EXPANDET®

Svendebuen 2-6 DK-3230
Tlf.: +45 70227979
expandet@expandet.dk

Declaration of Performance

No. DEA9900210

Expandet Concrete Hammer Rivet

Intended use or uses of the construction product according to ETAG 001-06		
Generic type		Deformation- controlled expansion anchor
Base material		May be anchored in: - Cracked or non-cracked concrete. - Reinforced or unreinforced normal weight concrete of strength classes C 20/25 at least to C50/60 at most according to EN 206: 2000-12.
A	Material	Galvanised steel
	Durability	May only be used in Structures subject to dry indoor conditions, indoor with temporary condensation.
Loading		Static, quasi-static and loads under fire
Fire Reaction		Class A1 in relation to reaction to fire in accordance with the stipulations of the Commission decision 96/603/EC, amended by 2000/605/EC.
ETA - 06/0259 issued by		Deutsches Institut für Bautechnik (DIBT)
On the basis of		ETAG 001-6
Certificate of constancy of performance 0756-CDP-0177-EN issued by		Deutsches Institut für Bautechnik (DIBT)
Under System		2+

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Dimensions and Materials

Expandet Concrete Hammer Rivet		**6 x 35 mm**	**6 x 60 mm**
Length of wedge	[mm]	43	73
Length of shank	[mm]	39	69,5
Material	Steel acc. To EN 10263-4		

Installation parameters

Expandet Concrete Hammer Rivet			**6 x 35 mm**	**6 x 60 mm**
Diameter of drill hole	d_0	[mm]	6	
Depth of drill hole	$h_0 \geq$	[mm]	40	
Effective anchorage depth	h_{ef}	[mm]	32	
Minimum thickness of member	h_{min}	[mm]	80	
Max. Thickness of fixture	t_{fix}	[mm]	5	35

Design Method C: Characteristic values

Expandet Concrete Hammer Rivet			**6 x 35 mm**	**6 x 60 mm**
Any load direction				
Characteristic resistance (in concrete C20/25 to C50/60) F_{Rk}		[kN]	5	
Partial safety factor	γ_M [1)]	[-]	1,5	
Spacing	S_{cr}	[mm]	200	
Edge distance	C_{cr}	[mm]	150	
Shear load with lever arm				
Characteristic bending moment	$M^0_{Rk,s}$ [2)]	[Nm]	5,4	
Partial safety factor	γ_{Ms}	[-]	1,25	
[1)] Installation safety factor γ_2 = 1,0 included				
[2)] Characteristic bending moment according to ETAG 001, Annex C, 5.2.3.2.b				

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Characteristic values under fire exposure in concrete C20/25 to C50/60 in any load direction without lever arm, Design Method C

Fire resistance class	Expandet Concrete Hammer Rivet		6x35 / 6x65
R 30	Characteristic resistance	$F_{Rk,s}$ [2] [kN]	0,8
R 60	Characteristic resistance	$F_{Rk,s}$ [2] [kN]	0,7
R 90	Characteristic resistance	$F_{Rk,s}$ [2] [kN]	0,6
R 120	Characteristic resistance	$F_{Rk,s}$ [2] [kN]	0,4
R 30 to R 120	Spacing	$S_{cr,s}$ [mm]	200
	Edge distance [1]	$C_{cr,s}$ [mm]	150
[1] In case of fire attack from more than one side, the edge distance shall be $\geq$ 300 mm.			
[2] In absence of other national regulations the partial safety factor for resistance under fire exposure $\gamma_{M,fi}$ = 1,0 is recommended.			

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, 10/07/2015

Lars Mortensen, Head of Technical Department