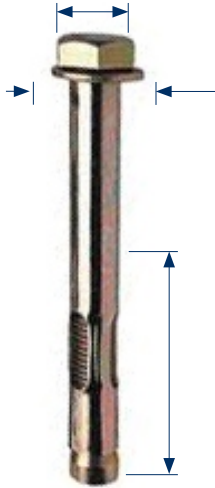


# IKA SLEEVE ANCHOR LOOSE BOLT FOR CONCRETE, BRICKWORK & STONE



## Product Information



### DESCRIPTION

All purpose expansion anchor for use in medium weight applications in brickwork, blockwork and hard masonry. Through fixing, allows drilling through pre-positioned fixture.

No marking out required.

Available in white/silver zinc plated steel and stainless steel.

### SUITABLE FOR USE IN:

Concrete  
Brickwork  
Blockwork  
Stone.

### FEATURES

1. 5.8 grade bolt for high performance.
2. Bolt and drill size marked on sleeve for accurate installation.
3. Integral collapse feature to ensure maximum clamping force is applied to the fixture.
4. Anchor designed for optimum performance in most base materials.

### IKA Loose Bolt Sleeve Anchor - Zinc plated

SIZE	LENGTH (mm)	HEAD DIAMETER (mm) (AF)	WASHER DIAMETER (mm)	MAXIMUM FIXTURE THICKNESS (mm) $f_x$	MINIMUM HOLE DEPTH IN STRUCTURE (mm)	MINIMUM SUBSTRATES THICKNESS (mm) ( $h_{min}$ )	MINIMUM EFFECTIVE EMBEDMENT DEPTH (mm)	HOLE DIAMETER		RECOMMENDED TIGHTENING TORQUE (Nm)			
								IN FIXTURE (mm)	IN STRUCTURE (mm)	CONCRETE 30N/mm <sup>2</sup>	BRICKWORK 20.5N/mm <sup>2</sup>	BLOCKWORK 14N/mm <sup>2</sup> ( $T_{inst}$ )	BLOCKWORK 7N/mm <sup>2</sup>
M10	75	13	24	25	45	70	32	12	10	11.0	11.0	6.0	4.0
				19									
M12	75	17	30	19	55	85	40	14	12	22.0	22.0	11.0	8.0

### IKA Sleeve Anchor - Stainless Steel

BOLT SIZE	BOLT LENGTH (mm)	HEAD DIAMETER (mm) (AF)	WASHER DIAMETER (mm)	MAXIMUM FIXTURE THICKNESS (mm) $f_x$	MINIMUM HOLE DEPTH IN STRUCTURE (mm)	MINIMUM SUBSTRATES THICKNESS (mm) ( $h_{min}$ )	MINIMUM EFFECTIVE EMBEDMENT DEPTH (mm)	HOLE DIAMETER		RECOMMENDED TIGHTENING TORQUE (Nm)			
								IN FIXTURE (mm)	IN STRUCTURE (mm)	CONCRETE 30N/mm <sup>2</sup>	BRICKWORK 20.5N/mm <sup>2</sup>	BLOCKWORK 14N/mm <sup>2</sup> ( $T_{inst}$ )	BLOCKWORK 7N/mm <sup>2</sup>
M8	40	10	14	10	35	55	26	10	8	6.0	6.0	3.0	2.0
M10	50	13	17	10	40	65	36	12	10	11.0	11.0	6.0	4.0
M12	75	15	21	27	55	85	43	14	12	22.0	22.0	11.0	8.0

### IKA Countersunk Sleeve Anchor- Zinc plated



BOLT SIZE	BOLT LENGTH (mm)	HEAD DIAMETER (mm) (AF)	MAXIMUM FIXTURE THICKNESS (mm) $f_x$	MINIMUM HOLE DEPTH IN STRUCTURE (mm)	MINIMUM SUBSTRATES THICKNESS (mm)	MINIMUM EFFECTIVE EMBEDMENT DEPTH (mm)	HOLE DIAMETER		RECOMMENDED TIGHTENING TORQUE (Nm)			
							IN FIXTURE (mm)	IN STRUCTURE (mm)	CONCRETE 30N/mm <sup>2</sup>	BRICKWORK 20.5N/mm <sup>2</sup>	BLOCKWORK 14N/mm <sup>2</sup> ( $T_{inst}$ )	BLOCKWORK 7N/mm <sup>2</sup>
M10	75	16	46	30	50	27	8	6.5	2.5	2.5	1.5	1

# IKA SLEEVE ANCHOR LOOSE BOLT FOR CONCRETE, BRICKWORK & STONE



## Specification Data

### IKA Loose Bolt / Countersunk Performance Data

SIZE	CONCRETE, $f_{ck,cube} = 30N/mm^2$ (C20/25)				
	RECOMMENDED LOAD UNFACTORED (kN)		CHARACTERISTIC EDGE DISTANCE (mm)		CHARACTERISTIC SPACING (mm)
	TENSION ( $N_{rec}$ )	SHEAR ( $V_{rec}$ )	TENSION ( $C_{cr,N}$ )	SHEAR ( $C_{cr,V}$ )	TENSION & SHEAR ( $S_{cr,N}$ ) ( $S_{cr,V}$ )
M8	2.7	2.5	70	80	80
M10	3.6	4.2	80	100	100
M12	4.4	5.8	100	120	120

SIZE	BRICKWORK, $f_{ck} = 20Nmm^2$	
	MAX. WORKING LOAD (kN)	
	TENSION ( $N_{rec}$ )	SHEAR ( $V_{rec}$ )
M8	1.6	2.8
M10	2.3	3.7
M12	3.0	4.5

SIZE	BRICKWORK, $f_{ck} = 14Nmm^2$	
	MAX. WORKING LOAD (kN)	
	TENSION ( $N_{rec}$ )	SHEAR ( $V_{rec}$ )
M8	0.9	1.5
M10	1.2	1.6
M12	1.6	1.7

SIZE	BRICKWORK, $f_{ck} = 7Nmm^2$	
	MAX. WORKING LOAD (kN)	
	TENSION ( $N_{rec}$ )	SHEAR ( $V_{rec}$ )
M8	0.8	1.2
M10	1.0	1.3
M12	1.4	1.4

When calculating loads in brickwork and blockwork apply the published edge distance and spacing for concrete and assume these figures to be the absolute minimums. Concrete reduction factors must NOT be applied.

### Reduction Factors - Edge and Spacing Distances for IKA Loose Bolt.

The full characteristic edge and spacing distances shown in the table above are the minimum allowable for the quoted DESIGN RESISTANCE or RECOMMENDED LOAD, depending on your design method.

Where these dimensions are not achievable, the appropriate reduction factor/s from the tables below must be applied to the DESIGN RESISTANCE or RECOMMENDED LOAD. Choose the required bolt diameter across the top of the appropriate table and read down the left hand column until actual edge or spacing distance is found.

Read off the reduction factor where the two lines intersect (interpolate as required). Multiply this factor by the DESIGN RESISTANCE or RECOMMENDED LOAD quoted in the table. On the occasion that multiple close edge and/or spacing distances occur, the appropriate reduction factors must be applied.

### Edge Distance (Concrete Only)

EDGE (mm)	TENSILE: EDGE REDUCTION FACTORS			EDGE (mm)	SHEAR: EDGE REDUCTION FACTORS		
	M8	M10	M12		M8	M10	M12
40				40			
50	0.79			50	0.53		
60	0.89	0.81		60	0.69	0.50	
70	1.00	0.91	0.77	70	0.84	0.62	0.48
80		1.00	0.85	80	1.00	0.75	0.58
90			0.92	90		0.87	0.69
100			1.00	100		1.00	0.79
120				120			1.00

### Spacing (Concrete Only)

SPACING (mm)	TENSILE & SHEAR REDUCTION FACTORS		
	M8	M10	M12
40			
50	0.77		
60	0.85	0.76	
70	0.92	0.82	0.75
80	1.00	0.88	0.80
90		0.94	0.85
100		1.00	0.90
120			1.00