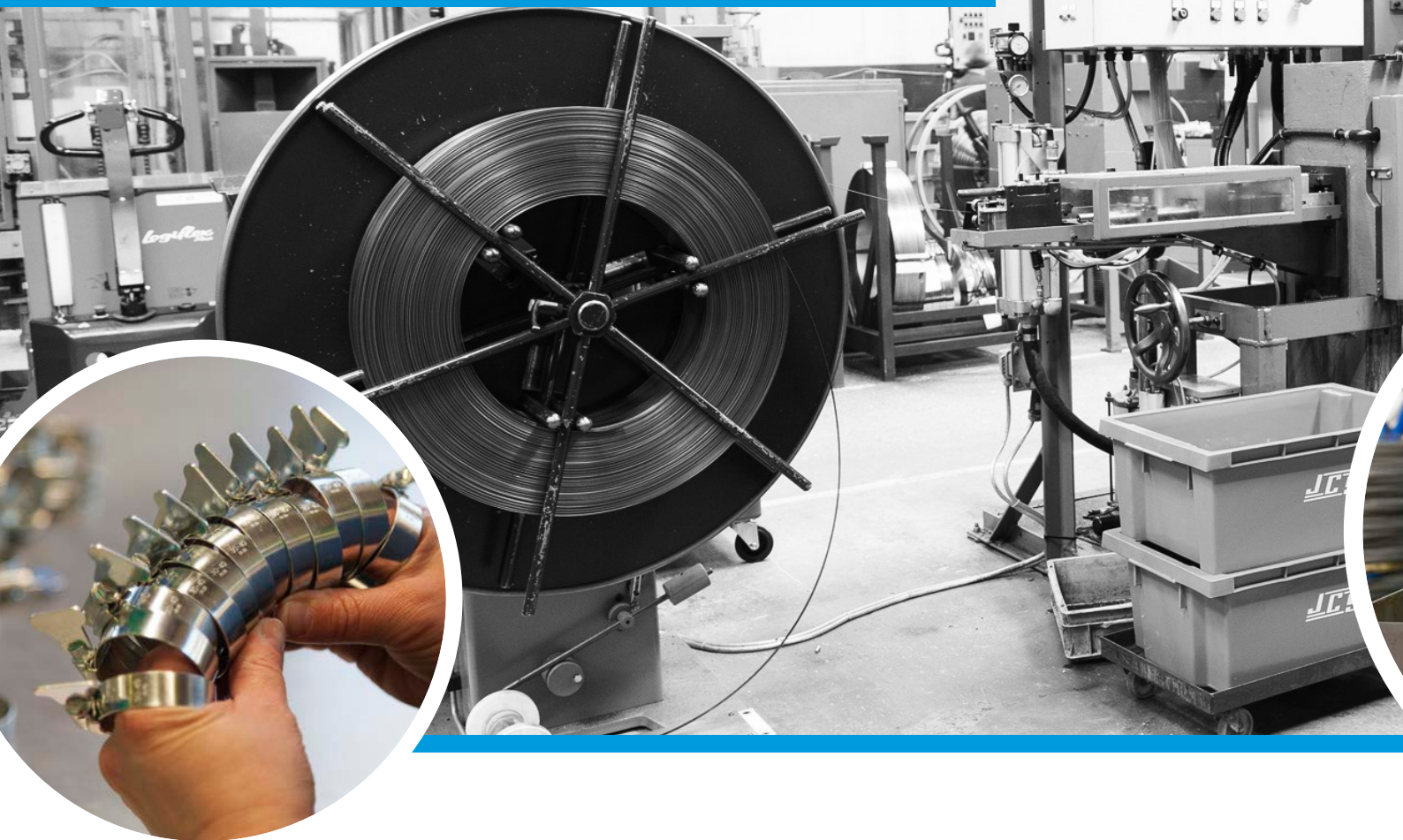




**HIGH PERFORMANCE HOSE CLIPS**



## A WORLD-LEADING HOSE CLAMP MANUFACTURER



### TRUSTED TO PERFORM

JCS is a specialist manufacturer of high performance worm drive hose clips with a proud history that can be traced back to 1768.

The design, material specification and quality of the JCS product range meets and exceeds the needs of the most demanding industries, including pharmaceutical, marine, aviation, petro chemical, food production and more.

All products are designed and manufactured in our self-sufficient factory in Suffolk.

### QUALITY ASSURED

Tested to exceed the most stringent standards and designed to perform in the most hazardous of environments, JCS worm drive hose clips are widely regarded as being the best in the world.

Our rigorous testing and inspection procedures help us to keep costs low and maintain our reputation for supplying the strongest and most reliable products in the world.

This is reflected in our approvals for BS EN ISO 9001, BSI Kitemark and Lloyd's Register Type Approval.

FOR MORE DETAILS CALL US NOW ON **+44 (0) 1787 888031** OR EMAIL **INFO@JCSHI-TORQUE.CO.UK**



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For reinforced hoses and high pressure applications that require an extra margin of safety.

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### **LLOYD'S REGISTER APPROVED**

For applications in the marine, offshore and industrial markets, including specific approval for the sealing of marine wet diesel exhausts.



### **MANUFACTURED IN THE UK**

Our dedicated manufacturing facility based in Suffolk, UK, produces in excess of 25 million hose clips each year, with a consistency and level of quality control that sets the benchmark for the rest of the industry to follow.



### **BSI KITEMARK APPROVAL**

Hi-Grip general purpose hose clips are manufactured to BS5315. British Standards have the highest operating requirements of all international standards.

BS 5315

## GENERAL PURPOSE HOSE CLIPS



Hi-Grip general purpose worm drive hose clips are widely regarded for their quality, durability and ability to withstand a great deal of abuse. They are manufactured to exceed BS5315, which has the highest requirements of any of the international standards and tests sealing ability, clamping force and torque. Also has BSI Kitemark and NATO approval, and exceeds all operational requirements of the relevant DIN and SAE standards.

### ZINC PLATED

Used for a wide variety of domestic, automotive and industrial applications, the standard Hi-Grip hose clip is made from mild steel, electroplated, passivated and tested to EN9227.

### 304 STAINLESS STEEL (A2)

Hi-Grip stainless steel worm drive hose clips have become the industry standard for demanding applications throughout the world due to their exceptional quality and performance.

Made entirely from 18/8 marine quality stainless steel and with Lloyds Register Approval, they are ideal for salt water and other corrosive environments.

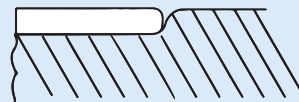
### 316 STAINLESS STEEL (A4)

Principally aimed at the marine, food, petro-chemical and pharmaceutical industries, the Hi-Grip 316 hose clip is made entirely from BS316 EN 1.4401/1.4578 austenitic stainless steel, providing the the same superior performance as the rest of the Hi-Grip range but with maximum corrosion resistance.

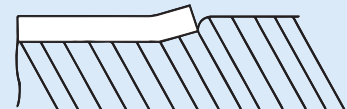
Lloyd's Register Type Approved for marine, offshore and industrial use.

### ULTIMATE PROTECTION

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



JCS band edges



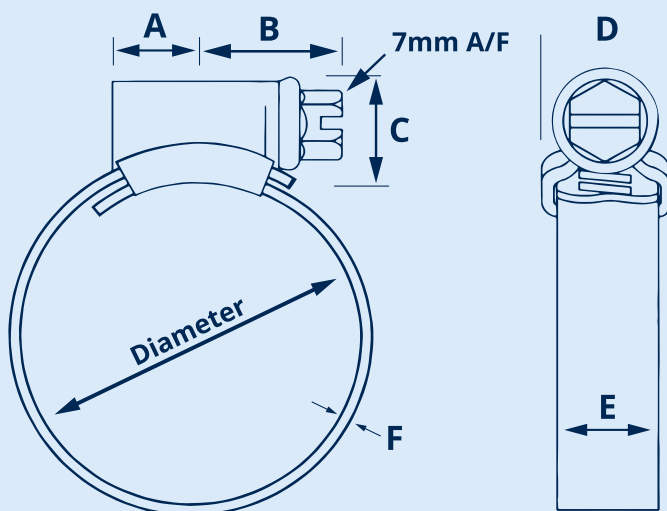
Typical hose clip with turned edges

## THE RANGE

Size	No.	Dia mm	Dia ins	Size	No.	Dia mm	Dia ins
12	000	9.5-12	3/8 - 1/2	160	7	130-160	5 1/8 - 6 1/4
16	M00	11-16	1/2 - 5/8	180	-	150-180	5 7/8 - 7 1/8
20	00	13-20	1/2 - 3/4	200	-	170-200	6 5/8 - 7 7/8
22	0	14-22	5/8 - 7/8	220	-	190-220	7 1/2 - 8 5/8
25	0X	17-25	3/4 - 1	240	-	210-240	8 1/4 - 9 1/2
30	1A	22-30	7/8 - 1 1/8	260	-	230-260	9 - 10 1/4
35	1	25-35	1 - 1 3/8	280	-	250-280	9 7/8 - 11
40	1X	30-40	1 1/8 - 1 5/8	300	-	270-300	10 5/8 - 11 3/4
45	-	35-45	1 3/8 - 1 3/4	320	-	290-320	11 3/8 - 12 1/2
50	2A	35-50	1 3/8 - 2	340	-	310-340	12 1/4 - 13 3/8
55	2	40-55	1 5/8 - 2 1/8	360	-	330-360	13 - 14 1/8
60	2X	45-60	1 3/4 - 2 3/8	380	-	350-380	13 3/4 - 15
70	3	50-70	2 - 2 3/4	400*	-	370-400	14 1/2 - 15 3/4
80	3X	60-80	2 3/8 - 3 1/8	420*	-	390-420	15 3/8 - 16 1/2
90	4	70-90	2 3/4 - 3 1/2	440*	-	410-440	16 1/8 - 17 3/8
100	4X	80-100	3 1/8 - 4	460*	-	430-460	16 7/8 - 18 1/8
120	5	90-120	3 1/2 - 4 3/4	480*	-	450-480	17 3/4 - 18 7/8
140	6 & 6X	110-140	4 3/8 - 5 1/2	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.

## TECHNICAL & MATERIAL SPECIFICATION



Dimensions in mm

### HI-GRIP

All parts - mild steel, bright zinc plated and passivated.

### HI-GRIP STAINLESS 304

All parts BS304 - EN 1.4301/1.4576

### HI-GRIP STAINLESS 316

All parts BS316 - EN 1.4401/1.4578

Size	A	B	C	D	E	F	Recommended Torque Setting	
							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

# HI-GRIP® WING SCREW



## HI-GRIP WING SCREW

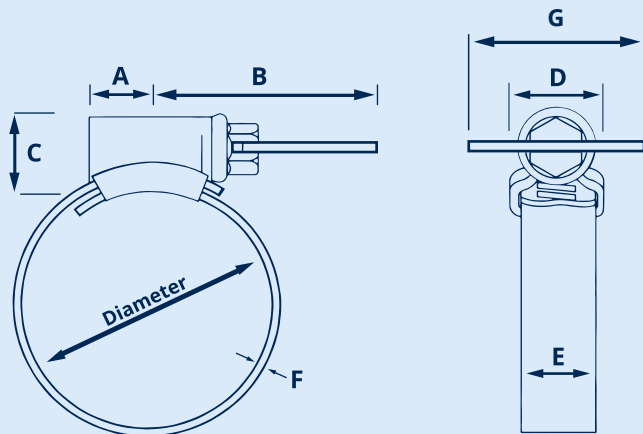
Specifically designed for frequently removed hoses, the unique dovetail locking and side lugs of the wing plate ensure excellent sealing and longevity. The soft plastic wing plate cover is kinder to unprotected fingers.

Available in both zinc plated and 304 stainless steel.

## WING SCREW RANGE

Size	No.	Dia mm	Dia ins
12	000	9.5-12	3/8 - 1/2
16	M00	11-16	1/2 - 5/8
20	00	13-20	1/2 - 3/4
22	0	14-22	5/8 - 7/8
25	0X	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

## TECHNICAL & MATERIAL SPECIFICATION



Dimensions in mm

### HI-GRIP WING SCREW

All parts - mild steel, bright zinc plated and passivated.

### HI-GRIP WING SCREW STAINLESS 304

All parts BS304 - EN 1.4301/1.4576

Size	A	B	C	D	E	F	G	Recommended Torque Setting	
								NM	lb-in
12	7	31	10	12	9	0.7	24	3.0	26
22-45	8	32	12	15	13	0.9	24	5.0	45
50+	13	37	12	16	13	0.9	24	6.0	54

## HI-GRIP PACKAGING

Hi-Grip products are available in the following pack sizes.



### RETAIL PACKS

We supply retail pack cartons of 10 pieces (shrink wrapped into blocks of 10 cartons) for all clips in sizes 12 - 70.



### BAG PACKS

Hi-Grip clips can also be supplied in strong polythene bags packed in quantities of 50, 25 or 10 pcs depending upon diameter sizes.



### BULK PACKS

For high volume users we provide a bulk pack option where Hi-Grip hose clips are packed in strong corrugated cardboard boxes.



## DISPENSERS

Available for 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, whilst there are versions of the counter units for both the zinc plated and stainless ranges.



## FLEXIBLE SCREWDRIVER

This purpose made screwdriver with flexible shaft to makes fitting easier even in awkward areas.

## HEAVY DUTY STAINLESS STEEL HOSE CLAMPS



### HI-TORQUE

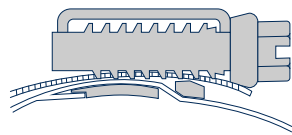
Available in both 304 and 316 stainless steel, Hi-Torque hose clamps are specifically designed for use with tough, wire reinforced hoses that require higher sealing pressures, and for when an extra margin of safety and reliability is required.

#### PERFORMS UNDER PRESSURE

Do not be fooled by their “straightforward” appearance, Hi-Torque heavy duty stainless steel worm drive hose clamps provide unrivalled hose sealing ability, quality and strength and regularly outperform their more “elaborately” designed rivals. Meaning Hi-Torque can be used in every application where an adjustable hose clamp is required.

Hi-Torque hose clamps are quicker to fit, have no loose parts to lose in awkward places and take up less space and have a larger adjustment range than any other heavy duty clamp.

#### UNIQUE 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.

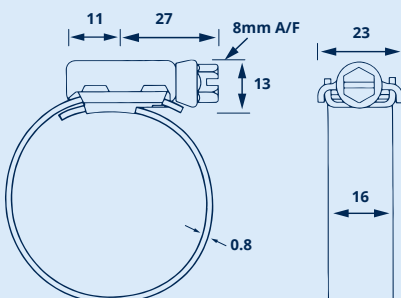
### THE RANGE

Size	Dia mm	Dia ins
27	20-27	3/4 - 1 1/8
30	20-30	3/4 - 1 1/4
35	20-35	3/4 - 1 3/8
40	25-40	1 - 1 5/8
45	25-45	1 - 1 3/4
50	30-50	1 1/4 - 2
60	40-60	1 5/8 - 2 3/8
65	45-65	1 3/4 - 2 1/2
70	50-70	2 - 2 3/4
80	60-80	2 3/8 - 3 1/8
90	70-90	2 3/4 - 3 1/2
95	75-95	3 - 3 3/4
100	80-100	3 1/8 - 4
115	85-115	3 3/8 - 4 1/2
120	90-120	3 1/2 - 4 3/4
140	110-140	4 3/8 - 5 1/2
160	130-160	5 1/8 - 6 1/4
180	150-180	5 7/8 - 7
200	170-200	6 3/4 - 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 1/4
460	430-460	17 - 18 1/8
480	450-480	17 3/4 - 18 7/8
500	470-500	18 1/2 - 19 5/8



Hi-Torque clamps hold Lloyd's Register Type approval for applications in the marine, offshore and industrial markets and are specifically approved by Lloyd's Register for the critical application of sealing wet diesel exhaust hoses.

## HI-TORQUE TECHNICAL & MATERIAL SPECIFICATION



**RECOMMENDED SETTING TORQUE**  
15Nm (130 lb.tn)

**BAND TENSILE STRENGTH**  
1150 N/mm<sup>2</sup> approx. (75 tons/in<sup>2</sup>)

#### MATERIAL SPECIFICATIONS

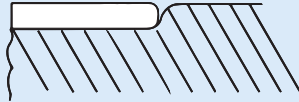
**TYPE HTM - STAINLESS STEEL 304**  
All parts BS304 - EN 1.4301/1.4576

**TYPE HTJ - STAINLESS STEEL 316**  
All parts BS316 - EN 1.4401/1.4578

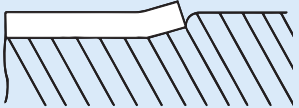


## ULTIMATE PROTECTION

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



JCS band edges



Typical hose clip with turned edges



## MULTI-TORQUE

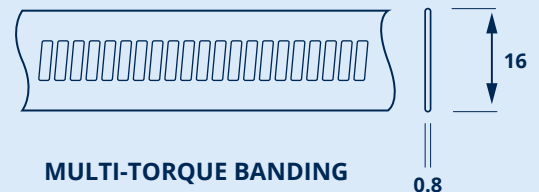
Ideal for large diameter applications, our Multi-Torque adjustable banding hose clamps combine the strength and performance of the Hi-Torque hose clamp with the versatility and convenience of producing instant hose clamps to any design and diameter from a kit. Available in both 304 and 316 stainless steel.

Multi-Torque is significantly stronger than any other adjustable banding products and straightforward to use - simply cut off the required banding length from a continuous roll and engage one end into each housing of the worm drive Multi-Torque connectors provided. The band can then be applied to pipes or ducts of virtually any diameter.

Multi-Torque banding is supplied in 10m and 30m coils. Other lengths are available to special order. A maintenance kit is also available that contains one connector and 1m coil, a necessary addition to any field service engineer's toolkit.

FOR MORE DETAILS CALL US NOW ON **+44 (0) 1787 888031** OR EMAIL **INFO@JCSHI-TORQUE.CO.UK**

## MULTI-TORQUE TECHNICAL & MATERIAL SPECIFICATION



**RECOMMENDED SETTING TORQUE**  
15Nm (130 lb.tn)

**BAND TENSILE STRENGTH**  
1150 N/mm<sup>2</sup> approx. (75 tons/in<sup>2</sup>)

### MATERIAL SPECIFICATIONS

#### STAINLESS STEEL 304

All parts BS304 - EN 1.4301/1.4576

#### STAINLESS STEEL 316

All parts BS316 - EN 1.4401/1.4578

### MULTI-TORQUE CONNECTORS

Length	Box Qty
150mm	10
300mm	25
350mm	25
450mm	25

### MULTI-TORQUE BANDING

Length
10m
30m

## TAMPER-PROOF INSTALLATION CLAMPS

For the secure and reliable fastening of all types of signage, street furniture and other mountable equipment to posts ranging from 55mm to 340mm in diameter. Manufactured from high strength stainless steel and with a hardened tamper-resistant screw featuring a unique recessed seven-sided socket.

Typical applications include the securing of road signs, advertising displays, street furniture and electronic systems such as PA systems and CCTV cameras.

### VANDAL RESISTANT

Tamtorque tamper-proof clamps can only be tightened or released with a special Tamtorque screw bit, and are tough enough to withstand even the most persistent attack.

### USER-FRIENDLY

Tamtorque clamps are safe, quick and easy to use and feature a patented auto locking safety buckle that ensures the free end of the band is both safe and tidy.

### RE-USABLE

Tamtorque tamper resistant clamps can be used over and over again. They are easily loosened, repositioned or removed completely using the special Tamtorque tool.

### STRENGTH

Using our Hi-Torque in-line housing design, Tamtorque offers unrivalled levels of strength allowing it to be used on large signage and in windy conditions. Real world tests have shown Tamtorque clamps will take in excess 1.5 ton of weight trying to pull them apart.



## THE RANGE

Size	For post diameters *	
	mm	ins
70	55-70	2 1/8 - 2 3/4
100	70-100	2 3/4 - 4
130	100-130	4 - 5 1/8
(160)	130-160	5 1/8 - 6 1/4
190	130-190	5 1/8 - 7 1/2
250	190-250	7 1/2 - 9 7/8
340	250-340	9 7/8 - 13 3/8

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

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

## TECHNICAL & MATERIAL SPECIFICATION

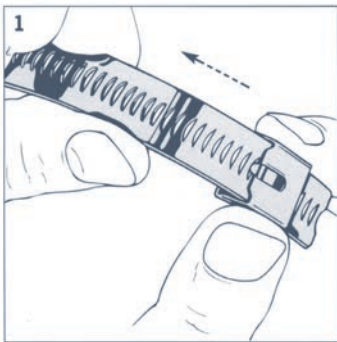
**BAND WIDTH**  
16mm (5/8")

**MATERIAL SPECIFICATIONS**  
Band, Housing, Buckle:  
BS304 – EN 1.4301

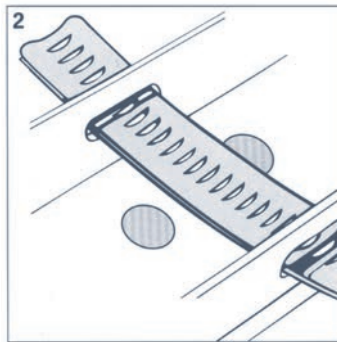
Screw: BS410 – EN 1.4006  
heat treated to 1220N/mm<sup>2</sup>

**MAXIMUM SETTING TORQUE**  
15 Nm (130 lb.in)

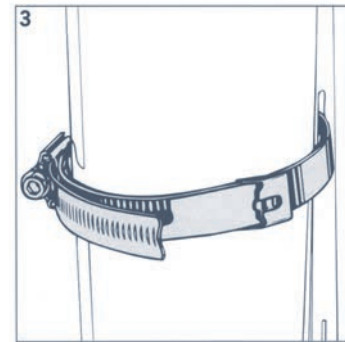
## EASY TO USE



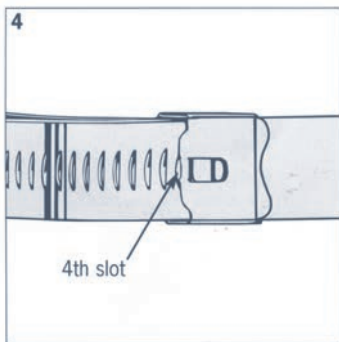
Slide the buckle onto the band in the direction of the arrow and push around to the housing.



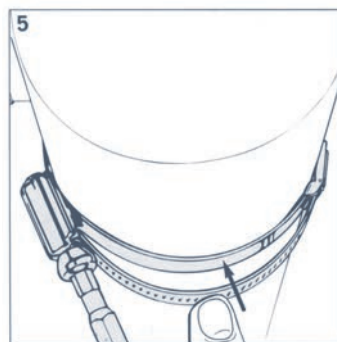
Thread the band through the slots in the sign and around post.



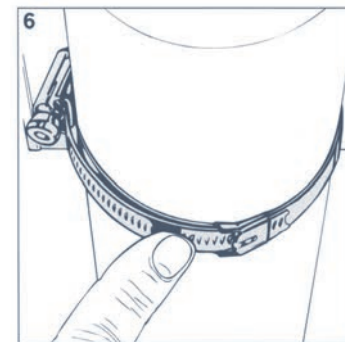
Engage the band into the screw housing and screw band through by approximately 50mm.



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



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



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

## TAMTORQUE® TOOLS



### RATCHET SPANNER

1/4" square ratchet driver complete with a tamtorque socket bit.



### COMBI DRIVER

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



### LONG REACH BIT

1/4" hex x 170mm long bit for direct insertion into cordless drill/drivers.



### TOOL BIT

1/4" hex x 50mm long bit for direct insertion into cordless drill/driver. Two bits per bag.



### SOCKET BIT

For use with the Tamtorque or other ratchet spanners.

## P-CLIPS FOR PIPES, CABLES AND HOSES

JCS rubber-lined P-Clips are tough and durable, providing a simple and secure fixing solution for even the most challenging of environments.

Available in two accurately sized ranges for 6mm and 10mm bolts in both Zinc plated Mild Steel and 304 Stainless Steel. TPE liners are available for both standard and High Temperature applications.

The standard P clip is supplied with a TPE rubber liner which prevents chafing or damage to the surface of the item being clamped.

### DESIGN FEATURES

- ✓ UV and ozone resistant TPE rubber liner absorbs vibration and prevents chafing of pipe or cable
- ✓ The P-Clip band features a special strengthening rib that 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

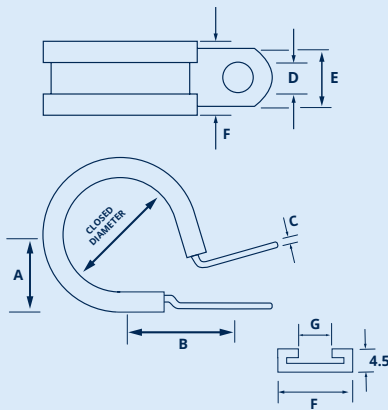
**Note** - fixing nuts and bolts not supplied.

### OPTIONS

Non-standard sizes and liners available upon request – please contact us for a quotation.



## TECHNICAL & MATERIAL SPECIFICATION



### MATERIAL SPECIFICATIONS

Zinc Plated P-Clip: Mild Steel - bright zinc plated and passivated  
 Stainless P-Clip: BS304 - EN1.4301

### LINERS SPECIFICATION

#### Standard Liner:

TPE rubber (black)

Service temperature:  
 -30 °C to +60 °C

#### High Temperature Liner:

TPE 160 (grey)

Service temperature:  
 -50 °C to +160 °C

All dimensions in mm.

## M6 RANGE

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

## M10 RANGE

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

Type	D	E	F	G
M6	6.6	12.6	16	7
M10	10.8	20	23	12

# MINI CLIPS

## FOR FUEL PIPES AND SMALL HOSES

JCS Mini-Clips are an economical and reliable 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 sizes ranging from 9mm O/D to 18mm O/D.

JCS Mini-Clips are formed from a one-piece band, which means they have no welded parts which can damage the hose. Also, 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.



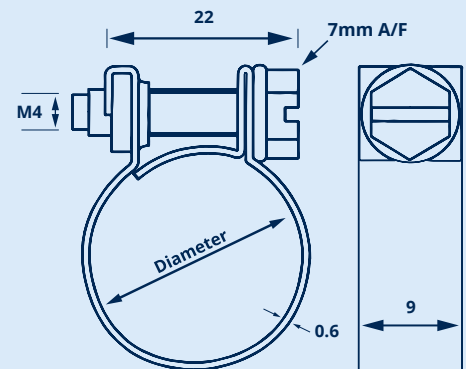
## TECHNICAL & MATERIAL SPECIFICATION

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 SPECIFICATIONS

Band - Mild Steel, Zinc Coated.

Screw and Nut - Mild Steel, Zinc plated and passivated



## FOR THE PROFESSIONALS

For professionals and dedicated enthusiasts we have put together the most popular sizes from our Hi-Grip, P-Clip and Mini-Clip ranges and presented 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.



### HI-GRIP ZINC PLATED HOSE CLIPS

A selection of zinc coated mild steel hose clips (size range 12-50mm) consisting of:

				HGZAB1	Qty 135 clips
12mm x 20	16mm x 30	20mm x 24	22mm x 10		
25mm x 8	30mm x 8	35mm x 10	40mm x 7		
45mm x 10	50mm x 8				



### HI-GRIP STAINLESS 304 HOSE CLIPS

A selection of stainless steel 18/8 Marine quality BS304 hose clips (size range 12-50mm) consisting of:

				HGSAB2	Qty 76 clips
12mm x 10	16mm x 12	20mm x 12	22mm x 6		
25mm x 6	30mm x 6	35mm x 6	40mm x 6		
45mm x 6	50mm x 6				



### ZINC PLATED P-CLIPS

A selection of zinc coated mild steel p-clips (size range 5-35mm) consisting of:

				PCZRAB1	Qty 104 clips
5mm x 14	6mm x 14	8mm x 12	10mm x 10		
13mm x 8	16mm x 8	19mm x 6	21mm x 8		
25mm x 6	29mm x 10	35mm x 8			



### STAINLESS STEEL P-CLIPS

A selection of stainless steel 18/8 Marine quality BS304 hose clips (size range 5-35mm) consisting of:

				PCSRAB1	Qty 104 clips
5mm x 14	6mm x 14	8mm x 12	10mm x 10		
13mm x 8	16mm x 8	19mm x 6	21mm x 8		
25mm x 6	29mm x 10	35mm x 8			



### ZINC PLATED MINI-CLIPS

A selection of zinc coated mild steel mini hose clips (size range 9-18mm) consisting of:

				MCZAB1	Qty 157 clips
9mm x 10	10mm x 10	11mm x 20	12mm x 30		
13mm x 16	14mm x 30	15mm x 16	16mm x 10		
17mm x 8	18mm x 7				



**HIGH PERFORMANCE HOSE CLIPS**

**JCS Hi-Torque Limited**

Northern Road, Chilton Industrial Estate, Sudbury, CO10 2YH England

**+44 (0)1787 376212   sales@jcshi-torque.co.uk   www.jcshi-torque.co.uk**