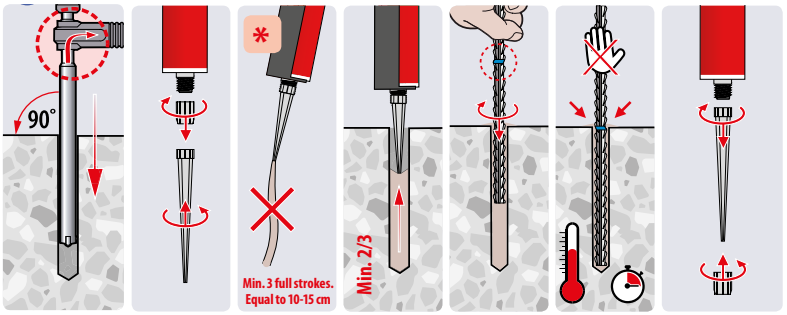
Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

REINFORCING BARS

Installation Procedures (Hammer Drilling)

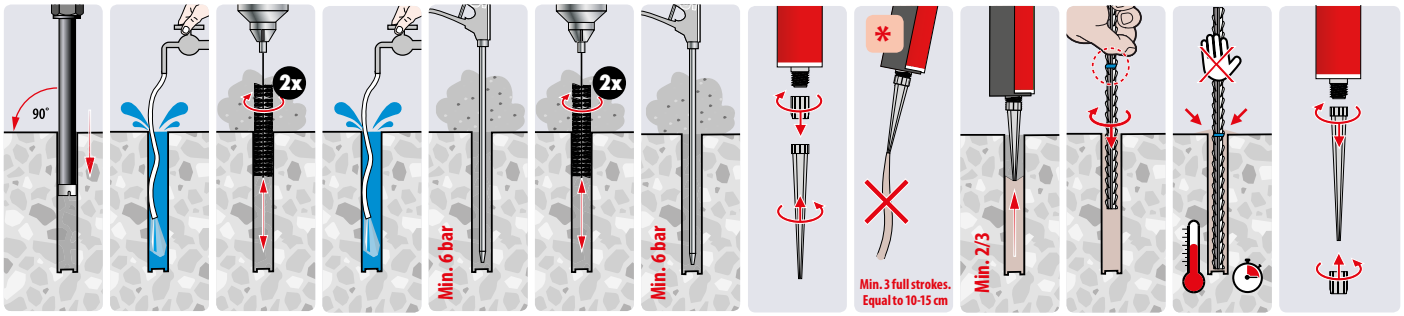


Installation Procedures (Hollow Drilling)



* Sqeeze out seperately a minimum of 3 full strokes (Equal to 10-15 cm) until the mortar shows a consistent colour.

Installation Procedures (Diamond Drilling)



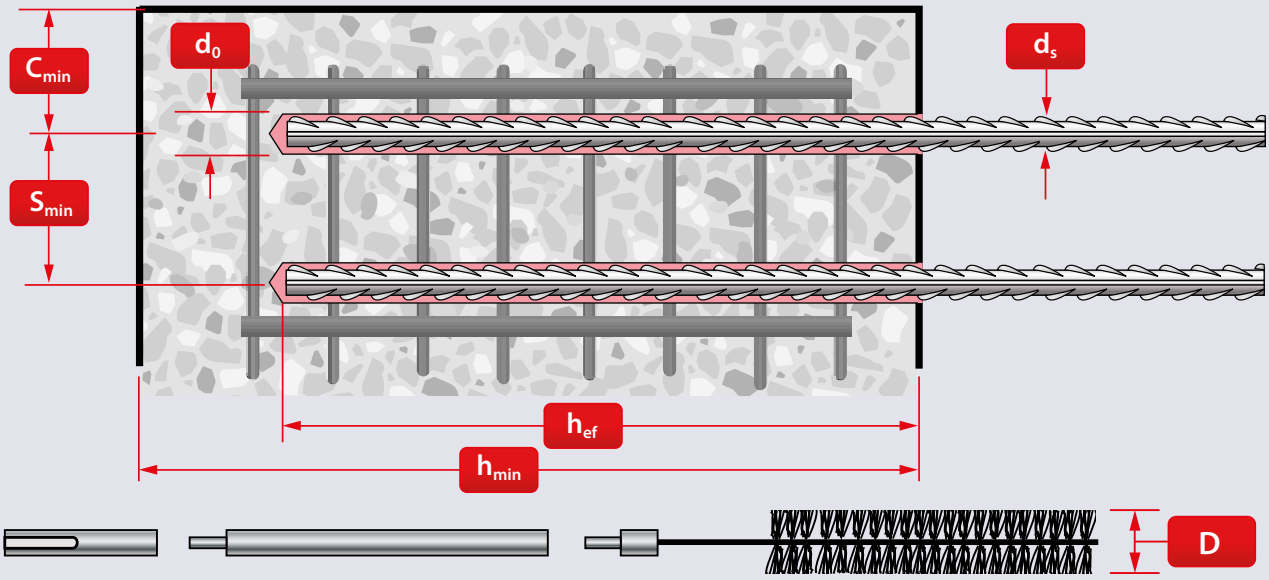
Curing Times[1)]

Temperature[2)] °C	+5 to +9	+10 to +14	+15 to +19	+20 to + 24	+25 to +34	+35 to +39	+40
Processing/Working Time	80 min	60 min	40 min	30 min	12 min	8 min	8 min
Curing Time Dry Holes	48 h	28 h	18 h	12 h	9 h	6 h	4 h
Curing Time Wet Holes	96 h	56 h	36 h	24 h	18 h	12 h	8 h

1) Cartridge Temperature must be between +5°C and +40°C. 2) Concrete Temperature

ETA - 19/0850

Specification Data for the use in Cracked & Uncracked Concrete according to EN 1992-4:2018, AS 5216:2018 and Technical Report TR 055



Installation Dimensions

Rebar Size	d_{nom}		Ø8		Ø10		Ø12		Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
Min. Eff. Anchorage Depth	$h_{ef,min}$	[mm]	60		60		70		75	80	90	96	100	112	128
Max. Eff. Anchorage Depth	$h_{ef,max}$	[mm]	160		200		240		280	320	400	480	500	560	640
Hole Diameter	d_0	[mm]	10	12	12	14	14	16	18	20	25	32	32	35	40
Required Volume per cm Embedment Depth	V_s	[ml/cm]	0,34	0,75	0,41	0,90	0,49	1,06	1,21	1,36	2,12	4,22	3,76	4,16	5,43

Member Thickness, Edge Distance & Spacing

Rebar Size	d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
Min. Member Thickness	h_{min}	[mm]	h_{ef} + 30 mm ≥100 mm		$h_{ef} + 2d_0$							
Min. Edge Distance	C_{min}	[mm]	35	40	45	50	50	60	70	70	75	85
Min. Spacing	S_{min}	[mm]	40	50	60	70	75	95	120	120	130	150

Steel Brush & Piston Plug Dimensions

Rebar Size	d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
Brush Diameter	D	[mm]	13,5	15,5	17,5	20,0	20,0	27,0	34,0	34,0	37,0	43,5
Min. Brush Diameter	D_{min}	[mm]	12,5	14,5	16,5	18,5	20,5	25,5	32,5	32,5	35,5	40,5
Piston Plug	#	--	No piston plug required			18	20	25	32	32	35	40

Static and quasi-static resistance for a service life of 50 years (for a single rebar)

All data in this section subject to:

- Correct setting (see setting instructions).
- No edge distance and spacing influence.
- Minimum and maximum embedment depth, as specified in the 'Installation Dimensions' table.
- Concrete C20/25, f_{ck} = 20 N/mm².
- Temperature range I: (max. long/short term temperature +24°C/+40°C).
- Shear loads are calculated without the influence of a lever arm.
- ψ_{sus} = 1,0 according EN 1992-4:2018; eq. 7.14a.
- Recommended loads are with overal partial safety factor for action γ_G = 1,4. The partial safety factors for action depend on the type of loading and shall be taken from national regulations.

HD HAMMER

Design Resistance Dry/Wet Holes (Hammer Drilled)

Steel Decisive

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	15,2	15,2	19,2	21,3	23,5	28,0	30,8	32,8	38,9	47,5
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	7,0	8,8	13,4	14,9	16,4	19,6	21,6	23,0	27,2	33,2
	Tensile Max.	$N_{Rd,max}$	[kN]	18,8	29,3	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	32,9	39,2	43,2	45,9	54,4	66,5
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Design Resistance Flooded Holes (Hammer Drilled)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	12,7	12,7	16,0	17,8	19,6	23,3	25,7	27,3	32,4	39,6
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	5,9	7,3	11,2	12,4	13,7	16,3	18,0	19,1	22,7	27,7
	Tensile Max.	$N_{Rd,max}$	[kN]	15,6	24,4	42,7	58,2	76,0	118,7	170,9	185,4	232,6	303,8
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	32,9	39,2	43,2	45,9	54,4	66,5
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Recommended Loads Dry/Wet Holes (Hammer Drilled)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	10,9	10,9	13,7	15,2	16,8	20,0	22,0	23,4	27,8	33,9
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	5,0	6,3	9,6	10,7	11,7	14,0	15,4	16,4	19,4	23,7
	Tensile Max.	$N_{rec,max}$	[kN]	13,4	20,9	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	23,5	28,0	30,8	32,8	38,9	47,5
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Recommended Loads Flooded Holes (Hammer Drilled)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	9,1	9,1	11,4	12,7	14,0	16,7	18,4	19,5	23,1	28,3
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	4,2	5,2	8,0	8,9	9,8	11,7	12,9	13,7	16,2	19,8
	Tensile Max.	$N_{rec,max}$	[kN]	11,2	17,5	30,5	41,5	54,3	84,8	122,1	132,5	166,2	217,0
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	23,5	28,0	30,8	32,8	38,9	47,5
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

HDB HAMMER

Design Resistance Dry/Wet Holes (Hollow Drilling)

Steel Decisive

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	14,1	15,2	19,2	21,3	23,5	28,0	30,8	32,8	38,9	47,5
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	7,0	8,8	13,4	14,9	16,4	19,6	21,6	23,0	27,2	33,2
	Tensile Max.	$N_{Rd,max}$	[kN]	18,8	29,3	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	32,9	39,2	43,2	45,9	54,4	66,5
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

HAMMER

Design Resistance Flooded Holes (Hollow Drilling)

Steel Decisive

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	10,9	12,7	16,0	17,8	19,6	23,3	25,7	27,3	32,4	39,6
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	5,9	7,3	11,2	12,4	13,7	16,3	18,0	19,1	22,7	27,7
	Tensile Max.	$N_{Rd,max}$	[kN]	15,6	24,4	42,7	58,2	76,0	118,7	170,9	185,4	232,6	303,8
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	32,9	39,2	43,2	45,9	54,4	66,5
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Recommended Loads Dry/Wet Holes (Hollow Drilling)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	10,1	10,9	13,7	15,2	16,8	20,0	22,0	23,4	27,8	33,9
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	5,0	6,3	9,6	10,7	11,7	14,0	15,4	16,4	19,4	23,7
	Tensile Max.	$N_{rec,max}$	[kN]	13,4	20,9	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	23,5	28,0	30,8	32,8	38,9	47,5
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Recommended Loads Flooded Holes (Hollow Drilling)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	7,8	9,1	11,4	12,7	14,0	16,7	18,4	19,5	23,1	28,3
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	4,2	5,2	8,0	8,9	9,8	11,7	12,9	13,7	16,2	19,8
	Tensile Max.	$N_{rec,max}$	[kN]	11,2	17,5	30,5	41,5	54,3	84,8	122,1	132,5	166,2	217,0
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	23,5	28,0	30,8	32,8	38,9	47,5
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

DD DIAMOND

Design Resistance Dry/Wet Holes (Diamond Drilled)

Steel Decisive

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	14,1	15,2	19,2	21,3	23,5	28,0	30,8	32,8	38,9	47,5
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Design Resistance Flooded Holes (Diamond Drilled)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	11,7	12,7	16,0	17,8	16,8	20,0	22,0	23,4	27,8	33,9
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Recommended Loads Dry/Wet Holes (Diamond Drilled)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	10,1	10,9	13,7	15,2	16,8	20,0	22,0	23,4	27,8	33,9
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Recommended Loads Flooded Holes (Diamond Drilled)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	8,4	9,1	11,4	12,7	12,0	14,3	15,7	16,7	19,8	24,2
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Seismic resistance for a service life of 50 years (for a single rebar)

All data in this section subject to:
- Correct setting (see setting instructions).
- No edge distance and spacing influence.
- Minimum and maximum embedment depth, as specified in the 'Installation Dimensions' table.
- Concrete C20/25, f_{ck} = 20 N/mm².
- Temperature range I: (max. long/short term temperature +24°C/+40°C).
- Shear loads are calculated without the influence of a lever arm.
- α_{gap} = 1,0 (using special filling washer according ETA-19/0850 Annex A 3).
- Increasing factor for concrete ψ_c: C25/30 to C50/60 = 1,0

Design Resistance Dry/Wet Holes in case of seismic performance category C1

Steel Decisive

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,eq,min}$	[kN]	7,0	8,8	11,4	12,7	14,0	16,7	18,4	19,5	23,1	28,3
	Tensile Max.	$N_{Rd,eq,max}$	[kN]	18,8	29,3	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,eq,min}$	[kN]	6,4	10,1	14,5	19,8	25,8	33,3	36,7	39,0	46,3	56,5
	Shear Max.	$V_{Rd,eq,max}$	[kN]	6,4	10,1	14,5	19,8	25,8	40,3	58,0	63,0	79,1	103,2

Design Resistance Flooded holes in case of seismic performance category C1

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,eq,min}$	[kN]	5,9	6,4	8,1	9,0	9,9	11,8	13,0	13,8	16,4	20,0
	Tensile Max.	$N_{Rd,eq,max}$	[kN]	15,6	24,4	42,7	58,2	76,0	110,6	145,4	154,5	183,2	223,8
	Shear Min.	$V_{Rd,eq,min}$	[kN]	6,4	10,1	14,5	19,8	25,8	33,3	36,7	39,0	46,3	56,5
	Shear Max.	$V_{Rd,eq,max}$	[kN]	6,4	10,1	14,5	19,8	25,8	40,3	58,0	63,0	79,1	103,2

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Static and quasi-static resistance for a service life of 100 years (for a single rebar)

All data in this section subject to:

- Correct setting (see setting instructions).
- No edge distance and spacing influence.
- Minimum and maximum embedment depth, as specified in the 'Installation Dimensions' table.
- Concrete C20/25, f_{ck} = 20 N/mm².
- Temperature range I: (max. long/short term temperature +24°C/+40°C).
- Shear loads are calculated without the influence of a lever arm.
- ψ_{sus} = 1,0 according EN 1992-4:2018; eq. 7.14a.
- Recommended loads are with overal partial safety factor for action γ_G = 1,4. The partial safety factors for action depend on the type of loading and shall be taken from national regulations.

HD HAMMER

100+ YEAR DESIGN LIFE

Design Resistance Dry/Wet Holes (Hammer Drilled)

Steel Decisive

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	15,2	15,2	19,2	21,3	23,5	28,0	30,8	32,8	38,9	47,5
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Design Resistance Flooded Holes (Hammer Drilled)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	12,7	12,7	16,0	17,8	19,6	23,3	25,7	27,3	32,4	39,6
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Recommended Loads Dry/Wet Holes (Hammer Drilled)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	10,9	10,9	13,7	15,2	16,8	20,0	22,0	23,4	27,8	33,9
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Recommended Loads Flooded Holes (Hammer Drilled)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	9,1	9,1	11,4	12,7	14,0	16,7	18,4	19,5	23,1	28,3
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

HAMMER

100+ YEAR DESIGN LIFE

Design Resistance Dry/Wet Holes (Hollow Drilling)

Steel Decisive

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	14,1	15,2	19,2	21,3	23,5	28,0	30,8	32,8	38,9	47,5
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Design Resistance Flooded Holes (Hollow Drilling)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	10,9	12,7	16,0	17,8	19,6	23,3	25,7	27,3	32,4	39,6
	Tensile Max.	$N_{Rd,max}$	[kN]	19,6	31,0	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	36,9	56,0	61,7	65,6	77,7	95,0
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Recommended Loads Dry/Wet Holes (Hollow Drilling)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	10,1	10,9	13,7	15,2	16,8	20,0	22,0	23,4	27,8	33,9
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Recommended Loads Flooded Holes (Hollow Drilling)

Non-Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	7,8	9,1	11,4	12,7	14,0	16,7	18,4	19,5	23,1	28,3
	Tensile Max.	$N_{rec,max}$	[kN]	14,0	22,2	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	26,3	40,0	44,1	46,9	55,5	67,8
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Design Resistance Dry/Wet Holes (Hammer/Hollow Drilling)

Steel Decisive

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	6,5	8,2	13,2	14,9	16,4	19,6	21,6	23,0	27,2	33,2
	Tensile Max.	$N_{Rd,max}$	[kN]	17,4	27,2	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	32,9	39,2	43,2	45,9	54,4	66,5
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Design Resistance Flooded Holes (Hammer/Hollow Drilling)

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,min}$	[kN]	5,4	6,8	11,0	12,4	13,7	16,3	18,0	19,1	22,7	27,7
	Tensile Max.	$N_{Rd,max}$	[kN]	14,5	22,7	37,7	51,3	67,0	104,7	150,8	163,6	205,3	268,1
	Shear Min.	$V_{Rd,min}$	[kN]	9,2	14,5	20,7	28,2	32,9	39,2	43,2	45,9	54,4	66,5
	Shear Max.	$V_{Rd,max}$	[kN]	9,2	14,5	20,7	28,2	36,9	57,6	82,9	90,0	112,9	147,4

Recommended Loads Dry/Wet Holes (Hammer/Hollow Drilling)

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	4,7	5,8	9,44	10,7	11,7	14,0	15,4	16,4	19,4	23,7
	Tensile Max.	$N_{rec,max}$	[kN]	12,4	19,4	31,7	43,2	56,4	88,1	126,8	137,8	172,9	225,6
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	23,5	28,0	30,8	32,8	38,9	47,5
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Recommended Loads Flooded Holes (Hammer/Hollow Drilling)

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{rec,min}$	[kN]	3,9	4,9	7,9	8,9	9,8	11,7	12,9	13,7	16,2	19,8
	Tensile Max.	$N_{rec,max}$	[kN]	10,4	16,2	26,9	36,7	47,9	74,8	107,7	116,9	146,6	191,5
	Shear Min.	$V_{rec,min}$	[kN]	6,5	10,3	14,8	20,2	23,5	28,0	30,8	32,8	38,9	47,5
	Shear Max.	$V_{rec,max}$	[kN]	6,5	10,3	14,8	20,2	26,3	41,1	59,2	64,3	80,7	105,3

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

Seismic resistance for a service life of 100 years (for a single rebar)

All data in this section subject to:
- Correct setting (see setting instructions).
- No edge distance and spacing influence.
- Minimum and maximum embedment depth, as specified in the 'Installation Dimensions' table.
- Concrete C20/25, f_{ck} = 20 N/mm².
- Temperature range I: (max. long/short term temperature +24°C/+40°C).
- Shear loads are calculated without the influence of a lever arm.
- α_{gap} = 1,0 (using special filling washer according ETA-19/0850 Annex A 3).
- Increasing factor for concrete ψ_c: C25/30 to C50/60 = 1,0

Design Resistance Dry/Wet Holes in case of seismic performance category C1 (Hammer/Hollow Drilling)

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,eq,min}$	[kN]	7,0	8,8	11,4	12,7	14,0	16,7	18,4	19,5	23,1	28,3
	Tensile Max.	$N_{Rd,eq,max}$	[kN]	18,8	29,3	44,4	60,5	79,0	123,4	177,6	192,9	242,0	315,9
	Shear Min.	$V_{Rd,eq,min}$	[kN]	6,4	10,1	14,5	19,8	25,8	33,3	36,7	39,0	46,3	56,5
	Shear Max.	$V_{Rd,eq,max}$	[kN]	6,4	10,1	14,5	19,8	25,8	40,3	58,0	63,0	79,1	103,2

Design Resistance Flooded holes in case of seismic performance category C1 (Hammer/Hollow Drilling)

Cracked Concrete		d_{nom}		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32
B500B	Tensile Min.	$N_{Rd,eq,min}$	[kN]	5,9	6,4	8,1	9,0	9,9	11,8	13,0	13,8	16,4	20,0
	Tensile Max.	$N_{Rd,eq,max}$	[kN]	15,6	24,4	42,7	58,2	76,0	110,6	145,4	154,5	183,2	223,8
	Shear Min.	$V_{Rd,eq,min}$	[kN]	6,4	10,1	14,5	19,8	25,8	33,3	36,7	39,0	46,3	56,5
	Shear Max.	$V_{Rd,eq,max}$	[kN]	6,4	10,1	14,5	19,8	25,8	40,3	58,0	63,0	79,1	103,2

Combined tension and shear loading in accordance with EN 1992-4:2018 and AS 5216:2018 please refer to ICCONS Designfix software or contact Iccons engineering department **engineering@iccons.com.au** for further information.

BIS-PE GEN3 Mortar Properties

B+BTec BIS-PE GEN3 injection mortar may be applied in cracked and non-cracked concrete, lightweight-concrete, aerated-concrete and natural stone (Attention! natural stone can discolour, this shall be checked in advance.). In the table below the physical properties of the B+BTec BIS-PE GEN3 are listed.

Properties	Test Method	Result
Compressive strength	EN 196-1	122 N/mm²
Flexural strength	EN 196-1	66,0 N/mm²
Axial tensile strength	DIN EN ISO 527-2	44,2 N/mm²
E modulus	DIN EN ISO 527-2	6.300 N/mm²
Elongation at fracture	DIN EN ISO 527-2	1 %
Degree of shrinkage	DIN 52450	≤ 1,4 ‰
Hardness Shore A	DIN EN ISO 868	99,4
Hardness Shore D	DIN EN ISO 868	86,1
Density		≤ 1,5 kg/dm³
Thermal conductivity	DIN EN 993-15	0,50 W/mK
Heat capacity	DIN EN 993-15	1.350 J/kgK
Electrical resistance	DIN IEC 93	$8{,}0 \cdot 10^{12}$ Ω

BIS-PE GEN3 Chemical Resistance

The resistance of the B+BTec BIS-PE GEN3 injection mortar to chemical substances is given in the table below. The data in this table are applicable to brief periods of chemical contact with full cured adhesive (e.g. temporary contact with adhesive during a spill).

Chemical Agent	Concentration	Resistant	Not resistant
Acetic acid (Vinegar)	40		■
Acetone	10		■
Ammonia, aqueous solution	5	■	
Aniline	100		■
Beer	100	■	
Benzine (kp 100-140°F)	100	■	
Benzene	100		■
Boric Acid, aqueous solution		■	
Calcium carbonate, suspended in water	All	■	
Calcium chloride, suspended in water		■	
Calcium hydroxide, suspended in water		■	
Carbon tetrachloride	100	■	
Caustic soda (Sodium hydroxide)	40	■	

Continued on next page ➔

Chemical Agent	Concentration	Resistant	Not resistant
Citric acid	All	■	
Chlorine	All	■	
Diesel oil	100	■	
Ethyl alcohol, aqueous solution	50		■
Formaldehyde, aqueous solution	30	■	
Formic acid (Methanoic acid)	100		■
Formic acid (Methanoic acid)	10	■	
Freon		■	
Fuel Oil		■	
Gasoline (premium grade)	100	■	
Glycol (Ethylene glycol)		■	
Hydrogen peroxide	30		■
Hydrochloric acid (Muriatic Acid)	Conc.		■
Isopropyl alcohol	100		■
Lactic acid	All		■
Laitance		■	
Linseed oil	100	■	
Lubricating oil	100	■	
Magnesium chloride, aqueous solution	All	■	
Methanol	100		■
Motor oil (SAE 20 W-50)	100	■	
Nitric acid	10		■
Oleic acid	100	■	
Perchloroethylene	100	■	
Petroleum	100	■	
Phenol, aqueous solution (Carbonic acid)	8		■
Phosphoric acid	85	■	
Phosphoric acid	10	■	
Potash lye (potassium hydroxide, 10% and 40% solutions)		■	
Potassium carbonate, aqueous solution	All	■	
Potassium chlorite, aqueous solution	All	■	
Potassium nitrate, aqueous solution	All	■	
Sodium carbonate, aqueous solution	All	■	
Sodium chloride, aqueous solution	All	■	
Sodium phosphate, aqueous solution	All	■	
Sodium silicate	All	■	
Sulfuric acid	30		■
Tartaric acid	All	■	
Tetrachloroethylene	100	■	
Toluene			■
Turpentine	100	■	
Trichloroethylene	100		■

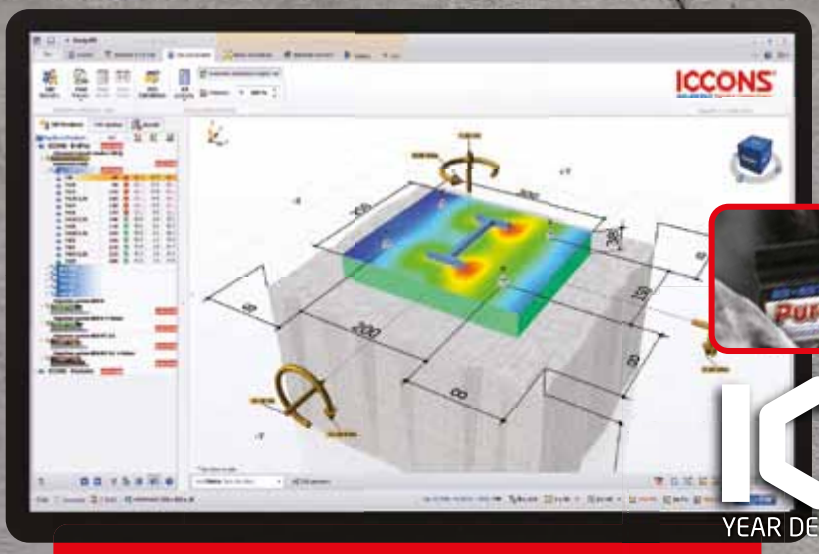
Design FiX

DESIGNFIX®: anchor design made easy

- An innovative 3D visual user interface, utilizing EN 1992-4 design methodology and suitable for design in accordance with AS 5216:2018
- Seismic design under earthquake loads according to EN 1992-4, TR 045, TR 049
- Finite element analysis steel baseplate design

ICCONS DesignFiX® is a simple, intuitive and free to download (registration required) anchor design program for design engineers, project managers, site engineers and end users. Complex mechanical or chemical heavy duty anchor arrangements can be calculated in minutes.

INCLUDES THE NEW BIS PE GEN3 PURE EPOXY WITH 100 year design service life assessed in accordance with EAD 330499-01-0601



Optimum BIS Injection System anchorage depth

When selecting a BIS Adhesive Injection System, ICCONS DesignFiX allows for the automatic calculation of the most effective anchorage depth, taking into consideration the minimal and maximum values of the ETA.

100+ YEAR DESIGN LIFE

FREE DOWNLOAD www.iccons.com.au/software/anchor-design-software

Input freedom & 3D user interface

ICCONS DesignFiX offers complete freedom to select an anchor pattern and base plate configuration, as well as the position and direction of load combinations. Changes are made directly into the 3D user interface.

Anchor type comparison

ICCONS DesignFiX displays the usability of the various anchor types (according to EN 1992-4) including the values for each load type. This allows you to compare the calculation results of the different anchor types in a single easy to read panel. Design results suitable for use in accordance with AS 5216:2018.

Calculate base plate thickness

The integrated FEM-Calculation Method (Finite Element Method) in ICCONS DesignFiX allows you to calculate the base plate thickness based upon the stresses in the base plate in combination with the base plate configuration.

NCC NATIONAL CODE COMPLIANT · ETA · C1 SEISMIC · C2 SEISMIC · DONE AND DUSTLESS · AEFAC Australian Engineered Fasteners and Anchors Council SUPPORTING MEMBER

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