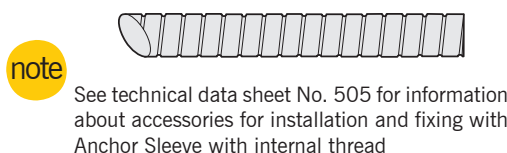
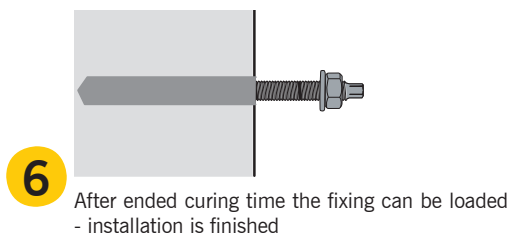
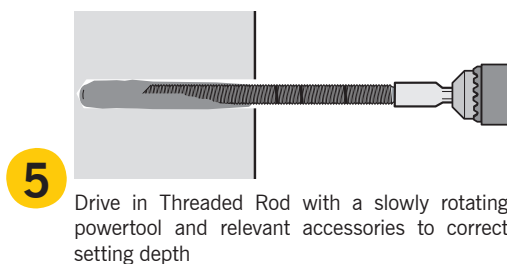
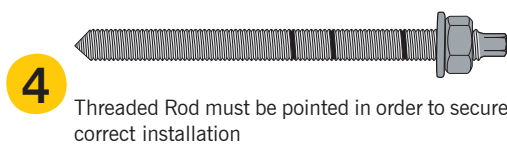
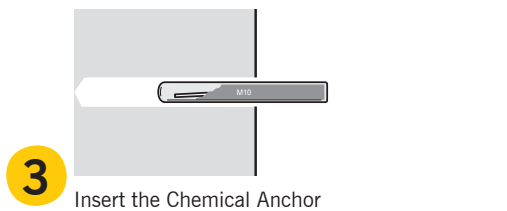
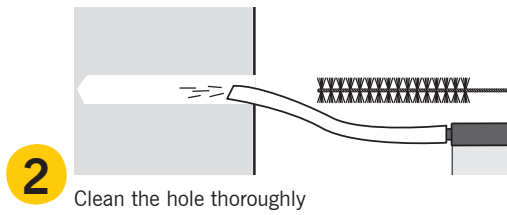
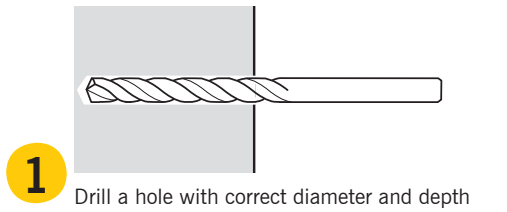


**CHEMICAL ANCHOR**

**Installation:**

For fixing with  
threaded rod or socket etc.  
in brick, concrete and aerated concrete



**Advantages:**

- Expansion-free fixing.
- Applicable close to free edge - and with small spacing.
- Anchorage can be designed in Expandet Calculation Software
- Usable in:
  - In damp environments
  - Under water
  - In aggressive environments

**Accessories:**

- Blow Out Bulp.
- Brush.
- Threaded rods - see sheet 506.
- Socket Anchor with internal thread - see sheet 505.



**Approvals:**

Expandet Chemical Anchor has following approvals:



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Svendebuen 2-6  
3230 Græsted  
Danmark

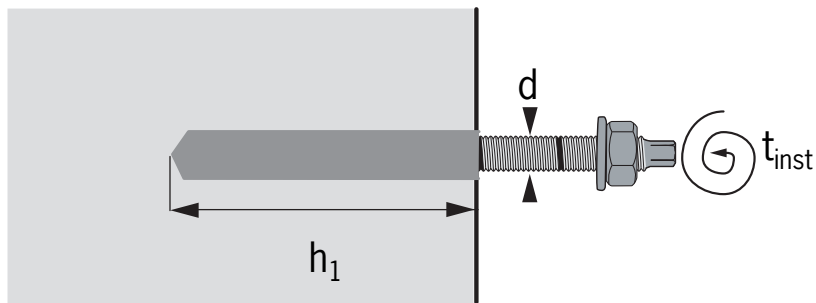
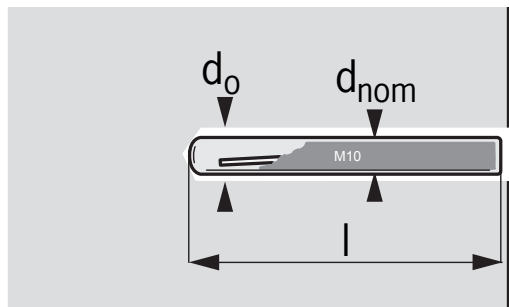
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# CHEMICAL ANCHOR



Type	Dimensions			Fixing				Load Capacities		
	d	d <sub>nom</sub>	L	d <sub>o</sub>	h <sub>1</sub>	T <sub>inst</sub>	h <sub>min</sub>	S <sub>rec</sub>	C <sub>rec</sub>	F <sub>Rd</sub>
Expandet Chemical Anchor	Bolt diameter mm	Outside diameter of anchor mm	Anchor length mm	Drill hole diameter mm	Depth of drilled hole (Min.) mm	Required setting torque Nm	Thickness of concrete member, min. mm	Recommended spacing mm	Recommended edge distance mm	Design resistance kN*
M8	M8	8	80	10	80	10	130	200	100	4,00
M10	M10	10	80	12	90	20	140	220	110	7,00
M12	M12	12	95	14	110	40	160	270	135	10,00
M16	M16	16	95	18	125	80	175	310	155	15,00
M20	M20	20	170	25	170	150	220	420	210	27,00
M24	M24	24	210	28	210	200	260	520	260	37,00

\* Design resistance is valid for a single anchor independent of load directions in concrete C20/25 not influenced by edge distance and/or spacing.

If no guidance for  $\gamma_f$  exists Expandet recommend a partial safety factor for actions of minimum 1,5.

1 kN  $\approx$  100 kg.

**Important:** See Expandet's "Principles for fastening" for general information on fastening as well as information on limited liability. (Can be downloaded at [www.expandet.com](http://www.expandet.com))



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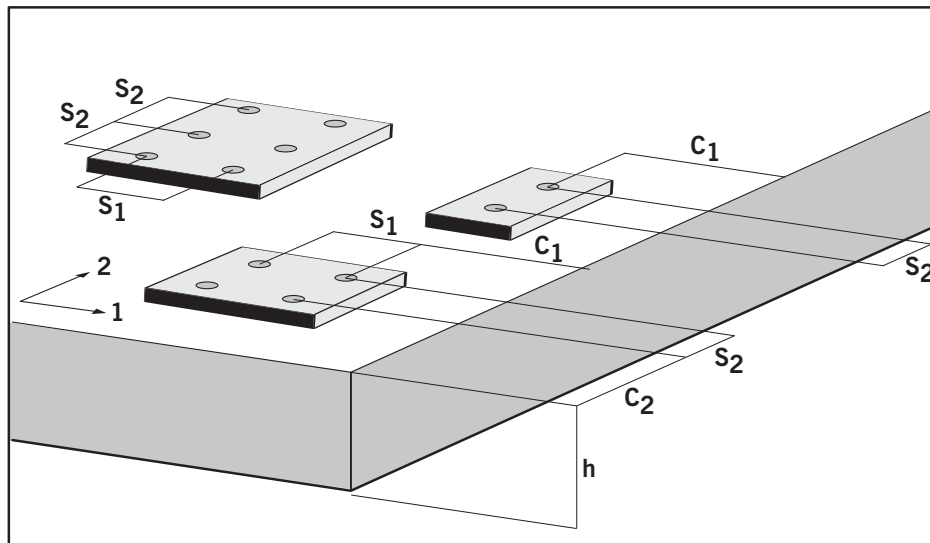
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# REDUCTION OF LOAD CAPACITIES



Reduction factor for edge distance ( $r_{Fc}$ )						
Edge distance	M8	M10	M12	M16	M20	M24
40 mm	0,22					
45 mm	0,29	0,23				
50 mm	0,35	0,29				
55 mm	0,42	0,35	0,23			
65 mm	0,50	0,47	0,33	0,25		
85 mm	0,81	0,70	0,52	0,41	0,23	
100 mm	<b>1,00</b>	0,88	0,66	0,54	0,32	
105 mm		0,94	0,71	0,58	0,35	0,23
110 mm		<b>1,00</b>	0,76	0,62	0,38	0,25
135 mm			<b>1,00</b>	0,83	0,54	0,38
155 mm				<b>1,00</b>	0,66	0,48
170 mm					0,75	0,55
190 mm					0,88	0,65
210 mm					<b>1,00</b>	0,75
230 mm						0,85
250 mm						0,95
260 mm						<b>1,00</b>

Reduction factor for spacing ( $r_{Fc}$ )						
Spacing	M8	M10	M12	M16	M20	M24
80 mm	0,70					
90 mm	0,73	0,70				
110 mm	0,78	0,75	0,70			
125 mm	0,81	0,78	0,73	0,70		
150 mm	0,88	0,84	0,78	0,74		
170 mm	0,93	0,89	0,81	0,77	0,70	
200 mm	<b>1,00</b>	0,95	0,87	0,82	0,74	
210 mm		0,98	0,89	0,84	0,75	0,70
220 mm		<b>1,00</b>	0,91	0,85	0,76	0,71
250 mm			0,96	0,90	0,80	0,74
270 mm			<b>1,00</b>	0,94	0,82	0,76
310 mm				<b>1,00</b>	0,87	0,80
350 mm					0,92	0,84
400 mm					0,98	0,88
420 mm					<b>1,00</b>	0,90
500 mm						0,98
520 mm						<b>1,00</b>

CURING TIME:	
Temperature:	Curing time:
-5 - 0°C	5 hours
0 - 10°C	60 minutes
10 - 20°C	20 minutes
20°C	10 minutes



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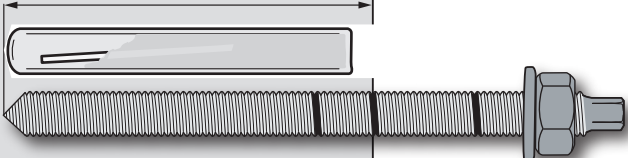
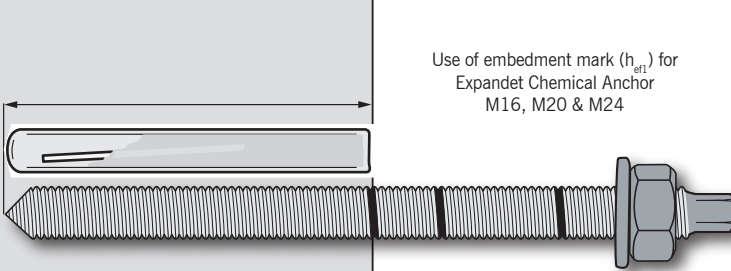
# CHEMICAL ANCHOR

## THREADED ROD

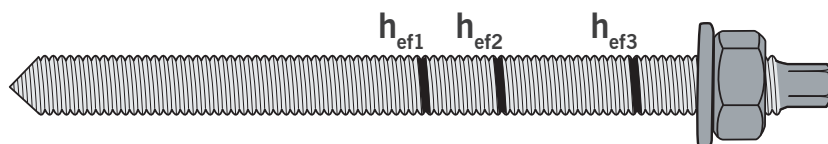
### Use of Expandet Threaded Rod together with Expandet Chemical Anchor:

Expandet Chemical Anchor is defined with 1 embedment depth.

Hence it only utilizes one of the 3 embedment markings on Expandet Threaded Rod in carbon and stainless steel.

Type		Dimensions			Marking of embedment depth	
		$h_{nom}$	$h_1$	$t_{fix}$		
Chemical anchor dimension	Threaded Rod dim. mm	Embedment depth mm	Depth of drilled hole mm	Thickness of fixture mm		
	M8	8 x 110 *	80	80	17	 <p>Use of embedment mark (<math>h_{ef2}</math>) for Expandet Chemical Anchor M8, M10 &amp; M12</p>
		8 x 130	80	80	37	
		8 x 150 *	80	80	57	
		8 x 175	80	80	82	
8 x 200		80	80	105		
M10	10 x 110	90	90	5		
	10 x 130 *	90	90	25		
	10 x 165 *	90	90	60		
	10 x 200	90	90	95		
	10 x 220	90	90	115		
	10 x 250	90	90	145		
	10 x 300	90	90	195		
M12	12 X 140	110	110	10		
	12 X 160 *	110	110	30		
	12 X 190 *	110	110	60		
	12 X 220	110	110	90		
	12 X 250	110	110	120		
	12 X 300	110	110	170		
M16	16 X 170 *	125	125	20	 <p>Use of embedment mark (<math>h_{ef1}</math>) for Expandet Chemical Anchor M16, M20 &amp; M24</p>	
	16 X 190 *	125	125	40		
	16 X 230	125	125	80		
	16 X 250	125	125	100		
M20	20 X 260 *	170	170	60		
	20 X 360	170	170	160		
M24	24 X 300 *	210	210	55		
	24 X 360	210	210	115		

\* Also available in stainless steel, A4-70.



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