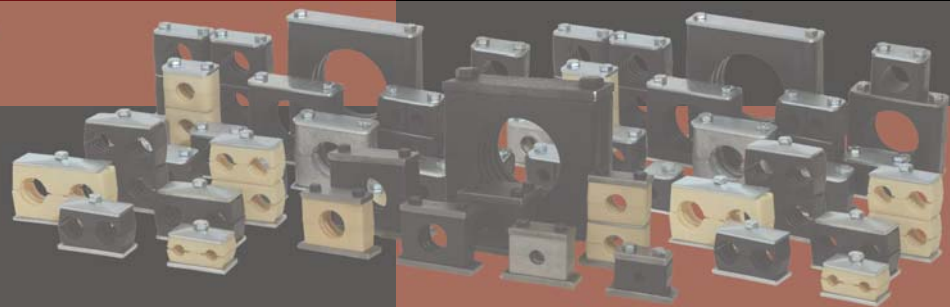




BEHRINGER[®]

Pipe Supports for Industrial Applications



STOCKING DISTRIBUTOR

**Steel &
O'Brien**
Manufacturing

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Introduction

Thank you for choosing Behringer, the world's leading manufacturer of Pipe and Tube supports. Behringer has been manufacturing pipe clamps and support systems for over 40 years, and has developed a reputation in the industrial and sanitary markets second to none. We have made developments and product improvements over the years both strengthening and broadening our product offering. This is evident in the breadth of our line and ability to accommodate new applications and designs. You can count on Behringer for all your clamping requirements.

Product

Behringer Industrial Pipe and Tube Supports have natural vibration-dampening characteristics. This is important in pressure piping in order to reduce vibration, noise, and shock. This will effectively protect the system and it's sensitive components from the damaging effects of these adverse system byproducts typically found in pressure piping systems.

Behringer offers many different series and within each series there are many different configurations available. We offer options for mounting such as welding, bolting, rail and strut mounting, double, and group mounting, etc. Behringer always welcomes a challenge, and would be happy to work with you to design a product that is custom-tailored to your application. This is where many of our developments are first generated, and helps to further progress the complexity of our product. Challenge us with your requirements..

Guarantee

Behringer Corporation, hereinafter called the "MANUFACTURER", guarantees that this product shall be free from defects in workmanship and materials. THIS GUARANTEE IS IN LIEU OF ALL OTHER GUARANTEES EITHER EXPRESSED OR IMPLIED, INCLUDING GUARANTEES FOR FITNESS FOR PURPOSE INTENDED. The MANUFACTURER'S liability is limited to the replacement of any materials which, after inspection by the MANUFACTURER at it's sole option, are found to be defective. The MANUFACTURER will honor only those claims that are presented to it within one hundred eighty (180) days of the delivery of the materials to the purchaser. The MANUFACTURER SPECIFICALLY DISCLAIMS ANY AND ALL LIABILITY FOR CONSEQUENTIAL DAMAGES. The MANUFACTURER shall not be liable for any damages which arise out of the misuse or abuse of the products.



Applications

Behringer clamps are used in many different types of applications ranging from low pressure lubrication and water systems to high pressure hydraulic and process systems. Anywhere that there are pipes, tubes, or hoses are viable applications for Behringer clamps. Behringer clamps are used in the following markets and applications most frequently.

Mobile Equipment
Mining Equipment
Offshore and Marine Applications
Shipbuilding
Instrumentation
Nuclear
General Construction
Electrical / Mechanical Contracting
Process Piping
Pharmaceutical / Biotechnology
Food and Dairy
Beverage

Power Generation
Pulp and Paper
Industrial Hydraulics
Power Units
Agricultural Equipment
OEM Machinery

Assistance

Behringer Corporation has a competent and highly skilled staff of inside sales and customer service personnel available to assist you with any of your needs. Behringer can be reached in the following ways.

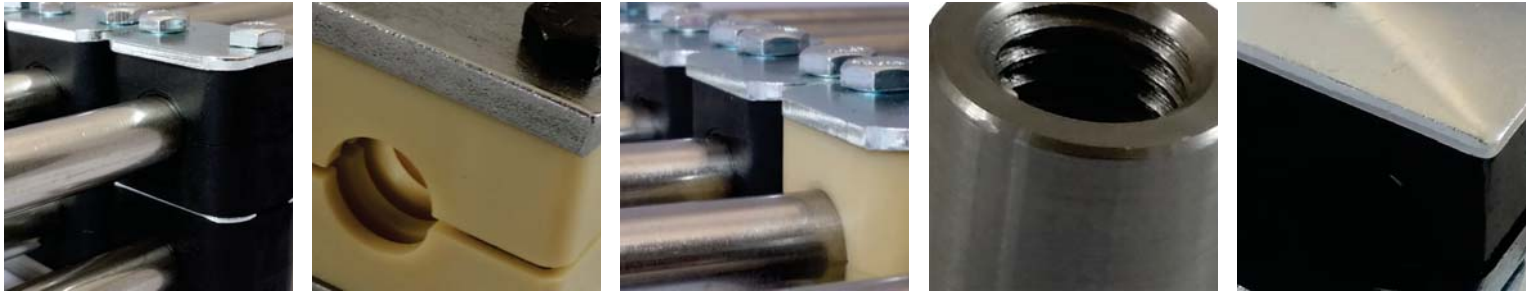
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Our regular business hours are Monday through Friday, 8AM - 5 PM Eastern Time. For after-hours service, please contact your regional sales manager.

Please Read

The information contained in this document is provided as an aid in properly selecting products and/or options. It is intended to be used by technically experienced users for general reference only. The supplier assumes no responsibility or liability for the accuracy or completeness of this document, as well as results obtained by the use of this information. Due to the variety of possible operating conditions, it is highly recommended that the user make their own tests to determine the safety and suitability of all products and combinations thereof. The user is solely responsible for final determination of such conditions.

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Pipe Clamp Selection

Behringer's pipe clamps are available with many different mounting configurations and arrangements. In choosing a pipe clamp, there are five main required pieces of information; series, size, clamp pair material, hardware material, and mounting / hardware configuration.

Series Selection

In order to select the proper clamp, the first thing that must be determined is the series of clamp to be used. Refer to the series specification on pages 4-5 to see what clamp series are available, as well as the technical characteristics of those series. The most important factors to be considered are the operating pressure of the line to be secured, the weight being supported, and the dynamic load. Other considerations include size, environment, and application. For example, a 1" pipe for a hydraulic system operating at 2,000 psi would typically require the use of the standard series, but the heavy series may be selected if it will be required to support the weight of a large filter or other system component. Maximum weight loads and shearing forces can be found in the technical appendix. Also, the heavy series might be selected rather than the standard series if the line is on a piece of mining or mobile equipment that may see a very high amount of impact with other equipment or materials such as stones and metals. In Fig.1 below you can see the suggested operating pressures by series. These suggested values take into consideration the shock and vibration that a typical hydraulic system operating at these pressures can deliver.

Fig. 1: General Pressure Guidelines by Series

Clamp Series	Suggested Operating Pressure
Standard	up to 2000 psi
Heavy	5000 psi for Single Heavy/10,000 psi for Double
Twin	up to 1500 psi
Heavy-4	5000 psi for Single Heavy/10,000 psi for Double

Size

The next important factor in the selection of the pipe clamp is the size of the line to be secured. Behringer clamps use a modular group size that consists of multiple OD sizes being available within the same group. Clamps are listed as pipe or tube sizes. The difference is in the standard measurements used to rate pipe and tube sizes. Pipe is rated by the inside diameter, and will have a larger outside diameter because of the wall thickness. For example, a 1 inch pipe has an OD of 1.315. This is a standard pipe OD size and is consistent of all hydraulic pipe, regardless of schedule. Tubing, on the other hand, is rated by the outside diameter. Therefore, a 1 inch tube will have an OD of 1.00 in. This is important in determining the size of the pipe clamp that will be selected. Also, the size may determine the series of clamp selected. For example, a low pressure line operating at 1,500 psi that is 6 inch pipe size is not available in the Standard Series, therefore the Heavy Series must be used.

Clamp Pair Material

The clamp pair material is the next thing that should be selected. Behringer's clamp pairs are offered in different materials; Polypropylene (PP), Santoprene (SP), Aluminum (AL), HDPE (NN), and High Temperature Cast Nylon (HT). The single most important determining factor of clamp pair material is operating temperature. The temperature ratings and other important specifications can be found in the technical appendix. Some materials are not available in all sizes or all series. Refer to the specific clamp pair selection charts from each series to see what is available in the required size. Other considerations for materials are compatibility with the environment and for aesthetic reasons, color.

Hardware Material

Once you have determined the series of pipe clamp and the size that is required, the next step is to determine the hardware materials that you will require. In the series selection pages, you will see that each series has a standard hardware material type. See Fig. 2 for standard hardware choices. The standard hardware is either plain carbon steel or zinc-plated steel. All Behringer clamps that are zinc-plated use a trivalent blue zinc plating, which is more environmentally friendly than typical hexavalent zinc plating, and is RoHS compliant. In addition to the standard hardware choices, Behringer offers stainless steel in 2 grades from stock. AISI 304 Stainless Steel (A2 - 1.4301/1.4305) is used in applications where stainless steel is required. This may be in an outside environment, because of chemical compatibility reasons, or because of requirements from the FDA or other regulatory committee. AISI 316 Ti Stainless Steel (A4 - 1.4401/1.4571) is a high grade stainless steel. The 316 Stainless is used in applications where it will come in contact with salt water or air with a high salt concentration such as offshore or marine applications.

Fig. 2: Standard Hardware Material by Series

Clamp Series	Code	Material
Standard	Z	Clear Zinc-Plated Steel
Heavy	C	Plain Carbon Steel
Twin	Z	Clear Zinc-Plated Steel
Heavy-4	C	Plain Carbon Steel

Pipe Clamp Selection

Mounting / Hardware Configuration

Behringer offers a multitude of mounting configurations and arrangement styles. Clamps can be mounted to support structure by either welding, bolting, rail-mounting, unistrut mounting, or stanchion and special securing plates. In addition, clamps can be stacked on top of each other, suspended from threaded rods, or any number of double and group positions can be made on multiple clamp weld plates, called Group Weld Plates (GRW). These options are not available for every series. Please check the ordering code for available mounting and hardware configurations. See below for examples of these mounting types.



Weld Mounting [STW, SWP, TWP]

Clamps are supplied with a weld plate for welding directly to the support structure. This is the most common form of clamp mounting, and is available in all series of pipe clamps. It is typically used with a cover plate and bolts, and is a commonly stocked item.

Standard Series:	STW
Heavy Series:	SWP / DWP
Twin Series:	TWP
Heavy 4 Series:	SWP / DWP



Rail Mounting [RAL / RCN]

Rail mounting makes installation of multiple lines of different group sizes an easy task. All clamps within one series can be mounted directly to a single channel using rail nuts that are designed for that rail. Behringer also makes proprietary rails that can accept the weld plates rather than the rail nuts. The rail uses are as follows.

RAL-0	Standard and Twin Series Clamps with RCN-0 (standard) / RCN-T0 (twin)
RAL-1	Standard and Twin Series with STW RCN-1 (standard) / RCN-4 (twin)
RAL-2	Heavy Series Clamps with SWP (H3-H5)
RAL-3	Heavy Series Clamps with SWP (H6)
RAL-4	Heavy Series Clamps with RCN



Bolt Mounting with Base Plates [BAP]

Clamps are supplied with a base plate for applications where the clamp cannot be welded into position. This is commonly used to mount the clamps to non-metallic surfaces such as wood or drywall. However, base plates can be welded into position if required. Base plates are only available in the standard series, and are available from stock.



Strut Mounting (UCN)

Behringer clamps can also be supplied with strut nuts (UCN) for mounting to standard strut channel. The new spring-loaded nuts are adaptable to any strut channel that is 1-5/8" wide. The depth of the channel is not important, as the UCN clips attach with a spring loaded tension on the top of the channel. Unistrut adaptation is available for all series of pipe clamps.



Multiple Clamp Weld Plates [DOW, GRW]

For multiple lines, Behringer offers double weld plates or group weld plates. The double weld plates create a double clamp that allows for the convenience of welding only one plate, but the strength and durability of using standard series hardware with individual clamp halves and 4 hex bolts. Group weld plates can accommodate between 3-10 positions, depending on the application. This is beneficial for keeping a tightly regimented center distance on the piping or tubing where multiple lines are run along the same plane. For both the double and group weld plates, all clamps to be fitted to the same plate must be within the same hardware group size.



Stacking Kits

Stacking kits consist of a set of clamp halves, stacking bolts, and a safety plate. A stacking kit is everything that is needed to take an existing clamp and make it one level taller. You use the hardware from the existing clamp; remove the cover plate, clamp halves, and hex bolts from the existing clamp, insert the stacking kit onto the bottom fixture (weld plate, rail nuts, etc...), and then replace the existing clamp hardware on top. Multiple stacking kits can be added to increase the number of clamps stacked on top of each other. Stacking kits are available in all series.

Pipe Clamp Series Specifications

Vibration-Dampening Pipe Clamps

Behringer's vibration-dampening pipe clamps are manufactured in different series for use in many different applications. The core range of pipe clamps encompasses Standard Series, Heavy Series, Heavy-4 Series, and Twin Series. They meet ASTM, Shipbuilding, Nuclear, Coast Guard, and other specifications.



Standard Series Pipe Clamps

Range: 0.25 in. (6.2 mm) through 4 in. (102 mm) OD

Pressure: 2,000 psi

Material: Zinc-plated, 304SS, 316SS, Carbon Steel

Clamp Halves: Polypropylene, Santoprene, Aluminum



Heavy Series Pipe Clamps

Range: 0.25 in. (6.3 mm) through 8.625 in. (219 mm)

Pressure: 5,000 to 10,000 psi

Material: Plain Carbon Steel, 304SS, 316SS, Zinc Plated

Clamp Halves: Polypropylene, Santoprene, Aluminum

Standard series pipe clamps can withstand the shock and vibration that a hydraulic system operating at up to 2,000 psi can deliver. Standard hardware is zinc-plated steel, unless otherwise noted. Also available from stock are 304 SS and 316 SS hardware. The standard series is offered in a multitude of configurations, such as weld-mounting, bolt-mounting, rail mounting, stacking, double weld-mounting, and group weld-mounting. Many other options are possible with existing hardware, and custom arrangements are always a welcomed challenge.

Heavy series pipe clamps can withstand the shock and vibration that a hydraulic system operating at up to 5,000 psi can deliver. With the use of the Double Heavy design, lines with operating pressure of up to 10,000 psi can be accommodated. Standard hardware material is un-plated carbon steel. Also available from stock are 304 SS and 316 SS hardware. The heavy series can be mounted using a weld plate, rails, and stacking kits. Many other options are possible with existing hardware, and custom arrangements are always a possibility.



Twin Series Pipe Clamps

Range: 0.25 in. (6.3 mm) through 1.66 in. (42 mm)

Pressure: 1,500 psi

Material: Zinc Plated, 304SS, 316SS, Plain Carbon Steel

Clamp Halves: Polypropylene, Santoprene



Heavy-4 Series Pipe Clamps

Range: 8.625 in. (219 mm) through 30 in. (762 mm) OD

Pressure: 5,000 psi to 10,000 psi

Material: Un-plated Carbon Steel, 304SS, 316SS, Zinc-Plated

Clamp Halves: Polypropylene
Others on request

The Twin Series is an excellent choice where multiple lines are required, while keeping a close center distance between the lines. Twin series pipe clamps can withstand the shock and vibration that a hydraulic system operating at up to 1,500 psi can deliver. Twin Series hardware material is zinc-plated steel. Also available from stock are 304 SS and 316 SS hardware. The twin series can be mounted using a weld plate, rails, and stacking kits. Many other options are possible with existing hardware, and custom arrangements are always an option.

Behringer's patented Heavy-4 Series pipe clamps are unrivaled in design and performance. Our clamps feature a unique 4-segmented plastic design which retains dimensional accuracy, resists stress and impact, absorbs vibration, and accomplishes a strong plastic-to-metal contact interface. This segmented plastic design is complemented by substantial steel support hardware.

Heavy-4 Series pipe clamps can withstand the shock and vibration that a hydraulic system operating at up to 5,000 psi can deliver, and with the use of the double heavy design they can accommodate lines with pressures up to 10,000 psi. Standard hardware is a low carbon steel. Also available are 304 SS and 316 SS as well as zinc-plated hardware. The Heavy-4 Series is only offered as a weld-mounted clamp.

Pipe Clamp Series Specifications

Other Pipe Clamps

Behringer also manufactures other clamping components and hardware. The Cushion Clamps mount low pressure lines to commonly found strut channel. Plastic saddle clamps and U-bolts are commonly used on large diameter low pressure piping. Behringer has roots in the metal fabrication industry, and we can easily manufacture customer-specific fabricated metal or injection molded products. We currently manufacture many other items for OEMs that are specially designed for that specific customer. We work closely with key personnel in the research and design stages, and can make prototypes in a very short time. Let us know what we can do for you.



Cushioned Pipe Clamps

Range: 0.25 in. (6.2 mm) through 6.625 in. (168 mm) OD

Pressure: Low pressure

Material: Zinc-Plated, 304SS, 316 SS

Clamp Insert: Thermoplastic Elastomer

Behringer's cushioned clamps are designed for low pressure applications such as conduit, water, waste, and other non or low pressure lines. They easily mount to standard strut channels that are available in almost every industrial and many mobile applications. The standard hardware material is zinc-plated steel. Also available are 304 SS and 316 SS hardware. The cushion is manufactured from a thermoplastic elastomer material that is designed to reduce vibration and noise, while providing constant reliability in operating temperatures to 275 degrees F.



Saddle Series Pipe Clamps

Range: 0.84 in. (21 mm) through 30 in. (762 mm)

U-Bolt Material: Zinc Plated, 304SS, 316SS, Plain Carbon Steel

Saddle Material: Polypropylene, UHMW

The Saddle Series pipe clamps consist of a heavy duty plastic saddle and a U-bolt with 4 hex nuts. The saddle series allows for movement due to vibrations and thermal expansion and contraction. The plastic saddle eliminates the metal-to-metal contact of the piping on the support structure, preventing costly damage to pipe installations. Behringer's Saddle Series clamps are typically used in shipbuilding, offshore and marine vessels, chemical plants, or wherever large diameter low pressure piping is installed. Behringer's saddle clamps are available in 2 different designs; Long Saddle and Short Saddle. The Long Saddle (shown above) extends past the u-bolt legs, and has holes for the legs to be inserted into. The Short Saddle does not extend to the u-bolts, and sits on the support structure or is held in place with location pins.



Custom Pipe Clamps

Range: Any

Pressure: Any

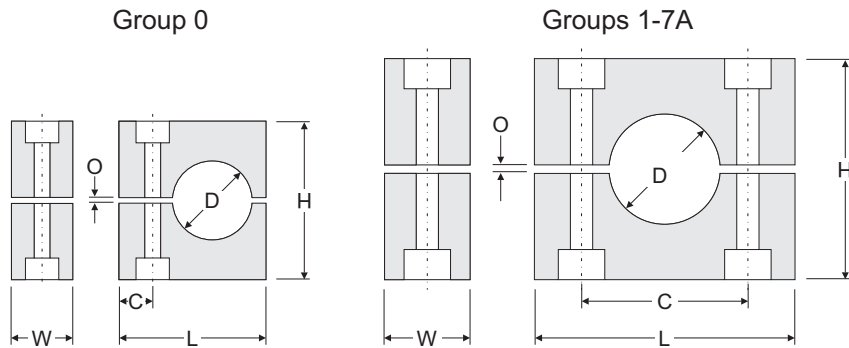
Material: Any

Clamp Insert: Any

Customization is an easy task for Behringer's vast experience in custom metal fabrication and injection molding. If you have ideas about a custom-made product, we can easily and quickly take concepts and turn them into prototypes and ultimately production items. Behringer currently manufactures custom products for major OEM manufacturers in the mobile, offshore, industrial, and construction markets. Some custom items are a variation of a standard item, and others are completely different from our cataloged items. Let Behringer work for you to help resolve any of your fastening or clamping requirements.

Standard Series Pipe Clamps

Behringer's clamp pairs are available in different materials and incorporate a modular insert by group size. Standard Series pipe clamps are available in sizes from 1/4 in. (6.35mm) through 4.5 in. (114mm) outside diameter sizes, and various materials such as polypropylene, Santoprene, and aluminum.



Clamp Pair Material Codes (*)					
P	[PP] Polypropylene Black Color	S	[SP] Santoprene Beige Color	A	[AL] Aluminum Aluminum Color

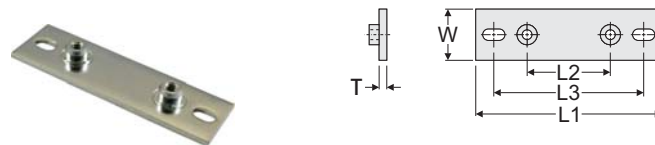
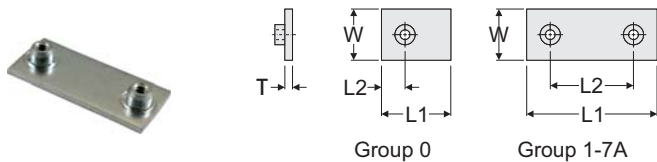
Clamp Pair Selection and Part Numbers

Behringer Group	Size	Metric OD (mm)	Imperial OD (Inch)	L	C	H	O	W	Weight Ea.	Ribbed Inside Clamp Pair (See material for *)
0	1/4 OD Tube	6.4	0.250	1.125 in. (28.6 mm)	0.375 in. (9.5 mm)	1.110 in. (28.2 mm)	0.031 in. (0.8 mm)	1.219 in. (31mm)	0.02 lbs	ST-CLH-00*-025
	3/8 OD Tube	9.5	0.375							ST-CLH-00*-038
	1/8 Pipe	10.0	0.405							ST-CLH-00*-041
	1/2 OD Tube	12.7	0.500							ST-CLH-00*-050
	5/8 OD Tube	16.0	0.625							ST-CLH-00*-062
1	1/4 OD Tube	6.4	0.250	1.375 in. (35 mm)	0.790 in. (20 mm)	1.080 in. (27.4 mm)	0.031 in. (0.8 mm)	1.219 in. (31mm)	0.03 lbs	ST-CLH-01*-025
	8 mm	8.0	0.315							ST-CLH-01*-032
	3/8 OD Tube	9.5	0.375							ST-CLH-01*-038
	1/8 Pipe	10.0	0.405							ST-CLH-01*-041
	12 mm	12.0	0.472							ST-CLH-01*-047
2	3/8 OD Tube	9.5	0.375	1.625 in. (42 mm)	1.020 in. (26 mm)	1.280 in. (32.5 mm)	0.031 in. (0.8 mm)	1.219 in. (31mm)	0.04 lbs	ST-CLH-02*-038
	1/2 OD Tube	12.7	0.500							ST-CLH-02*-050
	1/4 Pipe	14.0	0.540							ST-CLH-02*-054
	15 mm	15.0	0.591							ST-CLH-02*-059
	5/8 OD Tube	16.0	0.625							ST-CLH-02*-062
	3/8 Pipe	17.1	0.675							ST-CLH-02*-068
3	18 mm	18.0	0.709	1.875 in. (48 mm)	1.300 in. (33 mm)	1.380 in. (35.1 mm)	0.031 in. (0.8 mm)	1.219 in. (31mm)	0.05 lbs	ST-CLH-03*-070
	3/4 OD Tube	19.0	0.750							ST-CLH-03*-075
	1/2 Pipe	21.3	0.840							ST-CLH-03*-084
	7/8 OD Tube	22.2	0.875							ST-CLH-03*-087
	1 OD Tube	25.4	1.000							ST-CLH-03*-100
4	3/4 Pipe	26.7	1.050	2.250 in. (57 mm)	1.580 in. (40 mm)	1.625 in. (42 mm)	0.031 in. (0.8 mm)	1.219 in. (31mm)	0.06 lbs	ST-CLH-04*-105
	1 1/8 OD Tube	28.6	1.125							ST-CLH-04*-112
	30 mm	30.0	1.181							ST-CLH-04*-118
5	1 1/8 OD Tube	28.6	1.125	2.750 in. (70 mm)	2.050 in. (52 mm)	2.375 in. (60 mm)	0.031 in. (0.8 mm)	1.219 in. (31mm)	0.11 lbs	ST-CLH-05*-113
	1 1/4 OD Tube	32.0	1.250							ST-CLH-05*-125
	1 Pipe	33.4	1.315							ST-CLH-05*-132
	1 1/2 OD Tube	38.1	1.500							ST-CLH-05*-150
	40 mm	40.0	1.575							ST-CLH-05*-157
	1 5/8 OD Tube	41.3	1.625							ST-CLH-05*-163
	1 1/4 Pipe	42.2	1.660							ST-CLH-05*-166
6	1 3/4 OD Tube	44.5	1.750	3.375 in. (86 mm)	2.600 in. (66 mm)	2.625 in. (67 mm)	0.031 in. (0.8 mm)	1.219 in. (31mm)	0.12 lbs	ST-CLH-06*-175
	1 1/2 Pipe	48.3	1.900							ST-CLH-06*-190
	2 OD Tube	50.8	2.000							ST-CLH-06*-200
7	2 1/4 OD Tube	57.2	2.250	5.000 in. (127 mm)	4.250 in. (108 mm)	4.375 in. (111 mm)	0.031 in. (0.8 mm)	1.219 in. (31mm)	0.41 lbs	ST-CLH-07*-225
	2 Pipe	60.3	2.375							ST-CLH-07*-238
	2 1/2 OD Tube	63.5	2.500							ST-CLH-07*-250
	3 OD Tube	76.2	3.000							ST-CLH-07*-300
	3 Pipe	88.9	3.500							ST-CLH-07*-350
7A	4 OD Tube	102	4.000	5.750 in. (146 mm)	4.948 in. (126 mm)	4.828 in. (123 mm)	0.031 in. (0.8 mm)	1.219 in. (31mm)	0.39 lbs	ST-CLH-7A*-400
	4 Pipe	114	4.500							ST-CLH-7A*-450

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Standard Series Pipe Clamps

Securing Plate Selection and Dimensions



Single Weld Plate [STW]							
Grp.	Order Number	L1	L2	W	T	Thread	Weight Ea.
0	ST-STW-00-*	1.188 in. (30 mm)	0.370 in. (9 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)	0.06 lbs
1	ST-STW-01-*	1.510 in. (38 mm)	0.790 in. (20 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)	0.07 lbs
2	ST-STW-02-*	1.740 in. (44 mm)	1.020 in. (26 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)	0.08 lbs
3	ST-STW-03-*	2.020 in. (51 mm)	1.300 in. (33 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)	0.10 lbs
4	ST-STW-04-*	2.300 in. (58 mm)	1.580 in. (40 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)	0.11 lbs
5	ST-STW-05-*	2.770 in. (70 mm)	2.050 in. (52 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)	0.13 lbs
6	ST-STW-06-*	3.320 in. (84 mm)	2.600 in. (66 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)	0.15 lbs
7	ST-STW-07-*	5.02 in. (128 mm)	4.250 in. (108 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)	0.21 lbs
7A	ST-STW-7A-*	5.776 in. (147 mm)	4.948 in. (126 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)	0.27 lbs

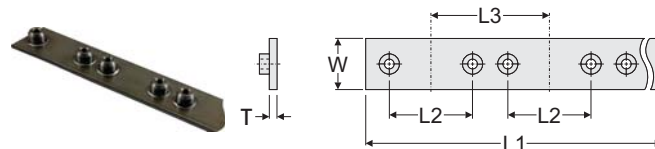
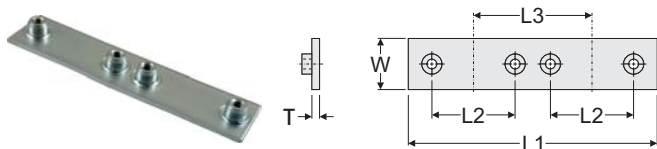
***Materials:** Z Zinc Plated Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 C Unplated Carbon Steel (Special Material)

Threads: omit As ordered above, the weld plates have standard UNC thread
 -MET By adding the "-MET" designation after the material designation above, the threads will be metric

Base Plate [BAP]							
Grp.	Order Number	L1	L2	L3	W	T	Weight Ea.
0	N/A	-	-	-	-	-	-
1	ST-BAP-01-*	3.000 in. (76 mm)	0.790 in. (20 mm)	2.295 in. (58 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.13 lbs
2	ST-BAP-02-*	3.302 in. (84 mm)	1.020 in. (26 mm)	2.550 in. (65 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.14 lbs
3	ST-BAP-03-*	3.500 in. (89 mm)	1.300 in. (33 mm)	2.825 in. (72 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.16 lbs
4	ST-BAP-04-*	3.813 in. (97 mm)	1.580 in. (40 mm)	3.085 in. (78 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.16 lbs
5	ST-BAP-05-*	4.250 in. (108 mm)	2.050 in. (52 mm)	3.500 in. (89 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.19 lbs
6	ST-BAP-06-*	4.875 in. (124 mm)	2.600 in. (66 mm)	4.125 in. (105 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.20 lbs
7	ST-BAP-07-*	6.500 in. (165 mm)	4.250 in. (108 mm)	5.750 in. (146 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.27 lbs
7A	ST-BAP-7A-*	7.240 in. (184 mm)	4.948 in. (126 mm)	6.450 in. (164 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.35 lbs

***Materials:** Z Zinc Plated Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 C Unplated Carbon Steel (Special Material)

Threads: omit As ordered above, the weld plates have standard UNC thread
 -MET By adding the "-MET" designation after the material designation above, the threads will be metric



Double Weld Plate [DOW]							
Grp.	Order Number	L1	L2	L3	W	T	Weight Ea.
0	N/A	-	-	-	-	-	-
1	ST-DOW-01-*	3.000 in. (76 mm)	0.790 in. (20 mm)	1.510 in. (38 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.16 lbs
2	ST-DOW-02-*	3.500 in. (89 mm)	1.020 in. (26 mm)	1.740 in. (44 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.17 lbs
3	ST-DOW-03-*	4.000 in. (102 mm)	1.300 in. (33 mm)	2.020 in. (51 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.19 lbs
4	ST-DOW-04-*	4.690 in. (119 mm)	1.580 in. (40 mm)	2.300 in. (58 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.24 lbs
5	ST-DOW-05-*	5.630 in. (143 mm)	2.050 in. (52 mm)	2.770 in. (70 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.26 lbs
6	ST-DOW-06-*	6.880 in. (175 mm)	2.600 in. (66 mm)	3.320 in. (84 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.30 lbs
7	ST-DOW-07-*	10.220 in. (260 mm)	4.250 in. (108 mm)	5.145 in. (131 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.45 lbs
7A	ST-DOW-7A-*	11.690 in. (297 mm)	4.948 in. (126 mm)	5.668 in. (144 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	0.56 lbs

***Materials:** Z Zinc Plated Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 C Unplated Carbon Steel (Special Material)

Threads: omit As ordered above, the weld plates have standard UNC thread
 -MET By adding the "-MET" designation after the material designation above, the threads will be metric

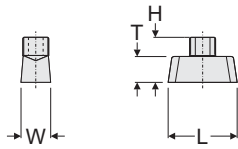
Group Weld Plate [GRW]							
Grp.	Order Number	L1	L2	L3	W	T	Thread
0	N/A	-	-	-	-	-	-
1	ST-GRW-01-***	C/F	0.790 in. (20 mm)	1.510 in. (38 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)
2	ST-GRW-02-***	C/F	1.020 in. (26 mm)	1.740 in. (44 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)
3	ST-GRW-03-***	C/F	1.300 in. (33 mm)	2.020 in. (51 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)
4	ST-GRW-04-***	C/F	1.580 in. (40 mm)	2.300 in. (58 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)
5	ST-GRW-05-***	C/F	2.050 in. (52 mm)	2.770 in. (70 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)
6	ST-GRW-06-***	C/F	2.600 in. (66 mm)	3.320 in. (84 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)
7	ST-GRW-07-***	C/F	4.250 in. (108 mm)	5.145 in. (131 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)
7A	ST-GRW-7A-***	C/F	4.948 in. (126 mm)	5.668 in. (144 mm)	1.223 in. (31 mm)	0.120 in. (3 mm)	1/4-20 UNC (M6)

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel

Threads: omit As ordered above, the weld plates have standard UNC thread
 -MET By adding the "-MET" designation after the material designation above, the threads will be M6 metric thread

Standard Series Pipe Clamps

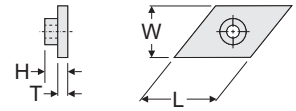
Rail Mounting Selection and Dimensions



Rail Nut [RCN-0 / MRN-0]						
Grp.	Order Number	L	W	T	H	Thread Weight Ea.
0-7A	ST-RCN-99-*RNO	0.950 in. (24 mm)	0.405 in. (10.4 mm)	0.190 in. (5 mm)	0.570 in. (14.5 mm)	1/4-20 UNC 0.02 lbs
0-7A	ST-MRN-99-*RNO	0.950 in. (24 mm)	0.405 in. (10.4 mm)	0.190 in. (5 mm)	0.570 in. (14.5 mm)	M6 0.02 lbs

***Materials:**

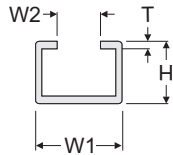
- Z Zinc Plated Steel (Standard Material)
- T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
- X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
- C Unplated Carbon Steel (Special Material)



Rail Nut [RCN-1 / MRN-1]						
Grp.	Order Number	L	W	T	H	Thread Weight Ea.
0-7A	ST-RCN-99-*RN1	1.075 in. (27 mm)	0.783 in. (20 mm)	0.175 in. (4 mm)	0.405 in. (10 mm)	1/4-20 UNC 0.04 lbs
0-7A	ST-MRN-99-*RN1	1.075 in. (27 mm)	0.783 in. (20 mm)	0.175 in. (4 mm)	0.405 in. (10 mm)	M6 0.04 lbs

***Materials:**

- Z Zinc Plated Steel (Standard Material)
- T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
- X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
- C Unplated Carbon Steel (Special Material)



Mounting Rail [RAL-0]					
Grp.	Order Number	W1	W2	T	H Length
0-7A	ST-RA0-99-*XXX	1.125 in. (28 mm)	0.438 in. (11 mm)	14 gauge	0.438 in. (11 mm) See Below

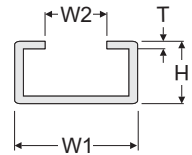
***Materials:**

- C Unplated Carbon Steel (Standard Material)
- T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
- X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
- Z Zinc Plated Steel

XXX Length:

- 6FT 72 in. (1829 mm) length (Standard Length)
- 3FT 36 in. (914 mm) length (Special Length)

-custom sizes available on request-



Mounting Rail [RAL-1]					
Grp.	Order Number	W1	W2	T	H Length
0-7A	ST-RA1-99-*XXX	1.438 in. (36.5 mm)	0.625 in. (16 mm)	14 gauge	0.438 in. (11 mm) See Below

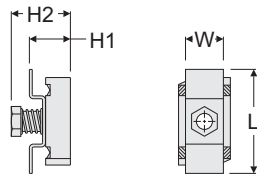
***Materials:**

- Z Zinc Plated Steel (Standard Material)
- T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
- X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
- C Unplated Carbon Steel

XXX Length:

- 6FT 72 in. (1829 mm) length (Standard Length)
- 3FT 36 in. (914 mm) length (Special Length)

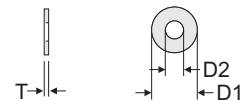
-custom sizes available on request-



Strut Nut [UCN]						
Grp.	Order Number	L	W	H1	H2	Thread Weight Ea.
0-7A	ST-UCN-99-*N	1.600 in. (41 mm)	0.640 in. (16 mm)	0.525 in. (13 mm)	0.813 in. (21 mm)	1/4-20 UNC 0.10 lbs

***Materials:**

- Z Zinc Plated Steel (Standard Material)
- T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
- X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
- C Unplated Carbon Steel (Special Material)



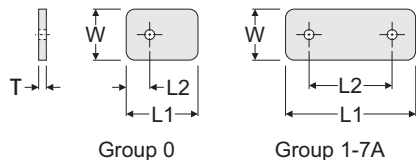
Cover Washer [COW]				
Grp.	Order Number	ØD1	ØD2	T Weight Ea.
0-7A	ST-COW-99-*	0.630 in. (16mm)	0.265 in. (7mm)	0.117 in. (3 mm) 0.01 lbs

***Materials:**

- Z Zinc Plated Steel (Standard Material)
- T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
- X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
- C Unplated Carbon Steel (Special Material)

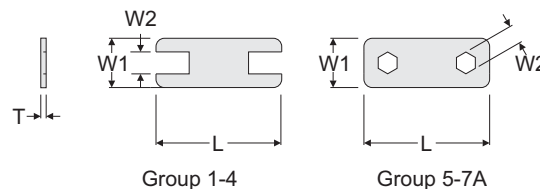
Standard Series Pipe Clamps

Fastening Hardware Selection and Dimensions



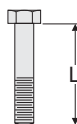
Cover Plate [COP]						
Grp.	Order Number	L1	L2	W	T	Weight Ea.
0	ST-COP-00-*	1.094 in. (28 mm)	0.370 in. (9 mm)	1.223 in. (31mm)	0.120 in. (3 mm)	0.04 lbs
1	ST-COP-01-*	1.362 in. (36 mm)	0.790 in. (20 mm)	1.223 in. (31mm)	0.120 in. (3 mm)	0.05 lbs
2	ST-COP-02-*	1.592 in. (40 mm)	1.020 in. (26 mm)	1.223 in. (31mm)	0.120 in. (3 mm)	0.06 lbs
3	ST-COP-03-*	1.872 in. (48 mm)	1.300 in. (33 mm)	1.223 in. (31mm)	0.120 in. (3 mm)	0.07 lbs
4	ST-COP-04-*	2.152 in. (55 mm)	1.580 in. (40 mm)	1.223 in. (31mm)	0.120 in. (3 mm)	0.08 lbs
5	ST-COP-05-*	2.790 in. (71 mm)	2.050 in. (52 mm)	1.223 in. (31mm)	0.120 in. (3 mm)	0.10 lbs
6	ST-COP-06-*	3.340 in. (85 mm)	2.600 in. (66 mm)	1.223 in. (31mm)	0.120 in. (3 mm)	0.15 lbs
7	ST-COP-07-*	5.020 in. (128 mm)	4.250 in. (108 mm)	1.223 in. (31mm)	0.120 in. (3 mm)	0.18 lbs
7A	ST-COP-7A-*	5.776 in. (147 mm)	4.948 in. (126 mm)	1.223 in. (31mm)	0.120 in. (3 mm)	0.27 lbs

***Materials:** Z Zinc Plated Steel (Standard Material)
T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)



Safety Plate [SAF]						
Grp.	Order Number	L	W1	W2	T	Weight Ea.
0	N/A	-	-	-	-	-
1	ST-SAF-01-*	1.330 in. (34 mm)	1.125 in. (29 mm)	0.440 in. (11.2 mm)	0.045 in. (1 mm)	0.05 lbs
2	ST-SAF-02-*	1.560 in. (40 mm)	1.125 in. (29 mm)	0.440 in. (11.2 mm)	0.045 in. (1 mm)	0.06 lbs
3	ST-SAF-03-*	1.872 in. (48 mm)	1.125 in. (29 mm)	0.440 in. (11.2 mm)	0.045 in. (1 mm)	0.07 lbs
4	ST-SAF-04-*	2.120 in. (54 mm)	1.125 in. (29 mm)	0.440 in. (11.2 mm)	0.045 in. (1 mm)	0.08 lbs
5	ST-SAF-05-*	2.760 in. (70 mm)	1.125 in. (29 mm)	0.460 in. (11.7 mm)	0.045 in. (1 mm)	0.10 lbs
6	ST-SAF-06-*	3.340 in. (85 mm)	1.125 in. (29 mm)	0.460 in. (11.7 mm)	0.045 in. (1 mm)	0.15 lbs
7	ST-SAF-07-*	5.020 in. (128 mm)	1.125 in. (29 mm)	0.460 in. (11.7 mm)	0.045 in. (1 mm)	0.18 lbs
7A	ST-SAF-7A-*	5.782 in. (147 mm)	1.125 in. (29 mm)	0.460 in. (11.7 mm)	0.045 in. (1 mm)	0.27 lbs

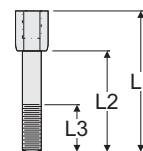
***Materials:** Z Zinc Plated Steel (Standard Material)
T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
C Unplated Carbon Steel (Special Material)



Hexagon Head Bolt [HEX]					
Grp.	Order Number	L	UNC Thread	Metric Thread	Weight Ea.
0	ST-HEX-01-*	1.250 in. (32 mm)	1/4 - 20 UNC	M6	0.02 lbs.
1	ST-HEX-01-*	1.250 in. (32 mm)	1/4 - 20 UNC	M6	0.02 lbs.
2	ST-HEX-02-*	1.500 in. (38 mm)	1/4 - 20 UNC	M6	0.02 lbs.
3	ST-HEX-02-*	1.500 in. (38 mm)	1/4 - 20 UNC	M6	0.02 lbs.
4	ST-HEX-04-*	1.750 in. (44 mm)	1/4 - 20 UNC	M6	0.03 lbs.
5	ST-HEX-05-*	2.500 in. (64 mm)	1/4 - 20 UNC	M6	0.04 lbs.
6	ST-HEX-06-*	2.750 in. (70 mm)	1/4 - 20 UNC	M6	0.04 lbs.
7	ST-HEX-07-*	4.500 in. (114 mm)	1/4 - 20 UNC	M6	0.06 lbs.
7A	ST-HEX-7A-*	5.000 in. (127 mm)	1/4 - 20 UNC	M6	0.06 lbs.

***Materials:** Z Zinc Plated Steel (Standard Material)
T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)

Threads: omit As ordered above, the weld plates have standard 1/4 - 20 UNC thread
-MET By adding the "-MET" designation after the material designation above, the threads are M6 metric thread



Stacking Bolt [STB]						
Grp.	Order Number	L1	L2	L3	Thread	Weight Ea.
0	ST-STB-00-*	1.438 in. (36.5 mm)	0.813 in. (21 mm)	0.75 in. (19 mm)	1/4 - 20 UNC M6	0.03 lbs.
1	ST-STB-00-*	1.438 in. (36.5 mm)	0.813 in. (21 mm)	0.75 in. (19 mm)	1/4 - 20 UNC M6	0.03 lbs.
2	ST-STB-02-*	1.688 in. (43 mm)	1.063 in. (27 mm)	0.75 in. (19 mm)	1/4 - 20 UNC M6	0.04 lbs.
3	ST-STB-02-*	1.688 in. (43 mm)	1.063 in. (27 mm)	0.75 in. (19 mm)	1/4 - 20 UNC M6	0.04 lbs.
4	ST-STB-04-*	1.938 in. (49 mm)	1.313 in. (33 mm)	0.75 in. (19 mm)	1/4 - 20 UNC M6	0.04 lbs.
5	ST-STB-05-*	2.688 in. (68 mm)	2.063 in. (52 mm)	0.75 in. (19 mm)	1/4 - 20 UNC M6	0.05 lbs.
6	ST-STB-06-*	2.938 in. (75 mm)	2.313 in. (59 mm)	0.75 in. (19 mm)	1/4 - 20 UNC M6	0.05 lbs.
7	ST-STB-07-*	4.688 in. (119 mm)	4.063 in. (103 mm)	0.75 in. (19 mm)	1/4 - 20 UNC M6	0.08 lbs.
7A	C/F	-	-	-	-	-

***Materials:** Z Zinc Plated Steel (Standard Material)
T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
C Unplated Carbon Steel (Special Material)

Threads: omit As ordered above, the weld plates have standard 1/4 - 20 UNC thread
-MET By adding the "-MET" designation after the material designation above, the threads are M6 metric thread

Standard Series Pipe Clamps

Complete Assembly Ordering Code

chart 1 chart 2 chart 3 chart 4 chart 5

S T 41050-PP-MET

Clamp Configuration chart 1	
S	Complete Clamp for Weld Mounting
BS	Complete Clamp for Bolt Mounting
DS	Complete Double Clamp for Weld Mounting
R0S	Complete Clamp for mounting to RAL-0
R1S	Complete Clamp for mounting to RAL-1
US	Complete Clamp for mounting to Strut Channel
G*S	Complete Clamp for Group Weld Plate Mounting
SSK	Stacking Kit

Hardware Material chart 2	
Omit	Electro-Zinc Dichromate Plating
T	AISI 304 Stainless Steel (A2 - 1.4301/1.4305)
X	AISI 316/316Ti Stainless Steel (A4 - 1.4401/1.4571)

Clamp Pair Material chart 4	
PP	Polypropylene
SP	Santoprene
AL	Aluminum (not available in groups 0, 7, or 7A)

Threads chart 5	
Omit	UNC Thread (Standard)
MET	Metric Thread


Clamp Group and Size chart 3					
Behringer Group	Pipe Size	Tube Size	Metric OD (mm)	Imperial OD (Inch)	Order No.
0	1/8	1/4	6.40	0.250	0025
		3/8	9.50	0.375	0038
		1/2	12.70	0.500	0050
		5/8	16.00	0.625	0062
		1	19.00	0.750	0075
1	1/8	1/4	6.40	0.250	1025
		3/8	9.50	0.375	1038
		1/2	12.70	0.500	1050
		5/8	16.00	0.625	1062
2	1/4	3/8	9.50	0.375	10405
		1/2	12.70	0.500	10472
		5/8	16.00	0.625	10472
		1	19.00	0.750	2050
		1 1/8	28.60	1.125	20540
3	1/2	3/4	19.00	0.750	2059
		7/8	22.20	0.875	2062
		1	25.40	1.000	20675
		1 1/8	28.60	1.125	3070
4	3/4	1	25.40	1.000	3075
		1 1/8	28.60	1.125	3075
		1 1/4	32.00	1.250	30840
5	1	1 1/2	38.1	1.500	3087
		2	50.8	2.000	3100
		2 1/4	57.2	2.250	51315
		2 1/2	63.5	2.500	5150
		3	76.2	3.000	51575
		3 1/2	88.9	3.500	51625
6	1 1/4	2	50.8	2.000	51660
		2 1/2	63.5	2.500	6175
		3	76.2	3.000	61900
		3 1/2	88.9	3.500	6200
7	2	2 1/2	63.5	2.500	62087
		3	76.2	3.000	7225
		3 1/2	88.9	3.500	72375
		4	102	4.000	7250
		4 1/2	114.3	4.500	72875
7A	4	4	102	4.000	7300
		4 1/2	114.3	4.500	7350

Standard Series Pipe Clamps

Ordering Examples

Single Clamp for Weld Mounting


S



Consists of:
 2 HEX bolts
 1 COP Cover Plate
 1 CLH Clamp Set (2 halves)
 1 STW Weld Plate

Double Clamp for Weld Mounting


DS



Consists of:
 4 HEX bolts
 2 COP Cover Plates
 2 CLH Clamp Sets (4 halves)
 1 DOW Weld Plate

Clamp for Bolt Mounting

BS



Consists of:
 2 HEX bolts
 1 COP Cover Plate
 1 CLH Clamp Set (2 halves)
 1 BAP Base Plate

Stacking Kit


SSK



Consists of:
 2 STB Stacking Bolts
 1 SAF Safety Plate
 1 CLH Clamp Sets (2 halves)

Clamp for RAL-0 Mounting


R0S



Consists of:
 2 HEX bolts
 1 COP Cover Plate
 1 CLH Clamp Set (2 halves)
 2 RCN-0 Rail Nuts

Clamp for RAL-1 Mounting


R1S



Consists of:
 2 HEX bolts
 1 COP Cover Plate
 1 CLH Clamp Set (2 halves)
 2 RCN-1 Rail Nuts

Clamp for Strut Mounting


US



Consists of:
 2 HEX bolts
 1 COP Cover Plate
 1 CLH Clamp Set (2 halves)
 2 UCN Strut Nuts

Clamp for Group Weld Mounting

G*S

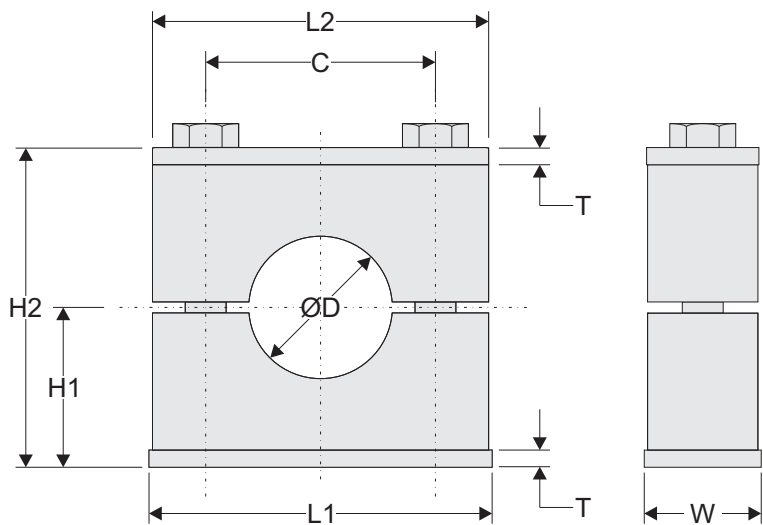


Consists of:
 2 HEX bolts per position
 1 COP cover plate per position
 1 CLH clamp set per position
 1 GRW group weld plate
 Standard material for GRW is un-plated steel.

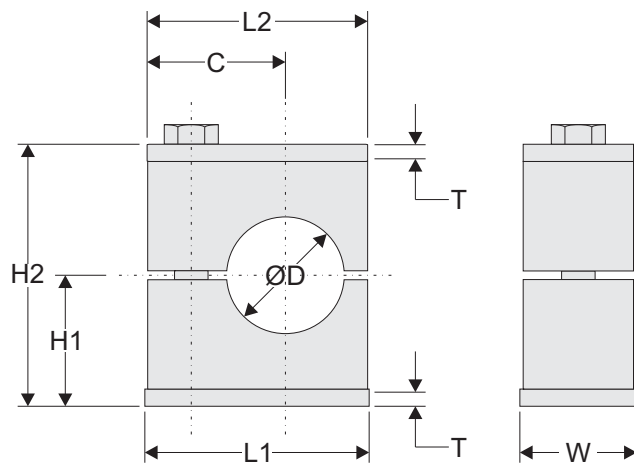
* is the number of positions
 Example: Group 2, 5 positions of 1/2" tube
 PP clamps, 304SS = G5ST2050-PP

Standard Series Pipe Clamps

Complete Assembly Dimensions



Group 1-7A



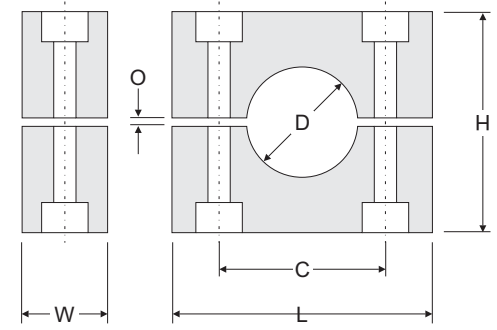
Group 0

Clamp Assembly Dimensions

Behringer Group	OD	L1	L2	C	H1	H2	T	W
0	See ordering code on page 6 for available diameters.	1.188 in. (30.2 mm)	1.094 in. (27.8 mm)	0.420 in. (10.7 mm)	0.675 in. (17.1 mm)	1.350 in. (34.3 mm)	0.120 in. (3 mm)	1.223 in. (31 mm)
1		1.510 in. (38.4 mm)	1.362 in. (34.6 mm)	0.790 in. (20.1 mm)	0.660 in. (16.8 mm)	1.320 in. (33.5 mm)	0.120 in. (3 mm)	1.223 in. (31 mm)
2		1.740 in. (44.2 mm)	1.592 in. (40.4 mm)	1.020 in. (25.9 mm)	0.760 in. (19.3 mm)	1.520 in. (38.6 mm)	0.120 in. (3 mm)	1.223 in. (31 mm)
3		2.020 in. (51.3 mm)	1.872 in. (47.5 mm)	1.300 in. (33 mm)	0.810 in. (20.6 mm)	1.620 in. (41.1 mm)	0.120 in. (3 mm)	1.223 in. (31 mm)
4		2.300 in. (58.4 mm)	2.152 in. (54.7 mm)	1.580 in. (40.1 mm)	0.938 in. (23.8 mm)	1.875 in. (47.6 mm)	0.120 in. (3 mm)	1.223 in. (31 mm)
5		2.770 in. (70.4 mm)	2.790 in. (70.9 mm)	2.050 in. (52.1 mm)	1.313 in. (33.3 mm)	2.625 in. (66.7 mm)	0.120 in. (3 mm)	1.223 in. (31 mm)
6		3.320 in. (84.3 mm)	3.340 in. (84.8 mm)	2.600 in. (66 mm)	1.438 in. (36.5 mm)	2.875 in. (73 mm)	0.120 in. (3 mm)	1.223 in. (31 mm)
7		5.020 in. (127.5 mm)	5.020 in. (127.5 mm)	4.250 in. (108 mm)	2.313 in. (58.7 mm)	4.625 in. (117.5 mm)	0.120 in. (3 mm)	1.223 in. (31 mm)
7A		5.776 in. (146.7 mm)	5.776 in. (146.7 mm)	4.948 in. (125.7 mm)	2.539 in. (64.5 mm)	5.078 in. (129 mm)	0.120 in. (3 mm)	1.223 in. (31 mm)

Heavy Series Pipe Clamps

Behringer's clamp pairs are available in different materials and incorporate a modular insert by group size. The robust Heavy Series design is larger and thicker than the Standard Series, and is designed for the toughest applications. Heavy Series pipe clamps are available in sizes from 1/4 in. (6.35mm) through 8.625 in. (219mm) outside diameter sizes, and various materials such as polypropylene, Santoprene, and aluminum. The clamp bore is offered in both the ribbed design for all sizes and now with a smooth bore design through group H6.



Ribbed Design



Smooth Bore



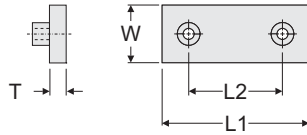
Clamp Pair Material Codes (*)			
P	[PP] Polypropylene Black Color	S	[SP] Santoprene Beige Color
		A	[AL] Aluminum Aluminum Color

Clamp Pair Selection and Part Numbers

Behringer Group	Size	Metric OD (mm)	Imperial OD (Inch)	L	C	H	O	W	Weight Ea.	Ribbed Inside Clamp Pair (See material for *)	Smooth Bore Clamp Pair (See material for *)
H3	1/4 OD Tube	6.4	0.250	2.250 in. (57 mm)	1.300 in. (33 mm)	1.375 in. (35 mm)	0.063 in. (1.6 mm)	1.188 in. (30.2 mm)	0.07 lbs	HS-CLH-03*-025	HS-CLH-03*-025SB
	3/8 OD Tube	9.5	0.375							HS-CLH-03*-038	HS-CLH-03*-038SB
	1/8 Pipe	10.0	0.405							HS-CLH-03*-041	HS-CLH-03*-041SB
	1/2 OD Tube	12.7	0.500							HS-CLH-03*-050	HS-CLH-03*-050SB
	1/4 Pipe	13.7	0.540							HS-CLH-03*-054	HS-CLH-03*-054SB
	5/8 OD Tube	16.0	0.625							HS-CLH-03*-062	HS-CLH-03*-062SB
H4	3/8 Pipe	17.1	0.675	2.750 in. (70 mm)	1.770 in. (45 mm)	1.875 in. (48 mm)	0.063 in. (1.6 mm)	1.188 in. (30.2 mm)	0.09 lbs	HS-CLH-04*-075	HS-CLH-04*-075SB
	3/4 OD Tube	19.0	0.750							HS-CLH-04*-079	HS-CLH-04*-079SB
	20 mm	20.0	0.790							HS-CLH-04*-084	HS-CLH-04*-084SB
	1/2 Pipe	21.3	0.840							HS-CLH-04*-087	HS-CLH-04*-087SB
	7/8 OD Tube	22.2	0.875							HS-CLH-04*-100	HS-CLH-04*-100SB
	1 OD Tube	25.4	1.000							HS-CLH-04*-105	HS-CLH-04*-105SB
H5	3/4 Pipe	26.7	1.050	3.344 in. (87 mm)	2.360 in. (60 mm)	2.375 in. (60 mm)	0.063 in. (1.6 mm)	1.188 in. (30.2 mm)	0.15 lbs	HS-CLH-04*-118	HS-CLH-04*-118SB
	30 mm	30.0	1.181							HS-CLH-05*-125	HS-CLH-05*-125SB
	1 1/4 OD Tube	32.0	1.250							HS-CLH-05*-132	HS-CLH-05*-132SB
	1 Pipe	33.4	1.315							HS-CLH-05*-150	HS-CLH-05*-150SB
H6	1 1/2 OD Tube	38.1	1.500	4.500 in. (115 mm)	3.530 in. (90 mm)	3.500 in. (89 mm)	0.125 in. (3.2 mm)	1.688 in. (43 mm)	0.35 lbs	HS-CLH-05*-166	HS-CLH-05*-166SB
	1 1/4 Pipe	42.2	1.660							HS-CLH-06*-132	HS-CLH-06*-132SB
	1 Pipe	33.4	1.315							HS-CLH-06*-166	HS-CLH-06*-166SB
	1 1/4 OD Tube	44.5	1.750							HS-CLH-06*-175	HS-CLH-06*-175SB
	1 1/2 Pipe	48.3	1.900							HS-CLH-06*-190	HS-CLH-06*-190SB
	2 OD Tube	50.8	2.000							HS-CLH-06*-200	HS-CLH-06*-200SB
	2 1/8 OD Tube	54.0	2.125							HS-CLH-06*-213	HS-CLH-06*-213SB
	2 1/4 OD Tube	57.2	2.250							HS-CLH-06*-225	HS-CLH-06*-225SB
	2 Pipe	60.3	2.375							HS-CLH-06*-238	HS-CLH-06*-238SB
	2 1/2 OD Tube	63.5	2.500							HS-CLH-06*-250	HS-CLH-06*-250SB
H7	2 3/4 OD Tube	69.9	2.750	6.000 in. (152 mm)	4.810 in. (122 mm)	4.750 in. (121 mm)	0.125 in. (3.2 mm)	2.188 in. (55.6 mm)	0.78 lbs	HS-CLH-06*-275	HS-CLH-06*-275SB
	2 1/2 Pipe	73.0	2.875							HS-CLH-07*-275	HS-CLH-07*-275SB
	3 OD Tube	76.2	3.000							HS-CLH-07*-288	HS-CLH-07*-288SB
	3 Pipe	88.9	3.500							HS-CLH-07*-300	HS-CLH-07*-300SB
H8	3 Pipe	88.9	3.500	8.063 in. (205 mm)	6.620 in. (168 mm)	6.625 in. (168 mm)	0.188 in. (4.8 mm)	2.938 in. (74.6 mm)	2.31 lbs	HS-CLH-07*-350	HS-CLH-07*-350SB
	4 OD Tube	102	4.000							HS-CLH-08*-350	HS-CLH-08*-350SB
	4 Pipe	114	4.500							HS-CLH-08*-400	HS-CLH-08*-400SB
H9	5 OD Tube	127	5.000	9.750 in. (248 mm)	8.060 in. (205 mm)	7.875 in. (200 mm)	0.188 in. (4.8 mm)	3.438 in. (87.3 mm)	2.59 lbs	HS-CLH-08*-450	HS-CLH-08*-450SB
	5 OD Tube	127	5.000							HS-CLH-08*-500	HS-CLH-08*-500SB
	5 1/4 OD Tube	133	5.250							HS-CLH-09*-500	HS-CLH-09*-500SB
	5 Pipe	141	5.563							HS-CLH-09*-525	HS-CLH-09*-525SB
	6 OD Tube	152	6.000							HS-CLH-09*-556	HS-CLH-09*-556SB
H10	6 Pipe	168	6.625	12.500 in. (318 mm)	10.430 in. (265 mm)	10.625 in. (270 mm)	0.188 in. (4.8 mm)	4.438 in. (113 mm)	7.73 lbs	HS-CLH-09*-600	HS-CLH-09*-600SB
	6 Pipe	168	6.625							HS-CLH-09*-663	HS-CLH-09*-663SB
	7 OD Tube	178	7.000							HS-CLH-10*-663	HS-CLH-10*-663SB
	8 OD Tube	203	8.000							HS-CLH-10*-700	HS-CLH-10*-700SB
	8 Pipe	219	8.625							HS-CLH-10*-800	HS-CLH-10*-800SB
										HS-CLH-10*-863	HS-CLH-10*-863SB

Heavy Series Pipe Clamps

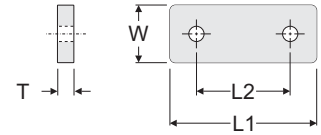
Securing Plate Selection and Dimensions



Single Weld Plate [SWP]							
Grp.	Order Number	L1	L2	W	T	Thread	Weight Ea.
H3	HS-SWP-03-*	2.875 in. (73 mm)	1.30 in. (33 mm)	1.25 in. (32 mm)	0.313 in. (8 mm)	3/8 - 16 UNC (M10)	0.34 lbs
H4	HS-SWP-04-*	3.375 in. (86 mm)	1.77 in. (45 mm)	1.25 in. (32 mm)	0.313 in. (8 mm)	3/8 - 16 UNC (M10)	0.39 lbs
H5	HS-SWP-05-*	4.000 in. (102 mm)	2.36 in. (60 mm)	1.25 in. (32 mm)	0.313 in. (8 mm)	3/8 - 16 UNC (M10)	0.45 lbs
H6	HS-SWP-06-*	5.875 in. (149 mm)	3.53 in. (90 mm)	1.75 in. (45 mm)	0.375 in. (10 mm)	7/16 - 14 UNC (M12)	1.10 lbs
H7	HS-SWP-07-*	7.375 in. (187 mm)	4.81 in. (122 mm)	2.25 in. (57 mm)	0.375 in. (10 mm)	5/8 - 11 UNC (M16)	1.71 lbs
H8	HS-SWP-08-*	10.000 in. (254 mm)	6.62 in. (168 mm)	3.00 in. (76 mm)	0.500 in. (13 mm)	3/4 - 10 UNC (M20)	4.15 lbs
H9	HS-SWP-09-*	11.750 in. (298 mm)	8.06 in. (205 mm)	3.50 in. (89 mm)	0.500 in. (13 mm)	7/8 - 9 UNC (M24)	5.83 lbs
H10	HS-SWP-10-*	14.500 in. (368 mm)	10.43 in. (265 mm)	4.50 in. (114 mm)	0.750 in. (19 mm)	1-1/8 - 7 UNC (M30)	13.65 lbs

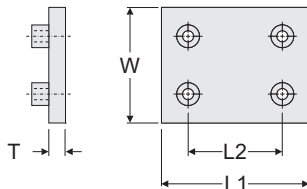
***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)

Threads: omit As ordered above, the weld plates have standard UNC thread
 -MET By adding the "-MET" designation after the material designation above, the threads will be metric



Single Cover Plate [SCP]							
Grp.	Order Number	L1	L2	W	T	ØD	Weight Ea.
H3	HS-SCP-03-*	2.250 in. (57 mm)	1.30 in. (33 mm)	1.25 in. (32 mm)	0.313 in. (8 mm)	0.438 in. (11 mm)	0.21 lbs
H4	HS-SCP-04-*	2.750 in. (70 mm)	1.77 in. (45 mm)	1.25 in. (32 mm)	0.313 in. (8 mm)	0.438 in. (11 mm)	0.26 lbs
H5	HS-SCP-05-*	3.344 in. (85 mm)	2.36 in. (60 mm)	1.25 in. (32 mm)	0.313 in. (8 mm)	0.438 in. (11 mm)	0.32 lbs
H6	HS-SCP-06-*	4.500 in. (114 mm)	3.53 in. (90 mm)	1.75 in. (45 mm)	0.375 in. (10 mm)	0.500 in. (13 mm)	0.77 lbs
H7	HS-SCP-07-*	6.000 in. (152 mm)	4.81 in. (122 mm)	2.25 in. (57 mm)	0.375 in. (10 mm)	0.688 in. (18 mm)	1.28 lbs
H8	HS-SCP-08-*	8.063 in. (205 mm)	6.62 in. (168 mm)	3.00 in. (76 mm)	0.500 in. (13 mm)	0.925 in. (23 mm)	3.19 lbs
H9	HS-SCP-09-*	9.750 in. (248 mm)	8.06 in. (205 mm)	3.50 in. (89 mm)	0.500 in. (13 mm)	0.925 in. (23 mm)	4.58 lbs
H10	HS-SCP-10-*	12.500 in. (318 mm)	10.43 in. (265 mm)	4.50 in. (114 mm)	0.750 in. (19 mm)	1.200 in. (30 mm)	11.31 lbs

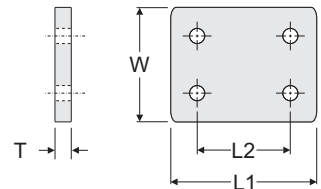
***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)



Double Weld Plate [DWP]							
Grp.	Order Number	L1	L2	W	T	Thread	Weight Ea.
H3	HS-DWP-03-*	2.875 in. (73 mm)	1.30 in. (33 mm)	2.50 in. (64 mm)	0.313 in. (8 mm)	3/8 - 16 UNC (M10)	0.72 lbs
H4	HS-DWP-04-*	3.375 in. (86 mm)	1.77 in. (45 mm)	2.50 in. (64 mm)	0.313 in. (8 mm)	3/8 - 16 UNC (M10)	0.78 lbs
H5	HS-DWP-05-*	4.000 in. (102 mm)	2.36 in. (60 mm)	2.50 in. (64 mm)	0.313 in. (8 mm)	3/8 - 16 UNC (M10)	0.90 lbs
H6	HS-DWP-06-*	5.875 in. (149 mm)	3.53 in. (90 mm)	3.50 in. (89 mm)	0.375 in. (10 mm)	7/16 - 14 UNC (M12)	2.20 lbs
H7	HS-DWP-07-*	7.375 in. (187 mm)	4.81 in. (122 mm)	4.50 in. (114 mm)	0.375 in. (10 mm)	5/8 - 11 UNC (M16)	3.42 lbs
H8	HS-DWP-08-*	10.000 in. (254 mm)	6.62 in. (168 mm)	7.00 in. (178 mm)	0.500 in. (13 mm)	3/4 - 10 UNC (M20)	8.30 lbs
H9	HS-DWP-09-*	11.750 in. (298 mm)	8.06 in. (205 mm)	7.00 in. (178 mm)	0.500 in. (13 mm)	7/8 - 9 UNC (M24)	11.75 lbs
H10	HS-DWP-10-*	14.500 in. (368 mm)	10.43 in. (265 mm)	9.375 in. (238 mm)	0.750 in. (19 mm)	1-1/8 - 7 UNC (M30)	28.00 lbs

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)

Threads: omit As ordered above, the weld plates have standard UNC thread
 -MET By adding the "-MET" designation after the material designation above, the threads will be metric

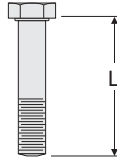


Double Cover Plate [DCP]							
Grp.	Order Number	L1	L2	W	T	ØD	Weight Ea.
H3	HS-DCP-03-*	2.250 in. (57 mm)	1.30 in. (33 mm)	2.50 in. (64 mm)	0.313 in. (8 mm)	0.438 in. (11 mm)	0.42 lbs
H4	HS-DCP-04-*	2.750 in. (70 mm)	1.77 in. (45 mm)	2.50 in. (64 mm)	0.313 in. (8 mm)	0.438 in. (11 mm)	0.52 lbs
H5	HS-DCP-05-*	3.344 in. (85 mm)	2.36 in. (60 mm)	2.50 in. (64 mm)	0.313 in. (8 mm)	0.438 in. (11 mm)	0.64 lbs
H6	HS-DCP-06-*	4.500 in. (114 mm)	3.53 in. (90 mm)	3.50 in. (89 mm)	0.375 in. (10 mm)	0.500 in. (13 mm)	1.54 lbs
H7	HS-DCP-07-*	6.000 in. (152 mm)	4.81 in. (122 mm)	4.50 in. (114 mm)	0.375 in. (10 mm)	0.688 in. (18 mm)	2.56 lbs
H8	HS-DCP-08-*	8.063 in. (205 mm)	6.62 in. (168 mm)	7.00 in. (178 mm)	0.500 in. (13 mm)	0.925 in. (23 mm)	6.38 lbs
H9	HS-DCP-09-*	9.813 in. (249 mm)	8.06 in. (205 mm)	7.00 in. (178 mm)	0.500 in. (13 mm)	0.938 in. (24 mm)	9.16 lbs
H10	HS-DCP-10-*	12.438 in. (316 mm)	10.43 in. (265 mm)	9.375 in. (238 mm)	0.750 in. (19 mm)	1.300 in. (33 mm)	22.62 lbs

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)

Heavy Series Pipe Clamps

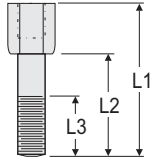
Fastening Hardware Selection and Dimensions



Hexagon Head Bolt [HEX]					
Grp.	Order Number	L	UNC Thread	Metric Thread	Weight Ea.
H3	HS-HEX-03-*	1.75 in. (44 mm)	3/8 - 16 UNC	M10	0.06 lbs.
H4	HS-HEX-04-*	2.25 in. (57 mm)	3/8 - 16 UNC	M10	0.08 lbs.
H5	HS-HEX-05-*	2.75 in. (70 mm)	3/8 - 16 UNC	M10	0.09 lbs.
H6	HS-HEX-06-*	4.00 in. (102 mm)	7/16 - 14 UNC	M12	0.18 lbs.
H7	HS-HEX-07-*	5.25 in. (133 mm)	5/8 - 11 UNC	M16	0.50 lbs.
H8	HS-HEX-08-*	7.50 in. (191 mm)	3/4 - 10 UNC	M20	0.97 lbs.
H9	HS-HEX-09-*	8.50 in. (216 mm)	7/8 - 9 UNC	M24	1.56 lbs.
H10	HS-HEX-10-*	11.75 in. (298 mm)	1-1/8 - 7 UNC	M30	3.53 lbs.

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)

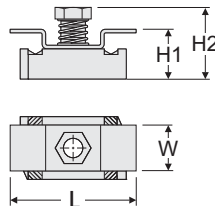
Threads: omit As ordered above, the weld plates have standard UNC thread
 -MET By adding the "-MET" designation after the material designation above, the threads will be metric



Stacking Bolt [STB]							
Grp.	Order Number	L1	L2	L3	UNC	Metric	Weight Ea.
H3	HS-STB-03-*	1.969 in. (50 mm)	0.906 in. (23 mm)	0.906 in. (23 mm)	3/8 - 16	M10	0.10 lbs
H4	HS-STB-04-*	2.469 in. (63 mm)	1.406 in. (36 mm)	1.000 in. (25.4 mm)	3/8 - 16	M10	0.11 lbs
H5	HS-STB-05-*	2.969 in. (75 mm)	1.906 in. (48 mm)	1.000 in. (25.4 mm)	3/8 - 16	M10	0.13 lbs
H6	HS-STB-06-*	4.250 in. (108 mm)	2.875 in. (73 mm)	1.250 in. (32 mm)	7/16 - 14	M12	0.24 lbs
H7	HS-STB-07-*	5.500 in. (140 mm)	3.875 in. (98 mm)	1.250 in. (32 mm)	5/8 - 11	M16	0.49 lbs
H8	HS-STB-08-*	7.750 in. (197 mm)	5.750 in. (146 mm)	1.500 in. (38 mm)	3/4 - 10	M20	1.15 lbs
H9	HS-STB-09-*	9.188 in. (233 mm)	7.000 in. (178 mm)	1.750 in. (44 mm)	7/8 - 9	M24	1.65 lbs
H10	HS-STB-10-*	12.000 in. (305 mm)	9.500 in. (241 mm)	2.250 in. (57 mm)	1-1/8 - 7	M30	2.50 lbs

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)

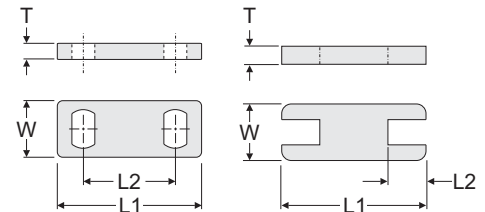
Threads: omit As ordered above, the weld plates have standard UNC thread
 -MET By adding the "-MET" designation after the material designation above, the threads will be metric



Strut Clip Nut [UCN]							
Grp.	Order Number	L	W	H1	H2	Thread	Weight Ea.
H3-H5	HS-UCN-345-*	1.500 in. (38 mm)	0.980 in. (25 mm)	0.728 in. (18.5 mm)	1.083 in. (27.5 mm)	3/8 - 16 UNC	0.2 lbs
H6	HS-UCN-06-*	1.790 in. (44 mm)	0.980 in. (25 mm)	0.610 in. (15.5 mm)	0.990 in. (25 mm)	7/16 - 14 UNC	0.3 lbs

***Materials:** Z Zinc Plated Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)

Threads: omit As ordered above, the weld plates have standard UNC thread
 -MET By adding the "-MET" designation after the material designation above, the threads will be metric (Special for this item - call for info)

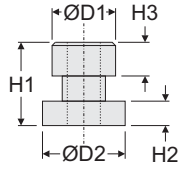


Safety Locking Plate [SAF]						
Grp.	Order Number	L1	L2	W	T	Weight Ea.
H3	HS-SAF-03-*	2.281 in. (58 mm)	1.300 in. (33 mm)	1.219 in. (31 mm)	0.125 in. (3.2 mm)	0.06 lbs.
H4	HS-SAF-04-*	2.750 in. (70 mm)	1.770 in. (45 mm)	1.219 in. (31 mm)	0.125 in. (3.2 mm)	0.08 lbs.
H5	HS-SAF-05-*	3.344 in. (85 mm)	2.360 in. (60 mm)	1.219 in. (31 mm)	0.125 in. (3.2 mm)	0.11 lbs.
H6	HS-SAF-06-*	4.531 in. (115 mm)	3.530 in. (90 mm)	1.625 in. (41 mm)	0.188 in. (4.8 mm)	0.31 lbs.
H7	HS-SAF-07-*	5.938 in. (151 mm)	4.812 in. (122 mm)	2.125 in. (54 mm)	0.188 in. (4.8 mm)	0.58 lbs.
H8	HS-SAF-08-*	8.000 in. (203 mm)	1.313 in. (33 mm)	2.938 in. (75 mm)	0.375 in. (9.5 mm)	1.43 lbs.
H9	HS-SAF-09-*	9.750 in. (248 mm)	1.750 in. (44 mm)	3.438 in. (87 mm)	0.375 in. (9.5 mm)	2.17 lbs.
H10	HS-SAF-10-*	12.438 in. (316 mm)	1.906 in. (48 mm)	4.438 in. (113 mm)	0.250 in. (6.3 mm)	-

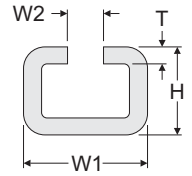
***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)

Heavy Series Pipe Clamps

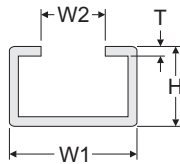
Rail Mounting Selection and Dimensions



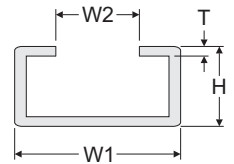
Rail Nut [RCN]						
Grp.	Order Number	ØD1	ØD2	H1	H2	H3 Thread
H3	HS-RCN-99- ^A -RN7	0.698 in. (17.8 mm)	0.750 in. (19 mm)	0.750 in. (19 mm)	0.219 in. (5.6 mm)	0.297 in. (7.6 mm) 3/8 - 16 UNC M10
H4						
H5						
H6	HS-RCN-99- ^A -RN8	0.778 in. (19.8 mm)	0.875 in. (22.2 mm)	0.813 in. (20.7 mm)	0.219 in. (5.6 mm)	0.359 in. (9.1 mm) 7/16 - 14 UNC M12
H7	HS-RCN-99- ^A -RN9	0.938 in. (23.8 mm)	1.125 in. (28.6 mm)	1.700 in. (43.2 mm)	0.375 in. (9.5 mm)	1.075 in. (27.3 mm) 5/8 - 11 UNC M16
H8	N/A	-	-	-	-	-
H9						
H10						
*Materials:	C	Unplated Carbon Steel (Standard Material)				
	T	AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)				
	X	AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)				
	Z	Zinc Plated Steel (Special Order)				
Threads:	omit	As ordered above, the weld plates have standard UNC thread				
	-MET	By adding the " -MET " designation after the material designation above, the threads will be metric				



Mounting Rail [RAL-4]						
Grp.	Order Number	W1	W2	T	H	Length
H3-H7	HS-RA4-99- ^A -XXX	1.563 in. (40 mm)	0.469 in. (12 mm)	0.188 in. (5 mm)	0.875 in. (22 mm)	See Below
*Materials:	C	Unplated Carbon Steel (Standard Material)				
	T	AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)				
	X	AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)				
	Z	Zinc Plated Steel (Special Order)				
XXX Length:	2ME	78 in. (2 m) Length (Standard Length)				14.5 lbs ea.
	1ME	39 in. (1 m) Length (Special Length)				7.25 lbs ea.
		-Custom sizes available on request-				



Mounting Rail [RAL-2]						
Grp.	Order Number	W1	W2	T	H	Length
H3-H5	HS-RA2-99- ^A -XXX	1.750 in. (44.4 mm)	0.750 in. (19 mm)	0.125 in. (3 mm)	0.750 in. (19 mm)	See Below
*Materials:	C	Unplated Carbon Steel (Standard Material)				
	T	AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)				
	X	AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)				
	Z	Zinc Plated Steel (Special Order)				
XXX Length:	6FT	72 in. (1829 mm) Length (Standard Length)				8 lbs ea.
	3FT	36 in. (914 mm) Length (Special Length)				4 lbs ea.
		-Custom sizes available on request-				



Mounting Rail [RAL-3]						
Grp.	Order Number	W1	W2	T	H	Length
H6	HS-RA3-06- ^A -XXX	2.125 in. (54 mm)	1.000 in. (25.4 mm)	0.125 in. (3 mm)	0.813 in. (20.7 mm)	See Below
*Materials:	C	Unplated Carbon Steel (Standard Material)				
	T	AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)				
	X	AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)				
	Z	Zinc Plated Steel (Special Order)				
XXX Length:	6FT	72 in. (1829 mm) Length (Standard Length)				8 lbs ea.
	3FT	36 in. (914 mm) Length (Special Length)				4 lbs ea.
		-Custom sizes available on request-				

Heavy Series Pipe Clamps

Complete Assembly Ordering Code

chart 1 chart 2 chart 3 chart 4 chart 5 chart 6
SH T 41050-PPSB-MET

Clamp Configuration chart 1	
SH	Single Heavy Complete Clamp for Weld Mounting
DH	Double Heavy Complete Clamp for Weld Mounting
R7H	Complete Clamp for mounting to RAL-4 (H3-H5)
R8H	Complete Clamp for mounting to RAL-4 (H6)
R9H	Complete Clamp for mounting to RAL-4 (H7)
UH	Complete Clamp for mounting to Strut Channel
HSK	Heavy Stacking Kit
OH	Single Heavy Clamp with no Bottom Plate

Hardware Material chart 2	
Omit	Untreated Carbon Steel
T	AISI 304 Stainless Steel (A2 - 1.4301/1.4305)
X	AISI 316/316Ti Stainless Steel (A4 - 1.4401/1.4571)
Z	Electro-Zinc Dichromate Plating

Clamp Pair Design chart 4	
Omit	Ribbed Inside
SB	Smooth Bore Inside (groups H3-H6 only)

Clamp Pair Material chart 5	
PP	Polypropylene
SP	Santoprene
AL	Aluminum

Threads chart 6	
Omit	UNC Thread (Standard)
MET	Metric Thread

Clamp Group and Size chart 3					
Behringer Group	Pipe Size	Tube Size	Metric OD (mm)	Imperial OD (Inch)	Order No.
H3		1/4	6.4	0.250	3025
		3/8	9.5	0.375	3038
	1/8		10.0	0.405	30405
		1/2	12.7	0.500	3050
	1/4		13.7	0.540	30540
	3/8		16.0	0.620	3062
H4		3/4	19.0	0.750	4075
			20.0	0.790	4079
	1/2		21.3	0.840	40840
		7/8	22.2	0.875	4087
		1	25.4	1.000	4100
	3/4		26.7	1.050	41050
H5			30.0	1.181	41181
		1 1/4	32.0	1.250	5125
	1		33.4	1.315	51315
		1 1/2	38.1	1.500	5150
	1 1/4		42.2	1.660	51660
	1		42.2	1.660	61315
H6	1 1/4		42.2	1.660	61660
		1 3/4	44.5	1.750	6175
	1 1/2		48.3	1.900	61900
		2	50.8	2.000	6200
		2 1/8	54.0	2.125	62125
		2 1/4	57.2	2.250	6225
H7	2		60.3	2.375	62375
		2 1/2	63.5	2.500	6250
		2 3/4	69.9	2.750	6275
		2 3/4	69.9	2.750	7275
	2 1/2		73.0	2.875	72875
		3	76.2	3.000	7300
H8	3	3 1/2	88.9	3.500	7350
		3 1/2	88.9	3.500	83500
	4		102	4.000	8400
	4	4 1/2	114	4.500	8450
H9		5	127	5.000	8500
		5	127	5.000	9500
		5 1/4	133	5.250	9525
	5		141	5.563	95563
H10		6	152	6.000	9600
	6		168	6.625	96625
		6	168	6.625	06625
		7	178	7.000	0700
		8	203	8.000	0800
	8		219	8.625	08625

Heavy Series Pipe Clamps

Ordering Examples

Single Clamp for Weld Mounting

SH



- Consists of:**
- 2 HEX bolts
 - 1 SCP Cover Plate
 - 1 CLH Clamp Set (2 halves)
 - 1 SWP Weld Plate

Double Clamp for Weld Mounting

DH



- Consists of:**
- 4 HEX bolts
 - 1 DCP Double Cover Plate
 - 2 CLH Clamp Sets (4 halves)
 - 1 DWP Double Weld Plate

Rail Mounting [groups H3-H6]

R7H
R8H



- Consists of:**
- 2 HEX bolts
 - 1 SCP Cover Plate
 - 1 CLH Clamp Set (2 halves)
 - 2 RCN Rail Nuts
 - groups H3-H5 use RCN-7
 - group H6 uses RCN-8

Rail Mounting [group H7]

R9H



- Consists of:**
- 2 HEX bolts
 - 1 SCP Cover Plate
 - 1 CLH Clamp Set (2 halves)
 - 1 SPL Spacer Plate
 - 2 RCN-9 Rail Nuts

Stacking kit

HSK



- Consists of:**
- 2 STB Stacking bolts
 - 1 SAF Safety Plate
 - 1 CLH Clamp Set (2 halves)

Strut Mounting [groups H3-H6]

UH

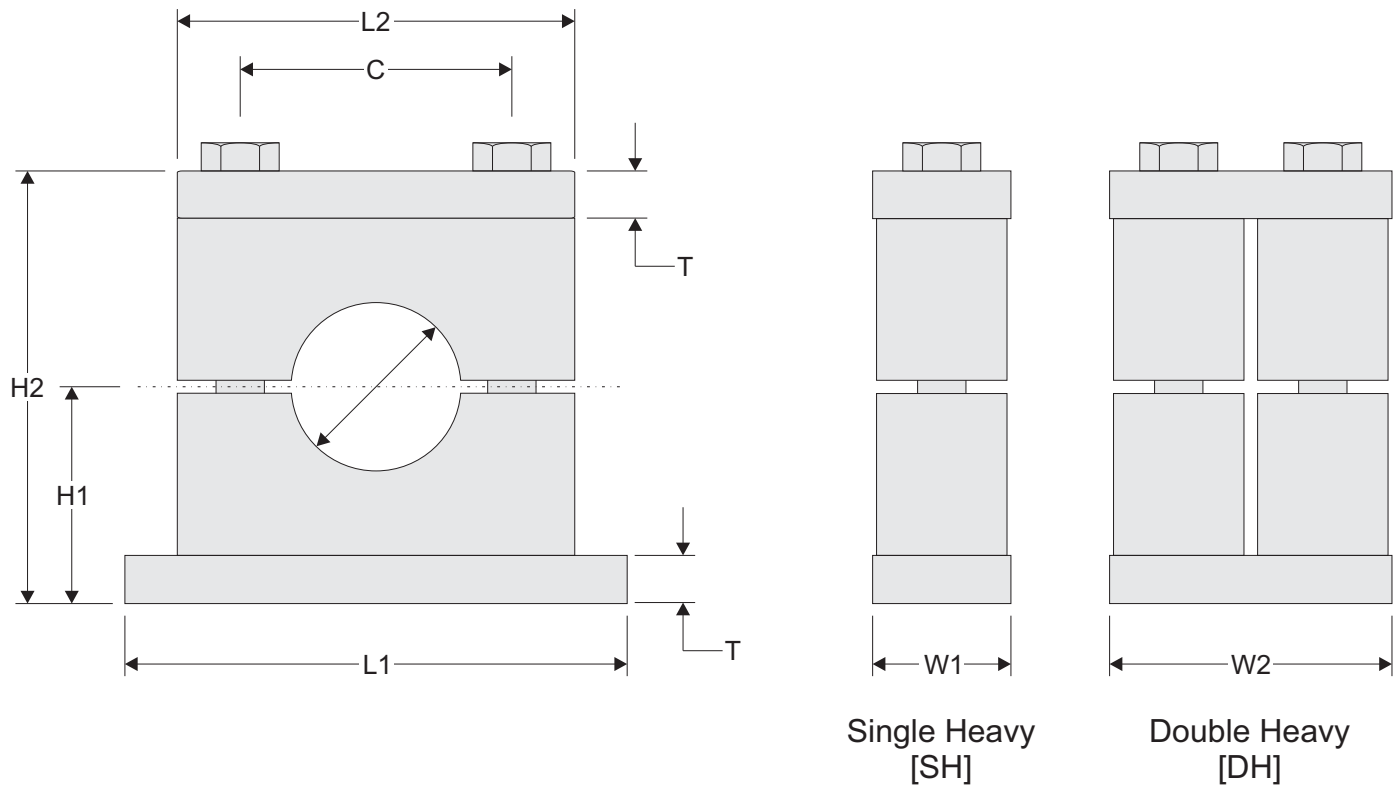


- Consists of:**
- 2 HEX bolts
 - 1 SCP Cover Plate
 - 1 CLH Clamp Set (2 halves)
 - 2 UCN Strut Nuts

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Heavy Series Pipe Clamps

Complete Assembly Dimensions

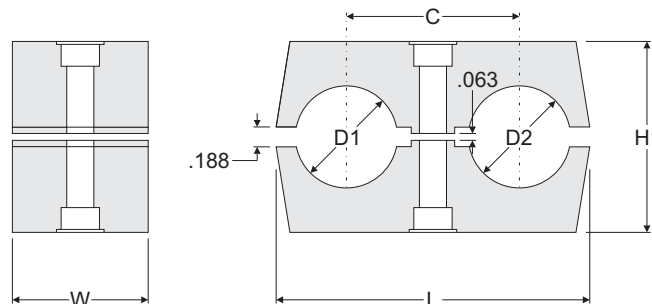


Clamp Assembly Dimensions

Behringer Group	OD	L1	L2	C	H1	H2	T	W1	W2
H3	See ordering code on page 13 for available diameters.	2.875 in. (73 mm)	2.250 in. (57 mm)	1.300 in. (33 mm)	1.000 in. (25.4 mm)	2.000 in. (50.8 mm)	0.313 in. (8 mm)	1.250 in. (32 mm)	2.500 in. (63.5 mm)
H4		3.375 in. (86 mm)	2.750 in. (70 mm)	1.770 in. (45 mm)	1.250 in. (32 mm)	2.500 in. (63.5 mm)	0.313 in. (8 mm)	1.250 in. (32 mm)	2.500 in. (63.5 mm)
H5		4.000 in. (102 mm)	3.344 in. (85 mm)	2.360 in. (60 mm)	1.500 in. (38 mm)	3.000 in. (76.2 mm)	0.313 in. (8 mm)	1.250 in. (32 mm)	2.500 in. (63.5 mm)
H6		5.875 in. (149 mm)	4.500 in. (114 mm)	3.530 in. (90 mm)	2.125 in. (54 mm)	4.250 in. (108 mm)	0.375 in. (10 mm)	1.750 in. (44.5 mm)	3.500 in. (88.9 mm)
H7		7.375 in. (187 mm)	6.000 in. (152 mm)	4.810 in. (122 mm)	2.750 in. (70 mm)	5.500 in. (140 mm)	0.375 in. (10 mm)	2.250 in. (57.2 mm)	4.500 in. (114 mm)
H8		10.000 in. (254 mm)	8.063 in. (205 mm)	6.620 in. (168 mm)	3.813 in. (97 mm)	7.625 in. (194 mm)	0.500 in. (13 mm)	3.000 in. (76.2 mm)	7.000 in. (178 mm)
H9		11.750 in. (298 mm)	9.750 in. (248 mm)	8.060 in. (205 mm)	4.438 in. (113 mm)	8.875 in. (225 mm)	0.500 in. (13 mm)	3.500 in. (88.9 mm)	7.000 in. (178 mm)
H10		14.500 in. (368 mm)	12.500 in. (318 mm)	10.430 in. (265 mm)	6.063 in. (154 mm)	12.125 in. (308 mm)	.750 in. (19 mm)	4.500 in. (114 mm)	9.375 in. (238 mm)

Twin Series Pipe Clamps

Behringer's clamp pairs are available in different materials and incorporate a modular insert by group size. The Twin Series is available in sizes from 1/4 in. (6.35mm) through 1.660 in. (42mm) outside diameter sizes. The design of the twin series has 2 holes in one clamp, making it ideal for dual runs of pipe, tubing, or hose.



Clamp Pair Material Codes (*)

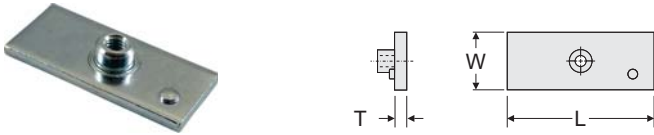
P	[PP] Polypropylene Black Color	S	[SP] Santoprene Beige Color
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Clamp Pair Selection and Part Numbers

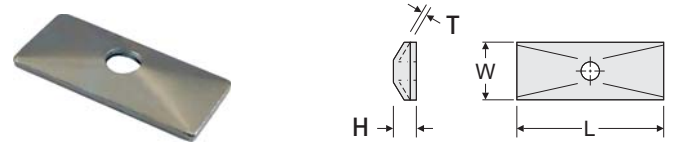
Behringer Group	Size	Metric OD (mm)	Imperial OD (Inch)	L	C	H	W	Weight Ea.	Clamp Pair (See material for *)
T1	1/4 OD Tube	6.4	0.250	1.406 in. (36 mm)	0.781 in. (20 mm)	0.781 in. (20 mm)	0.985 in. (25 mm)	0.02 lbs	TS-CLH-01-* 025
	3/8 OD Tube	9.5	0.375						TS-CLH-01-* 038
	12 mm	12.0	0.472						TS-CLH-01-* 047
T2	1/4 OD Tube	6.4	0.250	2.188 in. (56 mm)	1.250 in. (32 mm)	1.000 in. (25.4 mm)	1.195 in. (30.4 mm)	0.03 lbs	TS-CLH-02-* 025
	3/8 OD Tube	9.5	0.375						TS-CLH-02-* 038
	1/8 Pipe	10.0	0.405						TS-CLH-02-* 041
	1/2 OD Tube	12.7	0.500						TS-CLH-02-* 050
	1/4 Pipe	14.0	0.540						TS-CLH-02-* 054
	5/8 OD Tube	16.0	0.625						TS-CLH-02-* 062
	3/8 Pipe	17.0	0.675						TS-CLH-02-* 068
T3	3/4 OD Tube	19.0	0.750	2.688 in. (68.3 mm)	1.438 in. (36.5 mm)	1.500 in. (38.1 mm)	1.195 in. (30.4 mm)	0.04 lbs	TS-CLH-03-* 075
	1/2 Pipe	21.3	0.840						TS-CLH-03-* 084
	7/8 OD Tube	22.2	0.875						TS-CLH-03-* 087
	1 OD Tube	25.4	1.000						TS-CLH-03-* 100
T4	7/8 OD Tube	22.2	0.875	3.188 in. (81 mm)	1.813 in. (46.1 mm)	1.750 in. (44.4 mm)	1.195 in. (30.4 mm)	0.05 lbs	TS-CLH-04-P 087
	1 OD Tube	25.4	1.000						TS-CLH-04-P 100
	3/4 Pipe	26.7	1.050						TS-CLH-04-P 105
	1 1/8 OD Tube	28.6	1.125						TS-CLH-04-P 112
T5	3/4 OD Tube	19.0	0.750	4.063 in. (103 mm)	2.188 in. (56 mm)	2.250 in. (57.1 mm)	1.195 in. (30.4 mm)	0.06 lbs	TS-CLH-05-P 075
	1 1/4 OD Tube	32.0	1.250						TS-CLH-05-P 112
	1 Pipe	33.4	1.315						TS-CLH-05-P 132
	1 1/2 OD Tube	38.1	1.500						TS-CLH-05-P 150
	1 1/4 Pipe	42.2	1.660						TS-CLH-05-P 166

Twin Series Pipe Clamps

Hardware Selection and Dimensions



Twin Weld Plate [TWP]						
Grp.	Order Number	L	W	T	Thread	Weight Ea.
T1	TS-TWP-01-*	1.449 in. (37 mm)	1.188 in. (30 mm)	0.188 in. (5 mm)	1/4 - 20 UNC (M6)	0.09 lbs
T2	TS-TWP-02- -XXX	2.188 in. (56 mm)	1.188 in. (30 mm)	0.188 in. (5 mm)	5/16 - 18 UNC (M8)	0.14 lbs
T3	TS-TWP-03- -XXX	2.688 in. (68.3 mm)	1.188 in. (30 mm)	0.188 in. (5 mm)	5/16 - 18 UNC (M8)	0.17 lbs
T4	TS-TWP-04- -XXX	3.188 in. (81 mm)	1.188 in. (30 mm)	0.188 in. (5 mm)	5/16 - 18 UNC (M8)	0.20 lbs
T5	TS-TWP-05- -XXX	4.063 in. (103 mm)	1.188 in. (30 mm)	0.188 in. (5 mm)	5/16 - 18 UNC (M8)	0.26 lbs
*Materials: <ul style="list-style-type: none"> Z Zinc Plated Steel (Standard Material) T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305) X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571) C Unplated Carbon Steel 						
XXX Threads: <ul style="list-style-type: none"> 56H 5/16 - 18 UNC Thread (Standard) 38H 3/8 - 16 UNC Thread (Special) -MET Metric thread as stated in chart (Special) 						



Twin Cover Plate [TCP]						
Grp.	Order Number	L	W	H	T	Weight Ea.
T1	TS-TCP-01-*	1.225 in. (31 mm)	0.905 in. (23 mm)	-	0.120 in. (3 mm)	0.04 lbs
T2	TS-TCP-02-*	2.040 in. (52 mm)	1.200 in. (30.5 mm)	0.266 in. (7 mm)	0.120 in. (3 mm)	0.08 lbs
T3	TS-TCP-03-*	2.542 in. (65 mm)	1.200 in. (30.5 mm)	0.266 in. (7 mm)	0.120 in. (3 mm)	0.10 lbs
T4	TS-TCP-04-*	2.870 in. (73 mm)	1.205 in. (30.6 mm)	0.266 in. (7 mm)	0.120 in. (3 mm)	0.11 lbs
T5	TS-TCP-05-*	3.688 in. (94 mm)	1.220 in. (31 mm)	0.266 in. (7 mm)	0.120 in. (3 mm)	0.14 lbs
*Materials: <ul style="list-style-type: none"> Z Zinc Plated Steel (Standard Material) T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305) X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571) 						



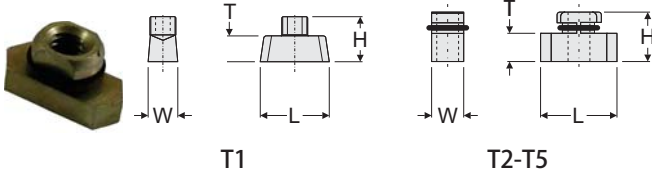
Hexagon Head Bolt [HEX]					
Grp.	Order Number	L	UNC Thread	Thread	Weight Ea.
T1	TS-HEX-01-*	1.00 in. (25.4 mm)	1/4 - 20 UNC	M6	0.02 lbs
T2	TS-HEX-02- -XXX	1.25 in. (32 mm)	5/16 - 18 UNC	M8	0.03 lbs
T3	TS-HEX-03- -XXX	1.75 in. (44 mm)	5/16 - 18 UNC	M8	0.04 lbs
T4	TS-HEX-04- -XXX	2.00 in. (50.8 mm)	5/16 - 18 UNC	M8	0.05 lbs
T5	TS-HEX-05- -XXX	2.50 in. (63 mm)	5/16 - 18 UNC	M8	0.06 lbs
*Materials: <ul style="list-style-type: none"> Z Zinc Plated Steel (Standard Material) T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305) X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571) 					
XXX Threads: <ul style="list-style-type: none"> 56H 5/16 - 18 UNC Thread (Standard) 38H 3/8 - 16 UNC Thread (Special) -MET Metric thread as stated in chart (Special) 					



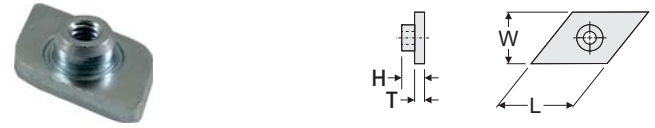
Twin Stacking Bolt [STB]					
Grp.	Order Number	L1	L2	Thread	Weight Ea.
T1	N/A	-	-	-	-
T2	TS-STB-02- -XXX	1.25 in. (32 mm)	0.625 in. (16 mm)	5/16 - 18 UNC (M8)	0.04 lbs
T3	TS-STB-03- -XXX	1.75 in. (44 mm)	1.125 in. (29 mm)	5/16 - 18 UNC (M8)	0.05 lbs
T4	TS-STB-04- -XXX	2.00 in. (50.8 mm)	1.375 in. (35 mm)	5/16 - 18 UNC (M8)	0.06 lbs
T5	TS-STB-05- -XXX	2.50 in. (63 mm)	1.875 in. (48 mm)	5/16 - 18 UNC (M8)	0.06 lbs
*Materials: <ul style="list-style-type: none"> Z Zinc Plated Steel (Standard Material) T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305) X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571) C Unplated Carbon Steel (Special Order) 					
XXX Threads: <ul style="list-style-type: none"> 56H 5/16 - 18 UNC Thread (Standard) 38H 3/8 - 16 UNC Thread (Special) -MET Metric thread as stated in chart (Special) 					

Twin Series Pipe Clamps

Rail and Strut Mounting Options



Twin Rail Nut [RCN-0]						
Grp.	Order Number	L	W	T	H	Thread Weight Ea.
T1	ST-RCN-99- -RN0	0.950 in. (24 mm)	0.405 in. (10 mm)	0.210 in. (5.3 mm)	0.570 in. (15 mm)	1/4-20 UNC (M6) 0.02 lbs
T2-T5	TS-RCN-99- -RN0	1.000 in. (25.4 mm)	0.420 in. (10.7 mm)	0.210 in. (5.3 mm)	0.570 in. (15 mm)	1/4-20 UNC (M6) 0.02 lbs
*Materials: <ul style="list-style-type: none"> Y Yellow Zinc Plated Steel (Standard Material Groups T2-T5) Z Zinc Plated Steel (Group T1 Standard Material, Special T2-T5) T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305) X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571) C Unplated Carbon Steel (Special Material) 						



Twin Rail Nut [RCN-1/RCN-4]						
Grp.	Order Number	L	W	T	H	Thread Weight Ea.
T1	ST-RCN-99- -RN1	1.075 in. (27.3 mm)	0.783 in. (20 mm)	0.175 in. (4.4 mm)	0.405 in. (10 mm)	1/4-20 UNC (M6) 0.04 lbs
T2-T5	TS-RCN-99- -RN4	1.075 in. (27.3 mm)	0.783 in. (20 mm)	0.175 in. (4.4 mm)	0.405 in. (10 mm)	5/16-18 UNC (M8) 0.04 lbs
*Materials: <ul style="list-style-type: none"> Z Zinc Plated Steel (Group T1 Standard Material, Special T2-T5) T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305) X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571) C Unplated Carbon Steel (Special Material) 						



Mounting Rail [RAL-0]					
Grp.	Order Number	W1	W2	T	H Length
0-7A	ST-RA0-99- -XXX	1.125 in. (28 mm)	0.438 in. (11 mm)	14 gauge	0.438 in. (11 mm) See Below
*Materials: <ul style="list-style-type: none"> C Unplated Carbon Steel (Standard Material) T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305) X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571) Z Zinc Plated Steel 					
XXX Length: <ul style="list-style-type: none"> 6FT 72 in. (1829 mm) length (Standard Length) 3FT 36 in. (914 mm) length (Special Length) <i>-custom sizes available on request-</i>					



Mounting Rail [RAL-1]					
Grp.	Order Number	W1	W2	T	H Length
0-7A	ST-RA1-99- -XXX	1.438 in. (36.5 mm)	0.625 in. (16 mm)	14 gauge	0.438 in. (11 mm) See Below
*Materials: <ul style="list-style-type: none"> Z Zinc Plated Steel (Standard Material) T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305) X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571) C Unplated Carbon Steel 					
XXX Length: <ul style="list-style-type: none"> 6FT 72 in. (1829 mm) length (Standard Length) 3FT 36 in. (914 mm) length (Special Length) <i>-custom sizes available on request-</i>					



Twin Safety Plate [SAF]				
Grp.	Order Number	W	B	T Weight Ea.
T1	N/A	-	-	-
T2-T5	TS-SAF-02-*	0.719 in. (18mm)	0.510 in. (13 mm)	0.050 in. (1.3 mm) 0.04 lbs
*Materials: <ul style="list-style-type: none"> Y Yellow Zinc Plated Steel (Standard Material) Z Zinc Plated Steel (Special Material) T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305) X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571) C Unplated Carbon Steel (Special Material) 				

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Twin Series Pipe Clamps

Complete Assembly Ordering Code

chart 1 chart 2 chart 3 chart 4 chart 5

TW T 41050-PP-MET

Clamp Configuration chart 1

TW	Complete Clamp for Weld Mounting
R0T	Complete Clamp for Mounting to RAL-0
R1T/R4T	Complete Clamp for Mounting to RAL-1
UT	Complete Clamp for Mounting to Strut Channel
TWSK	Complete Stacking Kit

Hardware Material chart 2

Omit	Electro-Zinc Dichromate Plating
T	AISI 304 Stainless Steel (A2 - 1.4301/1.4305)
X	AISI 316/316Ti Stainless Steel (A4 - 1.4401/1.4571)
C	Untreated Carbon Steel

Clamp Pair Material chart 4

PP	Polypropylene
SP	Santoprene

Threads chart 5

Omit	UNC Thread (Standard)
MET	Metric Thread

Clamp Group and Size chart 3

Behringer Group	Pipe Size	Tube Size	Metric OD (mm)	Imperial OD (Inch)	Order No.
T1		1/4	6.4	0.250	1025
		3/8	9.5	0.375	1038
		12 mm	12.0	0.472	10472
T2		1/4	6.5	0.250	2025
		3/8	9.5	0.375	2038
	1/8		10.0	0.405	20405
		1/2	12.7	0.500	2050
	1/4		14.0	0.540	20540
		5/8	16.0	0.625	2062
	3/8		17.0	0.675	20675
T3		3/4	19.0	0.750	3075
	1/2		21.3	0.840	30840
		7/8	22.2	0.875	3087
		1	25.4	1.000	3100
T4		7/8	22.2	0.875	4087
		1	25.4	1.000	4100
	3/4		26.7	1.050	41050
		1 1/8	28.6	1.125	41125
T5		3/4	19.0	0.750	5075
		1 1/4	32.0	1.250	5125
	1		33.4	1.315	51315
		1 1/2	38.1	1.500	5150
	1 1/4		42.2	1.660	51660

Twin Series Pipe Clamps

Ordering Examples

Clamp for Weld Mounting

TW



Consists of:

- 1 HEX bolt
- 1 TCP Cover Plate
- 1 CLH Clamp Set (2 halves)
- 1 TWP Weld Plate

Stacking Kit

TWSK



Consists of:

- 1 STB Stacking bolt
- 1 SAF Safety Plate
- 1 CLH Clamp Set (2 halves)

Clamp for RAL-0 Mounting

R0T



Consists of:

- 1 HEX bolt
- 1 TCP Cover Plate
- 1 CLH Clamp Set (2 halves)
- 1 RCN-0 Rail Nut

Clamp for RAL-1 Mounting

R1T
R4T



Consists of:

- 1 HEX bolt
- 1 TCP Cover Plate
- 1 CLH Clamp Set (2 halves)
- 1 RCN-4 Rail Nut

Clamp for Strut Mounting

UT

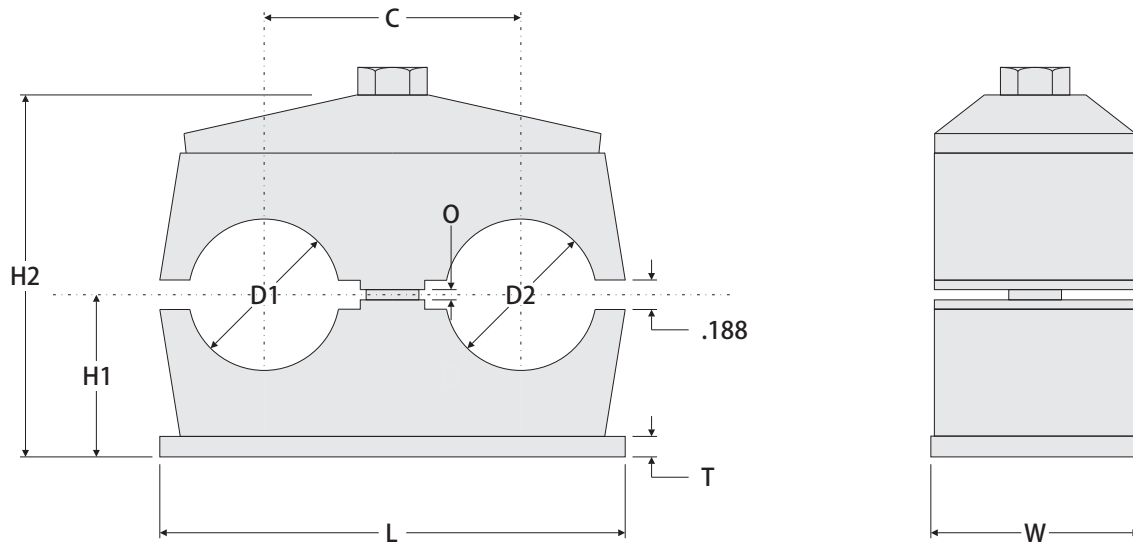


Consists of:

- 1 HEX bolt
- 1 TCP Cover Plate
- 1 CLH Clamp Set (2 halves)
- 1 UCN Strut Clip

Twin Series Pipe Clamps

Complete Assembly Dimensions

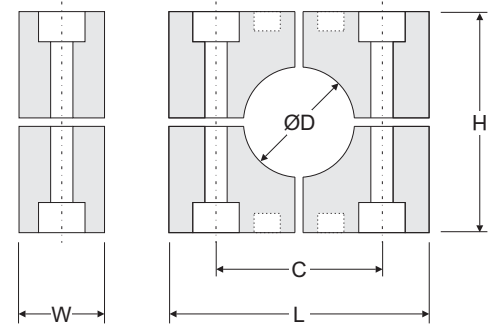
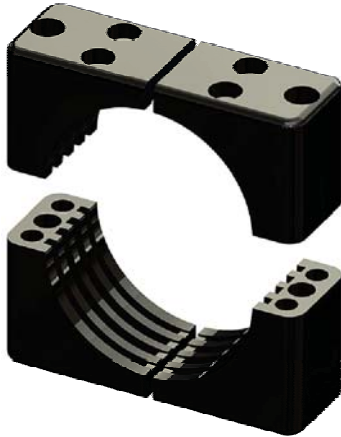


Clamp Assembly Dimensions

Behringer Group	D1 / D2	L	C	H1	H2	T	W	O
T1	See ordering code on page 20 for available diameters.	1.449 in. (37 mm)	0.781 in. (20 mm)	0.563 in. (14.3 mm)	1.235 in. (31.4 mm)	0.188 in. (5 mm)	1.188 in. (30 mm)	0.063 in. (1.6 mm)
T2		2.188 in. (56 mm)	1.250 in. (32 mm)	0.688 in. (17.5 mm)	1.454 in. (37 mm)	0.188 in. (5 mm)	1.188 in. (30 mm)	0.063 in. (1.6 mm)
T3		2.688 in. (68.3 mm)	1.438 in. (36.5 mm)	0.938 in. (23.8 mm)	1.954 in. (49.6 mm)	0.188 in. (5 mm)	1.188 in. (30 mm)	0.063 in. (1.6 mm)
T4		3.188 in. (81 mm)	1.813 in. (46.1 mm)	1.063 in. (27 mm)	2.204 in. (56 mm)	0.188 in. (5 mm)	1.188 in. (30 mm)	0.063 in. (1.6 mm)
T5		4.063 in. (103 mm)	2.188 in. (56 mm)	1.313 in. (33.3 mm)	2.704 in. (68.7 mm)	0.188 in. (5 mm)	1.188 in. (30 mm)	0.063 in. (1.6 mm)

Heavy-4 Series Pipe Clamps

Behringer's patented Heavy-4 Series pipe clamps accommodate pipe sizes from 8 through 30 inch. They feature a unique four-segmented plastic design which retains dimensional accuracy, absorbs vibration, resists stress and impact, and accomplishes a strong plastic-to-steel interface, strongly securing the largest pipes with ease. Substantial metal plates and bolts complement this heavyweight of the pipe clamp world.



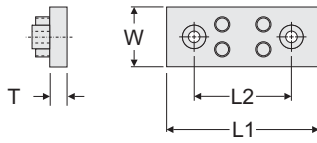
Clamp Pair Material Codes (*)			
P	[PP] Polypropylene Black Color	S	[SP] Santoprene Beige Color
		A	[AL] Aluminum Aluminum Color
***Please Note: For aluminum material, the clamp design will incorporate 2 halves, rather than a 4-segment design. For Santoprene material, minimum quantities may apply.			

Clamp Pair Selection and Part Numbers

Behringer Group	Size	Metric OD (mm)	Imperial OD (Inch)	L	C	H	W	Weight Ea.	Clamp Pair (See material for *)
H11	8 Pipe	219.0	8.625	18.250 in. (464 mm)	15.688 in. (398 mm)	16.000 in. (406 mm)	5.800 in. (147 mm)	24 lbs.	H4-CLH-11-*-08P
	10 Pipe	273.0	10.750						H4-CLH-11-*-10P
	12 Pipe	324.0	12.750						H4-CLH-11-*-12P
H12	14 Pipe	356.0	14.000	23.500 in. (597 mm)	20.875 in. (530 mm)	20.000 in. (508 mm)	5.800 in. (147 mm)	32 lbs.	H4-CLH-12-*-14P
	16 Pipe	406.0	16.000						H4-CLH-12-*-16P
H13	18 Pipe	457.0	18.000	24.750 in. (629 mm)	22.250 in. (565 mm)	22.000 in. (559 mm)	5.800 in. (147 mm)	22 lbs.	H4-CLH-13-*-18P
H14	20 Pipe	508.0	20.000	28.750 in. (730 mm)	26.250 in. (667 mm)	22.000 in. (559 mm)	5.800 in. (147 mm)	26 lbs.	H4-CLH-14-*-20P
H15	24 Pipe	610.0	24.000	34.750 in. (883 mm)	32.250 in. (819 mm)	32.000 in. (813 mm)	5.800 in. (147 mm)	30 lbs.	H4-CLH-14-*-24P
	30 Pipe	762.0	30.000						H4-CLH-14-*-30P

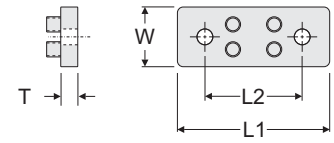
Heavy-4 Series Pipe Clamps

Securing Plate Selection and Dimensions



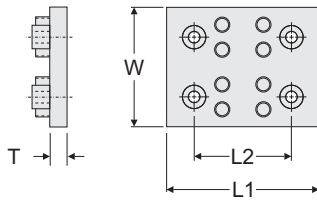
Single Weld Plate [SWP]							
Grp.	Order Number	L1	L2	W	T	Thread	Weight Ea.
H11	H4-SWP-11.*	20.000 in. (508 mm)	15.688 in. (398 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	34 lbs
H12	H4-SWP-12.*	25.500 in. (648 mm)	20.875 in. (530 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	43 lbs
H13	H4-SWP-13.*	27.000 in. (686 mm)	22.250 in. (565 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	46 lbs
H14	H4-SWP-14.*	30.500 in. (775 mm)	26.250 in. (667 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	52 lbs
H15	H4-SWP-15.*	36.500 in. (927 mm)	32.250 in. (819 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	62 lbs

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)



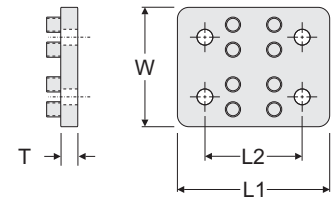
Single Cover Plate [SCP]							
Grp.	Order Number	L1	L2	W	T	Thread	Weight Ea.
H11	H4-SCP-11.*	18.250 in. (464 mm)	15.688 in. (398 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)		28 lbs
H12	H4-SCP-12.*	23.500 in. (597 mm)	20.875 in. (530 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)		37 lbs
H13	H4-SCP-13.*	25.000 in. (635 mm)	22.250 in. (565 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)		40 lbs
H14	H4-SCP-14.*	29.000 in. (737 mm)	26.250 in. (667 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)		45 lbs
H15	H4-SCP-15.*	35.000 in. (889 mm)	32.250 in. (819 mm)	5.875 in. (149 mm)	1.000 in. (25.4 mm)		55 lbs

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)



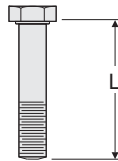
Double Weld Plate [DWP]							
Grp.	Order Number	L1	L2	W	T	Thread	Weight Ea.
H11	H4-DWP-11.*	20.000 in. (508 mm)	15.688 in. (398 mm)	12.000 in. (305 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	71 lbs
H12	H4-DWP-12.*	25.500 in. (648 mm)	20.875 in. (530 mm)	12.000 in. (305 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	88 lbs
H13	H4-DWP-13.*	27.000 in. (686 mm)	22.250 in. (565 mm)	12.000 in. (305 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	93 lbs
H14	H4-DWP-14.*	30.500 in. (775 mm)	26.250 in. (667 mm)	12.000 in. (305 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	106 lbs
H15	H4-DWP-15.*	36.500 in. (927 mm)	32.250 in. (819 mm)	12.000 in. (305 mm)	1.000 in. (25.4 mm)	1 1/4 - 7 UNC	127 lbs

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)



Double Cover Plate [DCP]							
Grp.	Order Number	L1	L2	W	T	Thread	Weight Ea.
H11	H4-DCP-11.*	18.250 in. (464 mm)	15.688 in. (398 mm)	11.750 in. (298 mm)	1.000 in. (25.4 mm)		60 lbs
H12	H4-DCP-12.*	23.500 in. (597 mm)	20.875 in. (530 mm)	11.750 in. (298 mm)	1.000 in. (25.4 mm)		77 lbs
H13	H4-DCP-13.*	25.000 in. (635 mm)	22.250 in. (565 mm)	11.750 in. (298 mm)	1.000 in. (25.4 mm)		82 lbs
H14	H4-DCP-14.*	29.000 in. (737 mm)	26.250 in. (667 mm)	11.750 in. (298 mm)	1.000 in. (25.4 mm)		96 lbs
H15	H4-DCP-15.*	35.000 in. (889 mm)	32.250 in. (819 mm)	11.750 in. (298 mm)	1.000 in. (25.4 mm)		115 lbs

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)



Hexagon Head Bolt [HEX]				
Grp.	Order Number	L	UNC Thread	Weight Ea.
H11	H4-HEX-11.*	17.500 in. (445 mm)	1 1/4 - 7 UNC	lbs.
H12	H4-HEX-12.*	21.500 in. (546 mm)	1 1/4 - 7 UNC	lbs.
H13	H4-HEX-13.*	24.000 in. (610 mm)	1 1/4 - 7 UNC	lbs.
H14	H4-HEX-14.*	27.500 in. (699 mm)	1 1/4 - 7 UNC	lbs.
H15	H4-HEX-15.*	33.500 in. (851 mm)	1 1/4 - 7 UNC	lbs.

***Materials:** C Unplated Carbon Steel (Standard Material)
 T AISI 304 Grade Stainless Steel (A2 - 1.4301/1.4305)
 X AISI 316 Grade Stainless Steel (A4 - 1.4401/1.4571)
 Z Zinc Plated Steel (Special Order)

Heavy-4 Series Pipe Clamps

Complete Assembly Ordering Code

chart 1 chart 2 chart 3 chart 4 chart 5
SH T 11275-PP-MET

Clamp Configuration chart 1	
SH	Single Heavy Complete Clamp for Weld Mounting
DH	Double Heavy Complete Clamp for Weld Mounting


Clamp Pair Material chart 4	
PP	Polypropylene
SP	Santoprene
AL	Aluminum
*For Aluminum, clamps are supplied in 2 halves rather than 4 quadrants. Some other dimensions will vary as well.	


Hardware Material chart 2	
Omit	Untreated Carbon Steel
T	AISI 304 Stainless Steel (A2 - 1.4301/1.4305)
X	AISI 316/316Ti Stainless Steel (A4 - 1.4401/1.4571)
Z	Electro-Zinc Dichromate Plating

Threads chart 5	
Omit	UNC Thread (Standard)
MET	Metric Thread

Clamp Group and Size chart 3				
Behringer Group	Pipe Size	Metric OD (mm)	Imperial OD (Inch)	Order No.
H11	8	219.0	8.625	11862
	10	273.0	10.750	11075
	12	323.8	12.750	11275
H12	14	355.6	14.000	12140
	16	406.4	16.000	12160
H13	18	457.2	18.000	13180
H14	20	508.0	20.000	14200
H15	24	609.6	24.000	15240
	30	762.0	30.000	15300

Ordering Examples

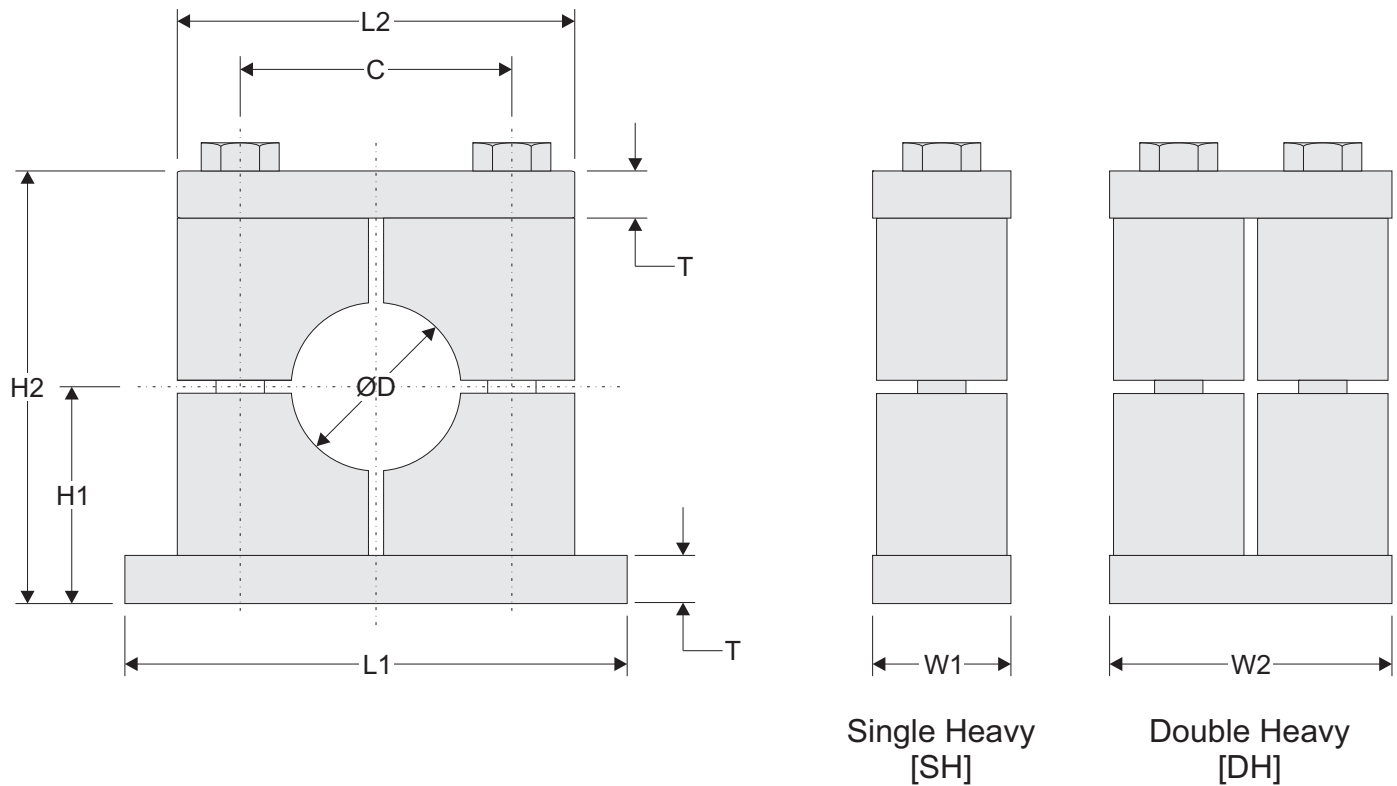
Single Heavy for Weld Mounting	
SH	 <p>Consists of: 2 HEX bolts 1 SCP Single Cover Plate 1 CLH Clamp Set (4 quarters) 1 SWP Single Weld Plate</p>

Double Heavy for Weld Mounting	
DH	 <p>Consists of: 4 HEX bolts 1 DCP Double Cover Plate 2 CLH Clamp Sets (8 quarters) 1 DWP Double Weld Plate</p>

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Heavy-4 Series Pipe Clamps

Complete Assembly Dimensions

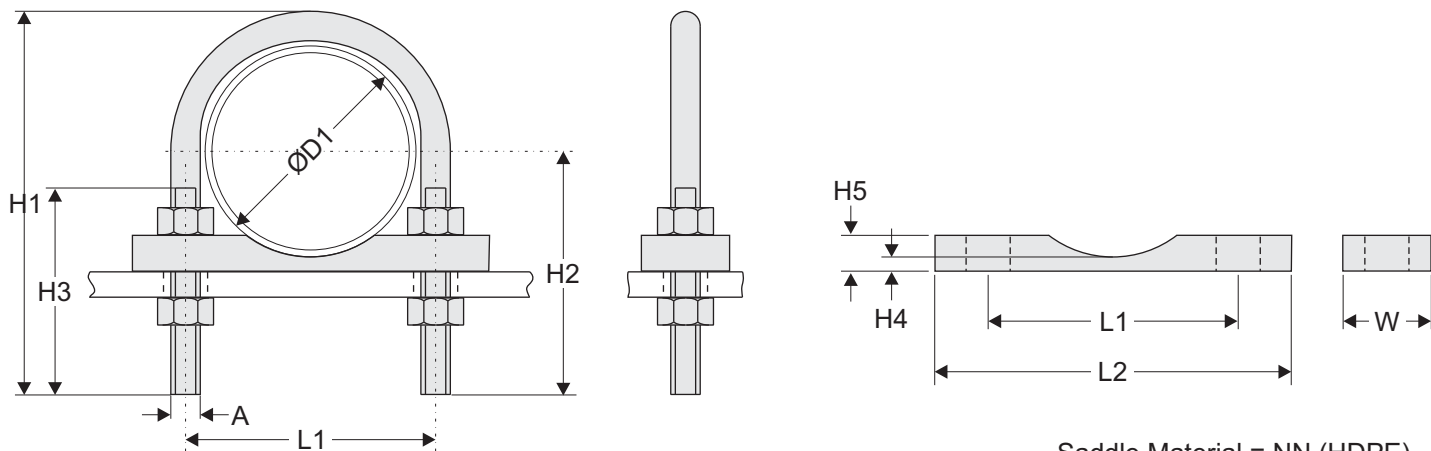


Clamp Assembly Dimensions

Behringer Group	OD	L1	L2	C	H1	H2	T	W1	W2
H11	See ordering code on page 26 for available diameters.	20.000 in. (508 mm)	18.250 in. (464 mm)	15.688 in. (398 mm)	9.000 in. (228.6 mm)	18.000 in. (457 mm)	1.000 in. (25.4 mm)	5.875 in. (149 mm)	12.000 in. (305 mm)
H12		25.000 in. (635 mm)	23.500 in. (597 mm)	20.875 in. (530 mm)	11.000 in. (279.4 mm)	22.000 in. (559 mm)	1.000 in. (25.4 mm)	5.875 in. (149 mm)	12.000 in. (305 mm)
H13		26.500 in. (673 mm)	24.750 in. (629 mm)	22.250 in. (565 mm)	12.000 in. (304.8 mm)	24.000 in. (610 mm)	1.000 in. (25.4 mm)	5.875 in. (149 mm)	12.000 in. (305 mm)
H14		30.000 in. (762 mm)	28.750 in. (730 mm)	26.250 in. (667 mm)	12.000 in. (304.8 mm)	24.000 in. (610 mm)	1.000 in. (25.4 mm)	5.875 in. (149 mm)	12.000 in. (305 mm)
H15		36.000 in. (914 mm)	34.750 in. (883 mm)	32.250 in. (819 mm)	17.000 in. (431.8 mm)	34.000 in. (864 mm)	1.000 in. (25.4 mm)	5.875 in. (149 mm)	12.000 in. (305 mm)

Saddle Series Pipe Clamps

Long Saddle U-Bolt Clamp



Saddle Material = NN (HDPE)
= HT (High Temp)

U-Bolt							
Nominal Pipe Size	ØD1 (pipe OD)	L1	H1	H2	H3	A (thread)	Wt. (lbs)
1/2	0.840	1.188	3.500	2.750	2.375	1/4-20 UNC	0.11
3/4	1.050	1.375	3.563	2.750	2.375	1/4-20 UNC	0.12
1	1.315	1.625	3.688	2.750	2.375	1/4-20 UNC	0.12
1 1/4	1.660	2.063	4.125	2.875	2.375	3/8-16 UNC	0.28
1 1/2	1.900	2.375	4.378	3.000	2.500	3/8-16 UNC	0.30
2	2.375	2.813	4.875	3.250	2.500	3/8-16 UNC	0.33
2 1/2	2.875	3.438	5.75	3.750	3.000	1/2-13 UNC	0.73
3	3.500	4.063	6.313	4.000	3.000	1/2-13 UNC	0.78
4	4.500	5.063	7.313	4.500	3.000	1/2-13 UNC	0.90
5	5.563	6.125	8.313	5.000	3.000	1/2-13 UNC	1.00
6	6.625	7.375	10.125	6.125	3.750	5/8-11 UNC	2.00
8	8.625	9.375	12.125	7.125	3.750	5/8-11 UNC	2.30
10	10.750	11.625	14.563	8.375	4.000	3/4-10 UNC	4.90
12	12.750	13.750	16.938	9.625	4.250	7/8-9 UNC	7.70
14	14.000	15.000	18.188	10.250	4.250	7/8-9 UNC	8.30
16	16.000	17.000	20.188	11.250	4.250	7/8-9 UNC	9.20
18	18.000	19.125	22.688	12.625	4.750	1-8 UNC	13.50
20	20.000	21.125	24.688	13.625	4.750	1-8 UNC	14.60
22	22.000	23.125	26.688	14.625	4.750	1-8 UNC	15.20
24	24.000	25.125	28.688	15.625	4.750	1-8 UNC	16.90
30	30.000	31.125	34.625	18.625	4.750	1-8 UNC	19.10

Long Saddle					
L1	L2	W	H4	H5	Wt. (lbs)
1.188	2.000	1.250	0.250	0.500	0.04
1.375	3.000	1.250	0.250	0.500	0.07
1.625	3.188	1.250	0.250	0.500	0.07
2.063	3.500	1.250	0.250	0.500	0.08
2.375	3.750	1.500	0.313	0.625	0.10
2.813	4.375	1.500	0.313	0.625	0.12
3.438	5.375	1.500	0.313	0.625	0.15
4.063	5.750	1.500	0.375	0.750	0.19
5.063	7.500	1.500	0.375	0.750	0.25
6.125	8.750	1.500	0.375	0.750	0.29
7.375	9.875	2.000	0.500	1.000	0.59
9.375	12.500	2.000	0.500	1.000	0.74
11.625	14.625	2.000	0.500	1.000	0.87
13.75	16.625	2.500	0.594	1.250	1.54
15.000	19.000	2.500	0.594	1.250	1.76
17.000	21.250	2.500	0.594	1.250	1.97
19.125	23.240	2.500	0.594	1.250	2.16
21.125	25.250	2.500	0.594	1.250	2.35
23.125	27.625	2.750	0.750	1.500	3.38
25.125	29.625	2.750	0.750	1.500	3.62
31.125	36.000	2.750	0.750	1.500	4.40

Assembly Ordering

LSUBC-12750-NN

Pipe Diameter
Enter ØD1 value from above, including decimal

Material of U-Bolt
C Carbon Steel
Z Zinc Plated
T 304 Stainless Steel
X 316 Stainless Steel

U-Bolt Ordering

UBC-12750

Pipe Diameter
Enter ØD1 value from above, including decimal

Material of U-Bolt
C Carbon Steel
Z Zinc Plated
T 304 Stainless Steel
X 316 Stainless Steel

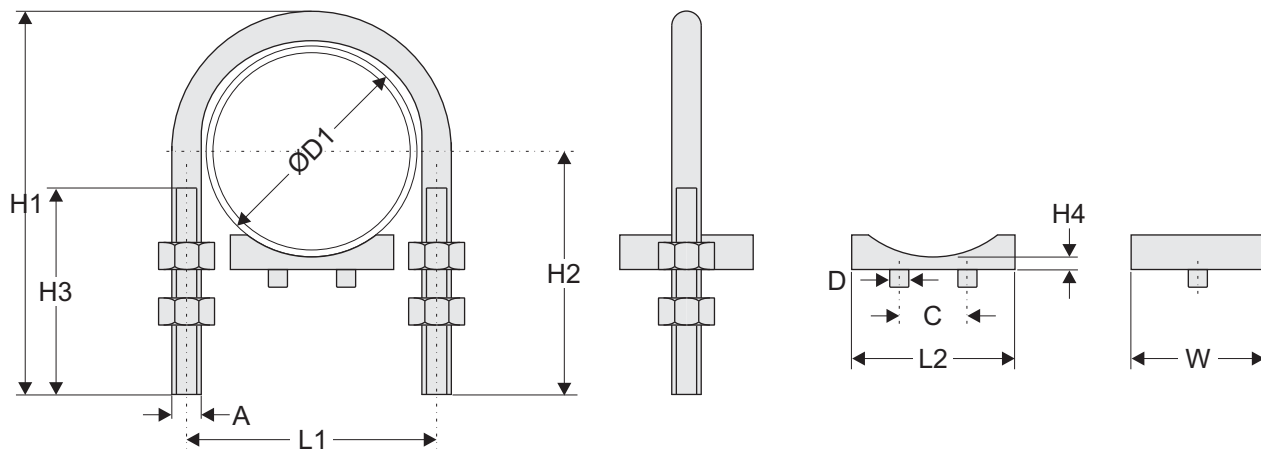
Saddle Ordering

LS-12750-NN

Pipe Diameter
Enter ØD1 value from above, including decimal

Saddle Series Pipe Clamps

Short Saddle U-Bolt Clamp



Saddle Material = PP (Polypropylene)

U-Bolt							
Nominal Pipe Size	ØD1 (pipe OD)	L1	H1	H2	H3	A (thread)	Wt. (lbs)
1 1/4	1.660	2.063	4.125	2.875	2.375	3/8-16 UNC	0.28
1 1/2	1.900	2.375	4.378	3.000	2.500	3/8-16 UNC	0.30
2	2.375	2.813	4.875	3.250	2.500	3/8-16 UNC	0.33
3	3.500	4.063	6.313	4.000	3.000	1/2-13 UNC	0.78
4	4.500	5.063	7.313	4.500	3.000	1/2-13 UNC	0.90
6	6.625	7.375	10.125	6.125	3.750	5/8-11 UNC	2.00
8	8.625	9.375	12.125	7.125	3.750	5/8-11 UNC	2.30
10	10.750	11.625	14.563	8.375	4.000	3/4-10 UNC	4.90
12	12.750	13.750	16.938	9.625	4.250	7/8-9 UNC	7.70
14	14.000	15.000	18.188	10.250	4.250	7/8-9 UNC	8.30
16	16.000	17.000	20.188	11.250	4.250	7/8-9 UNC	9.20
18	18.000	19.125	22.688	12.625	4.750	1-8 UNC	13.50
20	20.000	21.125	24.688	13.625	4.750	1-8 UNC	14.60
24	24.000	25.125	28.688	15.625	4.750	1-8 UNC	16.90
30	30.000	31.125	34.625	18.625	4.750	1-8 UNC	19.10

Short Saddle				
L2	C	D	H4	W
1.500	1.000	0.313	0.250	1.000
1.500	1.000	0.313	0.250	1.000
1.500	1.000	0.313	0.250	1.000
3.000	1.563	0.563	0.313	2.000
3.000	1.563	0.563	0.313	2.000
5.500	3.500	1.000	0.375	3.000
5.500	3.500	1.000	0.375	3.000
5.500	3.500	1.000	0.375	3.000
8.500	5.875	1.125	0.375	3.000
8.500	5.875	1.125	0.375	3.000
8.500	5.875	1.125	0.375	3.000
8.500	5.875	1.125	0.375	3.000
14.000	10.500	1.125	0.500	4.000
14.000	10.500	1.125	0.500	4.000
14.000	10.500	1.125	0.500	4.000

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Assembly Ordering

SSUBC-12.750-PP

Pipe Diameter
Enter ØD1 value from above, including decimal

- Material of U-Bolt**
- C Carbon Steel
 - Z Zinc Plated
 - T 304 Stainless Steel
 - X 316 Stainless Steel

U-Bolt Ordering

UBC-12.750

Pipe Diameter
Enter ØD1 value from above, including decimal

- Material of U-Bolt**
- C Carbon Steel
 - Z Zinc Plated
 - T 304 Stainless Steel
 - X 316 Stainless Steel

Saddle Ordering

SS-12.750-PP

Pipe Diameter
Enter ØD1 value from above, including decimal

Cushion Clamps

Cushioned Clamping Systems

Behringer now offers a complete line of cushioned clamps. Cushioned clamps are typically used in pneumatic, refrigeration, HVAC, and some low pressure hydraulic lines. Behringer's cushioned clamps also eliminate metal to metal contact between the fluid lines and the support hardware. Standard material for the hardware is a clear trivalent zinc plated steel with options for both 304 and 316 grades stainless steel. Additional special options include aluminum and powder coating.



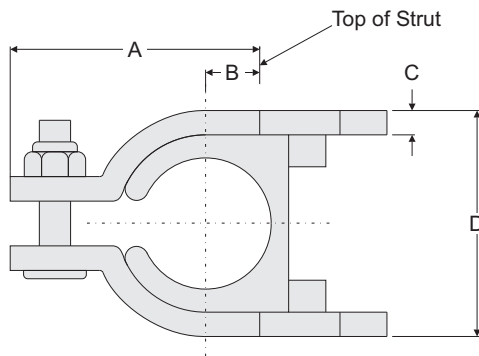
Specifications

Cushion:

Thermoplastic Elastomer
-65°F to 275°F operating temperature

Hardware:

Fits industry standard strut channel with 1-5/8 in. width.



Cushion Ordering

Order Number Material
CC -

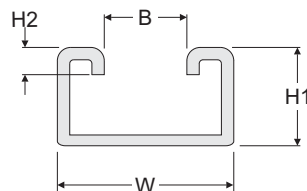
Hardware Material

Z	Electro-Zinc Dichromate Plating
T	AISI 304 Stainless Steel (A2 - 1.4301/1.4305)
X	AISI 316/316Ti Stainless Steel (A4 - 1.4401/1.4571)

To order, use the ordering code above. Fill in the order number from the light blue shaded boxes in the chart to the right. Then add the material designation from the Hardware Materials chart above.

Ex. For 1 in. pipe with zinc plated hardware the order number is CC1315-Z.

Channel Ordering



Strut Channel Rail

Height	Order Number	Length	H1	H2	W	B
7/8"	ST-SCR-088-*-048	48.0 in.	0.875 in.	0.281 in.	1.625 in.	0.875 in.
	ST-SCR-088-*-120	120.0 in.	(22.2 mm)	(7 mm)	(41.4 mm)	(22.2 mm)
1"	ST-SCR-100-*-048	48.0 in.	1.0 in.	0.281 in.	1.625 in.	0.875 in.
	ST-SCR-100-*-120	120.0 in.	(25.5 mm)	(7 mm)	(41.4 mm)	(22.2 mm)

*Materials:
C Unplated Mild Steel
T AISI 304 Grade Stainless (A2 - 1.4301/1.4305)
X AISI 316 Grade Stainless (A4 - 1.4401/1.4571)

Cushion Clamp Size Table

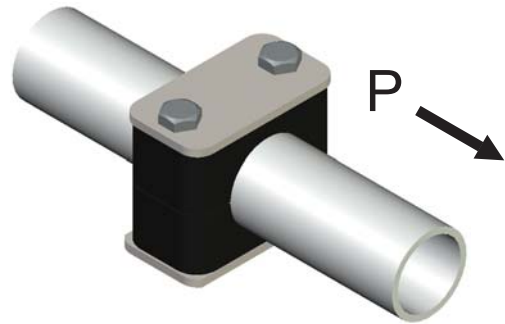
Size	Order Number	ØD	A	B	C	D*	Box Quantity
1/4 OD Tube	0250	0.250	1.110	0.220	0.075	0.620	24
3/8 OD Tube	0375	0.375	1.240	0.280	0.075	0.750	24
1/2 OD Tube	0500	0.500	1.360	0.340	0.075	0.870	24
1/4 Pipe	0540	0.540	1.410	0.630	0.075	0.910	24
5/8 OD Tube	0625	0.625	1.500	0.410	0.075	1.000	24
3/8 Pipe	0675	0.675	1.590	0.450	0.075	1.070	24
3/4 OD Tube	0750	0.750	1.780	0.530	0.075	1.330	24
1/2 Pipe	0840	0.840	1.910	0.590	0.075	1.450	24
7/8 OD Tube	0875	0.875	1.910	0.580	0.075	1.450	24
1 OD Tube	1000	1.000	2.030	0.660	0.105	1.660	12
3/4 Pipe	1050	1.050	2.160	0.720	0.105	1.790	12
1 1/8 OD Tube	1125	1.125	2.160	0.720	0.105	1.790	12
1 1/4 OD Tube	1250	1.250	2.300	0.780	0.105	1.920	12
1 Pipe	1315	1.315	2.750	0.910	0.119	2.220	12
1 3/8 OD Tube	1375	1.375	2.750	0.910	0.119	2.220	12
1 1/2 OD Tube	1500	1.500	2.750	0.910	0.119	2.220	12
1 5/8 OD Tube	1625	1.625	3.030	1.030	0.119	2.470	12
1 1/4 Pipe	1660	1.660	3.030	1.030	0.119	2.470	12
1 3/4 OD Tube	1750	1.750	3.030	1.030	0.119	2.470	12
1 7/8 OD Tube	1875	1.875	3.280	1.160	0.119	2.470	12
1 1/2 Pipe	1900	1.900	3.280	1.160	0.119	2.470	12
2 OD Tube	2000	2.000	3.280	1.160	0.119	2.470	12
2 1/8 OD Tube	2125	2.125	3.530	1.280	0.119	2.970	1
2 1/4 OD Tube	2250	2.250	3.780	1.410	0.119	3.220	1
2 3/8 OD Tube	2375	2.375	3.780	1.410	0.119	3.220	1
2 Pipe	2375	2.375	3.780	1.410	0.119	3.220	1
2 1/2 OD Tube	2500	2.500	4.030	1.530	0.119	3.470	1
2 5/8 OD Tube	2625	2.625	4.030	1.530	0.119	3.470	1
2 1/2 Pipe	2875	2.875	4.270	1.660	0.119	3.720	1
3 OD Tube	3000	3.000	4.520	1.780	0.119	3.970	1
3 1/8 OD Tube	3125	3.125	4.520	1.780	0.119	3.970	1
3 Pipe	3500	3.500	4.910	1.970	0.119	4.360	1
3 5/8 OD Tube	3625	3.625	5.030	2.030	0.119	4.470	1
3 1/2 Pipe	4000	4.000	5.530	2.280	0.119	4.970	1
3 1/8 OD Tube	4125	4.125	5.660	2.340	0.119	5.090	1
4 Pipe	4500	4.500	6.030	2.530	0.119	5.470	1
5 Pipe	5563	5.563	7.030	3.030	0.119	6.470	1
6 Pipe	6625	6.625	8.030	3.530	0.119	7.470	1

Material Properties Technical Data

Clamp Pair Material Other materials have been used and are available upon request.	PP	SP	AL	NN
	Polypropylene	Santoprene	Aluminum	HDPE
Color	Black	Tan	Natural Aluminum	White
Description	Thermoplastic Copolymer	Thermoplastic Elastomer	AlSi12	High Density Polyethylene
Mechanical Properties				
Tensile Strength	3300 psi (at yield, 73 ° F) (ASTM D638)	1740 psi (at yield, 73 ° F) (ASTM D638)	19,000 psi (at yield, 73 ° F) (ASTM D638)	4500 psi (at yield, 73 ° F) (ASTM D638)
Tensile Elongation	6.6% (at yield, 73 ° F) (ASTM D638)	31% (at yield, 73 ° F) (ASTM D638)	3.5% (at yield, 73 ° F) (ASTM D638)	
Hardness		50 Shore D (ASTM D2240)		65 R (Rockwell "R" Scale)
Thermal Properties				
Temperature Range (Brief Exposure)	-22° F to + 215° F (-30° C to + 102° C)	-40° F to + 302° F (-40° C to + 150° C)	-65° F to + 750° F*1 (-54° C to + 399° C)	
Temperature Range (Continuous Exposure)	-22° F to + 194° F (-30° C to + 90° C)	-40° F to + 275° F (-40° C to + 135° C)	-65° F to + 500° F*1 (-54° C to + 260° C)	-58° F to + 175° F (-50° C to + 79° C)
Electrical Properties				
Dielectric Strength	475 V/mil (ASTM D149)	920 V/mil (ASTM D149)		510 V/mil (ASTM D149)
Dielectric Constant	2.26 - 2.36 (ASTM D150)	2.300 (ASTM D150)		2.35 (ASTM D150)
Volume Resistivity	> 2 x 10 ¹⁶ ohm-cm (ASTM D257)	>1 x 10 ¹⁴ ohm-cm (ASTM D257)	4.4 x 10 ⁶ ohm-cm (ASTM D257)	>6 x 10 ¹⁵ ohm-cm (ASTM D257)
Standards and Specifications				
	FDA Regulation Title 21 CFR 177.1520	UL Listed File# QMFZ2.E80017		FDA Regulation Title 21 CFR 177.1520
	Meets Multiple Automotive Industry Specifications	Meets Multiple Automotive Industry Specifications		ASTM D 1248-84 Type III, Class A
	EU Directive 2002/95/EC (RoHS) Compliant	EU Directive 2002/95/EC (RoHS) Compliant		Federal Specificaion LP-390 Type III, Class H, Grade I
Special Notes				
Notes:	<p>*1: Tensile and fatigue strenght rise as temperature decreases. The tensile elongation decreases as the temperature decreases.</p> <p>The information contained in this document is provided as an aid in properly selecting products and/or options. It is intended to be used by technically experienced users for general reference only. The supplier assumes no responsibility or liability for the accuracy or completeness of this document, as well as results obtained by the use of this information. Due to the variety of possible operating conditions, it is highly recommended that the user make their own tests to determine the safety and suitability of all products and combinations thereof. The user is solely responsible for final determination of such conditions.</p>			

Tightening Torques and Maximum Loads

The charts below show the force in the direction of the pipe [P] required to move the pipe through the clamp. The values are for clamps with cover plates and hexagon head bolts using the recommended tightening torques below.



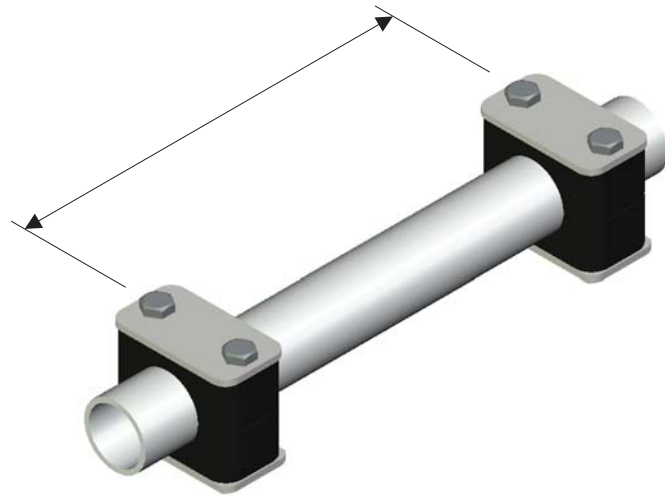
Standard Series							
Behringer Group	Hexagon Head Bolt	Polypropylene		Santoprene		Aluminum	
		Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)	Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)	Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)
0	1/4 - 20 UNC	6	135	6	135	9	785
1		6	245	6	225	9	945
2		6	290	6	270	9	965
3		6	315	6	290	9	1100
4		6	335	6	315	9	1125
5		6	425	6	380	9	1600
6		6	450	6	405	9	2000
7		6	495	6	425	9	N/A
7A		6		6		9	N/A

Heavy Series							
Behringer Group	Hexagon Head Bolt	Polypropylene		Santoprene		Aluminum	
		Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)	Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)	Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)
H3	3/8 - 16 UNC	9	360	9	335	22	2720
H4		9	650	9	600	22	3395
H5		11	740	11	675	25	3485
H6	7/16 - 14 UNC	22	1845	22	1755	40	6615
H7	5/8 - 11 UNC	33	2475	33	2025	90	7850
H8	3/4 - 10 UNC	60	3150	60	2700	160	15,885
H9	7/8 - 9 UNC	80	6300	80	5625	180	16,875
H10	1 1/8 - 7 UNC	130	9000	130	7650	370	19,000

Twin Series					
Behringer Group	Hexagon Head Bolt	Polypropylene		Santoprene	
		Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)	Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)
T1	1/4 - 20 UNC	4	100	4	100
T2	5/16 - 18 UNC	9	235	9	235
T3		9	235	9	235
T4		9	300	12	300
T5		6	300	6	300

Note: All tightening torques and static shearing forces apply to clamps with cover plates and hex bolts and are according to DIN3015-10. Pipe sliding starts when the load values "P" are reached.

Recommended Spacing



Recommended Spacing

Pipe or Tube OD	Operating Pressure	Recommended Spacing	Operating Pressure	Recommended Spacing
0.250 in. to 0.675 in.	up to 3000 psi	5 - 7 Ft.	over 3000 psi	3 - 5 Ft.
0.750 in. to 1.050 in.	up to 3000 psi	6 - 8 Ft.	over 3000 psi	4 - 6 Ft.
1.125 in. to 1.500 in.	up to 3000 psi	7 - 9 Ft.	over 3000 psi	5 - 7 Ft.
1.750 in. to 2.500 in.	up to 3000 psi	8 - 10 Ft.	over 3000 psi	6 - 8 Ft.
2.750 in. to 3.500 in.	up to 3000 psi	9 - 11 Ft.	over 3000 psi	7 - 9 Ft.
4.000 in. to 4.500 in.	up to 3000 psi	10 - 12 Ft.	over 3000 psi	8 - 10 Ft.
5.563 in. to 6.625 in.	up to 3000 psi	11 - 13 Ft.	over 3000 psi	8 - 11 Ft.
6.625 in. to 8.625 in.	up to 3000 psi	12 - 14 Ft.	over 3000 psi	9 - 11 Ft.
10.750 in. to 12.750 in.	up to 3000 psi	13 - 15 Ft.	over 3000 psi	8 - 10 Ft.
13.750 in. to 19.750 in.	up to 3000 psi	14 - 16 Ft.	over 3000 psi	10 - 12 Ft.

Recommended Mounting Practices

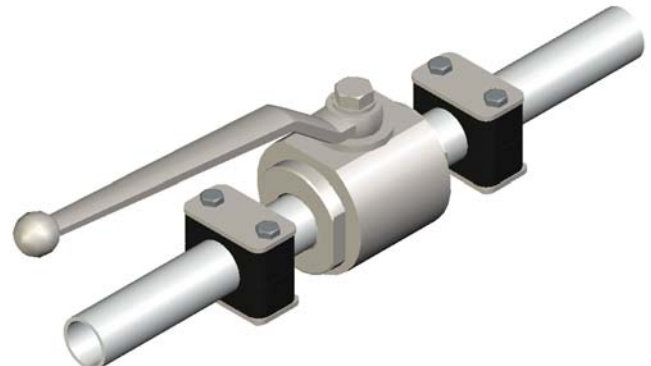
Bends

Behringer recommends that all pipe bends be supported by clamps placed as close to the bend as possible. The clamps should be directly after the connection (coupler, threaded connector, flange, or other).



Components

Behringer recommends that all system components be supported by clamps directly before and after the component in order to protect against vibrations and shock. The clamps should be located as close to the component as possible.



For more information visit our website:
www.behringersystems.com

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Catalog Number BPC2014R1

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