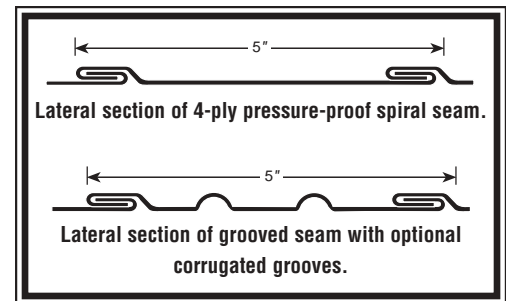


# Flat Oval Spiral Pipe & Fittings

## Sheet Metal Connectors, Inc. (SMC)

Sheet Metal Connectors, Inc. flat oval single wall duct and fittings are one part of our complete line of HVAC products. Flat oval duct has been designed for restricted space conditions that cannot accept round spiral duct. Flat Oval Spiral Pipe is fabricated in spiral lock seam or longitudinal welded construction. Applied end treatments can be E-Z flange with barrel clamp, standard slip connection, or angle iron rings. Refer to the chart below for specific materials, gauges, and lengths.



MATERIAL	THICKNESS	ASTM	TYPE	LENGTH
Galvanized	26 - 16 gauge	A-653	G60-G90	1' to 12' - 10' standard
Paint Grip	24 - 18 gauge	A-653	A60	1' to 12' - 10' standard
PVS	24 - 16 gauge	A-653	4 x 1, 4 x 4	1' to 12' - 10' standard
Aluminum	.032 - .073	B-316	3003 H-14	1' to 12' - 10' standard
Stainless Steel	24 - 20 gauge	A-240	304 or 316	1' to 12' - 10' standard

## Flat Oval Construction

Flat oval is for positive pressure applications only. See Sheet Metal Connectors, Inc. recommended size and gauge chart below.

MAJOR DIMENSION DUCT WIDTH	SPIRAL SEAM DUCT GAUGE	LONGITUDINAL SEAM DUCT GAUGE	GAUGES OF FITTINGS
To 24"	24	20	20
26" to 36"	22	20	20
38" to 48"	22	18	18
50" to 60"	20	18	18
62" to 70"	20	16	16
72" and up	18	16	16



Note: SMACNA Testing and Research Institute verified that Sheet Metal Connectors, Inc. shop standards comply with the 1995-2nd edition of the SMACNA HVAC Duct Construction Standards.

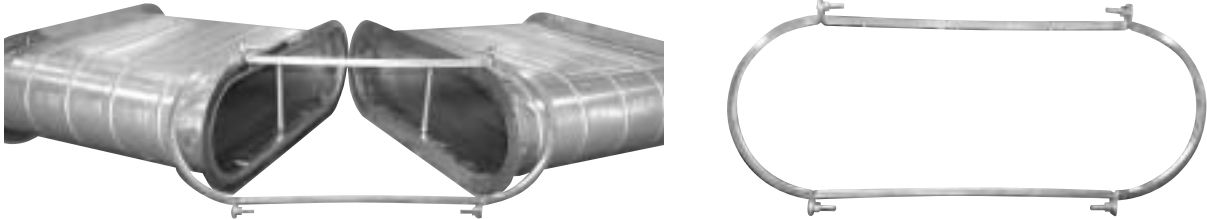


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## Flat Oval Connections

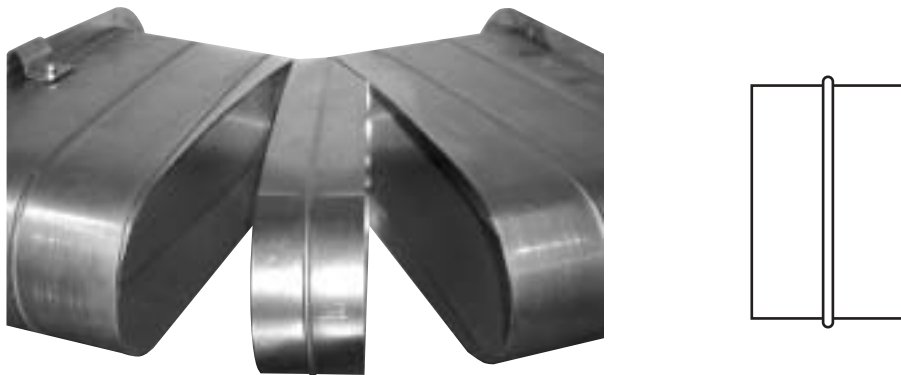
### E-Z Flange with Barrel Clamp

The E-Z flange with barrel clamp can be factory installed or shipped loose for field installation. A set consists of two E-Z flanges and one barrel clamp. For field installation the installer attaches the E-Z flange to the pipe and fittings. Next the installer applies the gasket to one flange, mates the two flanges together and attaches the barrel clamp. Sheet Metal Connectors, Inc. also installs E-Z flanges. Flanges are fastened and internally sealed on both ends of spiral pipe and fittings.



### Standard Spiral Pipe Connector

Pipe to Pipe connections are made by using a fitting size coupling that slips inside the mating pipe sections, as shown below. A stop bead runs around the middle of the coupling to center the coupling in the connection. Secure the connection by installing sheet metal screws through the outer shell of the duct, 1/2 inch from the stop bead.



# Flat Oval Spiral Pipe

Flat oval duct shall be manufactured from Sheet Metal Connectors spiral pipe with the following gauges, unless otherwise specified.

Nominal Duct Width	Equivalent Round*	Gauge	LBS/FT
6" x 22"	12"	24	5.51
25"	12 1/2"	22	7.54
28"	13"	22	8.38
31 1/2"	13 1/2"	22	9.21
34 1/2"	14 1/2"	22	10.05
37 1/2"	15"	22	10.89
41"	15 1/2"	22	11.73
44"	16"	22	12.56
8" x 21"	13 1/2"	24	5.51
24"	14 1/2"	24	7.54
27"	15"	22	8.38
30 1/2"	16"	22	9.21
33"	16 1/2"	22	10.05
36 1/2"	17 1/2"	22	10.89
39 1/2"	18"	22	11.73
43"	18 1/2"	22	12.56
46"	19"	22	13.40
50"	19 1/2"	20	15.57
52 1/2"	20"	20	17.75
10" x 23"	15 1/2"	24	7.54
26"	17"	22	8.38
29"	17 1/2"	22	9.21
32 1/2"	18 1/2"	22	10.05
35 1/2"	19 1/2"	22	10.89
38 1/2"	20"	22	11.73
42"	21"	22	12.56
45"	21 1/2"	22	13.40
48"	22"	22	15.57
51 1/2"	22 1/2"	20	17.75
54 1/2"	23"	20	18.75
57 1/2"	24"	20	19.75
61"	24 1/2"	20	20.75
64"	25"	20	21.75
67"	25 1/2"	20	22.72
70"	26"	20	23.70
74"	26 1/2"	18	28.90
76 1/2"	27"	18	34.10
12" x 25"	18"	22	8.38
28"	19"	22	9.21
31"	20"	22	10.05
34 1/2"	21"	22	10.89
37 1/2"	22"	22	11.73
40 1/2"	22 1/2"	22	12.56
44"	23 1/2"	22	13.40
47"	24"	22	15.57
50"	25"	20	17.75
53 1/2"	26"	20	18.75
56 1/2"	26 1/2"	20	19.75
59"	27"	20	20.75
63"	27 1/2"	20	21.75
66"	28"	20	22.72
69"	28 1/2"	20	23.70
72"	29"	18	28.90
75 1/2"	30"	18	34.10

\* For Equal Capacity and Friction Loss

Nominal Duct Width	Equivalent Round*	Gauge	LBS/FT
14" x 27"	20"	22	9.21
30"	21 1/2"	22	10.05
33"	22 1/2"	22	10.89
36 1/2"	23 1/2"	22	11.73
39 1/2"	24 1/2"	22	12.56
42 1/2"	25 1/2"	22	13.40
46"	26"	22	15.57
49"	27"	20	17.75
52"	28"	20	18.75
55 1/2"	28 1/2"	20	19.75
58 1/2"	29"	20	20.75
61 1/2"	30"	20	21.75
65"	30 1/2"	20	22.72
68"	31"	20	23.70
71"	32"	18	28.90
74 1/2"	32 1/2"	18	34.10
16" x 25 1/2"	21"	22	9.21
29"	22 1/2"	22	10.05
32"	23 1/2"	22	10.89
35"	24 1/2"	22	11.73
38 1/2"	26"	22	12.56
41 1/2"	27"	22	13.40
45"	28"	22	15.57
48"	28 1/2"	22	17.75
51"	29 1/2"	20	18.57
54"	30 1/2"	20	19.75
57"	31"	20	20.75
60 1/2"	32"	20	21.75
63"	33"	20	22.72
67"	33 1/2"	20	23.70
70"	34"	18	28.90
73"	34 1/2"	18	34.10
18" x 28"	23"	22	10.05
31"	24 1/2"	22	10.89
34"	26"	22	11.73
37"	27"	22	12.56
40 1/2"	28"	22	13.40
43"	29"	22	15.57
46 1/2"	30"	22	15.10
50"	31"	20	18.75
53"	32"	20	19.75
56"	34"	20	20.75
59 1/2"	33 1/2"	20	21.75
62 1/2"	34 1/2"	20	22.72
65 1/2"	35 1/2"	20	23.70
70"	36"	18	28.90
72"	36 1/2"	18	34.10
20" x 29 1/2"	25"	22	10.89
33"	26 1/2"	22	11.73
36"	28"	22	12.56
39 1/2"	29"	22	13.40
42 1/2"	30"	22	15.57
45 1/2"	31 1/2"	22	17.75
49"	32"	20	18.75
52"	33 1/2"	20	19.75
55"	34 1/2"	20	20.75
58"	35 1/2"	20	21.75
61"	36"	20	22.75
64 1/2"	37"	20	23.70
68"	38"	18	28.90
71"	37 1/2"	18	34.10

\* For Equal Capacity and Friction Loss

\*Equivalent round dimension is the diameter of the round duct which will have the same volume and friction loss.

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



**SHEET METAL CONNECTORS, INC.**

# Flat Oval Duct and Fittings

## Legend

FOD - Flat Oval Duct  
 FOSET - Offset  
 FOS - Coupling  
 FON - End Cap  
 FOTREC - Oval to Rectangular  
 FOR - Reducer

FOE - Elbow  
 FOT - Tee  
 FOL - Lateral  
 FOC - Cross  
 FOST - Saddle  
 FOY - WYE Fitting

H - Height  
 Z - Dimension of Offset  
 V - Body Length  
 L - Reducer Length  
 R - Radius  
 S - Slip (2")

## Dimension

- The "A" dimension is what you see in the plain view.
- The "B" or second dimension is the hidden dimension.

Example: A 24 x 12 FOE-90-5 is a "Hard Bend" or "Long Way" flat oval 90° elbow  
 A 12 x 24 FOE-90-5 is an "Easy Bend" or "Short Way" flat oval 90° elbow

When dimensions C x D, and/or E x F, and/or G x H are shown, the first dimension is the plan dimension. If a fitting end is round, use only one dimension.

Conical fittings taper only on plan side.

## Vane Chart

For mitered elbows and tees use the following chart if vanes are required.

"A" Dimension	Number of Vanes
3-9"	2
10-14"	3
15-19"	4
20-60"	5
Over 60"	12" spacing

## Ordering

Specify type of fitting and list the following dimensions:

Elbow - A x B

Laterals - (A x B) x (C x D) x (E x F) x (V)

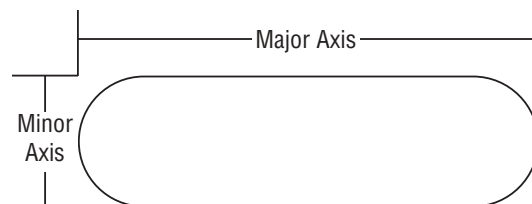
Reducers - (A x B) x (C x D) x (V) x (Z)

Tees - (A x B) x (C x D) x (E x F) x (V)

Crosses - (A x B) x (C x D) x (E x F) x (G x H) x (V)

Offsets - (A x B) x (C x D) x (V) x (Z)

The drawings shown on the following pages are illustrative of the types of fittings manufactured. SMC does not recommend deviation from these drawings.



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