ESI Xtreme Pro Injection Mortar

TYPE	ART. NR.			EAN 13
280 ml incl. mixer nozzle	800028	12		5708620103778
350 ml incl. mixer nozzle	800350	12		5708620103792
410 ml incl. mixer nozzle	800410	12		5708620103761
Stock box 20 x art. nr. 800028	800028B			5708620103815
Stock box 20 x art. nr. 800350	800350B			5708620103839
Stock box 20 x art. nr. 800410	800410B			5708620103822

Design load capacities in non-cracked concrete C20/25

Dimension of threaded rod (mm)	M8	M10	M12	M16	M20	M24	M27	M30
Effective anchorage depth, h_{ef} (mm)	80	90	110	125	170	210	240	270
Drill hole diameter (mm)	10	12	14	18	22	26	30	35
Minimum thickness of submaterial, h_{min} (mm)	110	120	140	161	218	266	304	340
Tension load, Design resistance N_{Rd}, kN◆								
4.6 steel	7,5	11,5	17,0	31,5	49,0	70,5	92,0	112,0
5.8 steel	13,4	18,9	27,6	39,2	62,2	85,4	104,3	124,5
8.8 steel	13,4	18,9	27,6	39,2	62,2	85,4	104,3	124,5
A4-70 Stainless Steel	13,4	18,9	27,6	39,2	62,2	85,4	104,3	124,5
A4-80 Stainless Steel	13,4	18,9	27,6	39,2	62,2	85,4	104,3	124,5
HCR steel	13,4	18,9	27,6	39,2	62,2	85,4	104,3	124,5
Shear load, Design resistance V_{Rd}, kN◆								
4.6 steel	4,2	7,2	10,2	18,6	29,3	42,5	55,1	67,1
5.8 steel	7,2	12,0	16,8	31,2	48,8	70,4	92,0	112,0
8.8 steel	12,0	18,4	27,2	50,4	78,4	112,8	147,2	179,2
A4-70 Stainless Steel	8,3	12,8	19,2	35,3	55,1	79,5	103,2	125,6
A4-80 Stainless Steel	11,3	17,3	25,6	47,4	73,7	106,0	138,3	168,4
HCR Steel	10,4	16,0	24,0	44,0	68,8	99,2	128,8	156,8

◆ Design resistance is valid for a single anchor in dry/wet non-cracked concrete C20/25 not influenced by edge distance and/or spacing.
Ψre,N = 1 (Normal reinforcement according to TR029 5.2.2.3 - 5.2i & 5.2.2.4 - 5.3d).

Design load capacities in cracked concrete C20/25

Dimension of threaded rod (mm)	M8	M10	M12	M16	M20	M24	M27	M30
Effective anchorage depth, h_{ef} (mm)	80	90	110	125	170	210	240	270
Drill hole diameter (mm)	10	12	14	18	24	28	32	35
Minimum thickness of submaterial, h_{min} (mm)	110	120	140	161	218	266	304	340
Tension load, Design resistance N_{Rd}, kN◆								
4.6 steel	5,4	7,9	12,7	19,2	32,6	48,4	73,5	88,7
5.8 steel	5,4	7,9	12,7	19,2	32,6	48,4	73,5	88,7
8.8 steel	5,4	7,9	12,7	19,2	32,6	48,4	73,5	88,7
A4-70 Stainless Steel	5,4	7,9	12,7	19,2	32,6	48,4	73,5	88,7
A4-80 Stainless Steel	5,4	7,9	12,7	19,2	32,6	48,4	73,5	88,7
HCR Steel	5,4	7,9	12,7	19,2	32,6	48,4	73,5	88,7
Shear load - Recommended Design resistance V_{Rd}, kN◆								
4.6 steel	4,2	7,2	10,2	18,6	29,3	42,5	55,1	67,1
5.8 steel	7,2	12,0	16,8	31,2	48,8	70,4	92,0	112,0
8.8 steel	9,7	18,4	27,0	46,1	78,3	112,8	147,2	179,2
A4-70 Stainless Steel	8,3	12,8	19,2	35,3	55,1	79,5	103,2	125,6
A4-80 Stainless Steel	9,7	17,3	24,1	46,1	73,7	106,0	138,4	168,4
HCR Steel	9,7	16,0	24,0	44,0	68,8	99,2	128,8	156,8

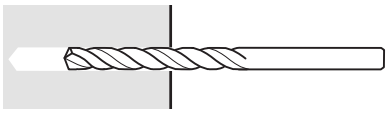
◆ Design resistance is valid for a single anchor in dry/wet cracked concrete C20/25 not influenced by edge distance and/or spacing.
Ψre,N = 1 (Normal reinforcement according to TR029 5.2.2.3 - 5.2i & 5.2.2.4 - 5.3d).

Post installed rebar acc. to EN 1992-1-1 (EC2)

Design anchorage lengths for straight rebar ($f_{y,k}$ = 500 N/mm^2) post installed with ESI Xtreme Pro in concrete C25/30 acc. to EN 1992-1-1 for "good" bond conditions.

Rebar diameter d_s (mm)	Drill diameter d_0 (mm)	Cross section A_s (mm2)	Used Design steel capacity (yield) (kN)	Design anchorage Lenghts for design to yield	
				α_2 = 1,0	Consumption α_2 = 1,0
				(mm)	(ml)
8	12	50,3	21,9	378	29
10	14	78,5	34,1	473	43
12	16	113,1	49,2	567	60
14	18	153,9	66,9	662	80
16	20	201,1	87,4	756	103
20	25	314,2	136,6	945	200
22	28	380,1	165,3	1040	294
24	32	452,4	196,7	1134	479
25	32	490,9	213,4	1181	444

1) $\alpha_1=\alpha_3=\alpha_4=\alpha_5=\alpha_6$= 1,0. $\gamma_{m,s}$ = 1,15 og $\gamma_{m,c}$ =1,5 acc. to EN 1992-1-1.
* Allowed Drilling Method: Hammer or Compressed air drilling.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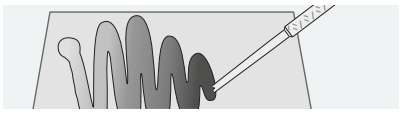
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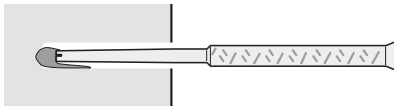
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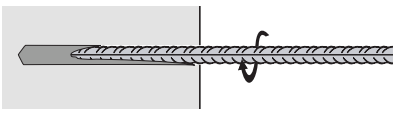
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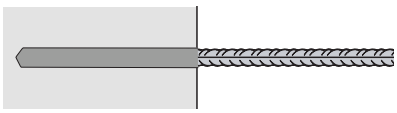
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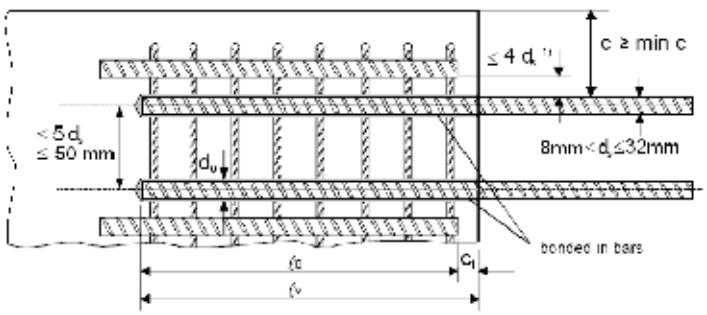
Minimum concrete cover min c of the bonded-in rebar depending on drilling method

Drilling method	Without drilling aid
Hammer drilling	40 mm + 0,06 $l_v \geq 2\ d_s$
Compressed air drilling	60 mm + 0,08 l_v



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