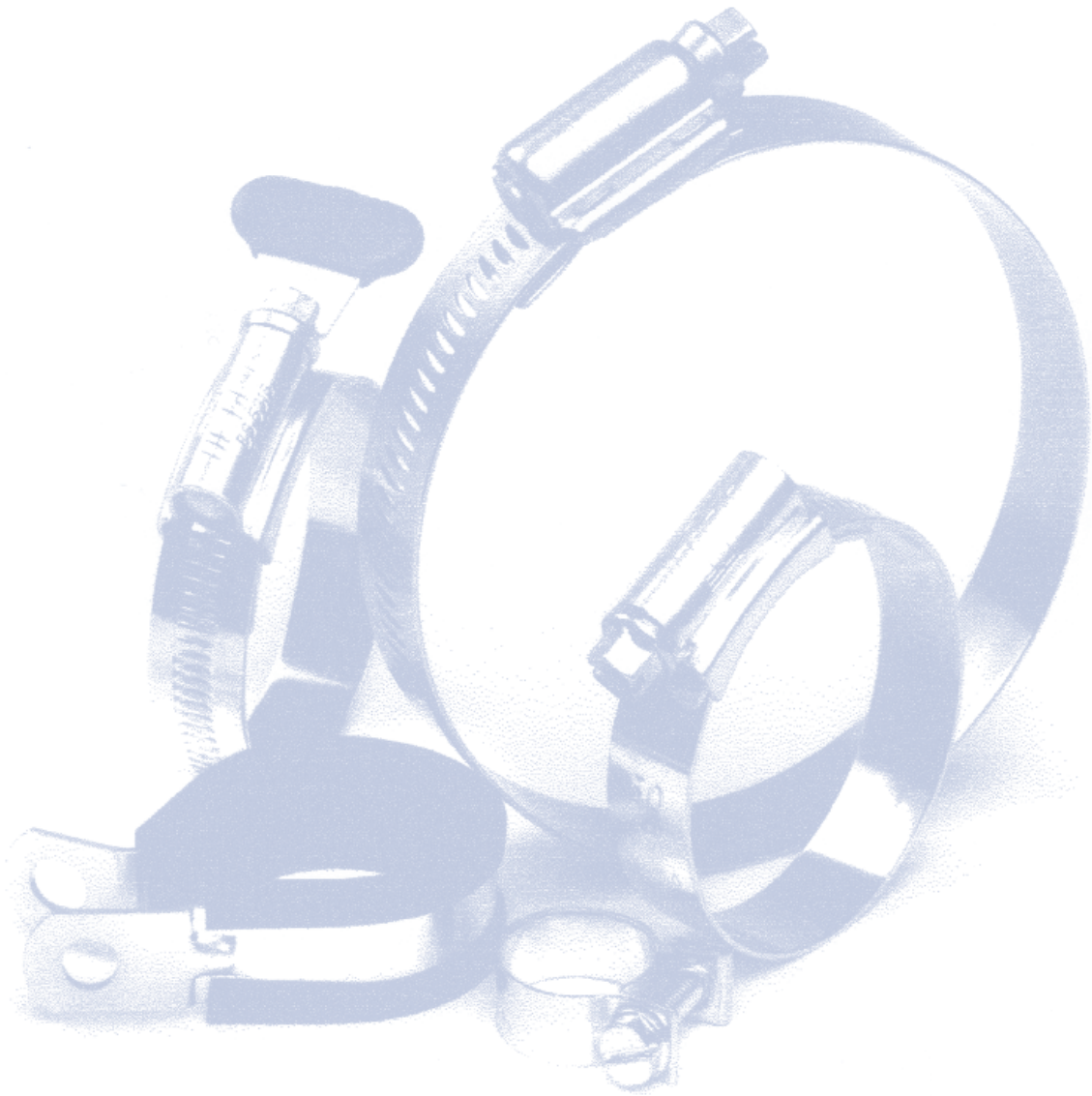


JCS HI-TORQUE LTD

Catalogue





HI-GRIP®

GENERAL PURPOSE HOSE CLIPS TO BS5315

HI-GRIP

HI-GRIP general purpose worm drive hose clips are regarded universally as being the highest quality clip available in the market today. Their tough construction will stand a great deal of abuse. They are manufactured to BS5315 and have BSI Kitemark and N.A.T.O. approvals. The standard version of HI-GRIP is made from heavily zinc plated mild steel and is used for a wide variety of domestic, automotive and industrial applications.

HI-GRIP STAINLESS

HI-GRIP STAINLESS hose clips are made entirely from 18/8 marine quality stainless steel and therefore are ideal for salt water and many other highly corrosive environments. They have Lloyd's Register Type Approval for marine, offshore and industrial use. HI-GRIP STAINLESS hose clips have become the industry standard for marine applications throughout the world due to their high quality and performance.

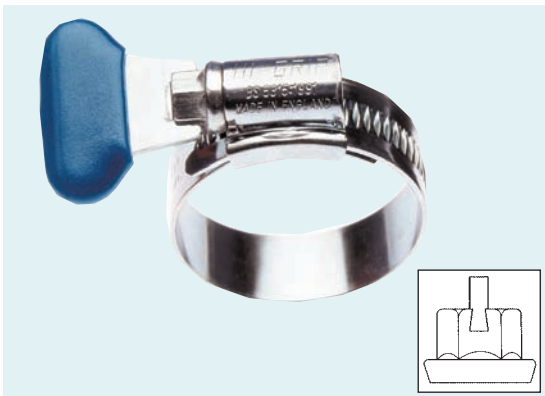
HI-GRIP WING SCREW

ZINC PLATED AND STAINLESS STEEL RANGES

The HI-GRIP WING SCREW hose clip was specifically designed to answer the problem of frequently removed hoses such as found in the garden, home, laboratory and industry. The unique dovetail locking and side lugs of the wing plate guarantee a firm fixture that outlasts those of other designs. A plastic wing plate cover is supplied as standard which enables a greater tightness to be obtained and is kinder to fingers. The super free-running and high efficiency worm drive gives excellent sealing.

HI-GRIP CARTON & CLIP DISPENSERS

HI-GRIP carton and clip dispensers are available for either van, wall or counter location to promote the sales of HI-GRIP hose clips. The wall and van mounted units hold 680 clips in retail packs. The counter units hold either 100 or 160 clips together with 1 HI-GRIP Flexible Screwdriver.



HI-GRIP FLEXIBLE SCREWDRIVER

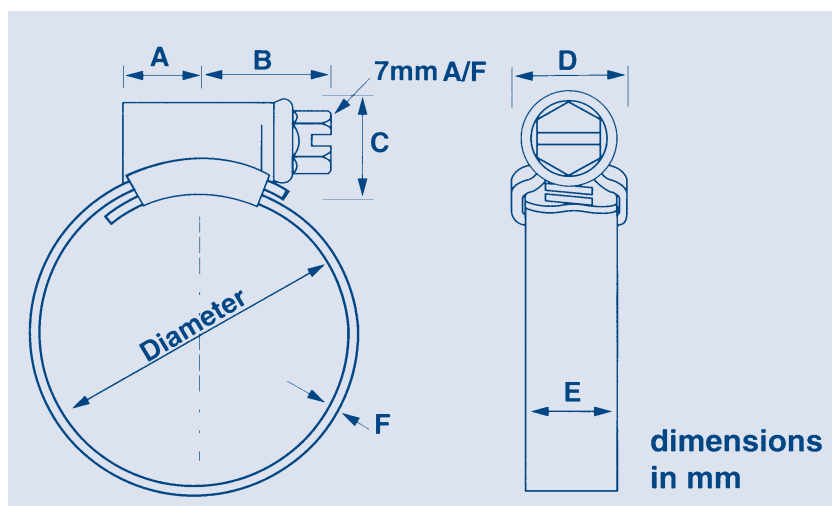
This purpose made screwdriver will not slip off the screwhead whilst turning and together with the flexible shaft, makes fitting easier in awkward places.



HI-GRIP®



TECHNICAL SPECIFICATION

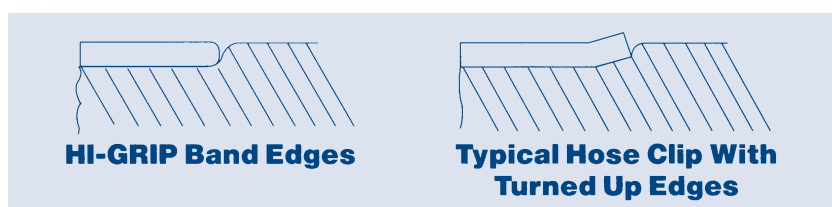


size	A mm	B mm	C mm	D mm	E mm	F mm	Recommended Setting Torque	
							NM	lb-in
12-20	7	14	10	12	9	0.7	3.0	26
22-45	8	15	12	15	13	0.9	5.0	45
50+	13	20	12	16	13	0.9	6.0	54

Material Specification

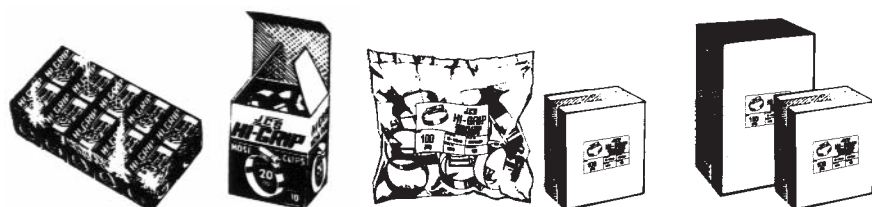
HI-GRIP All parts - Mild Steel, Bright Zinc Plated and Passivated
 HI-GRIP STAINLESS All parts BS304 - ENI.4301

HI-GRIP® BAND EDGES



All HI-GRIP and HI-GRIP STAINLESS hose clips have fully rounded edges to give the best possible protection to the hose.

HI-GRIP® PACKAGING



RETAIL PACKS

- 10 clips per carton
- 10 cartons per shrink wrapped pack
- Available for HI-GRIP and HI-GRIP STAINLESS sizes 12 to 70

BAG PACKS

- Available for all HI-GRIP types sizes 12 to 160

BULK PACKS

- Available for all HI-GRIP types and sizes

STANDARD RANGE

size	old size no.	diameter mm	diameter ins
12	000	9.5 - 12	3/8 - 1/2
16	MOO	11 - 16	1/2 - 5/8
20	OO	13 - 20	1/2 - 3/4
22	O	14 - 22	5/8 - 7/8
25	OX	17 - 25	3/4 - 1
30	1A	22 - 30	7/8 - 1 1/8
35	1	25 - 35	1 - 1 3/8
40	1X	30 - 40	1 1/8 - 1 5/8
45	-	35 - 45	1 3/8 - 1 3/4
50	2A	35 - 50	1 3/8 - 2
55	2	40 - 55	1 5/8 - 2 1/8
60	2X	45 - 60	1 3/4 - 2 3/8
70	3	50 - 70	2 - 2 3/4
80	3X	60 - 80	2 3/8 - 3 1/8
90	4	70 - 90	2 3/4 - 3 1/2
100	4X	80 - 100	3 1/8 - 4
120	5	90 - 120	3 1/2 - 4 3/4
140	6 & 6X	110 - 140	4 3/8 - 5 1/2
160	7	130 - 160	5 1/8 - 6 1/4
180	-	150 - 180	5 7/8 - 7 1/8
200	-	170 - 200	6 5/8 - 7 7/8
220	-	190 - 220	7 1/2 - 8 5/8
240	-	210 - 240	8 1/4 - 9 1/2
260	-	230 - 260	9 - 10 1/4
280	-	250 - 280	9 7/8 - 11
300	-	270 - 300	10 5/8 - 11 3/4
320	-	290 - 320	11 3/8 - 12 1/2
340	-	310 - 340	12 1/4 - 13 3/8
360	-	330 - 360	13 - 14 1/8
380	-	350 - 380	13 3/4 - 15
400*	-	370 - 400	14 1/2 - 15 3/4
420*	-	390 - 420	15 3/8 - 16 1/2
440*	-	410 - 440	16 1/8 - 17 3/8
460*	-	430 - 460	16 7/8 - 18 1/8
480*	-	450 - 480	17 3/4 - 18 7/8
500*	-	470 - 500	18 1/2 - 19 5/8

* The **HI-GRIP Stainless Range** ends at 380mm diameter. We recommend the use of **HI-TORQUE Clamps** for sizes of 400mm and above in Stainless Steel.

HI-GRIP WING SCREW RANGE

size	old size no.	diameter mm	diameter ins
12	000	9.5 - 12	3/8 - 1/2
16	MOO	11 - 16	1/2 - 5/8
20	OO	13 - 20	1/2 - 3/4
22	O	14 - 22	5/8 - 7/8
25	OX	17 - 25	3/4 - 1
30	1A	22 - 30	7/8 - 1 1/8
35	1	25 - 35	1 - 1 3/8
40	1X	30 - 40	1 1/8 - 1 5/8
45	-	35 - 45	1 3/8 - 1 3/4
50	2A	35 - 50	1 3/8 - 2
55	2	40 - 55	1 5/8 - 2 1/8
60	2X	45 - 60	1 3/4 - 2 3/8
70	3	50 - 70	2 - 2 3/4
80	3X	60 - 80	2 3/8 - 3 1/8
90	4	70 - 90	2 3/4 - 3 1/2

HI-TORQUE

HEAVY DUTY STAINLESS STEEL HOSE CLAMPS



HI-TORQUE STAINLESS

HI-TORQUE Heavy Duty Stainless Steel Hose Clamps have been specifically designed for tough and wire reinforced hoses and for when an extra margin of safety and reliability is required. HI-TORQUE clamps out perform nut and bolt type clamps due to their more uniform tightening which gives higher sealing pressure. They are quicker to fit, have no loose parts to lose in awkward places and require less space than any other heavy duty hose clamp. HI-TORQUE clamps also offer a larger adjustment for each size than nut and bolt clamps thus reducing inventory requirements.

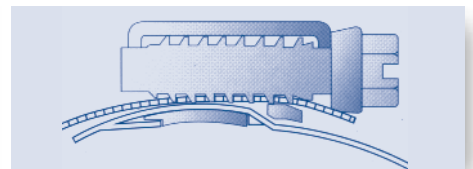
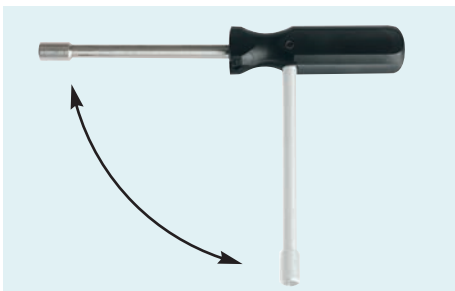
LLOYD'S REGISTER APPROVAL

JCS HI-TORQUE heavy duty hose clamps hold Lloyd's Register Type Approval for applications in the marine, offshore and industrial markets. They are specifically approved by Lloyd's Register for the critical application of sealing wet diesel exhaust hoses. Further details can be supplied on request.



MULTI-TORQUE

We have coupled the strength of HI-TORQUE hose clamps with the convenience of being able to produce instant hose clamps to any desired diameter from a kit. MULTI-TORQUE is significantly stronger than other adjustable banding products. By simply cutting off the required length from a continuous banding roll and engaging one end of the band into each housing of the MULTI-TORQUE connector a hose clamp is made. MULTI-TORQUE banding is supplied in 10m and 30m coils. A maintenance kit is available which contains one connector and 1m coil.



TOOLS

For HI-TORQUE and MULTI-TORQUE a special combined screwdriver and T-bar tool is available.

HI-TORQUE STRAPS

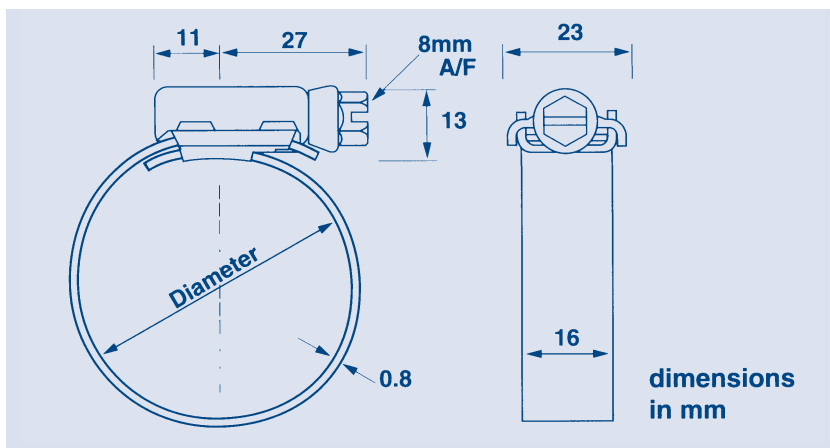
The strength of HI-TORQUE clamps is utilised in our straps which are used for scores of applications.

STRAIGHT LINE HOUSING

The HI-TORQUE design has a unique 'Straight Line' housing, which ensures that every thread of the screw is fully engaged with the band. This special feature together with a high tensile band and hardened rolled thread screw means that HI-TORQUE clamps have more than twice the strength of ordinary worm drive hose clips.

HI-TORQUE

TECHNICAL SPECIFICATION



Material Specification

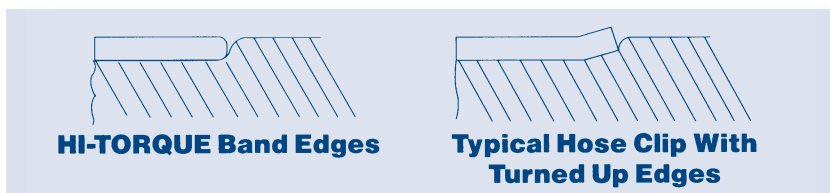
Type HTM All parts BS304 - EN1.4301

Type HTJ All parts BS316 - EN1.4401

Band Tensile strength = 1150 N/mm² approx (75 tons/in²)

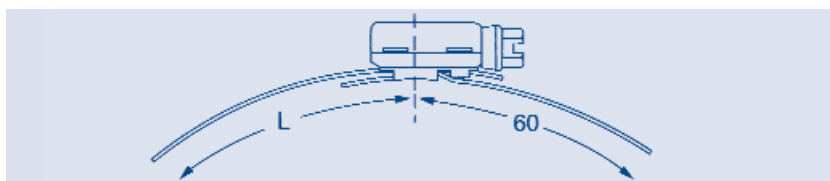
Recommended Setting Torque = 15 Nm (130 lb.in)

HI-TORQUE BAND EDGES



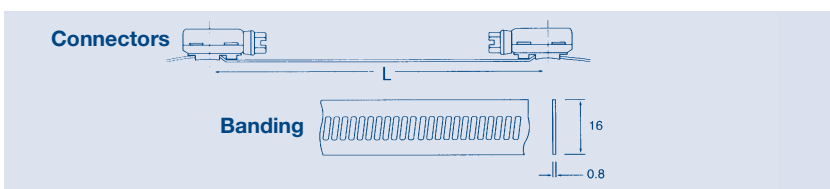
All HI-TORQUE Stainless hose clips have fully rounded edges to give the best possible protection to the hose.

HI-TORQUE STRAPS



Strap Size	Linear Adjustment	Dia Adjustment	Length L
0	62	20	100
1	94	30	136
2	125	40	164

MULTI-TORQUE

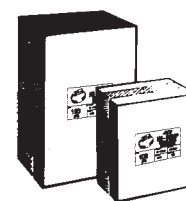


STANDARD RANGE

size	diameter mm	diameter ins	box qty
27	20 - 27	3/4 - 1 1/8	100
30	20 - 30	3/4 - 1 1/4	100
35	20 - 35	3/4 - 1 3/8	100
40	25 - 40	1 - 1 5/8	100
(45)	25 - 45	1 - 1 3/4	100
50	30 - 50	1 1/4 - 2	100
60	40 - 60	1 5/8 - 2 3/8	100
(65)	45 - 65	1 3/4 - 2 1/2	100
70	50 - 70	2 - 2 3/4	100
80	60 - 80	2 3/8 - 3 1/8	100
90	70 - 90	2 3/4 - 3 1/2	100
(95)	75 - 95	3 - 3 3/4	100
100	80 - 100	3 1/8 - 4	100
(115)	85 - 115	3 3/8 - 4 1/2	50
120	90 - 120	3 1/2 - 4 3/4	50
140	110 - 140	4 3/8 - 5 1/2	50
160	130 - 160	5 1/8 - 6 1/4	50
180	150 - 180	5 7/8 - 7	50
200	170 - 200	6 3/4 - 7 7/8	25
220	190 - 220	7 1/2 - 8 5/8	25
240	210 - 240	8 1/4 - 9 1/2	25
260	230 - 260	9 - 10 1/4	25
280	250 - 280	9 7/8 - 11	25
300	270 - 300	10 5/8 - 11 3/4	25
320	290 - 320	11 3/8 - 12 1/2	25
340	310 - 340	12 1/4 - 13 3/8	25
360	330 - 360	13 - 14 1/8	25
380	350 - 380	13 3/4 - 15	25
400	370 - 400	14 1/2 - 15 3/4	25
420	390 - 420	15 3/8 - 16 1/2	25
440	410 - 440	16 1/8 - 17 1/4	25
460	430 - 460	17 - 18 1/8	25
480	450 - 480	17 3/4 - 18 7/8	25
500	470 - 500	18 1/2 - 19 5/8	25

() = Not required for a complete range but useful intermediate sizes for popular hoses. Larger diameter and clamps with greater adjustment to order.

PACKAGING



BULK PACKS

- All sizes of HI-TORQUE are supplied in bulk packs



MULTI-TORQUE Banding is supplied in 1m, 10m and 30m lengths. Other lengths of connectors are available to special order.



Part No	Length 'L'	Box Qty
MTC150	150mm	10
MTC300	300mm	25
MTC350	350mm	25
MTC450	450mm	25

TAMTORQUE®

SIGN FIXING CLAMPS

TAMTORQUE SIGN FIXING CLAMPS have been designed for clamping signs of all types to round, square, hexagon or any unusual shaped post, giving a quick and reliable fix every time. They are available in seven diameters covering post sizes from 55mm to 340mm diameter without the need to cut the band to size. They do not therefore have sharp edges which can snag or cut and, unlike other banding systems, can be easily re-used or readjusted.

TAMTORQUE SIGN FIXING CLAMPS are manufactured from high strength stainless steel and have a hardened tamper resistant screw with a unique recessed seven-sided socket. This means that they can only be tightened or released with a special Tamtorque screw bit.

An auto locking safety buckle ensures the free end of the band is both safe and tidy. The unique safety buckle was developed especially for TAMTORQUE and is covered by patents in many countries including European Patent No 0891508 and US Patent No 6205624.

Typical applications for TAMTORQUE SIGN FIXING CLAMPS include securing waste bins and litter bins, street lamp and signal control box security and clamping road, public, industrial and advertising signs.



Band Width: 16mm (5/8")

Material Specification:

Band, Housing, Buckle: BS304 - EN1.4301
Screw: BS410 - EN1.4006 heat treated to 1220N/mm²

Recommended Tightening Torque:

10 - 15Nm 90 - 130lb.in

STANDARD RANGE

size	JCS Part No	for post diameters* mm	ins	box qty
70	TTK70P	55 - 70	2 1/8 - 2 3/4	50
100	TTK100P	70 - 100	2 3/4 - 4	50
130	TTK130P	100 - 130	4 - 5 1/8	50
(160)	TTK160P	130 - 160	5 1/8 - 6 1/4	50
190	TTK190P	130 - 190	5 1/8 - 7 1/2	25
250	TTK250P	190 - 250	7 1/2 - 9 7/8	25
340	TTK340P	250 - 340	9 7/8 - 13 3/8	25

*For close fitting brackets. It will be necessary to make an allowance for the extra band length that U brackets and similar will require.

() = Not required for a complete range but a useful intermediate size for many applications.

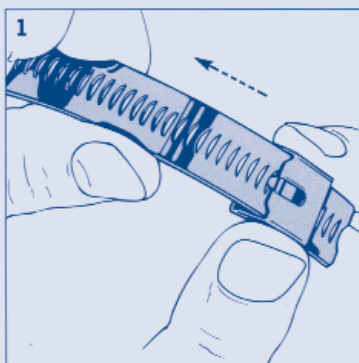
Note: For the quickest fixing time we recommend a cordless drill/driver (with a Tamtorque Power Bit) followed by final tightening with the Tamtorque Ratchet Spanner, or Tamtorque T-bar driver.



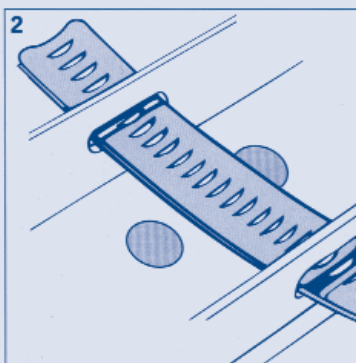
TAMTORQUE®

TAMTORQUE®

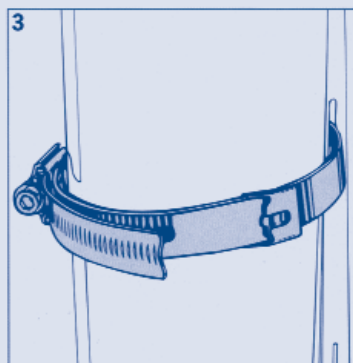
BANDING SYSTEM



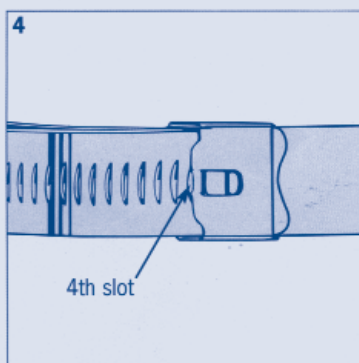
1 Slide the buckle onto the band in the direction of the arrow and push around to the housing.



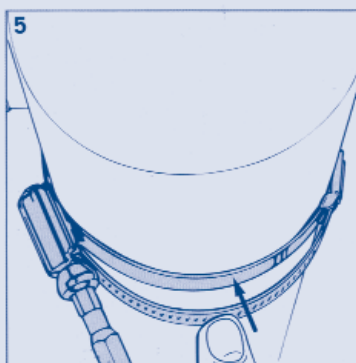
2 Thread the band through the slots in the sign and around post.



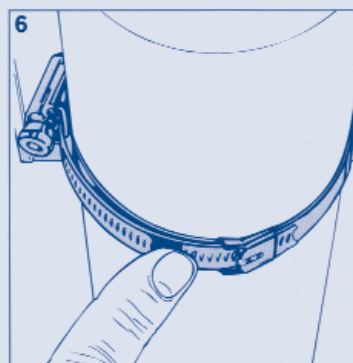
3 Engage the band into the screw housing and screw band through by approximately 50mm.



4 Locate the tongue of the buckle in the 4th slot of the band. Screw the band through using a hand or power tool.



5 Hold down any excess band just before the buckle is clamped. Finally tighten with the ratchet spanner.



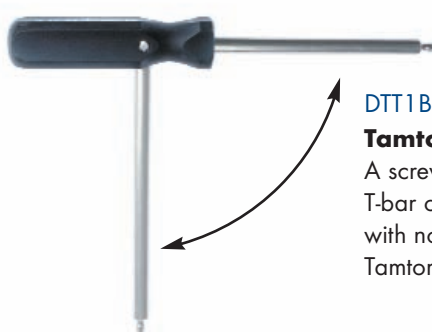
6 Push any remaining excess band through the buckle for a safe, tidy job. Tamtorque can be released and repositioned if required.

TAMTORQUE® TOOLS



DTT2BG

Tamtorque Ratchet Spanner
1/4" square ratchet driver complete with a Tamtorque socket bit.



DTT1BG

Tamtorque Driver
A screwdriver and T-bar combination tool with non-removable Tamtorque bit.



DTTBP50BG

Tamtorque Power Tool Bit
1/4" hex x 50mm long bit for direct insertion into cordless drill/drivers. Two bits per bag.



DTTB2BG

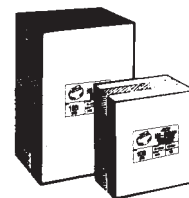
Tamtorque 1/4" Square Socket Bit
For use with the Tamtorque or other ratchet spanners.



DTTBP170BG

Tamtorque Long Reach Power Tool Bit
1/4" hex x 170mm long bit for direct insertion into cordless drill/drivers.

PACKAGING



BULK PACKS

- All sizes of TAMTORQUE sign fixing clamps are supplied in bulk packs

M6 & M10 P-CLIPS

FOR PIPES, CABLES AND HOSES



JCS P-CLIPS are available in two ranges for 6mm and 10mm bolts in both zinc-plated finish and 18/8 stainless steel. Two types of TPE liner with different service temperatures can be supplied.

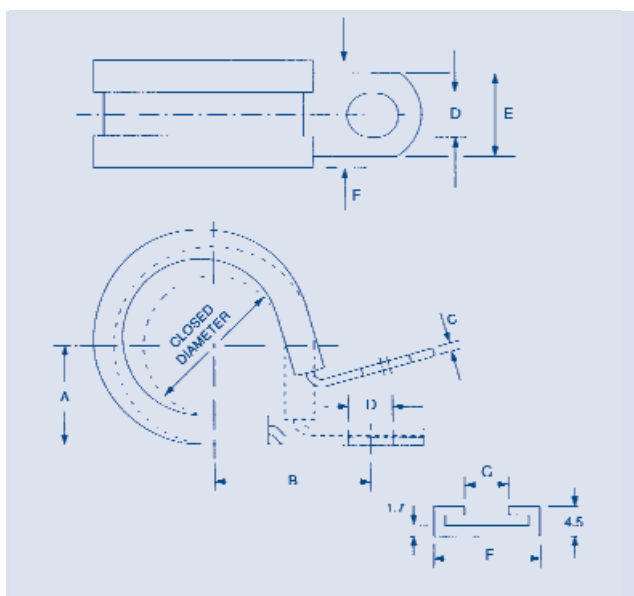
JCS DESIGN FEATURES

- Snug fitting TPE rubber liner absorbs vibration and prevents chafing of pipe or cable, and water penetration into the clamping area.
- The P-CLIP band has a special strengthening rib which keeps the clips flush with the surface to which it is bolted.
- The Zinc Plated version is heavily electro zinc plated on all surfaces including the edges for the very best corrosion resistance.
- The Stainless version is made from marine quality 18/8 Stainless Steel.
- The upper hole is elongated to help line up the fixing bolt when fitting.
- The TPE liners are UV and ozone resistant.
- Fixing nuts and bolts are not supplied.

OPTIONS

- Non standard sizes. Non standard liners. Quotations available upon request.

TECHNICAL SPECIFICATION M6 & M10



P-CLIP Type	D	E	F	G
M6	6.6	12.6	16.0	7.0
M10	10.8	20.0	23.0	12.0

All dimensions in mm.

M6 & M10 P-CLIPS

M6 RANGE

size	closed dia	A	B	Zinc Plated		Stainless	
				C	bag qty	C	bag qty
5	5	6	15	0.9	50	0.7	25
6	6	7	16	0.9	50	0.7	25
8	8	8	17	0.9	50	0.7	25
9	9	8	17	0.9	50	0.7	25
10	10	9	18	0.9	50	0.7	25
12	12	10	20	0.9	50	0.7	25
13	13	10	20	0.9	50	0.9	25
16	16	12	21	0.9	50	0.9	25
19	19	13	23	0.9	50	0.9	25
21	21	15	24	1.2	50	0.9	25
22	22	15	25	1.2	50	0.9	25
25	25	17	26	1.2	50	0.9	25
28	28	18	28	1.2	50	0.9	25
29	29	19	28	1.2	50	0.9	25
32	32	20	30	1.2	50	0.9	25
35	35	22	31	1.2	50	0.9	25
40	40	24	34	1.2	50	0.9	25
44	44	26	36	1.2	25	0.9	25
48	48	28	38	1.2	25	0.9	25
52	52	30	40	1.2	25	0.9	25
56	56	32	42	1.2	25	0.9	25
60	60	34	44	1.2	25	0.9	25

M6 P-CLIPS



Bolt Size = 6mm

Band Width = 12mm

Available with Standard & High Temperature Liners

M10 RANGE

size	closed dia	A	B	Zinc Plated		Stainless	
				C	bag qty	C	bag qty
6	6	7	21	0.9	25	0.7	25
8	8	8	22	0.9	25	0.7	25
10	10	9	23	0.9	25	0.7	25
13	13	10	24	0.9	25	0.9	25
16	16	12	26	0.9	25	0.9	25
19	19	13	28	0.9	25	0.9	25
22	22	15	29	1.2	25	0.9	25
25	25	17	31	1.2	25	0.9	25
28	28	18	32	1.2	25	0.9	25
32	32	20	34	1.2	25	0.9	25
36	36	22	36	1.2	25	0.9	25
40	40	24	38	1.2	25	0.9	25
44	44	26	40	1.2	25	0.9	25
48	48	28	42	1.2	25	0.9	25
52	52	30	44	1.2	25	0.9	25

All dimensions in mm.

Material Specification

Zinc Plated P-Clip:

Mild Steel - bright zinc plated and passivated

Stainless P-Clip:

BS304 - EN1.4301-18/8 stainless steel

Liners:

Standard Liner: TPE rubber (black) - 65 IRHD hardness. Service temperature -30°C to +60°C

High Temperature Liner: TPE 160 (grey) - 60 IRHD hardness. Service temperature -50°C to +160°C

M10 P-CLIPS



Bolt Size = 10mm

Band Width = 20mm

Available with High Temperature Liners only

PACKAGING

All P-Clips are packed in bags



MINI-CLIPS

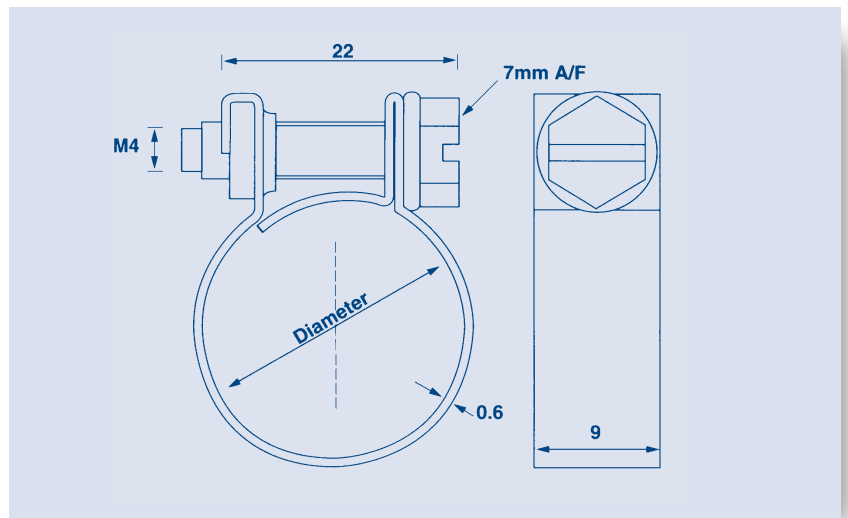
FOR FUEL PIPES AND SMALL HOSES

JCS MINI-CLIPS are formed from a one piece band and therefore have no welded parts which can damage the hose. The band is folded over the nut which ensures it remains firmly in place when the screw is removed. The screw head is formed to a 7mm Hexagon head so that the JCS flexible shaft screwdriver can be used making fitting quicker and easier especially in awkward places. The screw head is also slotted for ordinary screwdriver use.

JCS MINI-CLIPS are an economical solution for many low pressure applications where a larger adjustment range is not required. They are especially suitable for petrol and LPG gas hoses and are available in 10 sizes ranging from 9mm O/D to 18mm O/D.



TECHNICAL SPECIFICATION



STANDARD RANGE	
size	dia mm
9	7 - 9
10	8 - 10
11	9 - 11
12	10 - 12
13	11 - 13
14	12 - 14
15	13 - 15
16	14 - 16
17	15 - 17
18	16 - 18

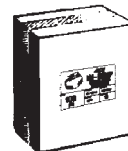
Material Specification:

Band - Mild Steel, Aluzinc Coated
Screw and Nut - Mild Steel, Zinc Plated and Passivated

PACKAGING

Bag Packs - all sizes 50 clips per pack

Bulk Pack - all sizes 1000 clips per box



MINI-CLIPS

ASSORTED CLIP BOX

FOR THE PROFESSIONALS



PART NO	DESCRIPTION	QTY
HGZAB1	HI-GRIP MILD STEEL HOSE CLIPS <ul style="list-style-type: none"> Mild Steel Zinc Plated Size Range 12mm-50mm 	135 clips
HGSAB2	HI-GRIP STAINLESS HOSE CLIPS <ul style="list-style-type: none"> 18/8 Marine Quality BS304 Stainless Steel Size Range 12mm - 50mm 	76 clips
PCZRAB1	JCS M6 P-CLIPS, ZINC PLATED <ul style="list-style-type: none"> Diameters sizes 5mm, 6mm, 8mm, 10mm, 13mm, 16mm, 19mm, 21mm, 25mm, 29mm and 35mm. Ideal for clamping pipes, cables and groups of cables 	104 clips
PCSRAB1	JCS M6 P-CLIPS STAINLESS STEEL <ul style="list-style-type: none"> 18/8 Marine Quality BS304 Stainless Steel Diameter sizes 5mm, 6mm, 8mm, 10mm, 13mm, 16mm, 19mm, 21mm, 25mm, 29mm and 35mm. Ideal for clamping pipes, cables and groups of cables 	104 clips
MCZAB1	JCS MINI-CLIPS, ZINC PLATED <ul style="list-style-type: none"> Size Range 9mm - 18mm. Ideal for fuel pipes and small hoses 	157 clips

For the professionals and the dedicated enthusiast, JCS Hi-Torque have put together the most popular sizes from their Hi-Grip, P-Clip and Mini-Clip ranges and housed them in tough, robust plastic boxes.

The assorted box range is ideal for field engineers and for the workshop. They eliminate the frustration of searching for the correct size of clip at that crucial moment.

Made from the highest quality materials for the ultimate performance.



CLIP BOXES

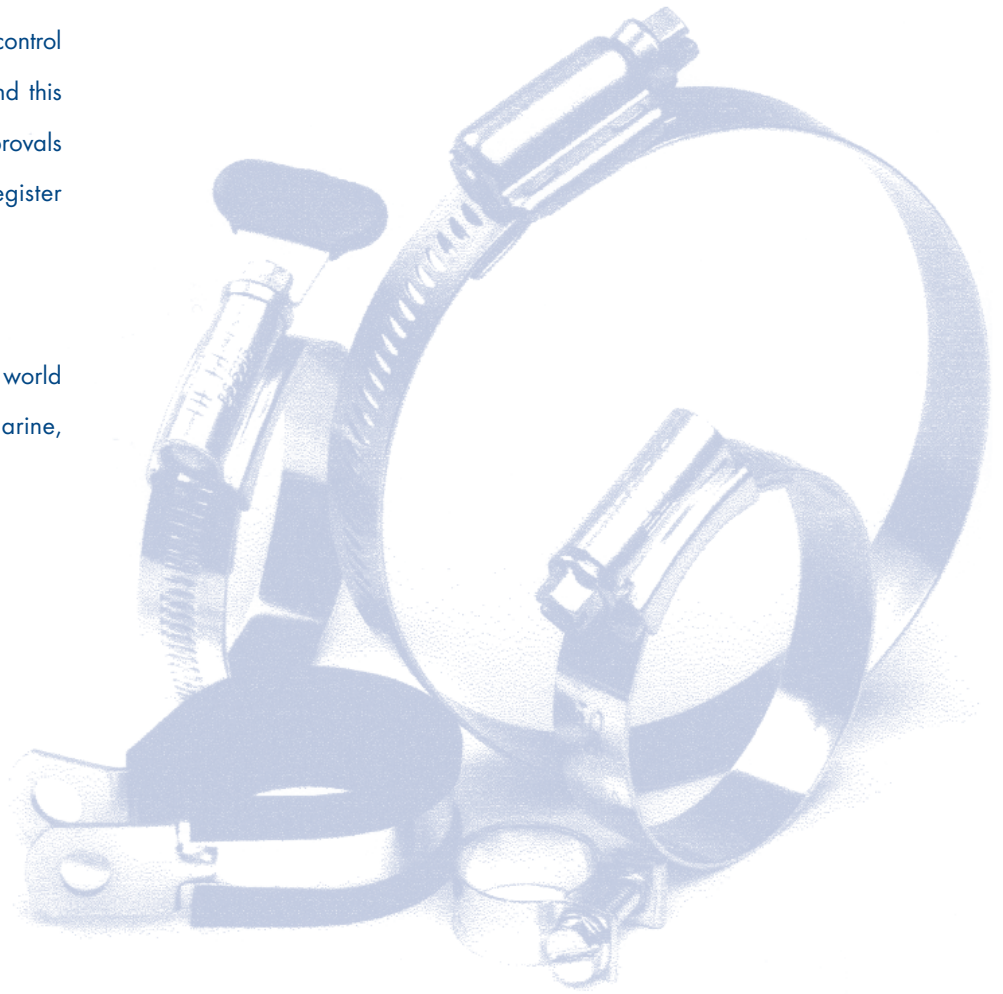
THE COMPANY

The JCS Group of Companies has been developing and manufacturing worm drive hose clips for over sixty years and today offers a wide range in design and material specification to meet the needs of modern industry.



JCS is largely self-sufficient with its own design, toolmaking, testing and metal finishing departments. This means that the company has complete control over quality and continuity of its products and this is reflected in the fact that it holds approvals for ISO 9001, BSI Kitemark, Lloyd's Register Type Approval.

JCS products are exported throughout the world for use in the Industrial, Automotive, Marine, Construction and Petro-Chemical industries.



JCS **HI-TORQUE LTD**

JCS HI-TORQUE LTD
CHILTON INDUSTRIAL ESTATE • SUDBURY
SUFFOLK • CO10 2YH • ENGLAND

TELEPHONE (DIRECT SALES) +44 (0) 1787 888031
TELEPHONE (SWITCHBOARD) +44 (0) 1787 376212
FAX +44 (0) 1787 880633

E-MAIL: sales@jcshi-torque.co.uk
WEBSITE: www.jcshi-torque.co.uk