



P R O D U C T C A T A L O G U E

Complete range of hose clamps, cable retention and banding solutions



M A R C H 2 0 1 1



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 ancillary 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.

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HCL's Quality Policy

Within HCL Fasteners Ltd we are committed to provide products and services which meet the customers' specified contractual and project requirements and those of all applicable regulating authorities.

We are totally committed to setting and achieving quality standards that are capable of meeting, in all respects, the specified requirements and reasonable expectations of our customers, whilst working within the framework of statutory, regulatory and legal requirements.

In order to achieve this objective, it is the policy of HCL Fasteners to maintain an effective quality system based on the requirements of: **BS EN ISO 9001-2008**.



Specialists in banding and clamping products



HCL is uniquely placed to provide a first class clamping service thanks to its long term exclusive arrangements with high quality clamping suppliers around the world, and its ability to manufacture a variety of clamping products and fitting tools.

Founded in 1994, HCL was originally known for the manufacture and supply of the original double grip plastic hose clamp, the Herbie Clip®. Since then, HCL has established a focused range of products which specialise in plastic clamping and banding; including Smart Band®, Smart Tie™ and the Ezyklik™. Our hi-tech manufacturing facility consisting of numerous injection moulding machines and bespoke extrusion lines.

2010 saw an exciting change for HCL, as for the first time we combined our manufactured and supplied clamping products to create a complete portfolio of clamping solutions.

With an established office in North America and a worldwide distribution network, our continuous objective is to innovate and service the market with quality-engineered products that will stand the test of time.

SNAP FIT & EAR CLAMPS



Double Grip Plastic Hose Clamp – Herbie Clip®

Manufactured by HCL, the Herbie Clip® is the original double grip plastic hose clamp. 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.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
Dynamic Range		

Applications

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

Materials – see section 10.3

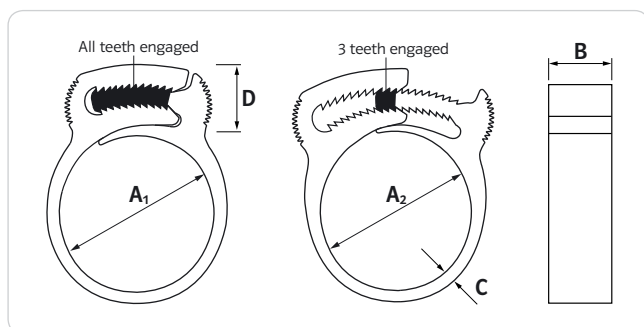
Standard

- Heat/UV Stabilised ROHS compliant Nylon 6.6.

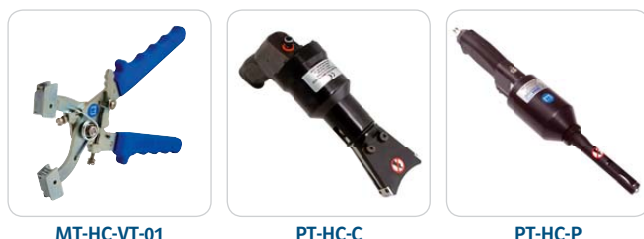
On Request

- Polypropylene

Strength	
Temperature	
Weathering	
Chemical	



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	1.6	9.9	2500
HC-B	7.9 – 9.2	4.6		9.3	
HC-BB	9.2 – 10.3	4.5	1.7	10.9	2000
HC-C	10.2 – 11.8	5.8		12.2	
HC-CC	11.1 – 12.9	6.1		12.3	
HC-D	12.0 – 13.8	6.1		12.9	
HC-E	13.1 – 15.1	7.2	2.0	13.6	1000
HC-F	15.0 – 17.1	7.1		12.9	
HC-G	16.9 – 19.1	6.9	2.1	12.5	
HC-H	18.1 – 20.6	7.1		12.7	
HC-J	20.3 – 23.0	6.4	2.0	14.2	1500
HC-K	22.2 – 24.9	7.0		13.0	
HC-L	24.5 – 27.6	7.1	2.1	12.5	1000
HC-M	26.5 – 29.5	7.4	2.2	13.4	
HC-N	28.8 – 32.2	9.0	2.0	13.4	750
HC-P	32.0 – 34.8	9.1	2.2	13.8	
HC-Q	34.3 – 37.9	8.9	2.1	13.5	500
HC-R	38.0 – 41.0	9.2		14.1	
HC-S	40.1 – 44.2	9.0	2.2	13.4	1000
HC-T	43.2 – 46.2	8.9	2.1	12.8	
HC-U	46.0 – 50.5	9.0		14.4	750
HC-V	48.5 – 53.8	9.0	2.6	14.4	
HC-W	53.0 – 56.5	9.0		15.0	
HC-X	55.0 – 60.5	9.4	2.3	15.5	500
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		15.7	
HC-70	70.0 – 75.4	9.1		15.5	100
HC-75	74.7 – 80.5	9.1	2.9	16.5	
HC-80	79.8 – 85.0	9.0		17.7	
HC-85	85.1 – 90.6	8.9	2.6	17.2	
HC-91	91.0 – 96.0	9.5		16.7	500
HC-96	97.7 – 102.1	8.5		17.4	
HC-105	105.3 – 111.8	8.9		16.2	
HC-109	108.0 – 114.3	9.0		17.4	100
HC-115	115.0 – 121.0	9.5		17.4	
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



Ezyklik™-P

Manufactured by HCL, the Ezyklik™-P (Plastic) is specifically designed for hose clamping applications where space is restricted. The unique design of the patent pending Ezyklik™-P ensures strong, fast and reliable clamping with a low profile design and fully corrosion resistant materials.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

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

Materials – see section 10.3

Standard

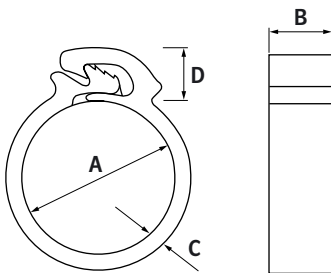
- Heat/UV Stabilised ROHS compliant Nylon 6.6.

On Request

- Polypropylene
- Glass-filled Nylon 6.6.

Strength	
Temperature	
Weathering	
Chemical	

Strength	
Temperature	



Installation Tools – see section 9.1



MT-EZP-LVT-01

MT-EZP-HT-01

PT-EZY-C

Other Ezyklik™-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	8.0	1.7	5.3	2000
EZY-P-8.7	8.7				
EZY-P-8.9	8.9				
EZY-P-9.2	9.2				
EZY-P-9.5	9.5				
EZY-P-10.0	10.0				
EZY-P-11.4	11.4			5.5	1500
EZY-P-12.0	12.0				
EZY-P-12.5	12.5				
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		2.0	6.8	1000
EZY-P-14.6	14.6				
EZY-P-15.0	15.0				
EZY-P-15.7	15.7				
EZY-P-15.9	15.9				
EZY-P-16.5	16.5				
EZY-P-16.8	16.8				
EZY-P-17.1	17.1				
EZY-P-17.5	17.5				
EZY-P-17.6	17.6				
EZY-P-18.0	18.0				1500
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				
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	1000			
EZY-P-25.8	25.8				
EZY-P-26.8	26.8				
EZY-P-28.0	28.0				
EZY-P-30.6	30.6				
EZY-P-31.4	31.4	9.0	2.5	7.3	400
EZY-P-36.5	36.5				
EZY-P-42.4	42.4				
EZY-P-43.3	43.3				
EZY-P-45.5	45.5				

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



Ezyklik™-M

The Ezyklik™-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.

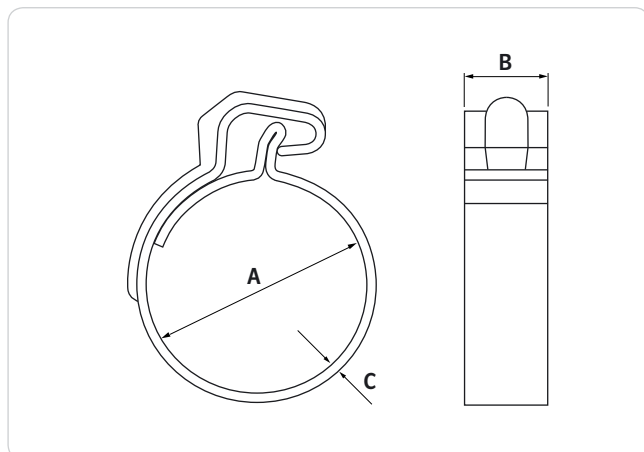
PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

- Automotive
- Hydro Massage
- White Goods
- General Industry

Materials – see section 10.3

- W4 304 SS



Installation Tools – see section 9.1



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Colour Mark	Box Quantity
EZY-M-8.0	8.5 – 9.5	6.0	0.5	Blue	3000
EZY-M-8.5	9.0 – 10.0			Green	
EZY-M-9.0	9.5 – 11.0			Purple	2500
EZY-M-9.5	10.0 – 11.5			Black	
EZY-M-10.0	10.5 – 11.5			Green	
EZY-M-10.5	11.0 – 12.0		0.6	Blue	
EZY-M-11.0	11.5 – 12.5			Green	2500
EZY-M-11.5	12.0 – 13.0			Purple	
EZY-M-12.0	12.5 – 13.5			Black	
EZY-M-12.5	13.0 – 14.0			Red	
EZY-M-13.0	13.5 – 14.5			Green	3500
EZY-M-13.5	14.0 – 15.0			Purple	
EZY-M-14.0	14.0 – 14.5			Red	
EZY-M-14.5	15.0 – 16.0			Purple	
EZY-M-15.0	15.5 – 16.5	8.0	0.6	Black	3000
EZY-M-15.5	16.0 – 17.0			Blue	
EZY-M-16.0	16.5 – 17.5			Green	
EZY-M-16.5	17.0 – 18.0			Black	
EZY-M-17.0	17.5 – 18.5			Red	2500
EZY-M-17.5	18.0 – 19.0			Blue	
EZY-M-18.0	18.5 – 19.5			Green	
EZY-M-18.5	19.0 – 20.0			Purple	
EZY-M-19.0	19.5 – 21.0		0.5	Blue	2000
EZY-M-19.5	20.0 – 21.5			Black	
EZY-M-20.0	20.5 – 22.0			Red	
EZY-M-20.5	21.0 – 22.5			Blue	
EZY-M-21.0	21.5 – 23.0			Green	2500
EZY-M-21.5	22.0 – 23.5			Purple	
EZY-M-22.0	22.5 – 24.0			Black	
EZY-M-23.0	23.5 – 25.0			Blue	2000
EZY-M-23.5	24.0 – 25.5			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 Ear

HCL's Zero Leak Ear clamp is ideal for rubber and PVC hoses. The 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.

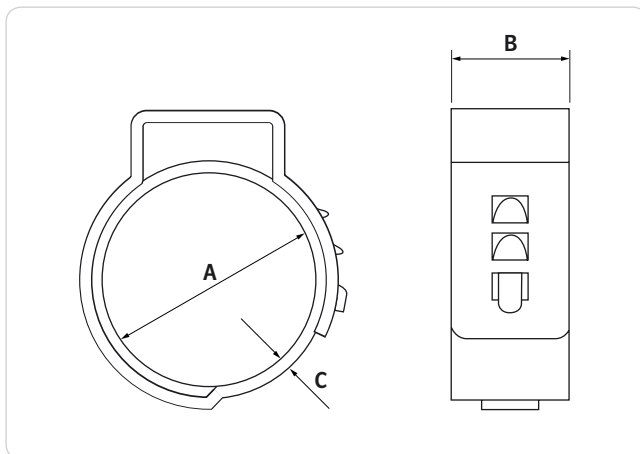
PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

- Automotive
- Vending
- White Goods
- General Industry

Materials – see section 10.3

- 304 SS



Installation Tools – see section 9.1



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Box Quantity
ZLEC-7.0	5.7 – 7.0	5.0	0.5	100
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			
ZLEC-10.0	8.3 – 10.0			
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	7.0	0.6	
ZLEC-12.3	9.8 – 12.3			
ZLEC-12.8	10.3 – 12.8			
ZLEC-13.3	10.8 – 13.3			
ZLEC-13.8	11.3 – 13.8			
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			
ZLEC-15.3	12.8 – 15.3			
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.

SNAP FIT & EAR CLAMPS

Single Ear Hose Clamp (O-clip)

HCL's Single Ear Hose Clip (O Clip) is manufactured from a choice of materials and is an economical solution for many simple hose assemblies. The clamps can be used with air or other fluids. The design of the clamp means that they are tamper proof once mounted. The edges are also rounded to avoid damage to the hose. A full range of manual and pneumatic installation tools are available.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
Dynamic Range		

Applications

- Automotive
- White Goods
- Vending
- General Industry

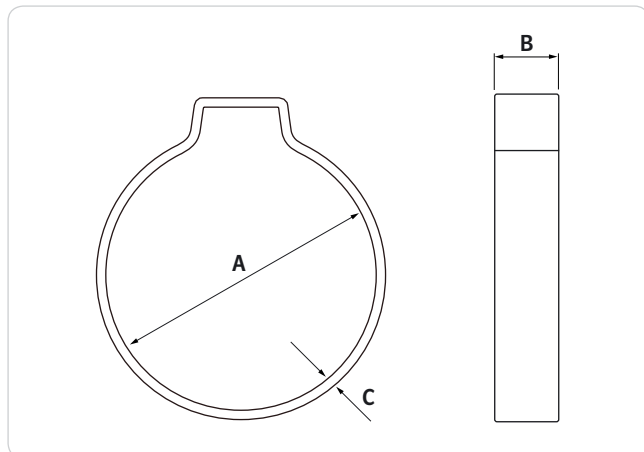
Materials – see section 10.3

- W1** Zinc Plated Steel

On Request

- W4** 304 SS

Weathering	
Chemical	



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Box Quantity			
SEC-7	7 – 9	6.0	0.8	100			
SEC-8	8 – 10						
SEC-9	9 – 11						
SEC-10	10 – 12						
SEC-11	11 – 13	6.5	1.0		100		
SEC-12	12 – 14						
SEC-13 [®]	13 – 15						
SEC-14	14 – 16						
SEC-15 [®]	15 – 17						
SEC-16	16 – 18	7.0	1.0			100	
SEC-17 [®]	17 – 19						
SEC-18 [®]	18 – 20						
		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-VHT-01

MT-EC-VT-01

SNAP FIT & EAR CLAMPS

Double Ear Hose Clamp (O-clip)

HCL's Double Ear Hose Clip (O Clip) is manufactured from a choice of materials 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. The practical design of the clamp means that they clamp firmly onto the assembly and cannot be removed.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
Dynamic Range		

Applications

- Automotive
- White Goods
- Vending
- General Industry

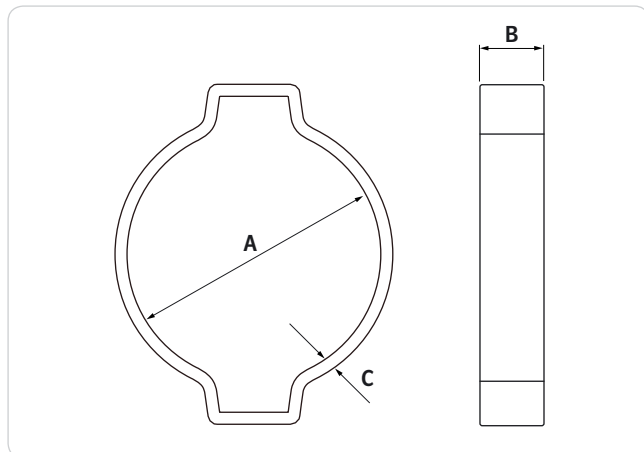
Materials – see section 10.3

- W1** Zinc Plated Steel

On Request

- W4** 304 SS

Weathering	
Chemical	



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Box Quantity
DEC-5	5 – 7	6.0	0.6	100
DEC-7	7 – 9		0.8	
DEC-9	9 – 11	6.5	0.9	
DEC-11	11 – 13		1.0	
DEC-13	13 – 15	7.0	1.2	
DEC-14*	14 – 17		1.3	
DEC-15	15 – 18	7.5	1.4	
DEC-17	17 – 20		1.6	
DEC-18	18 – 21	8.0	1.6	
DEC-20	20 – 23		1.6	
DEC-22	22 – 25	8.5	1.6	
DEC-23*	23 – 27		1.6	
DEC-25*	25 – 28	9.0	1.6	
DEC-28*	28 – 31		1.6	
DEC-31*	31 – 34	9.5	1.6	
DEC-34*	34 – 37		1.6	
DEC-37*	37 – 40	10.0	1.6	
DEC-40*	40 – 43		1.6	
DEC-43*	43 – 45	10.5	1.6	

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



MT-EC-VHT-01

MT-EC-VT-01

COMPENSATING CLAMPS



Ezyclick™-M+

The Ezyclick™-M+ hose clamp offers exceptional strength and a diameter that self-adjusts to compensate for diametrical variations. It is quick and easy, to assemble and disassemble; has a low profile design and is manufactured from corrosion resistant Stainless Steel.

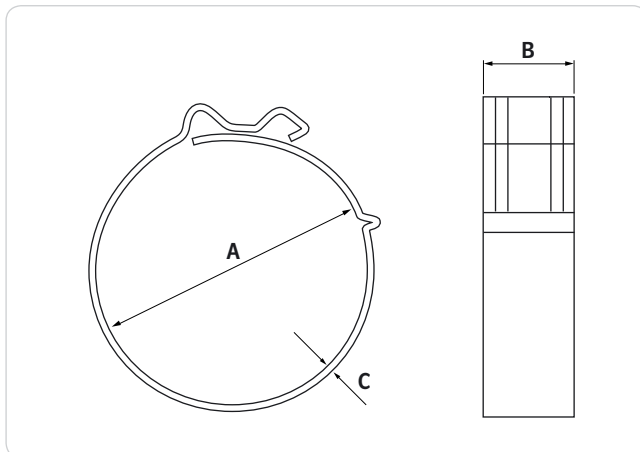
PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

- Automotive
- Hydro Massage
- White Goods
- General Industry

Materials – see section 10.3

- 304 SS



Installation Tools – see section 9.1



MT-EZM-VT-01

MT-EZM-SJ-01

PT-EZY-C

HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Box Quantity
EZY-M+-7.0	7.5 – 9.0	6.0	0.6	5000
EZY-M+-8.0	8.5 – 10.0			4000
EZY-M+-9.0	9.5 – 11.0			3000
EZY-M+-10.0	10.5 – 12.0			4500
EZY-M+-10.5	11.0 – 12.5			
EZY-M+-11.0	11.5 – 13.0	8.0		2500
EZY-M+-11.5	12.0 – 13.5			2000
EZY-M+-12.0	12.5 – 14.0			
EZY-M+-12.5	13.0 – 14.5			
EZY-M+-13.0	13.5 – 15.0			3500
EZY-M+-13.5	14.0 – 15.5			
EZY-M+-14.0	14.5 – 16.0			3000
EZY-M+-14.5	15.0 – 16.5			
EZY-M+-15.0	15.5 – 17.0			2500
EZY-M+-15.5	16.0 – 17.5			
EZY-M+-16.0	16.5 – 18.0			2000
EZY-M+-16.5	17.0 – 18.5			
EZY-M+-17.0	17.5 – 19.0			1500
EZY-M+-17.5	18.0 – 19.5			
EZY-M+-18.5	19.0 – 20.5			1500
EZY-M+-19.5	20.0 – 21.5			
EZY-M+-20.5	21.0 – 23.0			1500
EZY-M+-21.0	21.5 – 23.5			
EZY-M+-21.5	22.0 – 24.0			1500
EZY-M+-22.5	23.0 – 25.0			
EZY-M+-23.5	24.0 – 26.0			1500
EZY-M+-24.0	24.5 – 26.5			
EZY-M+-24.5	25.0 – 27.0			1500
EZY-M+-25.0	25.5 – 27.5			
EZY-M+-25.5	26.0 – 28.0			1500
EZY-M+-26.0	26.5 – 28.5			
EZY-M+-26.5	27.0 – 29.0			1500
EZY-M+-27.5	28.0 – 30.0			
EZY-M+-28.5	29.0 – 31.0			1500
EZY-M+-29.0	29.5 – 31.5			
EZY-M+-30.0	30.5 – 32.5			1500

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.

COMPENSATING CLAMPS



Double Wire Spring

Double Wire Spring clamps are ideal on rubber and PVC hoses. The spring effect compensates for diametrical variation and the complete circle guarantees a uniform radial pressure.

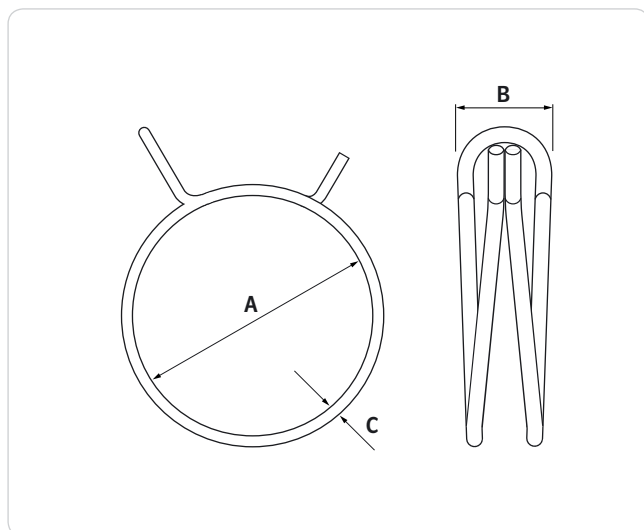
PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

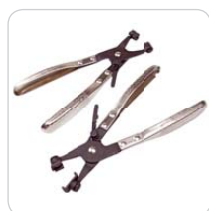
- Agricultural
- Irrigation
- White Goods
- General Industry

Materials – see section 10.3

- **W1** 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	Box Quantity
DW-6.8	6.6 – 7.0	5.0	1.0	1000
DW-7.3	7.0 – 7.5			
DW-7.6	7.3 – 7.8			
DW-8.1	7.8 – 8.3	5.5		
DW-8.6	8.3 – 8.8			
DW-9.1	8.8 – 9.3			
DW-9.6	9.3 – 9.8			
DW-10.1	9.8 – 10.4	6.0	1.2	
DW-10.7	10.4 – 11.0			
DW-11.3	11.0 – 11.6			
DW-11.9	11.6 – 12.2	7.0	1.5	
DW-12.6	12.2 – 12.9			
DW-13.3	12.9 – 13.6			
DW-13.7	13.3 – 14.1			
DW-14.0	13.6 – 14.4	8.0	1.8	
DW-14.8	14.4 – 15.1			
DW-15.6	15.1 – 15.9			
DW-15.8	15.5 – 16.3			
DW-16.4	15.9 – 16.8			
DW-17.3	16.8 – 17.7	9.0	1.9	
DW-18.2	17.7 – 18.7			
DW-19.2	18.7 – 19.6			
DW-20.2	19.6 – 20.6	9.5	2.0	
DW-21.2	20.6 – 21.6			
DW-22.1	21.5 – 22.6			
DW-22.6	22.0 – 23.1	10.3	2.2	
DW-23.1	22.4 – 23.6			
DW-24.2	23.5 – 24.7			
DW-25.2	24.5 – 25.8			

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 available on request.

COMPENSATING CLAMPS



Spring Band Hose Clamp – Constant Tension

HCL supplies Rotor constant tension band clamps made from W1 Zinc Plated steel covering a diameter range of 14-53mm in the colour silver.

Pre-opened or Pre-positioned clamps are also available.

Applications

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

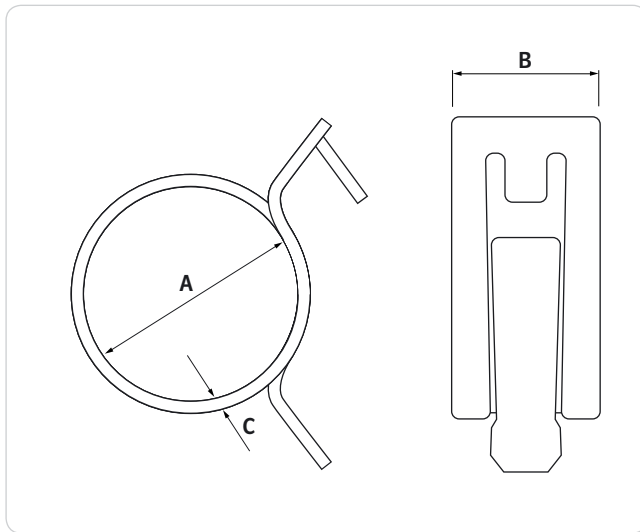
PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Materials – see section 10.3

- **W1** Zinc Plated Steel

On Request

Clamps can also be supplied in finished colours Black, Brown, Tan, Green or Red.



HCL Part No	Diameter Range (A) mm	Clamp Width (B) mm	Band Thickness (C) mm	Box Quantity
CTB-14.4	14.4 – 17.2	15.0	1.00	100
CTB-15.2	15.2 – 18.5		0.85	
CTB-17.8	17.8 – 20.0		1.30	
CTB-18.4	18.4 – 21.6			
CTB-20.5	20.5 – 24.5			
CTB-22.0	22.0 – 26.0		1.60	
CTB-24.3	24.3 – 28.0			
CTB-25.2	25.2 – 28.9		1.73	
CTB-27.0	27.0 – 31.5			
CTB-29.3	29.3 – 34.5		1.90	
CTB-31.5	31.5 – 38.0			
CTB-37.2	37.2 – 44.5			
CTB-40.5	40.5 – 48.5			
CTB-41.4	41.4 – 50.0		2.00	
CTB-43.5	43.5 – 53.0			

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

Installation Tools – see section 9.1



MT-SC-TP-01



MT-SC-FR-01

COMPENSATING CLAMPS



Spring Band Light Hose Clamp – Constant Tension

HCL supplies Rotor constant tension light band clamps made from W1 Zinc Plated steel in covering a diameter range of 14-53mm in the colour silver.

Offering a cost effective alternative to other solutions but not compromising on quality or reliability.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

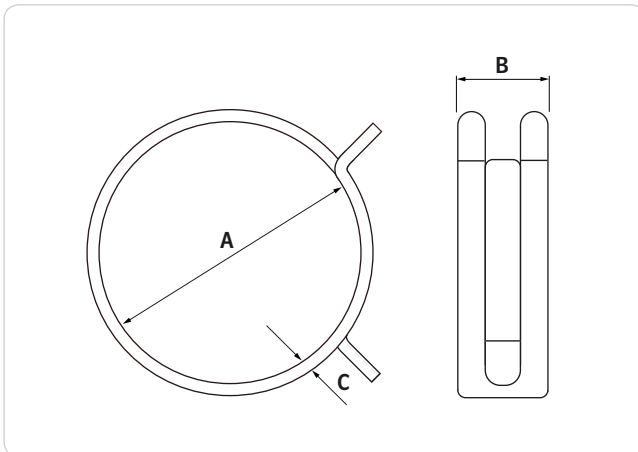
- Agricultural
- Automotive
- Vending
- White Goods
- General Industry

Materials – see section 10.3

- **W1** Zinc Plated Steel

On Request

Clamps can also be supplied in finished colours Black, Green, Red or Yellow.



HCL Part No	Diameter Range (A) mm	Clamp Width (B) mm	Band Thickness (C) mm	Box Quantity
CTL-6.1	6.1 – 7.6	6.3	0.51	100
CTL-7.7*	7.7 – 8.8	7.9	0.76	
CTL-8.5	8.5 – 10.4		0.51	
CTL-9.5	9.5 – 11.4		0.64	
CTL-10.3	10.3 – 12.3			
CTL-11.7	11.7 – 13.8			
CTL-12.5	12.5 – 14.6		0.76	
CTL-13.2	13.2 – 15.4			
CTL-13.7	13.7 – 16.5			
CTL-14.8*	14.8 – 17.0			
CTL-15.8	15.8 – 18.4			
CTL-16.4	16.4 – 21.0	9.5	1.02	
CTL-19.1	19.1 – 22.9			
CTL-21.8	21.8 – 26.2			

Part numbers with * standard colour is Black
All weights, dimensions & quantities are subject to a 2.5% tolerance.
To add material selection to the HCL Part No: for W1, add "W1".

Installation Tools – see section 9.1



MT-SC-TP-01



MT-SC-FR-01

WORM DRIVE & SCREW CLAMPS



Worm Drive BS5315

HCL's British Standard Worm Drive clamps are manufactured in accordance with BS5315, using a "Spot Weld" type housing.

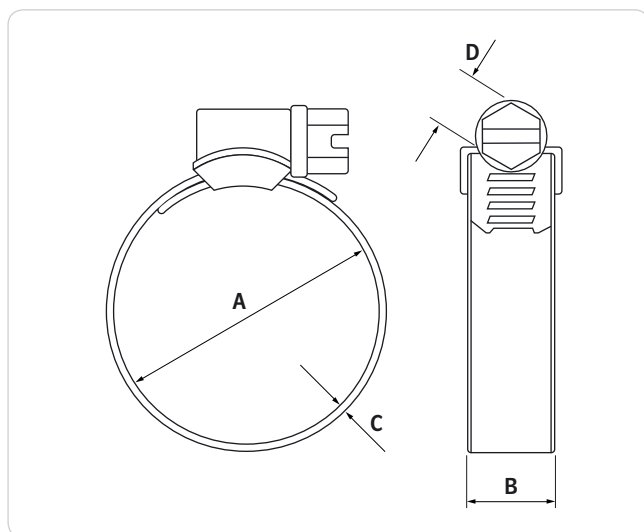
PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

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

Materials – see section 10.3

- **W1** 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	9.7	0.8	7.0	3.5	1200
WD-BS-00-SW	13 – 19					1000
WD-BS-0-SW	16 – 25					1200
WD-BS-0X-SW	19 – 29				4.5	600
WD-BS-1A-SW	22 – 32					
WD-BS-1-SW	25 – 38					
WD-BS-1X-SW	32 – 44					
WD-BS-2A-SW	35 – 51	5.0			300	
WD-BS-2-SW	38 – 57					
WD-BS-2X-SW	44 – 64					
WD-BS-3-SW	51 – 70					
WD-BS-3X-SW	64 – 76				250	
WD-BS-4-SW	70 – 89					
WD-BS-4X-SW	76 – 92				100	
WD-BS-5-SW	80 – 100					
WD-BS-5X-SW	90 – 110					
WD-BS-6-SW	100 – 120					
WD-BS-6X-SW	110 – 130					
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".

Installation Tools – see section 9.1



MT-D-01

MT-AD-01

MT-TD-01

WORM DRIVE & SCREW CLAMPS



Worm Drive DIN3017 – 9mm

Mikalor's patented ASFA-L premium Worm Drive clamps are manufactured 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.

PERFORMANCE	Strength	Temperature	Speed	Weathering	Chemical	Dynamic Range
	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■

Applications

W2

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

W4 / W5

- Food Processing
- Marine Industry
- Petrochemical Industry

Materials – see section 10.3

- **W2** Screw – Zinc Plated Steel
Band & Housing – 430 SS

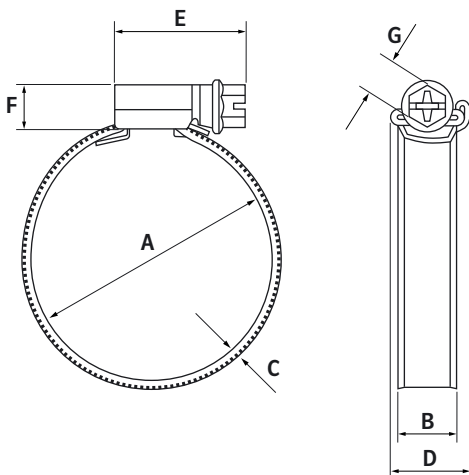
On Request

- **W4** 304 SS

Weathering	■■■■
Chemical	■■■■

- **W5** 316 SS

Weathering	■■■■
Chemical	■■■■



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 (D) mm	Max Torque Nm	Box Quantity				
WD-9-DIN-8	8 - 16	9.0	0.6	14.0	22.1	10.0	7.0	3.0	200				
WD-9-DIN-12	12 - 22		0.7		23.6			3.5					
WD-9-DIN-16	16 - 27				25.6			4.0	100				
WD-9-DIN-20	20 - 32												
WD-9-DIN-25	25 - 40				29.6								
WD-9-DIN-30	30 - 45												
WD-9-DIN-32	32 - 50				50								
WD-9-DIN-40	40 - 60												
WD-9-DIN-50	50 - 70				25								
WD-9-DIN-60	60 - 80												
WD-9-DIN-70	70 - 90												
WD-9-DIN-80	80 - 100												
WD-9-DIN-90	90 - 110												
WD-9-DIN-100	100 - 120												
WD-9-DIN-110	110 - 130												
WD-9-DIN-120	120 - 140												
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".

Installation Tools – see section 9.1



MT-D-01



MT-AD-01



MT-TD-01

WORM DRIVE & SCREW CLAMPS



Worm Drive DIN3017 - 12mm

Mikalor's patented ASFA-S premium Worm Drive clamps are manufactured in accordance with DIN3017. Their innovative housing, together with the 12mm band is designed for very 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.

PERFORMANCE	Strength	Temperature	Speed	Weathering	Chemical	Dynamic Range
	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■

Applications

W2

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

W4 / W5

- Food Processing
 - Marine Industry
 - Petrochemical Industry
- #### T1
- Competition Engines

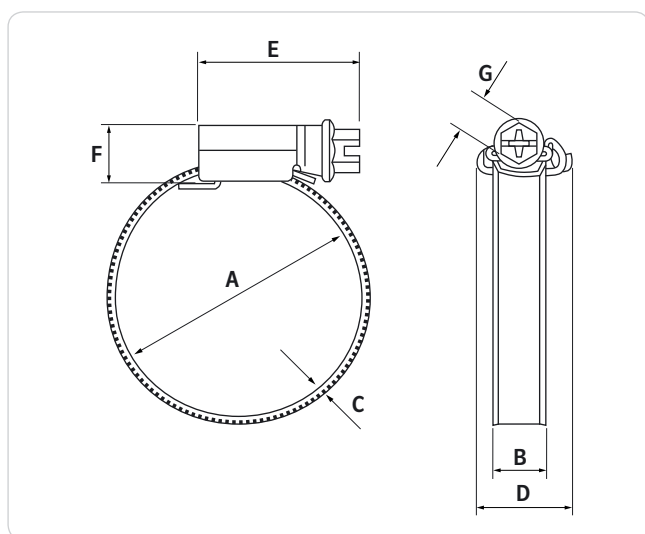
Materials – see section 10.3

- **W2** Screw – Zinc Plated Steel
Band & Housing – 430 SS

On Request

- **W4** 304 SS
- **W5** 316 SS
- **T1** Titanium

Weathering	■■■■■
Chemical	■■■■■
Weathering	■■■■■
Chemical	■■■■■
Weathering	■■■■■
Chemical	■■■■■



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	12.2	0.8	18.0	29.6	11.0	7.0	4.2	50
WD-12-DIN-20	20 – 32							5.2	
WD-12-DIN-25	25 – 40							3.5	
WD-12-DIN-30	30 – 45							6.0	
WD-12-DIN-32	32 – 50								
WD-12-DIN-40	40 – 60				31.6				
WD-12-DIN-50	50 – 70								
WD-12-DIN-60	60 – 80								
WD-12-DIN-70	70 – 90								
WD-12-DIN-80	80 – 100								
WD-12-DIN-90	90 – 110								
WD-12-DIN-100	100 – 120								
WD-12-DIN-110	110 – 130								
WD-12-DIN-120	120 – 140								
WD-12-DIN-130	130 – 150								
WD-12-DIN-140	140 – 160								
WD-12-DIN-150	150 – 170								
WD-12-DIN-160	160 – 180								
WD-12-DIN-170	170 – 190								
WD-12-DIN-180	180 – 200								
WD-12-DIN-190	190 – 210								
WD-12-DIN-200	200 – 220								
WD-12-DIN-210	210 – 230								
WD-12-DIN-220	220 – 240				34.6				

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

Installation Tools – see section 9.1



MT-D-01



MT-AD-01



MT-TD-01

WORM DRIVE & SCREW CLAMPS



Worm Drive SAE J1670

HCL's robust perforated Worm Drive clamps are manufactured in accordance with SAE J1670. They are designed for higher sealing pressure with minimal torque.

PERFORMANCE	Strength	  
	Temperature	    
	Speed	   
	Weathering	 
	Chemical	 
	Dynamic Range	   

Applications

- Chemical Industry
- Food Processing
- Marine Engines
- Petrochemical Industry
- Shipyards

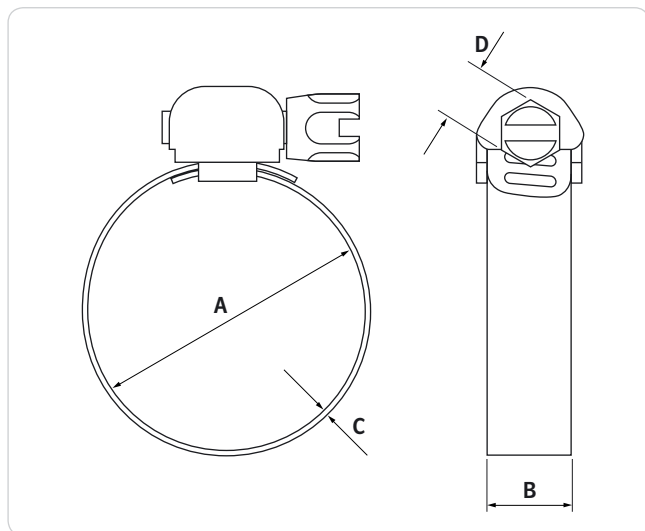
Materials – see section 10.3

- W2** Screw – Zinc Plated Steel
Band & Housing – 430 SS

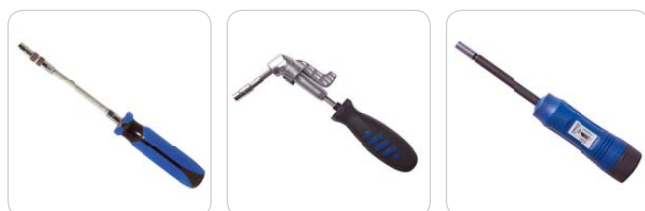
On Request

- W4** 304 SS

Weathering	
Chemical	



Installation Tools – see section 9.1



MT-D-01

MT-AD-01

MT-TD-01

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
WD-SAE-8-2	2	6 – 16	8.0		6.0	3.5	2000
WD-SAE-8-6	6	12 – 22					
WD-SAE-8-9	9	16 – 27					
WD-SAE-8-12	12	20 – 32					
WD-SAE-8-16	16	25 – 40				3.0	
WD-SAE-13-4	4	11 – 20					
WD-SAE-13-7	7	12 – 24	12.7		0.6		1000
WD-SAE-13-9	9	14 – 27					
WD-SAE-13-12	12	17 – 32					
WD-SAE-13-16	16	20 – 39					
WD-SAE-13-20	20	20 – 45					
WD-SAE-13-24	24	26 – 51					
WD-SAE-13-28	28	33 – 58					
WD-SAE-13-32	32	39 – 64					
WD-SAE-13-36	36	45 – 70					
WD-SAE-13-40	40	52 – 77					
WD-SAE-13-44	44	58 – 83					
WD-SAE-13-48	48	65 – 89					
WD-SAE-13-52	52	71 – 96					
WD-SAE-13-56	56	77 – 102					
WD-SAE-13-60	60	84 – 108					
WD-SAE-13-64	64	90 – 115					
WD-SAE-13-72	72	103 – 127					
WD-SAE-13-80	80	117 – 140					
WD-SAE-13-88	88	130 – 153					
WD-SAE-13-96	96	141 – 166					
WD-SAE-13-104	104	156 – 178					

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 & SCREW CLAMPS



Quick Release Worm Drive

HCL's Quick Release Worm Drive clamps offer a tilting Worm Drive housing. This is the ideal product for quick application, especially for large diameter pipes and hoses.

Applications

- Exhaust Fans
- Flexible Ducting
- HVAC
- General Industry

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Materials – see section 10.3

- W2** Screw & Cover – Zinc Plated Steel
Band & Housing – 430 SS

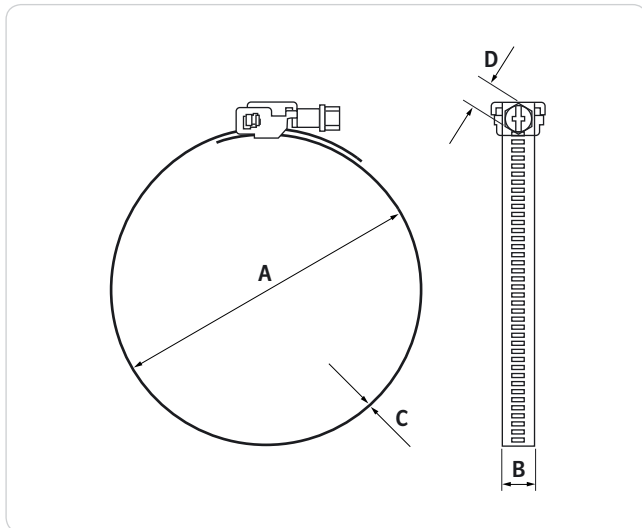
On Request

- W4** 304 SS

Weathering	
Chemical	

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	9.0	0.6	7.0	4.0	100
QR-200	25 – 200					
QR-300	25 – 300					
QR-400	25 – 400					
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.



Installation Tools – see section 9.1



MT-D-01

MT-AD-01

MT-TD-01

WORM DRIVE & SCREW CLAMPS



Mini Screw

Mini Screw clamps are particularly suitable for soft hoses and small diameters. The clamp forms a complete circle and has smooth edges.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
Dynamic Range		

Applications

- Automotive
- Gas Equipment
- White Goods
- General Industry

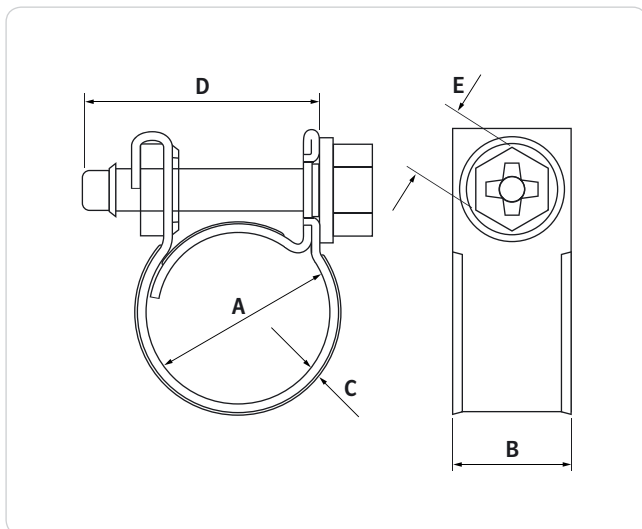
Materials – see section 10.3

W1 Zinc Plated Steel

On Request

W4 304 SS

Weathering	
Chemical	



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	9.0	0.6	22.0	7.0	1.2	2000
MC-9	8 – 10						
MC-10	9 – 11						
MC-11	10 – 12						3000
MC-12	11 – 13						
MC-13	12 – 14						
MC-14	13 – 15						
MC-15	14 – 16						
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.

Installation Tools – see section 9.1



MT-D-01

MT-AD-01

MT-TD-01

WORM DRIVE & SCREW CLAMPS



Double Wire Screw

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

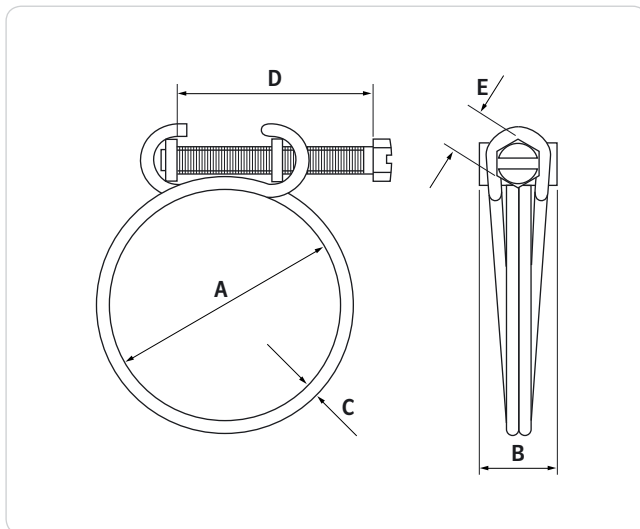
PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

- Agricultural
- Automotive
- HVAC
- Irrigation
- General Industry

Materials – see section 10.3

- **W1** Zinc Plated Steel



HCL Part No	Diameter Range (A) mm	Clamp Width (B) mm	Wire Diameter (C) mm	Hex Screw Length (D) mm	Hex Screw A/F (E) mm	Box Quantity
DWS-012	9.5 – 12.0	11.0	1.5	20.0	5.5	500
DWS-014	11.5 – 14.0		1.8	25.0		
DWS-016	13.0 – 16.0					
DWS-018	15.0 – 18.0					
DWS-020	17.0 – 20.0	14.0	2.0	30.0	7.0	
DWS-023	19.0 – 23.0		2.2			
DWS-025	21.5 – 25.0					
DWS-027	23.5 – 27.0					
DWS-029	25.0 – 29.0					
DWS-031	27.0 – 31.0					
DWS-033	29.0 – 33.0					
DWS-035	30.5 – 35.0					
DWS-037	33.0 – 37.0					
DWS-040	35.5 – 40.0		15.0			
DWS-043	38.5 – 43.0					
DWS-046	41.0 – 46.0					
DWS-049	43.5 – 49.0					
DWS-053	46.5 – 53.0					
DWS-056	50.5 – 56.0					
DWS-060	53.5 – 60.0					100

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 190mm diameter available on request.

Installation Tools – see section 9.1



MT-D-01

MT-AD-01

MT-TD-01

WORM DRIVE & SCREW CLAMPS



Plastic Worm Drive

HCL's Plastic Worm Drive clamp is ideal in applications requiring a non-conductive and non-corrosive clamp.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

- Electrical
- HVAC
- Irrigation
- Marine
- Medical
- Pharmaceutical
- General Industry

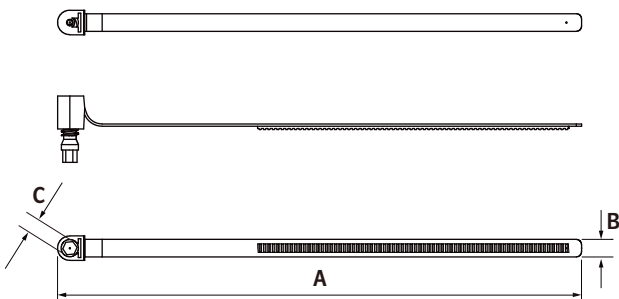
Materials – see section 10.3

- Screw – PC/ABS
- Band & Housing – POM

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	135.0	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.



Installation Tools – see section 9.1



MT-D-01

MT-AD-01

MT-TD-01

WORM DRIVE & SCREW CLAMPS



Continuous Worm Drive Kit

HCL offers a high strength worm drive kit, comprising of a 14mm wide perforated band with a separate screw and housing. The band can be cut to a desired length and fitted using standard tools, thereby offering a versatile clamping solution.

All the components are made from W4 SS304, providing excellent weathering and chemical resistance.

Applications

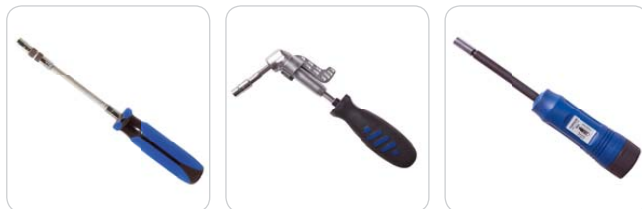
- Electrical Exhaust Fans
- Flexible Ducting
- HVAC
- Sign Fixing
- General Industry

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Materials – see section 10.3

- W4 304 SS

Installation Tools – see section 9.1



MT-D-01

MT-AD-01

MT-TD-01

HCL Part No		Band Width mm	Band Thickness mm	Hex Screw A/F mm	Band Reel Lengths m	Screw/Housing Box Quantity
Band	Screw/Housing					
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".

HEAVY DUTY CLAMPS



Bolt & Barrel

Atlantic's premium Bolt & Barrel clamps 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.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

W2

- Construction Equipment
- Drainage
- Irrigation
- Tankers

W4 / W5

- Chemical Industry
- Food Processing
- Shipyards

Materials – see section 10.3

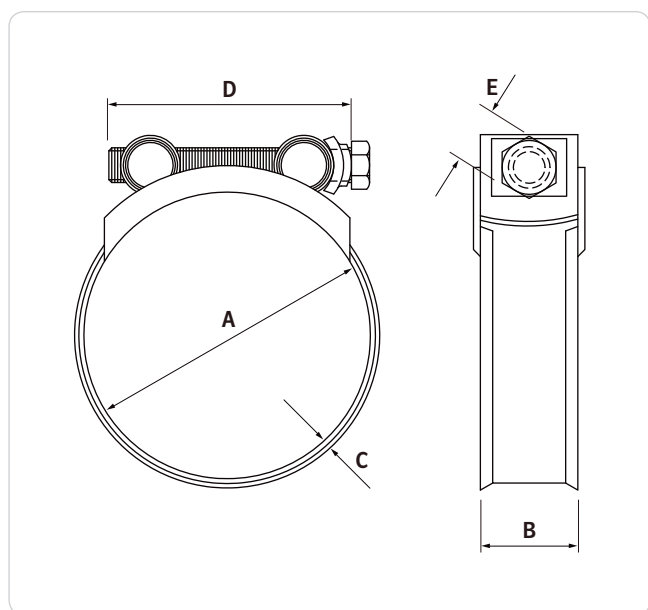
- W2** Bolt – Zinc Plated Steel
Band/Bridge – 430 SS

On Request

- W4** 304 SS
- W5** 316 SS

Weathering	
Chemical	

Weathering	
Chemical	



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	21.0	0.8	50.0	10.0	10.4	100
BBC-30	30 – 33						
BBC-34	34 – 37						
BBC-38	38 – 41						
BBC-42	42 – 46						
BBC-47	47 – 51						
BBC-52	52 – 57			60.0			
BBC-58	58 – 63						
BBC-63	63 – 68						
BBC-67	67 – 73						
BBC-73	73 – 79						
BBC-79	79 – 86	24.0	1.2	70.0	13.0	24.6	50
BBC-86	86 – 95						
BBC-95	95 – 105						
BBC-104	104 – 115						
BBC-110	110 – 123						
BBC-115	115 – 130			90.0			
BBC-120	120 – 134						
BBC-131	131 – 140						
BBC-134	134 – 148						
BBC-148	148 – 162						
BBC-162	162 – 176	26.0	1.5	100.0	17.0	50.1	25
BBC-165	165 – 180						
BBC-175	175 – 190						
BBC-190	190 – 205						
BBC-205	205 – 220						
BBC-224	214 – 227						
BBC-220	220 - 235						
BBC-235	235 – 250						

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

HEAVY DUTY CLAMPS



T-Bolt

HCL's T-Bolt clamps provide a leak-proof, high strength, durable and corrosion resistant clamping solution. Commonly found in the US market, they are regarded as the ideal choice for medium and heavy duty applications.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

- Automotive
- Ducting
- Industrial Cleaners
- Irrigation
- Medical Industry
- Pharmaceutical

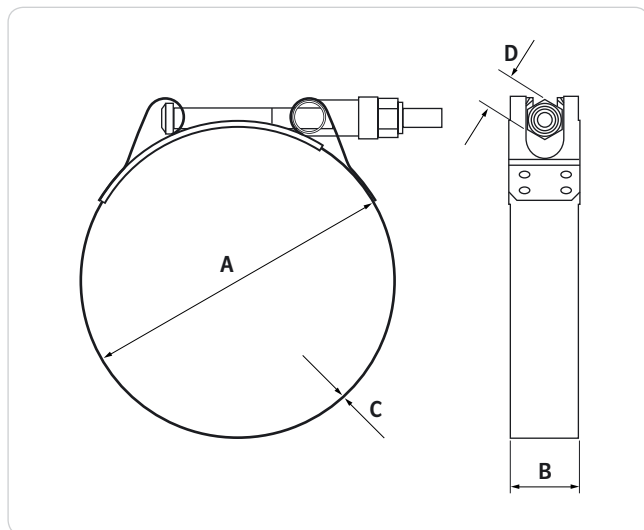
Materials – see section 10.3

- W2** Screw – Zinc Plated Steel
Band & Housing – 301 SS

On Request

- W4** 304 SS

Weathering	
Chemical	



HCL Part No	Diameter Range (A) mm	Band Width (B) mm	Band Thickness (C) mm	Nut A/F (D) mm	Max Torque Nm	Box Quantity
TB-34	34 – 40	19.0	0.6	11.0	8.5	100
TB-40	40 – 46					
TB-43	43 – 49					
TB-46	46 – 52					
TB-51	51 – 57					
TB-58	58 – 65					
TB-64	64 – 72					
TB-70	70 – 78					
TB-76	76 – 84					
TB-83	83 – 91					
TB-89	89 – 97					
TB-95	95 – 103					
TB-102	102 – 110					50
TB-108	108 – 116					
TB-114	114 – 122					
TB-121	121 – 129					
TB-127	127 – 135					
TB-133	133 – 141					
TB-140	140 – 148					
TB-146	146 – 154					
TB-152	152 – 160					
TB-159	159 – 167					
TB-165	165 – 173					
TB-171	171 – 179					
TB-178	178 – 186					
TB-184	184 – 192					
TB-191	191 – 199					
TB-197	197 – 205					
TB-203	203 – 211					

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

HEAVY DUTY CLAMPS



Worm Drive Super Torque

HCL's perforated Worm Drive Super Torque 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.

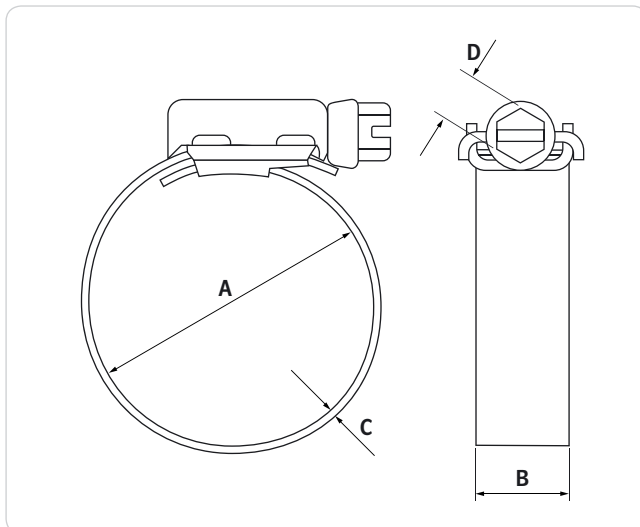
PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

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

Materials – see section 10.3

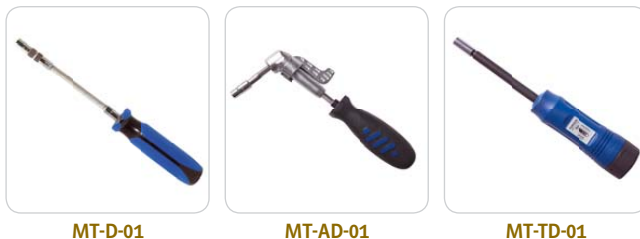
- **W4** 304 SS



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-16-126	126	20 – 32	15.8	0.7	8.0	15.0	100
ST-16-176	176	32 – 44					
ST-16-238	238	40 – 60					
ST-16-312	312	57 – 79					
ST-16-362	362	70 – 92					
ST-16-412	412	83 – 106					
ST-16-462	462	95 – 118					
ST-16-512	512	108 – 130					
ST-16-562	562	121 – 143					
ST-16-612	612	133 – 156					
ST-16-738	738	146 – 188					
ST-16-812	812	184 – 208					
ST-16-912	912	210 – 232					
ST-16-950	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".

Installation Tools – see section 9.1



MT-D-01

MT-AD-01

MT-TD-01

HEAVY DUTY CLAMPS



Preformed

Preformed 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. Vibration resistant and automatically locked with one simple lever movement, these clamps are ideal where superior strength is required.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

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

Materials – see section 10.3

- **WB** 301 SS
- On Request
- **WS** 316 SS

Weathering	
Chemical	

Installation Tools – see section 9.1



MT-MB-01



MT-MB-02

Both tools are required to install Preformed clamps.

HCL Part No	Max Diameter mm	Band Width mm	Band Thickness mm	Box Quantity
PC-6-19	19.1	6.35	0.51	100
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			
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	9.5	0.65	
PC-10-21	20.6			
PC-10-25	25.4			
PC-10-35	34.9			
PC-10-51	50.8			
PC-10-64	63.5			
PC-10-76	76.2			
PC-10-90	88.9			
PC-10-102	101.6			
PC-13-26	25.4	12.7	0.75	
PC-13-32	31.8			
PC-13-38	38.1			
PC-13-45	44.5			
PC-13-51	50.8			
PC-13-64	63.5			
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	15.8		
PC-16-45	44.5			
PC-16-51	50.8			
PC-16-57	57.2			
PC-16-64	63.5			
PC-19-51	50.8	19.0		50
PC-19-64	63.5			25
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			
PC-19-127	127.0			
PC-19-133	133.4			
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"

CABLE RETENTION

Nylon Earth Clamp – Ezybond® BS951-2009

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.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

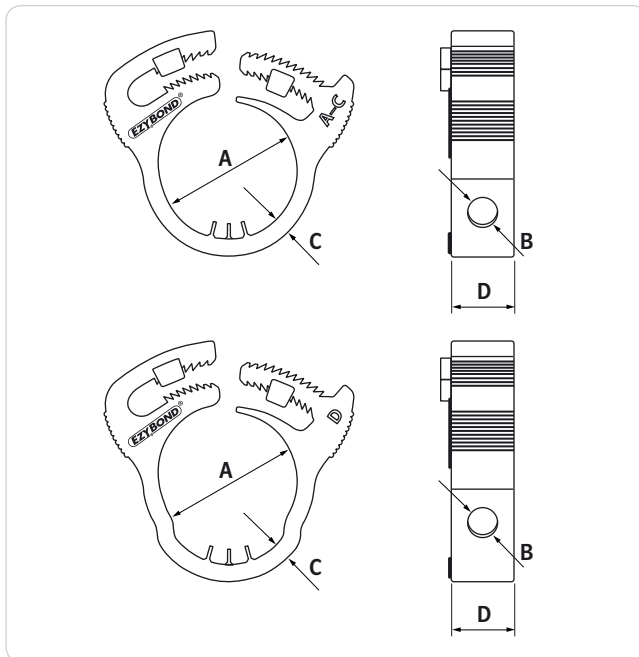
Applications

- Construction
- Plumbing
- Electrical



Materials – see section 10.3

- Heat/UV Stabilised ROHS compliant Nylon 6.6.



HCL Part No	Pipe Diameter (A) mm	Conductor Size (B)	Band Width (C) mm	Band Thickness (D) mm	Colour	Bag Quantity
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	Grey	
EZB-22D	22	(10.0mm ²)	12.9	3.4		

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



Installation Tools – see section 9.1



MT-PL-01

CABLE RETENTION



Heavy Duty Cable Tie – Smart Tie™

Smart Tie™ is a patent pending heavy duty cable tie, able to withstand system loads well in excess of 600kg. Manufactured by HCL, in a selection of 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 clamping solution for smaller diameters.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

Onshore:

- Processing Plants
- HVAC
- General Industry

Offshore:

- Cable Protection
- Oil Rigs
- Subsea Marking

Materials – see section 10.3

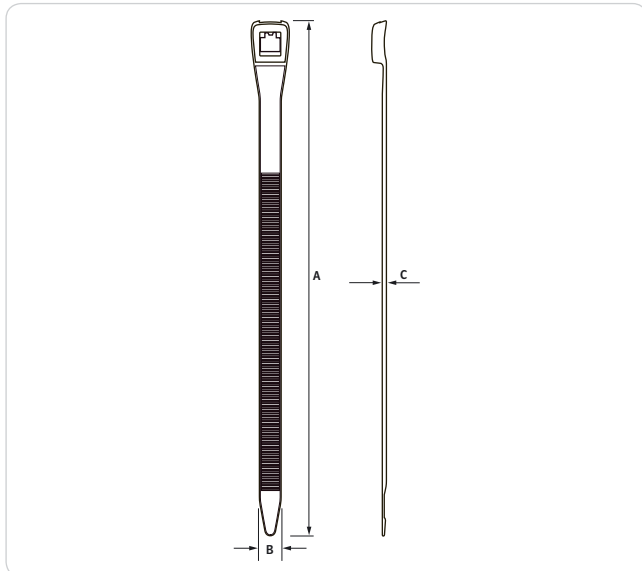
Onshore:

Heat/UV Stabilised ROHS Nylon 6.6.

Offshore:

Nylon 11

Weathering	
Chemical	



Installation Tools – see section 9.1



SM-FT-2000-19

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

CABLE RETENTION



Metal Cable Tie – Ball Locking Type

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.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

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

Certifications



Materials – see section 10.3

- **W5** 316 SS
- On Request
- **W5** 316 SS coated

Temperature

Installation Tools – see section 9.1



MT-MCT-01

HCL Part No	Max Diameter mm	Length mm	Band Width mm	Band Thickness mm	Bag Quantity
BLT-4.6-100	25	100	4.6	0.4	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			
BLT-4.6-520	152	520			
BLT-4.6-620	190	620			
BLT-4.6-840	254	840			
BLT-4.6-1000	300	1000	7.9		
BLT-7.9-100	25	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”.

CABLE RETENTION



Metal Cable Tie – Re-usable – Coated

These re-usable Cable ties have a thick PPA coating, which removes all sharp edges; thus protecting both the fitter and the application.

They are halogen free, flame retardant and extremely non-corrosive, making them highly suited to aggressive environments, such as marine cable bundling.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

- Chemical Industry
- Offshore
- Fixing Identification
- Shipyards

Certifications



Materials – see section 10.3

- W5** 316 SS with PPA coating

Installation Tools – see section 9.1



MT-MCT-01

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	1.3	100
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	231	762			
RCT-6.4-914	280	914			
RCT-9.5-152	38	152	9.5		
RCT-9.5-229	63	229			
RCT-9.5-305	86	305			
RCT-9.5-457	137	457			
RCT-9.5-610	185	610			
RCT-9.5-762	231	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 Cable Tie – Standard

These high quality Nylon Cable ties offer smooth rounded edges, a bent tip for easier insertion and a low friction material.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
Dynamic Range		

Applications

- Construction
- Electrical
- Fixing Identification
- General Industry

Certifications



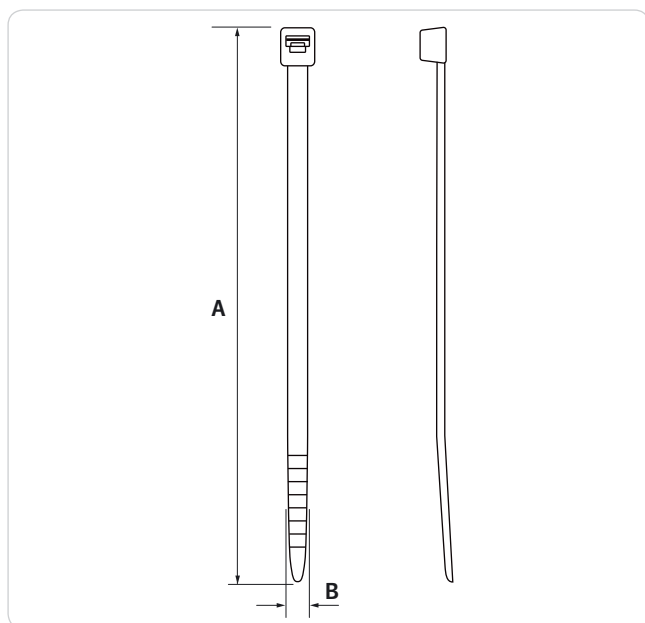
Materials – see section 10.3

- Heat/UV Stabilised ROHS compliant Nylon 6.6.

On Request

- Natural colour

Weathering	
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Installation Tools – see section 9.1



MT-PCT-01



MT-PCT-02



MT-PCT-03

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	100
CT-2.5-98	21	98	2.5	8	
CT-2.5-135	32	135			
CT-2.5-160	40	160			
CT-2.5-200	52	200			
CT-3.6-140	35	140	3.6	18	
CT-3.6-200	50	200			
CT-3.6-290	80	290			
CT-4.5-120	24	120	4.5		
CT-4.5-160	40	160			
CT-4.8-178	45	178	4.8	22	
CT-4.8-200	50	200			
CT-4.8-250	68	250			
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	55	
CT-7.8-180	45	180			
CT-7.8-240	63	240			
CT-7.8-300	80	300			
CT-7.5-365	100	365	7.5		
CT-7.5-450	130	450			
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	12.5	110	50
CT-12.5-500	143	500			
CT-12.5-720	213	720			
CT-12.5-850	255	850			
CT-12.5-1000	302	1000			

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".

CABLE RETENTION



Nylon Cable Tie – Flat Head

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.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
Dynamic Range		

Applications

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

Materials – see section 10.3

- Nylon 6.6.

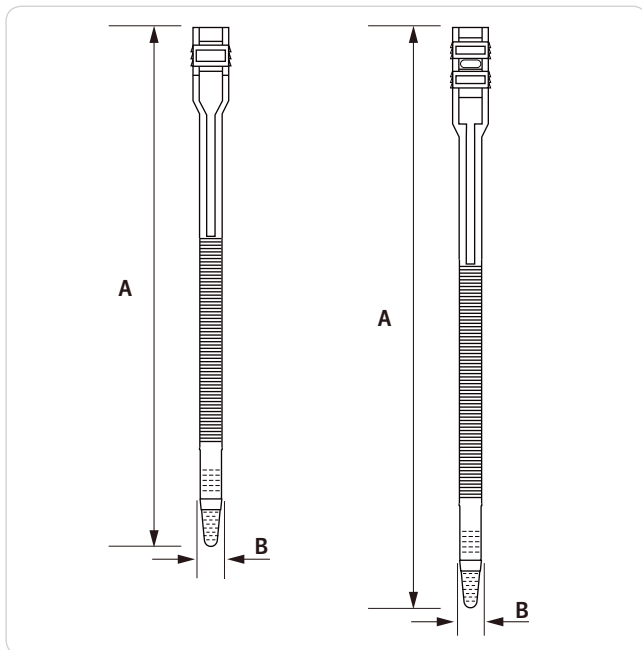
On Request

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

Weathering	
Chemical	

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



Rubber Lined Clips – P Clips – PK Series – DIN3016

Rubber lined 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 P Clip is manufactured in accordance with DIN3016, incorporating a reinforced fastening hole.

PERFORMANCE	Strength	■■■■
	Temperature	■■■
	Speed	■■■
	Weathering	■
	Chemical	■
	Dynamic Range	■

Applications

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

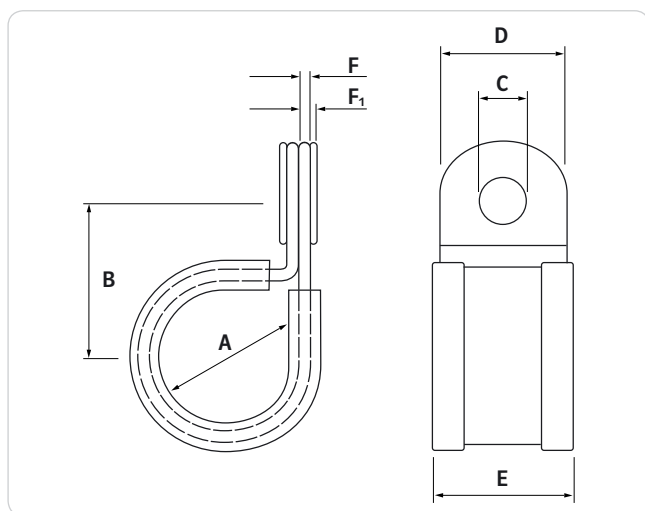
Materials – see section 10.3

- W1** Zinc Plated Steel

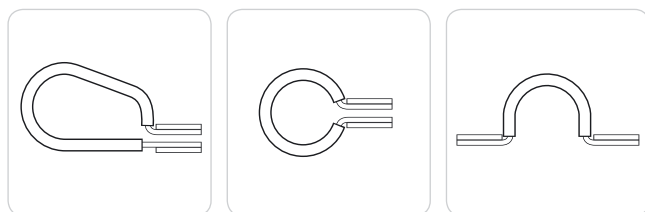
On Request

- WS** 316 SS

Weathering	■■■■
Chemical	■■■■



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 (A) mm	Offset Distance (B) mm	Hole Diameter (C) mm	Band Width (D) mm	Rubber Width (E) mm	Band Thickness (F) mm	Clamping Thickness (F ₁) mm	Box Quantity				
PK-15-5	5.0	12.2	6.4	15.0	18.0	0.6	1.6	100				
PK-15-6	6.0	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										
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										
PK-15-21	21.0	20.2										
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										
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										
PK-15-32	32.0	25.7										
PK-15-33	33.0	26.2										
PK-15-34	34.0	26.7										
PK-15-35	35.0	27.2										
PK-15-40	40.0	29.7										
PK-20-11	11.0	20.0				8.4	20.0		24.0	1.0	2.5	50
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										
PK-20-30	30.0	29.5										
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										
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	70.0	47.5										
PK-20-75	75.0	50.0										
PK-20-80	80.0	52.5										
PK-20-85	85.0	55.0										
PK-20-90	90.0	57.5										
PK-20-95	95.0	60.0										
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										

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 available on request.



Plastic P Clips

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

The 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.

PERFORMANCE	Strength	■
	Temperature	■
	Speed	■ ■ ■
	Weathering	■ ■
	Chemical	■ ■ ■
	Dynamic Range	■

Applications

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

Certifications



Materials – see section 10.3

- Natural Nylon 6.6
- Black Nylon 6.6

On Request

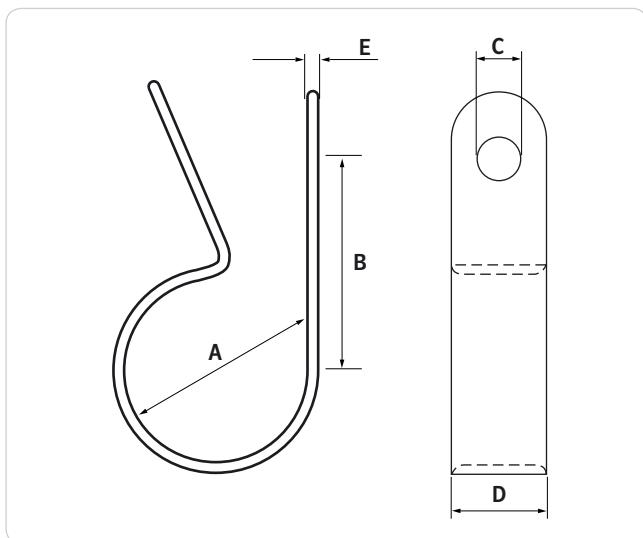
- Polypropylene
- 2% Carbon Black (UV Resistant) Nylon 6.6
- Flame Retardant Nylon 6.6

Weathering	■ ■ ■
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Chemical	■ ■ ■ ■
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Weathering	■ ■ ■ ■ ■
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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	5.2	9.5	1.3	1000
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				
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		12.7		
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				
NPC-13-11	11.1	14.2				
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				
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

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 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

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	



Materials – see section 10.3

Onshore:

Nylon 6.6. – 7-19mm

Offshore:

Acetal – 19-25mm

On Request

Nylon 11 – 10-19mm

Strength	
Chemical	
Strength	
Temperature	
Weathering	
Chemical	

Installation Tools – see section 9.1



SM-TA-528A

SM-FT-2000-19

SM-FT-1000-19

HCL Part No		Band Width		Band Thickness mm	Max System Strength kg	Band Reel Lengths m	Buckle Box Quantity
Band	Buckle	mm	in				
SM-7R	SM-7HST	7	1/4	2.5	95	20 / 250	100
SM-10R	SM-10HST	10	3/8	3.6	200	30 / 125	
SM-19R	SM-19HST	19	3/4		500	30 / 60	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



Nylon Banding – Smart Band® Hybrid

Manufactured by HCL, Smart Band® Hybrid is a patent pending non-metallic band and buckle system. Incorporating an innovative snap-fit 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 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

PERFORMANCE	Strength	■ ■ ■ ■ ■
	Temperature	■ ■ ■ ■ ■
	Speed	■ ■ ■ ■ ■
	Weathering	■ ■ ■ ■ ■
	Chemical	■ ■ ■ ■ ■
	Dynamic Range	■ ■ ■ ■ ■

Materials – see section 10.3

Onshore:

Nylon 6.6. – 19mm only

Offshore:

Acetal

Glass-filled Nylon 11

Strength	■ ■ ■ ■ ■
Chemical	■ ■ ■ ■ ■

Strength	■ ■ ■ ■ ■
Temperature	■ ■ ■ ■ ■
Weathering	■ ■ ■ ■ ■
Chemical	■ ■ ■ ■ ■

Installation Tools – see section 9.1



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



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



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

HCL Part No		Band Width		Band Thickness mm	Max System Strength kg	Band Reel Lengths m	Buckle Box Quantity
Band	Buckle	mm	in				
SM-19R	SM-19HHY	19	¾	3.6	1220	30 / 60	50
SM-32R	SM-32HHY	32	1¼	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

HCL's Metal banding is a high quality band and buckle system, suitable for almost any sized application where superior strength is required.

PERFORMANCE	Strength	
	Temperature	
	Speed	
	Weathering	
	Chemical	
	Dynamic Range	

Applications

- Electrical
- Sign Fixing
- Telecommunications
- General Industry

Materials – see section 10.3

- W3** 301 SS

On Request

- W4** 304 SS

- W5** 316 SS

Weathering	
Chemical	

Weathering	
Chemical	

HCL Part No		Band Width		Band Thickness mm	Max System Strength kg	Band Reel Lengths m	Buckle Box Quantity
Band	Buckle	mm	in				
MBA-1/4	MBU-1/4	6.4	¼	0.51	225	30 / 50	100
MBA-3/8	MBU-3/8	9.5	¾	0.61	400		
MBA-1/2	MBU-1/2	12.7	½	0.75	680		
MBA-5/8	MBU-5/8	15.8	⅝		890		
MBA-3/4	MBU-3/4	19.1	¾		1090		

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 Ezyklik™-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.



Ezyklik™ Fuel Pump Spigot Retaining Clamp

This bespoke clamp is based on the Ezyklik™-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.

INSTALLATION TOOLING

Manual Tools – Plastic Snap Fit Clamps



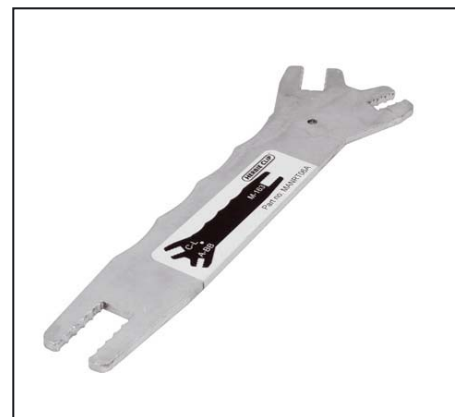
Herbie Clip® – Vertical Tool

PART NUMBER	MT-HC-VFT-01
DIMENSIONS	225x125x25mm
WEIGHT	0.46kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Herbie Clip® Sizes A-85	2.1



Adjustable Waterpump Pliers

PART NUMBER	MT-PL-01
DIMENSIONS	235x205x20mm
WEIGHT	0.34kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Herbie Clip®	2.1
Ezybond®	6.1



Herbie Clip® – Removal Tool

PART NUMBER	MT-HC-RT-01
DIMENSIONS	160x50x3mm
WEIGHT	0.09kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Herbie Clip®	2.1



Ezyklik™-P – Lightweight Vertical Tool

PART NUMBER	MT-EZP-LVT-01
DIMENSIONS	180x125x30mm
WEIGHT	0.10kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Ezyklik™-P	2.2



Ezyklik™-P – Horizontal Tool

PART NUMBER	MT-EZP-HT-01
DIMENSIONS	230x135x25mm
WEIGHT	0.37kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Ezyklik™-P	2.2

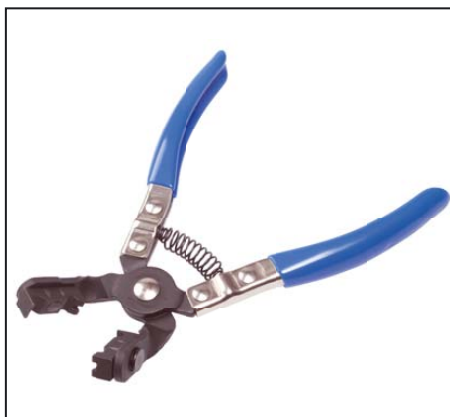
INSTALLATION TOOLING

Manual Tools – Metal Snap Fit, Ear & Spring Clamps



Ezyclik™-M/M+ – Vertical Tool

PART NUMBER	MT-EZM-VT-01
DIMENSIONS	150x180x15mm
WEIGHT	0.22kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Ezyclik™-M	2.3
Ezyclik™-M+	3.1



Ezyclik™-M/M+ – Swivel Jaw Tool

PART NUMBER	MT-EZM-SJ-01
DIMENSIONS	180x145x40mm
WEIGHT	0.25kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Ezyclik™-M	2.3
Ezyclik™-M+	3.1



Ear Clamp – Vertical/Horizontal Tool

PART NUMBER	MT-EC-VHT-01
DIMENSIONS	230x220x25mm
WEIGHT	0.43kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Zero Leak Ear	2.4



Ear Clamp – Vertical Tool

PART NUMBER	MT-EC-VT-01
DIMENSIONS	225x190x35mm
WEIGHT	0.54kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Zero Leak Ear	2.4



Spring Clamp – Tool Pack

PART NUMBER	MT-SC-TP-01
DIMENSIONS	200x160x25mm
WEIGHT	0.21kg
BOX QUANTITY	1 + 1
APPLICABLE CLAMPS	
Double Wire Spring	3.2



Spring Clamp – Flexible Ratchet Tool

PART NUMBER	MT-SC-FR-01
DIMENSIONS	875x190x25mm
WEIGHT	0.47kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Double Wire Spring	3.2

INSTALLATION TOOLING

Manual Tools – Worm Drive & Screw Clamps



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

PART NUMBER	MT-D-01
DIMENSIONS	280x35x35mm
WEIGHT	0.19kg
BOX QUANTITY	1

APPLICABLE CLAMPS

Worm Drive BS5315	4.1
Worm Drive DIN3017 – 9mm	4.2
Worm Drive DIN3017 – 12mm	4.3
Worm Drive SAE J1670	4.4
(only up to size WD-SAE-8-12)	
Quick Release Worm Drive	4.5
Mini Screw	4.6
Double Wire Screw	4.7
Plastic Worm Drive	4.8
Super Torque Worm Drive	5.3



**Angled Worm Drive & Screw Clamp
Driver – 6.0, 7.0 & 8.0mm Hex Sockets**

PART NUMBER	MT-AD-01
DIMENSIONS	230x100x35mm
WEIGHT	0.28kg
BOX QUANTITY	1

APPLICABLE CLAMPS

Worm Drive BS5316	4.1
Worm Drive DIN3017 – 9mm	4.2
Worm Drive DIN3017 – 12mm	4.3
Worm Drive SAE J1670	4.4
Quick Release Worm Drive	4.5
Mini Screw	4.6
Double Wire Screw	4.7
Plastic Worm Drive	4.8
Super Torque Worm Drive	5.3



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

PART NUMBER	MT-TD-01
DIMENSIONS	255x45x45mm
WEIGHT	0.45kg
BOX QUANTITY	1

APPLICABLE CLAMPS

Worm Drive BS5317	4.1
Worm Drive DIN3017 – 9mm	4.2
Worm Drive DIN3017 – 12mm	4.3
Worm Drive SAE J1670	4.4
Quick Release Worm Drive	4.5
Mini Screw	4.6
Double Wire Screw	4.7
Plastic Worm Drive	4.8
Super Torque Worm Drive	5.3

INSTALLATION TOOLING

Manual Tools – Cable Ties



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

PART NUMBER	MT-PCT-01
DIMENSIONS	160x130x20mm
WEIGHT	0.30kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Nylon Cable Tie Standard	6.5



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

PART NUMBER	MT-PCT-02
DIMENSIONS	165x135x25mm
WEIGHT	0.20kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Nylon Cable Tie Standard	6.5



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

PART NUMBER	MT-PCT-03
DIMENSIONS	190x120x25mm
WEIGHT	0.26kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Nylon Cable Tie Standard	6.5
Nylon Cable Tie Flat Head	6.6



Metal Cable Tie, Max 12.0mm
width – Tensioning & Cutting Tool

PART NUMBER	MT-MCT-01
DIMENSIONS	215x155x40mm
WEIGHT	0.56kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Metal Ball Locking Tie	6.3
Metal Re-usable Coated Tie	6.4

INSTALLATION TOOLING

Manual Tools – Banding & Strapping



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

PART NUMBER	SM-TA-528A
DIMENSIONS	215x130x30mm
WEIGHT	0.43kg
BOX QUANTITY	1
APPLICABLE CLAMPS	

Smart Band® Standard	7.1
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Smart Tie™ & Smart Band® 19mm – Tensioning & Cutting Tool

PART NUMBER	SM-FT-2000-19
DIMENSIONS	370x285x55mm
WEIGHT	0.75kg
BOX QUANTITY	1
APPLICABLE CLAMPS	

Smart Tie™	6.2
Smart Band® Standard	7.1
Smart Band® Hybrid	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 CLAMPS	

Smart Band® Standard	7.1
Smart Band® Hybrid	7.2



Metal Banding – Tensioning & Cutting Tool

PART NUMBER	MT-MB-01
DIMENSIONS	300x205x70mm
WEIGHT	1.79kg
BOX QUANTITY	1
APPLICABLE CLAMPS	

Preformed Metal Banding	5.3
	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 CLAMPS	

Preformed	5.3
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Band Cutters

PART NUMBER	MT-C-01
DIMENSIONS	250x75x30mm
WEIGHT	0.39kg
BOX QUANTITY	1
APPLICABLE CLAMPS	

Smart Band® Standard	7.1
Smart Band® Hybrid	7.2
Metal Banding	7.3

INSTALLATION TOOLING

Pneumatic Tools – On Request



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

Handle Options:

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

PART NUMBER	PT-HC-C
DIMENSIONS	240x80x170mm
WEIGHT	0.89kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Herbie Clip® Sizes F-85	2.1



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

Handle Options:

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

PART NUMBER	PT-HC-P
DIMENSIONS	335x55x65mm
WEIGHT	0.66kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Herbie Clip® Sizes A-105	2.1



Ezyklik™ – Calliper Tool
(Various Jaw options available)

Handle Options:

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

PART NUMBER	PT-EZY-C
DIMENSIONS	60x60x270mm
WEIGHT	0.91kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Ezyklik™-P	2.2
Ezyklik™-M	2.3
Ezyklik™-M+	3.1



Control Box (works with Piston and Calliper tools)

PART NUMBER	PT-CB-01
DIMENSIONS	300x320x145mm
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-PR-32
DIMENSIONS	450x300x135mm
WEIGHT	4.00kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
Smart Band® Hybrid	7.2



Smart Band® 19mm or 32mm, Air Shut-off Driver – Tensioning & Cutting Tool

PART NUMBER	SM-FT-1000-PS-19 or SM-FT-1000-PS-32
DIMENSIONS	475x450x135mm
WEIGHT	6.80kg
BOX QUANTITY	1
APPLICABLE CLAMPS	
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.

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.

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

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*
- Ezyklik™-M
- Double Wire Spring
- Worm Drive
- Mini Screw
- Double Wire Screw



Silicone hose

Suitable Clamps:

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



PVC hard hose

Suitable Clamps:

- Herbie Clip*
- Ezyklik™-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®
- Ezyclick™-P
- Ezyclick™-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®
- Ezyclick™-M
- Zero Leak Ear
- Double Wire Spring
- Mini Screw
- Worm Drive
- Double Wire Screw



PVC braided reinforced hose

Suitable Clamps:

- Herbie Clip®
- Ezyclick™-P
- Ezyclick™-M
- Zero Leak Ear
- Double Wire Spring
- Worm Drive
- Mini Screw
- Double Wire Screw



Rubber reinforced high pressure hose

Suitable Clamps:

- Ezyclick™-M
- Worm Drive DIN 3017 – 12mm
- Bolt & Barrel
- Worm Drive Super Torque
- Preformed



Rubber coolant hose

Suitable Clamps:

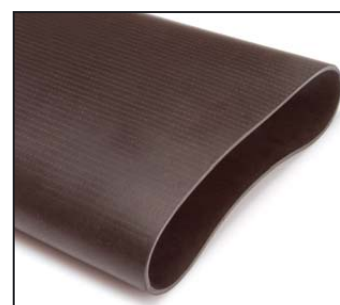
- Ezyclick™-M+
- Double Wire Spring
- Worm Drive
- Double Wire Screw
- Worm Drive Super Torque
- Preformed



Rubber air induction hose

Suitable Clamps:

- Herbie Clip®
- Ezyclick™-P
- Ezyclick™-M
- Zero Leak Ear
- Double Wire Spring
- Worm Drive
- Worm Drive Super Torque



Rubber flat hose

Suitable Clamps:

- Herbie Clip®
- Ezyclick™-P
- Ezyclick™-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 mid-range 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.

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.

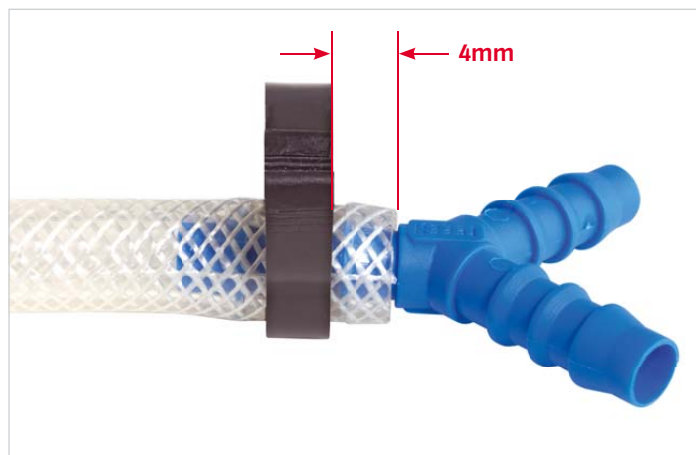
Tensioning

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 Ezyklik™ 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

Clamping Environment

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

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 W3 - W5	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 Ezyklik™ 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 Ezyklik™-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 have improved chemical resistance (particularly to strong acids) over Nylon 6.6. The clamps also do not need to be moisturised.



More information on plastic material properties can be found in the Herbie Clip® and Ezyklik™ Technical Booklet

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	
		AISI	BS	WIN	DIN
W1	Screw - Zinc Plated Steel Cr3	-	-	1.0214	Qst 36-3
	Band & Housing - Zinc Plated Steel Cr3	-	-	1.0935	-
W2	Screw - Zinc Plated Steel Cr3	-	-	1.0214	Qst 36-3
	Band & Housing - Stainless Steel	430	430 S 17	1.4016	X8 CrNi 18 10
W3	Stainless Steel	301 / 430	301 S 21 / 430 S 17	1.4310 / 1.4016	X12 CrNi 17 7 / X8 Cr17
W4	Stainless Steel	304	304 S 15	1.4301	X5 CrNi 18 10
W5	Stainless Steel	316	316 S 33	1.4436	X5CrNiMo 17 13 3

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

													
	Units	AISI 201	AISI 301	AISI 304	AISI 304	AISI 316	AISI410	AISI 430	Steel	Monel 400			
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 1 max Si 2 max Cr 16-18 Ni 6-8	C 0.08 Mn 1 max Si 2 max Cr 18-20 Ni 8-10.5	C 0.12 Mn 2 max Si 1 max Cr 17-19 Ni 10.5-13	C 0.08 max Mn 2 max Si 1 max Cr 16-18 Ni 10-14 Mo 2-3	C 0.15 max Mn 1 max Si 1 max Cr 11.5-13.5	C 0.12 max Mn 1 max Si 1 max Cr 16-18	C 0.4-0.6 Mn 0.6-0.9 P 0.04 max S 0.05 max	C 0.3 max Mn 1.25 max Si 0.5 max Ni 63-70 S 0.024 max Fe 1.25 max Cu 31.5			
Physical Properties													
Structure	-	AUSTENITIC						MARTENSITIC	FERRITIC	-			
Density	g/cm³	7.75	8.03				7.75		7.83	-			
Melting Point	°C	1398-1454	1398-1421	1398-1454		1371-1398	1470-1560	1426-1510	-	1196-1220			
Continuous Heat Resistance	°C	760	810	835			635	760	-	485			
Electrical Properties													
Magnetic Behaviour	-	Non-magnetic					Magnetic						
Magnetic Permeability	-	1.02		1.008			700-1000	600-1100	1500-2000	-			
Electrical Resistivity at 21°C	μ ohm/ cm²	69.0	72.0				57.0	60.0	17.2	5.1			
Mechanical Properties													
			Annealed	Hardened	Annealed	Hardened	Annealed	Hardened					
Elongation	%	40	50	18	50	7	50	7	5	57	60	17.2	5.1
Breaking Strength	MPa	70	56	105	56	105	56	105	52	45		30	52
Yield Strength	MPa	32	21	77	21	77	21	77	21	28		39	17
Hardness	R _b	90-95	70-95		75-95			75-85	75-85	75-90		80-95	60-80
Corrosion Resistance													
Fresh Water	-	Good			Very Good			Excellent	Good		Good-Fair	Good	
Industrial	-	Good			Very Good			Very Good	Fair		Fair	Good	
Marine	-	Fair			Good			Very Good	Poor		Poor	Excellent	
Salt Water	-	No			No			Good	No		No	Excellent	
Acid	-	Fair			Good			Good	Fair		No	Good	
Bases	-	No			No			Good	No		No	Good	



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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