

PRODUCT CATALOGUE

Complete range of hose clamps, cable retention and banding solutions



NOVEMBER 2017





























INDEX



Introductory Pages

- 1.1 Company Profile
- 1.2 Online Shop

Snap Fit & Ear Clamps

- 2.1 Herbie Clip* Plastic (Nylon) Hose Clamp Double Grip
- 2.2 Ezyclik*-P Low Profile Plastic Hose Clamp
- 2.3 Ezyclik*-M Low Profile Automotive Hose Clip
- 2.4 Zero Leak Low Profile Ear Clamp
- 2.5 | Single Ear Hose Clamp
- 2.6 Double Ear Hose Clamp
- 2.7 Adjustable Ear Clamp Oetiker

Compensating Clamps

- 3.1 Ezyclik*-M+ Spring Automotive Hose Clip
- 3.2 Zinc Plated Steel Double Wire Spring Hose Clip
- 3.3 Rotor Spring Band Hose Clamp Constant Tension
- 3.4 Rotor Spring Band Light Hose Clamp Constant Tension
- 3.5 Worm Drive Constant Tension S-Bend
- 3.6 Supra Heavy Duty Constant Tension Clamp

Worm Drive & Screw Clamps

- 4.1 | Jubilee* Clip Worm Drive Hose Clamp
- 4.2 Worm Drive Hose Clip British Style Budget
- 4.3 Worm Drive Hose Clamp 9mm Mikalor
- 4.4 Worm Drive Hose Clamp 12mm Mikalor
- 4.5 Quick Release Worm Drive Hose Clamp
- 4.6 Mini Screw or Petrol Pipe Clip Mollfam
- 4.7 Double Wire Screw Hose Clamp Mollfam
- 4.8 Plastic Worm Drive Hose Clamp
- 4.9 Continuous Worm Drive Clamping Kit
- 4.10 Jubilee* Wingspade* Worm Drive Hose Clip
- 4.11 Mini Worm Drive Clip Oetiker

Heavy Duty Clamps

5.1 Hydraulic Hose Clip – Bolt & Barrel

The complete range of HCL products

Below is the index for the complete HCL Product Catalogue. HCL's comprehensive range of hose clamps, cable retention and banding solutions is complimented by introductory and ancilliary pages, providing advice on hose clamp selection, a variety of installation tools and technical information. The catalogue pages are designed to guide the customer through the HCL range and to offer peace of mind when making a product selection.

- 5.2 Worm Drive Super (High) Torque Hose Clamp
- 5.3 Preformed Band Clamps

Cable Retention

- 6.1 Nylon Earth Bond Clamp Ezybond* BS951-1009
- 6.2 Heavy Duty Nylon Cable Tie Smart Tie™
- 6.3 Metal Cable Tie Tyco Ball Locking Type 316SS
- 6.4 Metal Cable Tie Tyco Re-Usable 316SS Coated
- 6.5 Nylon (Plastic) Cable Tie Standard ITW Elematik
- 6.6 Nylon Cable Tie Flat Head
- 6.7 Rubber Lined P Clips Zinc Plated Steel
- 6.8 Nylon (Plastic) P Clips Black or Natural Micro Plastics

Banding & Strapping

- 7.1 Heavy Duty Nylon Banding Smart Band* Standard
- 7.2 High Strength Nylon Banding Smart Band* Hybrid
- 7.3 Metal Banding 301SS Band and Buckles

Special Hose Clamps

8.1 Special Clamp Designs

Installation Tooling

- 9.1 Manual Tools Plastic Snap Fit Hose Clamps
- 9.2 Manual Tools Metal Snap Fit, Ear & Spring Hose Clamps
- 9.3 Manual Tools Worm Drive & Screw Hose Clamps
- 9.4 Manual Tools Plastic and Steel (metal) Cable Ties
- 9.5 Manual Tools Banding & Strapping Smart Band* & Metal Banding
- 9.6 Installation Tools Pneumatic Air Tools for Hose Clamps

Ancillary Pages

- 10.1 Choosing the Right Clamp
- 10.2 Technical Information
- 10.3 Material Information
- 10.4 Conditions of Sale

COMPANY PROFILE







HCL's Quality Policy

HCL Fasteners Limited is committed to the manufacture / supply of plastic and metallic clamping solutions and ancillary products across a wide variety of sectors and markets. Focus will be given to:

- 1) Meeting or exceeding the customers' specified requirements and reasonable expectations.
- 2) Working within the framework of statutory, regulatory and legal requirements.
- 3) Ensuring products sent to customers are correct and arrive in good time and in good condition.
- 4) Managing risks, process inputs and process outputs to ensure consistent products.
- 5) Continually improving, growing and developing the business using a Quality Management System that conforms to the requirements of ISO9001 to ensure consistent quality in all work undertaken.
- 6) Establishing and communicating measureable Quality Objectives that will reflect the company strategy and will be subject to review to ensure ongoing relevance and performance.
- 7) Ensuring that Quality and Continual Improvement are responsibilities for all employees, in every activity, throughout the company.
- 8) Supporting all employees according to their individual needs for personal development, training and resources.





Our complete range available to buy online



Whether you need a single clamp or 100 clamps to finish that important job, visit our online web site where you can choose and purchase from the complete range of products contained in this catalogue.

As well as our own manufactured clamping products, HCL has also partnered with a number of hose clamp manufacturers to provide a complete clamping solution portfolio.

We are also continually researching and reviewing new products that may add value to our already extensive range.

www.hcl-clamping.co.uk



























SNAP FIT & EAR CLAMPS





Herbie Clip® Plastic (Nylon) Hose Clamp - Double Grip

Manufactured by HCL, the Herbie Clip® is the original Double Grip plastic hose clip. It is a quick and easy to install nylon hose clamp with exceptional strength arising from its unique double row of



interlocking toothed jaws. The double row of teeth offers over twice the clamping force achieved by similar products with only a single row of teeth. No other nylon hose clamps can rival the Herbie Clip in terms of overall strength and performance.

Temperature range: Nylon 6.6 -40°C to 170°C, PP -40°C to 90°C.

Applications

- Agricultural
- _ '
- Automotive
- Vending
- Hydro Massage
- White Goods
- Irrigation
- General Industry

Pharmaceutical

Materials - see section 10.3

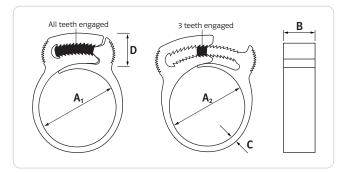
Standard

Heat/UV Stabilised ROHS compliant Nylon 6.6.

On Request

Polypropylene





Installation Tools - see section 9.1







Other Herbie Clip® tools also available.

HCL Part No	Diameter Range (A ₁ -A ₂) mm	Band Width (B) mm	Band Thickness (C) mm	Head Height (D) mm	Box Quantity
HC-A	5.6 - 6.5	4.2	1.4	8.3	3000
HC-AA	6.5 - 7.9	4.5		9.9	2500
НС-В	7.9 - 9.2	4.6	1.6	9.3	2000
HC-BB	9.2 - 10.3	4.5		10.9	2000
HC-C	10.2 - 11.8	5.8	1.7	12.2	
HC-CC	11.5 - 13.4	6.4	1.8	12.8	
HC-D	12.0 - 13.8	6.1	1.7	12.9	
HC-E	13.1 - 15.1	7.2		13.6	1000
HC-F	15.0 - 17.1	7.1	2.0	12.9	
HC-G	16.9 - 19.1	7.3		12.5	
НС-Н	18.1 - 20.6	7.1	2.1	12.7	
HC-J	20.3 - 23.0	6.4		14.2	
HC-K	23.1 - 26.1	7.3	2.2	13.7	1500
HC-L	24.5 - 27.6	7.1	2.1	12.5	
HC-M	26.5 - 29.5	7.4	2.2	13.4	4000
HC-N	28.8 - 32.2	9.0	2.0	13.4	1000
HC-P	32.0 - 34.8	9.1	2.2	13.8	
HC-Q	34.3 - 37.9	8.9	2.1	13.5	750
HC-R	38.5 - 42.4	9.5		13.7	
HC-S	41.8 - 45.2	9.3	2.2	13.6	F00
HC-T	44.6 - 48.0	9.1		13.2	500
HC-U	47.4 - 51.1	9.1	24	14.6	
HC-V	48.5 - 53.8	9.0	2.1	14.4	1000
HC-W	53.0 - 56.5	9.0]	15.0	1000
HC-X	55.0 - 60.5	9.4	2.3	15.5	
HC-59	59.0 - 64.7	9.3	2.7	17.0	
HC-64	63.0 - 67.4	9.4	2.6	15.6	
HC-66	65.8 - 71.7	9.2	1.95	15.7	750
HC-70	70.0 - 75.4	9.1	2.6	15.5	
HC-75	74.7 - 80.5	9.1	2.6	16.5	
HC-80	79.8 - 85.0	9.0	2.9	17.7	
HC-85	85.1 - 90.6	8.9		17.2	
HC-91	91.0 - 96.0	9.5		16.7	F00
HC-96	97.7 - 102.1	8.5		17.4	500
HC-105	105.3 - 111.8	8.9	2.6	16.2	
HC-109	108.0 - 114.3	9.0		17.4	
HC-115	115.0 - 121.0	9.5		17.4	400
HC-163	163.0 - 169.0	9.5	2.5	16.0	100

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for Nylon 6.6. Black, add ".PA66-BK". Other colours available on request.

SNAP FIT & EAR CLAMPS





Ezyclik®-P Low Profile Plastic Hose Clamp

Manufactured by HCL in the UK, the Ezyclik®-P (Plastic) hose clip is specifically designed for hose clamping applications where space is restricted. The unique design of the patent pending Ezyclik®-P Strength
Temperature
Speed
Weathering
Chemical
Dynamic Range

ensures strong, fast and reliable clamping with a low profile design and fully corrosion resistant materials.

Temperature range: Nylon 6.6 -40°C to 170°C, PP -40°C to 90°C.

Applications

- Automotive
- Hydro Massage
- Irrigation
- Pharmaceutical
- Vending
- White Goods
- General Industry

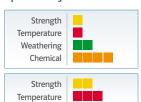
Materials - see section 10.3

Standard

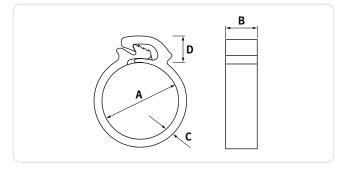
Heat/UV Stabilised ROHS compliant Nylon 6.6.

On Request

Polypropylene



Glass-filled Nylon 6.6.



Installation Tools - see section 9.1



Other Ezyclik*-P tools also available.

HCL Part No	Closed Diameter (A) mm	Band Width (B) mm	Band Thickness (C) mm	Head Height (D) mm	Box Quantity
EZY-P-8.5	8.5				
EZY-P-8.7	8.7				
EZY-P-8.9	8.9			5.3	2000
EZY-P-9.2	9.2			J.J	2000
EZY-P-9.5	9.5				
EZY-P-10.0	10.0		1.7		
EZY-P-11.4	11.4		1	5.5	
EZY-P-12.0	12.0			5.6	
EZY-P-12.5	12.5			5.7	1500
EZY-P-12.7	12.7				
EZY-P-13.2	13.2			5.8	
EZY-P-13.7	13.7				
EZY-P-14.5	14.5				
EZY-P-14.6	14.6				
EZY-P-15.0	15.0				
EZY-P-15.7	15.7				
EZY-P-15.9	15.9	8.0		6.8	1000
EZY-P-16.5	16.5				
EZY-P-16.8	16.8		2.0		
EZY-P-17.1	17.1	0.0			
EZY-P-17.5	17.5				
EZY-P-17.6	17.6				
EZY-P-18.0	18.0				
EZY-P-18.5	18.5				
EZY-P-19.1	19.1				
EZY-P-19.6	19.6				
EZY-P-20.1	20.1				
EZY-P-20.8	20.8				1500
EZY-P-21.1	21.1				
EZY-P-22.0	22.0				
EZY-P-22.1	22.1				
EZY-P-22.6	22.6				
EZY-P-23.1	23.1				
EZY-P-23.6	23.6				
EZY-P-24.7	24.7				
EZY-P-25.8	25.8				1000
EZY-P-26.8	26.8				
EZY-P-28.0	28.0				
EZY-P-30.6	30.6				
EZY-P-31.4	31.4				500
EZY-P-36.5	36.5	9.0			
EZY-P-42.4	42.4	7.0	2.5		
EZY-P-43.3	43.3		2.5	7.3	400
EZY-P-45.5	45.5				
All weights, dimens	ione & quantities ar	e subject to a 2 5% t	toloranco		

All weights, dimensions & quantities are subject to a 2.5% tolerance.

To add material selection to the HCL Part No: for Nylon 6.6. Black, add ".PA66-BK". Other colours available on request.

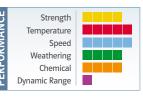
AP FIT & R CLAMPS





Ezyclik®-M Low Profile Automotive Hose Clip

The Ezyclik®-M (Metal) type hose clamp offers exceptional strength and is used extensively in the automotive and general industry. It is



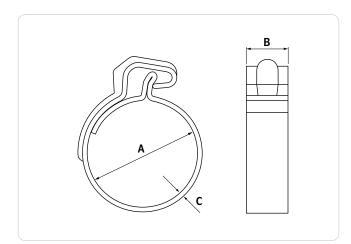
quick and easy, to assemble and disassemble; has a low profile design and is manufactured from corrosion resistant Stainless Steel. The Ezyclik®-M offers an alternative to the Clic hose clamp often used in these applications. The Ezyclik®-M hose clip is often used in automotive applications.

Applications

- Automotive
- White Goods
- Hydro Massage
- General Industry

Materials - see section 10.3

W4 304 SS



Installation Tools - see section 9.1





PT-EZY-C

HCL Part No	Closed Diameter (A) mm	Band Width (B) mm	Band Thickness (C) mm	Colour Mark	Box Quantity	
EZY-M-8.0	8.0			Blue	3000	
EZY-M-8.5	8.5		0.5	Green		
EZY-M-9.0	9.0			Purple		
EZY-M-9.5	9.5			Black		
EZY-M-10.0	10.0			Green		
EZY-M-10.5	10.5	6.0		Blue		
EZY-M-11.0	11.0			Green	2500	
EZY-M-11.5	11.5			Purple	2500	
EZY-M-12.0	12.0			Black		
EZY-M-12.5	12.5			Red		
EZY-M-13.0	13.0		0.6	Green		
EZY-M-13.5	13.5			Purple		
EZY-M-14.0	14.0			Red	3500	
EZY-M-14.5	14.5			Purple		
EZY-M-15.0	15.0			Black		
EZY-M-15.5	15.5			Blue		
EZY-M-16.0	16.0			Green	3000	
EZY-M-16.5	16.5			Black		
EZY-M-17.0	17.0			Red		
EZY-M-17.5	17.5			Blue		
EZY-M-18.0	18.0			Green		
EZY-M-18.5	18.5	8.0		Purple		
EZY-M-19.0	19.0			Blue		
EZY-M-19.5	19.5			Black		
EZY-M-20.0	20.0			Red		
EZY-M-20.5	20.5			Blue	2500	
EZY-M-21.0	21.0			Green		
EZY-M-21.5	21.5			Purple		
EZY-M-22.0	22.0			Black		
EZY-M-23.0	23.0			Blue	2000	
EZY-M-23.5	23.5			Green		

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W4, add "-W4". Other sizes available on request.

SNAP FIT & EAR CLAMPS





Zero Leak - Low Profile Ear Clamp

HCL's Zero Leak Ear clamp (O-Clip) is ideal for rubber and PVC hoses. The steel hose clamp forms a complete circle, removing the possibility of



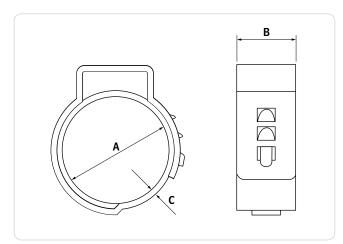
leakage. It is quick and easy to assemble, has a low profile design and is manufactured from corrosion resistant Stainless Steel 304 or W4. The Zero leak metal hose clip is also known sometimes as a low profile hose clamp.

Applications

- Automotive
- White Goods
- Vending
- General Industry

Materials - see section 10.3

W4 304 SS



Installation Tools - see section 9.1



HCL	Diameter	Band	Band	Вох
Part No	Range (A) mm	Width (B) mm	Thickness (C) mm	Quantity
ZLEC-7.0	5.7 - 7.0			
ZLEC-8.0	6.8 - 8.0			
ZLEC-8.7	7.0 - 8.7			
ZLEC-9.0	7.3 - 9.0			
ZLEC-9.5	7.8 - 9.5	5.0	0.5	
ZLEC-10.0	8.3 - 10.0	5.0	0.5	
ZLEC-10.5	8.8 - 10.5			
ZLEC-10.9	9.2 - 10.9			
ZLEC-11.3	9.6 - 11.3			
ZLEC-11.8	10.1 - 11.8			
ZLEC-11.9	9.4 - 11.9			
ZLEC-12.3	9.8 - 12.3			
ZLEC-12.8	10.3 - 12.8			100
ZLEC-13.3	10.8 - 13.3			
ZLEC-13.8	11.3 - 13.8			100
ZLEC-14.0	11.5 - 14.0			
ZLEC-14.2	11.7 - 14.2			
ZLEC-14.5	12.0 - 14.5			
ZLEC-14.8	12.3 - 14.8	7.0	0.6	
ZLEC-15.3	12.8 - 15.3	7.0	0.0	
ZLEC-15.7	13.2 - 15.7			
ZLEC-16.0	13.5 - 16.0			
ZLEC-16.8	14.3 - 16.8			
ZLEC-17.0	14.5 - 17.0			
ZLEC-17.5	15.0 - 17.5			
ZLEC-17.8	14.6 - 17.8			
ZLEC-18.0	14.8 - 18.0			
ZLEC-18.5	15.3 - 18.5			

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W4, add ".W4". Other sizes available on request.

AP FIT & R CLAMPS





Single Ear Hose Clamp

The Single Ear Hose Clamp or Pinch clip is manufactured from Zinc Plated or 304 Stainless Steel and is an economical solution for many simple hose assemblies. The single ear hose clamp can

Strength Temperature Speed Weathering Chemical Dynamic Range

be used with air or other fluids. These pinch clamps are ideal for demanding applications involving soft or hard rubbers and plastics. The design also ensures a uniform compression around the whole circumference of the hose clamp.

Single Ear Hose Clamp 304 Stainless Steel

Due to the AISI-304 Steel used in the manufacture of these clips, their corrosion resistance is outstanding making them suitable for outdoor & marine applications. Like all ear clips, once mounted they are tamper-proof.

Single Ear Hose Clamp with Inner Ring

The inner ring means that he clamp fits snugly around the hose while the bevelled edges protect the hose from being pinched during fitting. The use of one ear clamps with inner-ring is recommended when working with delicate hoses.

Applications

- Automotive
- Vending
- Marine
- General Industry
- White Goods

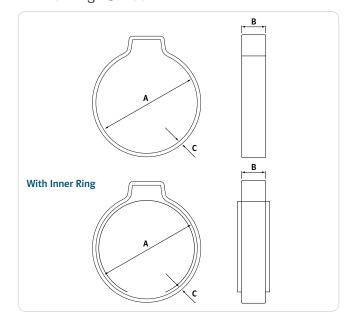
Materials - see section 10.3

Zinc Plated Steel

W4 304 SS

Weathering

Inner Ring – 301 SS



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Box Quantity	
SEC-7	7-9	6.0			
SEC-8	8 - 10	6.0			
SEC-9	9 - 11		0.8		
SEC-10	10 - 12	6.5			
SEC-11	11 - 13				
SEC-12	12 - 14			100	
SEC-13*	13 - 15			100	
SEC-14	14 - 16	7.0			
SEC-15*	15 - 17		1.0		
SEC-16	16 - 18				
SEC-17°	17 - 19	7.5			
SEC-18*	18 - 20	7.5			
With Inner Ring					
SEC-IR-7.5	7.5 - 8.5	6.0			
SEC-IR-8.2	8 - 9.5	6.0			
SEC-IR-9.0	9 - 10.5		0.8		
SEC-IR-10.0	10 - 11.5	6.5			
SEC-IR-10.5	10.5 - 12.5				
SEC-IR-11.5	11.5 - 13.5			100	
SEC-IR-12.5*	12.5 - 14.5			100	
SEC-IR-13.0	13 - 15.3	7.0			
SEC-IR-14.0°	14 - 16.3	7.0	1.0		
SEC-IR-15.0	15 - 17.3				
SEC-IR-16.0°	16 - 18.3				
SEC-IR-17.0°	17 - 19.3	7.5			

Part numbers marked with * are only available in W4 Material All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W4, add "-W4".

Installation Tools - see section 9.1





MT-EC-VT-01

SNAP FIT & EAR CLAMPS





Double Ear Hose Clamp

The Double Ear Hose Clamp or Crimp clip is manufactured from Zinc Plated or 304 Stainless Steel and is an economical solution for many simple hose assemblies. The two ears give the clip extra grip



and help maintain constant pressure around the hose. Fitting is more flexible and exact. The practical design of the double ear hose clamps means that they clamp firmly onto the assemble and cannot be removed once mounted. The edges are rounded to avoid damage to the hose.

Double Ear Hose Clamp 304 Stainless Steel

Due to the AISI-304 Steel used in the manufacture of these clips, their corrosion resistance is outstanding making them suitable for outdoor and marine applications.

Band Width

6.0

6.5

7.0

7.5

8.0

8.5

9.0

9.5

Applications

- Automotive
- Marine
- Vending

DEC-5

DEC-7

DEC-9

DEC-11

DEC-13

DEC-14*

DEC-15

DEC-17

DEC-18

DEC-20

DEC-22

DEC-23°

DEC-25*

DEC-28*

DEC-31*

DEC-34*

General Industry

(C) mm

0.6

8.0

0.9

1.0

1.2

1.3

1.4

1.6

Box Quantity

100

White Goods

Range (A) mm

5 - 7

9 - 11

11 - 13

13 - 15

14 - 17

15 - 18

17 - 20

18 - 21

20 - 23

22 - 25

23 - 27

25 - 28

28 - 31

31 - 34

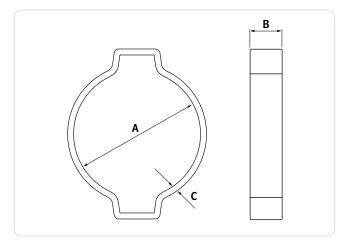
34 - 37

Materials - see section 10.3

Zinc Plated Steel

W4 304 SS





 DEC-37°
 37 - 40

 DEC-40°
 40 - 43

 DEC-43°
 43 - 45
 10.5

 Part numbers marked with * are only available in W1 Material

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W4, add "-W4".

Installation Tools - see section 9.1



SNAP FIT & EAR CLAMPS







Adjustable Ear Clamp - Oetiker®

The Oetiker® Adjustable Ear Clamp is manufactured in 304 Stainless Steel and its choice of engagement positions means that



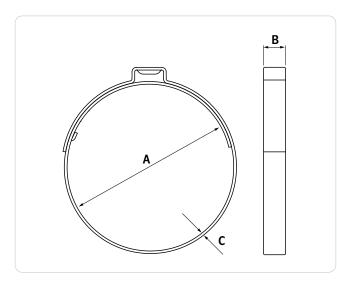
the Clamp can be adjusted to several nominal diameters. The inner ring with radial guidance provides an effective and powerful all-round sealing.

Applications

- Automotive
- White Goods
- Vending
- Aerations
- General Industry

Materials - see section 10.3

W4 304 SS



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Box Quantity
0EC-23-W4	23.6 - 30			
0EC-28-W4	28.6 - 35			
0EC-33-W4	33.6 - 40			
OEC-38-W4	38.6 - 45			
0EC-43-W4	43.6 - 50		0.6	100
OEC-47-W4	47.5 - 56	7.0		
0EC-53-W4	53.5 - 62			
0EC-59-W4	59.5 - 68			
0EC-65-W4	65.5 - 74			
0EC-71-W4	71.5 - 80			
0EC-77-W4	77.5 - 86			
0EC-83-W4	83.5 - 92			
OEC-89-W4	89.5 - 98			
OEC-100-W4	100 - 108			
OEC-106-W4	106 - 114	9.0		50
OEC-112-W4	112 - 120			

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W4, add "-W4".

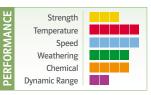






Ezyclik®-M+ - Spring Automotive Hose Clip

The Ezyclik®-M+ hose clamp offers exceptional strength and a diameter that selfadjusts to compensate for diametrical variations. This



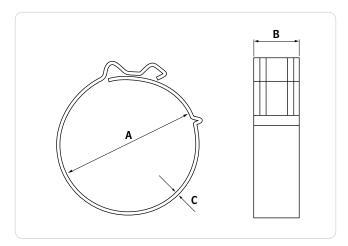
spring loaded hose clip is quick and easy, to assemble and disassemble; has a low profile design and is manufactured from corrosion resistant Stainless Steel.

Applications

- Automotive
- White Goods
- Hydro Massage
- General Industry

Materials - see section 10.3

W4 304 SS



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Box Quantity
EZY-M+-8	8.5 - 9.5			
EZY-M+-9	9.5 - 10.5	7.0		
EZY-M+-10	10.5 - 11.5	7.0		1000
EZY-M+-11	11.5 - 12.5			1000
EZY-M+-12	12.5 - 14.0			
EZY-M+-13	13.5 - 15.0			
EZY-M+-14	14.5 - 16.0			
EZY-M+-15	15.5 - 17.0			
EZY-M+-16	16.5 - 18.0		0.6	
EZY-M+-17	17.5 - 19.0			
EZY-M+-18	18.5 - 20.0	8.0		
EZY-M+-19	19.5 - 21.0			500
EZY-M+-20	20.5 - 22.0			
EZY-M+-21	21.5 - 23.0			
EZY-M+-22	22.5 - 24.0			
EZY-M+-23	23.5 - 25.0			
F7Y-M+-24	24.5 - 26.0			

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W4, add "-W4". Other sizes available on request.







MT-EZM-VT-01

MT-EZM-SJ-01

PT-EZY-C





Zinc Plated Steel - Double Wire Spring Hose Clip

Mollfam's Double Wire Spring hose clips are ideal on rubber and PVC hoses. Made from Zinc Plated steel the spring effect compensates for diametrical



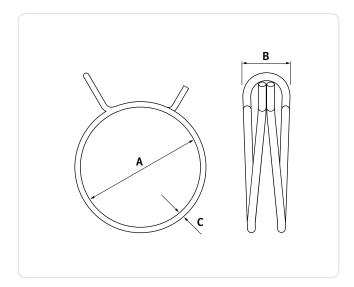
variation and the complete circle guarantees a uniform radial pressure. These Double Wire Spring Hose Clips are ideal for low pressure applications.

Applications

- Agricultural
- White Goods
- Irrigation
- General Industry

Materials - see section 10.3

Zinc Plated Steel



Installation Tools - see section 9.1





MT-SC-TP-01 MT-SC-FR-01

HCL Part No	Diameter Range (A) mm	Clamp Width (B) mm	Wire Diameter (C) mm
DW-6.8	6.6 - 7.0	(B) IIIIII	(6) 111111
DW-6.8	7.0 - 7.5	5.0	
DW-7.6	7.3 - 7.8	5.0	
DW-8.1	7.8 - 8.3		1.0
DW-8.6	8.3 - 8.8		1.0
DW-9.1	8.8 - 9.3	5.5	
DW-9.6	9.3 - 9.8		
DW-10.1	9.8 - 10.4		
DW-10.7	10.4 - 11.0	6.0	1.2
DW-10.7	11.0 - 11.6	0.0	1.2
DW-11.9	11.6 - 12.2		
DW-11.9 DW-12.6	12.2 - 12.9		
DW-12.8	12.9 - 13.6	7.0	1.5
DW-13.7	13.3 - 14.1	7.0	1.5
DW-13.7	13.6 - 14.4		
DW-14.8	14.4 - 15.1		
DW-14.8	15.1 - 15.9		
DW-15.8	15.5 - 16.3	8.0	1.8
DW-15.8	15.9 - 16.8	0.0	1.0
DW-16.4 DW-17.3	16.8 - 17.7		
DW-17.3	17.7 - 18.7	9.0	1.9
DW-18.2 DW-19.2	18.7 - 19.6	9.0	1.2
DW-19.2 DW-20.2	19.6 - 20.6	9.5	2.0
DW-20.2	20.6 - 21.6	9.5	2.0
DW-21.2 DW-22.1	21.5 - 22.6		
DW-22.1	22.0 - 23.1		
DW-22.6 DW-23.1	22.4 - 23.6	10.3	2.2
DW-23.1	23.5 - 24.7		
DW-24.2 DW-25.2	24.5 - 25.8	11.0	25
DVV-25.2	24.5 - 25.8	11.0	2.5

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W1, add "-W1". Other sizes up to 59.6mm diameter available on request.





Rotor Spring Band Hose Clamp - Constant Tension

HCL supplies Rotor Constant Tension Band Clamps. The spring loaded Steel hose clamps are ideal for many automotive, truck and spa applications.

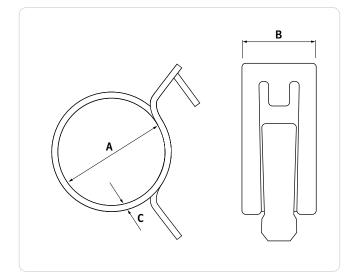
Strength	
Temperature	
Speed	
Weathering	
Chemical	
Dynamic Range	
	Temperature Speed Weathering Chemical

Applications

- Agricultural
- White Goods
- Automotive
- General Industry
- Vending

Materials – see section 10.3

Steel with a Zinc rich paint coating



HCL Part No	Equivalent Rotor Clip Part No	Diameter Range (A) mm	Clamp Width (B) mm	Band Thickness (C) mm	Colour*	
CTB-14.4	CTB-16	14.4 - 17.2		1.00	Black	
CTB-15.2	CTB-17	15.2 - 18.5		0.85	Silver	
CTB-17.8	CTB-19	17.8 - 20.0		1.30	Silver	Silver
CTB-18.4	CTB-20	18.4 - 21.6			Black or Silver	
CTB-20.5	CTB-22	20.5 - 24.5			Black	
CTB-22.0	CTB-24	22.0 - 26.0			Black or Silver	
CTB-24.3	CTB-26	24.3 - 28.0				
CTB-25.2	CTB-27	25.2 - 28.9	15.0	1.60		
CTB-27.0	CTB-29	27.0 - 31.5			Silver	
CTB-29.3	CTB-32	29.3 - 34.5		1.73		
CTB-31.5	CTB-35	31.5 - 38.0				
CTB-37.2	CTB-42	37.2 - 44.5		1.90		
CTB-40.5	CTB-46	40.5 - 48.5			Dlask	
CTB-41.4	CTB-47	41.4 - 50.0		2.00	Black	
CTB-43.5	CTB-50	43.5 - 53.0				

All weights, dimensions & quantities are subject to a 2.5% tolerance.

*Clamp colour stated for general information only, the actual colour sent may differ according to stock received from supplier.





MT-SC-TP-01

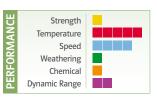
MT-SC-FR-01





Rotor Spring Band Light Hose Clamp - Constant Tension

HCL supplies Rotor Constant Tension Light Band Clamps. The spring loaded Steel hose clamps are cost effective alternatives to other types



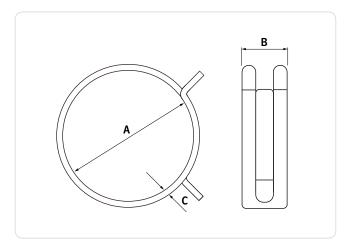
of hose clamps but do not compromise quality or reliability. The Light Constant Tension Clamps are used on such applications as small engines, agricultural and utility vehicles, automotive systems and appliances.

Applications

- Agricultural
- White Goods
- Automotive
- General Industry
- Vending

Materials - see section 10.3

Steel with a Dry Phosphate coating



HCL Part No	Equivalent Rotor Clip Part No	Diameter Range (A) mm	Clamp Width (B) mm	Band Thickness (C) mm	Colour*
CTL-6.1	CTL-4.5	6.1 - 7.6	6.3	0.51	
CTL-7.7	CTL-5	7.7 - 8.8		0.76	
CTL-8.5	CTL-6	8.5 - 10.4		0.51	Dlask
CTL-9.5	CTL-6.5	9.5 - 11.4		0.64	Black
CTL-10.3	CTL-7	10.3 - 12.3		0.64	
CTL-11.7	CTL-8	11.7 - 13.8	70	0.76	
CTL-12.5	CTL-8.5	12.5 - 14.6	7.9		Green
CTL-13.2	CTL-9	13.2 - 15.4			
CTL-13.7	CTL-9.5	13.7 - 16.5			
CTL-14.8	CTL-10	14.8 - 17.0			
CTL-15.8	CTL-10.5	15.8 - 18.4			Black
CTL-16.4	CTL-12	16.4 - 21.0			
CTL-19.1	CTL-13	19.1 - 22.9	9.5	1.02	
CTL-21.8	CTL-15	21.8 - 26.2		1.14	

All weights, dimensions & quantities are subject to a 2.5% tolerance.

*Clamp colour stated for general information only, the actual colour sent may differ according to stock received from supplier.





MT-SC-TP-01

MT-SC-FR-01





Worm Drive Constant Tension - S-Band

The main difference between the W3 constant tension worm-drive and the standard Mikalor worm-drive is to be found in the innerring insert incorporating a spring. This spring-loaded insert maintains

Strength
Temperature
Speed
Weathering
Chemical
Dynamic Range

constant pressure around the hose in case of sudden changes in temperature and/or vibration thereby avoiding leaks.

Worm Drive Constant Tension Clamps – Other Features

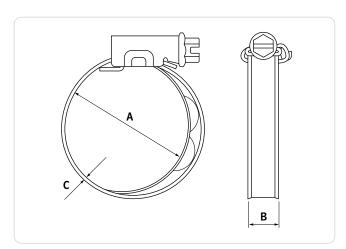
The fact that this clamp guarantees leak-proof hose assemblies with both gaseous fluid and liquids makes it ideal for applications in car, tractor or heavy machinery engines. Moreover the non-perforated cold formed band together with the rounded band edges make sure that no damage occurs to the hose. The clip complies fully with the DIN 3017 norm and also with the RoHs directive EU/2002/95/EC dated 1st July 2006.

Applications

- Automotive
- Heavy Machinery
- Agriculture
- Engines

Materials - see section 10.3

W 430 SS



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Max Pressure Bar	Max Torque	Box Quantity
WD-CT-MIK-20	20 - 32					
WD-CT-MIK-25	25 - 40					
WD-CT-MIK-30	30 - 45					
WD-CT-MIK-40	40 - 60					
WD-CT-MIK-50	50 - 70					
WD-CT-MIK-60	60 - 80	12.2	0.80	47	5.5	100
WD-CT-MIK-70	70 - 90					
WD-CT-MIK-80	80 - 100					
WD-CT-MIK-90	90 - 110					
WD-CT-MIK-100	100 - 120					
WD-CT-MIK-110	110 - 130					

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W1, add "-W1".







Supra Heavy Duty Constant Tension Clamp

The Supra CT clamp incorporates a series of AISI-304 Stainless steel spring washers to the original Supra Clamp product. This Specialised Clamp is used in applications subject to vibration and/or great variations Strength
Temperature
Speed
Weathering
Chemical
Dynamic Range

in temperature which cause the components of the hose assembly to expand and contract.

Supra Heavy Duty Constant Tension Clamp – Other Features

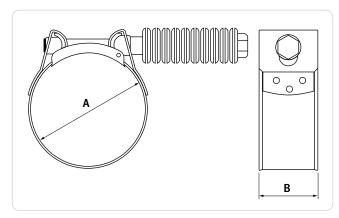
Thanks to the spring washer system, the Supra Constant tension heavy duty hose clamp maintains constant pressure around the hose and prevents leakage. The bevelled edges protect the hose from damage. The Supra CT clamp complies fully with the RoHs directive EU 20032/95/EC dated 1st July 2006. The clamp is generally fitted in high-powered diesel engines in heavy machinery, trucks, buses, marine engines and diesel powered generators as well as in various other industrial applications where expansion and contraction cause assemblies using standard hose clamps to leak.

Applications

- Diesel Engines
- Generators
- Heavy Machinery
- Trucks
- Marine Engines
- Buses

Materials - see section 10.3

W 430 SS



Installation Tools - see section 9.1



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Max Pressure Bar	Max Torque	Box Quantity
HD-SUPRA-17	17 - 19				
HD-SUPRA-19	19 - 21		50		
HD-SUPRA-21	21 - 23				
HD-SUPRA-23	23 - 25	18.0	48	4.5	
HD-SUPRA-25	25 - 27		,-		
HD-SUPRA-27	27 - 29		45		
HD-SUPRA-29	29 - 31		/0		
HD-SUPRA-31	31 - 34		42		
HD-SUPRA-34	34 - 37		40	8	
HD-SUPRA-37	37 - 40		40		
HD-SUPRA-40	40 - 43		20		
HD-SUPRA-43	43 - 47	20.0	38		
HD-SUPRA-47	47 - 51		36		
HD-SUPRA-51	51 - 55		36	10	
HD-SUPRA-55	55 - 59			10	
HD-SUPRA-59	59 - 63		34		
HD-SUPRA-63	63 - 68				
HD-SUPRA-68	68 - 73				100
HD-SUPRA-73	73 - 79		28		100
HD-SUPRA-79	79 - 85				
HD-SUPRA-85	85 - 91				
HD-SUPRA-91	91 - 97	25.0	20	25	
HD-SUPRA-97	97 - 104				
HD-SUPRA-104	104 - 112				
HD-SUPRA-112	112 - 121		12		
HD-SUPRA-121	121 - 130				
HD-SUPRA-130	130 - 140				
HD-SUPRA-140	140 - 150		9		
HD-SUPRA-150	150 - 162				
HD-SUPRA-162	162 - 174				
HD-SUPRA-174	174 - 187	28.0	6	50	
HD-SUPRA-187	187 - 200	20.0		90	
HD-SUPRA-200	200 - 213				
HD-SUPRA-213	213 - 226		3		
HD-SUPRA-226	226 - 239)		
HD-SUPRA-239	239 - 252				

All weights, dimensions & quantities are subject to a 2.5% tolerance To add material selection to the HCL Part No: for W1, add "-W1".





Jubilee® Clip - Worm Drive Hose Clamp

Jubilee® Clips have been manufactured by L Robinson & Co Ltd since 1921. In fact they are the original worm drive hose clips. To this day they



are still being manufactured to the finest standards in accordance with the prestigious British Standard 5315 and are kitemarked accordingly. Remember: not all worm drive clips are Jubilee® clips.

Applications

W2

- Agricultural
- Automotive
- Fluid Transfer
- Hardware

White Goods



- Food Processing
- Marine Industry
- Petrochemical Industry

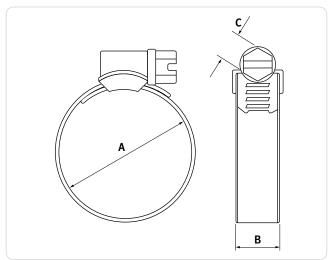
Materials - see section 10.3

Screw - Zinc Plated Steel Band & Housing - 430 SS

On Request

W 316 SS





Installation Tools - see section 9.1



HCL	Diameter	Band	Hex Screw	Max	Ну	draulic Pre	ess
Part No	Range (A) mm	Width (B) mm	A/F (C) mm	Torque Nm	Мра	PSI	BAR
WD-JUB-000	9.5 - 12		7.0				
WD-JUB-M00	11 - 16	9.0	8.0	4.5			
WD-JUB-00	13 - 20		9.0		1.4	203	14
WD-JUB-0	16 - 22		10.0	5.6	1.4		
WD-JUB-0X	18 - 25		11.0	5.0			
WD-JUB-1A	22 - 30		12.0				
WD-JUB-1	25 - 35		13.0	6.8			
WD-JUB-1X	30 - 40		14.0	0.0		102	7
WD-JUB-1M	32 - 45		15.0				
WD-JUB-2A	35 - 50		16.0		0.7		
WD-JUB-2	40 - 55		17.0	7.9			
WD-JUB-2X	45 - 60		18.0				
WD-JUB-3	55 - 70		19.0				
WD-JUB-3X	60 - 80		20.0				3
WD-JUB-4	70 – 90	13.0	21.0	9.0			
WD-JUB-4X	85 - 100		22.0	9.0	0.3	44	
WD-JUB-5	90 - 120		23.0				
WD-JUB-6	110 - 140		24.0				
WD-JUB-6X	120 - 150		25.0				
WD-JUB-7	135 - 165		26.0				
WD-JUB-7.5	158 - 190		27.0		N/A		
WD-JUB-8.5	184 - 216		28.0	7.9		N/A	N/A
WD-JUB-9.5	210 - 242		29.0	1.7		IN/A	IN/A
WD-JUB-10.5	235 - 267		30.0				
WD-JUB-11.5	260 - 292		31.0				
WD-JUB-12.5	286 - 318		32.0				

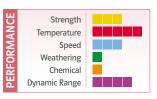
All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W1, add "-W1".





Worm Drive Hose Clip - British Style - Budget

HCL supply a budget range of British Style Zinc Plated Worm Drive Clamps. These clamps are manufactured using a Spot Weld technique.

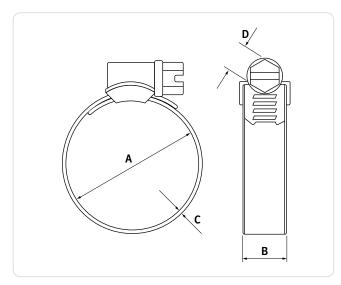


Applications

- Agricultural
- Automotive
- Fluid Transfer
- Hardware
- HVAC
- Plumbing & Sanitary
- White Goods
- General Industry

Materials - see section 10.3

Zinc Plated Steel



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Hex Screw A/F (D) mm	Max Torque Nm	Box Quantity
WD-BS-000-SW	10 - 16					1200
WD-BS-00-SW	13 - 19	0.7			2.5	1000
WD-BS-0-SW	16 - 25	9.7			3.5	1200
WD-BS-0X-SW	19 - 29					1200
WD-BS-1A-SW	22 - 32					
WD-BS-1-SW	25 - 38		0.8	7.0	4.5	
WD-BS-1X-SW	32 - 44					600
WD-BS-2A-SW	35 - 51					
WD-BS-2-SW	38 - 57					
WD-BS-2X-SW	44 - 64					
WD-BS-3-SW	51 - 70					300
WD-BS-3X-SW	64 - 76	11.7				300
WD-BS-4-SW	70 - 89					
WD-BS-4X-SW	76 - 92				5.0	
WD-BS-5-SW	80 - 100				5.0	250
WD-BS-5X-SW	90 - 110					
WD-BS-6-SW	100 - 120					
WD-BS-6X-SW	110 - 130					100
WD-BS-7-SW	120 - 140					

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W1, add "-W1".



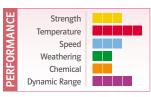






Worm Drive Hose Clamp - 9mm - Mikalor

Mikalor's patented ASFA-L premium Worm Drive hose clamps are manufactured in Spain in accordance with DIN3017. Their innovative



housing is designed for high strength whilst remaining compact. The cold-formed stamped band is smooth on the underside and bevelled at the edges, protecting the hose from damage. Mikalor's Worm Drive Hose Clips are manufactured to the highest quality from Stainless Steel material.

Applications

WZ

- Agricultural
- Automotive
- Fluid Transfer
- Hardware
- White Goods

W4/W5

- Food Processing
- Marine Industry
- Petrochemical Industry

Materials - see section 10.3

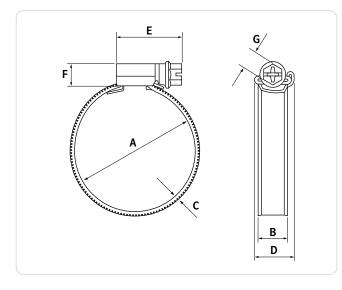
Screw - Zinc Plated Steel Band & Housing - 430 SS

On Request

W4 304 SS

W 316 SS





HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Max Width (D) mm	Head Length (E) mm	Head Height (F) mm	Hex Screw A/F (G) mm	Max Torque Nm	Box Quantity
WD-9-DIN-8	8 - 16		0.6		224			2.0	
WD-9-DIN-12	12 - 22		0.6		22.1			3.0	200
WD-9-DIN-16	16 - 27				22.6			2.5	200
WD-9-DIN-20	20 - 32				23.6			3.5	
WD-9-DIN-25	25 - 40					10.0	7.0	4.0	
WD-9-DIN-30	30 - 45				25.6				100
WD-9-DIN-32	32 - 50				25.6				
WD-9-DIN-40	40 - 60			14.0					
WD-9-DIN-50	50 - 70								
WD-9-DIN-60	60 - 80	9.0							
WD-9-DIN-70	70 - 90		0.7						
WD-9-DIN-80	80 - 100								50
WD-9-DIN-90	90 - 110				20.6				
WD-9-DIN-100	100 - 120				29.6				
WD-9-DIN-110	110 - 130								25
WD-9-DIN-120	120 - 140								25
WD-9-DIN-130	130 - 150								
WD-9-DIN-140	140 - 160								

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W2, add ".W2".







Worm Drive Hose Clamp - 12mm - Mikalor

Mikalor's patented ASFA-S premium Worm Drive hose clamps are manufactured Spain in accordance with DIN3017. Their innovative housing is designed for high strength whilst remaining



compact. The cold-formed stamped band is smooth on the underside and bevelled at the edges, protecting the hose from damage. Mikalor's Worm Drive Hose Clips are manufactured to the highest quality from Stainless Steel material.

Applications

W₂

- Agricultural
- Automotive
- Fluid Transfer
- Hardware
- White Goods

W4/W5

- Food Processing
- Marine Industry
- Petrochemical Industry



Competition Engines

Materials - see section 10.3

■ W≥ Screw - Zinc Plated Steel Band & Housing - 430 SS

On Request

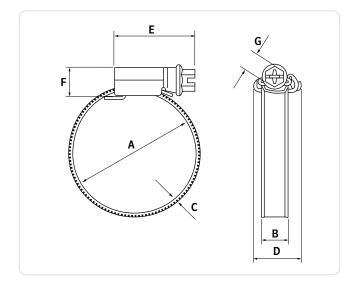
W4 304 SS

W 316 SS

■ **T**1 Titanium

Weathering Chemical	
Weathering Chemical	

Weathering



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Max Width (D) mm	Head Length (E) mm	Head Height (F) mm	Hex Screw A/F (G) mm	Max Torque Nm	Box Quantity
WD-12-DIN-16	16 - 27							4.2	
WD-12-DIN-20	20 - 32							5.2	
WD-12-DIN-25	25 - 40				25	29.6			3.5
WD-12-DIN-30	30 - 45				29.6			5.5	
WD-12-DIN-32	32 - 50							6.0	50
WD-12-DIN-40	40 - 60							6.0	
WD-12-DIN-50	50 - 70								
WD-12-DIN-60	60 - 80				31.6	11.0	7.0		
WD-12-DIN-70	70 - 90								
WD-12-DIN-80	80 - 100			18.0					
WD-12-DIN-90	90 - 110								
WD-12-DIN-100	100 - 120	12.2	0.8						25
WD-12-DIN-110	110 - 130	12.2	0.8					6.8	
WD-12-DIN-120	120 - 140								
WD-12-DIN-130	130 - 150								
WD-12-DIN-140	140 - 160							0.0	
WD-12-DIN-150	150 - 170								
WD-12-DIN-160	160 - 180								
WD-12-DIN-170	170 - 190				34.6				
WD-12-DIN-180	180 - 200								
WD-12-DIN-190	190 - 210								40
WD-12-DIN-200	200 - 220								10
WD-12-DIN-210	210 - 230								
WD-12-DIN-220	220 - 240								
WD-12-DIN-220 All weights, dimension		ties are su	bject to a	2.5% tolera	ance.				

To add material selection to the HCL Part No: for W2, add "-W2".

Installation Tools - see section 9.1



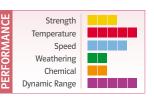
MT-TD-01





Quick Release Worm Drive Hose Clamp

HCL's Quick Release Worm Drive hose clamps offer a tilting Worm Drive housing. These quick release hose clamps are ideal for rapid application and



removal, especially for large diameter pipes and hoses.

Applications

- Exhaust Fans
- HVAC
- Flexible Ducting
- General Industry

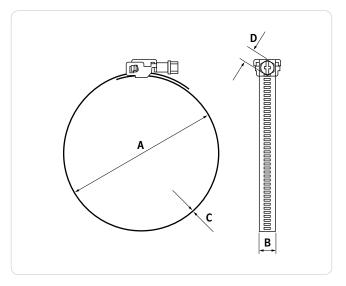
Materials - see section 10.3

Screw & Cover – Zinc Plated Steel Band & Housing – 430 SS

On Request

W4 304 SS





HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Hex Screw A/F (D) mm	Max Torque Nm	Box Quantity
QR-100	25 - 100		0.6	7.0	4.0	100
QR-200	25 - 200					
QR-300	25 - 300	0.0				
QR-400	25 - 400	9.0				
QR-500	25 - 500					
QR-750	25 - 750					

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W2, add "-W2". Other sizes available on request.







Mini Screw or Petrol Pipe Clip - Mollfam

Mollfam's Mini Screw Hose clamps, Petrol Pipe or Fuel Line Clips are particularly suitable for soft hoses and small diameters. The clamp forms a complete circle and has smooth edges.

Ц	Strength	
	Temperature	
Ě	Speed	
5	Weathering	
2	Chemical	
	Dynamic Range	

Applications

- Automotive
- White Goods
- Gas Equipment
- General Industry

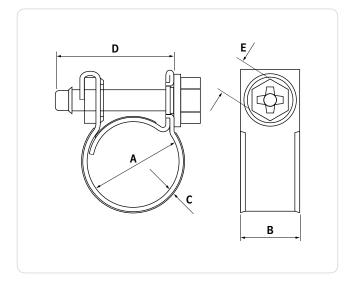
Materials - see section 10.3

Zinc Plated Steel

On Request

W4 304 SS





HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Hex Screw Length (D) mm	Hex Screw A/F (E) mm	Max Torque Nm	Box Quantity
MC-8	7-9						
MC-9	8 - 10						2000
MC-10	9 - 11						2000
MC-11	10 - 12						
MC-12	11 - 13			22.0	7.0	1.2	
MC-13	12 - 14						
MC-14	13 - 15	0.0					3000
MC-15	14 - 16	9.0	0.6				
MC-16	15 - 17						
MC-17	16 - 18						
MC-18	17 - 19						
MC-19	18 - 20						2500
MC-20	19 - 21						
MC-25-IMQ*	24 - 25						

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W1, add "-W1". Other sizes up to 84mm diameter available on request.
"IMQ code – Crosshead screw.







Double Wire Screw Hose Clamp - Mollfam

Mollfam's Double Wire Screw Clamps are highly suited to soft and semi-rigid hoses, with spiral or braided reinforcement; as well as aluminium foil ducting.

Strength	
Temperature	
Speed	
Weathering	
Chemical	
Dynamic Range	

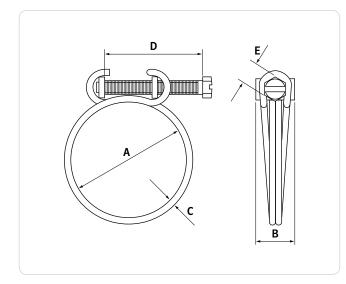
Applications

- Agricultural
- Irrigation
- Automotive
- General Industry

HVAC

Materials - see section 10.3

Zinc Plated Steel



Installation Tools - see section 9.1



				ı		
HCL	Diameter Range	Clamp Width	Wire Diameter	Hex Screw Length	Hex Screw A/F	
Part No	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm	
DWS-012	9.5 - 12.0		4.5	20.0		
DWS-014	11.5 - 14.0		1.5	20.0		
DWS-016	13.0 - 16.0	11.0			5.5	
DWS-018	15.0 - 18.0		1.8	25.0		
DWS-020	17.0 - 20.0					
DWS-023	19.0 - 23.0		2.0			
DWS-025	21.5 - 25.0		2.0			
DWS-027	23.5 - 27.0					
DWS-029	25.0 - 29.0					
DWS-031	27.0 - 31.0	14.0		30.0	7.0	
DWS-033	29.0 - 33.0	17.0	2.2	50.0	7.0	
DWS-035	30.5 - 35.0		۷.۲			
DWS-037						
DWS-040	35.5 - 40.0					
DWS-043	38.5 - 43.0					
DWS-046	41.0 - 46.0					
DWS-049	43.5 - 49.0	15.0				
DWS-053	46.5 - 53.0		2.5	40.0	8.0	
DWS-056	50.5 - 56.0					
DWS-060	53.5 - 60.0					
DWS-064	56.5 - 64.0					
DWS-068	60.0 - 68.0		2.8			
DWS-072	64.0 - 72.0		2.0			
DWS-076	68.5 - 76.0					
DWS-080	72.5 – 80.0					
DWS-084	76.5 - 84.0					
DWS-088	80.0 - 88.0			50.0		
DWS-092	84.0 - 92.0					
DWS-100	92.0 - 100.0					
DWS-108	98.0 - 108.0	18.0			10.0	
DWS-112	103.0 - 112.0					
DWS-120	111.0 - 120.0		3.0			
DWS-124	115.0 - 124.0					
DWS-128	120.0 - 128.0					
DWS-140	125.0 - 140.0					
DWS-150						
DWS-160	145.0 - 160.0			70.0		
DWS-170	155.0 - 170.0					
DWS-180	165.0 - 180.0					
DWS-190	175.0 - 190.0					

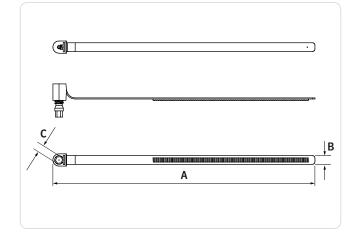
All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W1, add "-W1".





Materials - see section 10.3

- Screw PC/ABS
- Band & Housing POM



Installation Tools - see section 9.1



Plastic Worm Drive Hose Clamp

HCL's Plastic Worm Drive Hose clip is ideal in applications requiring a non-conductive and non-corrosive clamp. Manufactured in the UK it is a Strength
Temperature
Speed
Weathering
Chemical
Dynamic Range

unique clamping product which offers the non-corrosive features of a plastic clamping product combined with the strength of a metal worm drive hose clamp product.

Applications

- Electrical
- HVAC
- Irrigation
- Marine

- Medical
- Pharmaceutical
- General Industry

HCL Part No	Diameter Range mm	Length (A) mm	Band Width (B) mm	Hex Screw A/F (C) mm	Max Torque Nm	Box Quantity
PWD-15-65	15.0 - 65.0	235.0	10.0	7.0	2.5*	100

All weights, dimensions & quantities are subject to a 2.5% tolerance.

*It should be noted that torque data does not relate directly to the hoop strength of the clamp like a metal hose clip, as a significant amount of torque used in a metal clamp is needed to overcome the friction of the metal worm with the metal band of the clamp. This is not the case with the Plastic worm drive clamp as less torque is required to achieve the same hoop strength.





Materials - see section 10.3

W4 304 SS

Installation Tools - see section 9.1



Continuous Worm Drive Clamping Kit

HCL offers a high strength continuous worm drive kit, comprising of a 14mm wide perforated band with a separate screw and housing.

Strength Temperature Speed Weathering Chemical Dynamic Range	
--	--

The band can be cut to a desired length and fitted using standard tools to make a complete worm drive hose clamp of any diameter, thereby offering a versatile clamping solution.

Applications

- Electrical Exhaust Fans
- Sign Fixing
- Flexible Ducting
- General Industry

HVAC

HCL P	art No	Band	Band Band Width Thickness		Band	Screw/ Housing
Band	Screw/Housing		mm	A/F mm	Reel Lengths m	Box Quantity
FC-BA-25M	FC-BU	14	0.8	8.0	25	25

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W4, add "W4".



Strength Temperature

Speed

Weathering Chemical





Jubilee® Wingspade® Worm Drive Hose Clip

HCL are also offering the Jubilee® Wingspade® worm drive hose clip.

This product range is manufactured to DIN standard and has a plastic spade for ease of use.

Wing screw hose clamps are generally used on garden hoses and domestic applications where there is a requirement for frequent tightening and loosening on low torque applications mianly for the hardware market.

Applications

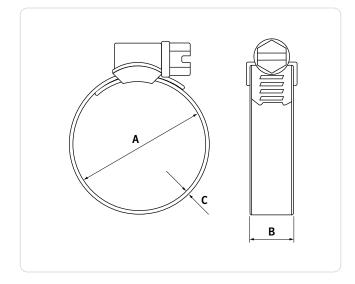
Hardware

Domestic

Garden

Materials - see section 10.3

Zinc Plated Steel



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm
WSWD-JUB-9.5	9.5 - 12		
WSWD-JUB-11	11 - 16		
WSWD-JUB-13	13 - 20		
WSWD-JUB-16	16 - 25		
WSWD-JUB-20	20 - 32	9.9	0.76
WSWD-JUB-25	25 - 40		
WSWD-JUB-32	32 - 50		
WSWD-JUB-40	40 - 60		
WSWD-JUB-50	50 - 70		

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W1, add "-W1".





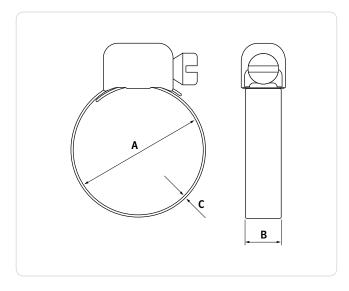


Applications

- Automotive
- Vending
- Aerations
- White Goods
- General Industry

Materials - see section 10.3

■ **W 4** 304 SS



Installation Tools – see section 9.1



Mini Worm Drive Clip - Oetiker

Oetiker Mini Worm Drive Clips are manufactured in 304 Stainless steel and its compact design means that the space requirements are minimal.

REORMANCE	Strength Temperature Speed Weathering Chemical	
Ä	Dynamic Range	

These clips are ideal for fitting into applications where space is at a premium.

Oetiker Mini Worm Drive Clip - Other Features

The mini worm drive clip features a cylindrical screw head which enables fast, simple and safe installation. In addition the clamp has an embossed band strip which reduces the risk of damage to the part being clamped.

HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm
MINI-WD-OET-7	7 – 11		
MINI-WD-OET-11	11 - 19		
MINI-WD-OET-18	18 - 29		
MINI-WD-OET-28	28 - 39		
MINI-WD-OET-38	38 - 49		
MINI-WD-OET-48	48 - 59		
MINI-WD-OET-58	58 - 69		
MINI-WD-OET-68	68 - 79		
MINI-WD-OET-78	78 - 89		
MINI-WD-OET-88	88 - 99		
MINI-WD-OET-98	98 - 109	5.0	0.40
MINI-WD-OET-108	108 - 119	5.0	0.40
MINI-WD-OET-118	118 - 129		
MINI-WD-OET-128	128 - 139		
MINI-WD-OET-138	138 - 149		
MINI-WD-OET-148	148 - 159		
MINI-WD-OET-158	158 - 169		
MINI-WD-OET-168	168 - 179		
MINI-WD-OET-178	178 - 189		
MINI-WD-OET-188	188 - 199		
MINI-WD-OET-198	198 - 209		
MINI-WD-OET-208	208 - 219		

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W1, add "-W1".

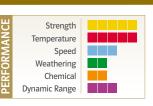
HEAVY DUTY CLAMPS





Hydraulic Hose Clip - Bolt & Barrel

Atlantics Stainless Steel Heavy Duty Bolt & Barrel Hose Clamps are manufactured in Italy to the highest standard. These Hydraulic hose clips are designed for high performance applications, such



as the sealing of suction and pressure hoses. The band has a smooth underside and bevelled edges, protecting the hose from damage. The bolt is directly engaged in the barrel and can be fastened with an electric or pneumatic tool.

Applications

W2

- Construction Equipment
- Drainage
- Irrigation
- Tankers

W4/W5

- Chemical Industry
- Food Processing
- Shipyards

Certifications



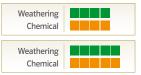
Materials - see section 10.3

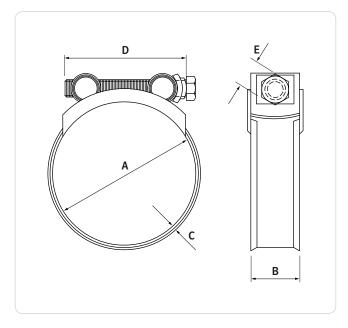
Bolt - Zinc Plated Steel Band/Bridge - 430 SS

On Request

W4 304 SS

W 316 SS





HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Hex Screw Length (D) mm	Hex Screw A/F (E) mm	Max Torque Nm	Box Quantity		
BBC-26	26 - 29								
BBC-30	30 - 33								
BBC-34	34 - 37			F0.0					
BBC-38	38 - 41			50.0					
BBC-42	42 - 46						100		
BBC-47	47 - 51	21.0	0.8		10.0	10.4			
BBC-52	52 - 57								
BBC-58	58 - 63								
BBC-63	63 - 68			60.0					
BBC-67	67 - 73						50		
BBC-73	73 - 79								
BBC-79	79 - 86			70.0					
BBC-86	86 - 95								
BBC-95	95 - 105								
BBC-104	104 - 115								
BBC-110	110 - 123	24.0	24.0	24.0	1.2	80.0	13.0	24.6	
BBC-115	115 - 130								
BBC-120	120 - 134								
BBC-131	131 - 140			90.0					
BBC-134	134 - 148						25		
BBC-148	148 - 162						25		
BBC-162	162 - 176								
BBC-165	165 - 180						20		
BBC-175	175 - 190						20		
BBC-190	190 - 205	26.0	1.5	100.0	17.0	50.1			
BBC-205	205 - 220						15		
BBC-224	214 - 227								
BBC-220	220 - 235						40		
BBC-235	235 - 250						10		

To add material selection to the HCL Part No: for W2, add "-W2".

HEAVY DUTY CLAMPS





Worm Drive Super (High) Torque Hose Clamp

HCL's perforated Worm
Drive Super (High) Torque
Worm Drive Hose Clamps are
ideal for heavy duty sealing
applications, particularly where



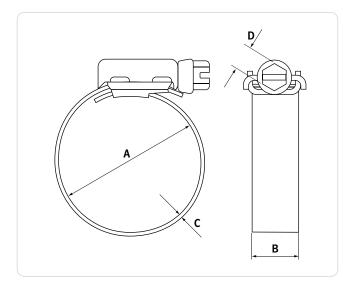
high vibration resistance is required. It is stronger than conventional Worm Drive clamps due to the wider band and the 'in-line' housing, which enables every thread on the worm to engage with the band.

Applications

- Agricultural
- Chemical Industry
- Food Processing
- Fluid Transfer
- Marine Industry
- Petrochemical Industry
- Shipyards

Materials - see section 10.3

W4 304 SS



HCL Part No	SAE No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Hex Screw A/F (D) mm	Max Torque Nm	Box Quantity
ST-16-20	126	20 - 32					
ST-16-32	176	32 - 44					
ST-16-40	238	40 - 60					
ST-16-57	312	57 - 79					
ST-16-70	362	70 - 92					
ST-16-83	412	83 - 106					
ST-16-95	462	95 - 118	45.0	0.7	0.0	45.0	400
ST-16-108	512	108 - 130	15.8	0.7	8.0	15.0	100
ST-16-121	562	121 - 143					
ST-16-133	612	133 - 156					
ST-16-146	738	146 - 188					
ST-16-184	812	184 - 208					
ST-16-210	912	210 - 232					
ST-16-220	950	220 - 240					

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W4, add "-W4".



HEAVY DUTY CLAMPS





Materials - see section 10.3

■ **W=** 301 SS

On Request

W 316 SS



Installation Tools - see section 9.1





MT-MB-01

MT-MB-02

Both tools are required to install Preformed clamps.

Preformed Band Clamps

Preformed Band Clamps offer a smooth inner diameter and provide the highest strength capability. They are manufactured in a wide range of fixed diameters and come in 2 types of materials.

щ	Strength	
۶ı	J	
ĪЪ	Temperature	
ΣI	Speed	
šΙ	Weathering	
추	Chemical	
7	Dynamic Range	

Vibration resistant and automatically locked with one simple lever movement, these clamps are ideal where superior strength is required. These are often the ideal hose clamping solutions for Hydraulic applications.

Applications

- Agricultural Machinery
- Offshore
- Railway Industry
- Sewer Cleaning Equipment
- Welding Equipment

HCL Part No.	Max Diameter	Band Width	Band Thickness	Box	
Part No	mm	mm	mm	Quantity	
PC-6-19	19.1				
PC-6-21	20.6				
PC-6-25	25.4				
PC-6-35	34.9				
PC-6-38	38.1				
PC-6-51	50.8	6.35	0.51		
PC-6-63	63.5				
PC-6-70	69.9				
PC-6-76	76.2				
PC-6-90	88.9				
PC-6-102	101.6				
PC-6-114	114.3				
PC-10-21	20.6				
PC-10-25	25.4				
PC-10-35	34.9				
PC-10-51	50.8	9.5	0.65		
PC-10-64	63.5			100	
PC-10-76	76.2				
PC-10-90	88.9				
PC-10-102	101.6				
PC-13-26	25.4				
PC-13-32	31.8				
PC-13-38	38.1				
PC-13-45	44.5				
PC-13-51	50.8	12.7			
PC-13-64	63.5	12.7			
PC-13-70	69.9				
PC-13-76	76.2				
PC-13-90	88.9				
PC-13-102	101.6				
PC-16-38	38.1				
PC-16-45	44.5				
PC-16-51	50.8	15.8			
PC-16-57	57.2		0.75		
PC-16-64	63.5		0.75		
PC-19-51	50.8				
PC-19-64	63.5			50	
PC-19-70	69.9				
PC-19-76	76.2				
PC-19-89	88.9				
PC-19-102	101.6				
PC-19-114	114.3	19.0			
PC-19-127	127.0			25	
PC-19-133	133.4			23	
PC-19-152	152.4				
PC-19-165	165.1				
PC-19-178	177.8				
PC-19-203	203.2				

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W3, add "-W3"





Nylon Earth Bond Clamp - Ezybond® BS951-1009

Manufactured by HCL, the patented Ezybond® Earth clamp conforms to BS951-2009. It is quick and easy to assemble, with an innovative design,



including a double grip jaw, conductor guide vanes and security locking tabs. Manufactured in Nylon 6.6, it also has excellent mechanical, chemical, heat resistant and self extinguishing properties. The Ezybond is the perfect **Earth Bond Clamping solution.**

Applications

- Construction
- Plumbing
- Electrical

Materials – see section 10.3	Part No	(A) mm	Size (B)	Width (C) mm	T
	EZB-15AC	15	A – B	11.9	
Heat/IIV Stabilised ROHS compliant Nylon 6.6	E7D-22AC	22	(25 - 60mm²)	12.0	Г

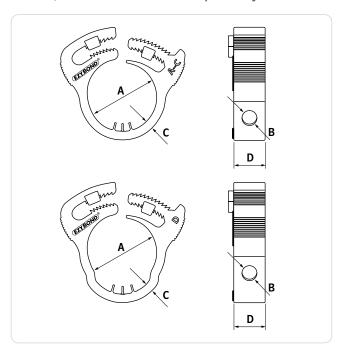
Turtito	(A) mm	(B)	(C) mm	(D) mm		Qualitity
EZB-15AC	15	A – B	11.9	3.2	Black	10
EZB-22AC	22	(2.5 - 6.0mm ²)	12.9	3.3		
EZB-15D	15	D	11.9	3.0	Cross	10
EZB-22D	22	(10.0mm²)	12.9	3.4	Grey	
All weights dimensions & quantities are subject to a 2.5% tolerance						

10 safely labels included in each bag.

Ezybond® versus standard Earth Clamps

Ezybond* offers a much faster installation time when compared to standard Earth clamps. The resulting cost reduction is highly advantageous to all users, ranging from Electricians to

Heat/UV Stabilised ROHS compliant Nylon 6.6.



Installation Tools - see section 9.1



MT-PL-01





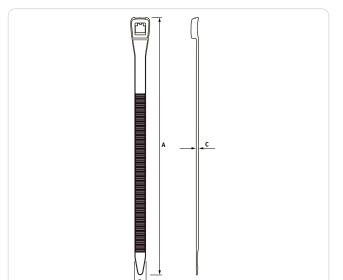
Materials - see section 10.3

Onshore:

Heat/UV Stabilised ROHS Nylon 6.6.

Offshore:

Nylon 11



Weathering

Chemical

Heavy Duty Nylon Cable Tie - Smart Tie™

Smart Tie[™] is a patented heavy duty nylon cable tie, able to withstand system loads well in excess of 600kg. Manufactured by HCL, in a selection of

빙	Strength	
킭	Temperature	
≩I	Speed	
šΙ	Weathering	
추	Chemical	
ͳ	Dynamic Range	

materials; it is able to perform in the most aggressive environments around the world, both on and offshore. Lightweight, easy to use and non-corrosive; the Smart Tie™ is the ideal cable tie solution for smaller diameters. The Smart Tie cable tie can also be made from Nylon 11 which is a long life polymer used in the offshore & subsea industry. In addition the Smart Tie is widely used in the downhole application as an alternative to metallic solutions.

Applications

Onshore:

- Processing Plants
- HVAC
- General Industry

Offshore:

- Cable Protection
- Oil Rigs
- Subsea Marking

HCL Part No	Diameter Range mm	Length (A) mm	Band Width (B) mm	Band Thickness (C) mm	System Strength kg	Box Quantity
ST-750	75 - 205	750	20.0	3.6	680	50

All weights, dimensions & quantities are subject to a 2.5% tolerance.

To add material selection to the HCL Part No: for Nylon 6.6, add "-PA66", or for Nylon 11, add "-PA11".

Online Videos

Demonstration videos are available to view on our website.



Smart Tie[™] and SM-FT-2000-19 Hand Tool



SM-FT-2000-19





Materials - see section 10.3

W 316 SS

On Request

■ WIS 316 SS coated

Temperature

Installation Tools - see section 9.1



MT-MCT-01

Metal Cable Tie - Tyco Ball Locking Type - 316SS

Tyco's 316 Stainless Steel Ball **Locking Cable ties are very** quick and easy to use. They are extremely non-corrosive, making them highly suited



to aggressive environments, such as marine cable bundling. These marine grade ball lock cable ties are supplied either coated or uncoated to suit the customers requirements.

Applications

- Aerospace
- Fixing Identification
- Automotive Aftermarket
- Offshore
- Chemical Industry
- Railway Industry
- Electrical and Electronic Industries
- Shipyards

Certifications





HCL Part No	Max Diameter mm	Length mm	Band Width mm	Band Thickness mm	Bag Quantity
BLT-4.6-100	25	100			
BLT-4.6-150	40	150			
BLT-4.6-200	50	200			
BLT-4.6-260	69	260			
BLT-4.6-360	102	360	4.6		
BLT-4.6-520	152	520			
BLT-4.6-620	190	620			
BLT-4.6-840	254	840			
BLT-4.6-1000	BLT-4.6-1000 300			0.4	400
BLT-7.9-100	25	100	7.9	0.4	100
BLT-7.9-150	40	150			
BLT-7.9-200	50	200			
BLT-7.9-260	69	260			
BLT-7.9-360	102	360			
BLT-7.9-520	152	520			
BLT-7.9-620	190	620			
BLT-7.9-840	254	840			
BLT-7.9-1000	300	1000			

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W5, add "-W5".





Materials - see section 10.3

■ WIS 316 SS with PPA coating

Installation Tools - see section 9.1



MT-MCT-01

Metal Cable Tie - Tyco Re-Usable - 316SS Coated

Tyco's 316 Stainless Steel **Coated Cable ties are very quick** and easy to use and can be used more than once. Because they are Coated these cable ties



are extremely non-corrosive, making them highly suited to aggressive corrosive environments, such as marine cable bundling.

Applications

- Chemical Industry
- Offshore
- Fixing Identification
- Shipyards

Certifications





HCL Part No	Max Diameter mm	Length mm	Band Width mm	Band Thickness mm	Bag Quantity pcs
RCT-6.4-152	38	152	6.4		
RCT-6.4-229	63	229			
RCT-6.4-305	86	305			
RCT-6.4-457	137	457			
RCT-6.4-610	185	610			
RCT-6.4-762	RCT-6.4-762 231				
RCT-6.4-914	280	914		1.3	100
RCT-9.5-152	38	152			
RCT-9.5-229	RCT-9.5-229 63		9.5		
RCT-9.5-305	RCT-9.5-305 86 30 RCT-9.5-457 137 45 RCT-9.5-610 185 61 RCT-9.5-762 231 76				
RCT-9.5-457					
RCT-9.5-610					
RCT-9.5-762					
RCT-9.5-914	280	914			

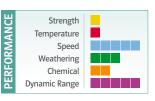
All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W5 with PPA coating, add "-W5-PPA".





Nylon (Plastic) Cable Tie - Standard - ITW Elematic

HCL supplies ITW standard plastic cable ties. These high quality Nylon Cable ties offer smooth rounded edges, a bent tip for easier insertion and a low friction material.



Applications

- Construction
- Electrical
- Fixing Identification
- General Industry

Certifications









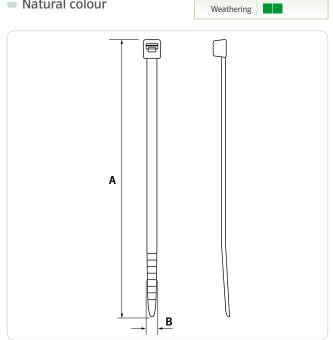


M	lateria	als	_	see	section	10.3

Heat/UV Stabilised ROHS compliant Nylon 6.6.

On Request

Natural colour



Installation Tools - see section 9.1



HCL Part No	Max Diameter mm	Length (A) mm	Band Width (B) mm	Tensile Strength kg	Box Quantity
CT-2.2-75	15	75	2.2	6	
CT-2.5-98	21	98			
CT-2.5-135	32	135	2.5	8	
CT-2.5-160	40	160	2.5		
CT-2.5-200	52	200			
CT-3.6-140	0 35 140				
CT-3.6-200	50	200	3.6	18	
CT-3.6-290	80	290			
CT-4.5-120	24	120	4.5		
CT-4.5-160	40	160	4.5		
CT-4.8-178	45	178			
CT-4.8-200	50	200		22	100
CT-4.8-250	68	250	4.8		
CT-4.8-290	78	290			
CT-4.8-360	100	360			
CT-4.8-430	115	430			
CT-7.8-120	25	120	7.8		
CT-7.8-180	45	180			
CT-7.8-240	63	240			
CT-7.8-300	80	300		55	
CT-7.5-365	100	365),	
CT-7.5-450	130	450	7.5		
CT-7.5-540	158	540			
CT-7.8-750	220	750	7.8		
CT-9.0-780	233	780	9.0	71	
CT-12.5-225	57	225			
CT-12.5-500	CT-12.5-500 143				
CT-12.5-720	213	720	12.5 110	110	50
CT-12.5-850	255	850			
CT-12.5-1000	CT-12.5-1000 302 10				

All weights, dimensions & quantities are subject to a 2.5% tolerance.

To add material selection to the HCL Part No: for Nylon 6.6. Black, add "-PA66-BK".

CLAMPING SOLUTIONS

CABLE RETENTION



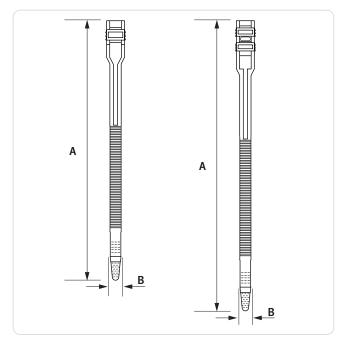
Materials - see section 10.3

Nylon 6.6.

On Request

Nylon 12 - FHCT-D-510 & FHCT-D-760 only





Nylon Cable Tie - Flat Head

HCL supplies ITW double and single flat head plastic cable ties. These high quality Nylon Cable ties offer smooth rounded edges, a bent tip for



easier insertion and a low friction material. These high strength Nylon Cable ties incorporate a low profile flat head, high surface area and a closing system with external teeth. They are particularly suitable for electrical applications, such as suspended lines, where there may be problems with insulation damage.

Applications

- Automotive
- Outdoor Use
- Electrical Installations
- Panel Building
- Industrial Wiring
- General Industry

HCL Part No	Max Bundle Diamater mm	Length (A) mm	Band Width (B) mm	Head Style	Tensile Strength kg	Box Quantity
FHCT-S-132	27	132		Single	e 39.8	100
FHCT-S-180	40	180				
FHCT-D-260	62	260		Double	Double 55.1	
FHCT-D-300	80	300	9.0			
FHCT-D-360	93	360				
FHCT-D-510	140	510				
FHCT-D-760	220	760				

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for Nylon 6.6, add ".PA66".

Installation Tools - see section 9.1



MT-PCT-03

CABLE RETENTION





Rubber Lined P Clips - Zinc Plated Steel

HCL's Zinc Plated Steel Rubber lined P clips have an elastomer sheathing that absorbs jolts and vibrations, preventing damage to cables and hoses; and also acts as an excellent electrical



insulator. The PK series Rubber lined P Clip is manufactured in accordance with DIN3016, incorporating a reinforced fastening hole and is made from Zinc Plated Steel with 316SS available on request.

Applications

- Automotive
- Electrical
- Engines
- Marine
- Railway
- General Industry

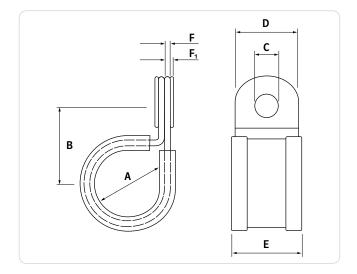
Materials - see section 10.3

W 1 Zinc Plated Steel

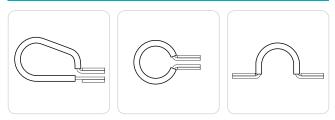
On Request

W 316 SS





Other types available on request



This page shows a small sample of the Rubber Lined clamps that we can supply. Please contact us with your specific requirement.

HCL Part No	Max Diameter	Offset Distance	Hole Diameter	Band Width	Rubber Width	Band Thickness	Clamping Thickness	Box Quantity
PK-15-5	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm	(F) mm	(F₁) mm	
PK-15-5 PK-15-6	5.0 6.0	12.2 12.7						
PK-15-7	7.0	13.2						
PK-15-8	8.0	13.7						
PK-15-9	9.0	14.2						
PK-15-10	10.0	14.7				0.6	1.6	
PK-15-11	11.0	15.2						
PK-15-12	12.0	15.7						
PK-15-13	13.0	16.2						
PK-15-14	14.0	16.7						
PK-15-15	15.0	17.2						
PK-15-16	16.0	17.7						
PK-15-17	17.0	18.2						
PK-15-18	18.0	18.7						
PK-15-19	19.0	19.2						
PK-15-20	20.0	19.7	6.4	15.0	18.0			100
PK-15-21	21.0	20.2	0.4	٠.٧.	10.0			100
PK-15-22	22.0	20.7						
PK-15-23	23.0	21.2						
PK-15-24	24.0	21.7						
PK-15-25	25.0	22.2				0.8	1.8	
PK-15-26	26.0	22.7						
PK-15-27	27.0	23.2						
PK-15-28	28.0	23.7						
PK-15-29	29.0	24.2						
PK-15-30	30.0	24.7						
PK-15-31	31.0	25.2 25.7						
PK-15-32 PK-15-33	32.0 33.0	26.2						
PK-15-33 PK-15-34	34.0	26.7						
PK-15-34	35.0	27.2						
PK-15-40	40.0	29.7						
PK-20-11	11.0	20.0						
PK-20-12	12.0	20.5						
PK-20-13	13.0	21.0						
PK-20-15	15.0	22.0						
PK-20-18	18.0	23.5						
PK-20-20	20.0	24.5						
PK-20-22	22.0	25.5						
PK-20-25	25.0	27.0						
PK-20-28	28.0	28.5						50
PK-20-30	30.0	29.5						JU
PK-20-32	32.0	30.5						
PK-20-35	35.0	32.0						
PK-20-38	38.0	33.5						
PK-20-40	40.0	34.5	_				_	
PK-20-45	45.0	37.0	8.4	20.0	24.0	1.0	2.5	
PK-20-50	50.0	37.5						
PK-20-55	55.0	40.0						
PK-20-60	60.0	42.5						
PK-20-65	65.0	45.0						
PK-20-70 PK-20-75	70.0 75.0	47.5 50.0						
PK-20-75 PK-20-80								
PK-20-80 PK-20-85	80.0 85.0	52.5 55.0						
PK-20-99	90.0	57.5						25
PK-20-95	95.0	60.0						رے
PK-20-100	100.0	62.5						
PK-20-110	110.0	65.0						
PK-20-120	120.0	67.5						
PK-20-130	130.0	70.0						
PK-20-130 All weights, din			subject to a 2	2.5% tolerand	e.	1		

To add material selection to the HCL Part No: for W1, add "-W1". Other sizes available on request.

CABLE RETENTION





Nylon (Plastic) P Clips Black or Natural - Micro Plastics

Micro Plastics Nylon P Clips (Plastic Cable Clamps) secure, insulate and route cable, wiring, tubing, piping and fibre optics.

Strength
Temperature
Speed
Weathering
Chemical
Dynamic Range

These Nylon P clamps are available in Black or natural colour and are

designed for medium to lightweight applications. All contact edges have a full radius for product protection.

Sizes are clearly marked on each clamp.

Applications

- Aerospace
- Marine
- Automotive
- Railway
- Electrical
- General Industry
- Engines

Certifications



Materials - see section 10.3

- Natural Nylon 6.6
- Black Nylon 6.6

On Request

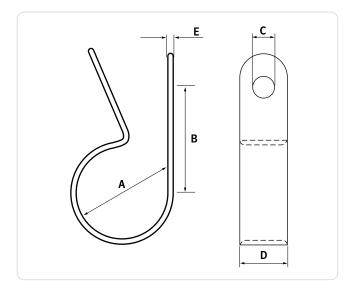
- Polypropylene
- 2% Carbon Black (UV Resistant) Nylon 6.6
- Flame Retardant Nylon 6.6

Chemical	

Weathering

Weathering

Temperature	
Weathering	



HCL Part No	Max Diameter (A) mm	Offset Distance (B) mm	Hole Diameter (C) mm	Band Width (D) mm	Band Thickness (E) mm	Box Quantity
NPC-10-3	3.2	8.4				
NPC-10-5	4.8	10.9				
NPC-10-6	6.4	10.4				
NPC-10-8	7.9	12.6				
NPC-10-10	9.5	15.1		9.5		
NPC-10-11	11.1	14.6				
NPC-10-13	12.7	15.4				
NPC-10-14	14.3	15.4				
NPC-10-16	15.9	17.2				
NPC-13-3	3.2	8.0				
NPC-13-5	4.8	10.8				
NPC-13-6	6.4	10.4				
NPC-13-8	7.9	12.7				
NPC-13-10	9.5	13.5	5.2		1.3	1000
NPC-13-11	11.1	14.2	5.2		1.5	1000
NPC-13-13	12.7	15.1				
NPC-13-14	14.3	15.4				
NPC-13-16	15.9	16.7				
NPC-13-18	17.5	19.2		12.7		
NPC-13-19	19.1	19.8				
NPC-13-21	20.6	20.7				
NPC-13-22	22.2	21.5				
NPC-13-26	25.4	23.1				
NPC-13-29	28.6	24.6				
NPC-13-30	30.2	25.4				
NPC-13-32	31.8	26.9				
NPC-13-35	34.9	28.6				
NPC-13-38	38.1	30.2				

All weights, dimensions & quantities are subject to a 2.5% tolerance. Other sizes available on request.

BANDING & STRAPPING





Heavy Duty Nylon Banding - Smart Band® Standard

Manufactured by HCL, Smart Band® Standard is a non-metallic band and buckle system. Quick, easy to use and versatile; it is the ideal strapping solution for



smaller diameters, both on and offshore.

Smart Band® Standard plastic banding system is available in a variety of materials, offering long-life, non-corrosive and high strength/relaxation properties; making it the ideal alternative to metallic strapping solutions, such as Stainless Steel, Titanium, Monel & Alloy 625.

Applications

Onshore:

- Cooling Towers
- HVAC
- Processing Plants
- Sign Fixing
- General Industry

Offshore:

- Marine Pile Protection
- Oil Rigs
- Subsea Marking

Materials - see section 10.3

Onshore:

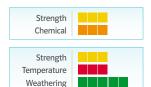
Nylon 6.6. – 7-19mm

Offshore:

Acetal - 19-25mm

On Request

Nylon 11 - 10-19mm



Chemical

SM-7R SM-7HST 2.5 95 20 / 250 100 SM-10R SM-10HST 10 3/8 200 30 / 125 3.6 SM-19R SM-19HST 30 / 60 19 3/4 500 50 All weights, dimensions & quantities are subject to a 2.5% tolerance.

To add material selection to the HCL Part No: for Nylon 6.6, add "-PA66"; for Acetal, add "-POM".

Online Videos

Demonstration videos are available to view on our website.



Sign Attachment using 19mm Smart Band® and SM-FT-2000-19 Hand Tool

Installation Tools - see section 9.1







SM-FT-1000-19

BANDING & STRAPPING





Materials - see section 10.3

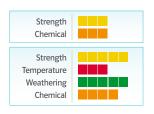
Onshore:

Nylon 6.6. - 19mm only

Offshore:

Acetal

Glass-filled Nylon 11



Installation Tools - see section 9.1







SM-FT-1000-PR-19 or SM-FT-1000-PR-32



SM-FT-1000-PS-19 or SM-FT-1000-PS-32

High Strength Nylon Banding - Smart Band® Hybrid

Manufactured by HCL, Smart Band® Hybrid is a patented nylon banding system. Incorporating an innovative snapfit latch, which allows the perfect blend of strength and flexibility; it is the strongest plastic band and buckle system in the world.



Smart Band® Hybrid is available in a variety of materials, offering long-life, non-corrosive and high strength/relaxation properties; making it the ideal alternative to metallic strapping solutions, such as Kevlar, Stainless Steel, Titanium, Monel & Alloy 625.

Applications

Onshore:

- HVAC
- Processing Plants
- General Industry

Offshore:

- Cable Protection
- Marine Pile Protection
- Oil Rigs
- Piggyback Pipe Lay
- Subsea Marking
- VIV Strakes

HCL Part No		Band Width			Max System		Buckle
Band	Buckle	mm	in	Thickness mm	Strength kg	Reel Lengths m	Box Quantity
SM-19R	SM-19HHY	19	3/4	3.6	1220	30 / 60	50
SM-32R	SM-32HHY	32	11/4	4.6	2560	30	25

All weights, dimensions & quantities are subject to a 2.5% tolerance.
To add material selection to the HCL Part No: for Nylon 6.6, add "-PA66", for Acetal, add "-POM", or for Glass-filled Nylon 11, add "-PA11GF".

Technical

The Smart Band* Hybrid system has been fully tested to offshore standards for Piggyback loading, Impact strength & long life performance – All of which can be found in our technical booklet available online.



Online Videos

Demonstration videos are available to view on our website.



19mm Smart Band[®] and SM-FT-1000 Hand Tool

BANDING & STRAPPING





Metal Banding 301SS Band and Buckles

HCL's Metal Banding (Steel Strapping) is a high quality band and buckle system, suitable for almost any sized application where superior Strength
Temperature
Speed
Weathering
Chemical
Dynamic Range

strength is required. This steel strap is often used in sign fixing and other onshore applications.

Applications

- Electrical
- Telecommunications
- Sign Fixing
- General Industry

Materials - see section 10.3

■ **W=** 301 SS

On Request

W4 304 SS

W 316 SS



MBA-1/4 MBU-1/4 6.4 1/4 0.51 225 MBA-3/8 MBU-3/8 9.5 3/8 0.61 400 MBA-1/2 MBU-1/2 680 30 / 50 12.7 1/2 100 MBA-5/8 MBU-5/8 15.8 5/8 0.75 890 MBA-3/4 MBU-3/4 3/4 1090 19.1

All weights, dimensions & quantities are subject to a 2.5% tolerance. To add material selection to the HCL Part No: for W3, add "-W3".

Installation Tools - see section 9.1



MT-MB-01

SPECIAL HOSE CLAMPS





Special Clamp Designs

From time to time, customers approach HCL with applications requiring a bespoke clamp design. On such occasions, HCL's in-house product development team will work closely with the customer to produce a unique clamp, based on either the Herbie Clip® or the Ezyclik®-P, but designed specifically for the particular application. Below are a few examples of special clamp designs:



Herbie Clip® Capacitor Cradle

This special clamp is based on the Herbie Clip*, but has been adapted to function as a capacitor cradle. The clamp incorporates a rectangular recess for fixing it to a sheet metal frame and a living hinge for isolating the capacitor from the frame.



Ezyclik® Fuel Pump Spigot Retaining Clamp

This bespoke clamp is based on the Ezyclik*-P, but has been modified to retain a moulded spigot in a cast automotive fuel pump housing. The clamp profile was designed to fit snugly around the housing boss, with various retaining features to prevent removal of the spigot or the clamp.



Herbie Clip® Dishwasher Clamp

This special Herbie Clip* is narrower than a standard clip, in order for it to fit in the restricted space on a certain dishwasher application. The head of the clip is full width where possible, so that the clip can be satisfactorily tightened using the Herbie Clip* Hand Tool.

Herbie Clip® Washing Machine Door Seal Clamp

This special clamp is based on the Herbie Clip*, but has been adapted to retain the rubber door seal on a washing machine. The clamp incorporates various bespoke features, including sealing, retaining and strengthening ribs.



Manual Tools - Plastic Snap Fit Hose Clamps



Herbie	Clip® -	- Vertical	Tool

PART NUMBER	MT-HC-VFT-0	1
DIMENSIONS	225 x 125 x 2	5mm
WEIGHT	0.46kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Herbie Clip® S	izes A-85	2.1



Adjustable	Waterpump	Pliers
------------	-----------	---------------

PART NUMBER	MT-PL-01	
DIMENSIONS	235 x 205 x 20mm	
WEIGHT	0.34kg	
BOX QUANTITY	1	
APPLICABLE CLAN	MPS	
Herbie Clip®		2.1
Ezybond®		6.1



Herbie Clip® - Removal Tool

Herbie Clip®		2.1
APPLICABLE CLA	MPS	
BOX QUANTITY	1	
WEIGHT	0.09kg	
DIMENSIONS	160 x 50 x 3mn	n
PART NUMBER	MT-HC-RT-01	



Ezyclik®-P - Lightweight Vertical Tool

PART NUMBER	MT-EZP-LVT-01		
DIMENSIONS	180 x 125 x 3	0mm	
WEIGHT	0.10kg		
BOX QUANTITY	1		
APPLICABLE CLA	MPS		
Ezyclik®-P		2.2	



Manual Tools - Metal Snap Fit, Ear & Spring Hose Clamps



PART NUMBER	MT-EZM-VT-01	l
DIMENSIONS	150 x 180 x 15ı	mm
WEIGHT	0.22kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Ezyclik®-M		2.3

3.1

Ezyclik®-M+

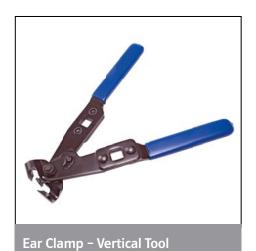


PART NUMBER	MT-EZM-SJ-01
DIMENSIONS	180 x 145 x 40mm
WEIGHT	0.25kg
BOX QUANTITY	1
APPLICABLE CLA	MPS
Ezyclik®-M	2.3
Ezyclik®-M+	3.1



PART NUMBER MT-EC-VHT-01
DIMENSIONS 230 x 220 x 25mm
WEIGHT 0.43kg
BOX QUANTITY 1
APPLICABLE CLAMPS
Zero Leak Ear 2.4

Tool



PART NUMBER	MT-EC-VT-01	
DIMENSIONS	225 x 190 x 35m	m
WEIGHT	0.54kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Zero Leak Ear		2.4



PART NUMBER MT-SC-TP-01

DIMENSIONS 200 x 160 x 25mm

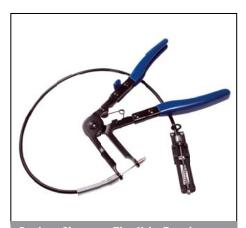
WEIGHT 0.21kg

BOX QUANTITY 1 + 1

APPLICABLE CLAMPS

Double Wire Spring 3.2

Spring Clamp - Tool Pack



Spring Clamp - Flexible Ratchet Tool

PART NUMBER	MT-SC-FR-01	
DIMENSIONS	875 x 190 x 2	5mm
WEIGHT	0.47kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Double Wire Spring		3.2





Manual Tools - Worm Drive & Screw Hose Clamps



Worm Drive & Screw Clamp Driver - 6.0/7.0mm Reversible Hex Socket

PART NUMBER	MT-D-01	
DIMENSIONS	280 x 35 x 35mm	
WEIGHT	0.19kg	
BOX QUANTITY	1	
APPLICABLE CLAN	IPS	
Worm Drive Co	nstant Tension	3.5
Supra Heavy D	uty Clamp	3.6
Worm Drive BS	5315	4.2
Worm Drive DI	N3017 - 9mm	4.3
Worm Drive DI	N3017 - 12mm	4.4
Quick Release \	Norm Drive	4.5
Mini Screw		4.6
Double Wire So	rew	4.7
Plastic Worm D	rive	4.8
Mini Worm Driv	ve Clip	4.11
Super Torque V	Vorm Drive	5.2



Worm Drive & Screw Clamp Torque Driver - 6.0, 7.0 & 8.0mm Hex Sockets

PART NUMBER	MT-TD-01	
DIMENSIONS	255 x 45 x 45mm	
WEIGHT	0.45kg	
BOX QUANTITY	1	
APPLICABLE CLAN	1PS	
Worm Drive Co	nstant Tension	3.5
Supra Heavy D	uty Clamp	3.6
Worm Drive BS	5317	4.2
Worm Drive DI	N3017 - 9mm	4.3
Worm Drive DI	N3017 - 12mm	4.4
Quick Release Worm Drive		4.5
Mini Screw		4.6
Double Wire So	rew	4.7
Plastic Worm D	rive	4.8
Mini Worm Driv	ve Clip	4.11
Super Torque V	Vorm Drive	5.2



Manual Tools - Plastic and Steel (Metal) Cable Ties



Plastic Cable Tie, 2.2 - 4.8mm width - Tensioning & Cutting Tool

PART NUMBER	MT-PCT-01	
DIMENSIONS	160 x 130 x 20	mm
WEIGHT	0.30kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Nylon Cable Tie Standard		6.5



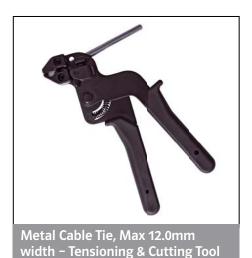
Plastic Cable Tie, 4.8 - 7.8mm width - Tensioning & Cutting Tool

PART NUMBER	MT-PCT-02	
DIMENSIONS	165 x 135 x 25	mm
WEIGHT	0.20kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Nylon Cable Tie Standard		6.5



Plastic Cable Tie, 3.6 - 13.0mm width - Tensioning & Cutting Tool

PART NUMBER	MT-PCT-03	
DIMENSIONS	190 x 120 x 25r	nm
WEIGHT	0.26kg	
BOX QUANTITY	1	
APPLICABLE CLAN	MPS	
Nylon Cable Ti	e Standard	6.5
Nylon Cable Ti	e Flat Head	6.6



PART NUMBER	MT-MCT-01	
DIMENSIONS	215 x 155 x 4	0mm
WEIGHT	0.56kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Metal Ball Locking Tie		6.3

6.4

Metal Re-usable Coated Tie



Manual Tools - Banding & Strapping - Smart Band® & Metal Banding



Smart Band® Standard, 7 - 10mm width - Tensioning & Cutting Tool

0x30mm
-528A



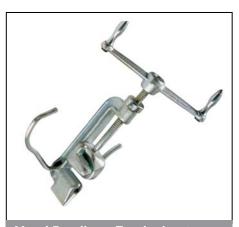
Smart Tie[™] & Smart Band[®] 19mm -Tensioning & Cutting Tool

PART NUMBER	SM-FT-2000-19	
DIMENSIONS	370x285x55mm	
WEIGHT	0.75kg	
BOX QUANTITY	1	
APPLICABLE CLAN	MPS	
Smart Tie [™]		6.2
Smart Band® Standard		7.1
Smart Band® H	lybrid	7.2



Smart Band® 19mm or 32mm - Tensioning & Cutting Tool

PART NUMBER	SM-FT-1000-19 or		
	SM-FT-1000-32		
DIMENSIONS	410x255x135mm		
WEIGHT	2.79kg		
BOX QUANTITY	1		
APPLICABLE CLA	MPS		
Smart Band® Standard			
Smart Band® Hybrid			



Metal Banding - Tensioning & Cutting Tool

PART NUMBER	MT-MB-01	
DIMENSIONS	300x205x70mm	
WEIGHT	1.79kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Preformed		5.3
Metal Banding		7.3



Metal Banding - Tool Adaptor (only works with MT-MB-01)

PART NUMBER	MT-MB-02	
DIMENSIONS	275x50x45mm	
WEIGHT	0.50kg	
BOX QUANTITY	1	
APPLICABLE CLAN	ЛPS	
Preformed		5.3



Band Cutters

PART NUMBER	MT-C-01	
DIMENSIONS	250x75x30mm	
WEIGHT	0.39kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Smart Band® S	Standard	7.1
Smart Band® Hybrid		7.2
Metal Banding		7.3



Installation Tools - Pneumatic Air Tools for Hose Clamps



Herbie Clip® - Calliper Tool (Various Jaw options available)

Handle Options:

- Gun grip (shown)
- Straight grip
- Vertical grip

PART NUMBER	PT-HC-C	
DIMENSIONS	240 x 80 x 170	mm
WEIGHT	0.89kg	
BOX QUANTITY	1	
APPLICABLE CLAN	MPS	
Herbie Clip® Sizes F-85		



Herbie Clip® - Piston Tool (Various Piston options available)

Handle Options:

- Gun grip
- Straight grip (shown)
- Vertical grip

PART NUMBER	PT-HC-P	
DIMENSIONS	335 x 55 x 65mr	n
WEIGHT	0.66kg	
BOX QUANTITY	1	
APPLICABLE CLAN	ИPS	
Herbie Clip® Si	zes A-105	2.1



Ezyclik® - Calliper Tool (Various Jaw options available)

Handle Options:

- Gun grip
- Straight grip
- Vertical grip (shown)

PART NUMBER	PT-EZY-C	
DIMENSIONS	60 x 60 x 270mm	
WEIGHT	0.91kg	
BOX QUANTITY	1	
APPLICABLE CLAN	ИPS	
Ezyclik®-P		2.2
Ezyclik®-M		2.3
Ezyclik®-M+		3.1



Control Box (works with Piston and Calliper tools)

PART NUMBER	PT-CB-01
DIMENSIONS	300 x 320 x 145mm
WEIGHT	3.90kg
BOX QUANTITY	1



Smart Band® 19mm or 32mm, Air Ratchet – Tensioning & Cutting Tool

PART NUMBER	SM-FT-1000-PR-19 or	
	SM-FT-1000-I	PR-32
DIMENSIONS	450 x 300 x 1	35mm
WEIGHT	4.00kg	
BOX QUANTITY	1	
APPLICABLE CLA	MPS	
Smart Band®	Hybrid	7.2

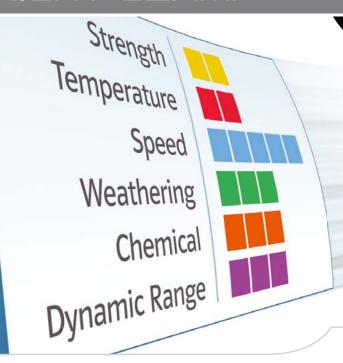


Smart Band[®] 19mm or 32mm, Air Shutoff Driver - Tensioning & Cutting Tool

PART NUMBER	SM-FT-1000-PS-19 or SM-FT-1000-PS-32		
DIMENSIONS	475 x 450 x	135mm	
WEIGHT	6.80kg		
BOX QUANTITY	1		
APPLICABLE CLA	MPS		
Smart Band®	Hybrid	7.2	

CHOOSING THE RIGHT CLAMP





Bar chart guide

The catalogue uses a bar chart guide, which rates each clamp in relation to its properties. The higher the number of bars, the better the performance. In this way, the bar chart guide can be used to compare the relative performance of the products in the catalogue.

When selecting a clamp, it is important to prioritise its desired properties. Once prioritised, the bar chart guide can be used to select the right clamp.

For clamps that are offered in a selection of materials, the figure shown represents the standard material and may be improved by selecting an alternative grade.

Strength

'The maximum pressure exerted by the clamp'

For any hose clamp application, it is important to match the clamping strength of the hose clamp with the sealing capabilities of the hose and pipe fitting. A hose clamp with inadequate strength may allow leakages, whilst a hose clamp with excessive strength may distort and damage the hose or fitting.



Temperature

'The maximum operating temperature of the clamp'

The maximum operating temperature of a clamp can be attributed almost entirely to the material from which it has been manufactured. Metal products are more temperature resistant than plastic; however, the majority of HCL's plastic products are manufactured from heat resistant polymers, such as Nylon 6.6. Fluctuating temperatures may cause diametrical variations to the hose or fitting; in which case, clamps in the 'Constant Tension' section of the catalogue may be required.



Speed

'The time taken to assemble the clamp'

The time taken to assemble a clamp is an important factor for higher volume applications, e.g. production lines; or for applications where the assembly time will impact upon more significant costs, e.g. offshore pipe laying. Installation tools have a major impact on speed of assembly and therefore should be selected accordingly. Please see the 'Installation Tools' section of the catalogue for more information.

Please refer to the 'Technical Information' section at the rear of the catalogue for more details.



Weathering

'The resistance of the clamp to weathering, such as Ultra Violet (UV) and moisture attack.'

The resistance of a clamp to weathering can be attributed entirely to the material from which it has been manufactured. Nylon offers superior resistance to weathering than Polypropylene. Metal products are more resistant to UV than plastic; however, the majority of HCL's plastic products are manufactured using a UV resistant carbon black additive. The materials used for metal clamps are given a 'W' rating from 1 to 5: the higher the rating, the more resistant the metal is to corrosion. For clamps that are offered in a selection of materials, the figure shown represents the standard material and may be improved by selecting an alternative grade.



Chemical

'The resistance of the clamp to chemicals, such as acids and alkalis."

The resistance of a clamp to chemicals can be attributed entirely to the material from which it has been manufactured. Polypropylene offers superior resistance to chemicals than Nylon. The materials used for metal clamps are given a 'W' rating from 1 to 5: the higher the rating, the more resistant the metal is to chemicals. For clamps that are offered in a selection of materials, the figure shown represents the standard material and may be improved by selecting an alternative grade.



Dynamic Range

'The diameter adjustment of the clamp'

A wide dynamic range is necessary where there is significant variation in diameter. This could be due to manufacturing variance of the hose, or because a single clamp is being used for a series of different applications. For clamps with a narrow dynamic range, it is important to evaluate 2 or 3 sizes per application before finally deciding. The diameter range of each clamp can be found in its table of dimensions.

CHOOSING THE RIGHT CLAMP



Matching the clamp to the hose

HCL's comprehensive range of clamping products provides the solution to a wide variety of applications. The following section can be used to match these clamps to particular hose types.

It is important to match the clamping strength of the hose clamp with the sealing capabilities of the hose and pipefitting. A hose clamp with inadequate strength may allow leakages, whilst a hose clamp with excessive strength may distort and damage the hose or fitting.

- Find the hose below, which is most suitable to the application.
- Refer to the Bar Chart for each product, to compare the relative performance of the suitable clamps.
- Thick rubber hoses may require a compensating clamp to adjust to shrinkage over time and maintain adequate compression.
- For more advice on choosing the correct clamp, please contact HCL.



Polypropylene rigid hose

Suitable Clamps:

- Herbie Clip*
- Ezyclik*-M
- Double Wire Spring
- Worm Drive
- Mini Screw
- Double Wire Screw



Silicone hose

Suitable Clamps:

- Herbie Clip*
- Ezyclik*-P
- Ezyclik*-M
- Zero Leak Ear
- Double Wire Spring
- Worm Drive
- Mini Screw
- **Double Wire Screw**



PVC Semi Rigid Spiral hose

Suitable Clamps:

- Worm Drive
- Double Wire Screw
- Bolt & Barrel
- T-Bolt
- Worm Drive Super Torque



PVC helix reinforced hose

Suitable Clamps:

- Worm Drive
- Double Wire Screw
- Bolt & Barrel
- Worm Drive Super Torque



PVC helix wire reinforced hose

Suitable Clamps:

- Worm Drive
- Double Wire Screw
- Bolt & Barrel
- Worm Drive Super Torque



PVC spiral low pressure hose

Suitable Clamps:

- Double Wire Spring
- Worm Drive
- Double Wire Screw



PVC soft braided reinforced hose

Suitable Clamps:

- Herbie Clip*
- Ezyclik*-P
- Ezyclik*-M
- Zero Leak Ear
- **Double Wire Spring**
- Worm Drive
- Mini Screw
- Double Wire Screw



PVC hard hose

Suitable Clamps:

- Herbie Clip*
- Ezyclik*-M
- Zero Leak Ear
- Worm Drive ■ Mini Screw
- Worm Drive Super Torque

CHOOSING THE RIGHT CLAMP



Matching the clamp to the hose



Rubber low pressure hose

Suitable Clamps:

- Herbie Clip®
- Ezyclik*-P
- Ezyclik*-M
- Zero Leak Ear
- Double Wire Spring
- Worm Drive
- Mini Screw
- Double Wire Screw
- Metal Tie various



PVC braided and steel reinforced hose

Suitable Clamps:

- Worm Drive DIN 3017 12mm
- Bolt & Barrel
- T-Bolt
- Worm Drive Super Torque



Rubber gas hose

Suitable Clamps:

- Herbie Clip*
- Ezyclik*-M
- Zero Leak Ear
- Double Wire Spring
- Mini Screw
- Worm Drive
- Double Wire Screw



PVC braided reinforced hose

Suitable Clamps:

- Herbie Clip*
- Ezyclik*-P
- Ezyclik*-M
- Zero Leak Ear
- Double Wire Spring
- Worm Drive
- Mini Screw
- Double Wire Screw



Rubber reinforced high pressure hose

Suitable Clamps:

- Ezyclik*-M
- Worm Drive DIN 3017 12mm
- Bolt & Barrel
- Worm Drive Super Torque
- Preformed



Rubber coolant hose

Suitable Clamps:

- Ezyclik*-M+
- Double Wire Spring
- Worm Drive
- Double Wire Screw
- Worm Drive Super Torque
- Preformed



Rubber air induction hose

Suitable Clamps:

- Herbie Clip*
- Ezyclik*-P
- Ezyclik*-M
- Zero Leak Ear
- Double Wire Spring
- Worm Drive
- Worm Drive Super Torque



Rubber flat hose

Suitable Clamps:

- Herbie Clip*
- Ezyclik*-P
- Ezyclik*-M
 Worm Drive
- Metal Tie Various
- Bolt & Barrel
- Worm Drive Super Torque

Choosing the right diameter:



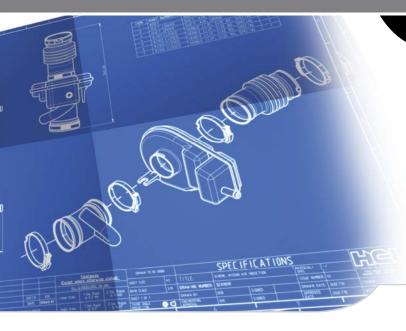
Hose clamps come in a range of diameters, so it is important to choose the correct size. The following points will help you in selecting the right diameter hose clamp:

 Only measure the outside diameter of the hose when it has been pushed onto the end of the pipe fitting, as often there will be expansion at this point.

- Once the outside diameter has been measured, check the dynamic range of the hose clamp to ensure that it can be tightened to the correct size. An allowance should be made for the compression of the hose.
- Ideally, the required diameter will be close to the midrange of the selected hose clamp. However, if this is not possible, or the hose clamp has a narrow dynamic range; it is advised to obtain sample sizes above and below the selected size, due to the difficulty in determining the required hose compression.

TECHNICAL INFORMATION





Clamping Design & Installation

The following section provides general information on clamping related technical issues. For certain products, more comprehensive information is available in the form of a Technical booklet.

For additional information, please refer to www.hcl-clamping.co.uk or contact HCL directly.

Pipe fitting design

An effective clamping solution relies, not only on the hose and hose clamp, but also on the pipe fitting. In order to select a fitting for optimum sealing performance, the following points must be taken into consideration:

- A barbed profile is normally best for sealing, however, this may not be true for thin walled or low pressure applications.
- The pipe fitting should be sized in order that the hose stretches slightly over the fitting. Undersize fittings may cause the hose to bunch up, thus creating a leak path. Oversize fittings will make it difficult to apply the hose.
- The pipe fitting should be of sufficient strength to withstand the compressive force of the clamp. This is particularly relevant for heavy duty clamps.

Diameter vs Axial thrust

Pressure inside a hose will create an axial thrust, which will tend to force the hose off the end of the pipe fitting. The purpose of a hose clamp is to retain the hose on the fitting, despite the axial thrust.

Axial thrust is proportional to the pressure in the hose and the square of the hose diameter. Therefore, for a given pressure, the axial thrust of a 200mm internal diameter hose is 100 times greater than for a 20mm internal diameter hose. For this reason, heavy duty hose clamps are required for large diameter hoses, where the pressure is significant.

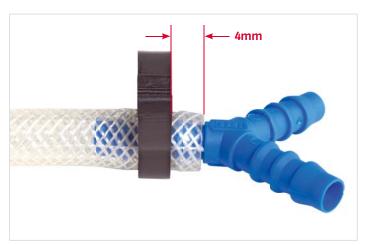
Tensioning

Tightening the clamp to the correct tension is essential for reliable performance.

For Worm Drive, Screw and Bolt clamps, a maximum torque figure is provided. The higher the input torque for a given clamp, the higher the clamping force will be. However, this figure must not be used to compare the relative strength of clamps; as other factors, such as the screw thread and the band width also play a part. Information on recommended tensioning for the Herbie Clip* range can be found in the Herbie Clip* and Ezyclik* Technical Booklet.

Hose clamp positioning

Tightening a hose clamp will result in compression of the hose. Upon compression, there will also be a certain amount of hose distortion. If the clamp is positioned too close to the end of the hose, there is a risk the clamp will slip off. Ensure that the clamp is at least 4mm from the end of the hose, as shown.



TECHNICAL INFORMATION



The application environment has a very important bearing on clamp and material selection.

Temperature

Generally, Nylon 6.6. hose clamps have a working temperature ceiling of 125°C (150°C for Glass-filled Nylon 6.6.). For applications that exceed 150°C, steel clamps should be used.

Weathering

For plastic hose clamps, exposure to UV radiation is the main cause of degradation. However, HCL's black plastic clamps are enriched with UV inhibitors and heat stabilisers, giving them a working life in excess of 10 years.

Steel clamps are more resistant to UV degradation, and

Clamping Environment

will last in hot sunny conditions well in excess of 10 years. Zinc plated steel clamps (W1-W2) can be used in dry climates, however, Stainless steel (W3-W5) should be selected for climates that are humid, or have significant rainfall.

Chemical

For corrosive environments, such as wet or salt water weathering: plastic or W4/W5 steel clamps should be used.

For highly corrosive applications requiring long life (25+ years): ultra-high grade materials must be used. This includes Nylon 11 or Nylon 12 for plastic clamps, and Titanium or High Nickel/Chromium alloys for steel clamps.



Sterilisation

In medical applications, it is common practice to sterilise the clamps before use. This is typically an aggressive process, to which only certain materials are resistant (W1-W2 steel clamps are not recommended for sterilisation).

The table below gives the material resistance to commonly used sterilisation methods:

Material	Gamma Radiation	Ethylene Oxide	Autoclave
Stainless Steel W - W -	Excellent	Excellent	Excellent
Nylon & Glass-filled Nylon Physically compatible with commonly used sterilisation doses, but may discolour to brownish hue.		Very Good. Some susceptibility to oxidising agents	Very Good. Components may swell slightly due to water absorption
Polypropylene	Excellent up to commonly used sterilisation doses (approximately 6 M-Rad)	Fair. May stress crack in EtO/CFC mix due to moulding stresses	Poor. Parts may distort due to low heat deflection temperature.

Stainless Steel is also rated as excellent for the following methods of disinfecting and sterilisation:

■ Formalin ■ Isopropyl Alcohol ■ Ethyl Alcohol ■ E-Beam ■ Dry Heat

TECHNICAL INFORMATION



A variety of polymers may be used to manufacture plastic hose clamps. The correct material for each application must be selected depending on the environmental conditions and the required performance of the clamp.

For the Herbie Clip* and Ezyclik* hose clamps, the standard polymer is Nylon 6.6, however, other materials are available on request.

Nylon 6.6.

Nylon 6.6. is a high strength, temperature and creep resistant polymer. For outdoor applications black is recommended, as this has the best UV resistance. Please note that Nylon 6.6. is a hygroscopic (water absorbing)

Material Information - Plastic

material. Herbie Clips® are supplied in a moisturised state and should not be allowed to dry out before they are applied. If the clamps are dry and stiff, the simple addition of water for 24 hours will re-moisturise the clamps. Once the clamps have been fitted, moisturisation is no longer an issue.

Glass-filled Nylon 6.6.

Available for the Ezyclik*-P on request only. Increased strength and temperature resistance over standard Nylon 6.6.

Polypropylene

Inferior to Nylon 6.6. in almost every respect but it does acids) over Nylon 6.6. The clamps also do not need to be



TECHNICAL INFORMATION



Material Information - Metal

Steel hose clamps are manufactured in a range of different material grades, specified as W1 to W5, depending on their corrosion resistance. The grades are defined as follows:

'W' Rating	Composition	USA	UK	Germany	Italy
		AISI	BS	WN	UNI
W	Screw - Zinc Plated Steel Cr3	-	-	1.0214	-
	Band & Housing - Zinc Plated Steel Cr3	-	-	1.0935	-
WE	Screw - Zinc Plated Steel Cr3	-	-	1.0214	-
VV[=	Band & Housing - Stainless Steel	430	430 S 15	1.4016	X8 Cr17
WE	Stainless Steel	301 / 430	301 S 21 / 430 S 15	1.4310 / 1.4016	X12 CrNi 17 7 / X8 Cr17
W4	Stainless Steel	304	304 S 15	1.4301	X5 CrNi 18 10
	Stainless Steel	316	316 S 33	1.4401	X5 CrNiMo 17 12

The following table provides a more detailed composition analysis of the various metals that are used to make steel hose clamps:

		WB	WE	W 4	WS	WE	Steel
	Units	AISI 201	AISI 301	AISI 304	AISI 316	AISI 430	(E.g. AISI 1045)
Composition	%	C 0.15 max Mn 5.5-7.5 Si 1 max Cr 16-18 Ni 3.5-5.5	C 0.15 max Mn 2 max Si 1 max Cr 16-18 Ni 6-8	C 0.08 Mn 2 max Si 1 max Cr 18-20 Ni 8-10.5	C 0.08 max Mn 2 max Si 1 max Cr 16-18 Ni 10-14 Mo 2-3	C 0.12 max Mn 1 max Si 1 max Cr 16-18	C 0.43-0.5 Mn 0.6-0.9 P 0.04 max S 0.05 max
Physical Properties							
Structure	-	Austenitic				Ferritic	
Density	g/cm³	7.8	8	8	8	7.8	7.8
Melting Point	°C	1398-1454	1398-1421	1398-1454	1371-1398	1426-1510	_
Continuous Heat Resistance	°C	760	810	835	835	760	_
Electrical Properties							
Magnetic Behaviour	-	Non-magnetic			Magnetic		
Magnetic Permeability	-	1.02	1.02	1.008	1.008	600-1100	1500-2000
Electrical Resistivity at 21°C	10 ⁻⁹ Ωm	690	720	720	740	600	170
Mechanical Properties							
Elongation	%	40	40	40	40	22	12
Breaking Strength	MPa	515	515	515	515	450	585
Yield Strength	MPa	275	205	205	205	205	505
Hardness	R _B	90-95	70-95	75-95	75-85	75-90	170
Corrosion Resistance							
Fresh Water	-	Good	Good	Very Good	Excellent	Good	Fair*
Industrial	-	Good	Good	Very Good	Very Good	Fair	Fair*
Marine	-	Fair	Fair	Good	Very Good	Poor	Poor
Salt Water	-	No	No	Poor	Good	No	No
Acid	-	Fair	Fair	Good	Good	Fair	No
Bases	-	No	No	No	Good	No	No

Assuming zinc-plated

CONDITIONS OF SALE





Conditions of Sale

Full terms and conditions can be found on the HCL website under the heading 'Corporate'.

Order Placement - Customer Codes

HCL uses customer codes against internal product codes to ensure continuity within the ordering process.

Customer codes will be used on 'Orders of Acceptance' and 'Invoices'.

Box Quantities

All box quantities are subject to a +/- 2.5% tolerance.

For Nylon 6.6. hose clamp products, HCL weigh-counts the quantities when dry for maximum accuracy. Due to the hygroscopic (water absorbing) nature of Nylon 6.6. and the addition of water to these products, the piece part weights may vary. Customers should be aware that any subsequent weigh-counting of the products could be inaccurate.

Returning Goods

Return of goods must be agreed beforehand with HCL. Without prior agreement, HCL reserves the right to refuse any return of goods.

Privacy

HCL is committed to safeguarding the privacy of its customers. Customer records will be protected from 3rd parties unless the customer expressly consents otherwise.

Guarantee

HCL guarantees the replacement of faulty products free of charge. This does not include faults caused by misuse or incorrect installation. See HCL warranty for full details.

Disclaimer

The information contained in this catalogue should be used as a guideline only and does not constitute a warranty (explicit or implied) for our products or their suitability for specific applications. HCL will assist and advise the selection of a suitable product for a given application, however, the customer assumes final responsibility for the use of any product from this catalogue.

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NOTES



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