

Product Information



DESCRIPTION

IKA HAMMER-IN capsule range is a system that offers a quick and simple method of fixing either threaded studs or rebar into solid concrete. Simply installed by hammering the stud or rebar through the capsule using a hammer or mechanical drill. Not suitable for overhead applications.

SUITABLE FOR USE IN:

Concrete.

FEATURES

1. Quick and easy to install.
2. No expensive tooling required for installation.
3. Long shelf life.
4. Double capsules can be used for deep embedment.
5. Ideal for starter bar applications.

If you are bonding rebar into reinforced concrete, where the size, position etc. of the reinforcing is known, then design principles contained within Eurocode 2 can be adopted instead of the design recommendations contained within this manual.

IKA-HAMMER-IN (Studding)

CAPSULE DIAMETER (mm)	CAPSULE LENGTH (mm)	HOLE DIAMETER IN CONCRETE (mm)	HOLE DIAMETER IN FIXTURE (mm) f	HOLE DEPTH IN CONCRETE (mm) h	RECOMMENDED TORQUE (Nm) i/h^5t	CAPSULES PER BOX/PACK
M8	85	10	9	85	6	10
M10	85	12	11	85	12	10
M12	95	14	13	110	20	10
M16	95	18	17	140	45	10
M20	140	25	22	180	100	6
M24	215	28	26	210	150	6
M30	270	35	32	265	300	6

Rebar

CAPSULE TYPE	REBAR NOMINAL DIAMETER (mm)	ACTUAL DIAMETER (mm) f	HOLE DIAMETER IN CONCRETE (mm)	HOLE DEPTH (mm) h	NUMBER OF CAPSULES	HOLE DEPTH (mm) h	NUMBER OF CAPSULES
M10	10	11.5	13	85	1	170	2
M12	12	13.9	15	110	1	220	2
M16	16	18.7	20	140	1	280	2
M20	20	23.4	25	180	1	360	2
M24	25	29.2	30	210	1	420	2
M30	32	37.4	38	265	1	530	2

BASE MATERIAL TEMPERATURE (°C)	> 20	11 – 20	1 – 10	-5 – 0
Curing time	1 hour	2 hours	5 hours	10 hours

Specification Data

IKA HAMMER-IN Performance Data (Uncracked Concrete only)

	M8	M10	M12	M16	M20	M24	M30
Concrete Strength 25 - 55 MpA Max. Rec. load/unfactored Tensile kN	4	7	10	15	27	37	60
Concrete Strength 25 - 55 MpA Max. Rec. load/unfactored Shear kN	4	7	10	15	27	37	60
Concrete Strength 15 MpA Max. Rec. load/unfactored Tensile kN	3	5	7	10	19	26	42
Concrete Strength 15 MpA Max. Rec. load/unfactored Shear kN	3	5	7	10	19	26	42
Hole Diameter mm	10	12	14	18	25	28	35
Characteristic Hole Depth mm	85	90	105	125	170	210	280
Characteristic Anchor Spacing Greater than mm	200	220	270	310	420	520	700
Min. Anchor Spacing Equal to mm	80	90	110	125	170	210	280
Characteristic Edge Distance Greater than mm	100	110	135	155	210	260	350
Min. Edge Distance Equal to mm	40	45	55	65	85	105	140
Characteristic Width of concrete Greater than mm	200	220	270	310	420	520	700
Min. Width of concrete Equal to mm	80	90	110	125	170	210	280
Thickness of concrete Greater than mm	130	140	160	175	220	260	330
Hole in the structural steel to be assembled mm	9	11	13	17	22	26	33
Max. Torque with dynamometric handles Nm	10	20	40	80	150	200	400

Reduction factors - Edge and spacing distances

Where characteristic dimensions are equal to or greater than those supplied in above table, the full recommended anchor loads per individual anchor are achieved. Where these dimensions are not achievable the appropriate reduction needs to be applied (ie. where $y =$ appropriate size bolt. Then $yKN \times a \times ar =$ New anchor strength)

REDUCTION FACTORS ANCHOR SPACING - "a" (From midpoint to midpoint)

(mm)	M8	M10	M12	M16	M20	M24	M30
350							1.00
340							0.97
330							0.94
320							0.91
310							0.89
300							0.83
290							0.80
280							0.77
270							0.74
260						1.00	0.71
250						0.96	0.69
240						0.92	0.67
235						0.90	0.63
220						0.85	0.60
210					1.00	0.81	0.57
200					0.95	0.77	0.54
190					0.90	0.73	0.51
180					0.86	0.69	0.49
170					0.81	0.69	0.46
160					0.76	0.62	0.44
155				1.00	0.74	0.60	0.43
150				0.97	0.71	0.58	0.40
140				0.90	0.67	0.54	
135			1.00	0.87	0.64	0.52	
130			0.96	0.84	0.62	0.50	
120			0.87	0.77	0.57	0.46	
110		1.00	0.81	0.71	0.52	0.42	
104		0.95	0.77	0.67	0.50	0.40	
100	1.00	0.91	0.74	0.65	0.48		
94	0.94	0.85	0.70	0.61	0.45		
90	0.90	0.82	0.67	0.58	0.43		
84	0.84	0.76	0.62	0.54	0.40		
80	0.80	0.73	0.59	0.52			
70	0.70	0.64	0.52	0.45			
62	0.62	0.56	0.46	0.40			
60	0.60	0.55	0.44				
54	0.54	0.49	0.40				
50	0.50	0.45					
44	0.44	0.40					
40	0.40						
(mm)	M8	M10	M12	M16	M20	M24	M30

REDUCTION FACTORS EDGE CONCRETE DISTANCE SPACING - "ar"

(mm)	M8	M10	M12	M16	M20	M24	M30
700							1.00
680							0.99
660							0.97
640							0.96
620							0.94
600							0.93
580							0.91
560							0.90
540							0.89
520						1.00	0.87
500						0.98	0.86
470					1.00	0.95	0.84
450					0.98	0.93	0.82
440					0.97	0.92	0.81
420					0.95	0.90	0.80
400					0.93	0.88	0.79
380					0.90	0.87	0.77
360					0.88	0.85	0.76
340					0.86	0.83	0.74
320					0.84	0.81	0.73
310				1.00	0.83	0.80	0.72
300				0.98	0.82	0.79	0.71
280				0.95	0.80	0.77	0.70
270			1.00	0.94	0.79	0.76	
260			0.98	0.92	0.78	0.75	
240			0.94	0.89	0.76	0.73	
220		1.00	0.91	0.85	0.73	0.71	
208		0.97	0.89	0.84	0.72	0.70	
200	1.00	0.95	0.87	0.82	0.71		
188	0.97	0.93	0.85	0.80	0.70		
180	0.95	0.91	0.83	0.79			
168	0.92	0.88	0.81	0.77			
160	0.90	0.86	0.80	0.76			
140	0.85	0.82	0.76	0.73			
124	0.81	0.78	0.73	0.70			
120	0.80	0.77	0.72				
108	0.77	0.75	0.70				
100	0.75	0.73					
88	0.72	0.70					
80	0.70						
(mm)	M8	M10	M12	M16	M20	M24	M30