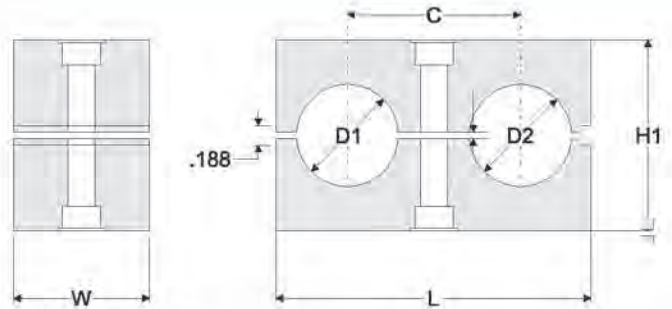


Twin Series Pipe Clamps

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

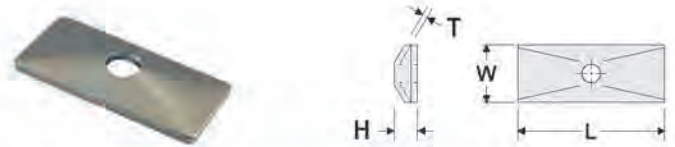
Behringer Group	Size	Metric ØD (mm)	Imperial ØD (Inch)	L	C	H	W	Weight Ea.	Clamp Pair (See material for *)	Smooth Bore Clamp Pair (See material for *)
T1	1/4 OD Tube	6.4	0.250	1.435 in. (36.5 mm)	0.787 in. (20 mm)	1.038 in. (26.4 mm)	1.195 in. (30.4 mm)	0.02 lbs	TS-CLH-01-*-025	TS-CLH-01-*-025SB
	3/8 OD Tube	9.5	0.375						TS-CLH-01-*-038	TS-CLH-01-*-038SB
	12 mm	12.0	0.472						TS-CLH-01-*-047	TS-CLH-01-*-047SB
T2	1/4 OD Tube	6.4	0.250	2.105 in. (53.5 mm)	1.142 in. (29 mm)	1.038 in. (26.4 mm)	1.195 in. (30.4 mm)	0.03 lbs	TS-CLH-02-*-025	TS-CLH-02-*-025SB
	3/8 OD Tube	9.5	0.375						TS-CLH-02-*-038	TS-CLH-02-*-038SB
	1/8 Pipe	10.0	0.405						TS-CLH-02-*-041	TS-CLH-02-*-041SB
	1/2 OD Tube	12.7	0.500						TS-CLH-02-*-050	TS-CLH-02-*-050SB
	1/4 Pipe	13.7	0.540						TS-CLH-02-*-054	TS-CLH-02-*-054SB
	5/8 OD Tube	16.0	0.625						TS-CLH-02-*-062	TS-CLH-02-*-062SB
	3/8 Pipe	17.0	0.675						TS-CLH-02-*-068	TS-CLH-02-*-068SB
T3	3/4 OD Tube	19.0	0.750	2.660 in. (67.6 mm)	1.417 in. (36 mm)	1.580 in. (40.1 mm)	1.195 in. (30.4 mm)	0.07 lbs	TS-CLH-03-*-075	TS-CLH-03-*-075SB
	1/2 Pipe	21.3	0.840						TS-CLH-03-*-084	TS-CLH-03-*-084SB
	7/8 OD Tube	22.2	0.875						TS-CLH-03-*-087	TS-CLH-03-*-087SB
	1 OD Tube	25.4	1.000						TS-CLH-03-*-100	TS-CLH-03-*-100SB
T4	7/8 OD Tube	22.2	0.875	3.313 in. (84.2 mm)	1.772 in. (45 mm)	1.750 in. (44.4 mm)	1.195 in. (30.4 mm)	0.09 lbs	TS-CLH-04-*-087	TS-CLH-04-*-087SB
	1 OD Tube	25.4	1.000						TS-CLH-04-*-100	TS-CLH-04-*-100SB
	3/4 Pipe	26.7	1.050						TS-CLH-04-*-105	TS-CLH-04-*-105SB
	1 1/8 OD Tube	28.6	1.125						TS-CLH-04-*-112	TS-CLH-04-*-112SB
T5	3/4 OD Tube	19.0	0.750	4.215 in. (107 mm)	2.205 in. (56 mm)	2.25 in. (57.1 mm)	1.195 in. (30.4 mm)	0.15 lbs	TS-CLH-05-*-075	TS-CLH-05-*-075SB
	1 1/4 OD Tube	32.0	1.250						TS-CLH-05-*-125	TS-CLH-05-*-125SB
	1 Pipe	33.4	1.315						TS-CLH-05-*-132	TS-CLH-05-*-132SB
	1 1/2 OD Tube	38.1	1.500						TS-CLH-05-*-150	TS-CLH-05-*-150SB
	1 1/4 Pipe	42.2	1.660						TS-CLH-05-*-166	TS-CLH-05-*-166SB

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-*	1.625 in. (41.3 mm)	1.20 in. (30.5 mm)	0.188 in. (5 mm)	1/4 - 20 UNC (M6)	0.09 lbs
T2	TS-TWP-02- ^{-XXX}	2.188 in. (56 mm)	1.20 in. (30.5 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)	1.20 in. (30.5 mm)	0.188 in. (5 mm)	5/16 - 18 UNC (M8)	0.17 lbs
T4	TS-TWP-04- ^{-XXX}	3.445 in. (87.5 mm)	1.20 in. (30.5 mm)	0.188 in. (5 mm)	5/16 - 18 UNC (M8)	0.20 lbs
T5	TS-TWP-05- ^{-XXX}	4.315 in. (110 mm)	1.20 in. (30.5 mm)	0.188 in. (5 mm)	5/16 - 18 UNC (M8)	0.26 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 XXX Threads: 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-*	1.315 in. (33.4 mm)	1.09 in. (27.7 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-*	3.150 in. (80 mm)	1.205 in. (30.6 mm)	0.266 in. (7 mm)	0.120 in. (3 mm)	0.11 lbs
T5	TS-TCP-05-*	4.125 in. (105 mm)	1.220 in. (31 mm)	0.266 in. (7 mm)	0.120 in. (3 mm)	0.14 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)						



Hexagon Head Bolt [HEX]				
Grp.	Order Number	L	Thread	Weight Ea.
T1	ST-HEX-01-*	1.25 in. (30 mm)	1/4 - 20 UNC (M6)	0.02 lbs
T2	TS-HEX-02- ^{-XXX}	1.25 in. (35 mm)	5/16 - 18 UNC (M8)	0.03 lbs
T3	TS-HEX-03- ^{-XXX}	1.75 in. (45 mm)	5/16 - 18 UNC (M8)	0.04 lbs
T4	TS-HEX-04- ^{-XXX}	2.00 in. (50 mm)	5/16 - 18 UNC (M8)	0.05 lbs
T5	TS-HEX-05- ^{-XXX}	2.25 in. (55 mm)	5/16 - 18 UNC (M8)	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) XXX Threads: 56H 5/16 - 18 UNC Thread (Standard) 38H 3/8 - 16 UNC Thread (Special) -MET Metric Thread as stated in chart (Special)				

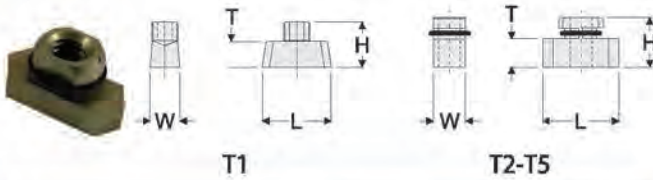


Twin Stacking Bolt [STB]					
Grp.	Order Number	L1	L2	Thread	Weight Ea.
T1	CF*	-	-	-	-
T2	TS-STB-02- ^{-XXX}	1.25 in. (32 mm)	0.625 in. (16 mm)	5/16 - 18 UNC (M8)	0.04 lbs
T3	TS-STB-03- ^{-XXX}	1.75 in. (44 mm)	1.125 in. (29 mm)	5/16 - 18 UNC (M8)	0.05 lbs
T4	TS-STB-04- ^{-XXX}	2.00 in. (50.8 mm)	1.375 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: 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: 56H 5/16 - 18 UNC Thread (Standard) 38H 3/8 - 16 UNC Thread (Special) -MET Metric Thread as stated in chart (Special)					

* Consult Factory

Twin Series Pipe Clamps

Rail and Strut Mounting Options



Twin Rail Nut [RCN-0]							
Group	Order Number	L	W	T	H	Thread	Weight Ea.
T1	ST-RCN-99*-RN0	0.950 in. (24 mm)	0.405 in. (10.2 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)	5/16 - 18 UNC (M8)	0.02 lbs

***Materials:** Y Yellow Zinc Plated Steel (Standard Material Groups T2-T5)
 Z Zinc Plated Steel (Group T1 as 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:** 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]							
Group	Order Number	W1	W2	T	H	Length	Weight
0-7A	ST-RA0-99*-XXX	1.125 in. (28 mm)	0.438 in. (11 mm)	14 gauge	0.438 in. (11 mm)	6FT 3FT	3.94 1.97

***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]							
Group	Order Number	W1	W2	T	H	Length	Weight
0-7A	ST-RA1-99*-XXX	1.438 in. (36.5 mm)	0.625 in. (16 mm)	14 gauge	0.438 in. (11 mm)	6FT 3FT	4.65 2.33

***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 Order)

XXX Length: 6FT 72 in. (1829 mm) Length (Standard Length)
 3FT 36 in. (914 mm) Length (Special Length)
 -Custom sizes available on request-



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:** 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)



Strut Clip Nut [UCN]						
Group	Order Number	L	W	H1	H2	Thread
T1	ST-UCN-99*	1.660 in. (42 mm)	0.635 in. (16 mm)	0.525 in. (13 mm)	0.813 in. (20.5 mm)	1/4 - 20 UNC
T2-T3	TS-UCN-23-2	1.500 in. (38 mm)	2.090 in. (53 mm)	0.730 in. (18.5 mm)	1.080 in. (27.5 mm)	5/18 - 18 UNC
T4-T5	TS-UCN-46-2	1.500 in. (38 mm)	3.150 in. (80 mm)	0.730 in. (18.5 mm)	1.080 in. (27.5 mm)	5/18 - 18 UNC

***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 Order)

Twin Series Pipe Clamps

Complete Assembly Ordering Code

chart 1 chart 2 chart 3 chart 4 chart 5 chart 6
TW T 41050-PPSB - 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

Clamp Pair Design chart 5	
Omit	Ribbed Inside
SB	Smooth Bore Inside (groups H3-H6 only)

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.
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		13.7	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
T4		1	25.4	1.000	3100
		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

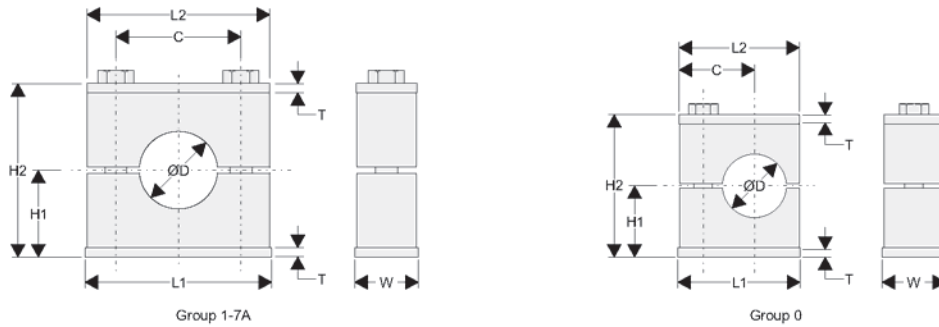
UT



Consists of:
1 HEX bolt
1 TCP Cover Plate
1 CLH Clamp Set (2 halves)
1 UCN Strut Clip Nut

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 Specification LP-390 Type III, Class H, Grade I
Special Notes				
Notes:	*1: Tensile and fatigue strength rise as temperature decreases. The tensile elongation decreases as the temperature decreases.			
<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>				

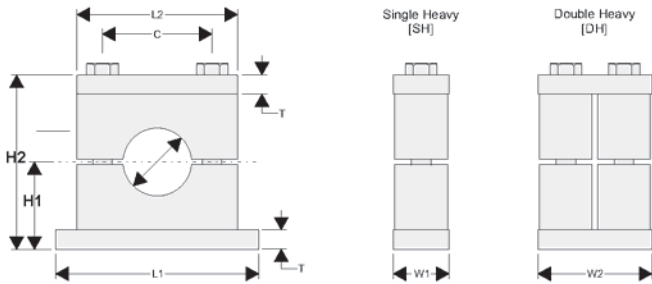
Standard Series Complete Assembly Dimensions



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

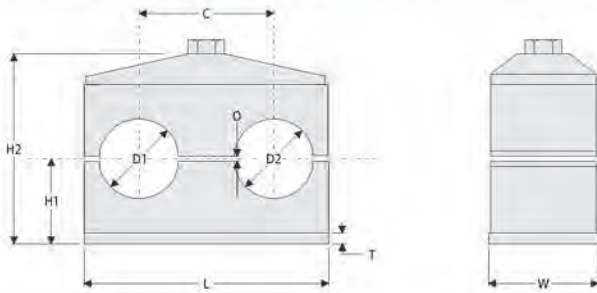
Heavy Series Complete Assembly Dimensions



Clamp Assembly Dimensions

Behringer Group	OD	L1	L2	C	H1	H2	T	W1	W2
H3	See ordering code on page 12 for available diameters.	2.875 (73)	2.250 in(57)	1.300 (33)	1.000 (25.4)	2.000 (50.8)	0.313 (8)	1.250 (32)	2.500 (63.5)
H4		3.375 (86)	2.750 (70)	1.770 (45)	1.250 (32)	2.500 (63.5)	0.313 (8)	1.250 (32)	2.500 (63.5)
H5		4.000 (102)	3.344 (85)	2.360 (60)	1.500 (38)	3.000 (76.2)	0.313 (8)	1.250 (32)	2.500 (63.5)
H6		5.875 (149)	4.500 (114)	3.530 (90)	2.125 (54)	4.250 (108)	0.375 (10)	1.750 (44.5)	3.500 (88.9)
H7		7.375 (187)	6.000 (152)	4.810 (122)	2.750 (70)	5.500 (140)	0.375 (10)	2.250 (57.2)	4.500 (114)
H8		10.000 (254)	8.063 (205)	6.620 (168)	3.813 (97)	7.625 (194)	0.500 (13)	3.000 (76.2)	7.000 (178)
H9		11.750 (298)	9.750 (248)	8.060 (205)	4.438 (113)	8.875 (225)	0.500 (13)	3.500 (88.9)	7.000 (178)
H10		14.500 (368)	12.500 (318)	10.430 (265)	6.063 (154)	12.125 (308)	0.750 (19)	4.500 (114)	9.375 (238)

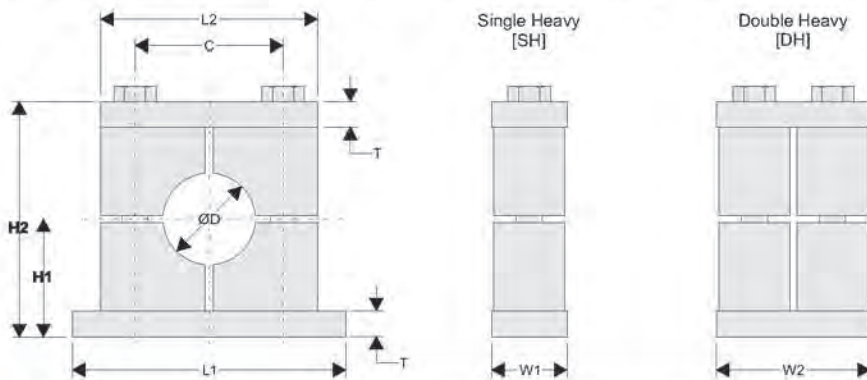
Twin Series Complete Assembly Dimensions



Clamp Assembly Dimensions

Behringer Group	D1/D2	L	C	H1	H2	T	W	O
T1	See Ordering code on page 18 for available dimensions	1.625 (41.3)	0.787 (20)	0.563 (14.3)	1.235 (31.4)	0.188 (5)	1.20 (30.5)	0.063 (1.6)
T2		2.188 (56)	1.142 (29)	0.688 (17.5)	1.454 (37)	0.188 (5)	1.20 (30.5)	0.063 (1.6)
T3		2.688 (68.3)	1.417 (36)	0.938 (23.8)	1.954 (49.6)	0.188 (5)	1.20 (30.5)	0.063 (1.6)
T4		3.445 (87.5)	1.772 (45)	1.063 (27)	2.204 (56)	0.188 (5)	1.20 (30.5)	0.063 (1.6)
T5		4.315 (110)	2.205 (56)	1.313 (33.3)	2.704 (68.7)	0.188 (5)	1.20 (30.5)	0.063 (1.6)

Heavy-4 Series Complete Assembly Dimensions

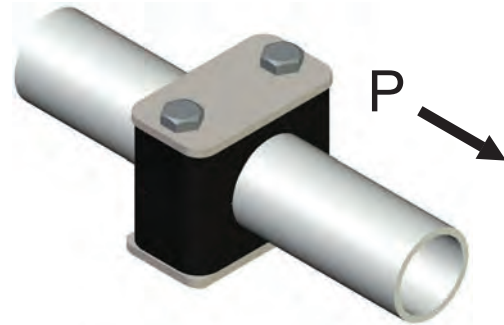


Clamp Assembly Dimensions

Behringer Group	OD	L1	L2	C	H1	H2	T	W1	W2
H11	See ordering code on page 25 for available diameters.	20.000 (508)	18.250 (464)	15.688 (398)	9.000 (229)	18.000 (457)	1.000 (25.4)	5.875 (149)	11.750 (298)
H12		25.000 (635)	23.500 (597)	20.875 (530)	11.000 (279)	22.000 (559)	1.000 (25.4)	5.875 (149)	11.750 (298)
H13		26.500 (673)	24.750 (629)	22.250 (565)	12.000 (305)	24.000 (610)	1.000 (25.4)	5.875 (149)	11.750 (298)
H14		30.000 (762)	28.750 (730)	26.250 (667)	12.000 (305)	24.000 (610)	1.000 (25.4)	5.875 (149)	11.750 (298)
H15		36.000 (914)	34.750 (883)	32.250 (819)	17.000 (432)	34.000 (864)	1.000 (25.4)	5.875 (149)	11.750 (298)

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.



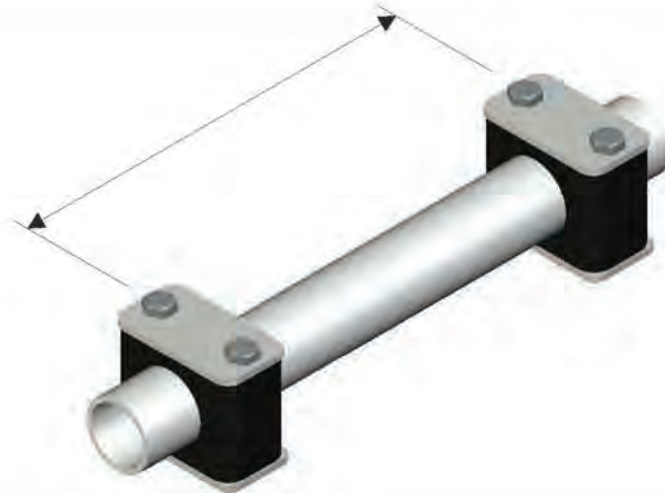
Standard Series							
Behringer Group	Hexagon Head Bolt	Polypropylene		Santoprene		Aluminum	
		Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)	Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (P)	Tightening Torque (Ft-lbs.)	Maximum load (lbs.) in pipe direction (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.

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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.



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