



## 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

Anchor Calculator Software can be used for detailed verifications based on EN 1992-4 or EOTA guidelines.

## BASE MATERIAL

- Concrete C20/25 To C50/60
- Cracked/Non-Cracked Concrete
- Solid Brickworks
- Concrete Blocks
- Natural Stone

## FEATURES

- Expansion Free
- High Performance
- Close Spacing And Edge Distances
- Dry/Wet/Flooded Holes
- Performance data for hammer / compressed air drilling and diamond core drilling
- Suitable For Overhead Installation
- No chemical or plastic waste
- 24-Month Shelf Life

## APPROVALS

European Technical Assessment



ETA26/0113  
For use in concrete  
Option 1 Cracked Concrete

## SOFTWARE



[Click here to download the software](#)

## RELATED PRODUCTS



SDS+ Drill Bits



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



JFV380SF (Vol. 410ml)  
JFV300SF (Vol. 300ml)

Vinylester Resin



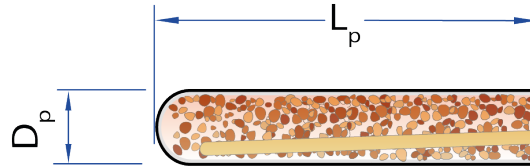
JFEA410SFW (Vol. 410ml)

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





## RANGE DATA



### CAPSULES DATA

Part number	Capsules Diameter (D <sub>p</sub> ) mm	Capsules Length (L <sub>p</sub> ) mm	Capsule Volume cc	Thread Diam (d) mm	Drill Hole Diameter (d <sub>0</sub> ) mm
JCAPSM08	9	80	4.4	M8	10
JCAPSM10	11	80	5.7	M10	12
JCAPSM12	13	95	9.4	M12	14
JCAPSM16	17	95	16.5	M16	18
JCAPSM20	17	160	29.5	M20	22
JCAPSM24	22	175	52.6	M24	26
JCAPSM30	25	230	98.2	M30	280

## CURING LOADING TIME

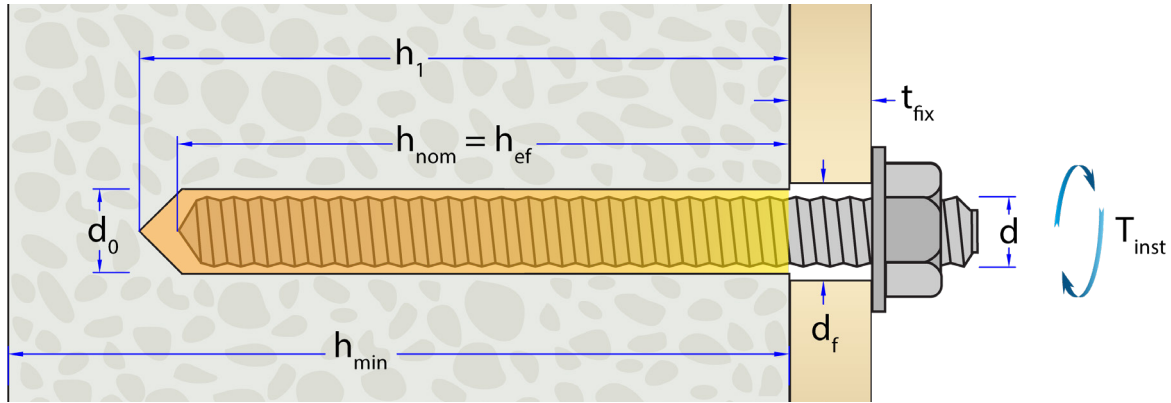
Concrete Temperature °C	Load Time (T <sub>load</sub> )	
	Dry Concrete	Wet Concrete
-20°C to -10°C	30 hrs.	60 hrs.
-10°C to -5°C	10 hrs.	20 hrs.
-5°C to +5°C	5 hrs.	10 hrs.
+5°C to +20°C	60 min.	120 min.
+20°C to +30°C	20 min.	40 min.
+25°C to +30°C	10 min.	20 min.

Ensure Capsule 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 <sub>0</sub> )mm	Fixture Clearance Hole (d <sub>f</sub> ) mm	Standard Embedment		Tightening Torque (T <sub>inst</sub> ) Nm	Diameter of Cleaning Brush Size mm	Minimum Spacing (s <sub>min</sub> ) mm	Minimum edge distance (c <sub>min</sub> ) mm
			Min. Hole Depth (h <sub>nom</sub> )mm	Min. Concrete Thickness (h <sub>min</sub> ) mm				
Threaded Studs								
M8	10	9	80	110	10	11	40	40
M10	12	12	90	120	20	13	45	45
M12	14	14	110	140	40	16	55	55
M16	18	18	125	160	80	20	65	65
M20	22	22	170	220	120	24	85	85
M24	26	26	210	260	180	28	105	105
M30	32	33	280	340	300	34	140	140





## PERFORMANCE DATA GRADE 5.8 STUDS - NON-CRACKED CONCRETE

### STANDARD EMBEDMENT

Grade 5.8 Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h <sub>nom</sub> )	Minimum Concrete Thickness (h <sub>min</sub> )	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N <sub>Rk</sub> )	Shear (V <sub>Rk</sub> )	Tensile (N <sub>Rd</sub> )	Shear (V <sub>Rd</sub> )	Tensile (N <sub>Ap</sub> )	Shear (V <sub>Ap</sub> )
mm	mm	mm	kN	kN	kN	kN	kN	kN
M8	80	110	18	9	12	7.2	8.5	5.1
M10	90	120	29	15	19.3	12	13.8	8
M12	110	140	42	21	28	16.8	20	12.00
M16	125	160	68.7	39	45.8	31.2	32.7	22.2
M20	170	220	109	61	72.6	48.8	51.9	34.8
M24	210	260	149.7	88	99.8	70.4	71.2	50.2
M30	280	340	230.4	140	128.05	112	91.4	80

## PERFORMANCE DATA GRADE 5.8 STUDS - CRACKED CONCRETE

### STANDARD EMBEDMENT

Grade 5.8 Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h <sub>nom</sub> )	Minimum Concrete Thickness (h <sub>min</sub> )	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N <sub>Rk</sub> )	Shear (V <sub>Rk</sub> )	Tensile (N <sub>Rd</sub> )	Shear (V <sub>Rd</sub> )	Tensile (N <sub>Ap</sub> )	Shear (V <sub>Ap</sub> )
mm	mm	mm	kN	kN	kN	kN	kN	kN
M8	No Performance Assessed							
M10	90	120	16.9	15	11.3	12	8	8
M12	110	140	24.8	21	16.5	16.8	11.8	12
M16	125	160	37.7	39	25.1	31.2	17.9	22.2
M20	170	220	74.7	61	49.8	48.8	35.6	34.8
M24	210	260	104.7	88	69.8	70.4	49.9	50.2
M30	No Performance Assessed							





## PERFORMANCE DATA GRADE 8.8 STUDS - NON-CRACKED CONCRETE

### STANDARD EMBEDMENT

Grade 8.8 Studs Performance Data (C20/25 non-cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h <sub>nom</sub> )	Minimum Concrete Thickness (h <sub>min</sub> )	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N <sub>Rk</sub> )	Shear (V <sub>Rk</sub> )	Tensile (N <sub>Rd</sub> )	Shear (V <sub>Rd</sub> )	Tensile (N <sub>Ap</sub> )	Shear (V <sub>Ap</sub> )
mm	mm	mm	kN	kN	kN	kN	kN	kN
M8	80	110	24.1	15	16	12	11.4	8.57
M10	90	120	33.9	23	22.6	18.4	16.1	13.1
M12	110	140	49.7	34	33.1	27.2	23.70	19.4
M16	125	160	68.7	63	45.8	50.4	32.7	36
M20	170	220	109	98	72.6	78.4	51.9	56
M24	210	260	149.7	141	99.8	112.8	71.2	80.5
M30	280	340	230.4	224	128	179.2	91.4	128

## PERFORMANCE DATA GRADE 8.8 STUDS - CRACKED CONCRETE

### STANDARD EMBEDMENT

Grade 8.8 Studs Performance Data (C20/25 cracked concrete)*								
Thread Diam (d)	Minimum Hole Depth (h <sub>nom</sub> )	Minimum Concrete Thickness (h <sub>min</sub> )	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N <sub>Rk</sub> )	Shear (V <sub>Rk</sub> )	Tensile (N <sub>Rd</sub> )	Shear (V <sub>Rd</sub> )	Tensile (N <sub>Ap</sub> )	Shear (V <sub>Ap</sub> )
mm	mm	mm	kN	kN	kN	kN	kN	kN
M8	No Performance Assessed							
M10	90	120	16.9	23	11.3	18.4	8.08	13.1
M12	110	140	24.8	34	16.5	27.2	11.8	19.4
M16	125	160	37.7	63	25.1	50.4	17.9	36
M20	170	220	74.7	98	49.8	78.4	35.6	56
M24	210	260	104.7	141	69.8	112.8	49.9	80.5
M30	No Performance Assessed							





## PERFORMANCE DATA

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

#### 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 <sub>nom</sub> )	Minimum Concrete Thickness (h <sub>min</sub> )	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N <sub>Rk</sub> )	Shear (V <sub>Rk</sub> )	Tensile (N <sub>Rd</sub> )	Shear (V <sub>Rd</sub> )	Tensile (N <sub>Ap</sub> )	Shear (V <sub>Ap</sub> )
mm	mm	mm	kN	kN	kN	kN	kN	kN
M8	80	110	25	13	13.3	8.3	9.5	5.9
M10	90	120	33.9	20	22.6	12.8	16.1	9.1
M12	110	140	59	30	31.5	19.2	22.5	13.7
M16	125	160	68.7	55	45.8	35.2	32.7	25.1
M20	170	220	109	86	72.6	55.1	51.9	39.3
M24	210	260	149.7	124	99.8	79.4	71.2	56.7

## PERFORMANCE DATA

### GRADE A4-70 OR A2-70 STAINLESS STEEL STUDS - CRACKED CONCRETE

#### STANDARD EMBEDMENT

Grade A2-70 or A4-70 Stainless Steel Studs Performance Data (C20/25 cracked concrete)\*

Thread Diam (d)	Minimum Hole Depth (h <sub>nom</sub> )	Minimum Concrete Thickness (h <sub>min</sub> )	Characteristic Resistance		Design Resistance		Approved Resistance	
			Tensile (N <sub>Rk</sub> )	Shear (V <sub>Rk</sub> )	Tensile (N <sub>Rd</sub> )	Shear (V <sub>Rd</sub> )	Tensile (N <sub>Ap</sub> )	Shear (V <sub>Ap</sub> )
mm	mm	mm	kN	kN	kN	kN	kN	kN
M8	No Performance Assessed							
M10	90	120	16.9	20	11.3	12.8	8	9.1
M12	110	140	24.8	30	16.5	19.2	11.8	13.7
M16	125	160	37.7	55	25.1	35.2	17.9	25.1
M20	170	220	74.7	86	49.8	55.1	35.6	39.3
M24	210	260	104.7	124	69.8	79.4	49.9	56.7





**\* Important notes:**

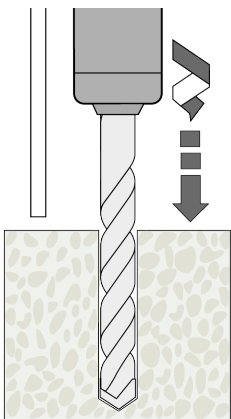
- Fasteners subject to static and quasi-static loads.
- Performance data stated for a single anchor, without the effect of spacing and edge distances. The influence of these parameters must be verified where applicable.
- Minimum concrete thickness, hole diameter, and embedment depth shall correspond to the dimensions stated in this document
- Concrete strength class C20/25 is assumed.
- The performance data is for short term loading. Please refer to ETA approval and EN 1992-4 to take into the influence of sustained load on the performance.
- Performance data is for drill holes produced using rotary hammer drilling, unless otherwise noted. Please refer to ETA approvals or Anchor calculation software for other drilling methods.
- 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 ( $\gamma_{add}$ ) 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  $-40^{\circ}\text{C}$ , maximum long/short term base material temp:  $+24^{\circ}\text{C}/40^{\circ}\text{C}$ . Please refer to ETA approvals or Anchor calculation software for other service temperature range.
- 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.



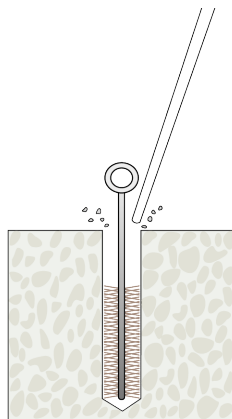
For variations in structure thickness, reduced spacing and edge calculations download the free **Anchor Calculation Program** from [www.jcpfixings.co.uk](http://www.jcpfixings.co.uk)

## INSTALLATION INSTRUCTIONS INTO CONCRETE (THREADED STUDS)

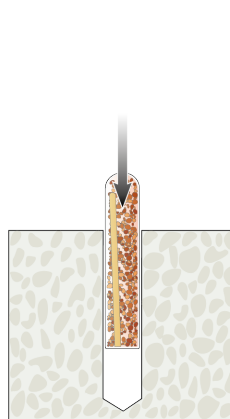
Technical Data Sheet



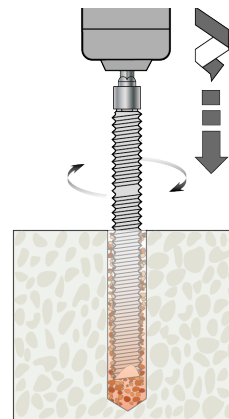
-Drill correct diameter hole to corresponding depth



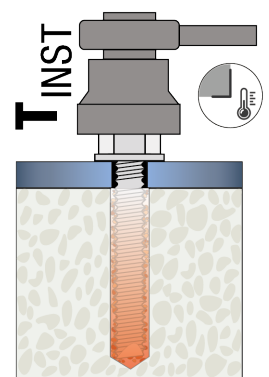
-Clean hole by brushing, blowing to remove drilling debris and dust:  
 2xBlowing  
 2xBrushing  
 2xBlowing  
 2xBrushing  
 2xBlowing



-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





## SUPPLEMENTARY DATA

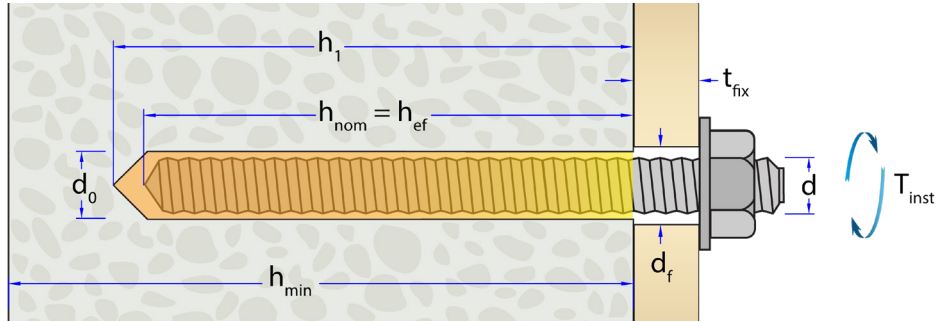
INFLUENCE OF CONCRETE STRENGTH						
Concrete strength		C20/25	C30/37	C40/50	C50/60	
Cylinder	N/mm <sup>2</sup>	20	30	40	50	
Cube	N/mm <sup>2</sup>	25	37	50	60	
Factor	Non-Cracked	All Sizes	1.0	1.14	1.26	1.30
		Cracked	M10	1.0	1.09	1.16
	M12					
	M16					
	M20	1.08	1.13	1.18		
M24	1.05	1.09	1.13			

STEEL DESIGN RESISTANCE FOR SINGLE ANCHOR								
Steel Grade	Load Type	Threaded Rods Diameter (mm)						
		M8	M10	M12	M16	M20	M24	M30
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






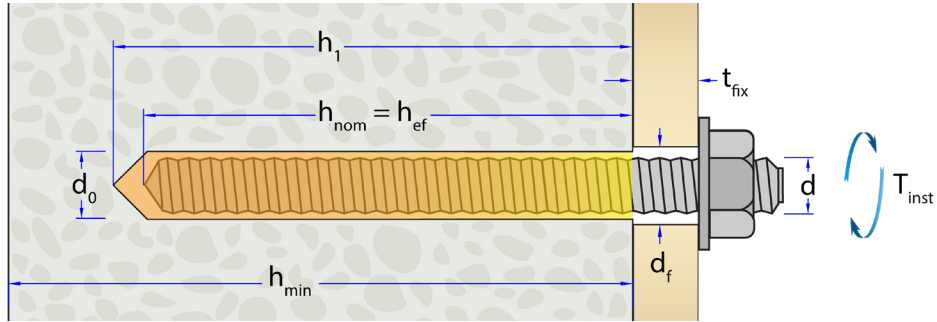
## J- FIX STUDS



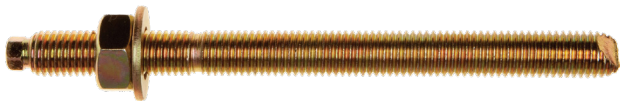

### RANGE DATA

Part Number	Thread Diam (d)	Stud Length (L)	Max Fixture Thickness ( $t_{fix}$ )	Features
	mm			
Steel Grade 5.8 - Zinc Plated Clear Passivated Chisel End Studs				
JSTUD08110	M8	110	18	 <ul style="list-style-type: none"> <li>• Property Grade 8.8</li> <li>• Chisel End Studs</li> <li>• Zinc Plated &amp; Yellow Passivated</li> <li>• Depth Mark for Standard Embedment Depth</li> <li>• Hex Head with Setting Tool Included</li> </ul>
JSTUD10130	M10	130	25	
JSTUD12160	M12	160	34	
JSTUD16190	M16	190	45	
JSTUD20260	M20	260	55	
JSTUD24300	M24	300	55	
JSTUD30380	M30	380	55	
Steel Grade 5.8 - Hot Dipped Galvanised Chisel End Studs				
JSTUD08110G	M8	110	18	 <ul style="list-style-type: none"> <li>• Property Grade 8.8</li> <li>• Chisel End Studs</li> <li>• Hot Dipped Galvanised (BS EN ISO 1461:2009)</li> <li>• Hex Head with Setting Tool Included</li> <li>• Depth Mark for Standard Embedment Depth</li> </ul>
JSTUD10130G	M10	130	25	
JSTUD12160G	M12	160	34	
JSTUD16190G	M16	190	45	
JSTUD20260G	M20	260	55	
JSTUD24300G	M24	300	55	

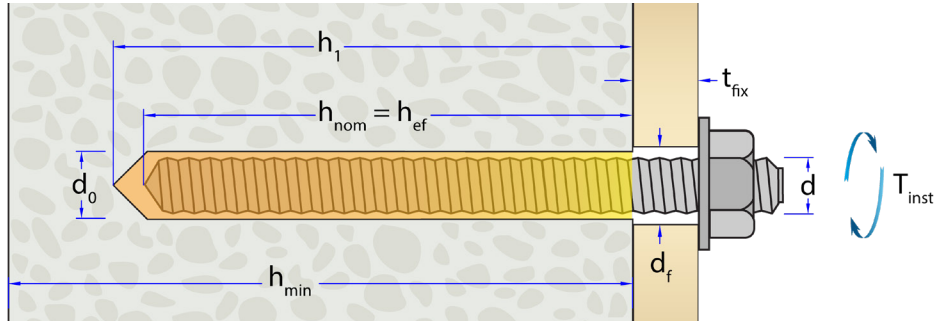





## RANGE DATA

Part Number	Thread Diam (d)	Stud Length (L)	Max Fixture Thickness (t <sub>fix</sub> )	Features
	mm	mm	mm	
High Tensile Steel Grade 8.8 Zinc Plated Yellow Passivated Chisel End Studs				
JSTUD08110HT	M8	110	18	 <ul style="list-style-type: none"> <li>Property Grade 8.8</li> <li>Chisel End Studs</li> <li>Zinc Plated &amp; Yellow Passivated</li> <li>Depth Mark for Standard Embedment Depth</li> <li>Hex Head with Setting Tool Included</li> </ul>
JSTUD10130HT	M10	130	25	
JSTUD12160HT	M12	160	34	
JSTUD16190HT	M16	190	45	
JSTUD20260HT	M20	260	55	
JSTUD24300HT	M24	300	55	
JSTUD30380HT	M30	380	55	
High Tensile Steel Grade 8.8 Hot Dipped Galvanised Chisel End Studs				
JSTUD08110GHT	M8	110	18	 <ul style="list-style-type: none"> <li>Property Grade 8.8</li> <li>Chisel End Studs</li> <li>Hot Dipped Galvanised (BS EN ISO 1461:2009)</li> <li>Hex Head with Setting Tool Included</li> <li>Depth Mark for Standard Embedment Depth</li> </ul>
JSTUD10130GHT	M10	130	25	
JSTUD12160GHT	M12	160	34	
JSTUD16190GHT	M16	190	45	
JSTUD20260GHT	M20	260	55	
JSTUD24300GHT	M24	300	55	





## RANGE DATA

Part Number	Thread Diam (d) mm	Stud Length (L) mm	Max Fixture Thickness (t <sub>fix</sub> ) mm	Features
Stainless Steel Grade A4/316 Chisel End Studs				
JSTUD08110SSA4	M8	110	18	 <ul style="list-style-type: none"> <li>Stainless Steel Grade A4/316</li> <li>Property Class 70</li> <li>Chisel End Studs</li> <li>Hex Head with Setting Tool Included</li> <li>Depth Mark for Standard Embedment Depth</li> </ul>
JSTUD10130SSA4	M10	130	25	
JSTUD12160SSA4	M12	160	34	
JSTUD16190SSA4	M16	190	45	
JSTUD20260SSA4	M20	260	55	
JSTUD24300SSA4	M24	300	55	
Stainless Steel Grade A2/304 Chisel End Studs				
JSTUD08110SS	M8	110	18	 <ul style="list-style-type: none"> <li>Stainless Steel Grade A2/304</li> <li>Property Class 70</li> <li>Chisel End Studs</li> <li>Hex Head with Setting Tool Included</li> <li>Depth Mark for Standard Embedment Depth</li> </ul>
JSTUD10130SS	M10	130	25	
JSTUD12160SS	M12	160	34	
JSTUD16190SS	M16	190	45	
JSTUD20260SS	M20	260	55	
JSTUD24300SS	M24	300	55	

Technical Data Sheet