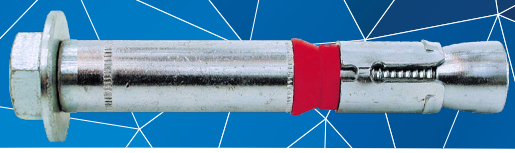
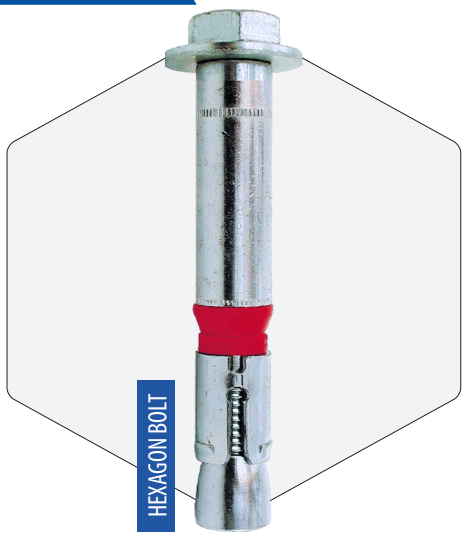
Heavy Duty Anchor
Hexagon Bolt Bright Zinc Plated





INFORMATION

The torque controlled Heavy Duty Anchor Hexagon Bolt is a zinc plated high performance anchor for use in cracked/non-cracked concrete and structural applications such as:

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

The variety of sizes and different embedment depths provide flexibility in selecting the appropriate anchor based on the fixture thickness.

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 Concrete
- Non-Cracked Concrete

FEATURES

- High Performance
- C1, C2 Seismic Performance
- Wide Range Of Sizes
- Fast And Secure Installation
- Through Fixing
- Three way Expansion Sleeve
- Zinc Plated Min. 5µm
- Close Spacing And Edge Distance
- Performance Data for different embedment depth
- Reaction To Fire Class A1
- Fire Resistant Loading

APPROVALS

European Technical Assessment

ETA-07/0331
Option 1 Structural Applications C1, C2

Seismic Performance Categories

SOFTWARE

Click here to download the software

RELATED PRODUCTS

SDS+ Drill Bits

Hole Cleaning Pump

BOP1

Heavy Duty
Stud and Nut
BZP

Heavy Duty
Countersunk
BZP

Heavy Duty
Hexagon Bolt
A4 Stainless Steel

Heavy Duty
Stud and Nut
A4 Stainless Steel

Heavy Duty
Countersunk
A4 Stainless Steel

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

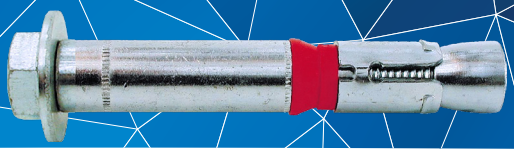
Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

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

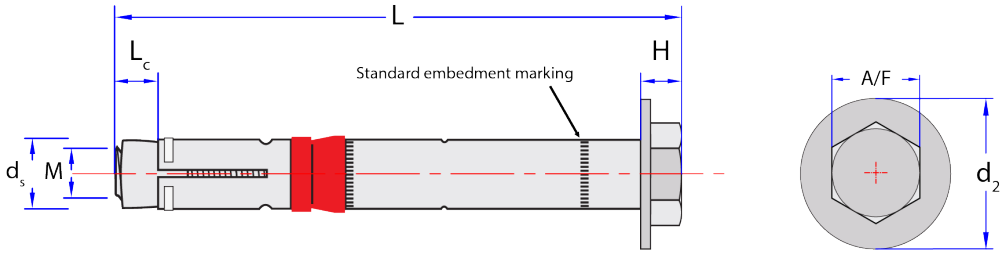
Re04 September 2026

Technical Data Sheet

Heavy Duty Anchor
Hexagon Bolt Bright Zinc Plated



RANGE DATA



RANGE DATA							
Part Number	Size of Thread	Sleeve Diameter	Total Length	Cone Length	Head height	Width Across Flats	Washer Outer diameter
	M	(d_s)	(L)	(L_c)	(H)	(A/F)	(d_2)
	mm	mm	mm	mm	mm	mm	mm
JHD0610	M6	10	75	10	6.8	10	18
JHD0630			95				
JHD0650			115				
JHD0810	M8	12	85	11	8.8	13	20
JHD0830			105				
JHD0850			125				
JHD1015	M10	15	106	14	10.9	17	25
JHD1025			116				
JHD1045			136				
JHD1210	M12	18	117	16	13.8	19	30
JHD1220			127				
JHD1240			147				
JHD1270			177				
JHD1610	M16	24	130	22	18.8	24	40
JHD1620			150				
JHD1650			180				
JHD2030	M20	28	192	26	21.8	30	50
JHD2060			222				
JHD2460	M24	32	262	32	26.5	36	60

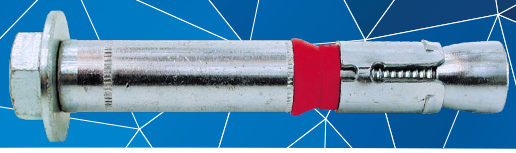
Technical Data Sheet

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

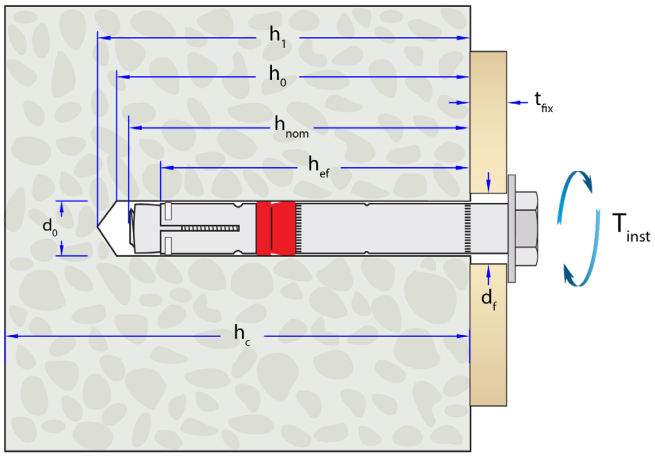
Tel: +44 (0)20 8943 1800
Fax:+44 (0)20 8943 1140

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

Heavy Duty Anchor
Hexagon Bolt Bright Zinc Plated



Installation Into Concrete



Installation Parameters

Part Number	Drill Hole Diameter	Standard Embedment				Deep Embedment				Fixture Clearance Hole	Tightening Torque
		Min Hole Depth	Embedment Depth	Anchorage depth	Max Fixture Thickness N/A	Min Hole Depth	Embedment Depth	Anchorage depth	Max Fixture Thickness		
	(d_0)	(h_1)	(h_{nom})	(h_{ef})	(t_{fix})	(h_1)	(h_{nom})	(h_{ef})	(t_{fix})	(d_f)	(T_{inst})
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm
JHD0610	10	65	60	50	10	N/A				12	15
JHD0630					30	90	85	75	5		
JHD0650					50				25		
JHD0810	12	80	70	60	10	N/A				14	30
JHD0830					30						
JHD0850					50	120	110	100	10		
JHD1015	15	95	85	71	15	N/A				17	50
JHD1025					25						
JHD1045					45	130	120	106	10		
JHD1210	18	105	95	80	10	N/A				20	80
JHD1220					20						
JHD1240					40	130	120	105	15		
JHD1270					70				45		
JHD1610	24	130	120	100	10	N/A				26	160
JHD1620					20	140	130	110	10		
JHD1650					50				40		
JHD2030	28	160	150	125	30	N/A				31	280
JHD2060					60	200	190	165	20		
JHD2460	32	180	170	150	60	220	210	190	20	35	280

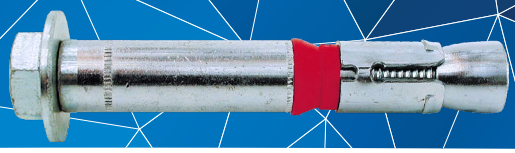
Technical Data Sheet

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

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

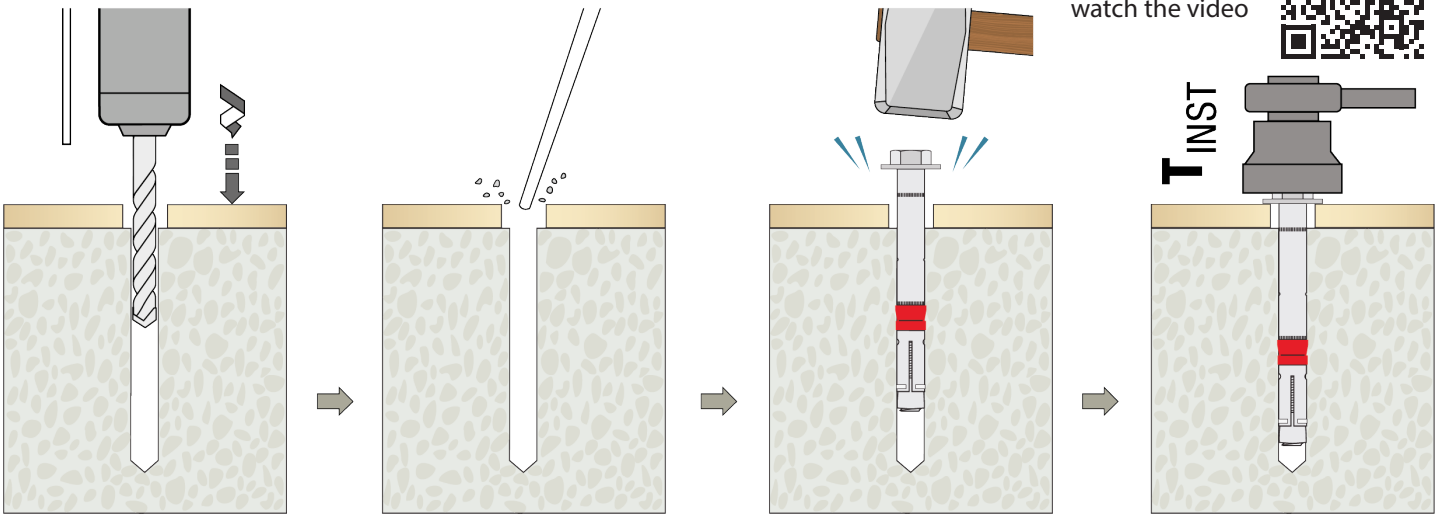
jcpenquiries@owlett-jaton.com
www.jcpfixings.co.uk

Heavy Duty Anchor
Hexagon Bolt Bright Zinc Plated



INSTALLATION INSTRUCTIONS

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



-Position fixture and drill correct diameter hole to corresponding depth

-Clean hole by blowing to remove drilling debris and dust

-Insert anchor through fixture into concrete and lightly hammer into concrete

-Tighten with torque wrench to recommended torque

PERFORMANCE DATA FOR STRUCTURAL APPLICATIONS (NON-CRACKED CONCRETE)

Performance Data (C20/25 non-cracked concrete) Standard Embedment

Size Of Thread	Embedment Depth	Minimum Concrete Thickness	Characteristic Resistance		Design Resistance		Recommended Resistance	
	h_{nom}	h_{min}	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile(N_{Rrec})	Shear (V_{Rrec})
-	mm	mm	kN	kN	kN	kN	kN	kN
M6	60	100	16	18	10.6	14.4	7.6	10.2
M8	70	120	20	30	13.3	24	9.5	17.1
M10	85	140	29.4	48	20	38.4	14	27.4
M12	95	160	35.2	70.4	23.4	46.9	16.7	33.5
M16	120	200	49.1	98.3	32.8	65.5	23.4	46.8
M20	150	250	68.7	137.5	45.8	91.6	32.7	65.4
M24	170	300	90.3	180.7	60.2	120.5	43	86

Performance Data (C20/25 non-cracked concrete) Deep Embedment

Size Of Thread	Embedment Depth	Minimum Concrete Thickness	Characteristic Resistance		Design Resistance		Recommended Resistance	
	h_{nom}	h_{min}	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile(N_{Rrec})	Shear (V_{Rrec})
-	mm	mm	kN	kN	kN	kN	kN	kN
M6	85	125	16	18	10.6	14.4	7.6	10.2
M8	110	160	20	30	13.3	24	9.5	17.1
M10	120	175	30	48	20	38.4	14.2	27.4
M12	120	185	36	73	24	58.4	17.1	41.7
M16	130	210	50	113.5	33.3	75.6	23.8	54
M20	190	290	70	150	46.6	120	33.3	85.7
M24	210	340	128.8	200	85.8	160	61.3	114.2

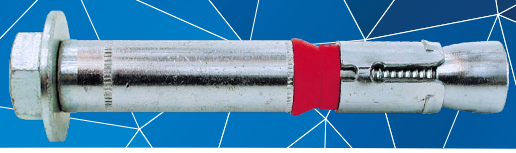
Technical Data Sheet

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

Heavy Duty Anchor
Hexagon Bolt Bright Zinc Plated



PERFORMANCE DATA FOR STRUCTURAL APPLICATIONS (CRACKED CONCRETE)

Performance Data* (C20/25 cracked concrete) Standard Embedment								
Size Of Thread	Embedment Depth	Minimum Concrete Thickness	Characteristic Resistance		Design Resistance		Recommended Resistance	
	h_{nom}	h_{min}	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile(N_{Rrec})	Shear (V_{Rrec})
-	mm	mm	kN	kN	kN	kN	kN	kN
M6	60	100	5	18	3.3	14.4	2.3	10.2
M8	70	120	12	32	8	21.3	5.7	15.2
M10	85	140	16	41.2	10.6	27.4	7.6	19.6
M12	95	160	24.6	49.2	16.4	32.8	11.74	23.4
M16	120	200	34.4	68.8	22.9	45.9	16.4	32.7
M20	150	250	48.1	96.2	32	64.1	22.9	45.8
M24	170	300	63.2	126.5	42.1	84.3	30.1	60.2

Performance Data* (C20/25 cracked concrete) Deep Embedment								
Size Of Thread	Embedment Depth	Minimum Concrete Thickness	Characteristic Resistance		Design Resistance		Recommended Resistance	
	h_{nom}	h_{min}	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile(N_{Rrec})	Shear (V_{Rrec})
-	mm	mm	kN	kN	kN	kN	kN	kN
M6	85	125	5	18	3.3	14.4	2.3	10.2
M8	110	160	12	30	8	24	5.7	17.1
M10	120	175	16	48	10.6	38.4	7.6	27.4
M12	120	185	25	74.1	16.6	49.4	11.9	35.2
M16	130	210	36	79.4	24	52.9	17.1	37.8
M20	190	290	50	145.9	33.3	97.3	23.8	69.5
M24	210	340	65	180.3	43.3	120.2	30.9	85.8

* Important notes:

- Fasteners subject to static and quasi-static loads. Please refer to ETA approval or the JCP Anchor Calculation Program for the seismic 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.
- Drill holes produced using rotary hammer drilling, unless otherwise noted.
- Installation carried out strictly in accordance with the product's Installation Instructions and performed by a trained operator.
- Characteristic and design resistances derived from ETA approval.
- 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.
- When concrete-related strength factors are applied, ensure that the resulting resistance value does not exceed the steel design resistance.
- For project-specific assessments or conditions not explicitly covered, download the JCP Anchor Calculation Program.

JCP PRO Suite
Click here to download the software

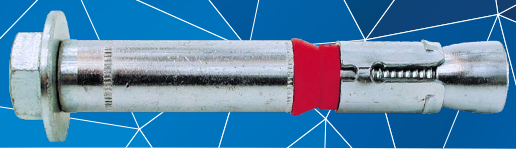
For variations in structure thickness, reduced spacing and edge calculations download the free **A**nchor **C**alculation **P**rogram from www.jcpfixings.co.uk

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

Heavy Duty Anchor
Hexagon Bolt Bright Zinc Plated



FIRE RESISTANCE DATA

Fire Resistance Data (C20/25 to C50/60 cracked or non-cracked concrete) Standard Embedment*																		
Size Of Thread	Embedment Depth h_{nom}	Minimum Concrete Thickness (h_{min})	Design Resistance								Recommended Resistance							
			30min (R30)		60min (R60)		90min (R90)		120min (R120)		30min (R30)		60min (R60)		90min (R90)		120min (R120)	
			Tensile ($N_{Rd,fi}$)	Shear ($V_{Rd,fi}$)	Tensile ($N_{Rd,fi}$)	Shear ($V_{Rd,fi}$)	Tensile ($N_{Rd,fi}$)	Shear ($V_{Rd,fi}$)	Tensile ($N_{Rd,fi}$)	Shear ($V_{Rd,fi}$)	Tensile ($N_{Rrec,fi}$)	Shear ($V_{Rrec,fi}$)	Tensile ($N_{Rrec,fi}$)	Shear ($V_{Rrec,fi}$)	Tensile ($N_{Rrec,fi}$)	Shear ($V_{Rrec,fi}$)	Tensile ($N_{Rrec,fi}$)	Shear ($V_{Rrec,fi}$)
	mm	mm	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)
M6	60	100	1	1	0.8	0.8	0.6	0.6	0.4	0.4	0.7	0.7	0.5	0.5	0.4	0.4	0.2	0.2
M8	70	120	1.9	1.9	1.5	1.5	1	1	0.8	0.8	1.3	1.3	1	1	0.7	0.7	0.5	0.5
M10	85	140	4	4.3	3.2	3.2	2.1	2.1	1.5	1.5	2.8	3	2.2	2.2	1.5	1.5	1	1
M12	95	160	6.2	6.3	4.6	4.6	3	3	2	2	4.4	4.5	3.2	3.2	2.1	2.1	1.4	1.4
M16	120	200	9	11.6	8.6	8.6	5	5	3.1	3.1	6.4	8.2	6.1	6.1	3.5	3.5	2.2	2.2
M20	150	250	12.5	18.3	12.5	13.5	7.7	7.7	4.9	4.9	8.9	13	8.9	9.6	5.5	5.5	3.5	3.5
M24	170	300	16.2	26.3	16.2	19.5	12.6	12.6	9.2	9.2	11.6	18.7	11.6	13.9	9	9	6.5	6.5

Fire Resistance Data (C20/25 to C50/60 cracked or non-cracked concrete) Deep Embedment*																		
Size Of Thread	Embedment Depth h_{nom}	Minimum Concrete Thickness (h_{min})	Design Resistance								Recommended Resistance							
			30min (R30)		60min (R60)		90min (R90)		120min (R120)		30min (R30)		60min (R60)		90min (R90)		120min (R120)	
			Tensile ($N_{Rd,fi}$)	Shear ($V_{Rd,fi}$)	Tensile ($N_{Rd,fi}$)	Shear ($V_{Rd,fi}$)	Tensile ($N_{Rd,fi}$)	Shear ($V_{Rd,fi}$)	Tensile ($N_{Rd,fi}$)	Shear ($V_{Rd,fi}$)	Tensile ($N_{Rrec,fi}$)	Shear ($V_{Rrec,fi}$)	Tensile ($N_{Rrec,fi}$)	Shear ($V_{Rrec,fi}$)	Tensile ($N_{Rrec,fi}$)	Shear ($V_{Rrec,fi}$)	Tensile ($N_{Rrec,fi}$)	Shear ($V_{Rrec,fi}$)
	mm	mm	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)
M6	85	125	1	1	0.8	0.8	0.6	0.6	0.4	0.4	0.7	0.7	0.5	0.5	0.4	0.4	0.2	0.2
M8	110	160	1.9	1.9	1.5	1.5	1	1	0.8	0.8	1.3	1.3	1	1	0.7	0.7	0.5	0.5
M10	120	175	4	4.3	3.2	3.2	2.1	2.1	1.5	1.5	2.8	3	2.2	2.2	1.5	1.5	1	1
M12	120	185	6.2	6.3	4.6	4.6	3	3	2	2	4.4	4.5	3.2	3.2	2.1	2.1	1.4	1.4
M16	130	210	9	11.6	8.6	8.6	5	5	3.1	3.1	6.4	8.2	6.1	6.1	3.5	3.5	2.2	2.2
M20	190	290	12.5	18.3	12.5	13.5	7.7	7.7	4.9	4.9	8.9	13	8.9	9.6	5.5	5.5	3.5	3.5
M24	210	340	16.2	26.3	16.2	19.5	12.6	12.6	9.2	9.2	11.6	18.7	11.6	13.9	9	9	6.5	6.5

* The determination covers anchors with a fire attack from one side only. If the fire attack is from more than one side, the design method may be taken only, if the edge distance of the anchor is $c \geq 300$ mm and $\geq 2\ h_{ef}$.

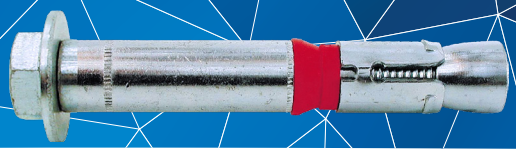
**For combined loads, use Anchor Calculation Program.

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

Heavy Duty Anchor
Hexagon Bolt Bright Zinc Plated



SUPPLEMENTARY DATA

Influence Of Concrete Strength (Cracked/Non-cracked Concrete)					
Concrete strength		C20/25	C30/37	C40/50	C50/60
Cylinder	N/mm^2	20	30	40	50
Cube	N/mm^2	25	37	50	60
Factor	-	1.0	1.22	1.41	1.55

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

Steel Failure						
Size Of Thread	Tensile Resistance			Shear Resistance		
	Characteristic Resistance ($N_{Rk,s}$)	Design Resistance ($N_{Rd,s}$)	Recommended Resistance ($N_{Rrec,s}$)	Characteristic Resistance ($V_{Rk,s}$)	Design Resistance ($V_{Rd,s}$)	Recommended Resistance ($V_{Rrec,s}$)
-	kN	kN	kN	kN	kN	kN
M6	16	10.6	7.5	18	14.4	10.2
M8	29	19.3	13.8	30	24	17.1
M10	46	30.6	21.8	48	38.4	27.4
M12	67	44.6	31.8	73	58.4	41.7
M16	126	84.0	60	126	100.8	72
M20	196	130.6	93.2	150	120	85.7
M24	282.0	188.0	134.2	200.0	160.0	114.2

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