

Clamp Overview

Standard Solutions

HYDAC Manufactures a complete line of hose, tube, and pipe mounting components. For many years, these products have been successfully applied, worldwide. Our standard product offering includes:

DIN 3015 Clamps

HRL, HRS, HRZ, HREL, & HRES Series

(see pages 75 - 91)

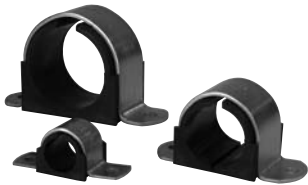
Line Sizes from 1/4" to 16" O.D.



Flat Cushion Clamps

HOM Series (see page 92)

Line Sizes from 1/4" to 2" O.D.

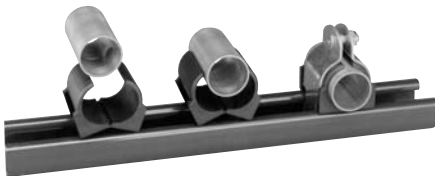


Cushion Clamps

CUSH Series (see pages 93 - 94)

Line Sizes from 1/4" to 3 1/2" O.D.

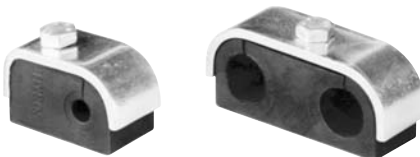
Mount on standard 1 5/8" x 7/8" unistrut mounting rail



Buegu

HRBGS Series (see pages 95 - 96)

Line Sizes from 1/4" to 3/4" O.D.



U-Bolt Clamps

HRRBS Series (see page 97)

Line Sizes from 3/4" to 16" O.D.



U-Bolt with Cushion Clamps

HUB Series (see pages 98)

Line Sizes from 1/4" to 12" O.D.



Oval Clamps

HROS Series (see page 99)

Line Sizes from 1/4" to 1" O.D.



"P" Style Clamps

HSPN Series (see page 100)

Line Sizes from 1/4" to 3" O.D.



Quick Release Swivel Bolt Clamps

HRGKSM Series (see pages 101 - 102)

Line Sizes from 1.54" to 17.87" O.D.

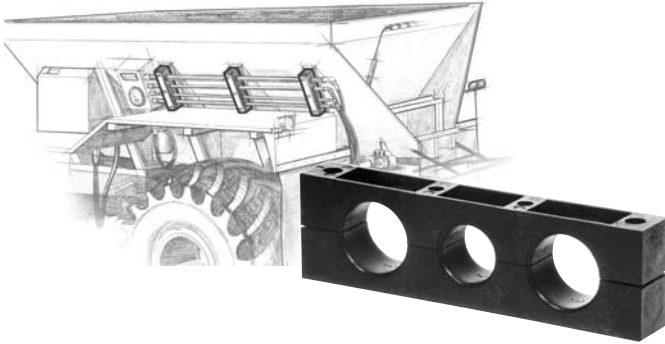


Custom Solutions

HYDAC is also a market leader in providing custom mounting solutions. Our engineers work with yours to develop unique solutions that save time and money by simplifying inventory and installation. From simple modifications of standard product to custom bracketry, we will provide you a successful solution for your application. For more information on custom solutions, please contact product management at **1-877-GO HYDAC**.

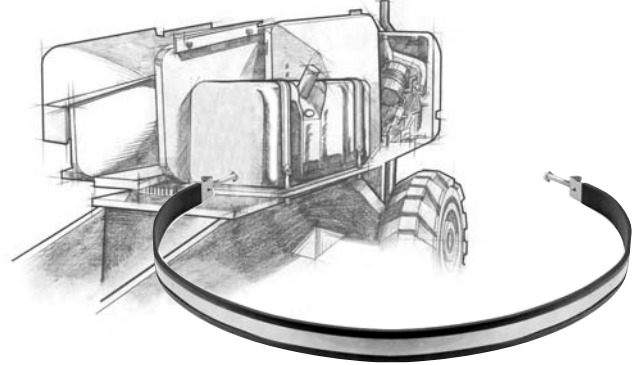
Series Strip Clamps

HRRL & HRRLE Series (see page 103)
Line Sizes from 6 to 25.4 mm O.D.

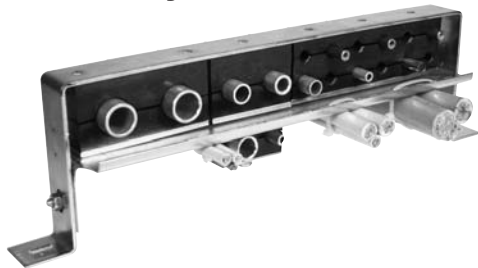


Band Straps (see page 104)

Length Ranges from 187 to 1511 mm



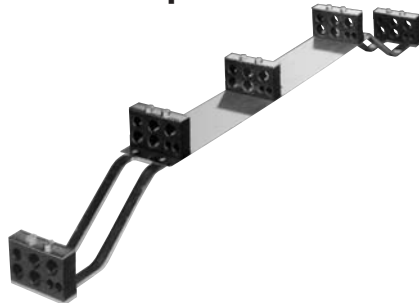
Series Strip Clamp & Custom Bracketry



Custom Molded Hose Bundle



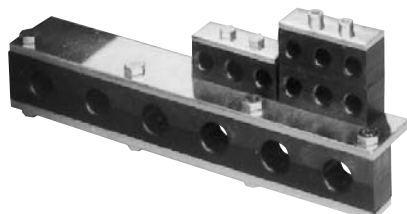
Stacking Series Strip Run



Cylinder / Tube Clamp



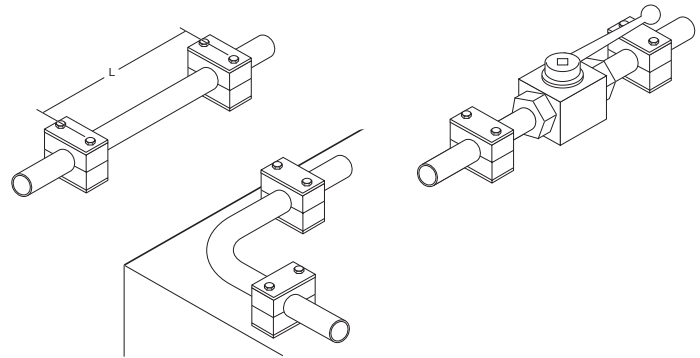
Series Strip Clamp & Custom Mounting Plates



Technical Specifications DIN 3015 Clamps

Mounting Guidelines

- The first clamp should be mounted directly after the threaded connection or coupling. This protects the connection from vibrations.
- Bends in the line should be clamped on BOTH sides of the bend.
- The line should be clamped directly before and after any inline valves.
- Proper Torquing of the clamp bolts is important, and is part of the DIN 3015 Standard
(see the chart below right for torque information)



Distance Between Clamps

Pipe Size	Distance (L)	Tube Size	Distance (L)
1/4"	4'	1/16"	3'
1/2"	4'	1/8"	3'
3/4"	5'	1/4"	3'
1"	5'	3/8"	3'
1 1/4"	7'	1/2"	3'
1 1/2"	8'	5/8"	4'
2"	10'	3/4"	4'
2 1/2"	10'	7/8"	4'
3"	12'	1"	5'
4"	13'	1 1/4"	7'
5"	13'	1 1/2"	7'
6"	14'	1 3/4"	7'
		2"	7'

Bolt Tightening Torque Specifications

Series	Size	Thread	PP	PA	AL
HRL (Std. Duty)	0 to 6	1/4-20	8	10	12
HRS (Heavy Duty)	1 & 2	3/8-16	12	20	30
	3	3/8-16	15	25	35
	4	7/16-14	30	40	55
	5	5/8-11	45	55	120
	6	3/4-10	80	150	220
	7	7/8-9	110	200	250
	8	M30	180	350	500
	9	M30	200	370	500
	10	M30	270	470	600
	HRZ (Twin)	1	1/4-20	5	6
2 to 4		5/16-18	12	12	-
5		5/16-18	8	8	-

Note: Torque is given in Nm. (Nm x 0.7376 = Ft.-lbs)

Properties of Materials (clamp pairs)

	Polypropylene PP	Polyimide PA	Aluminum AL
Mechanical Properties			
Tensile Strength	4200 psi	7800-11500 psi	-
Flexural Yield Strength	7600 psi	20500 psi	-
Impact Strength (Izod Method)	No Failure	No Failure	-
Tensile Test	-	-	2800 psi
Brinell Hardness Number	-	-	60 BHN
Modules of Elasticity	-	-	9.7 x 108 11.1 x 106 psi
Thermal Properties			
Continuous Service Temperature Range	-22° to 194°F -30° to 90°C	-40° to 284°F -40° to 140°C	-67° to 500°F -55° to 260°C
Electrical Properties			
Volume Resistivity	1018 Ohm-cm	1015 Ohm-cm	-
Chemical Properties			
Chemical Resistance	Resistant to most aqueous solutions of inorganic salts, minerals, and organic acids, even at high temperatures.	Resistant to organic solvents, dilute acids, and bases. Resistant to radiation.	Resistant to neutral and sea water, organic acids, esters, oils, and inorganic salt solutions.

DIN 3015 Clamp Overview

HYDAC Manufactures a complete line of hose, tube, and pipe mounting components according to the DIN 3015 standard.

HYDAC clamps assure a simple, reliable dampening support for lines. HYDAC clamps absorb shock, dampen vibration, and reduce noise in plumbing systems

Series

HRL - Standard Duty (see pages 77 - 78)



- Available to 2" tube outside diameter.
- Recommended for systems with less than 1500 PSI operating pressure and no dynamic loads.

HRS - Heavy Duty (see pages 79 - 80)



- Available to 16" nominal pipe size
- Recommended for systems with greater than 1500 PSI operating pressure, operations with pressure surges and applications with wide temperature fluctuations.

HRZ - Twin (see pages 81 - 82)



- Available to 1-1/4" nominal pipe size
- Recommended for systems with less than 1500 PSI operating pressure and no dynamic loads

HREL - Standard Duty w/ Rubber Insert (see pages 83 - 84)



- Available to 2" tube outside diameter
- Recommended for systems with less than 1500 PSI operating pressure and no dynamic loads
- Provide for greater noise reduction and resistance to axial movement

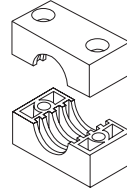
HRES - Heavy Duty w/ Rubber Insert (see pages 85 - 86)



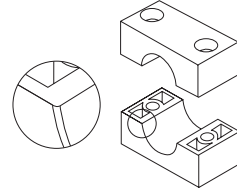
- Heavy duty available to 5 1/4" bore diameter
- Provide for greater noise reduction and resistance to axial movement

Bore Styles

Standard duty, heavy duty, and twin series are available with either ribbed bores (standard) or smooth bore (special order). When ordering a smooth bore arrangement or clamp pairs, a "G" is inserted in the code directly after the "HR" i.e. HRGL, HRGS, and HRGZ



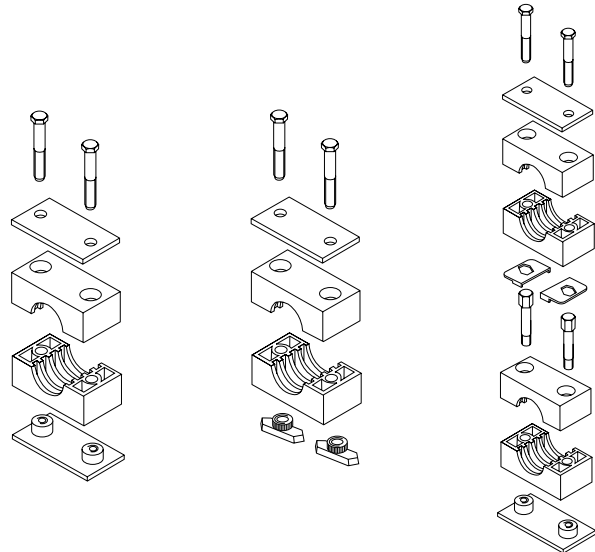
Ribbed Bore
(standard)



Smooth Bore
smooth surface and chamfered edge prevent chaffing of hoses (special)

Arrangements

Various arrangements are available in each series.



Weld Plate Mounting

C-rail Mounting

Stacking Modules & Kits

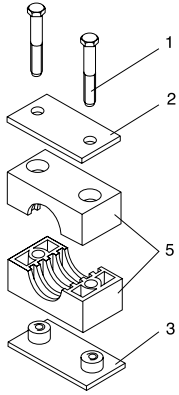
Materials

Metal components are carbon steel (standard.) Stainless steel is also available (see page 87 for details.) Metal components to be welded (weld plates and c-rails) and heavy duty top plates size 5-8 are phosphate coated, while all other metal components are zinc plated. Clamp pairs are polypropylene (standard.) Polyimide and aluminum clamp pairs are also available. For specifications on these materials, see page 75

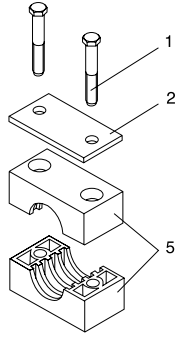
Ordering

Clamps can be ordered as complete arrangements, or separate components. See each series for details.

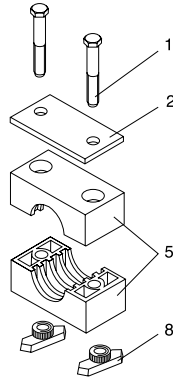
HRL Series Standard Duty Clamps



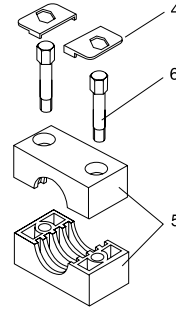
A
Single Clamp with
Weld Plate



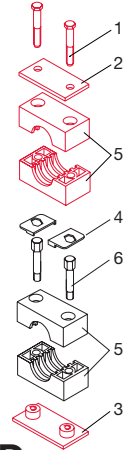
A1
Single Clamp without
Weld Plate



A1TM
Single Clamp for
C-Rail Mounting
(order C-Rail separately)



D
Single Clamp
Stacking Module
(not available for size 0)



A + D
Order one A (red) arrange-
ment and one D (black)
arrangement separately.

Parts Legend (see page 61 to order parts separately)

1 Hex Head Bolt	5 Clamp Pair
2 Top Plate	6 Stacking Bolt
3 Weld Plate	8 C-Rail Nut
4 Safety Plate	

A maximum of 3 stacking modules is recommended

Model Code: HRL Series

Series

- HRL = Standard duty single clamp with ribbed bore
- HRGL = Standard duty single clamp with smooth bore*

Size Family

0 to 8 (refer to table A on next page) (size 7 and 8 available in Metric only)

Arrangement

- A = Single clamp with top plate and weld plate
- A1 = Single clamp without weld plate
- A1TM = C-Rail mounted clamp
- D = Single clamp stacking module (not available for size 0)

Bore Size (in mm)

(refer to table A on next page)

Clamp Material

- PP = Polypropylene
- PA = Polyimide*
- AL = Aluminum (not available for size 0)*

Metal Component Material

- (omit) = Carbon Steel
- A2 = 304 Stainless Steel
- A4 = 316 Stainless Steel (metric threads only)*

Thread Type

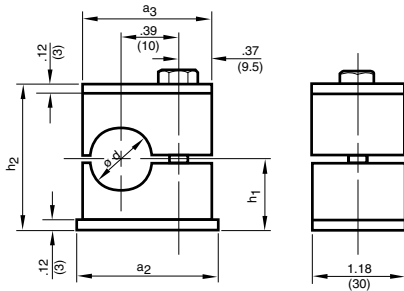
- UNC = Standard
- M = Metric*

HRL 2 A 12.7 PP UNC

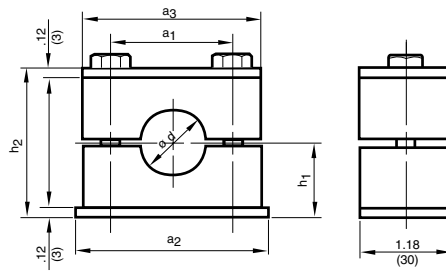
*Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability
Not all combinations are available*

Dimensions: HRL Series

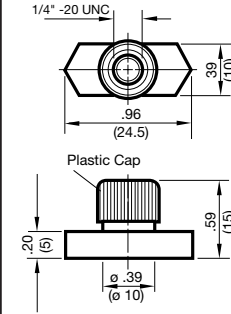
Size 0



Sizes 1-6



C-Rail Nut



C-Rail

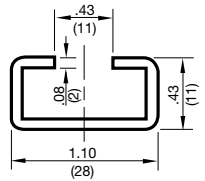


Table A

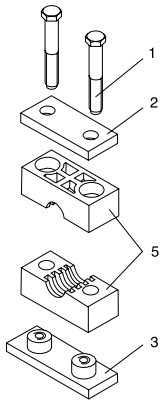
Size	Ød		Recommended		a1	a2	a3	h1	h2	Bolt Size Arrangement	Weight	
	Bore in	Size mm	Tube O. D.	Nominal Size Pipe							A	B
0	0.24	6	-	-	N/A	1.18 (30)	1.10 (28)	0.63 (16)	1.26 (32)	1/4-20 x 1-1/4 <i>(M6 x 30)</i>	0.14 (0.06)	0.12 (0.05)
	0.25	6.4	1/4"	-								
	0.31	8.0	5/16"	-								
	0.37	9.5	3/8"	1/8"								
	0.39	10.0	-	-								
	0.47	12.0	-	-								
1	0.24	6	-	-	0.79 (20)	1.42 (36)	1.34 (34)	0.63 (16)	1.26 (32)	1/4-20 x 1-1/4 <i>(M6 x 30)</i>	0.18 (0.08)	0.13 (0.06)
	0.25	6.4	1/4"	-								
	0.31	8.0	5/16"	-								
	0.37	9.5	3/8"	1/8"								
	0.39	10.0	-	-								
	0.47	12.0	-	-								
2	0.50	12.7	1/2"	-	1.02 (26)	1.65 (42)	1.57 (40)	0.77 (19.5)	1.53 (39)	1/4-20 x 1-1/2 <i>(M6 x 35)</i>	0.27 (0.12)	0.16 (0.07)
	0.54	13.7	-	1/4"								
	0.50	14.0	-	-								
	0.59	15.0	-	-								
	0.63	16.0	5/8"	-								
	0.67	17.1	-	3/8"								
0.71	18.0	-	-									
3	0.75	19.0	3/4"	-	1.30 (33)	1.97 (50)	1.89 (48)	0.85 (21.5)	1.69 (43)	1/4-20 x 1-1/2 <i>(M6 x 40)</i>	0.31 (0.14)	0.22 (0.10)
	0.79	20.0	-	-								
	0.84	21.3	-	1/2"								
	0.87	22.0	-	-								
	0.91	23.0	-	-								
	0.98	25.0	-	-								
1.00	25.4	1"	-									
4	1.05	26.6	-	3/4"	1.57 (40)	2.32 (59)	2.24 (57)	0.94 (24)	1.89 (48)	1/4-20 x 1-3/4 <i>(M6 x 45)</i>	0.33 (0.15)	0.27 (0.12)
	1.10	28.0	-	-								
	1.18	30.0	-	-								
5	1.26	32.0	1-1/4"	-	2.05 (52)	2.83 (72)	2.75 (70)	1.26 (32)	2.52 (64)	1/4-20 x 2-1/2 <i>(M6 x 60)</i>	0.42 (0.19)	0.31 (0.14)
	1.33	33.7	-	1"								
	1.38	35.0	-	-								
	1.50	38.0	1-1/2"	-								
	1.57	40.0	-	-								
	1.65	42.0	-	1-1/4"								
6	1.75	44.5	1-3/4"	-	2.60 (66)	3.46 (88)	3.38 (86)	1.42 (36)	2.83 (72)	1/4-20 x 2-3/4 <i>(M6 x 70)</i>	0.53 (0.24)	0.40 (0.18)
	1.90	48.3	-	1-1/2"								
	2.00	50.8	2"	-								
7	2.37	60.3	-	2	3.7 (94)	4.8 (122)	4.64 (118)	2.15 (54.5)	4.17 (106)	<i>(M6 x 100)</i>	-	-
	2.5	63.5	2 1/2"	-								
	2.87	73	-	2 1/2"								
	3	76.1	3"	-								
8	3.5	88.9	-	3"	4.72 (120)	5.8 (148)	5.67 (143.96)	2.66 (67.6)	5.16 (131)	<i>(M6 x 125)</i>	-	-

Note: Other bore diameters are available — Consult factory for details.

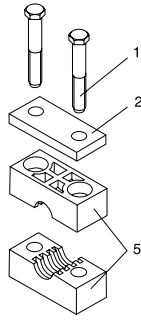
Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.

Dimensions are in inches/(mm) and lbs./kg.)

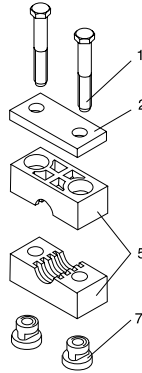
HRS Series Heavy Duty Clamps



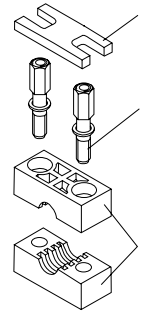
S
Single Clamp with
Weld Plate



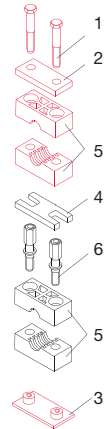
S1
Single Clamp without
Weld Plate



S1TM
Single Clamp for
C-Rail Mounting
(size 1 to 4 only)
(order C-Rail separately)



A
Single Clamp
Stacking Module
(size 1 to 5 only)



S + A
Order one S (red) arrange-
ment and one A (black)
arrangement separately.

Parts Legend (see page 62 to order parts separately)

1 Hex Head Bolt	5 Clamp Pair
2 Top Plate	6 Stacking Bolt
3 Weld Plate	7 C-Rail Nut
4 Safety Plate	

A maximum of 3 stacking modules is recommended

Model Code: HRS Series

Series

- HRS = Heavy duty single clamp with ribbed bore
- HRGS = Heavy duty single clamp with smooth bore*

Size Family

1 to 10 (refer to table B on next page)

Arrangement

- S = Single clamp with top plate & weld plate
- S1 = Single clamp stacking kit (sizes 1-5 only)
- S1TM = C-Rail mounted clamp (sizes 1-4 only)
- A = Single clamp stacking module (sizes 1-5 only)

Bore Size (in mm)

(refer to table B on next page)

Clamp Material

- PP = Polypropylene
- PA = Polyimide*
- AL = Aluminum*

Metal Component Material

- (omit) = Carbon Steel
- A4 = 316 Stainless Steel (metric threads only)*

Thread Type

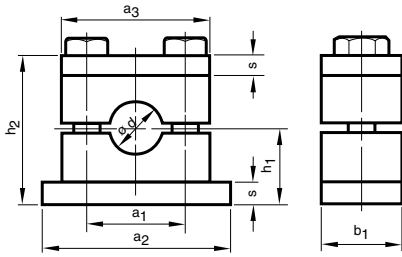
- UNC = Standard
- M = Metric*

HRS 1 S 12.7 PP UNC

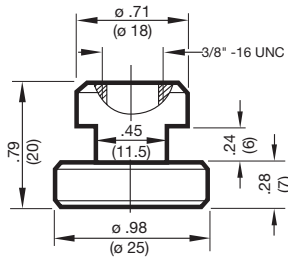
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Not all combinations are available

Dimensions: HRS Series

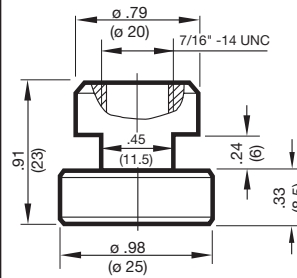
All Sizes



C-Rail Nut (sizes 1-3)



C-Rail Nut (size 4)



C-Rail (all sizes)

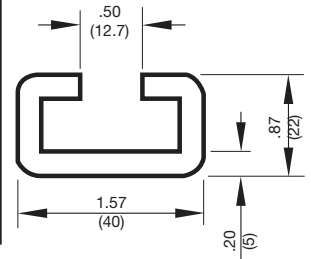


Table B

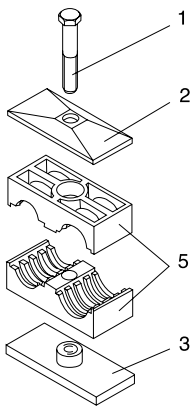
Size	Ød		Recommended		a1	a2	a3	b1	h1	h2	s	Bolt Size
	Bore Size in	mm	Nominal Tube O.D.	Size Pipe								
1	0.24	6.0	-	-	1.30 (33)	2.87 (73)	2.17 (55)	1.18 (30)	0.94 (24)	1.89 (48)	0.31 (8)	3/8-16x1-3/4 <i>(M10 x 45)</i>
	0.25	6.4	1/4"	-								
	0.32	8.0	5/16"	-								
	0.37	9.5	3/8"	-								
	0.39	10.0	-	-								
	0.41	10.3	-	1/8"								
	0.50	12.7	1/2"	-								
	0.54	13.7	-	1/4"								
	0.55	14.0	-	-								
	0.59	15.0	-	-								
2	0.63	16	5/8"	-	1.77 (45)	3.35 (85)	2.76 (70)	1.18 (30)	1.26 (32)	2.52 (64)	0.31 (8)	3/8-16x2-1/4 <i>(M10 x 60)</i>
	0.71	18.0	-	-								
	0.75	19.0	3/4"	-								
	0.79	20.0	-	1/2"								
	0.84	21.3	-	-								
	0.87	22.0	7/8"	-								
	0.98	25.0	-	-								
	1.00	25.4	1"	-								
3	1.05	26.7	-	3/4"	2.36 (60)	3.94 (100)	3.35 (85)	1.18 (30)	1.50 (38)	2.99 (76)	0.31 (8)	3/8-16x2-3/4 <i>(M10 x 70)</i>
	1.10	28.0	-	-								
	1.18	30.0	-	-								
	0.98	25.0	-	-								
	1.18	30.0	-	-								
	1.26	32.0	1-1/4"	-								
	1.33	33.7	-	1"								
	1.38	35.0	-	-								
4	1.50	38.0	1-1/2"	-	3.56 (90.5)	5.51 (140)	4.52 (115)	1.77 (45)	2.17 (55)	4.33 (110)	0.39 (10)	7/16-14 x 4 <i>(M12 x 100)</i>
	1.57	40.0	-	-								
	1.65	42.0	-	1-1/4"								
	1.18	30.0	-	-								
	1.50	38.0	1-1/2"	-								
	1.65	42.0	-	-								
	1.75	44.5	1-3/4"	-								
	1.90	48.3	-	1-1/2"								
	2.00	50.8	2"	-								
	5	2.13	54.0	-								
2.24		57.0	2-1/4"	-								
2.37		60.3	-	2"								
2.50		63.5	2-1/2"	-								
2.56		65.0	-	-								
2.75		70.0	2-3/4"	-								
1.50		38.0	1-1/2"	-								
2.60		66.0	-	-								
6	2.76	70.0	-	-	6.61 (168)	8.86 (225)	8.07 (205)	3.15 (80)	3.94 (100)	7.87 (200)	0.59 (15)	3/4-10x7-1/2 <i>(M20 x 190)</i>
	2.87	73.0	-	2-1/2"								
	3.00	76.1	3"	-								
	3.50	88.9	-	3"								
	2.56	65.0	-	-								
7	3.78	96.0	-	-	8.07 (205)	10.63 (270)	9.92 (252)	3.54 (90)	4.53 (115)	9.06 (230)	0.59 (15)	7/8-9x8-1/2 <i>(M20 x 220)</i>
	4.00	101.6	4"	3-1/2"								
	4.25	108.0	4-1/4"	-								
	4.50	114.3	4-1/2"	4"								
	3.54	90.0	-	-								
8	5.35	136.0	-	-	10.43 (265)	13.39 (340)	12.60 (320)	4.72 (120)	6.30 (160)	12.60 (320)	0.98 (25)	M30 x 300
	5.50	139.7	-	5"								
9	6.61	168.0	-	6"	15.55 (395)	20.47 (520)	18.35 (466)	6.30 (160)	9.25 (235)	18.50 (470)	1.18 (30)	M30 x 450
	10.75	273.0	-	10"								
10	12.75	323.9	-	12"	21.06 (535)	26.77 (680)	24.80 (630)	7.09 (180)	11.61 (295)	23.23 (590)	1.18 (30)	M30 x 560
	14.00	355.6	-	14"								
16.00	406.4	-	16"									

Note: Other bore diameters are available — Consult factory for details.

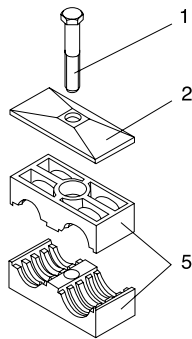
Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.

Dimensions are in inches/(mm) and lbs./kg.

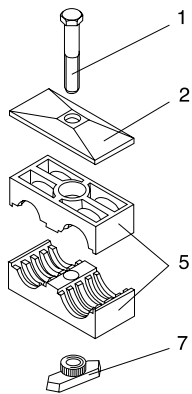
HRZ Series Twin Clamps



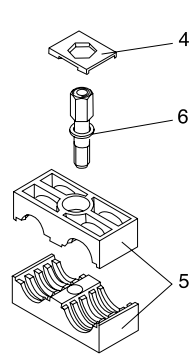
A
Twin Clamp with
Weld Plate



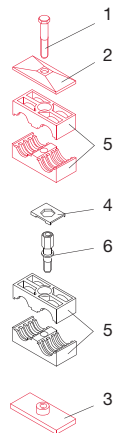
A1
Twin Clamp without
Weld Plate



A1TM
Twin Clamp for
C-Rail Mounting
(order C-Rail separately)



D
Twin Clamp
Stacking Module



A + D
Order one A (red) arrange-
ment and one D (black)
arrangement separately.

Parts Legend (see page 63 to order parts separately)

1 Hex Head Bolt	5 Clamp Pair
2 Top Plate	6 Stacking Bolt
3 Weld Plate	7 C-Rail Nut
4 Safety Plate	

A maximum of 3 stacking modules is recommended

Model Code: HRZ Series

Series

HRZ = Standard duty twin clamp with ribbed bore
HRGZ = Standard duty twin clamp with smooth bore

Size Family

0 to 5 (refer to table C on next page)

Arrangement

A - Twin clamp with weld plate
 A1 - Twin clamp without weld plate
 A1TM - C-Rail mounted twin clamp
 D - Twin clamp stacking module

Bore Size (in mm)

(refer to table C on next page)

Clamp Material

PP - Polypropylene
PA - Polyimide

Thread Type

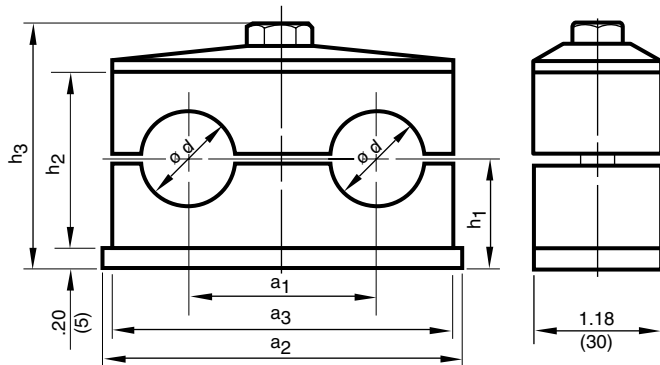
UNC = Standard
M = Metric

HRZ 1 A 9.5 - 9.5 PP UNC

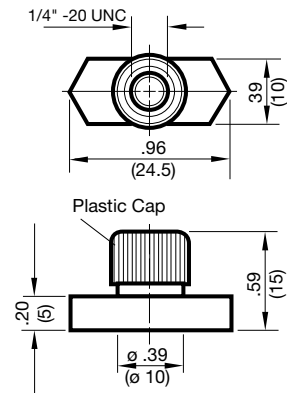
Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact **HYDAC** for information and availability
 Not all combinations are available

Dimensions: HRZ Series

All sizes



C-Rail Nut



C-Rail

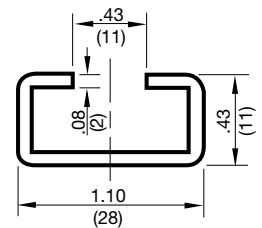


Table C

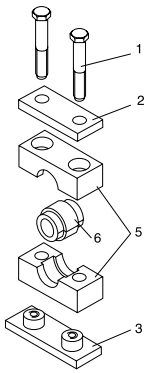
Size	Ød		Recommended		a1	a2	a3	h1	h2	h3	Bolt Size
	Bore Size in	mm	Nominal Size	Tube O.D. Pipe							
1	0.24	6.0	-	-	0.79 (20)	1.46 (37)	1.42 (36)	0.73 (18.5)	1.06 (27)	1.69 (43)	1/4-20 x 1-1/2 <i>(M6 x 35)</i>
	0.25	6.4	1/4"	-							
	0.32	8.0	5/16"	-							
	0.37	9.5	3/8"	-							
	0.39	10.0	-	1/8"							
	0.41	10.3	-	1/8"							
	0.47	12.0	-	-							
2	0.50	12.7	1/2"	-	1.14 (29)	2.17 (55)	2.09 (53)	0.71 (18)	1.02 (26)	1.71 (43.5)	5/16-18 x 1-1/4 <i>(M8 x 35)</i>
	0.54	13.7	-	1/4"							
	0.55	14.0	-	-							
	0.59	15.0	-	-							
	0.63	16.0	5/8"	-							
	0.67	17.1	-	3/8"							
3	0.75	19.0	3/4"	-	1.42 (36)	2.76 (70)	2.64 (67)	0.93 (23.5)	1.46 (37)	2.15 (54.5)	5/16-18 x 1-3/4 <i>(M8 x 45)</i>
	0.79	20.0	-	-							
	0.84	21.3	-	1/2"							
	0.87	22.0	7/8"	-							
	0.91	23.0	-	-							
	0.98	25.0	-	-							
	1.00	25.4	1"	-							
4	1.05	26.7	-	3/4"	1.77 (45)	3.35 (85)	3.23 (82)	1.02 (26)	1.65 (42)	2.34 (59.5)	5/16-18 x 2 <i>(M8 x 50)</i>
	1.10	28.0	-	-							
	1.18	30.0	-	-							
5	1.26	32.0	1-1/4"	-	2.20 (56)	4.33 (110)	4.17 (106)	1.26 (32)	2.13 (54)	2.81 (71.5)	5/16-18 x 2-1/2 <i>(M8 x 60)</i>
	1.33	33.7	-	1"							
	1.38	35.0	-	-							
	1.50	38.0	1-1/2"	-							
	1.65	40.0	-	-							
	1.65	42.0	-	1-1/4"							

Note: Other bore diameters are available — Consult factory for details.

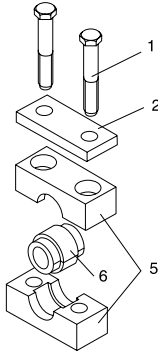
Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.

Dimensions are in inches/(mm)

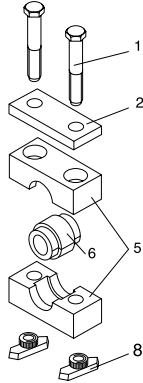
HREL Series Standard Duty Clamps with Rubber Inserts



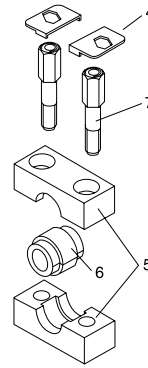
A
Single Clamp with
Weld Plate



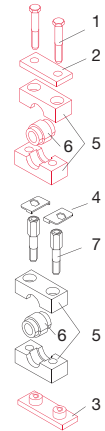
A1
Single Clamp without
Weld Plate



A1TM
Single Clamp for
C-Rail Mounting
(order C-Rail separately)



D
Single Clamp
Stacking Module



A + D
Order one A (*red*) arrange-
ment and one D (*black*)
arrangement separately.

Parts Legend (see page 61 to order parts separately)

1 Hex Head Bolt	5 Clamp Pair
2 Top Plate	6 Rubber Insert
3 Weld Plate	7 Stacking Bolt
4 Safety Plate	8 C-Rail Nut

A maximum of 3 stacking modules is recommended

Model Code: HREL Series

Series _____ **HREL**

Size Family _____ **4**
4, 6 (refer to table D on next page)

Arrangement _____ **A**
 A = Single clamp with top plate and weld plate
 A1 = Single clamp stacking kit
 A1TM = C-Rail mounted clamp
 D = Single clamp stacking module (not available for size 0)

Bore Size (in mm) _____ **12.7**
(refer to table D on next page)

Clamp Material _____ **PP**
 PP = Polypropylene
PA = Polyimide

Metal Components Materials _____ **UNC**
 (omit) = Carbon Steel
 A2 = 304 Stainless Steel
A4 = 316 Stainless Steel (metric threads only)

Thread Type _____ **UNC**
 UNC = Standard
M = Metric

Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact **HYDAC** for information and availability
 Not all combinations are available

Dimensions: HREL Series

All sizes

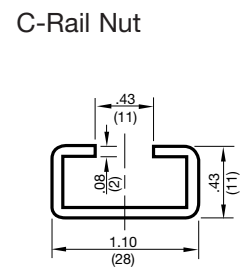
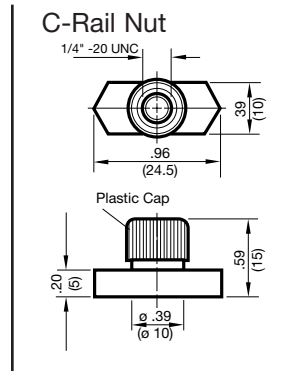
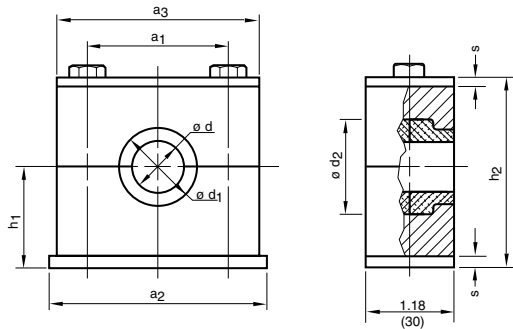


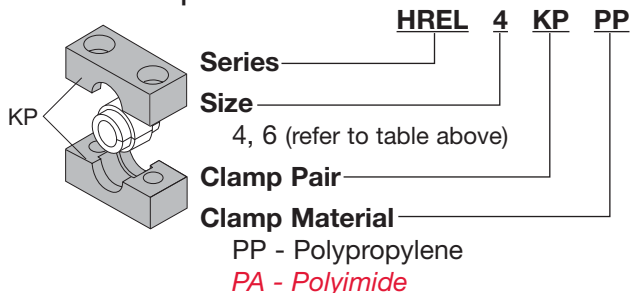
Table D

Clamp Size	EE-Rubber Insert Bore Size	Bore Size		Tube O.D.	Pipe	Recommended Nominal Size		Ø d1	Ø d2	h1	h2	a1	a2	a3	s	Bolt Size
		in	mm			Hose O.D.	Min (in)									
4	2/4 L	0.24	6	-	-	0.22	0.24	1.00	1.22	0.925	1.85	1.57	2.32	2.24	0.118	1/4-20x1 3/4
		0.32	8	5/16"	-	0.30	0.32									
		0.39	10	-	1/8"	0.37	0.39									
		0.47	12	-	-	0.45	0.47									
		0.50	12.7	1/2"	-	0.48	0.50									
		0.55	14	-	-	0.53	0.55									
		0.59	15	-	-	0.57	0.59									
		0.63	16	5/8"	-	0.61	0.63									
		0.68	17.2	-	3/8"	0.66	0.68									
0.75	19	3/4"	-	0.73	0.75											
6	3/6 L	0.79	20	-	1/2"	0.77	0.79	1.54	1.81	1.40	2.80	2.60	3.46	3.39	0.118	1/4-20x2 3/4
		0.87	22	7/8"	-	0.85	0.87									
		0.98	25	1"	-	0.96	0.98									
		1.06	26.9	-	3/4"	1.04	1.06									
		1.10	28	-	-	1.08	1.10									
		1.18	30	-	-	1.16	1.18									
1.26	32	1 1/4"	-	1.24	1.26											

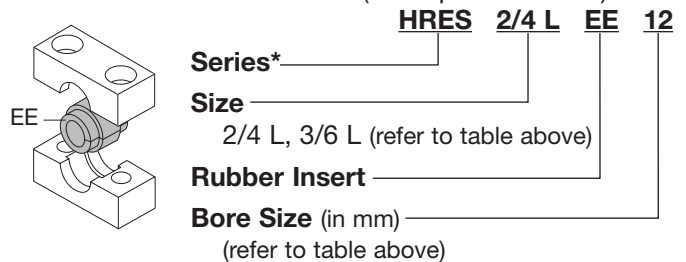
Note: Other bore diameters are available — Consult factory for details.
 Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.
 Dimensions are in inches/(mm) and lbs./.(kg.)

Parts: HREL Series

KP = Clamp Pair



EE = Rubber Insert (Santoprene TPE 73)

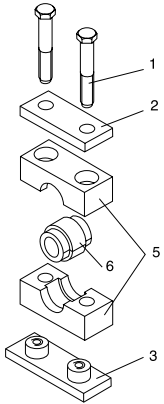


Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability

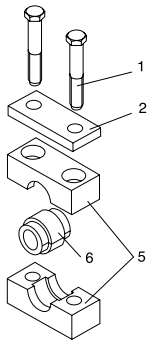
Note: All other components for these clamps are the same as for HRL series standard duty single clamps. Refer to page 61 for details

* HREL series use the same rubber inserts as the HRES series, therefore the model code for them is HRES.

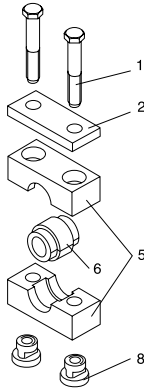
HRES Series Heavy Duty Clamps with Rubber Inserts



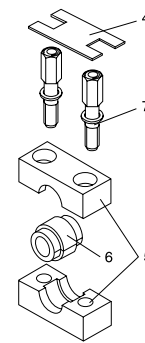
S
Single Clamp with
Weld Plate



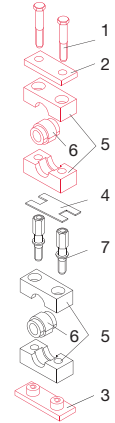
S1
Single Clamp without
Weld Plate



S1TM
Single Clamp for
C-Rail Mounting
(order C-Rail separately)



A
Single Clamp
Stacking Module



S + A
Order one S (red) arrange-
ment and one A (black)
arrangement separately.

Parts Legend (see page 62 to order parts separately)

1 Hex Head Bolt	5 Clamp Pair
2 Top Plate	6 Rubber Insert
3 Weld Plate	7 Stacking Bolt
4 Safety Plate	8 C-Rail Nut

A maximum of 3 stacking modules is recommended

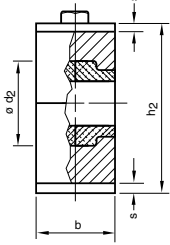
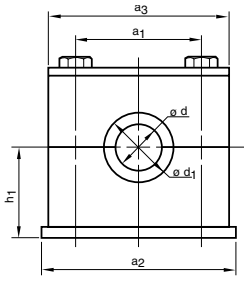
Model Code: HRES Series

Series _____	HRES
Size Family _____ 2 to 7 (refer to table E on next page)	4
Arrangement _____ S - Single clamp with weld plate S1 - Single clamp stacking kit S1TM - C-Rail mounted clamp A - Single clamp stacking module	S
Bore Size (in mm) _____ (refer to table E on next page)	35
Clamp Material _____ PP - Polypropylene <i>PA - Polyimide</i>	PP
Metal Component Material _____ (omit) = Carbon Steel <i>A4 = 316 Stainless Steel (metric threads only)</i>	UNC
Thread Type _____ UNC = Standard <i>M = Metric</i>	

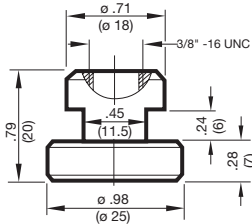
*Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability
Not all combinations are available*

Dimensions: HRES Series

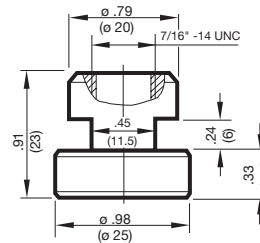
All Sizes



C-Rail Nut (sizes 1-3)



C-Rail Nut (size 4)



C-Rail (all sizes)

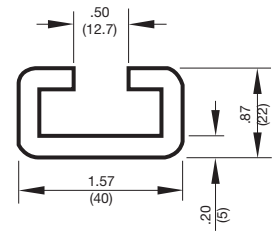


Table E

Clamp Size	EE-Rubber Insert Size	Bore Size		Recommended Nominal Size		Ø d1	Ø d2	b	h1	h2	a1	a2	a3	s	Bolt Size		
		in	mm	Tube O.D.	Pipe											Hose O.D. Min (in)	Hose O.D. Max (in)
2	2/4 L	0.24	6	-	-	0.22	0.24	1.00 (25.5)	1.24 (31.5)	1.18 (30)	1.22 (31)	2.44 (62)	1.77 (45)	3.35 (85)	2.76 (70)	0.32 (8)	3/8-16x2-1/4 (M10 x 60)
		0.32	8	5/16"	-	0.30	0.32										
		0.39	10	-	1/8"	0.37	0.39										
		0.47	12	-	-	0.45	0.47										
		0.50	12.7	1/2"	-	0.48	0.50										
		0.55	14	-	-	0.53	0.55										
		0.59	15	-	-	0.57	0.59										
		0.63	16	5/8"	-	0.61	0.63										
		0.68	17.2	-	3/8"	0.66	0.68										
0.75	19	3/4"	-	0.73	0.75												
3	3/6 L	0.79	20	-	1/2"	0.77	0.79	1.54 (39)	1.83 (46.5)	1.18 (30)	1.46 (37)	2.91 (74)	2.36 (60)	3.94 (100)	3.35 (85)	0.32 (8)	3/8-16x2-3/4 (M10 x 70)
		0.87	22	7/8"	-	0.85	0.87										
		0.98	25	1"	-	0.96	0.98										
		1.06	26.9	-	3/4"	1.04	1.06										
		1.10	28	-	-	1.08	1.10										
		1.18	30	-	-	1.16	1.18										
1.26	32	1 1/4"	-	1.24	1.26												
4	4	1.33	33.7	-	1"	1.31	1.33	2.56 (65)	2.91 (74)	1.77 (45)	2.11 (53.5)	4.21 (107)	3.56 (90.5)	5.51 (140)	4.53 (115)	0.39 (10)	7/16-14x4 (M12 x 100)
		1.38	35	-	-	1.36	1.38										
		1.50	38	1 1/2"	-	1.48	1.50										
		1.58	40	-	-	1.56	1.58										
		1.65	42	-	-	1.63	1.65										
		1.79	45.5	-	-	1.77	1.79										
		1.89	48	-	1 1/2"	1.87	1.89										
		2.01	51	2"	-	1.99	2.01										
		2.10	53.4	-	-	2.08	2.10										
2.22	56.4	-	-	2.20	2.22												
5	5	2.36	60	-	2"	2.34	2.36	3.50 (89)	3.86 (98)	2.36 (60)	2.70 (68.5)	5.39 (137)	4.80 (122)	7.09 (180)	5.98 (152)	0.39 (10)	5/8-11x5 1/2 (M16 x 130)
		2.56	65	-	-	2.54	2.56										
		2.76	70	-	-	2.74	2.76										
		2.87	73	2 1/2"	-	2.85	2.87										
2.99	76	3"	-	2.97	2.99												
6	6	3.27	83	-	-	3.19	3.27	4.57 (116)	5.20 (132)	3.15 (80)	3.88 (98.5)	7.76 (197)	6.61 (168)	8.86 (225)	8.07 (205)	0.59 (15)	3/4-10x7 1/2 (M20 x 190)
		3.50	89	3 1/2"	3"	3.43	3.50										
		3.70	94	-	-	3.62	3.70										
		3.98	101	4"	3 1/2"	3.90	3.98										
7	7	4.26	108	-	-	4.17	4.26	6.06 (154)	6.61 (168)	3.54 (90)	4.47 (113.5)	8.94 (227)	8.07 (205)	10.63 (270)	9.92 (252)	0.59 (15)	7/8-9x8 1/2 (M20 x 220)
		4.49	114	-	-	4.41	4.49										
		5.24	133	-	-	5.16	5.24										

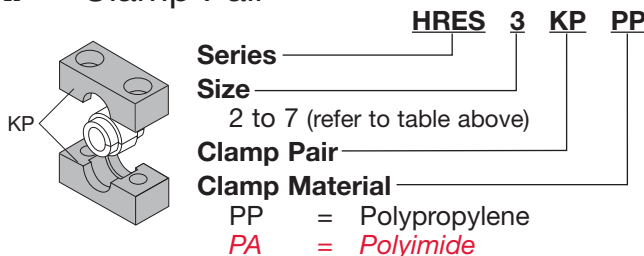
Note: Other bore diameters are available — Consult factory for details.

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.

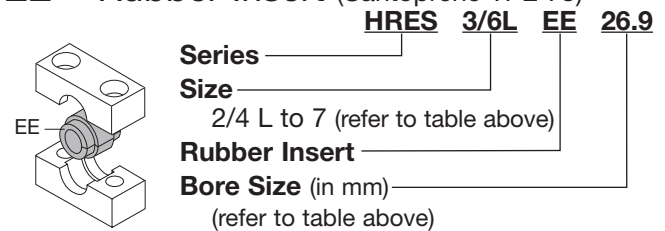
Dimensions are in inches/(mm) and lbs./(kg.)

Parts: HRES Series

KP = Clamp Pair



EE = Rubber Insert (Santoprene TPE 73)



Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability

Not all combinations are available

Note: All other components for these clamps are the same as for HRS series heavy duty single clamps.

Refer to page 62 for details

Clamps with Stainless Steel Metal Components

Description

Clamps with stainless steel metal components are available for corrosive environments. Our complete line of DIN 3015 clamps are available in stainless steel. Some models are special order, which may require minimum quantities, and/or extended delivery times. Listed here are the standard duty and heavy duty single clamps with weld plate.

Typical Arrangement

Single Clamp with Weld Plate (HRL...A...) for Standard Duty

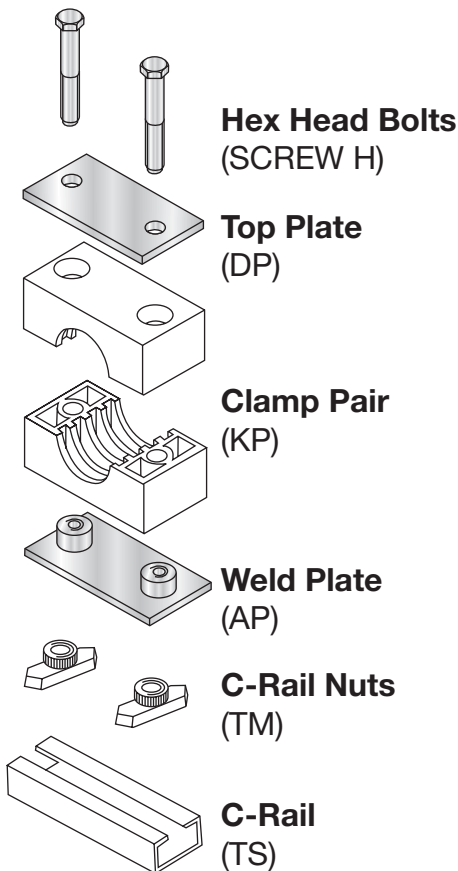
304 Stainless Steel: (A2)

- Available from stock
- UNC bolts

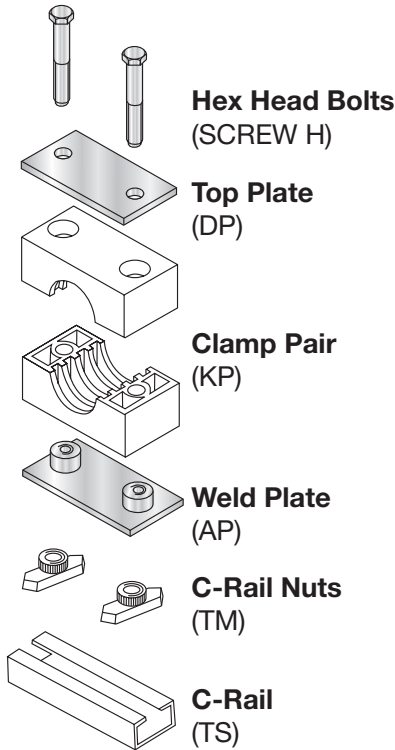
Standard Duty (HRL)

304 stainless steel (A2) metal components

Size	Model Code	Part Number
Arrangements (complete with PP clamp pair)		
1	HRL 1 A XX PP A2 UNC	<i>XX = bore diameter</i>
2	HRL 2 A XX PP A2 UNC	<i>A unique part number exists for each individual clamp bore diameter. A complete model code is sufficient for ordering. Use the dimensions table for standard HRL clamps on page 52 for available bore sizes.</i>
3	HRL 3 A XX PP A2 UNC	
4	HRL 4 A XX PP A2 UNC	
5	HRL 5 A XX PP A2 UNC	
6	HRL 6 A XX PP A2 UNC	
Weld Plates		
1	HRL 1 AP A2 UNC	02701275
2	HRL 2 AP A2 UNC	02701276
3	HRL 3 AP A2 UNC	02701277
4	HRL 4 AP A2 UNC	02701278
5	HRL 5 AP A2 UNC	02701279
6	HRL 6 AP A2 UNC	02701280
Top Plates		
1	HRL 1 DP A2	02701283
2	HRL 2 DP A2	02701284
3	HRL 3 DP A2	02701285
4	HRL 4 DP A2	02701286
5	HRL 5 DP A2	02701287
6	HRL 6 DP A2	02701288
Ext Hex Screws (316 Stainless Steel)		
1	SCREW H 1/4-20 x 1.25 SS316	02700627
2	SCREW H 1/4-20 x 1.50 SS316	02700906
3	SCREW H 1/4-20 x 1.50 SS316	02700906
4	SCREW H 1/4-20 x 1.75 SS316	02700157
5	SCREW H 1/4-20 x 2.50 SS316	02700646
6	SCREW H 1/4-20 x 2.75 SS316	02701205
HRL C-Rail		
1	HRL TS 28 x 11 A4 2M	00261229
HRL C-Rail Nuts		
1	HRL 0-6 TM 1/4 UNC A4	03035720



Clamps with Stainless Steel Metal Components



Typical Arrangement

Single Clamp with Weld Plate (HRL...A...) for Standard Duty (HRS...S...) for Heavy Duty

316 Stainless Steel: (A4)

- Salt water resistance
- Only metric bolts available

Standard Duty (HRL)

316 stainless steel (A4) metal components

Size	Model Code	Part Number
Arrangements (complete with PP clamp pair)		
1	<i>HRL 1 A XX PP A4 M</i>	<i>XX = bore diameter</i>
2	<i>HRL 2 A XX PP A4 M</i>	<i>A unique part number exists for each individual clamp bore diameter. A complete model code is sufficient for ordering. Use the dimensions table for standard HRL clamps on page 52 for available bore sizes.</i>
3	<i>HRL 3 A XX PP A4 M</i>	
4	<i>HRL 4 A XX PP A4 M</i>	
5	<i>HRL 5 A XX PP A4 M</i>	
6	<i>HRL 6 A XX PP A4 M</i>	
Weld Plates		
1	<i>HRL 1 AP A4 M</i>	<i>00268508</i>
2	<i>HRL 2 AP A4 M</i>	<i>00268509</i>
3	<i>HRL 3 AP A4 M</i>	<i>00268510</i>
4	<i>HRL 4 AP A4 M</i>	<i>00268511</i>
5	<i>HRL 5 AP A4 M</i>	<i>00261215</i>
6	<i>HRL 6 AP A4 M</i>	<i>00261216</i>
Top Plates		
1	<i>HRL 1 DP A4</i>	<i>00261108</i>
2	<i>HRL 2 DP A4</i>	<i>00261109</i>
3	<i>HRL 3 DP A4</i>	<i>00261110</i>
4	<i>HRL 4 DP A4</i>	<i>00261111</i>
5	<i>HRL 5 DP A4</i>	<i>00261112</i>
6	<i>HRL 6 DP A4</i>	<i>00261113</i>
Hex Head Bolts		
1	<i>SCREW H M6X30 A4</i>	<i>00603039</i>
2	<i>SCREW H M6X35 A4</i>	<i>00602136</i>
3	<i>SCREW H M6X40 A4</i>	<i>00602138</i>
4	<i>SCREW H M6X45 A4</i>	<i>00602140</i>
5	<i>SCREW H M6X60 A4</i>	<i>00602142</i>
6	<i>SCREW H M6X70 A4</i>	<i>00602144</i>

Heavy Duty (HRS)

316 stainless steel (A4) metal components

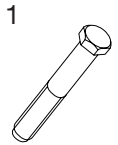
Size	Model Code	Part Number
Arrangements (complete with PP clamp pair)		
1	<i>HRS 1 S XX PP A4 M</i>	<i>XX = bore diameter</i>
2	<i>HRS 2 S XX PP A4 M</i>	<i>A unique part number exists for each individual clamp bore diameter. A complete model code is sufficient for ordering. Use the dimensions table for standard HRS clamps on page 54 for available bore sizes.</i>
3	<i>HRS 3 S XX PP A4 M</i>	
4	<i>HRS 4 S XX PP A4 M</i>	
5	<i>HRS 5 S XX PP A4 M</i>	
6	<i>HRS 6 S XX PP A4 M</i>	
Weld Plates		
1	<i>HRS 1 AP A4 M</i>	<i>00263646</i>
2	<i>HRS 2 AP A4 M</i>	<i>00263647</i>
3	<i>HRS 3 AP A4 M</i>	<i>00263648</i>
4	<i>HRS 4 AP A4 M</i>	<i>00267902</i>
5	<i>HRS 5 AP A4 M</i>	<i>00263700</i>
6	<i>HRS 6 AP A4 M</i>	<i>00263701</i>
Top Plates		
1	<i>HRS 1 DP A4</i>	<i>00262018</i>
2	<i>HRS 2 DP A4</i>	<i>00262019</i>
3	<i>HRS 3 DP A4</i>	<i>00262020</i>
4	<i>HRS 4 DP A4</i>	<i>00262021</i>
5	<i>HRS 5 DP A4</i>	<i>00262022</i>
6	<i>HRS 6 DP A4</i>	<i>00262023</i>
Hex Head Bolts		
1	<i>SCREW H M10X45 A4</i>	<i>00602151</i>
2	<i>SCREW H M10X60 A4</i>	<i>00602153</i>
3	<i>SCREW H M10X70 A4</i>	<i>00602155</i>
4	<i>SCREW H M12X100 A4</i>	<i>00602157</i>
5	<i>SCREW H M16X130 A4</i>	<i>00602160</i>
6	<i>SCREW H M20X190 A4</i>	<i>00602163</i>
HRS C-Rail		
1	<i>HRS TS 40X22 A4 2M</i>	<i>00263359</i>
HRS C-Rail Nuts		
1	<i>HRS TM 10 A4 M</i>	<i>00262736</i>
2	<i>HRS TM 12 A4 M</i>	<i>00262739</i>

Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability

Parts HRL Series

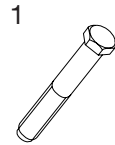
All metal components are carbon steel. For stainless steel metal components please refer to page 64.

ST = Carbon Steel **BL** = Phosphate coated **ZN** = Zinc Plated



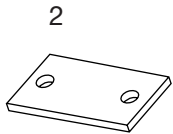
UNC Threads

UNC Hex Head Bolts	
size family	model code
0	SCREW H 1/4 - 20 x 1.25 GR2
1	SCREW H 1/4 - 20 x 1.25 GR2
2	SCREW H 1/4 - 20 x 1.50 GR2
3	SCREW H 1/4 - 20 x 1.50 GR2
4	SCREW H 1/4 - 20 x 1.75 GR2
5	SCREW H 1/4 - 20 x 2.50 GR2
6	SCREW H 1/4 - 20 x 2.75 GR2



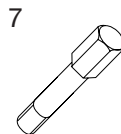
Metric Threads

Metric Hex Head Bolts	
size family	model code
0	SCREW H M6 X 30 - 8.8
1	SCREW H M6 X 30 - 8.8
2	SCREW H M6 X 35 - 8.8
3	SCREW H M6 X 40 - 8.8
4	SCREW H M6 X 45 - 8.8
5	SCREW H M6 X 60 - 8.8
6	SCREW H M6 X 70 - 8.8



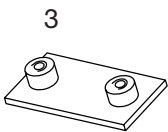
2

DP = Top Plate	
size family	model code
0	HRL 0 DP ST ZN
1	HRL 1 DP ST ZN
2	HRL 2 DP ST ZN
3	HRL 3 DP ST ZN
4	HRL 4 DP ST ZN
5	HRL 5 DP ST ZN
6	HRL 6 DP ST ZN



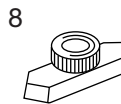
7

AF = Stacking Bolt	
size family	model code
1	HRL 1 AF ST UNC
2	HRL 2 AF ST UNC
3	HRL 3 AF ST UNC
4	HRL 4 AF ST UNC
5	HRL 5 AF ST UNC
6	HRL 6 AF ST UNC



3

AP = Weld Plate	
size family	model code
0	HRL 0 AP ST UNC BL
1	HRL 1 AP ST UNC BL
2	HRL 2 AP ST UNC BL
3	HRL 3 AP ST UNC BL
4	HRL 4 AP ST UNC BL
5	HRL 5 AP ST UNC BL
6	HRL 6 AP ST UNC BL



8

TM = C-Rail Nut	
size family	model code
0 - 6	HRL 0-6 TM1/4 ST UNC KAP
0 - 6	HRL 0-6 TM ST ZN KAP



4

SIP = Safety Plate	
size family	model code
0-6	HRL 0-6 SIP ST ZN



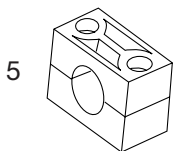
8

TS = C-Rail	
size family	model code
39"	HRL TS 28x11 ST BL 1M
78"	HRL TS 28x11 ST BL 2M

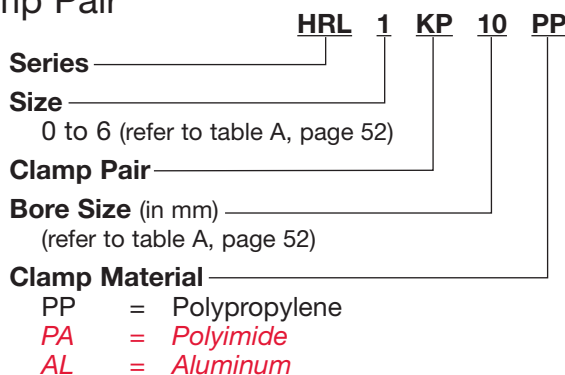
Parts Legend

1	Hex Head Bolt	5	Clamp Pair
2	Top Plate	6	Rubber Insert
3	Weld Plate	7	Stacking Bolt
4	Safety Plate	8	C-Rail Nut

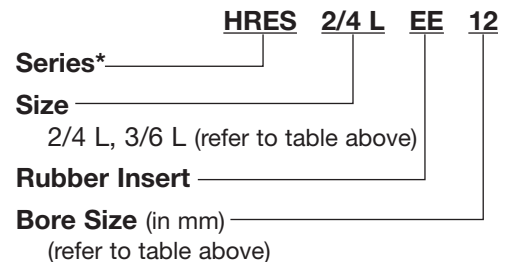
KP = Clamp Pair



5



EE = Rubber Insert (Santoprene TPE 73)

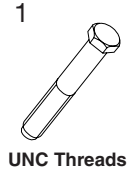


Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact **HYDAC** for information and availability
Not all combinations are available

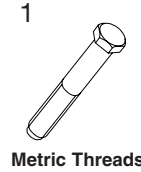
Parts HRS Series

All metal components are carbon steel. For stainless steel metal components please refer to page 53.

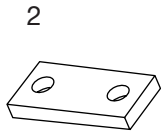
ST = Carbon Steel **BL** = Phosphate coated **ZN** = Zinc Plated



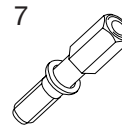
UNC Hex Head Bolts	
size family	model code
1	SCREW H 3/8 - 16 x 1.75 GR5
2	SCREW H 3/8 - 16 x 2.25 GR5
3	SCREW H 3/8 - 16 x 2.75 GR5
4	SCREW H 7/16 - 14 x 4.00 GR5
5	SCREW H 5/8 - 11 x 5.50 GR5
6	SCREW H 3/4 - 10 x 7.50 GR5
7	SCREW H 7/8 - 9 x 8.50 GR5
8	N/A (size 8 metric only)



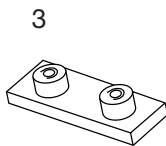
Metric Hex Head Bolts	
size family	model code
1	SCREW H M10 X 45 - 8.8
2	SCREW H M10 X 60 - 8.8
3	SCREW H M10 X 70 - 8.8
4	SCREW H M12 X 100 - 8.8
5	SCREW H M16 X 130 - 8.8
6	SCREW H M20 X 190 - 8.8
7	SCREW H M20 X 220 - 8.8
8	SCREW H M30 X 300 - 8.8



DP = Top Plate	
size family	model code
1	HRS 1 DP ST ZN
2	HRS 2 DP ST ZN
3	HRS 3 DP ST ZN
4	HRS 4 DP ST ZN
5	HRS 5 DP ST ZN
6	HRS 6 DP ST BL
7	HRS 7 DP ST BL
8	HRS 8 DP ST BL



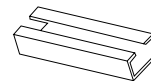
AF = Stacking Bolt w/ Washer	
size family	model code
1	HRS 1 AF ST UNC
2	HRS 2 AF ST UNC
3	HRS 3 AF ST UNC
4	HRS 4 AF ST UNC
5	HRS 5 AF ST UNC



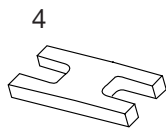
AP = Weld Plate	
size family	model code
1	HRS 1 AP ST UNC BL
2	HRS 2 AP ST UNC BL
3	HRS 3 AP ST UNC BL
4	HRS 4 AP ST UNC BL
5	HRS 5 AP ST UNC BL
6	HRS 6 AP ST UNC BL
7	HRS 7 AP ST UNC BL
8	HRS 8 AP ST UNC BL



TM = C-Rail Nut	
size family	model code
1-3	HRS 1-3 TM3/8 ST UNC BL
4	HRS 4 TM7/16 ST UNC BL



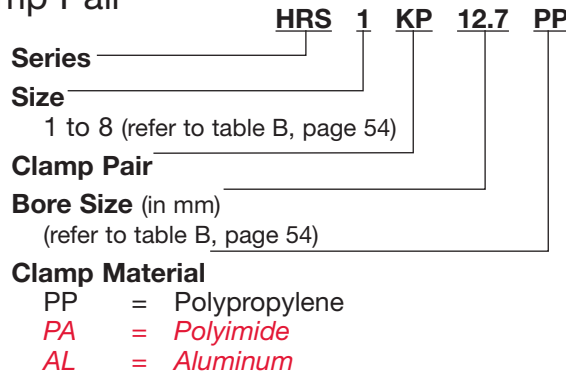
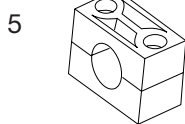
TS = C-Rail	
size family	model code
39"	HRS TS 40x22 ST BL 1M
78"	HRS TS 40x22 ST BL 2M



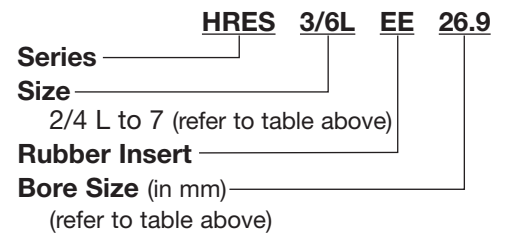
SIP = Safety Plate	
size family	model code
1	HRS 1 SIP ST ZN
2	HRS 2 SIP ST ZN
3	HRS 3 SIP ST ZN
4	HRS 4 SIP ST ZN
5	HRS 5 SIP ST ZN

Parts Legend			
1	Hex Head Bolt	5	Clamp Pair
2	Top Plate	6	Rubber Insert
3	Weld Plate	7	Stacking Bolt
4	Safety Plate	8	C-Rail Nut

KP = Clamp Pair

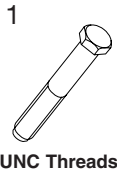


EE = Rubber Insert (Santoprene TPE 73)



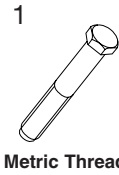
Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact **HYDAC** for information and availability
Not all combinations are available

Parts HRZ Series



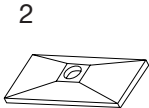
UNC Threads

UNC Hex Head Bolts	
size	model code
1	SCREW H 1/4 - 20 x 1.5 GR2
2	SCREW H 5/16 - 18 x 1.25 GR2
3	SCREW H 5/16 - 18 x 1.75 GR2
4	SCREW H 5/16 - 18 x 2.00 GR2
5	SCREW H 5/16 - 18 x 2.50 GR2



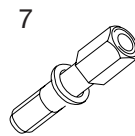
Metric Threads

Metric Hex Head Bolts	
size	model code
1	SCREW H M6x35 MM - 8.8 DIN 933
2	SCREW H M8x35 MM - 8.8 DIN 933
3	SCREW H M8x45 MM - 8.8 DIN 933
4	SCREW H M8x50 MM - 8.8 DIN 933
5	SCREW H M8x60 MM - 8.8 DIN 933



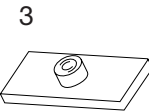
2

DP = Top Plate	
size	model code
1	HRZ 1 DP ST ZN
2	HRZ 2 DP ST ZN
3	HRZ 3 DP ST ZN
4	HRZ 4 DP ST ZN
5	HRZ 5 DP ST ZN



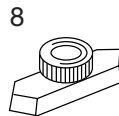
7

AF = Stacking Bolt w/ Washer	
size	model code
1	HRZ 1 AF ST UNC
2	HRZ 2 AF ST UNC
3	HRZ 3 AF ST UNC
4	HRZ 4 AF ST UNC
5	HRZ 5 AF ST UNC



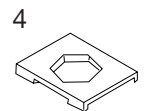
3

AP = Weld Plate	
size	model code
1	HRZ 1 AP ST UNC BL Anti-Turn
2	HRZ 2 AP ST UNC BL Anti-Turn
3	HRZ 3 AP ST UNC BL Anti-Turn
4	HRZ 4 AP ST UNC BL
5	HRZ 5 AP ST UNC BL



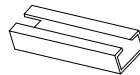
8

TM = C-Rail Nut	
size	model code
1	HRZ 1 TM1/4 ST UNC KAP
2-5	HRZ 2/5 TM5/16 ST UNC O-Ring



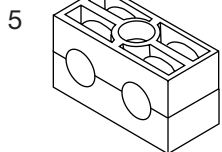
4

SIP = Safety Plate	
size	model code
1	HRZ 1 SIP ST ZN
2-5	HRZ 2/5 SIP ST ZN

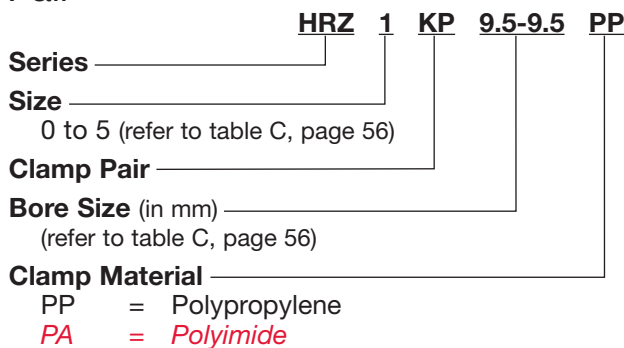


TS = C-Rail	
size	model code
39"	HRL TS 28x11 ST BL 1M
78"	HRL TS 28x11 ST BL 2M

KP = Clamp Pair



5

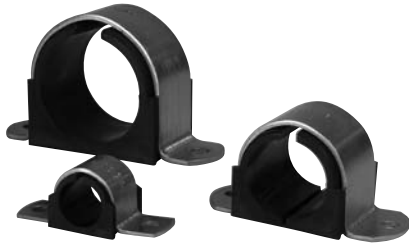


Parts Legend

1	Hex Head Bolt	5	Clamp Pair
2	Top Plate	6	Rubber Insert
3	Weld Plate	7	Stacking Bolt
4	Safety Plate	8	C-Rail Nut

Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact **HYDAC** for information and availability
 Not all combinations are available

HOM Series



Description:

The interlock edge insures that the cushion remains in place. The HOM Series clamp assembly retains, guides, protects and uniformly spaces line runs. They go up fast, lines are rigid, and look neat.

Features:

Attached with two standard* fasteners to any flat surface, the HOM Series clamp eliminates the use of specials channels, providing a savings in both space and cost.

- Low profile for limited space applications.

Materials:

The Clamp

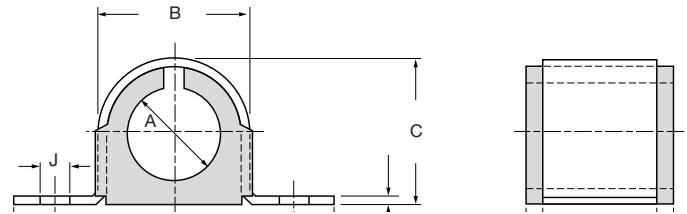
Available in steel (*with electro-dichromate finish*), and 304 stainless steel (*A2 in the model code denotes 304 stainless steel*).

The Cushion

Manufactured from a thermoplastic elastomer, it's built tough to withstand the effects of most oils, chemical and industrial cleaning compounds, in temperatures from -50° to 275°F.

*Note: Fasteners not provided.

Dimensions



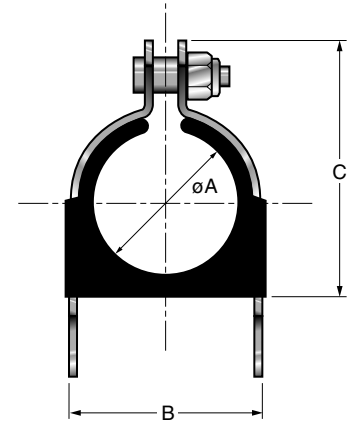
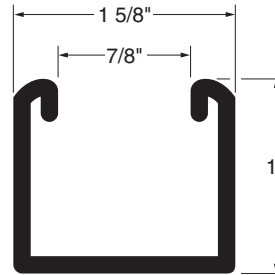
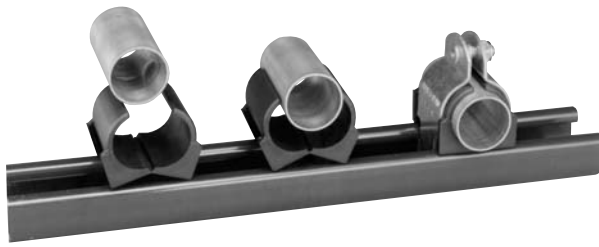
Model Code	Part Number	Copper & Steel Tubing O.D.	Copper Water Pipe	Pipe Size	A	B	C	D	E	F
HOM 1/4T	02080747	1/4"	-	-	0.25"	0.48"	0.60"	0.22"	0.26"	0.78"
HOM 1/4T A2	02080768									
HOM 3/8T	02080748	3/8"	1/4"	-	0.37"	0.62"	0.66"	0.31"	0.26"	0.81"
HOM 3/8T A2	02080769									
HOM 1/2T - 1/4P	02080749	1/2"	3/8"	1/4"	0.50"	0.81"	0.83"	0.40"	0.26"	0.98"
HOM 1/2T - 1/4P A2	02080770									
HOM 5/8-3/8P	02080750	5/8"	1/2"	3/8"	0.62"	0.93"	0.85"	0.46"	0.26"	0.98"
HOM 5/8-3/8P A2	02080771									
HOM 3/4T	02080751	3/4"	5/8"	-	0.75"	1.02"	0.90"	0.50"	0.26"	0.98"
HOM 3/4T A2	02080772									
HOM 7/8 - 1/2P	02080752	7/8"	3/4"	1/2"	0.87"	1.12"	1.03"	0.53"	0.26"	0.98"
HOM 7/8 - 1/2P A2	02080773									
HOM 1T	02080753	1"	-	-	1.00"	1.24"	1.04"	0.59"	0.26"	0.98"
HOM 1T A2	02080774									
HOM 3/4P	02080754	-	-	3/4"	1.05"	1.40"	1.11"	0.70"	0.26"	0.98"
HOM 3/4P A2	02080775									
HOM 1 1/8T	02080755	1 1/8"	1"	-	1.12"	1.40"	1.17"	0.70"	0.26"	0.98"
HOM 1 1/8T A2	02080776									
HOM 1 1/4T	02080756	1 1/4"	-	-	1.25"	1.60"	1.20"	0.77"	0.26"	1.56"
HOM 1 1/4T A2	02080777									
HOM 1P	02080757	-	-	1"	1.31"	1.71"	1.28"	0.81"	0.26"	1.56"
HOM 1P A2	02080778									
HOM 1 3/8T	02080758	1 3/8"	1 1/4"	-	1.37"	1.71"	1.28"	0.83"	0.26"	1.56"
HOM 1 3/8T A2	02080779									
HOM 1 1/2T	02080759	1 1/2"	-	-	1.50"	1.85"	1.36"	0.90"	0.26"	1.56"
HOM 1 1/2T A2	02080780									
HOM 1 5/8T	02080760	1 5/8"	1 1/2"	-	1.62"	1.95"	1.43"	0.96"	0.26"	1.56"
HOM 1 5/8T A2	02080781									
HOM 1 1/4P	02080761	-	-	1 1/4"	1.66"	2.12"	1.55"	0.99"	0.34"	1.56"
HOM 1 1/4P A2	02080782									
HOM 1 3/4T	02080762	1 3/4"	-	-	1.75"	2.12"	1.55"	1.02"	0.34"	1.56"
HOM 1 3/4T A2	02080783									
HOM 1 7/8T - 1 1/2P	02080763	1 7/8"	-	1 1/2"	1.87"	2.25"	1.64"	1.09"	0.34"	1.56"
HOM 1 7/8T - 1 1/2P A2	02080784									
HOM 2T	02080764	2"	-	-	2.00"	2.38"	1.69"	1.15"	0.34"	1.56"
HOM 2T A2	02080785									
HOM 2 1/8T	02080765	2 1/8"	-	-	2.12"	2.62"	1.86"	1.27"	0.34"	1.56"
HOM 2 1/8T A2	02080786									
HOM 2 3/8T - 2P	02080766	2 3/8"	-	2"	2.37"	2.88"	1.94"	1.41"	0.34"	1.56"
HOM 2 3/8T - 2P A2	02080787									
HOM 5 1/8T	02080767	5 1/8"	5"	-	5.12"	5.82"	3.55"	2.84"	0.43"	1.56"

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print. Dimensions are in inches/(mm) and lbs./(kg.)

Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability

CUSH Series Cushion Clamps

Dimensions



Description

Cushion clamps are ideal for multiple line runs, while absorbing shock and vibration, reducing unwanted noise and preventing galvanic corrosion.

Features

- Distortion free clamping
- Shock and vibration reduction
- Elimination of rotation
- Retrofit without disassembly
- Easy installation
- Control squeeze shoulder bolt prevents over tightening of the clamp assembly, preventing the possibility of crushing the tube.
- Fits standard 1-5/8" wide mounting rail

Materials

- Clamp - carbon steel
(with electrochromate finish)
- Cushion - thermoplastic elastomer
- Cushion material withstands the effect of most oils, chemicals and industrial cleaning solvents at temperatures -40° to 275°F.

Mounting Rail

- **Part Number:** 02073325
- **Model Code:** Cush Rail 1" x 4' Green
- **Material:** Low gauge carbon steel
- **Finish:** Green paint
- **Length:** 4'

Model Code	Application		Nom. Pipe Size in.	Dimensions			Part No.
	Copper Tubing in. (nom.)	Copper Water Pipe in.		ø A in.	B in.	C in.	
<i>CUSH 1/4T</i>	1/4			0.25	0.62	0.98	02073330
CUSH 3/8T	3/8	1/4		0.37	0.82	1.13	02073331
CUSH 1/2T	1/2	3/8		0.50	0.94	1.34	02073332
CUSH 1/4P			1/4	0.54	0.98	1.34	02073361
CUSH 5/8T	5/8	1/2		0.62	1.06	1.54	02073333
<i>CUSH 3/8P</i>			3/8	0.67	1.13	1.54	02073362
CUSH 3/4T	3/4	5/8		0.75	1.20	1.68	02073334
<i>CUSH 1/2P</i>			1/2	0.84	1.29	1.82	02073363
CUSH 7/8T	7/8	3/4		0.87	1.31	1.82	02073335
CUSH 1T	1			1.00	1.44	1.95	02073336
CUSH 3/4P			3/4	1.05	1.50	1.95	02073364
<i>CUSH 1-1/8T</i>	1 1/8	1		1.12	1.57	2.08	02073337
CUSH 1-1/4T	1 1/4			1.25	1.70	2.21	02073338
CUSH 1P			1	1.31	1.76	2.34	02073365
<i>CUSH 1-3/8T</i>	1 3/8	1 1/4		1.37	1.82	2.34	02073339
CUSH 1-1/2T	1 1/2			1.50	1.95	2.47	02073340
CUSH 1-5/8T	1 5/8	1 1/2		1.62	2.07	2.60	02073341
CUSH 1-1/4P			1 1/4	1.66	2.17	2.73	02073366
CUSH 1-3/4T	1 3/4			1.75	2.20	2.73	02073342
<i>CUSH 1-7/8T</i>	1 7/8			1.87	2.32	2.86	02073343
CUSH 1-1/2P			1 1/2	1.90	2.35	2.86	02073367
CUSH 2T	2			2.00	2.45	3.04	02073344
<i>CUSH 2-1/8T</i>	2 1/8			2.12	2.57	3.23	02073345
CUSH 2-3/8T	2 3/8			2.37	2.82	3.67	02073346
CUSH 2P			2	2.37	2.82	3.67	02073368
<i>CUSH 2-5/8T</i>	2 5/8			2.62	3.07	3.92	02073348
CUSH 2-1/2P			2 1/2	2.87	3.32	4.17	02073369
<i>CUSH 3-1/8T</i>	3 1/8			3.12	3.57	4.42	02073351
<i>CUSH 3P</i>			3	3.50	3.95	4.79	02073370
<i>CUSH 4p</i>	4			4.50	4.95	5.95	02073372
<i>CUSH 5p</i>	5			5.56	6.01	6.92	02073373
<i>CUSH 6P</i>	6		3	6.62	7.07	8.23	02073374

Tube Series: T = with Controlled Squeeze Shoulder Bolt (sizes 1 3/8" and smaller)

Pipe Series: P = without Controlled Squeeze Shoulder Bolt

Dimensions are for general information only. Due to constant development and updating of details, we ask that all critical dimensions be verified by requesting a certified print.

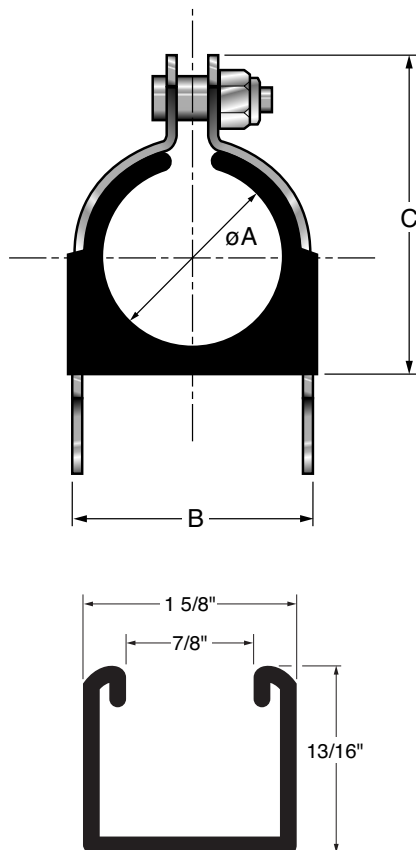
Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability
Not all combinations are available

CUSH Series Stainless Steel Cushion Clamps

Materials

- Clamp - 316 stainless steel
- Cushion - thermoplastic elastomer

Dimensions



Mounting Rail

Model Code: Cush Rail 13/16" x 10' A2

Part Number: 02701588

Material: Stainless Steel 316

Length: 10'0"

Model Code	Part Number	Size	A	B	C
<i>CUSH 1/4T A2</i>	02080701	1/4"	0.25"	0.62"	0.98"
<i>CUSH 3/8T A2</i>	02080702	3/8"	0.37"	0.82"	1.13"
CUSH 1/2T A2	02080703	1/2"	0.50"	0.94"	1.34"
CUSH 5/8T A2	02080704	5/8"	0.62"	1.06"	1.54"
CUSH 3/4T A2	02080705	3/4"	0.75"	1.20"	1.68"
<i>CUSH 7/8T A2</i>	02080706	7/8"	0.87"	1.31"	1.82"
<i>CUSH 1T A2</i>	02080707	1"	1.00"	1.44"	1.95"
CUSH 1 1/8T A2	02080708	1 1/8"	1.12"	1.57"	2.08"
<i>CUSH 1 1/4T A2</i>	02080709	1 1/4"	1.25"	1.70"	2.21"
<i>CUSH 1 3/8T A2</i>	02080710	1 3/8"	1.37"	1.82"	2.34"
<i>CUSH 1 1/2T A2</i>	02080711	1 1/2"	1.50"	1.95"	2.47"
<i>CUSH 1 5/8T A2</i>	02080712	1 5/8"	1.62"	2.07"	2.60"
<i>CUSH 1 3/4T A2</i>	02080713	1 3/4"	1.75"	2.20"	2.73"
<i>CUSH 1 7/8T A2</i>	02080714	1 7/8"	1.87"	2.32"	2.86"
CUSH 2T A2	02080715	2"	2.00"	2.45"	3.04"
<i>CUSH 2 1/8T A2</i>	02080716	2 1/8"	2.12"	2.57"	3.23"
<i>CUSH 2 1/4T A2</i>	02080717	2 1/4"	2.37"	2.82"	3.67"
<i>CUSH 2 3/8T A2</i>	02080718	2 3/8"	2.37"	2.82"	3.67"
<i>CUSH 2 1/2T A2</i>	02080719	2 1/2"	2.50"	2.94"	3.79"
<i>CUSH 2 5/8T A2</i>	02080720	2 5/8"	2.62"	3.07"	3.92"
<i>CUSH 2 7/8T A2</i>	02080721	2 7/8"	2.87"	3.32"	4.17"
<i>CUSH 3T A2</i>	02080722	3"	3.00"	3.57"	4.42"
<i>CUSH 3 1/8T A2</i>	02080723	3 1/8"	3.12"	3.57"	4.42"
<i>CUSH 3 5/16T A2</i>	02080724	3 5/16"	3.31"	3.96"	4.75"
<i>CUSH 3 1/2T A2</i>	02080725	3 1/2"	3.50"	3.95"	4.79"
<i>CUSH 3 5/8T A2</i>	02080726	3 5/8"	3.62"	4.20"	5.11"
<i>CUSH 4T A2</i>	02080727	4"	4.00"	4.45"	5.11"
<i>CUSH 4 1/8T A2</i>	02080728	4 1/8"	4.12"	4.57"	5.54"
<i>CUSH 4 1/2T A2</i>	02080729	4 1/2"	4.50"	4.95"	5.92"
<i>CUSH 5 1/8T A2</i>	02080730	5 1/8"	5.12"	5.57"	6.54"
<i>CUSH 6T A2</i>	02080731	6"	6.12"	6.57"	7.54"
<i>CUSH 6 1/8T A2</i>	02080732	6 1/8"	6.12"	6.57"	7.54"
<i>CUSH 1/4P A2</i>	02080733	1/4"	0.54"	0.98"	1.34"
<i>CUSH 3/8P A2</i>	02080734	3/8"	0.67"	1.13"	1.54"
<i>CUSH 1/2P A2</i>	02080735	1/2"	0.84"	1.29"	1.82"
<i>CUSH 3/4P A2</i>	02080736	3/4"	1.05"	1.57"	2.08"
<i>CUSH 1P A2</i>	02080737	1"	1.31"	1.76"	2.34"
<i>CUSH 1 1/4P A2</i>	02080738	1 1/4"	1.66"	2.17"	2.73"
<i>CUSH 1 1/2P A2</i>	02080739	1 1/2"	1.90"	2.35"	2.86"
<i>CUSH 2P A2</i>	02080740	2"	2.37"	2.82"	3.67"
<i>CUSH 2 1/2P A2</i>	02080741	2 1/2"	2.87"	3.32"	4.17"
<i>CUSH 3P A2</i>	02080742	3"	3.50"	3.95"	4.79"
<i>CUSH 3 1/2P A2</i>	02080743	3 1/2"	4.00"	4.45"	5.11"
<i>CUSH 4P A2</i>	02080744	4"	4.50"	4.95"	5.92"
<i>CUSH 5P A2</i>	02080745	5"	5.56"	6.01"	6.92"
<i>CUSH 6P A2</i>	02080746	6"	6.62"	7.07"	8.23"

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print. Dimensions are in inches/(mm) and lbs./(kg.)

HRBGS Series Buegu Clamps



Description

Buegu clamps are ideal for mobile applications where space is limited. They absorb shock and vibration, and reduce noise.

Features

- Low Profile Design
- Shock and vibration reduction
- Easy installation

Materials

- Stirrup & Weld Plate - carbon steel
- Clamp Body - thermoplastic elastomer (Santoprene TPE 73)

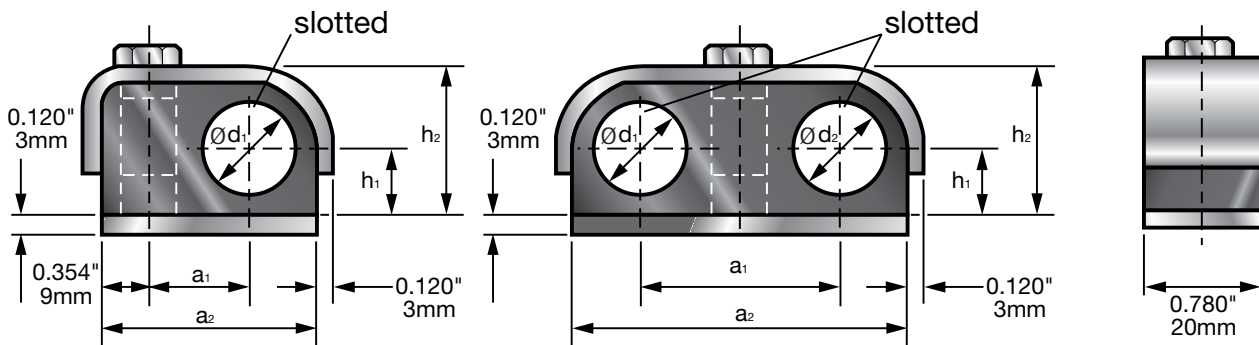
Temp Specifications

- -40° to 257°F (-40° to 125°C)

Dimensions

Size: 0a & 0b

Size: 1 and 2



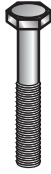
Clamp Size	Tube Size	Pipe Size	Bore Diameter ¹				Clamp Assembly Model Code	Part Number	Dimensions				Hex Head Bolt	
			Ød1 in	Ød1 mm	Ød2 in	Ød2 mm			a1	a2	h1	h2		
0A	1/4"	-	0.250	6.4	-	-	<i>HRBGS 0A A 6.4 STM</i>	<i>02063638</i>	mm	15	34	10	23	M6x25
	3/8"	-	0.375	9.5	-	-	<i>HRBGS 0A A 9.5 STM</i>	<i>02063639</i>						
	-	1/8"	0.394	10.0	-	-	<i>HRBGS 0A A 10.0 STM</i>	<i>02063640</i>						
0B	1/2"	-	0.500	12.7	-	-	<i>HRBGS 0B A 12.7 STM</i>	<i>02063641</i>	mm	18	39	12	27	M6x25
	-	1/4"	0.540	13.7	-	-	<i>HRBGS 0B A 13.7 STM</i>	<i>02063642</i>						
	5/8"	-	0.625	16.0	-	-	<i>HRBGS 0B A 16.0 STM</i>	<i>02063643</i>						
	-	3/8"	0.675	17.1	-	-	<i>HRBGS 0B A 17.1 STM</i>	<i>02063644</i>						
	3/4"	-	0.750	19.0	-	-	<i>HRBGS 0B A 19.0 STM</i>	<i>02063645</i>						
1	1/4"	-	0.250	6.4	0.250	6.4	HRBGS 1 A 6.4-6.4 STM	02063646	mm	30	50	10	23	M6x25
	3/8"	-	0.375	9.5	0.375	9.5	<i>HRBGS 1 A 9.5-9.5 STM</i>	<i>02063647</i>						
	-	1/8"	0.394	10.0	0.394	10.0	HRBGS 1 A 10-10 STM	02063648						
	1/2"	-	0.500	12.7	0.500	12.7	<i>HRBGS 1 A 12.7-12.7 STM</i>	<i>02063649</i>						
2	5/8"	-	0.625	16.0	0.625	16.0	HRBGS 2 A 16-16 STM	02063650	mm	35	59	12	27	M6x25
	-	3/8"	0.675	17.1	0.675	17.1	<i>HRBGS 2 A 17.1-17.1 STM</i>	<i>02063651</i>						
	3/4"	-	0.750	19.0	0.750	19.0	HRBGS 2 A 19-19 STM	02063652						

1) Consult Factory for sizes 1 and 2 with different bore diameters.

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.

Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability

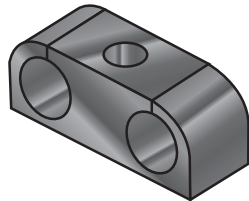
Parts Buegu Clamp Parts



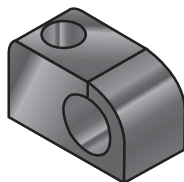
ASKT = Hex Head Bolt



BUE = Stirrup



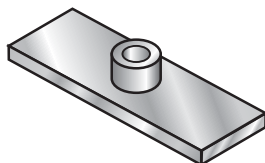
Size 1,2



Size 0
GT = Rubber Body



HUE = Sleeve



AP = Weld Plate

ASKT = Hex Head Bolt for use with Weld Plate		
Sizes	Model Code	Part Number
0A, 0B, 1, 2	HRBGS 0A/1 ASKT M6x25	02700852

BUE = Stirrup		
Sizes	Model Code	Part Number
0A	HRBGS 0A BUE ST ZN	00263306
0B	HRBGS 0B BUE ST ZN	00263307
1	HRBGS 1 BUE ST ZN	00263316
2	HRBGS 2 BUE ST ZN	00263309

Clamp Size	Bore Diameter ¹				Model Code	Part Number
	Ød1		Ød2			
	in	mm	in	mm		
0A	0.250	6.4	-	-	<i>HRBGS 0A GT 6.4</i>	<i>00268169</i>
	0.375	9.5	-	-	HRBGS 0A GT 9.5	00268170
	0.394	10.0	-	-	<i>HRBGS 0A GT 10.0</i>	<i>00263296</i>
0B	0.500	12.7	-	-	<i>HRBGS 0B GT 12.7</i>	<i>00268171</i>
	0.540	13.7	-	-	<i>HRBGS 0B GT 13.7</i>	<i>00268172</i>
	0.625	16.0	-	-	<i>HRBGS 0B GT 16.0</i>	<i>00263298</i>
	0.675	17.1	-	-	<i>HRBGS 0B GT 17.1</i>	<i>00268173</i>
1	0.750	19.0	-	-	<i>HRBGS 0B GT 19.0</i>	<i>00264713</i>
	0.250	6.4	0.250	6.4	HRBGS 1 A GT 6.4-6.4	00268174
	0.375	9.5	0.375	9.5	<i>HRBGS 1 GT 9.5-9.5</i>	<i>00268175</i>
	0.394	10.0	0.394	10.0	HRBGS 1 GT 10-10	00263313
2	0.500	12.7	0.500	12.7	<i>HRBGS 1 GT 12.7-12.7</i>	<i>00264011</i>
	0.630	16.0	0.625	16.0	HRBGS 2 GT 16-16	00263304
	0.675	17.1	0.675	17.1	<i>HRBGS 2 GT 17.1-17.1</i>	<i>00268176</i>
	0.750	19.0	0.750	19.0	HRBGS 2 GT 19-19	00268177

1) Consult Factory for sizes 1 and 2 with different bore diameters.

HUE = Sleeve for use with Weld Plate		
Sizes	Model Code	Part Number
0A	HRBGS 0A/1 HUE 11.5 ZN	00263418
0B	HRBGS 0B/2 HUE 15.5 ZN	00263419
1	HRBGS 0A/1 HUE 11.5 ZN	00263418
2	HRBGS 0B/2 HUE 15.5 ZN	00263419

HUE = Sleeve for use without Weld Plate		
Sizes	Model Code	Part Number
0A	<i>HRBGS 0A/1 HUE 18 ZN</i>	<i>00263310</i>
0B	HRBGS 0B/2 HUE 22 ZN	00263311
1	<i>HRBGS 0A/1 HUE 18 ZN</i>	<i>00263310</i>
2	HRBGS 0B/2 HUE 22 ZN	00263311

AP = Weld Plate		
Sizes	Model Code	Part Number
0A	<i>HRBGS 0A AP ST BLM</i>	<i>00263582</i>
0B	HRBGS 0B AP ST BLM	00263583
1	HRBGS 1 AP ST BLM	00263585
2	HRBGS 2 AP ST BLM	00263586

Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact **HYDAC** for information and availability

U-bolt Clamps



Description

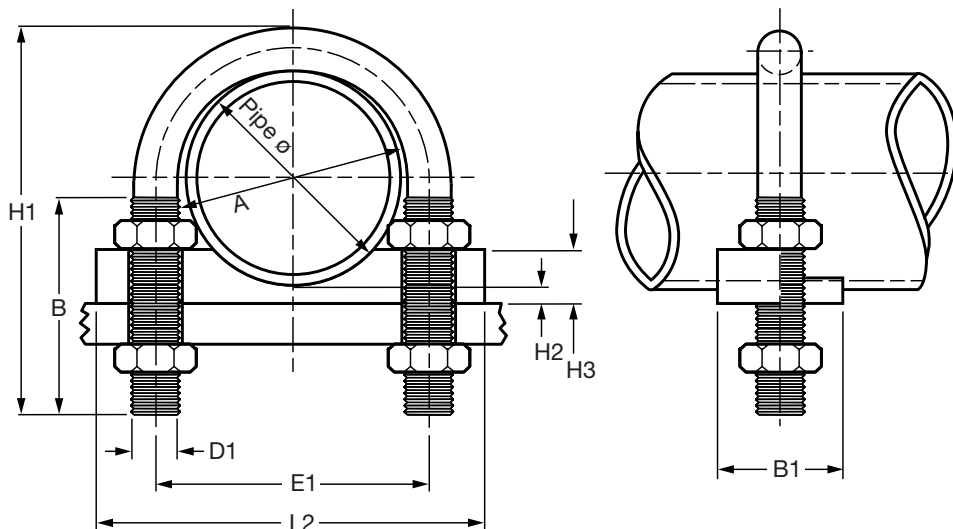
U-bolt clamps are a simple solution for securing pipes and other cylindrical objects. The clamps consist of a threaded "U" and a contoured saddle.

Features

- Metric Threads
- Easy installation

Materials

- Threaded "U" - zinc-plated carbon steel
- Saddle - polypropylene



Size	Model Code	Part No.	Pipe or Tube	U-Bolt		D1	E1	H1	Pipe support long version				Pipe Ø
				A	B				H2	H3	L2	B1	
1	HRRBS 1 L 21.3 PP ST ZN	02072678	1/2" Pipe	23	40	M10	33	65	5	10	60	25	21.3
2	HRRBS 2 L 26.9 PP ST ZN	02065150	3/4" Pipe	30	40	M10	40	70	5	12	75	30	26.9
3	HRRBS 3 L 33.7 PP ST ZN	02065151	1" Pipe	38	40	M10	48	75	5	12	80	30	33.7
4	HRRBS 4 L 42.4 PP ST ZN	02065152	-	46	50	M10	56	86	5	12	90	30	42.4
5	HRRBS 5 L 48.3 PP ST ZN	02065153	1 1/2" Pipe	52	50	M10	62	92	5	15	95	35	48.3
6	HRRBS 6 L 60.3 PP ST ZN	02065154	2" Pipe	64	60	M12	76	109	5	15	110	35	60.3
7	HRRBS 7 L 76.1 PP ST ZN	02065155	3" Tube	82	60	M12	94	125	5	15	135	35	76.1
8	HRRBS 8 L 88.9 PP ST ZN	02065156	3" Pipe	94	60	M12	106	138	10	20	145	40	88.9
9	HRRBS 9 L 108 PP ST ZN	02065157	-	120	80	M16	136	171	10	20	190	40	108
9	HRRBS 9 L 114.3 PP ST ZN	02065158	4" Pipe / 4 1/2" Tube	120	80	M16	136	171	10	20	190	40	114.3
10	HRRBS 10 L 139.7 PP ST ZN	02065159	5" Pipe	148	80	M16	164	191	10	20	220	40	139.7
11	HRRBS 11 L 159 PP ST ZN	02065160	-	176	80	M16	192	217	12	25	250	50	159
11	HRRBS 11 L 168.3 PP ST ZN	02065161	6" Pipe	202	80	M16	218	249	12	25	270	50	168.3
13	HRRBS 13 L 219.1 PP ST ZN	02065162	8" Pipe	228	100	M20	248	283	12	25	315	50	219.1
14	HRRBS 14 L 273 PP ST ZN	02065163	10" Pipe	282	100	M20	302	334	12	25	370	50	273
17	HRRBS 17 L 406.4 PP ST ZN	02068318	16" Pipe	428	100	M24	452	487	15	30	540	60	406.4

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.
Dimensions are in inches.

HUB Series



Description:

Designed for the tough jobs, the HUB Series secures pipe runs to any flat surface. The U-Bolt traps and secures the cushion in place to prevent lateral movement, while nylon insert locknuts provide a positive lock.

Features:

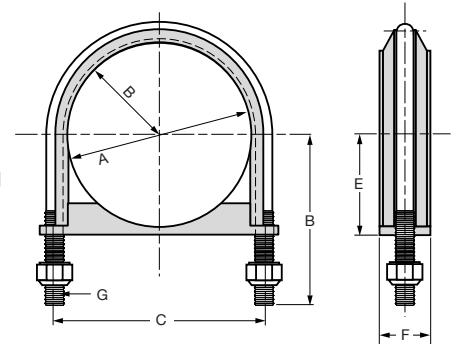
The cushion design provides total load distribution, allowing the U-Bolt to become a full contact hanger, eliminating knife-edge loading. Extremely cost effective, especially in larger sizes.

Materials:

- U-Bolt - Steel with electro-galvanized finish or 316 stainless steel*
- Cushion - Thermoplastic elastomer, rated from -50° to 275°F

* the A4 in the model code denotes 316 stainless steel

Dimensions



Model Code	Part Number	Pipe Size	ø A	B radius	C	D	E	F	G	H
HUB 1/2P	02080788	1/2"	0.84"	0.80"	1.60"	1.50"	0.67"	0.68"	1/4	1/4-20 UNC-2B
<i>HUB 1/2P A4</i>	<i>02080803</i>									
HUB 3/4P	02080789	3/4"	1.05"	0.90"	1.80"	1.60"	0.78"	0.68"	1/4	1/4-20 UNC-2B
<i>HUB 3/4P A4</i>	<i>02080804</i>									
HUB 1P	02080790	1"	1.31"	1.02"	2.05"	1.70"	0.91"	0.68"	1/4	1/4-20 UNC-2B
<i>HUB 1P A4</i>	<i>02080805</i>									
HUB 1 1/4P	02080791	1 1/4"	1.66"	1.27"	2.55"	2.10"	1.08"	1.24"	3/8	3/8-16 UNC-2B
<i>HUB 1 1/4P A4</i>	<i>02080806</i>									
HUB 1 1/2P	02080792	1 1/2"	1.90"	1.40"	2.80"	2.20"	1.19"	1.24"	3/8	3/8-16 UNC-2B
<i>HUB 1 1/2P A4</i>	<i>02080807</i>									
HUB 2P	02080793	2"	2.37"	1.67"	3.35"	2.50"	1.45"	1.24"	3/8	3/8-16 UNC-2B
<i>HUB 2P A4</i>	<i>02080808</i>									
<i>HUB 2 1/2P</i>	<i>02080794</i>	2 1/2"	2.87"	1.95"	3.90"	3.00"	1.69"	1.24"	1/2	1/2-13 UNC-2B
<i>HUB 2 1/2P A4</i>	<i>02080809</i>									
HUB 3P	02080795	3"	3.50"	2.27"	4.55"	3.30"	2.00"	1.24"	1/2	1/2-13 UNC-2B
<i>HUB 3P A4</i>	<i>02080810</i>									
<i>HUB 3 1/2P</i>	<i>02080796</i>	3 1/2"	4.00"	2.52"	5.05"	3.70"	2.25"	1.24"	1/2	1/2-13 UNC-2B
<i>HUB 3 1/2P A4</i>	<i>02080811</i>									
HUB 4P	02080797	4"	4.50"	2.75"	5.50"	3.90"	2.50"	1.24"	1/2	1/2-13 UNC-2B
<i>HUB 4P A4</i>	<i>02080812</i>									
HUB 5P	02080798	5"	5.56"	3.25"	6.56"	4.50"	3.03"	1.24"	1/2	1/2-13 UNC-2B
<i>HUB 5P A4</i>	<i>02080813</i>									
HUB 6P	02080799	6"	6.62"	3.87"	7.75"	5.40"	3.56"	1.44"	5/8	5/8-11 UNC-2B
<i>HUB 6P A4</i>	<i>02080814</i>									
HUB 8P	02080800	8"	8.82"	4.85"	9.82"	6.40"	4.56"	1.44"	5/8	5/8-11 UNC-2B
<i>HUB 8P A4</i>	<i>02080815</i>									
HUB 10P	02080801	10"	10.75"	6.08"	12.16"	7.70"	5.68"	1.65"	3/4	3/4-10 UNC-2B
<i>HUB 10P A4</i>	<i>02080816</i>									
HUB 12P	02080802	12"	12.75"	7.13"	14.25"	8.70"	6.68"	1.65"	3/4	3/4-10 UNC-2B
<i>HUB 12P A4</i>	<i>02080817</i>									

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.
Dimensions are in inches/(mm) and lbs./(kg.)

Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability

Oval Clamps



Description

Oval clamps are ideal for mobile applications where space is limited. One-piece, hinged polypropylene clamp body.

Features

- Low Profile Design
- Easy installation

Materials

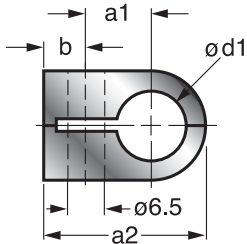
- PP - Polypropylene (standard)
- PA or others may be available

Temp Specifications

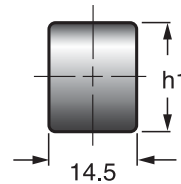
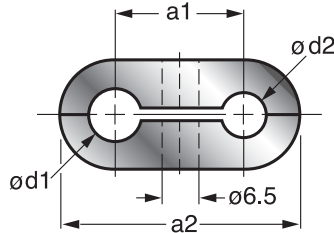
- -22° to 194°F (-30° to 90°C)

Dimensions

Size 0



Sizes 1-4



Model Code	Part Number	Size	Tube Size	Pipe Size	a1	a2	b	Ød1* & Ød2*	Ød1* & Ød2*	h1
<i>HROS 0a KP 6.0 PP</i>	<i>00264377</i>	0a			9	22.8	7	6.0	6 to 8	13.5
<i>HROS 0a KP 6.4 PP</i>	<i>00267926</i>		1/4"					6.4		
<i>HROS 0a KP 8 PP</i>	<i>00266455</i>		5/16"					8.0		
<i>HROS 0b KP 8 PP</i>	<i>00267982</i>	0b	5/16"		11	27.2	7	8.0	8 to 12.7	18.5
<i>HROS 0b KP 9.5 PP</i>	<i>00267981</i>		3/8"					9.5		
<i>HROS 0b KP 12.7 PP</i>	<i>00267931</i>		1/2"					12.7		
<i>HROS 0c KP 10 PP</i>	<i>00267993</i>	0c		1/8"	15	33.5	6.7	10	10 to 16	23.6
<i>HROS 0c KP 12.7 PP</i>	<i>00267991</i>		1/2"					12.7		
<i>HROS 0c KP 16 PP</i>	<i>00264380</i>		5/8"					16		
<i>HROS 0d KP 14 PP</i>	<i>00268008</i>	0d			19	40	5.7	14	14 to 25.4	30.6
<i>HROS 0d KP 16 PP</i>	<i>00268004</i>		5/8"	3/8"				16		
<i>HROS 0d KP 19 PP</i>	<i>00267999</i>		3/4"	1/2"				19		
<i>HROS 0d KP 25.4 PP</i>	<i>00268217</i>		1"					25.4		
<i>HROS 1 KP 6 - 6 PP</i>	<i>00268231</i>	1			18	32	N/A	6-6	6 to 8	13.5
<i>HROS 1 KP 6.4 - 6.4 PP</i>	<i>00268230</i>		1/4"					6.4-6.4		
<i>HROS 1 KP 8 - 8 PP</i>	<i>00268229</i>		5/16"					8-8		
<i>HROS 2 KP 8 - 8 PP</i>	<i>00268236</i>	2	5/16"		22	40.5	N/A	8-8	8 to 12.7	18.5
<i>HROS 2 KP 9.5 - 9.5 PP</i>	<i>00268237</i>		3/8"					9.5-9.5		
<i>HROS 2 KP 12.7 - 12.7 PP</i>	<i>00268241</i>		1/2"					12.7-12.7		
<i>HROS 3 KP 10 - 10 PP</i>	<i>00268250</i>	3		1/8"	30	53.6	N/A	10-10	10 to 16	23.6
<i>HROS 3 KP 12.7 - 12.7 PP</i>	<i>00268253</i>		1/2"					12.7-12.7		
<i>HROS 3 KP 16 - 16 PP</i>	<i>00268257</i>		5/8"					16-16		
<i>HROS 4 KP 14 - 14 PP</i>	<i>00268270</i>	4			38	68.3	N/A	14-14	14 to 25.4	30.6
<i>HROS 4 KP 16 - 16 PP</i>	<i>00268272</i>		5/8"	3/8"				16-16		
<i>HROS 4 KP 19 - 19 PP</i>	<i>00268275</i>		3/4"	1/2"				19-19		
<i>HROS 4 KP 25.4 - 25.4 PP</i>	<i>00268280</i>		1"					25.4-25.4		

*d1 and d2 may be different bore sizes. Dimensions listed are standard.

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Dimensions are in inches.

Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability

HSPN Series

Description:

P style clamp used for mounting a multitude of light duty applications including cables, pneumatic lines, and conduit.



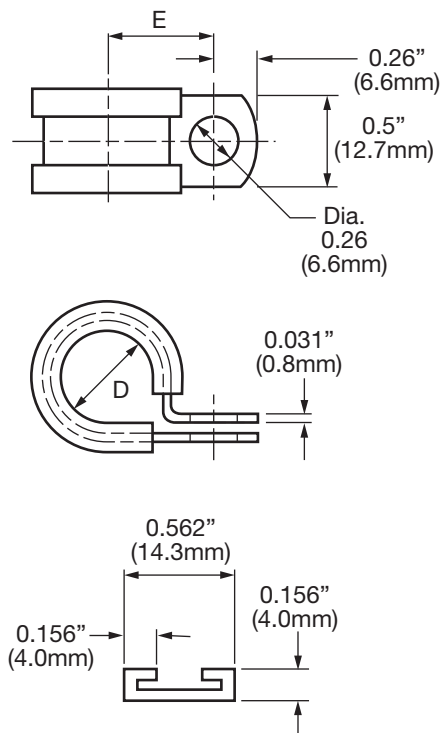
Features:

HSPN clamps provide electrical insulation and vibration absorption.

Materials:

- EPDM cushion
- Steel clamps are zinc electroplated for corrosion resistance
- Color- Silver with black EPDM cushion
- The A2 in the model code denotes 304 stainless steel

Dimensions



HYDAC Model Code	Part Number	Holding Dia. D	E
HSPN-3	02080818	3/16" (4.8)	3/8" (9.5)
HSPN-4	02080819	1/4" (6.4)	13/32" (10.3)
HSPN-4 A2	02080844		
HSPN-5	02080820	5/16" (7.9)	7/16" (11.1)
HSPN-5 A2	02080845		
HSPN-6	02080821	3/8" (9.5)	15/32" (11.9)
HSPN-6 A2	02080846		
HSPN-7	02080822	7/16" (11.1)	1/2" (12.7)
HSPN-7 A2	02080847		
HSPN-8	02080823	1/2" (12.7)	17/32" (13.5)
HSPN-8 A2	02080848		
HSPN-9	02080824	9/16" (14.30)	9/16" (14.3)
HSPN-9 A2	02080849		
HSPN-10	02080825	5/8" (15.9)	19/32" (15.1)
HSPN-10 A2	02080850		
HSPN-11	02080826	11/16" (17.5)	5/8" (15.9)
HSPN-12	02080827	3/4" (19.1)	3/4" (19.1)
HSPN-12 A2	02080852		
HSPN-14	02080829	7/8" (22.2)	13/16" (20.6)
HSPN-14 A2	02080854		
HSPN-16	02080831	1" (25.4)	7/8" (22.2)
HSPN-16 A2	02080856		
HSPN-18	02080832	1-1/8" (28.6)	15/16" (23.8)
HSPN-18 A2	02080857		
HSPN-20	02080833	1-1/4" (31.8)	1" (25.4)
HSPN-20 A2	02080858		
HSPN-22	02080834	1-3/8" (34.9)	1-5/32" (29.3)
HSPN-24	02080835	1-1/2" (38.1)	1-7/32" (30.9)
HSPN-24 A2	02080860		
HSPN-26	02080836	1-5/8" (41.3)	1-9/32" (32.5)
HSPN-28	02080837	1-3/4" (44.5)	1-11/32" (34.1)
HSPN-28 A2	02080862		
HSPN-30	02080838	1-7/8" (47.6)	1-13/32" (35.7)
HSPN-32	02080839	2" (50.8)	1-15/32" (37.2)
HSPN-32 A2	02080864		
HSPN-34	02080840	2-1/8" (54.0)	1-17/32" (38.8)
HSPN-40	02080841	2-1/2" (63.5)	1-23/32" (43.6)
HSPN-48	02080842	3" (76.2)	1-31/32" (50.1)

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HRGKSM Series Quick Release Swivel Bolt Clamps



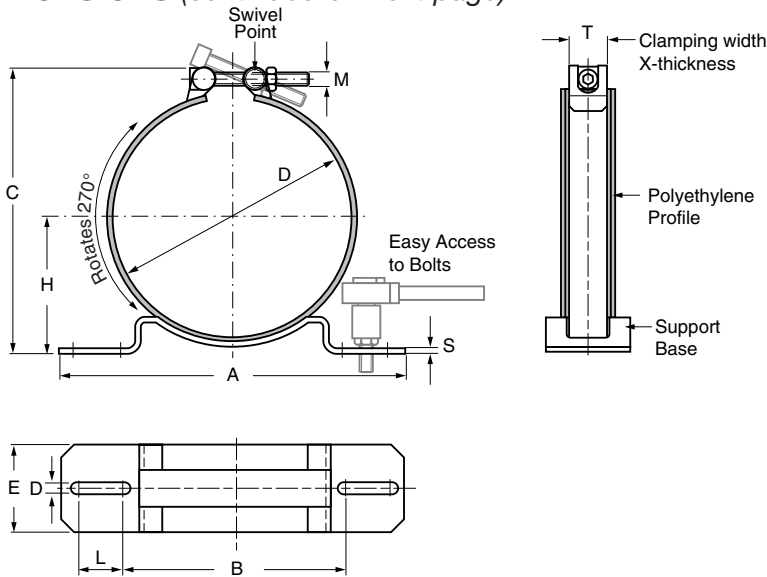
Description

The HRGKS is a clamp designed to mount cylindrical components. It is similar to the HYDAC HYRAC clamp, which is designed for accumulators, with some additional benefits that make it more practical for non-accumulator applications

Features / Benefits

- Swivel Assembly
Provides for simple installation and a tight fit
- Support Base
Provides easy access to bolts / unit easy to install
- The clamp rotates ~270° / Easy access
- Polyethylene profile does not compress
Clamp stays tight over time

Dimensions (continued on next page)



For more detailed information on the HYRAC Clamps please refer to the HYDAC Accumulator Catalog

Materials

Description	Material / Coating	Abbreviation
Support Base	Zinc Plated Steel	ST ZN
Polyethylene Profile	Polyethylene	PE
Quick Release Swivel Bolt	Zinc-Plated Steel	F1
Band Strap	Stainless Steel	ST ZN

HRGKSM vs. HYRAC

Difference	HRGKSM	HYRAC
Profile Material	Polyethylene	Rubber
Capability to Rotate	Can be rotated 270°	Fixed at 90 deg
Fit in clamp	Component sits flat	Two nubs ensure H dimension is consistent with other HYDAC Accumulator Clamps

Details & Dimensions

Model Code	P/N	C Max	D*	M	T	A	S	L	B	E	d	Weight
HRGKSM 0 R 40-43/44 ST	03018436	66.5	40-43	M 6 X 50	20x0.8	120	3	8	85	40	9	0.15
HRGKSM 0 R 44-46/47 ST	03018437	66.5	44-46									0.15
HRGKSM 0 R 47-50/50 ST	03018439	70.5	47-50									0.15
HRGKSM 0 R 51-54/55 ST	03018440	74.5	51-54									0.15
HRGKSM 0 R 55-58/59 ST	03018441	78.5	55-58									0.16
HRGKSM 0 R 58-61/62 ST	03018442	85	58-61									0.16
HRGKSM 0 R 62-65/65 ST	00444911	85	62-65									0.20
HRGKSM 0 R 66-69/69 ST	03018443	89	66-69									0.21
HRGKSM 0 R 70-73/73 ST	03018444	93	70-73									0.21
HRGKSM 0 R 73-76/76 ST	00444912	96	73-76									0.22
HRGKSM 0 R 77-80/80 ST	03018445	100	76-76									0.22
HRGKSM 0 R 81-84/85 ST	03018446	104	77-80									0.23
HRGKSM 0 R 85-88/89 ST	03018447	108	81-84									0.23
HRGKSM 0 R 89-92/93 ST	00444913	112	85-88									0.24
HRGKSM 0 R 92-95/96 ST	00444995	115	92-95									0.24
HRGKSM 0 R 96-100/100 ST	00444953	120	96-100									0.24
HRGKSM 1 R 101-109/106 ST	00444827	137	101-109	M 8 X 80	25x1.0	156	3	18	100	50	9	0.34
HRGKSM 1 R 110-118/115 ST	00444584	146	110-118									0.35
HRGKSM 1 R 119-127/124 ST	00444505	154	119-127									0.36
HRGKSM 1 R 128-136/133 ST	03013551	163	128-136									0.37
HRGKSM 1 R 137-145/142 ST	00444653	172	137-145									0.38
HRGKSM 1 R 146-154/151 ST	00444321	181	146-154									0.39
HRGKSM 1 R 150-158/154 ST	00444399	181	150-158									0.39
HRGKSM 1 R 155-163/160 ST	00444940	190	155-163									0.40
HRGKSM 1 R 164-172/169 ST	03008433	190	164-172	0.40								
HRGKSM 2 R 163-171/169 ST	00444400	200	163-175	M 8 X 80	25x1.0	236	3	32	152	60	9	0.57
HRGKSM 2 R 167-175/173 ST	00444401	204	167-175									0.58
HRGKSM 2 R 172-180/178 ST	00444402	209	172-180									0.58
HRGKSM 2 R 181-192/187 ST	00444467	217	181-192									0.59
HRGKSM 2 R 186-194/192 ST	00444403	222	186-194									0.60
HRGKSM 2 R 199-207/205 ST	00444433	235	199-207									0.61
HRGKSM 2 R 208-216/214 ST	03132903	243	208-216									0.62
HRGKSM 2 R 217-225/223 ST	03001691	252	217-225									0.63
HRGKSM 2 R 226-234/231 ST	03001914	261	226-234	0.64								
HRGKSM 3 R 235-246/243 ST	00444379	279	235-246	M 10 X 90	30x1.0	300	4	32	214	60	11	0.97
HRGKSM 3 R 248-259/256 ST	00444410	292	248-259									0.99
HRGKSM 3 R 261-272/269 ST	00444917	304	261-272									1.00
HRGKSM 3 R 268-279/276 ST	00444835	309	268-279									1.01
HRGKSM 3 R 274-285/282 ST	00444585	317	274-285									1.02
HRGKSM 3 R 287-298/295 ST	00444826	295	287-298									1.03
HRGKSM 3 R 293-304/301 ST	03083992	330	293-304									1.04
HRGKSM 3 R 300-311/308 ST	00444411	342	300-311									1.05
HRGKSM 3 R 313-324/321 ST	00444819	355	313-324	1.06								
HRGKSM 3 R 326-337/334 ST	00444923	368	326-337	1.08								
HRGKSM 4 R 339-350/347 ST	03025962	385	339-350	M 10 X 90	30x1.5	400	4	32	314	60	11	1.47
HRGKSM 4 R 343-354/351 ST	03066064	385	343-354									1.48
HRGKSM 4 R 352-363/360ST	00444795	398	352-363									1.49
HRGKSM 4 R 378-389/386 ST	00444760	424	378-389									1.52
HRGKSM 4 R 391-402/399 ST	00444506	435	391-402									1.54
HRGKSM 4 R 404-415-412 ST	00444924	448	404-415									1.56
HRGKSM 4 R 417-428/425 ST	00444857	461	417-428									1.58
HRGKSM 4 R 430-441/438 ST	03187768	474	430-441									1.60
HRGKSM 4 R 443-454-451 ST	03010052	485	443-454	1.62								

*Diameter range is noted in the model code. Example: HRGKSM 0 R 40-43/44 ST

Dimensions are in millimeters.

Dimensions are for general dimensions only, all critical dimensions should be verified by requesting a certified print.

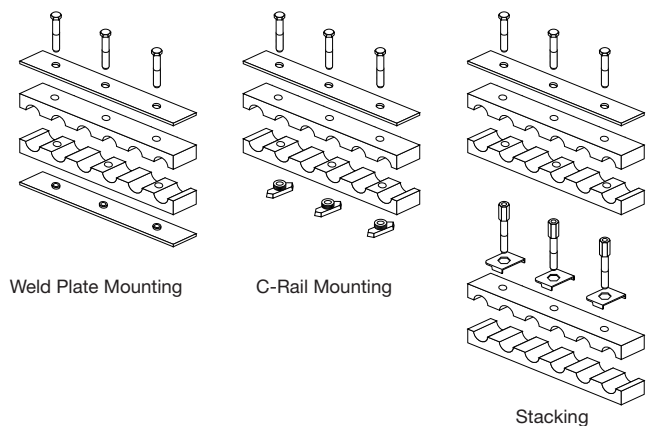
HRRL & HRRLE Series Series Strip Clamps

Description:

For OEM's requiring solutions for multiple line runs **HYDAC** offers customized series strips. These clamps reduce inventory and installation time, while providing a more compact solution than multiple DIN 3015 clamps. The design and dimensions are based on the DIN 3015 specifications set forth for single and twin clamps. The Series Strip Program, echoes that of the DIN 3015 Clamps in that it offers similar arrangements, sizes, options, and model coding.

Arrangements:

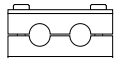
HRRL: Standard Duty



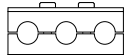
Number of Lines & Bolts:

HRRL: Standard Duty (diameter range: 6 to 25.4 mm)

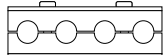
2 Lines / 2 Bolts (HRRL...2 X.../2...)



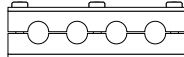
3 Lines / 2 Bolts (HRRL...3 X.../2...)



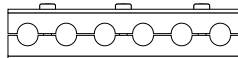
4 Lines / 2 Bolts (HRRL...4 X.../2...)



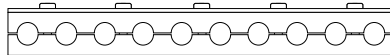
4 Lines / 3 Bolts (HRRL...4 X.../3...)



6 Lines / 3 Bolts (HRRL...6 X.../3...)

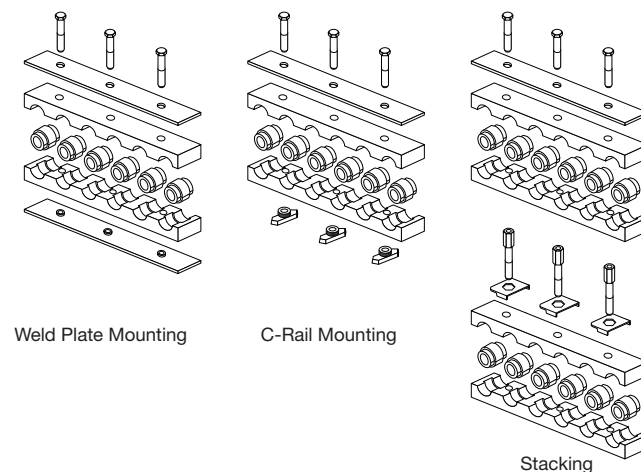


10 Lines / 5 Bolts (HRRL...10 X.../5...)



Arrangements:

HRRLE: Heavy Duty w/ Rubber Inserts



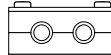
Number of Lines & Bolts:

HRRLE: Heavy Duty w/ Rubber Inserts (diameter range: 6 to 56.4 mm)

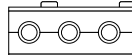
2 Lines / 1 Bolt (HRRLE...2 X.../1...)



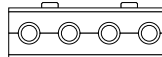
2 Lines / 2 Bolts (HRRLE...2 X.../2...)



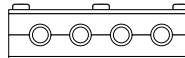
3 Lines / 2 Bolts (HRRLE...3 X.../2...)



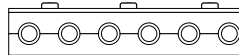
4 Lines / 2 Bolts (HRRLE...4 X.../2...)



4 Lines / 3 Bolts (HRRLE...4 X.../3...)



6 Lines / 3 Bolts (HRRLE...6 X.../3...)



Check out my
Sizing Program at
www.hydacusa.com



Series Strip Program:

Now ordering a Series Strip Clamp has become easier than ever before. Click on www.hydacusa.com and try out our new Series Strip Sizing Program. When you are finished you will have a model code, drawings and everything you need to place your order.

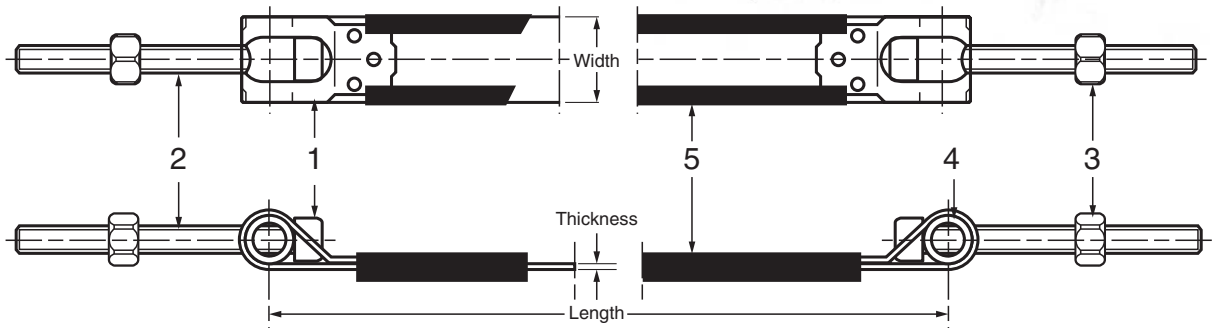
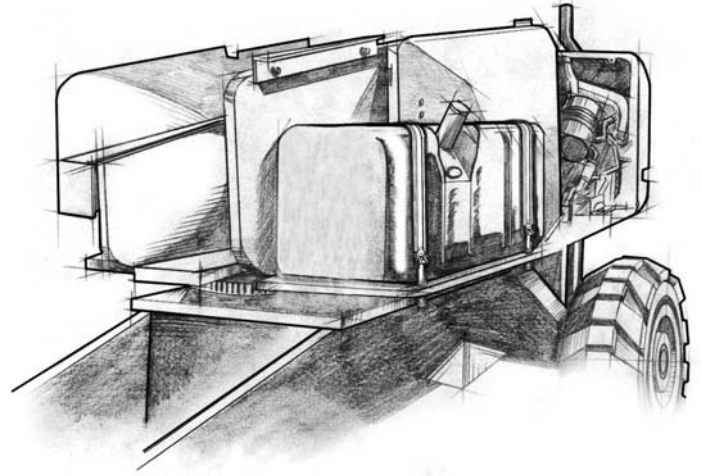
Ordering:

Series Strip Clamps are a custom product which must be quoted on an individual project basis. As with DIN 3015 Clamps, the Series Strip Clamps can be ordered as complete arrangements or as individual components. Series Strip Clamps are available with differing bore sizes. Contact **HYDAC** at 1-877-GO HYDAC with your specifications to request a quotation.

Band Straps

Description:

For OEM's requiring mounting solutions to secure non-cylindrical objects such as plastic fuel tanks, **HYDAC** offers steel band straps.

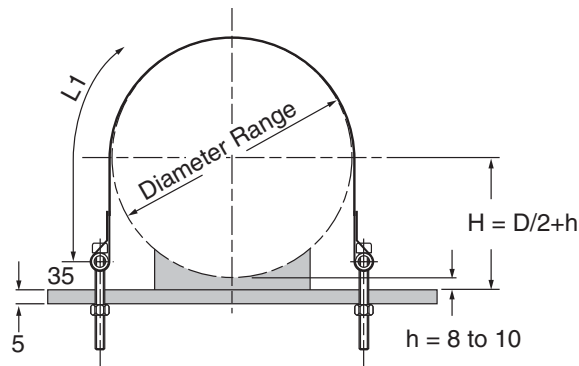


Item Description

- 1 Clamping Band
- 2 Metric Zinc-Plated Steel Socket Head Bolts
(Note: other bolt and connection styles are available based on customer's specifications)
- 3 Nuts
- 4 Swivel Sleeve
- 5 Rubber Profile

Dimensions

	Width x Thickness	Length Range (L1)
Light Range	25 x 1	187 - 921 mm
Heavy Range	30 X 1	232 - 921 mm
Heavy II Range	30 X 1.5	232 - 1511 mm



Ordering:

Band Straps are a custom product which must be quoted on an individual project basis. Band Straps are available with various lengths, widths, connecting hardware, and with or without rubber profiles. Contact **HYDAC** at **1-877-GO HYDAC** with your specifications to request a quotation.