

Hammer In Capsules



For Rebar Design reference should be made to Eurocode 2

Product Information

The Epoxy Acrylate, Hammer -In Capsules are suitable for use in solid concrete and some natural stone. They can be used with reinforcing bar or threaded rods and can achieve high loads by using 2 capsules at double embedment depth. They can be used in Rotary Percussion or Diamond Drilled holes

Features

- Expansion free
- High loads
- Increased embedment depth
- Rapid installation
- Exact resin quantity per hole

Capsule Data

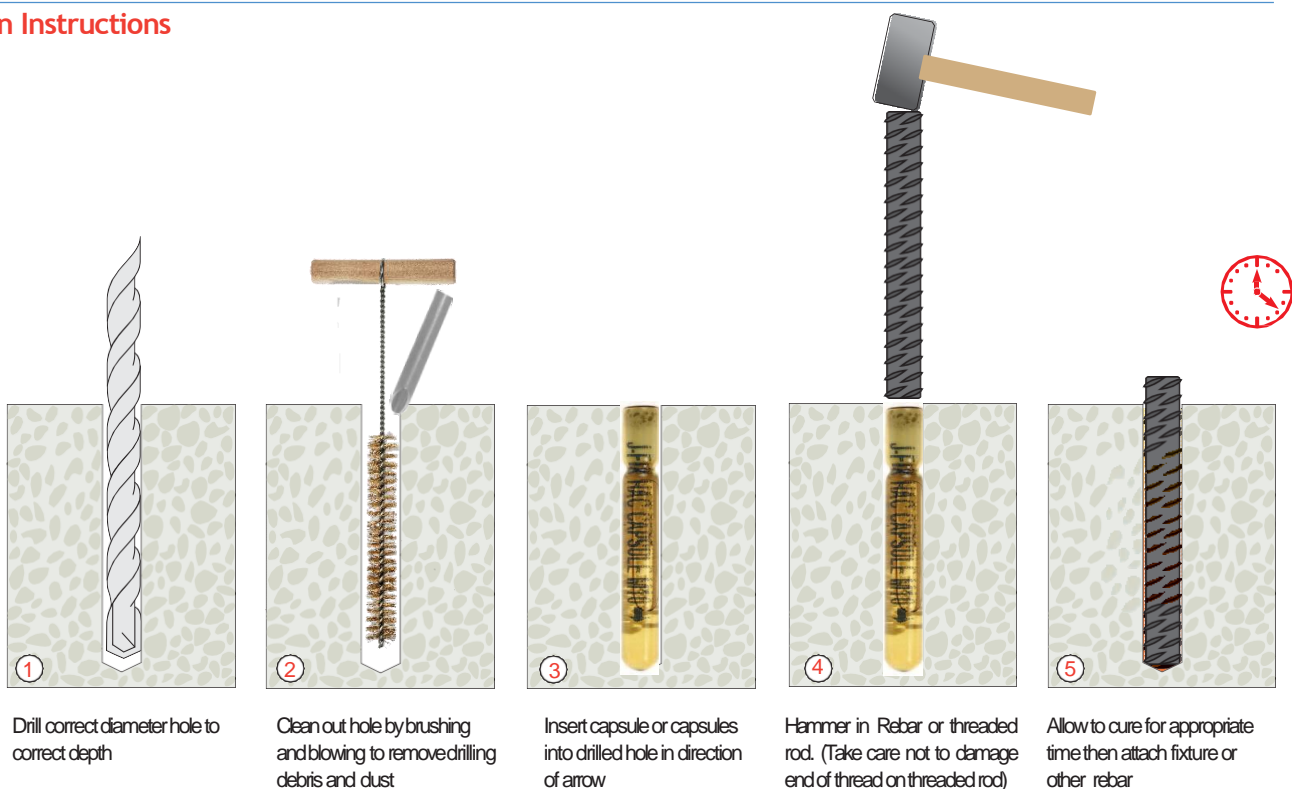
Part Number	Capsule Diameter mm	Capsule Length mm	Rebar				Threaded Studs			
			Nominal Diameter mm	Drill Diameter mm	Hole Depth		Nominal Diameter mm	Drill Diameter mm	Hole Depth	
					Single	Double mm			Single mm	Double mm
JCAFM10	11	90	10	14	100	200	10	12	100	200
JCAFM12	13	110	12	15	120	240	12	14	120	240
JCAFM16	17	125	16	20	160	320	16	18	160	320
JCAFM20	22	175	20	25	200	400	20	25	200	400
JCAFM24	24	210	25	30	250	500	24	28	240	480
JCAFM30	33	265	32	38	320	640	30	35	300	600

CURING TIMES

Base Material Temperature °C	Dry Concrete mins	Wet Concrete mins
5	300	600
10	120	240
20	60	120
30	45	90

Capsule temperature must be between +5°C to +25°C

Installation Instructions



Hammer In Capsules

LOAD DATA - NON- CRACKED CONCRETE



Grade 50 Rebar x 1 Capsule (C20/25 Non- Cracked Concrete)

Bar Diam (d _b)	Overall Embedment Depth (h _{nom})	Minimum Concrete Thickness (h _{min})	Characteristic Resistance		Design Resistance		Approved Resistance		Design Spacing		Design Edge Distance	
			Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear
mm	mm	mm	kN	kN	kN	kN	kN	kN	mm	mm	mm	mm
10	100	130	34.3	21.4	13.6	14.2	9.7	10.1	245	50	125	135
12	120	150	47.5	30.8	18.8	20.5	22.0	14.6	285	60	145	195
16	160	200	84.4	54.7	33.5	36.5	39.0	26.0	380	80	190	295
20	200	250	131.9	85.6	52.3	57.0	61.1	40.7	510	100	275	405
25	250	310	197.9	133.7	78.5	89.1	56.0	63.6	740	125	375	560
32	320	400	289.0	219.1	114.7	146.0	81.9	104.2	960	160	480	800



Grade 50 Rebar x 2 Capsule (C20/25 Non- Cracked Concrete)

Bar Diam (d _b)	Overall Embedment Depth (h _{nom})	Minimum Concrete Thickness (h _{min})	Characteristic Resistance		Design Resistance		Approved Resistance		Design Spacing		Design Edge Distance	
			Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear
mm	mm	mm	kN	kN	kN	kN	kN	kN	mm	mm	mm	mm
10	200	230	68.6	21.4	27.2	14.2	19.4	10.1	245	50	125	110
12	240	270	95.0	30.8	37.7	20.5	26.9	14.6	285	60	145	140
16	320	360	168.8	54.7	67.0	36.5	47.8	26.0	380	80	200	195
20	400	450	263.8	85.6	104.7	57.0	74.7	40.7	475	100	315	260
25	500	560	395.8	133.7	157.0	89.1	112.1	63.6	610	125	450	340
32	640	720	591.2	219.1	234.6	146.0	104.2	104.2	860	160	610	465



Grade 5.8 Threaded Rod x 1 Capsule (C20/25 Non- Cracked Concrete)

Thread Diam (d _b)	Overall Embedment Depth (h _{nom})	Minimum Concrete Thickness (h _{min})	Characteristic Resistance		Design Resistance		Approved Resistance		Design Spacing		Design Edge Distance	
			Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear
mm	mm	mm	kN	kN	kN	kN	kN	kN	mm	mm	mm	mm
10	100	130	31.6	14.0	12.5	11.2	8.9	8.0	230	50	120	110
12	120	150	44.3	21.0	17.5	16.8	12.5	12.0	275	60	140	155
16	160	200	76.0	39.0	30.1	31.2	21.5	22.2	360	80	180	245
20	200	250	131.9	61.0	52.3	48.8	37.3	34.8	510	100	215	335
24	240	300	177.3	88.0	70.3	70.4	50.2	50.2	640	120	335	435
30	300	370	262.4	140.0	104.1	112.0	74.3	80.0	900	150	450	620

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LOAD DATA - NON- CRACKED CONCRETE



Grade 8.8 Threaded Rod x 1 Capsule (C20/25 Non- Cracked Concrete)

Thread Diam (d _s)	Overall Embedment Depth (h _{nom})	Minimum Concrete Thickness (h _{min})	Characteristic Resistance		Design Resistance		Approved Resistance		Design Spacing		Design Edge Distance	
			Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear
mm	mm	mm	kN	kN	kN	kN	kN	kN	mm	mm	mm	mm
10	100	130	31.6	23.0	12.5	18.4	8.9	13.1	230	50	120	195
12	120	150	44.3	33.0	17.5	26.4	12.5	18.8	275	60	140	260
16	160	200	76.0	63.0	30.1	50.4	21.5	36.0	360	80	180	435
20	200	250	131.9	98.0	52.3	78.4	37.3	56.0	510	100	215	585
25	240	300	177.3	141.0	70.3	112.8	50.2	80.5	640	120	335	765
30	300	370	262.4	224.0	104.1	179.2	74.3	128.0	900	210	450	1090

STEEL DESIGN RESISTANCE FOR SINGLE ANCHOR

Load Type	Steel Grade	Threaded Bar /Rebar Size							
		M10	M12	M16	M20	M24	M25	M30	M32
Tensile (kN)	Rebar Fe500	30.5	44.0	78.2	122.3	-	191.0	-	313.0
	Grade 5.8	19.3	28.0	52.7	82.0	118.0	-	187.3	-
	Grade 8.8	30.7	44.7	84.0	130.7	188.0	-	299.3	-
Shear (kN)	Rebar Fe500	14.2	20.5	36.5	57.0	-	89.1	-	146.0
	Grade 5.8	11.2	16.8	31.2	48.8	78.4	-	112.0	-
	Grade 8.8	18.4	26.4	50.4	78.4	112.8	-	179.2	-