Vinylester Resin

JFV380SF Vol. 410ml

JFV300SF Vol. 300ml

INFORMATION

Vinylester Resin is a two part grey resin (10:1) suitable for use in the vast majority of base materials. It can be used for installing threaded studs, rebar or internal threaded sockets into various types of base materials for structural applications such as:

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

Anchor Calculator Software can be used for detailed verifications based on EN 1992-4 or EOTA guidelines. Rein Volume Calculator can be used to determine the number of cartridges required for the project.

BASE MATERIAL

- Concrete C20/25 To C50/60
- Cracked/Non-Cracked Concrete
- Solid and Hollow Brickworks
- Autoclaved Aerated Concrete Blocks
- Solid or hollow Calcium Silicate bricks
- Natural Stone

FEATURES

- Expansion Free
- High Performance
- Close Spacing And Edge Distances
- Dry/Wet/Flooded Holes
- Suitable For Overhead Installation
- Can be Used in Contact With Potable (Drinking) Water
- Performance Provided For 50 And 100 Year Anchor Service Life in The ETA Approval.
- 12-Month Shelf Life

APPROVALS

European Technical Assessment

ETA15/0704
For use in concrete
Option 1 Cracked Concrete
ETA 23/0029
For use in masonry

C1 Seismic Performance for M10 to M24 in Concrete

Water Regulations Advisory Scheme

WRAS APPROVED MATERIAL

WRAS Listing Number 250655038

SOFTWARE

PRO Suite

Click here to download the software

Click here to download the software

RELATED PRODUCTS

JTOOL380

JTOOL410

Injection Resin Guns for JFV380SF

JTOOL300

Injection Resin Gun for JFV300SF

JMN130

Mixer Nozzle

JFEA410SFW (Vol. 410ml)

Vinylester Fast Cure Winter Grade Resin
Suitable for Installation in Low Temperatures

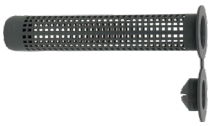
BOP1

Blow Out Pump

Hole Cleaning Brushes

J-Fix Threaded Studs with Nut and Washer
Grade 5.8 Steel - Zinc Plated or Hot Dipped Galvanised Finishing
Grade 8.8 Steel - Zinc Plated or Hot Dipped Galvanised Finishing
A2-70 Stainless Steel
A4-70 Stainless Steel

J-Fix Internal Threaded Sockets
Bright Zinc Plated (BZP)
A2/304 Stainless Steel
A4/316 Stainless Steel



Nylon Sleeves

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

Vinylester Resin

WORKING/LOADING TIME

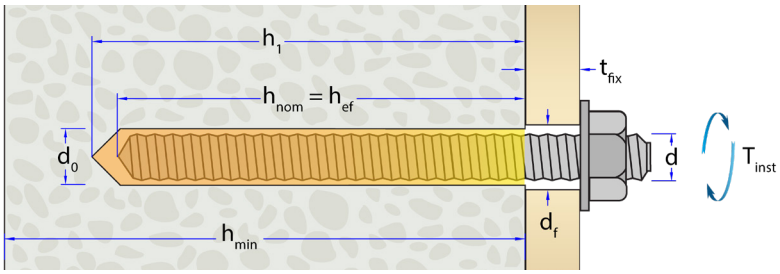
Note:

T_{work} = The highest temperature in the range

T_{load} = The lowest temperature in the range

Temperature °C	Usable Time (T_{work}) mins	Load Time (T_{load}) mins
+5°C to +10°C	10	145
+10°C to +15°C	8	85
+15°C to +20°C	6	75
+20°C to +25°C	5	50
+25°C to +30°C	4	40
Ensure Cartridge Temperature is > 5°C		

INSTALLATION INTO CONCRETE (THREADED STUDS)



Installation Parameters for fixing Threaded Studs into Concrete

Thread Diameter (d) mm	Drill Hole Diameter (d_0) mm	Fixture Clearance Hole (d_f) mm	Shallow Embedment		Standard Embedment		Deep Embedment		Tightening Torque (T_{inst}) Nm	Diameter of Cleaning Brush Size mm	Minimum Spacing (s_{min}) mm	Minimum edge distance (c_{min}) mm
			Min. Hole Depth (h_0) mm	Min. Concrete Thickness (h_{min}) mm	Min. Hole Depth (h_0) mm	Min. Concrete Thickness (h_{min}) mm	Min. Hole Depth (h_0) mm	Min. Concrete Thickness (h_{min}) mm				
Threaded Studs												
M8	10	10	64	100	80	110	130	160	10	14	35	35
M10	12	12	80	110	90	120	180	210	20	14	40	40
M12	14	14	96	130	110	140	225	255	40	20	50	50
M16	18	18	128	170	128	170	320	355	80	20	65	65
M20	22	22	160	205	170	215	400	445	150	29	80	80
M24	26	26	192	245	210	270	480	540	200	29	96	96
M30	35	32	240	310	280	350	600	670	275	40	120	120

Approximate Resin Fixing For Cartridge

Thread Diameter d mm	Drill Hole Diameter d_0 mm	Standard Hole Depth h_0 mm	Number of fixings per 300 ml cartridge (JFV300SF) No.	Number of fixings per 410 ml cartridge (JFV380SF) No.
Threaded Studs				
M8	10	80	57	78
M10	12	90	38	52
M12	14	110	25	34
M16	18	128	16	22
M20	22	170	8	11
M24	26	210	5	7
M30	35	280	1	2

Click here to download the Resin Volume Calculator to find the number of cartridges required for your application.

Technical Data Sheet

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

PERFORMANCE DATA
GRADE 5.8 STUDS - NON-CRACKED CONCRETE

SHALLOW EMBEDMENT

Grade 5.8 Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	64	100	17.7	9.0	9.8	7.2	7.0	5.1
10	80	110	25.1	15.0	14.0	12.0	10.0	8.6
12	96	130	34.4	21.0	19.1	16.8	13.6	12.0
16	128	170	57.9	39.0	32.2	31.2	23.0	22.3
20	160	205	85.5	61.0	47.5	48.8	33.9	34.9
24	192	245	115.8	88.0	64.3	70.4	46.0	50.3
30	240	310	124.4	140.0	59.2	112.0	42.3	80.0

STANDARD EMBEDMENT

Grade 5.8 Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	80	110	18.0	9.0	12.0	7.2	8.6	5.1
10	90	120	28.3	15.0	15.7	12.0	11.2	8.6
12	110	140	39.4	21.0	21.9	16.8	15.6	12.0
16	128	170	57.9	39.0	32.2	31.2	23.0	22.3
20	170	215	90.8	61.0	50.4	48.8	36.0	34.9
24	210	270	126.7	88.0	70.4	70.4	50.3	50.3
30	280	350	145.1	140.0	69.1	112.0	49.4	80.0

DEEP EMBEDMENT

Grade 5.8 Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	*	*	*	*	*	*	*	*
10	115	145	29.0	15.0	19.3	12.0	13.8	8.6
12	145	175	42.0	21.0	28.0	16.8	20.0	12.0
16	210	245	79.0	39.0	52.7	31.2	37.6	22.3
20	280	325	123.0	61.0	82.0	48.8	58.6	34.9
24	355	410	177.0	88.0	118.0	70.4	84.3	50.3
30	600	670	311.0	140.0	148.1	112.0	105.8	80.0

* Increased embedment depth limited by steel strength.

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jcpenquiries@owlett-jaton.com
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PERFORMANCE DATA
GRADE 5.8 STUDS - CRACKED CONCRETE

SHALLOW EMBEDMENT

Grade 5.8 Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	Not included in the ETA							
10	80	110	12.6	15.0	7.0	12.0	5.0	8.6
12	96	130	18.1	21.0	10.1	16.8	7.2	12.0
16	128	170	32.2	39.0	17.9	31.2	12.8	22.3
20	160	205	45.2	61.0	25.1	48.8	18.0	34.9
24	192	245	65.1	88.0	36.2	70.4	25.9	50.3
30	Not included in the ETA							

STANDARD EMBEDMENT

Grade 5.8 Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	Not included in the ETA							
10	90	120	14.1	15.0	7.9	12.0	5.6	8.6
12	110	140	20.7	21.0	11.5	16.8	8.2	12.0
16	128	170	32.2	39.0	17.9	31.2	12.8	22.3
20	170	215	48.1	61.0	26.7	48.8	19.1	34.9
24	210	270	71.3	88.0	39.6	70.4	28.3	50.3
30	Not included in the ETA							

DEEP EMBEDMENT

Grade 5.8 Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	Not included in the ETA							
10	200	230	31.4	15.0	17.5	12.0	12.5	8.6
12	240	270	45.2	21.0	25.1	16.8	18.0	12.0
16	255	290	64.1	39.0	35.6	31.2	25.4	22.3
20	320	365	90.5	61.0	50.3	48.8	35.9	34.9
24	400	460	135.7	88.0	75.4	70.4	53.9	50.3
30	Not included in the ETA							

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www.jcpfixings.co.uk

PERFORMANCE DATA
GRADE 8.8 STUDS - NON-CRACKED CONCRETE

SHALLOW EMBEDMENT

Grade 8.8 Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	64	100	17.6	15.0	9.8	12.0	7.0	8.6
10	80	110	25.1	23.0	14.0	18.4	10.0	13.1
12	96	130	34.4	34.0	19.1	27.2	13.6	19.4
16	128	170	57.9	63.0	32.2	50.4	23.0	36.0
20	160	205	85.5	98.0	47.5	78.4	33.9	56.0
24	192	245	115.8	141.0	64.3	112.8	46.0	80.6
30	240	310	124.4	248.8	59.2	165.9	42.3	118.5

STANDARD EMBEDMENT

Grade 8.8 Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	80	110	22.1	15.0	12.3	12.0	8.8	8.6
10	90	120	28.3	23.0	15.7	18.4	11.2	13.1
12	110	140	39.4	34.0	21.9	27.2	15.6	19.4
16	128	170	57.9	63.0	32.2	50.4	23.0	36.0
20	170	215	90.8	98.0	50.4	78.4	36.0	56.0
24	210	270	126.7	141.0	70.4	112.8	50.3	80.6
30	280	350	145.1	224.0	69.1	179.2	49.4	128.0

DEEP EMBEDMENT

Grade 8.8 Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	130	160	29.0	15.0	19.3	12.0	13.8	8.6
10	180	210	46.0	23.0	30.7	18.4	21.9	13.1
12	225	255	67.0	34.0	44.7	27.2	31.9	19.4
16	320	355	144.8	63.0	80.4	50.4	57.4	36.0
20	400	445	213.6	98.0	118.7	78.4	84.8	56.0
24	480	540	289.5	141.0	160.8	112.8	114.9	80.6
30	600	670	311.0	224.0	148.1	179.2	105.8	128.0

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PERFORMANCE DATA
GRADE 8.8 STUDS - CRACKED CONCRETE

SHALLOW EMBEDMENT

Grade 8.8 Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	Not included in the ETA							
10	80	110	12.6	25.1	7.0	16.8	5.0	12.0
12	96	130	18.1	36.2	10.1	24.1	7.2	17.2
16	128	170	32.2	64.3	17.9	42.9	12.8	30.6
20	160	205	45.2	90.5	25.1	60.3	18.0	43.1
24	192	245	65.1	130.3	36.2	86.9	25.9	62.0
30	Not included in the ETA							

STANDARD EMBEDMENT

Grade 8.8 Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	Not included in the ETA							
10	90	120	14.1	23.0	7.9	18.4	5.6	13.1
12	110	140	20.7	34.0	11.5	27.2	8.2	19.4
16	128	170	32.2	64.3	17.9	42.9	12.8	30.6
20	170	215	48.1	96.1	26.7	64.1	19.1	45.8
24	210	270	71.3	142.5	39.6	95.0	28.3	67.9
30	Not included in the ETA							

DEEP EMBEDMENT

Grade 8.8 Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	Not included in the ETA							
10	180	210	28.3	23.0	15.7	18.4	11.2	13.1
12	225	255	42.4	34.0	23.6	27.2	16.8	19.4
16	320	355	80.4	63.0	44.7	50.4	31.9	36.0
20	400	445	113.1	98.0	62.8	78.4	44.9	56.0
24	480	540	162.9	141.0	90.5	112.8	64.6	80.6
30	Not included in the ETA							

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Fax:+44 (0)20 8943 1140

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www.jcpfixings.co.uk

PERFORMANCE DATA
GRADE A4-70 OR A2-70 STAINLESS STEEL STUDS - NON-CRACKED CONCRETE

SHALLOW EMBEDMENT

Grade A2-70 or A4-70 Stainless Steel Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	64	100	17.7	13.0	9.8	8.3	7.0	6.0
10	80	110	25.1	20.0	14.0	12.8	10.0	9.2
12	96	130	34.4	30.0	19.1	19.2	13.6	13.7
16	128	170	57.9	55.0	32.2	35.3	23.0	25.2
20	160	205	85.5	86.0	47.5	55.1	33.9	39.4
24	192	245	115.8	124.0	64.3	79.5	46.0	56.8
30	240	310	124.4	196.0	59.2	125.6	42.3	89.7

STANDARD EMBEDMENT

Grade A2-70 or A4-70 Stainless Steel Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	80	110	22.1	13.0	12.3	8.3	8.8	6.0
10	90	120	28.3	20.0	15.7	12.8	11.2	9.2
12	110	140	39.4	30.0	21.9	19.2	15.6	13.7
16	128	170	57.9	55.0	32.2	35.3	23.0	25.2
20	170	215	90.8	86.0	50.4	55.1	36.0	39.4
24	210	270	126.7	124.0	70.4	79.5	50.3	56.8
30	280	350	145.1	196.0	69.1	125.6	49.4	89.7

DEEP EMBEDMENT

Grade A2-70 or A4-70 Stainless Steel Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	90	120	26.0	13.0	13.7	8.3	9.8	6.0
10	125	155	41.0	20.0	21.6	12.8	15.4	9.2
12	160	190	59.0	30.0	31.1	19.2	22.2	13.7
16	235	270	110.0	55.0	57.9	35.3	41.4	25.2
20	310	355	172.0	86.0	90.5	55.1	64.7	39.4
24	390	450	247.0	124.0	130.0	79.5	92.9	56.8
30	600	670	311.0	196.0	148.1	125.6	105.8	89.7

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PERFORMANCE DATA
GRADE A4-70 OR A2-70 STAINLESS STEEL STUDS - CRACKED CONCRETE

SHALLOW EMBEDMENT

Grade A2-70 or A4-70 Stainless Steel Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	Not included in the ETA							
10	80	110	12.6	20.0	7.0	12.8	5.0	9.2
12	96	130	18.1	30.0	8.6	19.2	6.2	13.7
16	128	170	32.2	55.0	17.9	35.3	12.8	25.2
20	160	205	45.2	86.0	25.1	55.1	18.0	39.4
24	192	245	65.1	124.0	36.2	79.5	25.9	56.8
30	Not included in the ETA							

STANDARD EMBEDMENT

Grade A2-70 or A4-70 Stainless Steel Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	Not included in the ETA							
10	90	120	14.1	20.0	7.9	12.8	5.6	9.2
12	110	140	20.7	30.0	9.9	19.2	7.1	13.7
16	128	170	32.2	55.0	17.9	35.3	12.8	25.2
20	170	215	48.1	86.0	26.7	55.1	19.1	39.4
24	210	270	71.3	124.0	39.6	79.5	28.3	56.8
30	Not included in the ETA							

DEEP EMBEDMENT

Grade A2-70 or A4-70 Stainless Steel Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
8	Not included in the ETA							
10	175	205	27.5	20.0	15.3	12.8	10.9	9.2
12	240	270	45.2	30.0	21.5	19.2	15.4	13.7
16	320	355	80.4	55.0	44.7	35.3	31.9	25.2
20	400	445	113.1	86.0	62.8	55.1	44.9	39.4
24	480	540	162.9	124.0	90.5	79.5	64.6	56.8
30	Not included in the ETA							

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ
Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140
jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

* Important notes:

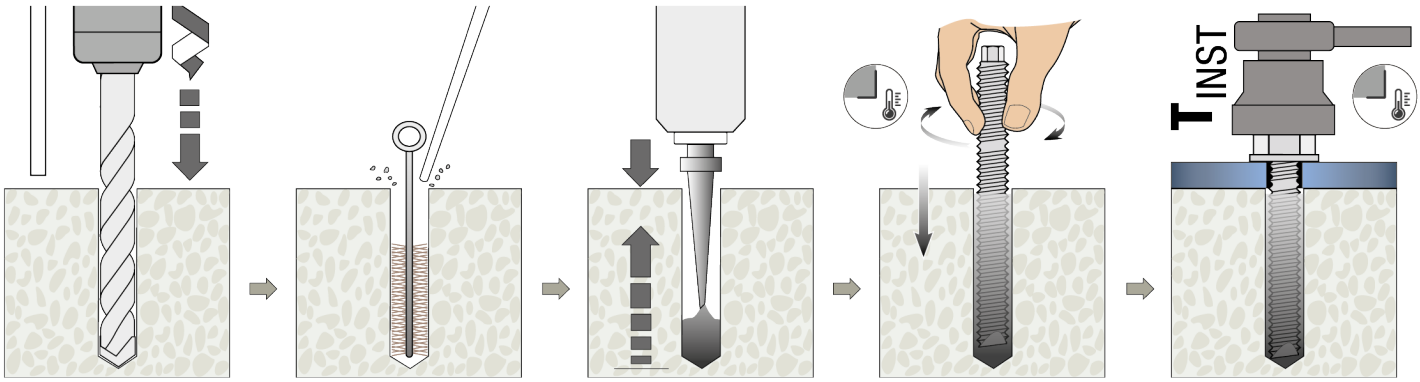
- Fasteners subject to static and quasi-static loads.
- For seismic actions please refer to ETA approvals or Anchor Calculation Software.
- Performance data stated for a single anchor, without the effect of spacing and edge distances. The influence of these parameters must be verified where applicable.
- Minimum concrete thickness, hole diameter, and embedment depth shall correspond to the dimensions stated in this document
- Concrete strength class C20/25 is assumed.
- Performance data is for drill holes produced using rotary hammer drilling, unless otherwise noted.
- Data given for the performance of the anchors are for 50 Years Working Life. Please refer to ETA approvals or Anchor calculation software for 100 Years Working Life.
- Design resistances are calculated from characteristic values using the appropriate partial safety factors corresponding to the decisive failure mode.
- The Recommended Resistance is calculated using an additional safety factor (γ_{add}) equal to 1.4.
- Performance data is valid for shear loading without a lever arm; installations involving a lever arm require additional verifications.
- Performance data is not valid for combined tensile and shear loading; where combined loading occurs, further checks shall be performed.
- Data given for the performance of the anchors for temperature range of minimum base material temperature -40°C, maximum long/short term base material temp: +24°C/40°C.
- Data given are for installation in dry concrete. Please refer to ETA approvals or Anchor calculation software for installation into flooded holes.
- When concrete-related strength factors are applied, ensure that the resulting resistance value does not exceed the steel design resistance
- Installation carried out strictly in accordance with the product's Installation Instructions and performed by a trained operator.
- For project-specific assessments or conditions not explicitly covered, download the JCP Anchor Calculation Program.

JCP PRO Suite
Click here to download the software

For variations in structure thickness, reduced spacing and edge calculations download the free **A**nchor **C**alculation **P**rogram from www.jcpfixings.co.uk

INSTALLATION INSTRUCTIONS INTO CONCRETE (THREADED STUDS)

Click on the QR code or scan it to watch the video.



-Drill correct diameter hole to corresponding depth

-Clean the hole by brushing, blowing to remove drilling debris and dust:

2 × Blowing
2 × Brushing
2 × Blowing
2 × Brushing
2 × Blowing

-Attach the nozzle to the cartridge

-Extrude the first part to waste until an even colour is achieved

-Fill the hole 1/3 to 1/2 full starting from the bottom of the hole

-Insert the stud into the base material by hand using a twisting motion

-Allow resin to cure

-Attach fixture

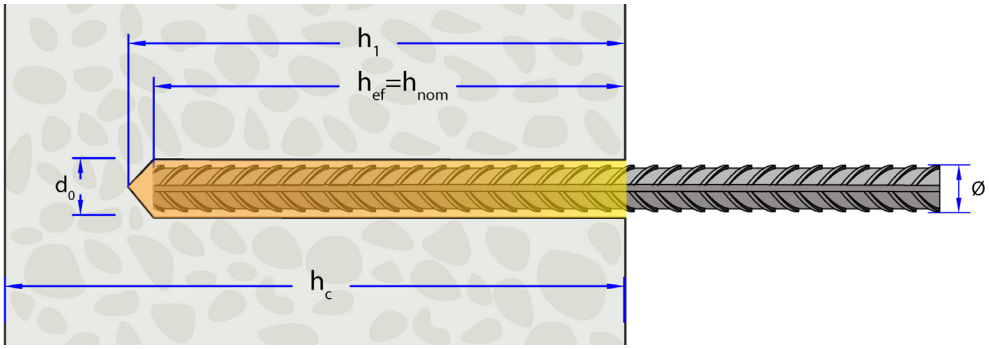
-Tighten with a torque wrench to recommended torque

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

INSTALLATION DATA INTO CONCRETE (REBAR)



Installation Data For Fixing Rebars Into Concrete

Rebar Diameter (Ø) mm	Drill Hole Diameter (d_0) mm	Fixture Clearance Hole (d_f) mm	Shallow Embedment		Standard Embedment		Deep Embedment		Diameter of Cleaning Brush Size mm	Minimum Spacing (s_{min}) mm	Minimum edge distance (c_{min}) mm
			Min. Hole Depth (h_0) mm	Min. Concrete Thickness (h_c) mm	Min. Hole Depth (h_0) mm	Min. Concrete Thickness (h_c) mm	Min. Hole Depth (h_0) mm	Min. Concrete Thickness (h_c) mm			
Rebars											
Ø8	12	10	64	94	80	110	160	190	14	35	35
Ø10	14	12	80	110	90	120	200	230	14	40	40
Ø12	16	14	96	126	110	140	240	270	19	50	50
Ø16	20	22	128	158	128	158	320	350	22	65	65
Ø20	25	29	160	210	210	260	400	450	29	80	80
Ø25	32	27	200	264	250	314	500	564	40	100	100
Ø32	40	35	256	336	300	380	640	720	42	130	130

Approximate Resin Fixing For Cartridge

Thread Diameter	Drill Hole Diameter	Standard Hole Depth	Number of fixings per 300 ml cartridge (JFV300SF)	Number of fixings per 410 ml cartridge (JFV380SF)
Ø	d_0	h_0		
mm	mm	mm	No.	No.
Rebars				
Ø8	12	80	38	53
Ø10	14	90	28	39
Ø12	16	110	20	27
Ø16	20	128	13	18
Ø20	25	210	4	6
Ø25	32	250	1	3
Ø32	40	300	1	2

Click here to download the Resin Volume Calculator to find the number of cartridges required for your application.

Technical Data Sheet

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

PERFORMANCE DATA
REBAR 500B- NON-CRACKED CONCRETE

SHALLOW EMBEDMENT

Rebar 500B Performance Data (C20/25 non-cracked concrete)*								
Rebar Diam (Ø)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
Ø8	64	94	19.3	14	10.7	9.3	7.6	6.6
Ø10	80	110	25.1	22	13.9	14.6	9.9	10.4
Ø12	96	126	36.1	31	20.1	20.6	14.3	14.7
Ø16	128	158	57.9	55	32.1	36.6	22.9	26.1
Ø20	160	210	90.4	86	50.2	68.8	35.9	49.1
Ø25	200	264	139.1	135	77.3	90	55.2	64.2
Ø32	256	336	141.5	221	78.6	147.3	56.1	105.2

STANDARD EMBEDMENT

Rebar 500B Performance Data (C20/25 non-cracked concrete)*								
Rebar Diam (Ø)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
Ø8	80	110	24.1	14	13.4	9.3	9.5	6.6
Ø10	90	120	28.2	22	15.7	14.6	11.2	10.4
Ø12	110	140	41.4	31	23.0	20.6	16.4	14.7
Ø16	128	158	57.9	55	32.1	36.6	22.9	26.1
Ø20	210	260	118.7	86	65.9	68.	47.1	49.1
Ø25	250	314	176.7	135	98.1	90	70.1	64.2
Ø32	300	380	165.8	221	92.1	147.3	65.8	105.2

DEEP EMBEDMENT

Rebar 500B Performance Data (C20/25 non-cracked concrete)*								
Rebar Diam (Ø)	Minimum Hole Depth (h_0)	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	mm	mm	kN	kN	kN	kN	kN	kN
Ø8	160	190	28	14	20	9.3	14.2	6.6
Ø10	200	230	43	22	30.7	14.6	21.9	10.4
Ø12	240	270	62	31	44.2	20.6	31.6	14.7
Ø16	320	350	111	55	79.2	36.6	56.6	26.1
Ø20	400	450	173	86	123.5	68.8	88.2	49.1
Ø25	500	564	270	135	192.8	90	137.7	64.2
Ø32	640	720	353.8	221	196.5	147.3	140.4	105.2

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

* Important notes:

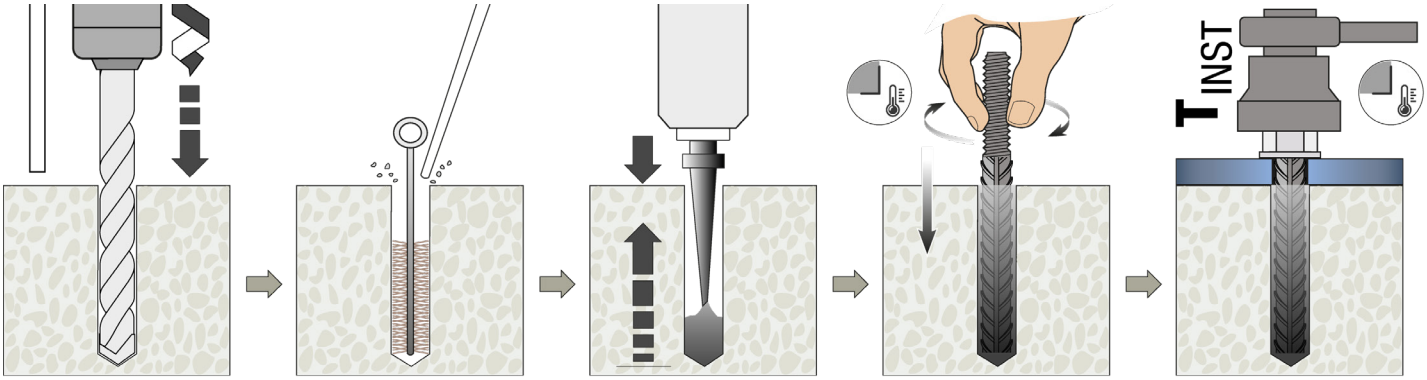
- The Performance data provided is for fixing a rebar as an anchor.
- Performance data is for fixing a rebar of Class B with characteristic yield strength of 500 MPa.
- Fasteners subject to static and quasi-static loads.
- Performance data stated for a single anchor, without the effect of spacing and edge distances. The influence of these parameters must be verified where applicable.
- Minimum thickness, hole diameter, and embedment depth shall correspond to the dimensions stated in this document.
- Data given for the performance of the anchors are for 50 Years Working Life. Please refer to ETA approvals or Anchor calculation software for 100 Years Working Life.
- Concrete strength class C20/25 is assumed.
- Design resistances are calculated from characteristic values using the appropriate partial safety factors corresponding to the decisive failure mode.
- The Recommended Resistance is calculated using an additional safety factor (γ_{add}) equal to 1.4.
- Performance data is valid for shear loading without a lever arm; installations involving a lever arm require additional verifications.
- Performance data is not valid for combined tensile and shear loading; where combined loading occurs, further checks shall be performed.
- Data given for the performance of the anchors for temperature range of minimum base material temperature -40°C, maximum long/short term base material temp: +24°C/40°C.
- Installation carried out strictly in accordance with the product's Installation Instructions and performed by a trained operator.

Click here to download the software

For variations in structure thickness, reduced spacing and edge calculations download the free **A**nchor **C**alculation **P**rogram from www.jcpfixings.co.uk

INSTALLATION INSTRUCTIONS INTO CONCRETE (Rebar)

Click on the QR code or scan it to watch the video



-Drill correct diameter hole to corresponding depth

-Clean the hole by brushing, blowing to remove drilling debris and dust:

2 × Blowing
2 × Brushing
2 × Blowing
2 × Brushing
2 × Blowing

-Attach the nozzle to the cartridge

-Extrude the first part to waste until an even colour is achieved

-Fill the hole 1/3 to 1/2 full starting from the bottom of the hole

-Insert the rebar into the base material by hand using a twisting motion

-Allow resin to cure

-Attach the fixture

-Tighten with a torque wrench to recommended torque

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
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jcpenquiries@owlett-jaton.com
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SUPPLEMENTARY DATA

INFLUENCE OF CONCRETE STRENGTH					
Concrete strength		C20/25	C30/37	C40/50	C50/60
Cylinder	N/mm²	20	30	40	50
Cube	N/mm²	25	37	50	60
Factor	Non-Cracked	1.0	1.0	1.0	1.0
	Cracked	1.0	1.12	1.23	1.30

STEEL DESIGN RESISTANCE FOR SINGLE ANCHOR								
Steel Grade	Load Type	Threaded Rods Diameter (mm)						
		8	10	12	16	20	24	30
Grade 5.8	Tensile (kN)	12.0	19.3	28.0	52.7	82.0	118.0	187.3
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	Shear (kN)	7.2	12.0	16.8	31.2	48.8	70.4	112.0
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

STEEL DESIGN RESISTANCE FOR B500 REBAR								
Steel Grade	Load Type	Rebar Diameter (mm)						
		8	10	12	16	20	25	32
Rebar B500	Tensile (kN)	20	30.7	44.2	79.2	123.5	192.8	315.7
	Shear (kN)	9.3	14.6	20.6	36.6	68.8	90	147.3

Technical Data Sheet

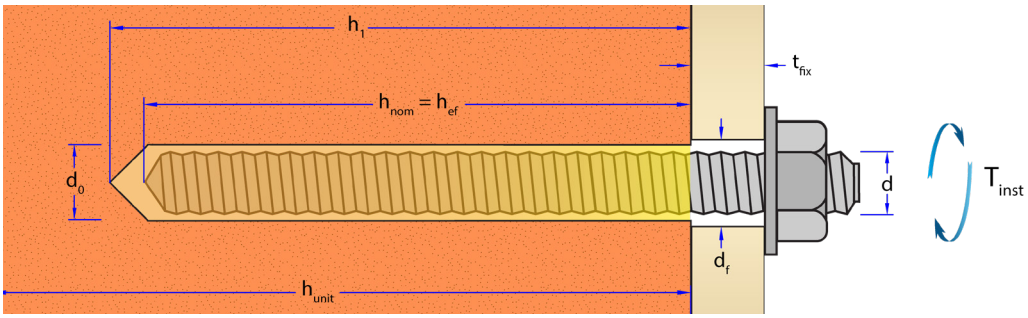
Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

FIXING INTO SOLID MASONRY

- **Solid Clay Brick**
  Dimensions (length/ width / height) = 240 / 115 /71 mm
  Compressive Strength >20 N/mm²
  Density >1.9 kg/dm³



Installation Data For Fixing Into Solid Clay Brick

Thread Diameter (d) mm	Anchor rod without Sleeve					Anchor rod with Sleeve						Fixture Clearance Hole (d_f) mm	Tightening Torque (T_{inst}) Nm
	Drill Hole Diameter (d_0) mm	Min. Hole Depth (h_0) mm	Diameter of Cleaning Brush Size mm	Minimum Spacing mm	Minimum Edge Distance mm	Sleeve Size (diam / length) mm	Drill Hole Diameter (d_0) mm	Min. Hole Depth (h_0) mm	Diameter of Cleaning Brush Size mm	Minimum Spacing mm	Minimum Edge Distance mm		
Threaded Studs													
M8	10	90	14	270	135	16/85	16	90	20	255	128	9	2
M10	12	90	14	270	135	16/85	16	90	20	255	128	12	2
M12	14	90	14	270	135	16/85	16	90	20	255	128	14	2
						20/85	20	90	22	255	128		
M16	18	90	20	270	135	20/85	20	90	22	255	128	18	2

Grade 5.8 Studs Performance Data (Solid Clay Brick without Sleeve)

Thread Diameter	Characteristic Resistance		Design Resistance		Approved Resistance	
d	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	kN	kN	kN	kN	kN	kN
M8	4.0	4.0	1.6	1.6	1.1	1.1
M10	5.0	5.0	2.0	2.0	1.4	1.4
M12	3.5	3.5	1.4	1.4	1.0	1.0
M16	4.5	4.5	1.8	1.8	1.29	1.29

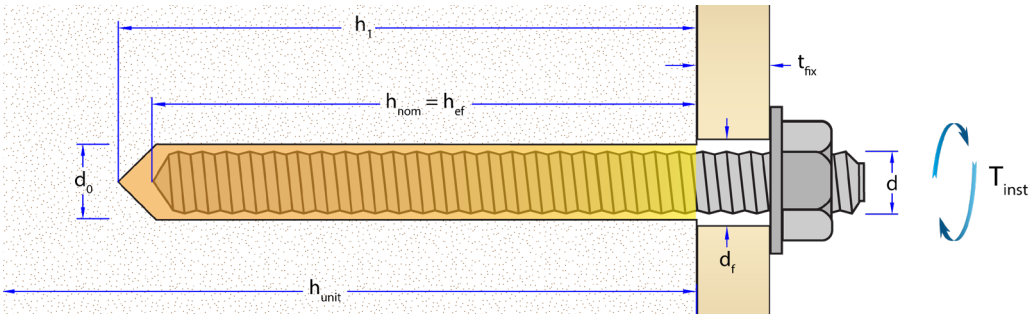
Grade 5.8 Studs Performance Data (Solid Clay Brick with Sleeve)

Thread Diam (d)	Sleeve Size (diam / length)	Characteristic Resistance		Design Resistance		Approved Resistance	
mm	mm	kN		kN		kN	
		Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
M8	16/85	3.0	3.0	1.2	1.2	0.8	0.8
M10	16/85	3.0	3.0	1.2	1.2	0.8	0.8
M12	16/85	3.0	3.0	1.2	1.2	0.8	0.8
	20/85	3.0	3.0	1.2	1.2	0.8	0.8
M16	20/85	3.0	3.0	1.2	1.2	0.8	0.8

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ
Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140
jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

Vinylester Resin

- **Solid Calcium Silicate Brick**
  Dimensions (length/ width / height) = 240 / 115 /71 mm
  Compressive Strength >25 N/mm²
  Density >1.8 kg/dm³



Installation Data for fixing into Solid Calcium Silicate Brick

Thread Diameter (d) mm	Anchor rod without Sleeve					Anchor rod with Sleeve						Fixture Clearance Hole (d_f) mm	Tightening Torque (T_{inst}) Nm
	Drill Hole Diameter (d_0) mm	Min. Hole Depth (h_0) mm	Diameter of Cleaning Brush Size mm	Minimum Spacing mm	Minimum Edge Distance mm	Sleeve Size (diam / length) mm	Drill Hole Diameter (d_0) mm	Min. Hole Depth (h_0) mm	Diameter of Cleaning Brush Size mm	Minimum Spacing mm	Minimum Edge Distance mm		
Threaded Studs													
M8	10	90	14	270	135	16/85	16	90	20	255	128	9	2
M10	12	90	14	270	135	16/85	16	90	20	255	128	12	2
M12	14	90	14	270	135	16/85	16	90	20	255	128	14	2
						20/85	20	90	22	255	128		
M16	18	90	20	270	135	20/85	20	90	22	255	128	18	2

Grade 5.8 Studs Performance Data (Solid Calcium Silicate Brick without Sleeve)

Thread Diameter	Characteristic Resistance		Design Resistance		Approved Resistance	
d	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	kN	kN	kN	kN	kN	kN
M8	5.3	4.1	2.1	1.6	1.5	1.2
M10	5.3	4.1	2.1	1.6	1.5	1.2
M12	5.3	4.1	2.1	1.6	1.5	1.2
M16	5.3	4.1	2.1	1.6	1.5	1.2

Grade 5.8 Studs Performance Data (Solid Calcium Silicate Brick with Sleeve)

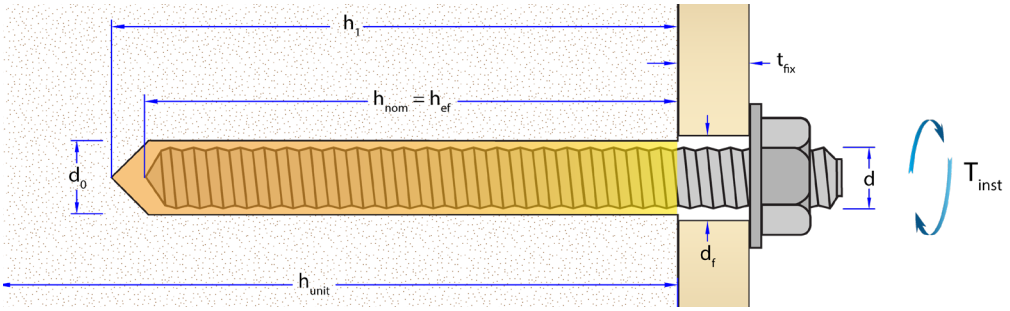
Thread Diam (d)	Sleeve Size (diam / length)	Characteristic Resistance		Design Resistance		Approved Resistance	
mm	mm	kN		kN		kN	
		Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
M8	16/85	3.0	3.0	1.2	1.2	0.8	0.8
M10	16/85	3.0	3.0	1.2	1.2	0.8	0.8
M12	16/85	3.0	3.0	1.2	1.2	0.8	0.8
	20/85	3.0	3.0	1.2	1.2	0.8	0.8
M16	20/85	3.0	3.0	1.2	1.2	0.8	0.8

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

- **Aerated Autoclaved Concrete Block**
  Dimensions (length/ width / height) = 599 / 375 /249 mm
  Compressive Strength >2 N/mm²
  Density >0.35 kg/dm³



Installation Parameters for Fixing Into Aerated Autoclaved Concrete Block

Thread Diameter (d) mm	Anchor rod without Sleeve					Fixture Clearance Hole (d_f) mm	Tightening Torque (T_{inst}) Nm
	Drill Hole Diameter (d_0) mm	Min. Hole Depth (h_0) mm	Diameter of Cleaning Brush Size mm	Minimum Spacing mm	Minimum Edge Distance mm		
Threaded Studs							
M8	10	90	14	270	135	9	2
M10	12	90	14	270	135	12	2
M12	14	90	14	270	135	14	2
M16	18	90	20	270	135	18	2

Grade 5.8 Studs Performance Data (Aerated Autoclaved Concrete Block without sleeve)

Thread Diameter	Characteristic Resistance		Design Resistance		Approved Resistance	
d	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
mm	kN	kN	kN	kN	kN	kN
M8	0.9	0.9	0.4	0.4	0.3	0.3
M10	0.9	0.9	0.4	0.4	0.3	0.3
M12	0.9	0.9	0.4	0.4	0.3	0.3
M16	2.0	2.0	1.0	1.0	0.7	0.7

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

* Important Notes:

- The Performance data provided is for guidance only. Due to variable nature of masonry units, site tests are recommended to determine the final resistance for safety critical applications.
- Fasteners subject to static and quasi-static loads.
- Performance data stated for a single anchor, without the effect of spacing and edge distances. The influence of these parameters must be verified where applicable.
- Minimum thickness, hole diameter, and embedment depth shall correspond to the dimensions stated in this document.
- Design resistances are calculated from characteristic values using the appropriate partial safety factors corresponding to the decisive failure mode.
- The Recommended Resistance is calculated using an additional safety factor (γ_{add}) equal to 1.4.
- Performance data is valid for shear loading without a lever arm; installations involving a lever arm require additional verifications.
- Performance data is not valid for combined tensile and shear loading; where combined loading occurs, further checks shall be performed.
- Data given for the performance of the anchors for temperature range of minimum base material temperature -40°C, maximum long/short term base material temp: +24°C/40°C.
- Performance data has been calculated taking into account of having Joints vertically and horizontally with 5mm thickness and joint class of M2.5-M9. Anchor calculation program can be used for more
- Installation carried out strictly in accordance with the product's Installation Instructions and performed by a trained operator.

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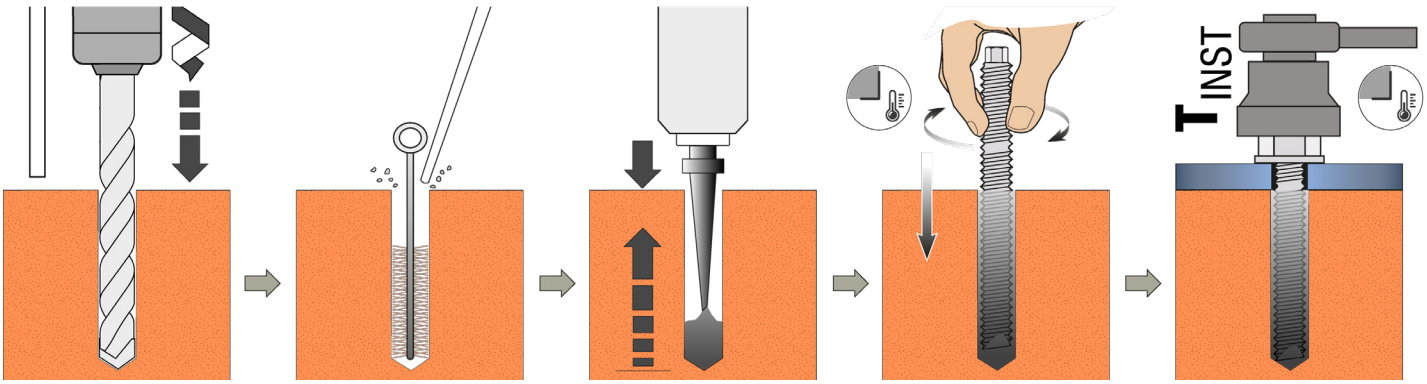
INSTALLATION INSTRUCTIONS INTO SOLID MASONRY

Click on the QR code or scan it to watch the video.



-Drill correct diameter hole to corresponding depth

-Clean the hole by brushing, blowing to remove drilling debris and dust:

2 × Blowing
2 × Brushing
2 × Blowing
2 × Brushing
2 × Blowing

-Attach the nozzle to the cartridge

-Extrude the first part to waste until an even colour is achieved

-Fill the hole 1/3 to 1/2 full starting from the bottom of the hole

-Insert the stud into the base material by hand using a twisting motion

-Allow resin to cure

-Attach fixture

-Tighten with a torque wrench to recommended torque

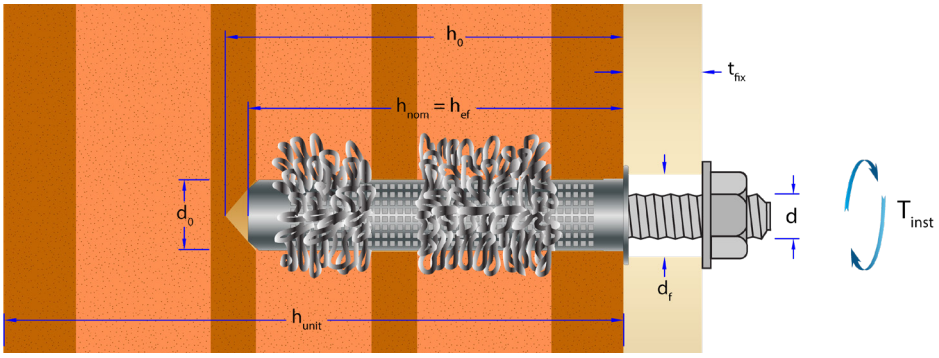
Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

FIXING INTO HOLLOW MASONRY

- **Hollow Clay Brick Porotherm (EN 771-1)**
  Dimensions (length/ width / height)
  = 373 / 250 /238 mm
  Compressive Strength >12 N/mm²
  Density >0.9kg/dm³



Installation Parameters for Fixing Into Hollow Clay Brick Porotherm

Thread Diameter (d) mm	Anchor rod with Sleeve: Sleeve Size (diam / length) mm	Drill Hole Diameter (d_0) mm	Min. Hole Depth (h_0) mm	Diameter of Cleaning Brush Size mm	Minimum Spacing* mm	Minimum Edge Distance mm	Fixture Clearance Hole (d_f) mm	Tightening Torque (T_{inst}) Nm
Threaded Studs								
M8	16/85	16	90	20	373/238	100	10	2
M10	16/85	16	90	20	373/238	100	12	2
M12	16/85	16	90	20	373/238	100	14	2
	20/85	20	90	22	373/238	120		
M16	20/85	20	90	22	373/238	120	18	2

* Minimum Spacing Parallel to Horizontal Joints / Minimum Spacing Vertical to the Horizontal Joints.

Grade 5.8 Studs Performance Data (Hollow Clay Brick Porotherm with Sleeve)

Thread Diam (d)	Sleeve Size (diam / length)	Characteristic Resistance		Design Resistance		Approved Resistance	
mm	mm	kN		kN		kN	
		Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
M8	16/85	2.0	2.0	0.8	0.8	0.6	0.6
M10	16/85	2.0	2.0	0.8	0.8	0.6	0.6
M12	16/85	2.0	2.0	0.8	0.8	0.6	0.6
	20/85	2.5	2.5	1.0	1.0	0.7	0.7
M16	20/85	2.5	2.5	1.0	1.0	0.7	0.7

Unit 14 Teddington Business Park
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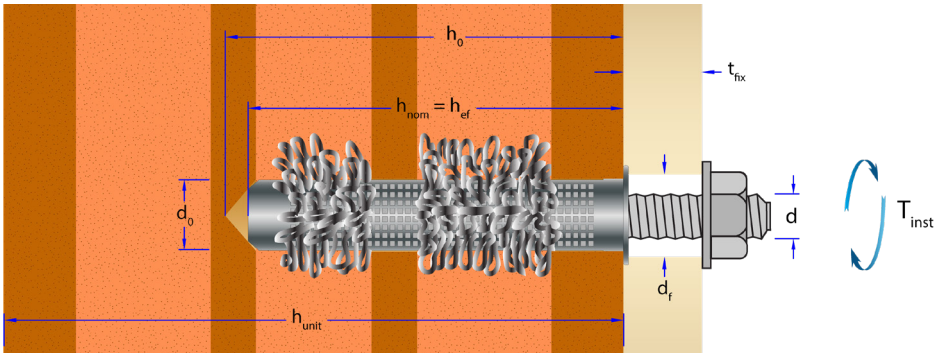
Fax:+44 (0)20 8943 1140
jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

- **Hollow Clay Brick Hueco Doble (EN 771-1)**
  Dimensions (length/ width / height) =
  245 / 110 /88 mm
  Compressive Strength >2.5 N/mm²
  Density >0.74 kg/dm³



Installation Parameters for Fixing Into Hollow Clay Brick Hueco Doble								
Thread Diameter (d) mm	Anchor rod with Sleeve						Fixture Clearance Hole (d_f) mm	Tightening Torque (T_{inst}) Nm
	Sleeve Size (diam / length) mm	Drill Hole Diameter (d_0) mm	Min. Hole Depth (h_0) mm	Diameter of Cleaning Brush Size mm	Minimum Spacing* mm	Minimum Edge Distance mm		
Threaded Studs								
M8	16/85	16	90	20	245/110	100	10	2
M10	16/85	16	90	20	245/110	100	12	2
M12	16/85	16	90	20	245/110	100	14	2
	20/85	20	90	22	245/110	120		
M16	20/85	20	90	22	373/238	120	18	2

* Minimum Spacing Parallel to Horizontal Joints / Minimum Spacing Vertical to the Horizontal Joints.

Grade 5.8 Studs Performance Data (Hollow Clay Brick Hueco Doble with Sleeve)							
Thread Diam (d)	Sleeve Size (diam / length)	Characteristic Resistance		Design Resistance		Approved Resistance	
mm	mm	kN		kN		kN	
		Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
M8	16/85	0.9	0.9	0.3	0.3	0.2	0.2
M10	16/85	1.5	1.5	0.6	0.6	0.4	0.4
M12	16/85	1.5	1.5	0.6	0.6	0.4	0.4
	20/85	1.5	1.5	0.6	0.6	0.4	0.4
M16	20/85	1.5	1.5	0.6	0.6	0.4	0.4

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
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Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140
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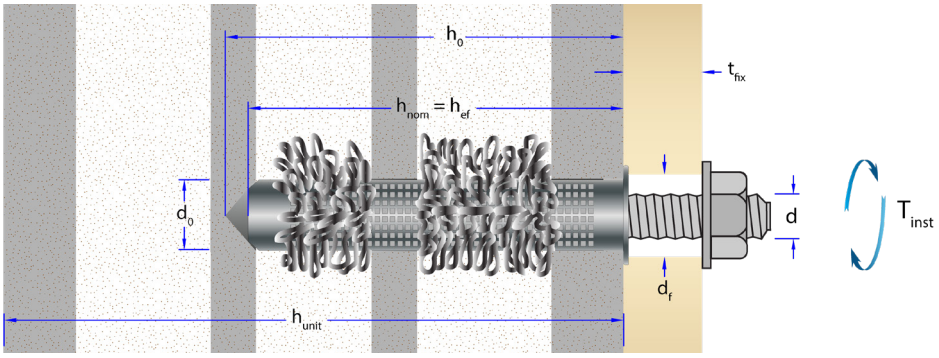
- **Perforated Calcium Silicate Brick**
- Dimensions (length/ width / height) = 239 / 248 /239 mm
  Compressive Strength >15N/mm²
  Density >1.3 kg/dm³



Installation Parameters for Fixing Into Perforated Calcium Silicate Brick

Thread Diameter (d) mm	Anchor rod with Sleeve: Sleeve Size (diam / length) mm	Drill Hole Diameter (d_0) mm	Min. Hole Depth (h_0) mm	Diameter of Cleaning Brush Size mm	Minimum Spacing* mm	Minimum Edge Distance mm	Fixture Clearance Hole (d_f) mm	Tightening Torque (T_{inst}) Nm
Threaded Studs								
M8	16/85	16	90	20	239/248	100	10	2
M10	16/85	16	90	20	239/248	100	12	2
M12	16/85	16	90	20	239/248	100	14	2
	20/85	20	90	22	239/248	120		
M16	20/85	20	90	22	239/248	120	18	2

* Minimum Spacing Parallel to Horizontal Joints / Minimum Spacing Vertical to the Horizontal Joints.

Grade 5.8 Studs Performance Data (Perforated Calcium Silicate Brick with Sleeve)

Thread Diam (d)	Sleeve Size (diam / length)	Characteristic Resistance		Design Resistance		Approved Resistance	
mm	mm	kN		kN		kN	
		Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ap})	Shear (V_{Ap})
M8	16/85	2.0	2.0	0.8	0.8	0.6	0.6
M10	16/85	2.0	2.0	0.8	0.8	0.6	0.6
M12	16/85	2.0	2.0	0.8	0.8	0.6	0.6
	20/85	2.5	2.5	1.0	1.0	0.7	0.7
M16	20/85	2.5	2.5	1.0	1.0	0.7	0.7

Unit 14 Teddington Business Park
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TW11 9BQ
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* Important Notes:

- The Performance data provided is for guidance only. Due to variable nature of masonry units, site tests are recommended to determine the final resistance for safety critical applications.
- Fasteners subject to static and quasi-static loads.
- Performance data stated for a single anchor, without the effect of spacing and edge distances. The influence of these parameters must be verified where applicable.
- Minimum thickness, hole diameter, and embedment depth shall correspond to the dimensions stated in this document.
- Design resistances are calculated from characteristic values using the appropriate partial safety factors corresponding to the decisive failure mode.
- The Recommended Resistance is calculated using an additional safety factor (γ_{add}) equal to 1.4.
- Performance data is valid for shear loading without a lever arm; installations involving a lever arm require additional verifications.
- Performance data is not valid for combined tensile and shear loading; where combined loading occurs, further checks shall be performed.
- Data given for the performance of the anchors for temperature range of minimum base material temperature -40°C, maximum long/short term base material temp: +24°C/40°C.
- Performance data has been calculated taking into account of having Joints vertically and horizontally with 5mm thickness and joint class of M2.5-M9. Anchor calculation program can be used for more
- Installation carried out strictly in accordance with the product's Installation Instructions and performed by a trained operator.

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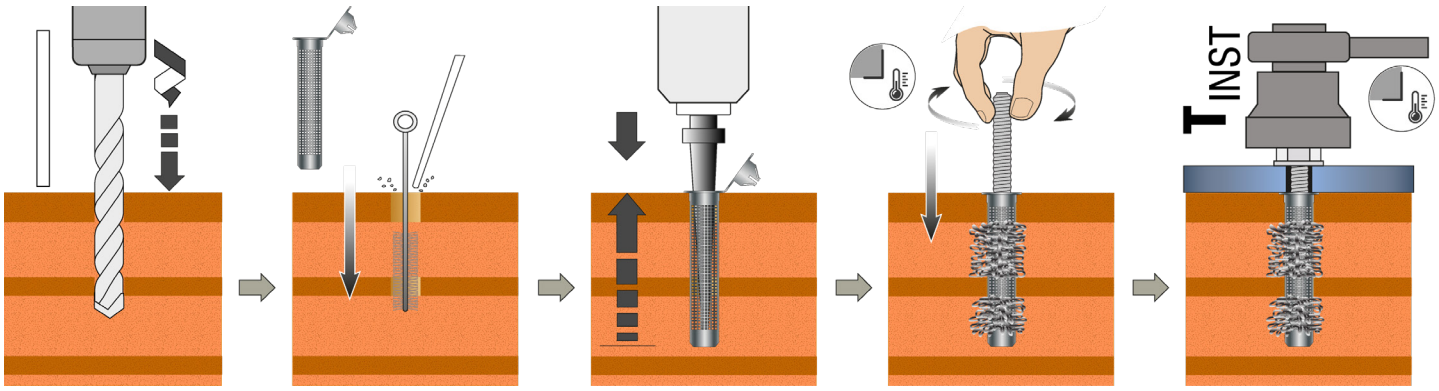
INSTALLATION INSTRUCTIONS INTO HOLLOW MASONRY



-Drill the hole to the correct diameter and depth using a rotary percussive machine

-Clean the hole by brushing, blowing to remove drilling debris and dust:

2 × Blowing
2 × Brushing
2 × Blowing
2 × Brushing
2 × Blowing

-Insert the correct perforated sleeve into the drilled hole after cleaning

-Ensure the sleeve is positioned flush with the surface of the base material and properly centred

-Attach the nozzle to the cartridge

-Extrude the first part to waste until an even colour is achieved

-Insert mixer nozzle to the end of the perforated sleeve and completely fill the sleeve with resin

-Withdraw the mixer nozzle as the sleeve fills

-Plug the centering cap into the sleeve

-Insert the stud into the perforated sleeve by hand using a twisting motion

-Allow resin to cure

-Attach fixture

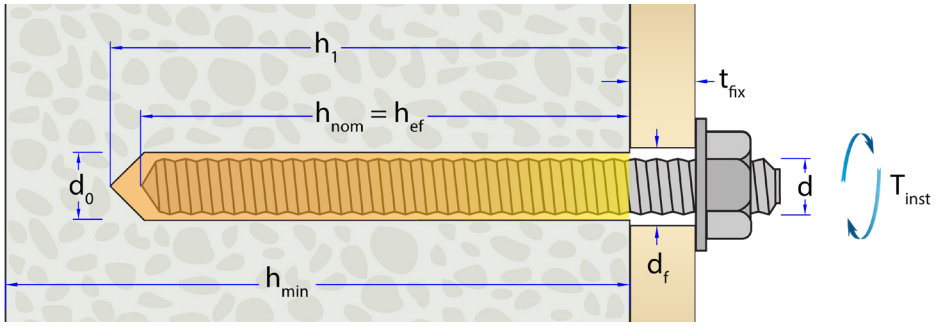
-Tighten with a torque wrench to recommended torque

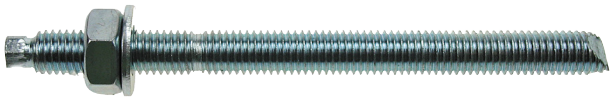
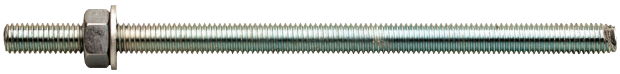
Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ

Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

J- FIX STUDS



RANGE DATA			
Part Number	Thread Diam (d) mm	Stud Length (L) mm	Features
Steel Grade 5.8 - Zinc Plated Clear Passivated Chisel End Studs			
JSTUD08110	M8	110	 • Property Grade 5.8 • Chisel End Studs • Bright Zinc Plated • Depth Mark for Standard Embedement Depth • Hex Head with Setting Tool Included
JSTUD10130	M10	130	
JSTUD12160	M12	160	
JSTUD16190	M16	190	
JSTUD20260	M20	260	
JSTUD24300	M24	300	
JSTUD30380	M30	380	
Steel Grade 5.8 - Hot Dipped Galvanised Chisel End Studs			
JSTUD08110G	M8	110	 • Property Grade 5.8 • Chisel End Studs • Hot Dipped Galvanised (BS EN ISO 1461:2009) • Depth Mark for Standard Embedement Depth • Hex Head with Setting Tool Included
JSTUD10130G	M10	130	
JSTUD12160G	M12	160	
JSTUD16190G	M16	190	
JSTUD20260G	M20	260	
JSTUD24300G	M24	300	
Steel Grade 5.8 - Zinc Plated Clear Passivated Plain Ended and Chisel End Studs			
JSTUD08150PE	M8	150	 • Property Grade 5.8 • Plain Ended Studs • Bright Zinc Plated
JSTUD10105PE	M10	105	
JSTUD10150PE		150	
JSTUD10200PE		200	
JSTUD12110PE	M12	110	
JSTUD12150PE		150	
JSTUD12200PE		200	
JSTUD16110PE	M16	110	
JSTUD16250PE		250	
JSTUD16350PE		350	
JSTUD20200PE	M20	200	
JSTUD20400PE		400	

Unit 14 Teddington Business Park
Station Rd.,Teddington, Middlesex
TW11 9BQ
Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140
jcpenquiries@owlett-jaton.com
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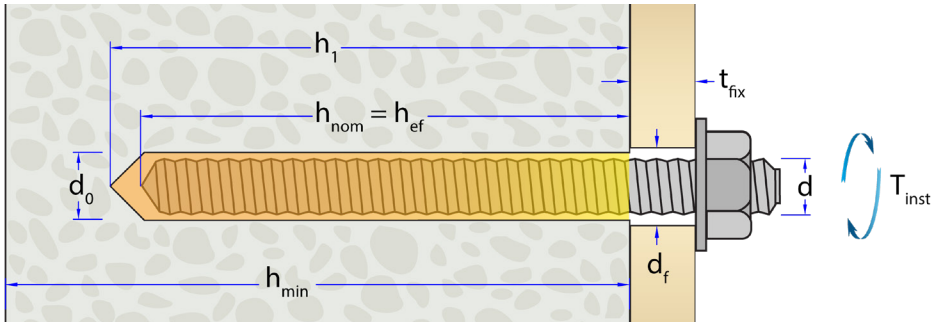
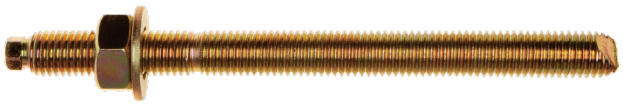


RANGE DATA			
Part Number	Thread Diam (d)	Stud Length (L)	Features
	mm	mm	
High Tensile Steel Grade 8.8 Zinc Plated Yellow Passivated Chisel End Studs			
JSTUD08110HT	M8	110	 • Property Grade 8.8 • Chisel End Studs • Zinc Plated & Yellow Passivated • Depth Mark for Standard Embedement Depth • Hex Head with Setting Tool Included
JSTUD10130HT	M10	130	
JSTUD12160HT	M12	160	
JSTUD16190HT	M16	190	
JSTUD20260HT	M20	260	
JSTUD24300HT	M24	300	
JSTUD30380HT	M30	380	
High Tensile Steel Grade 8.8 Hot Dipped Galvanised Chisel End Studs			
JSTUD08110GHT	M8	110	 • Property Grade 8.8 • Chisel End Studs • Hot Dipped Galvanised (BS EN ISO 1461:2009) • Hex Head with Setting Tool Included • Depth Mark for Standard Embedement Depth
JSTUD12160GHT	M12	160	
JSTUD16190GHT	M16	190	
JSTUD20260GHT	M20	260	
JSTUD24300GHT	M24	300	

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Station Rd.,Teddington, Middlesex
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jcpenquiries@owlett-jaton.com
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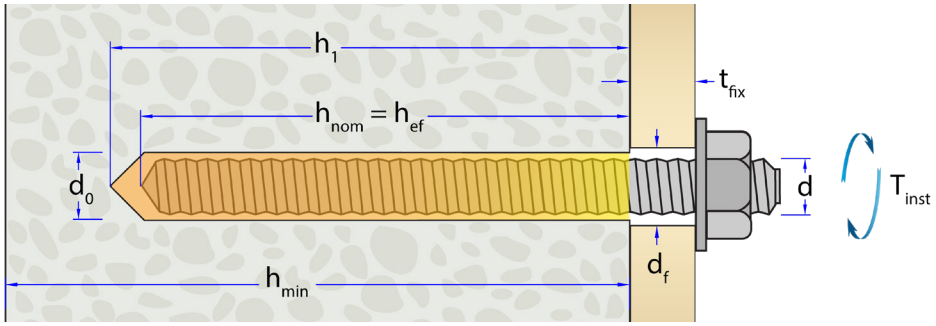
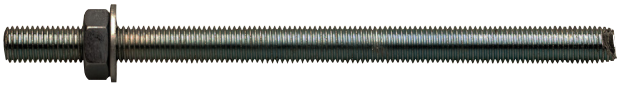


RANGE DATA

Part Number	Thread Diam (d) mm	Stud Length (L) mm	Features
Stainless Steel Grade A4/316 Chisel End Studs			
JSTUD08110SSA4	M8	110	 • Stainless Steel Grade A4/316 • Property Class 70 • Chisel End Studs • Hex Head with Setting Tool Included • Depth Mark for Standard Embedement Dept
JSTUD10130SSA4	M10	130	
JSTUD12160SSA4	M12	160	
JSTUD16190SSA4	M16	190	
JSTUD20260SSA4	M20	260	
JSTUD24300SSA4	M24	300	
Stainless Steel Grade A4/316 Plain Ended			
JSTUD08150PESS	M8	150	 • Stainless Steel Grade A4/316 • Property Class 70
JSTUD10105PESS	M10	105	
JSTUD10150PESS		150	
JSTUD10200PESS		200	
JSTUD12110PESS	M12	110	
JSTUD12150PESS		150	
JSTUD12200PESS		200	
JSTUD16110PESS	M16	110	
JSTUD16250PESS		250	
JSTUD16350PESS		350	
JSTUD20200PESS	M20	200	
JSTUD20400PESS		400	
Stainless Steel Grade A2/304 Chisel End Studs			
JSTUD08110SS	M8	110	 • Stainless Steel Grade A2/304 • Property Class 70 • Chisel End Studs • Hex Head with Setting Tool Included • Depth Mark for Standard Embedement Depth
JSTUD10130SS	M10	130	
JSTUD12160SS	M12	160	
JSTUD16190SS	M16	190	
JSTUD20260SS	M20	260	
JSTUD24300SS	M24	300	

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TW11 9BQ

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