EXPANDET®

Svedebuen 2-6 DK-3230
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CE Declaration of Performance

No. DEA990915

Expandet ESI Xtreme Pro (Styrene Free Injection Mortar)

Intended use or uses of the construction product according to ETAG 001 parts 1 and 5 EOTA TR023		
Generic type		Bonded anchor for anchorage of post-installed rebar
Base material		Concrete C12/15 to C50/60 (CL 0,40) acc. to EN 206-1:2003
Use	Material	Straight deformed reinforcing bars, diameter 8 - 32 mm, mechanical properties according Annex C, EN 1992-1-1 & EN 10080. (Class B & C are recommended)
Loading		Static and quasi-static loads
Service temperature range		-40°C to +80°C (max. short term temperature +80°C and max. long term temperature +50°C).
Use category 1		Dry and wet concrete. Overhead installation is allowed. Drilling performed with hammer drilling or compressed air drilling. • Overlapping joints with existing reinforcement in a building component • Anchoring of the reinforcement at a slab or beam support; end support/bearing of a slab designed as simply supported as well as its reinforcement for restraint forces. • Anchoring of reinforcement of building components stressed primarily in compression. • Anchoring of reinforcement to cover the line of acting tensile forces.
ETA - 16/0960 issued by		DIBT
On the basis of		ETAG 001 Part 5, April 2013 used as European Assessment Document acc. to Art. 66 § 3 of Regulation (EU) No 305/2011.
Certificate of constancy of performance		STAATLICHE MATERIALPRÜFUNGSANSTALT DARMSTADT, No.: 1343-CPR-M 628-3

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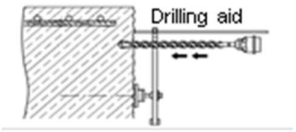
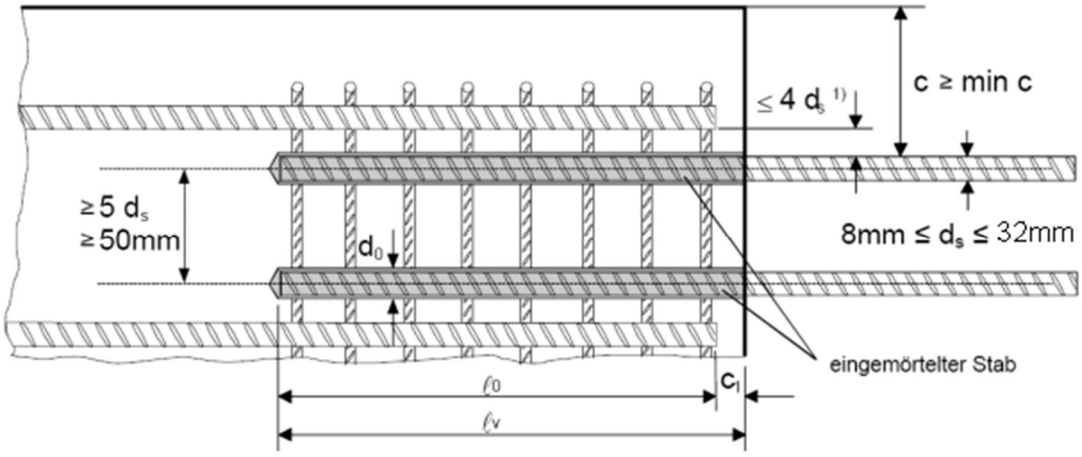
Declared performances according to ETAG 001 & TR023

Essential Characteristics			Performance										
			Ø 8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø22	Ø24	Ø25	Ø28	Ø32
Installation parameters													
Ø d_s	Diameter of rebar	[mm]	8	10	12	14	16	20	22	24	25	28	32
d_0	Nominal diameter of drill bit	[mm]	12	14	16	18	20	25	28	32	32	35	40
l_v	Max permissible anchorage depth	[mm]	10	100	120	140	160	200	200	200	200	100	100

	Drilling Method	Rebar ø	Without drilling aid	With drilling aid
Minimum concrete cover	Hammer drilling (HD)	< 25	30 mm + 0,06 · l_v ≥ 2 φ	30 mm + 0,02 · l_v ≥ 2 φ
		≥ 25	40 mm + 0,06 · l_v ≥ 2 φ	40 mm + 0,02 · l_v ≥ 2 φ
	Compressed air drilling (CD)	< 25	50 mm + 0,08 · l_v	50 mm + 0,02 · l_v
		≥ 25	60 mm + 0,08 · l_v	60 mm + 0,02 · l_v





Design values of ultimate bond resistance f_{bd} [1,2] for all drilling methods and good bond conditions

Essential Characteristics				Performance	
				Ø8 to Ø25	Ø28 to Ø32
f_{bd}	Concrete class	C12/15	[N/mm²]	1,6	1,6
f_{bd}	Concrete class	C16/20	[N/mm²]	2,0	2,0
f_{bd}	Concrete class	C20/25	[N/mm²]	2,3	2,3
f_{bd}	Concrete class	C25/30	[N/mm²]	2,7	2,7
f_{bd}	Concrete class	C30/37	[N/mm²]	3,0	3,0
f_{bd}	Concrete class	C35/45	[N/mm²]	3,4	3,4
f_{bd}	Concrete class	C40/50	[N/mm²]	3,7	3,7
f_{bd}	Concrete class	C45/55	[N/mm²]	4,0	3,7
f_{bd}	Concrete class	C50/60	[N/mm²]	4,3	3,7

[1] Values for f_{bd} are valid for good bond conditions according to EN 1992-1-1. For all other bond conditions multiply the values for f_{bd} by 0.7.

[2] Design values for f_{bd} is based on a γ_c = 1,5 acc. to Eurocode 1992-1-1

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The performance of the product identified above is in conformity with the set of declared performance/s.
This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of Expandet Screw Anchors A/S by:

Place and date of issue: Græsted, 31/12/2016

Lars Aa. Mortensen, Head of Technical Department