



JCAPS

## INFORMATION

The Quartz Spin In Capsules are suitable for use in the vast majority of base materials. The quartz aggregate enable the anchor to achieve exceptional loads. It can be used for installing threaded studs, rebar or internal threaded sockets for structural applications such as:

- Columns
- Guard rails
- Façades
- Staircases
- Silo installation
- Machines
- Cantilever beams

## BASE MATERIAL

- Concrete C20/25 To C50/60
- Non-Cracked Concrete
- Dry/Wet Holes
- Solid Brickwork
- Concrete Block
- Natural Stone

## APPROVALS

European Technical Approval  
Option 7 Non-Cracked Concrete



ETA12/0233

## FEATURES

- Expansion Free
- Good resistance to vibrating loads
- High Performance
- Close Spacing And Edge Distance
- Can be used in wet and corrosive environments

## RELATED PRODUCTS



SDS+ Drill Bits

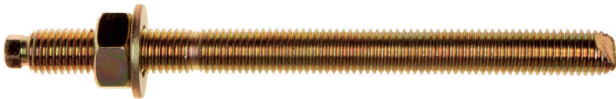


Hole Cleaning Brushes and Pump

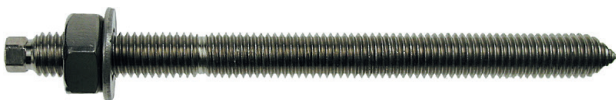
## LOADING(CURING) TIME

Concrete Member Temperature °C	Minimum Curing Time In Dry Concrete $T_{load,dry}$ (mins)	Minimum Curing Time In Wet Concrete $T_{load,wet}$ (mins)
≥ 0°C	300 (5 hrs.)	600 (10 hrs.)
≥ +5°C	60 (1 hr.)	120 (2 hrs.)
≥ +20°C	20	40
≥ +30°C	10	20

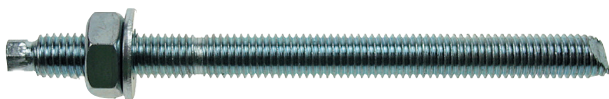
## EMBEDDED CHISEL END THREADED ROD



- High Tensile Grade 8.8 Chisel End Studs
- Zinc Plated And Yellow Passivated Min. 5µm
- Setting Tool Included



- Stainless Steel Grade A4/316
- Chisel End Studs
- Setting Tool Included



- Zinc Plated And Clear Passivated Min. 5µm
- Chisel End Studs
- Setting Tool Included

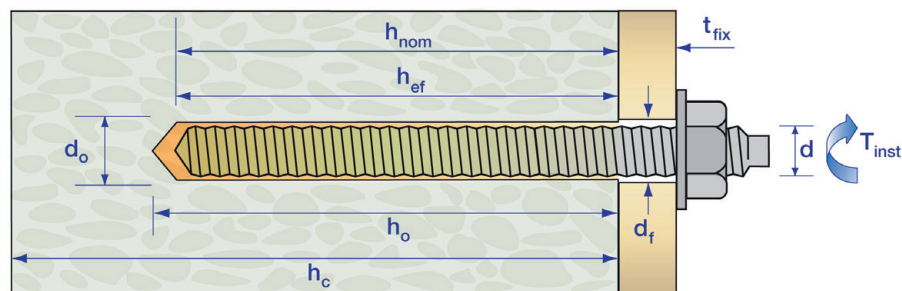
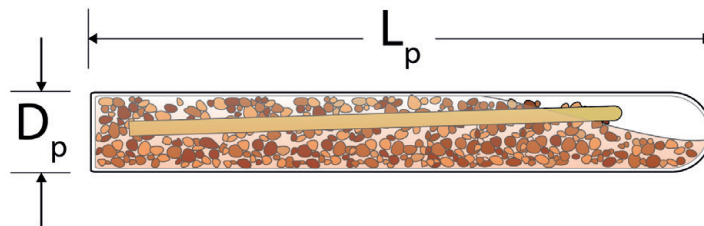




## RANGE AND LOAD DATA

CAPSULES DATA					
Part Number	Thread Diam (d)	Capsules Diameter ( $D_p$ )	Drill Hole Diameter ( $d_o$ )	Capsules Length ( $L_p$ )	Minimum Hole Depth ( $h_o$ )*
	mm	mm	mm	mm	mm
JCAPSM08	M8	9	10	80	80
JCAPSM10	M10	11	12	80	90
JCAPSM12	M12	13	14	95	110
JCAPSM16	M16	17	18	95	125
JCAPSM20	M20	17	22	160	170
JCAPSM24	M24	22	26	175	210
JCAPSM30	M30	25	32	230	280

\* For the Spin In Capsules :  $h_o = h_{ef}$



For variations in structure thickness, reduced spacing and edge calculations download the free **Anchor Calculation Program** from [www.jcpfixings.co.uk](http://www.jcpfixings.co.uk)



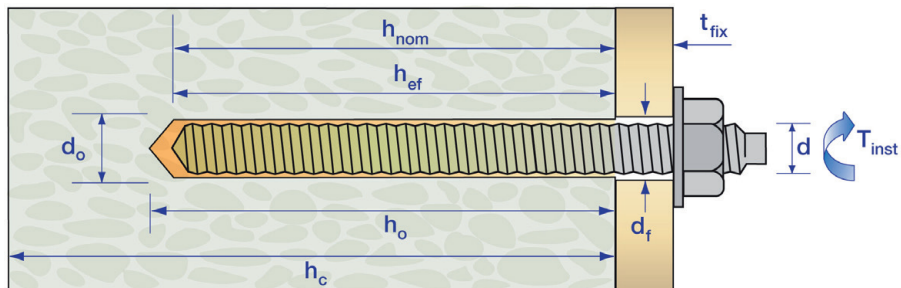


## RANGE DATA

Part Number	Thread Diam (d)	Stud Length (L)	Drill Hole Diam ( $d_o$ )	Fixture Clearance Hole ( $d_f$ )	Standard Embedment		Tightening Torque ( $T_{inst}$ )
					Max. Fix. Thickness ( $t_{fix}$ )	Min. Hole Depth ( $h_o$ )*	
	mm	mm	mm	mm	mm	mm	Nm
<b>High Tensile Grade 8.8 Zinc Plated** Yellow Passivated Chisel End Studs</b>							
JSTUD08110HT	M8	110	10	10	18	80	10
JSTUD10130HT	M10	130	12	12	25	90	20
JSTUD12160HT	M12	160	14	14	34	110	40
JSTUD16190HT	M16	190	18	18	45	125	80
JSTUD20260HT	M20	260	22	22	55	170	120
JSTUD24300HT	M24	300	26	26	55	210	180
JSTUD30380HT	M30	380	32	32	55	280	300
<b>Stainless Steel Grade A4/316 Chisel End Studs</b>							
JSTUD08110SSA4	M8	110	10	10	18	80	10
JSTUD10130SSA4	M10	130	12	12	25	90	20
JSTUD12160SSA4	M12	160	14	14	34	110	40
JSTUD16190SSA4	M16	190	18	18	45	125	80
JSTUD20260SSA4	M20	260	22	22	55	170	120
JSTUD24300SSA4	M24	300	26	26	55	210	180
<b>Zinc Plated** Steel Grade 5.8 - Clear Passivated and Chisel End Studs</b>							
JSTUD08110	M8	110	10	10	18	80	10
JSTUD10130	M10	130	12	12	25	90	20
JSTUD12160	M12	160	14	14	34	110	40
JSTUD16190	M16	190	18	18	45	125	80
JSTUD20260	M20	260	22	22	55	170	120
JSTUD24300	M24	300	26	26	55	210	180
JSTUD30380	M30	380	32	32	55	280	300

\* For the Spin In Capsules:  $h_o = h_{ef}$

\*\* Zinc Plated Minimum 5 $\mu$ m





## LOAD DATA - NON-CRACKED CONCRETE

### HIGH TENSILE ZINC PLATED STEEL GRADE 8.8

Grade 8.8 Zinc Plated Studs Performance Data (C20/25 non-cracked concrete)													
Thread Diam (d) mm	Minimum Hole Depth (h <sub>o</sub> ) mm	Minimum Concrete Thickness (h <sub>min</sub> ) mm	Characteristic Resistance kN		Design Resistance kN		Approved Resistance kN		Design Spacing (S) mm		Design Edge Distance (C) mm		
			Tensile (N <sub>Rk</sub> )	Shear (V <sub>Rk</sub> )	Tensile (N <sub>Rd</sub> )	Shear (V <sub>Rd</sub> )	Tensile (N <sub>Ra</sub> )	Shear (V <sub>Ra</sub> )	Tensile	Shear	Tensile	Shear	
8	80	110	24.0	15.0	16.0	12.0	11.4	8.5	200	40	110	120	
10	90	120	33.9	23.0	22.6	18.4	16.1	13.1	260	50	130	170	
12	110	140	49.6	34.0	33.1	27.2	23.6	19.4	310	60	160	230	
16	125	165	70.5	63.0	47.0	50.4	33.5	36.0	380	70	190	390	
20	170	215	111.9	98.0	74.6	78.4	53.2	56.0	510	100	260	530	
24	210	270	153.6	141.0	102.4	112.8	73.1	80.5	630	140	320	670	
30	280	350	236.5	224.0	131.4	179.2	93.8	128.0	840	420	420	920	

### STAINLESS STEEL GRADE A4/316

Grade A4-70 Stainless Steel Studs Performance Data (C20/25 non-cracked concrete)													
Thread Diam (d) mm	Minimum Hole Depth (h <sub>o</sub> ) mm	Minimum Concrete Thickness (h <sub>min</sub> ) mm	Characteristic Resistance kN		Design Resistance kN		Approved Resistance kN		Design Spacing (S) mm		Design Edge Distance (C) mm		
			Tensile (N <sub>Rk</sub> )	Shear (V <sub>Rk</sub> )	Tensile (N <sub>Rd</sub> )	Shear (V <sub>Rd</sub> )	Tensile (N <sub>Ra</sub> )	Shear (V <sub>Ra</sub> )	Tensile	Shear	Tensile	Shear	
8	80	110	25.9	13.0	13.9	8.3	9.9	5.9	140	40	90	80	
10	90	120	39.8	20.0	21.3	12.8	15.2	9.1	220	50	120	120	
12	110	140	58.9	30.0	31.5	19.2	22.5	13.7	280	60	150	160	
16	125	165	70.5	55.0	47.0	35.2	33.5	25.1	380	70	190	260	
20	170	215	111.9	86.0	74.6	55.1	53.2	39.3	510	90	260	350	
24	210	270	153.6	124.0	102.4	79.4	73.1	56.7	630	110	320	450	
30	280	350	236.5	196.0	131.4	125.6	93.8	89.7	840	140	420	600	

### ZINC PLATED STEEL GRADE 5.8

Grade 5.8 Zinc Plated Studs Performance Data (C20/25 non-cracked concrete)													
Thread Diam (d) mm	Minimum Hole Depth (h <sub>o</sub> ) mm	Minimum Concrete Thickness (h <sub>min</sub> ) mm	Characteristic Resistance kN		Design Resistance kN		Approved Resistance kN		Design Spacing (S) mm		Design Edge Distance (C) mm		
			Tensile (N <sub>Rk</sub> )	Shear (V <sub>Rk</sub> )	Tensile (N <sub>Rd</sub> )	Shear (V <sub>Rd</sub> )	Tensile (N <sub>Ra</sub> )	Shear (V <sub>Ra</sub> )	Tensile	Shear	Tensile	Shear	
8	80	110	22.4	9.0	12.0	7.2	8.5	5.1	80	40	70	70	
10	90	120	36.0	14.0	19.3	11.2	13.7	8.0	170	50	110	110	
12	110	140	52.3	21.0	28.0	16.8	20.0	12.0	210	60	130	130	
16	125	165	70.5	39.0	47.0	31.2	33.5	22.2	380	70	190	230	
20	170	215	111.9	61.0	74.6	48.8	53.2	34.8	510	90	260	310	
24	210	270	153.6	88.0	102.4	70.4	73.1	50.2	630	110	320	390	
30	280	350	236.5	140.0	131.4	112.0	93.8	80.0	840	140	420	520	





## SUPPLEMENTARY DATA

INFLUENCE OF CONCRETE STRENGTH					
Concrete strength		C20/25	C30/37	C40/50	C50/60
Cylinder	N/mm <sup>2</sup>	20	30	40	50
Cube	N/mm <sup>2</sup>	25	37	50	60
Factor	Cracked	1.0	1.14	1.26	1.34

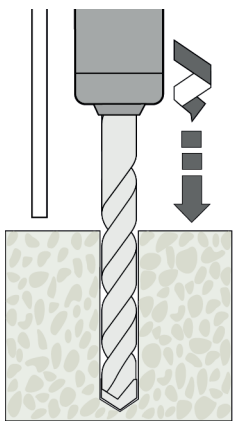
Important Note:

When using concrete factors ensure that loads do not exceed Steel Design Resistance.

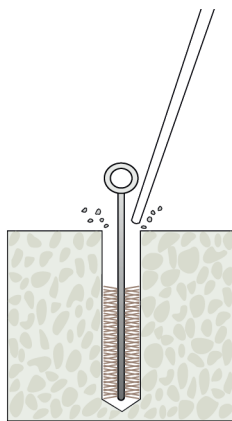
STEEL DESIGN RESISTANCE FOR SINGLE ANCHOR								
Load Type	Steel Grade	Threaded Rod Size						
		M8	M10	M12	M16	M20	M24	M30
Tensile (kN)	High Tensile Grade 8.8	19.3	30.7	44.7	84.0	130.7	188.0	299.3
	Stainless Steel Grade A4-70	13.7	21.6	31.1	57.9	90.5	130.0	206.8
	Grade 5.8	12.0	19.3	28.0	52.7	82.0	118.0	187.3
Shear (kN)	High Tensile Grade 8.8	12.0	18.4	27.2	50.4	78.4	112.8	179.2
	Stainless Steel Grade A4-70	8.3	12.8	19.2	35.3	55.1	79.5	125.6
	Grade 5.8	7.2	12.0	16.8	31.2	48.8	70.4	112.0

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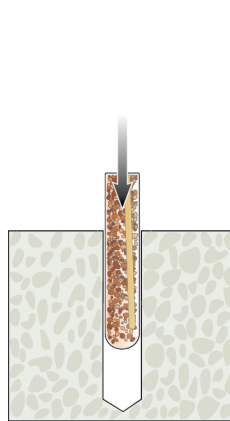
## INSTALLATION INSTRUCTIONS



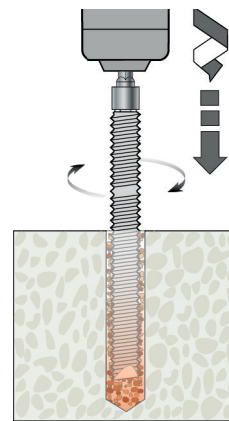
-Drill correct diameter hole to corresponding depth



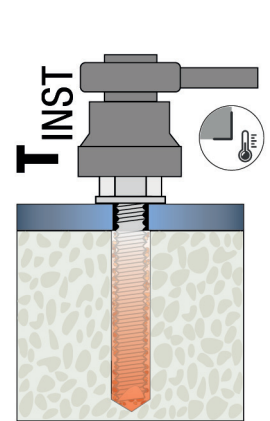
-Clean hole by brushing, blowing to remove drilling debris and dust:  
 2xBlowing  
 2xBrushing  
 2xBlowing  
 2xBrushing  
 2xBlowing



-Insert Spin-In Capsule into drilled hole with air gap in capsule nearest to surface



-Attach setting tool to stud and spin into capsule with drilling machine  
 -Using rotary hammer action until Depth Mark is reached



-Allow resin to cure  
 -Attach fixture  
 -Tighten with torque wrench to recommended torque

