

Corporate Headquarters **SHEET METAL CONNECTORS, INC.**

5850 MAIN STREET N.E. • MINNEAPOLIS, MINNESOTA 55432 **Toll Free:** 800-328-1966 **Local:** 763-572-0000 **Fax:** 763-572-1100 www.smcduct.com

Manufacturing Facilities

5850 Main Street N.E. Minneapolis, MN 55432 LOCAL: 763-572-0000

TOLL FREE: 1-800-328-1966

FAX: 763-572-1100

5601 Sandy Hollow Road Rockford, IL 61109 LOCAL: 815-874-4600 TOLL FREE: 1-866-504-4600

FAX: 815-874-9979

Sheet Metal Connectors, Inc. is proud to be a member or affiliated with the following associations;



Sheet Metal Workers' International Association Washington, DC



Sheet Metal Air Conditioning Contractors' National Association Chantilly, VA



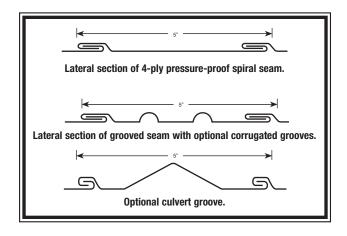
SPIDA Spiral Duct Manufacturers Association Irmo, SC



SMACNA Testing & Research Institute Chantilly, VA



Sheet Metal Connectors, Inc. E-Z Flange spiral pipe and fittings are one part of our complete line of HVAC products. The spiral pipe is formed from a coil of metal into a rigid tube with a 4-ply lockseam. It has a smooth interior low friction loss with the grooved seam entirely on the outside. This pipe has a resistance to crushing approximately 2 1/2 times that of longitudinal lockseam or welded pipe. Optional corrugations are available which increase the rigidity of the pipe by approximately 300%. Pipe sections are joined together by an E-Z Flange Jr. or an E-Z Flange with barrel clamp, which exceeds ASHRAE and SMACNA Class 3 Leakage Tests.



E-Z Flange Jr. with Barrel Clamp 6" - 24" Diameter

DIAMETER	MATERIAL	THICKNESS	ASTM	TYPE	LENGTH
6" - 24"	Galvanized	26 - 20 gauge	A-653	G60-G90	1' – 20'; 9' 11" Standard
6" - 24"	Paint Grip	24 - 20 gauge	A-653	A60	1' - 20'; 9' 11" Standard
6" - 24"	PVS	24 - 20 gauge	A-653	4 x 1, 4 x 4	1' - 20'; 9' 11" Standard
6" - 24"	Aluminum	.032048	B-316	3003 H-14	1' - 20'; 9' 11" Standard

E-Z Flange with Barrel Clamp 26" - 96" Diameter

DIAMETER	MATERIAL	THICKNESS	ASTM	TYPE	LENGTH
26" - 96"	Galvanized	26 - 14 gauge	A-653	G60-G90	1' – 20'; 10' Standard
26" - 96"	Paint Grip	24 - 18 gauge	A-653	A60	1' – 20'; 10' Standard
26" - 96"	PVS	24 - 16 gauge	A-653	4 x 1, 4 x 4	1' – 20'; 10' Standard
26" - 96"	Aluminum	.032063	B-316	3003 H-14	1' – 20'; 10' Standard

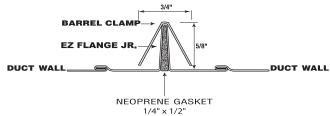


Note: SMACNA Testing and Research Institute verified that Sheet Metal Connectors, Inc. shop standards comply with the 2005-3rd edition of the SMACNA HVAC Duct Construction Standards.

The E-Z Flange Jr. Spiral Pipe System has a 5/8" flange roll formed directly on the ends of the spiral pipe and fittings. Since the flange is part of the pipe and fittings, it adds rigidity and there is no chance for leakage. With no protrusions in the air stream to disrupt the airflow, the E-Z Flange Jr. Spiral Pipe System is much more efficient than any other self sealing system.

The E-Z Flange Jr. Spiral Pipe System is assembled by applying a gasket to one flange, mating the two flanges together, and attaching the barrel clamp. The E-Z Flange Jr. Spiral Pipe System is sealed so tight that it out performs both ASHRAE and SMACNA Leakage Class 3 Testing. There is virtually no leakage at the transverse connections (test data available).

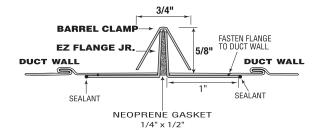




E-Z Flange Jr. with Barrel Clamp Field Cut Set

- Meets SMACNA Rigidity Class A per the SMACNA Testing and Research Institute.
- E-Z Flange Jr. sets are fabricated to fit inside the spiral pipe and fittings ranging from 6" to 24" diameter
- Manufactured from 22 gauge galvanized material meeting specifications ASTM A-653 (lock forming quality)
- Also available in PVS, aluminum, and paint grip materials upon request
- E-Z Flange Jr. can be installed on site
- · Ducts can be disassembled and reassembled
- E-Z Flange Jr. is assembled using a barrel clamp system that locks together with two 3/8" carriage bolts, no screws are required.
- E-Z Flange Jr. can be used on single wall, double wall.
- Virtually no leakage at traverse connection, test data available.
- Sold in sets only, a set consists of 2 flanges and 1 barrel clamp





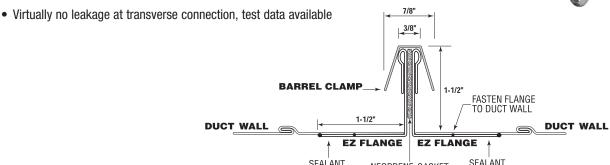
The E-Z Flange Spiral Pipe System has factory installed flanges on the ends of the spiral pipe and fittings which adds strength and rigidity to the system. The flanges are attached by either spotwelds or button lock, there are no screws protruding into the air stream. Factory installed E-Z Flanges are sealed internally making an airtight and better looking connection.

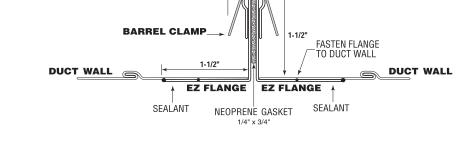
The E-Z Flange Spiral Pipe System is assembled by applying a gasket to one flange, mating the two flanges together, and attaching the barrel clamp. The E-Z Flange Spiral Pipe System is sealed so tight that it out performs both ASHRAE and SMACNA Leakage Class 3 Testing. There is virtually no leakage at the transverse connections (test data available).



E-Z Flange with Barrel Clamp Field Cut Set

- Meets SMACNA Rigidity Class C per the SMACNA Testing and Research Institute.
- E-Z Flanges are fabricated to fit inside spiral pipe and fittings ranging from 26" to 96" in diameter
- Manufactured from 16 gauge galvanized material meeting specifications ASTM A-653 (lock forming quality)
- Also available in PVS, aluminum, and paint grip materials upon request
- · E-Z Flanges can be installed on site or factory installed
- · Ducts can be disassembled and reassembled
- E-Z Flanges are assembled using a barrel clamp system that locks together with two 3/8" carriage bolts, no screws are needed.
- . E-Z Flange can be used on single wall, double wall and flat oval ductwork





Weight and Gauge Chart

Diam.	26 Gauge Ibs./ft.	24 Gauge Ibs./ft.	22 Gauge Ibs./ft.	20 Gauge Ibs./ft.	18 Gauge Ibs./ft.	16 Gauge Ibs./ft.
6"	1.6	2.0	2.5	3.0	155.711.	155.711.
7"	1.9	2.4	2.9	3.4		
8"	2.1	2.8	3.3	3.9		
9"	2.4	3.1	3.8	4.4		
10"	2.6	3.4	4.2	4.9		
11"	2.9	3.8	4.6	5.4		
12"	3.2	4.1	5.0	5.9		
13"	0.2	4.5	5.4	6.4		
14"		4.8	5.8	6.9		
15"		5.1	6.2	7.4		
16"		5.5	6.6	7.8		
17"		5.8	7.1	8.3		
18"		6.1	7.5	8.8		
20"		6.8	8.3	9.8		
22"		7.5	9.1	10.8		
24"		8.2	9.9	11.7		
26"			10.8	12.7	16.9	20.6
28"			11.6	13.7	18.2	22.2
30"			12.4	14.6	19.5	23.8
32"			13.3	15.6	20.8	25.4
34"			14.1	16.6	22.0	26.9
36"			14.9	17.6	23.3	28.5
38"				18.5	24.6	30.1
40"				19.5	25.9	31.7
42"				20.5	27.2	33.3
44"				21.5	28.5	34.9
46"				22.5	29.8	36.4
48"				23.4	31.1	38.0
50"				24.5	32.4	39.6
52"					33.7	41.3
54"					34.8	42.9
56"					36.3	44.5
58"					37.4	46.0
60"					38.9	47.3

Standard gauges in boxed area, weights may vary slightly.

E-Z Flange Jr. is manufactured up to 20 Ga. (shown in blue).

CLOSE CELL NEOPRENE GASKET

Neoprene	1/4" x 1/2"	(50' rolls - 1500' per box)	E-Z Flange Jr.
Neoprene	1/4" x 3/4"	(50' rolls - 1500' per box)	E-Z Flange & TDC

Positive Pressure

Bursting Pressure various gauges of spiral tubing

	26	24	22	20	18
Diam.	Gauge	Gauge	Gauge	Gauge	Gauge
6"	199	252	308	363	
7"	169	216	262	309	
8"	145	186	224	264	
9"	127	161	196	230	
10"	113	144	177	208	
12"	93	118	145	171	
14"	76	100	120	142	
16"	68	86	103	122	
18"		75	91	104	
20"		66	81	96	
22"		60	72	85	
24"			66	78	
26"			61	72	94
28"			55	65	85
30"			51	60	78
32"			47	56	73
34"				52	68
36"				48	65
38"				45	59
40"				42	55
42"				39	51
44"					47
46"	1 PSI	= 27.678	H_O		44
48"	1701		1120		41
50"					39

All tube diameters in inches. All pressure in PSI.

Internal Pressure

	26	24	22	20	18	16
Diam.	Gauge	Gauge	Gauge	Gauge	Gauge	Gauge
6"	220.4					
8"	69.2	121.2				
10"	34.6	110.6	691.7			
12"	22.0	55.1	249.2	1107.0		
14"	15.3	38.5	110.6	456.6		
16"	11.0	27.5	105.1	236.2		
18"	9.0	20.8	53.9	149.6		
20"	7.8	16.5	38.5	99.6		
22"	7.2	14.1	30.3	72.0		
24"	5.5	11.8	24.8	55.5		
26"	5.1	9.8	20.8	44.0	110.6	290.5
28"	4.7	8.6	18.1	35.8	88.5	243.7
30"	4.3	8.2	15.3	30.3	69.2	166.1
32"		6.6	13.7	26.3	58.2	128.7
34"				22.0	48.4	103.9
36"		5.5	11.0	20.4	42.9	85.8
38"				17.7	37.4	72.0
40"		4.3	9.8	16.5	33.0	62.2
42"			9.0	15.3	29.1	53.9
44"				13.7	26.3	47.2
46"				12.5	23.6	41.3
48"				11.8	22.0	37.4
50"	.036 P	SI = 1 ind	ch H ₂ O	11.0	19.2	34.6
60"	1000		20		14.9	24.8

Internal negative pressure in inches of water.

These tables are given only as a courtesy. Sheet Metal Connectors is not responsible for any results listed on these charts.

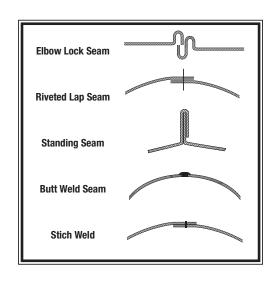


Fittings

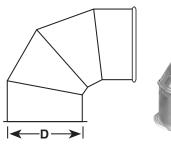
Sheet Metal Connectors, Inc. E-Z Flange Spiral Pipe System has a complete line of compatible fittings. E-Z Flange fittings are manufactured on our state of the art fabrication equipment. Many different materials, gauges, and configurations are available. E-Z Flange fittings can be fabricated with standing seam, elbow lock seam, or welded seam construction. Please consult our factory for more information.

All fittings are manufactured with:

- E-Z Flange Jr. with Barrel Clamp 6" to 24" Diameter
- E-Z Flange with Barrel Clamp 26" to 96" Diameter



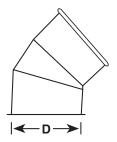
Adjustable Elbows & Angles





90° Throat and Gauge Chart

Diam.	26 Gauge	24 Gauge	22 Gauge	Diam.	26 Gauge	24 Gauge	22 Gauge
6"	3"	3"	3"	14"	N/A	4"	4"
7"	3"	3"	3"	15"	N/A	4"	4"
8"	3"	3"	3"	16"	N/A	4"	4"
9"	3"	3"	3"	18"	N/A	5"	5"
10"	3"	3"	3"	20"	N/A	6"	6"
11"	4"	4	4"	22"	N/A	N/A	6"
12"	4 1/2"	4 1/2"	4 1/2"	24"	N/A	N/A	6"
13"	5"	5"	5"				





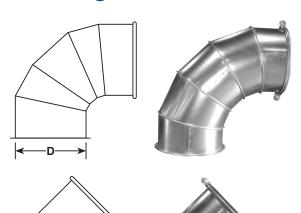
45° Throat and Gauge Chart

Diam.	26 Gauge	24 Gauge	22 Gauge	Diam.	26 Gauge	24 Gauge	22 Gauge
6"	5"	5"	5"	14"	N/A	6"	6"
7"	6"	6"	6"	15"	N/A	6"	6"
8"	6"	6"	6"	16"	N/A	6"	6"
9"	6"	6"	6"	18"	N/A	6"	6"
10"	6"	6"	6"	20"	N/A	8"	8"
11"	6"	6"	6"	22"	N/A	N/A	9"
12"	6"	6"	6"	24"	N/A	N/A	10"
13"	6"	6"	6"				

Adjustable elbows and angles are versatile and are most commonly used in a standard spiral duct system.

Full sweep elbows and angles are available up to 16" diameter

Standing Seam Elbows & Angles



Standing Seam Elbows and Angles

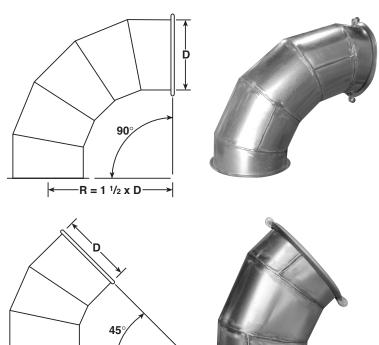
Standing Seam fittings work well for medium pressure applications plus offer an alternative to welded elbows and angles. Available in E-Z Flange Jr. 8" – 24" diameter and E-Z Flange 26" – 60" diameter.

Standard Throats				
8" thru 18"	8" Throat			
20" thru 40"	10" Throat			
42" thru 60"	20" Throat			

Full Sweep Standing Seam Elbows

8"-60" will be a 5 gore one piece standard throat construction. 52" and larger in diameter 90 degree full sweep elbows are fabricated using two 45 degree angles connected with an E-Z Flange and Barrel Clamp unless otherwise specified.

Welded Gored Elbows & Angles



Welded Gored Elbows & Angles

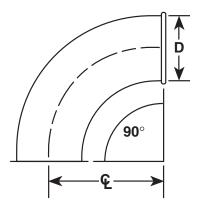
Welded Gored elbows and angles are used in high pressure and low leakage systems. Standard elbows and angles are fabricated from 20 gauge material. Available in E-Z Flange Jr. 6" – 24" diameter and E-Z Flange 26" – 60" diameter. 52" and larger in diameter 90 degree full sweep (1.5 x CL) elbows are fabricated using two 45 degree angles connected with an E-Z Flange and Barrel Clamp unless otherwise specified.



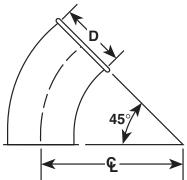
 $R = 1 \frac{1}{2} \times D$

All stamped fittings are manufactured from extra deep drawing steel (EDDS) in accordance with ASTM-A653. This type of steel is manufactured by domestic steel mills and has some unique qualities. Stamped fittings are precision drawn, tolerances must be within + or - .002 thickness to assure a quality product at all times. All pressed fittings are made of 24 Ga. or 22 Ga. Galvanized material with a G60 coating thickness and are chemically treated to retard white rust.

Two Piece Pressed Solid Welded Elbows





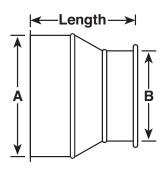




Centerline Throat Radius Chart

Diam.	90°	45°
6"	10 1/2"	10 1/2"
7"	12"	12"
8"	13 1/2"	13 1/2"
9"	15"	15"
10"	16 1/2"	16 1/2"
12"	19 1/2"	19 1/2"

Pressed Concentric Reducer





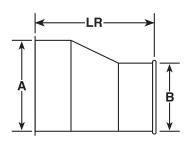
Pressed Reducers

Α	В	Overall Length
8"	6"	6 1/4"
10"	6"	8"
10"	8"	6 1/4"
12"	8"	8"
12"	10"	6 1/4"
14"	10"	8"
14"	12"	6 1/4"
16"	10"	10
16"	12"	8
16" 16"	14"	6 1/4"
18"	12"	10
18"	14"	8
18"	16"	6 1/4"

All sizes listed are in stock

Eccentric Reducer

Dimensions to be listed as follows: A, B $LR = 2 \frac{1}{2}$ " x Reduction + 6".



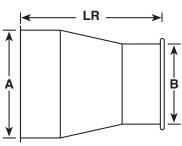


Size	
Reduction	LR
1" reduction	8 1/2"
2" reduction	11"
3" reduction	13 1/2"
4" reduction	16"
5" reduction	18 1/2"
6" reduction	21"
7" reduction	23 1/2"
8" reduction	26"
9" reduction	28 1/2"
10" reduction	31"
11" reduction	33 1/2"
12" reduction	36"
14" reduction	41"
16" reduction	46"
18" reduction	51"
20" reduction	56"

Concentric Reducer

Dimensions to be listed as follows: A, B

LR = (See chart below)





Standard Lengths for Concentric Reducers (LR)

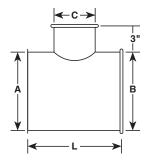
Galvanized pressed reducers (see bottom chart on page 7).

30	25	28	28 25	31 28 24	31 28 25	31 28 24	28 25 23	25 23 20	23 20 17	20 17 14	17 14 12	14 12 10	12 10	10
26			25	28	25								10	
24 22 2			25	_		24	23	20	17	14	12	10		
22				24	00				.,	17	12	10		
		24	-00		23	21	20	17	14	12	10			
	23		23	21	20	19	17	14	12	10				
20	23	21	20	19	17	16	14	13	10					
18 2	1 20	19	17	16	14	13	12	10						
16 20 1	9 17	16	14	13	12	10	10							
14 19 17 1	6 14	13	12	10	10	9								
13 20 19 17 16 1	1 13	12	10	10	9									
12 19 17 16 14 1	3 12	10	10	9										
11 17 16 14 13 1	2 10	10	9											
10 16 14 13 12 1	10	9												
9 14 13 12 10 1	9													
8 13 12 10 10 9														
7 13 10 10 9														
6														
5														
4														
3														
3 4 5 6 7	8	9	10	11	12	13	14	16	18	20	22	24	26	28



90° Tee

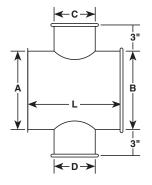
Dimensions to be listed as follows: A, B, C L = "C" + 2"





Cross

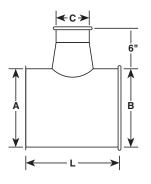
Dimensions to be listed as follows: A, B, C, D L = Largest of "C" or "D" + 2"





Conical Tee

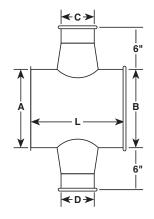
Dimensions to be listed as follows: A, B, C L = "C" + 7" C+1" = Cone Diameter





Conical Cross

Dimensions to be listed as follows: A, B, C, D L = Largest of "C" or "D" + 7" C+1" = Cone Diameter

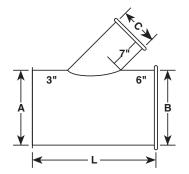






Lateral

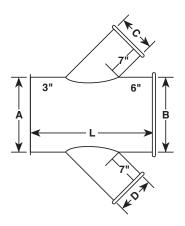
Dimensions to be listed as follows: A, B, C $L = (1.414 \times C) + 9$ "





Lateral Cross

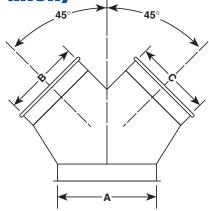
Dimensions to be listed as follows: A, B, C, D L = 1.414 x (Larger of "C" or "D") + 9"





Pair of Pants (Wye Branch)

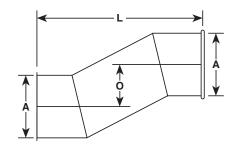
Dimensions to be listed as follows: A, B, C





Offset

Dimensions to be listed as follows: A, O, L





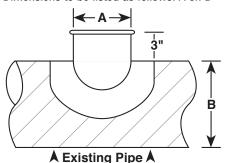


E-Z Flange Spiral Pipe SystemAll pressed fittings are made of 24 Ga. or 22 Ga. Galvanized material with a G60 coating

thickness and is chemically treated to retard white rust.

90° Pressed Saddles No Damper

Dimensions to be listed as follows: A on B

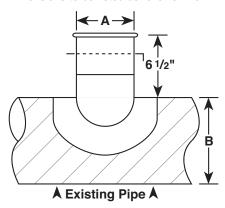




90° Pressed Saddles with Volume Damper

Dimensions to be listed as follows: A on B

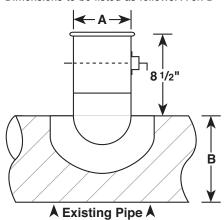
Also available with 2" Extension





90° Pressed Saddles with 2" Stand Off

Dimensions to be listed as follows: A on B





Pressed 90° Saddles

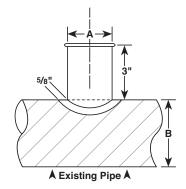
A on B
6" on 6"
6" on 8"
6" on 10"
6" on 12"
6" on 14"
8" on 8"
8" on 10"
8" on 12"
8" on 14"
8" on 16"
8" on 18"
10" on 10"
10" on 12"
10" on 14"
10" on 16"
10" on 18"
12" on 12"
12" on 14"
12" on 16"
12" on 18"
All sizes listed

All sizes listed are in stock. Other sizes are available.



90° Swedge Saddle

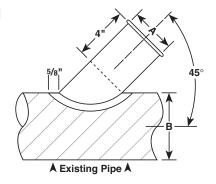
Dimensions to be listed as follows: A on B





45° Swedge Saddle

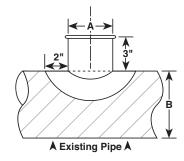
Dimensions to be listed as follows: A on B





90° Full Saddle

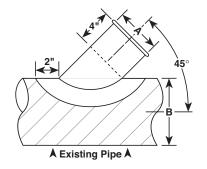
Dimensions to be listed as follows: A on B





45° Full Saddle

Dimensions to be listed as follows: A on B





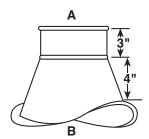


SHEET METAL CONNECTORS, INC.

FABRICATION THAT PERFORMS

90° Conical Swedge Saddle

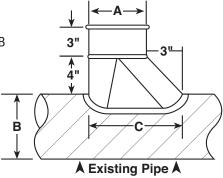
Dimensions to be listed as follows: A on B B = A + 1"





90° Shoe Tap

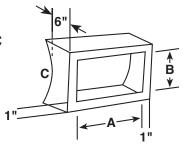
Dimensions to be listed as follows: A on B C = A + 3"





Register Takeoffs

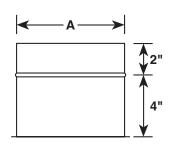
Dimensions to be listed as follows: A, B on C (Order Takeoffs by Register Size Only)





Flex Connector

Order as follows: A equals diameter





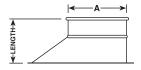


High Efficiency Die Stamped Takeoff (Super Heto)

Patent # US D571,908 S

Super Heto

Order as follows: A equals diameter

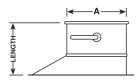




Α	Length
5"	10"
6"	5 3/4"
8"	6 1/4"
10"	6 1/4"
12"	6 1/4"

Super Heto w/ Damper

Order as follows: A equals diameter

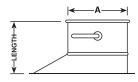




Α	Length
6"	5 3/4"
7"	10"
8"	6 1/4"
9"	10 3/4"
10"	6 1/4"
12"	6 1/4"

Super Heto w/2" Extension

Order as follows: A equals diameter

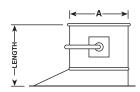




Α	Length
6"	5 3/4"
7"	10"
8"	6 1/4"
9"	10 3/4"
10"	6 1/4"
12"	6 1/4"

Super Heto w/2" Standoff

Order as follows: A equals diameter



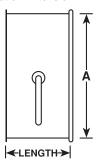


Α	Length
6"	8"
8"	8 1/2"
10"	8 1/2"
12"	8 1/2"



E-Z Tap Collars with Volume Damper

Order as follows: A equals diameter Also available with 2" Insulation Extension





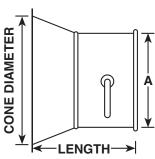
	Overall
Α	Length
6"	4 3/4"
7"	4 3/4"
8"	4 3/4"
9"	4 3/4"
10"	4 3/4"
12"	6 1/2"
14"	6 1/2"
16"	11 1/2"
18"	11 1/2"
20	11 1/2"

Conical E-Z Tap with Volume Damper

Order as follows: A equals diameter

A+2" = Cone Diameter

Also available with 2" Insulation Extension

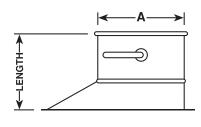




	Overall
Α	Length
6"	6"
7"	6"
8"	6"
9"	6"
10"	6"
12"	6"
14"	6 1/2"
16"	8 1/4"
18"	8 1/4"
20	8 1/4"

Hi-Efficiency with Volume Damper

Order as follows: A equals diameter
Also available with 2" Insulation Extension



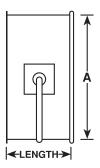


	Overall
Α	Length
14"	12"
16"	12 3/4"
18"	12 3/4"
20	12 3/4"



E-Z Tap Collars with 2" Standoff

Order as follows: A equals diameter

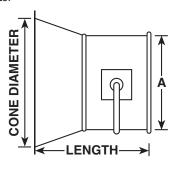




	Overall
Α	Length
6"	5"
7"	5"
8"	5"
9"	5"
10"	5"
12"	6 1/2"
14"	6 1/2"
16"	11 1/2"
18"	11 1/2"
20"	11 1/2"
22"	14 1/2"
24"	14 1/2"

Conical E-Z Tap with 2" Standoff

Order as follows: A equals diameter A+2" = Cone Diameter

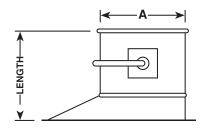




	Overall
Α	Length
6"	8 1/4"
7"	8 1/4"
8"	8 1/4"
9"	8 1/4"
10"	8 1/4"
12"	8 1/4"
14"	8 1/4"
16"	8 1/4"
18"	8 1/4"
20"	8 1/4"

Hi-Efficiency with 2" Standoff

Order as follows: A equals diameter



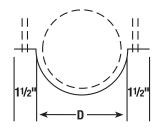


	Overall
Α	Length
14"	14 1/4"
16"	14 1/4"
18"	15"
20	15"



Double Rod Hanger

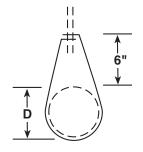
18" - 60" Diameters, fabricated from 2 $\frac{7}{8}$ " - 14 gauge galvanized $\frac{7}{16}$ " Standard Bolt Hole for $\frac{3}{8}$ " Rod $\frac{9}{16}$ " Bolt Hole available on request (Rod and hardware not included)





Single Rod Hangers

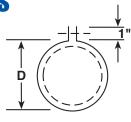
6" - 16" Diameters, fabricated from 2 $\frac{7}{8}$ " - 14 gauge galvanized $\frac{7}{16}$ " Standard Bolt Hole for $\frac{3}{8}$ " Rod $\frac{9}{16}$ " Bolt Hole available on request (Rod and hardware not included)





Light Gauge Round Pipe Hangers

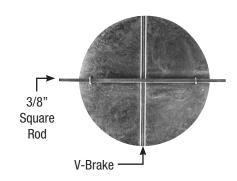
6" - 36" Diameters, fabricated from 1" - 16 gauge galvanized 5/16" Standard Bolt Hole for 1/4" Bolt (Bolt not included)





Heavy Volume Dampers

6" - 24" 22 gauge, 3/8" square rod and H.D, Quadrants with stiffener brake 26" - 30" 20 gauge, 3/8" square rod and H.D. Quadrants with stiffener brake Standoff Quadrants and End Bearings also available



Light Gauge Dampers

6" - 20" Diameters fabricated from 24 gauge galvanized material ¹/₄" Rapit Bearing provided with Stiffening beads on 10" diameters and larger



