



## Spiral Duct and Fittings Construction Standards

Air Distribution Corporation Spiral Duct and Fittings are manufactured in accordance with applicable SMACNA, ASHRAE and SPIDA standards.

### Galvanized or Stainless Steel Gauge Table for 2005 SMACNA Duct Standard up to 10" W.G. Static Pressure

Gauge Schedule	
Size Dia.	Spiral Pipe
3" - 16"	26
18" - 26"	24
28" - 40"	22
42" - 50"	20
52" - 84"	18

Gauge Schedule	
Size Dia.	Fittings
3" - 12"	26
14" - 24"	24
26" - 36"	22
38" - 48"	20
50" - 84"	18

Up to 2" W.G. Fittings conform to SMACNA seal Class "C" construction  
 Up to 10" W.G. Fittings conform to SMACNA seal Class "A" construction

### Aluminum Gauge Table for 2005 SMACNA Duct Standard up to + 2" W.G. & - 2" W.G. Static Pressure

Aluminum Thickness	
Size Dia.	Spiral Pipe
3" - 14"	.032
16" - 26"	.040
28" - 36"	.050
38" - 50"	.063
52" - 60"	NA

Aluminum Thickness	
Size Dia.	Fittings
3" - 14"	.040
16" - 26"	.050
28" - 36"	.063
38" - 50"	.071
52" - 60"	.090

Fittings conform to SMACNA seal Class "C" construction

### Thickness/Weight Relationships of Standard Materials

Gauge	Galvanized Steel		Stainless Steel (304 or 316)		Aluminum 3003-H14	
	Nominal Thickness (inches)	Nominal Weight (lb/sq ft)	Nominal Thickness (inches)	Nominal Weight (lb/sq ft)	Nominal Thickness (inches)	Nominal Weight (lb/sq ft)
26	0.0217	0.906	0.0188	0.788	0.025	0.356
24	0.0276	1.156	0.0250	1.050	0.032	0.456
22	0.0336	1.406	0.0313	1.313	0.040	0.570
20	0.0396	1.656	0.0375	1.575	0.050	0.713
18	0.0516	2.156	0.0500	2.100	0.063	0.898
16	0.0635	2.656	0.0625	2.625	0.080	1.140

### ASTM Material Specifications

Standard Material	ASTM Number
Galvanized Steel	A653, A924
Stainless Steel	A240
Aluminum	B209



Air Distribution Corporation

**DIMENSIONING CODE**

All dimensions are in inches, all angles are in degrees

**A** - Main barrel inlet diameter

**B** - Main barrel outlet diameter

**C or D** - Branch tap diameter (Note: On tee and lateral fittings with two taps, C is the branch closest to the inlet of the fitting. On cross fittings, C is the larger of the two taps.)

**R** - Center Line Radius

**V** - Body length of fitting

**H** - See Loloss Tee

**ORDERING**

Specify type of fittings and list the following dimensions:

**ELBOWS** - A, R

**TEES** - A, C, (B, D)

**LATERALS** - A, C, (B, D)

**CROSSES** - A, C, D, (B)

**ACCESSORIES** - As Noted

All fittings, unless noted, are sized as a male part on each end for a slip joint assembly with spiral pipe.

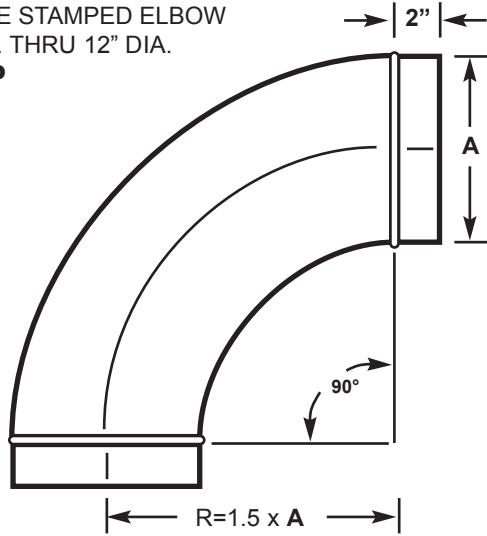
For flanged fittings see connectors detail for all dimensioning.



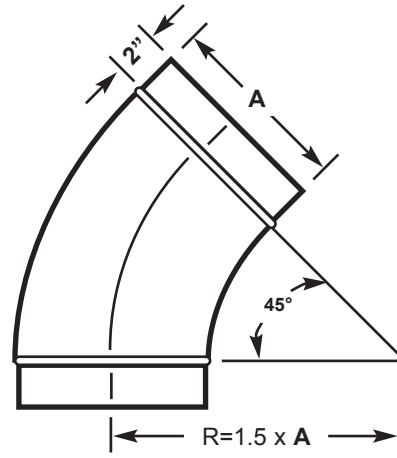
Air Distribution Corporation

# Single Wall Round ELBOWS

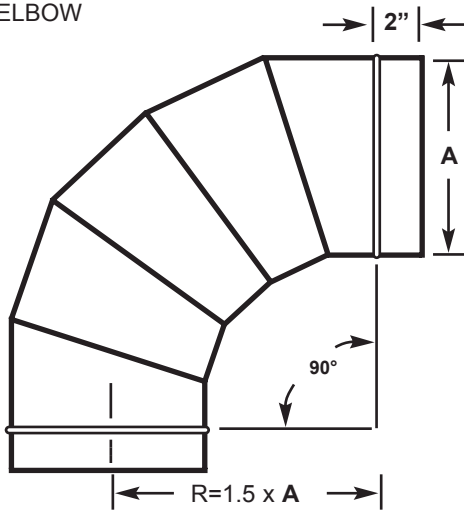
90° DIE STAMPED ELBOW  
3" DIA. THRU 12" DIA.  
**E90P**



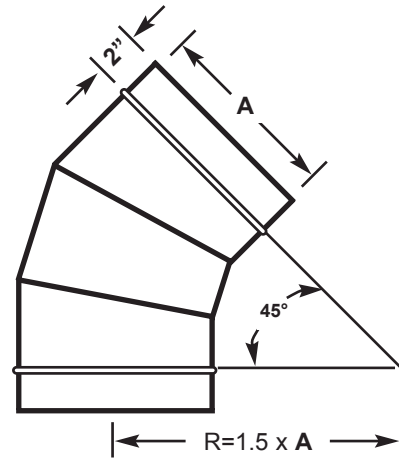
45° DIE STAMPED ELBOW  
3" DIA. THRU 12" DIA.  
**E45P**



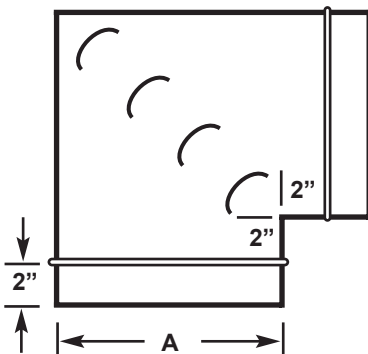
90° 5-PC ELBOW  
**E905**



45° 3-PC ELBOW  
**E453**

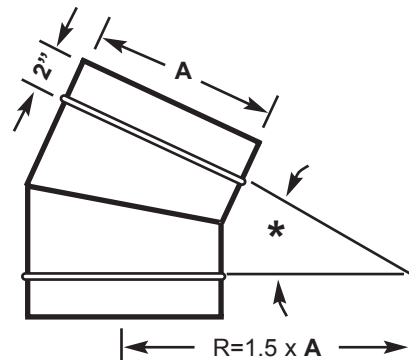


90° 2-PC MITRED ELBOW  
**EM90**



A	No. of vanes
3-9	2
10-14	3
15-19	4
20-60	5

CUSTOM ELBOW  
**XELB**



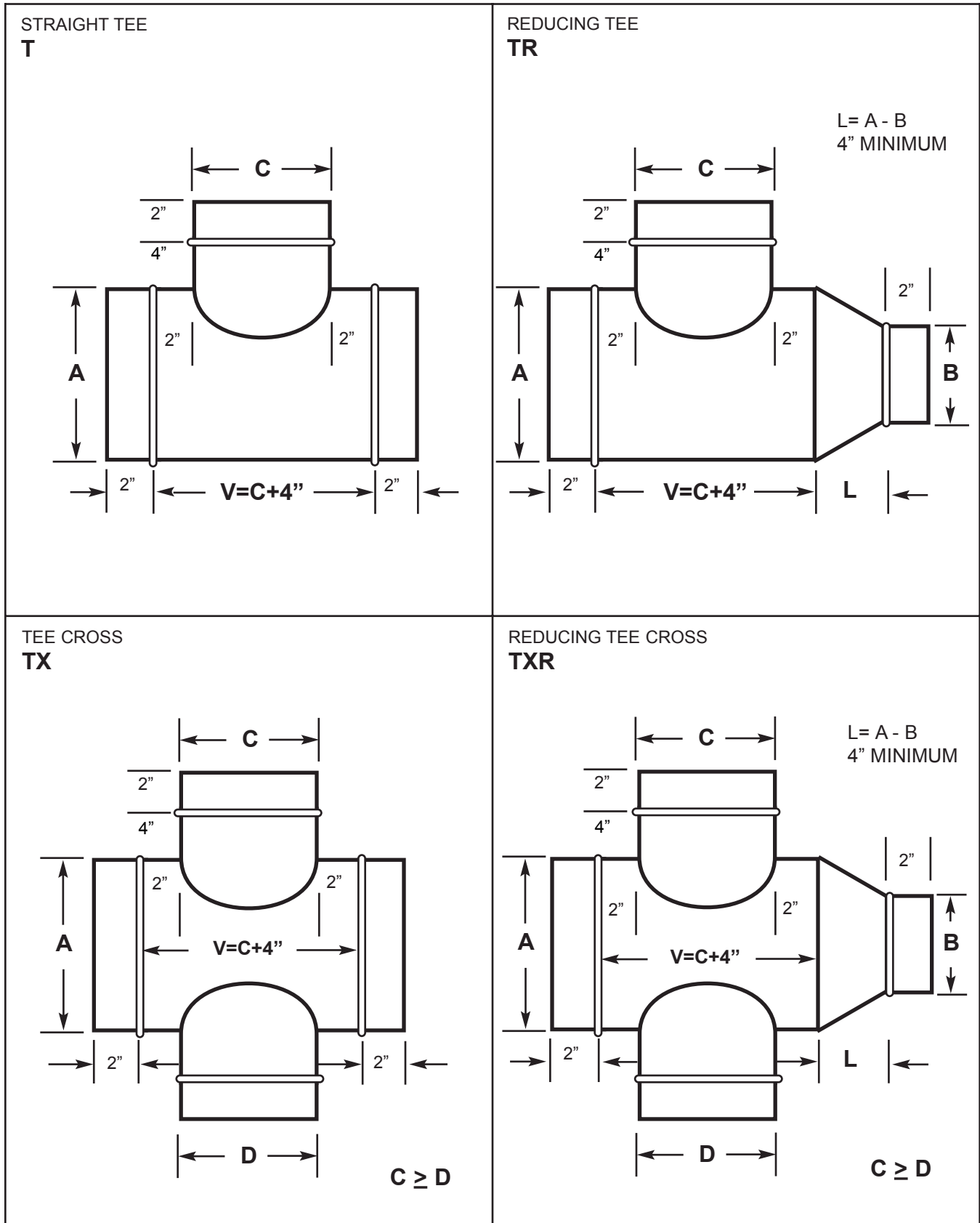
\*SPECIFY (Elbow Angle & Radius of Centerline)



Air Distribution Corporation

Single Wall Round

# STRAIGHT TEES

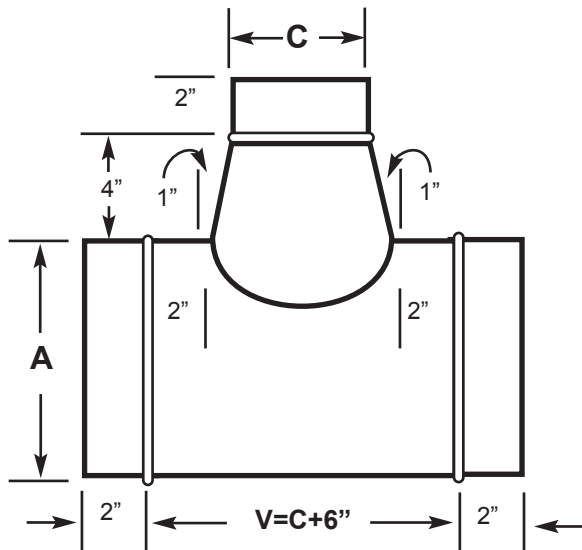




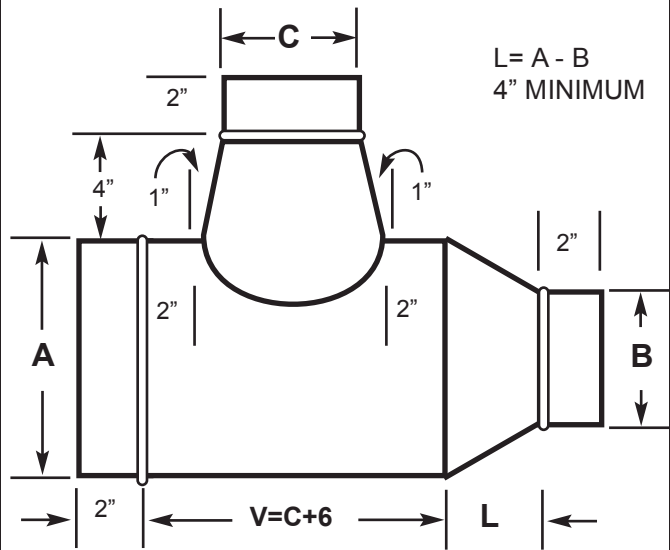
Air Distribution Corporation

# Single Wall Round CONICAL TEES

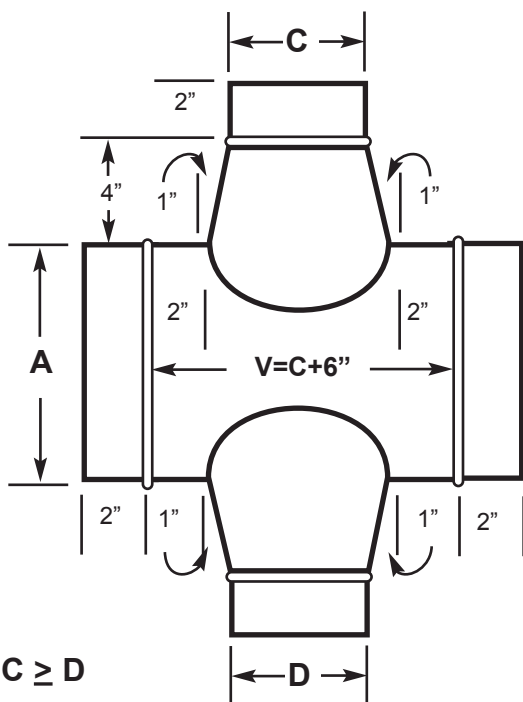
CONICAL TEE  
TC



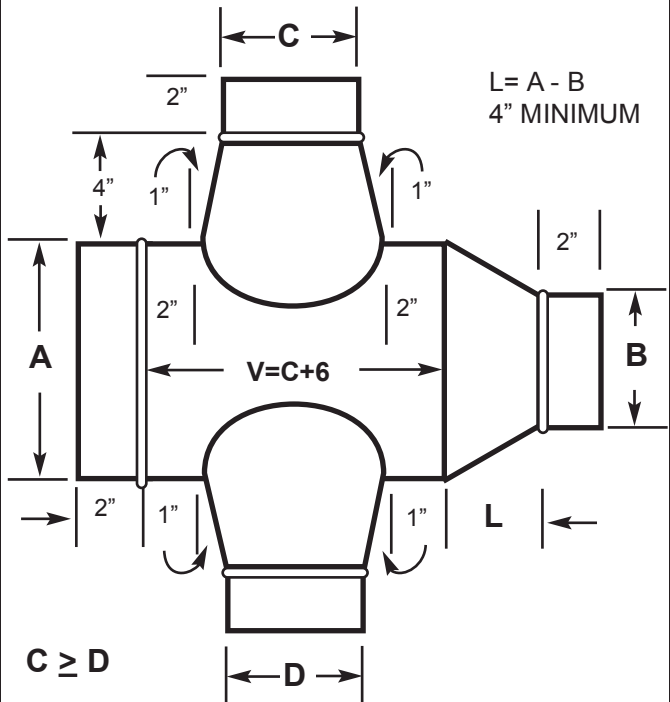
REDUCING CONICAL TEE  
TCR



CONICAL TEE CROSS  
TXC



REDUCING CONICAL TEE CROSS  
TXCR





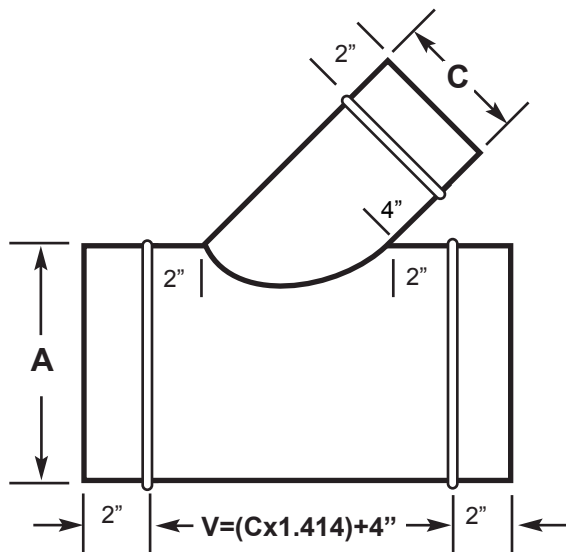
Air Distribution Corporation

Single Wall Round

# STRAIGHT LATERAL

45° LATERAL

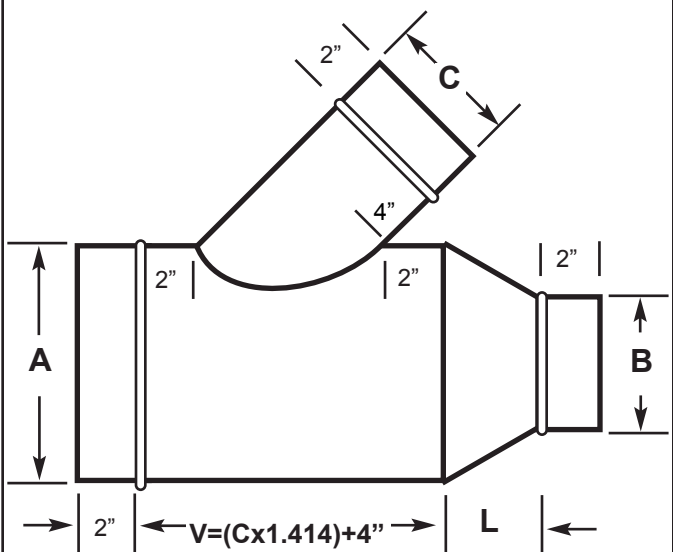
**L**



45° REDUCING LATERAL

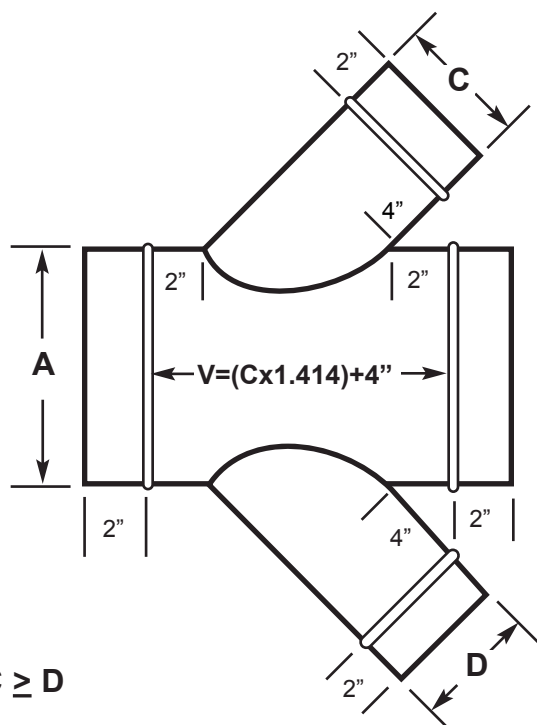
**LR**

$L = A - B$   
4" MINIMUM



45° LATERAL CROSS

**LX**

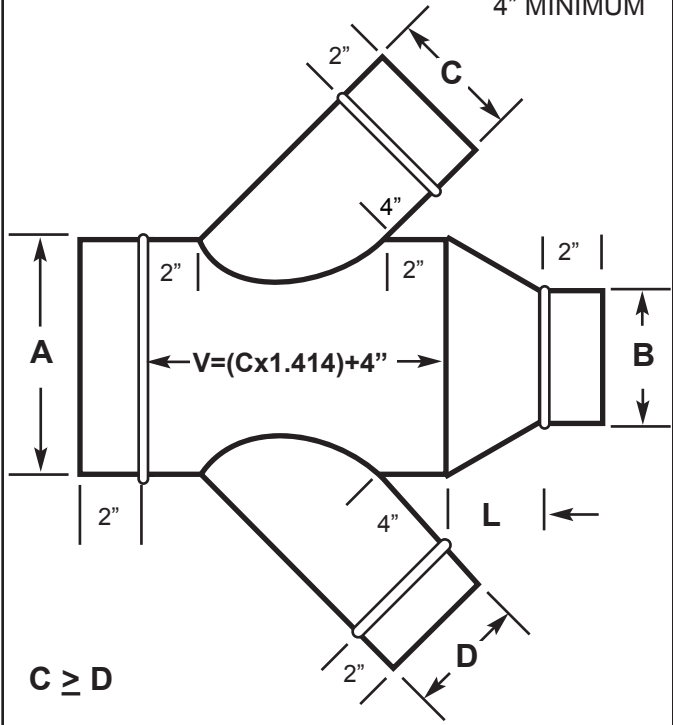


$C \geq D$

45° REDUCING LATERAL CROSS

**LXR**

$L = A - B$   
4" MINIMUM

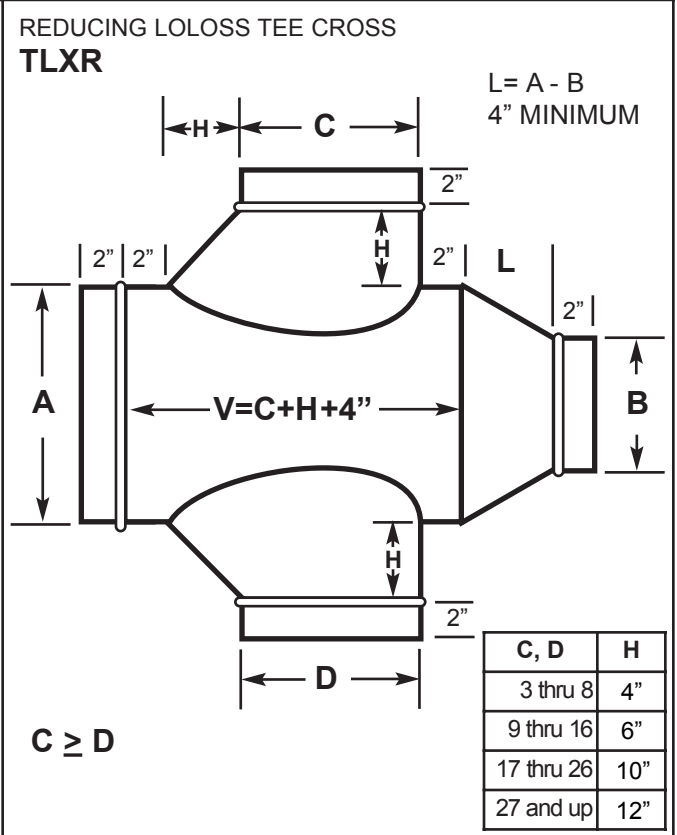
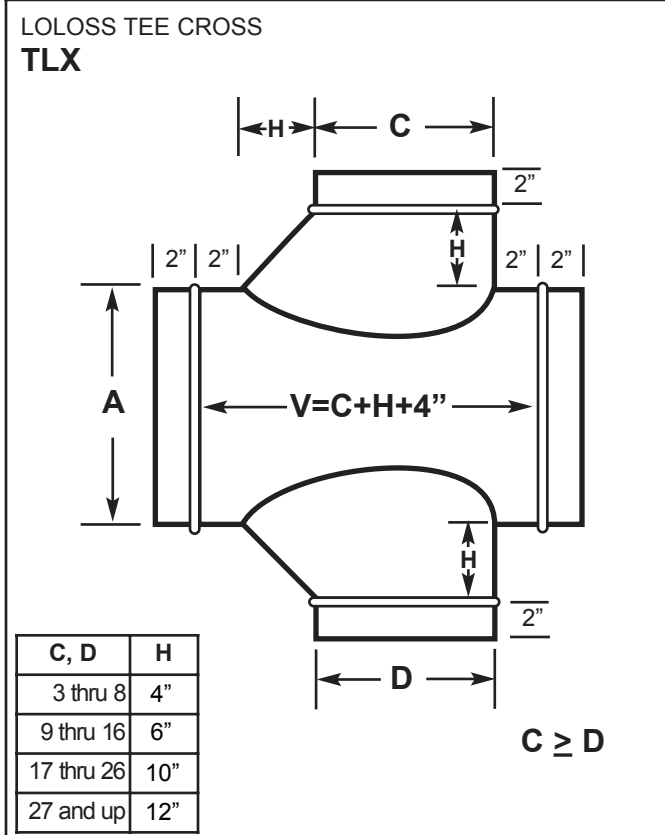
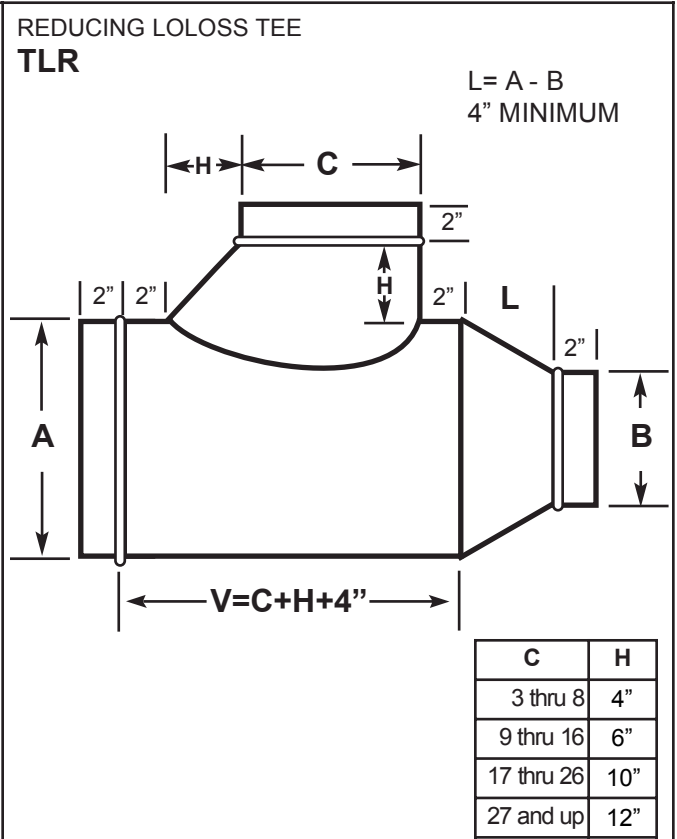
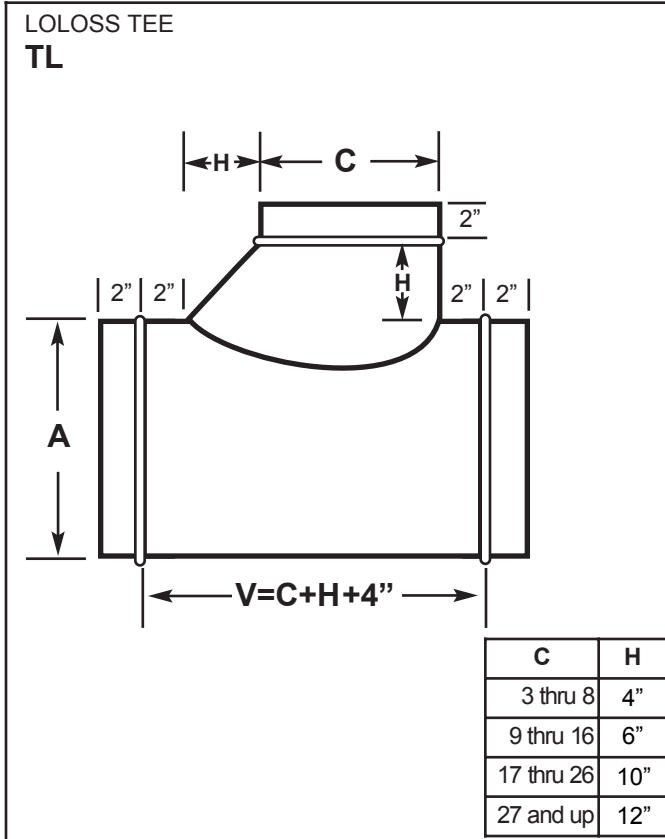


$C \geq D$



Air Distribution Corporation

# Single Wall Round LOLOSS TEES





Air Distribution Corporation

Single Wall Round

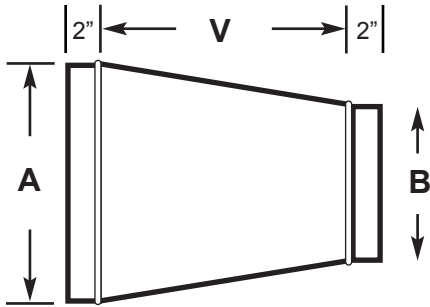
# MISCELLANEOUS

CONCENTRIC REDUCER

**RC**

$$V=A-B$$

4" MINIMUM

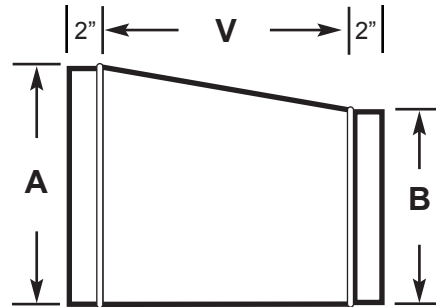


ECCENTRIC REDUCER

**RE**

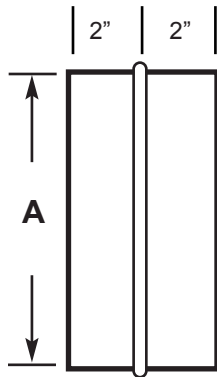
$$V=A-B$$

4" MINIMUM



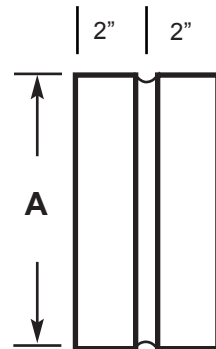
PIPE COUPLING MALE

**NP**



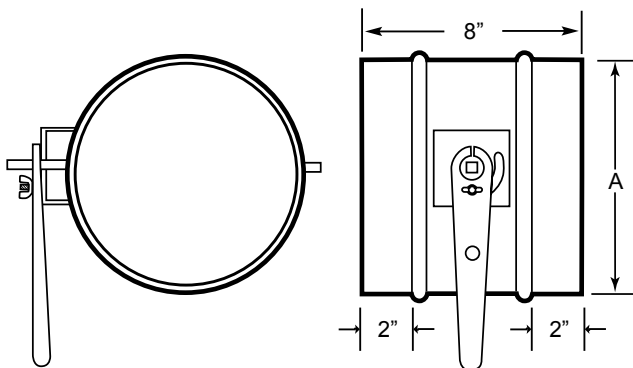
FITTING COUPLING

**FCL**



ROUND BALANCING DAMPER

**RBD**



END CAP

**ES**







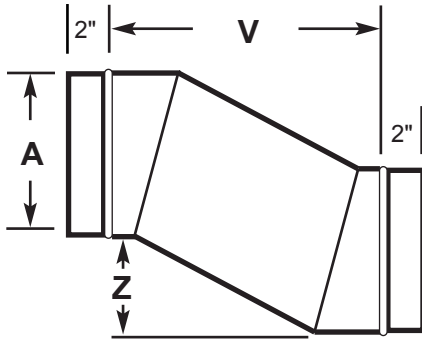
Air Distribution Corporation

Single Wall Round

# MISCELLANEOUS

OFFSET

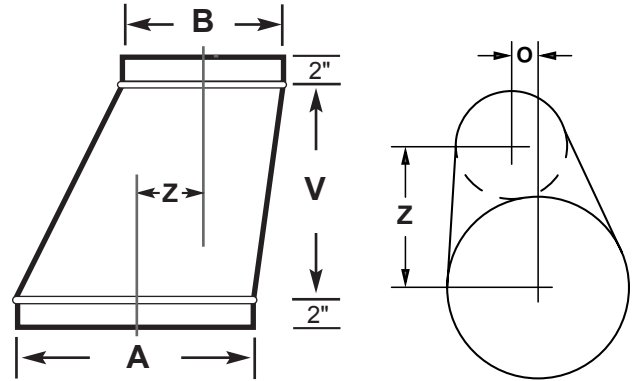
**Z**



V STANDARD = 2 x A

ROUND TO ROUND

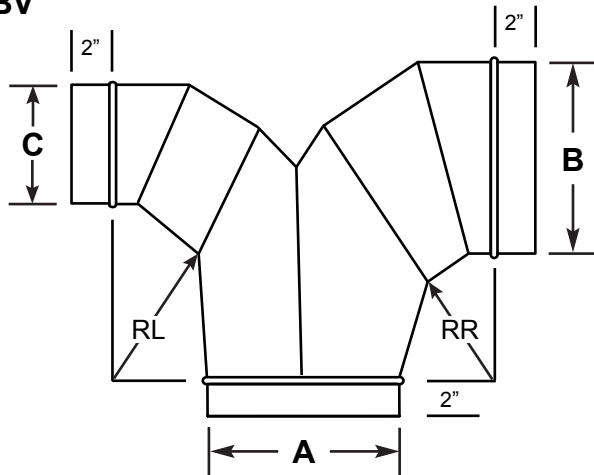
**ZR**



V STANDARD = 2 x A

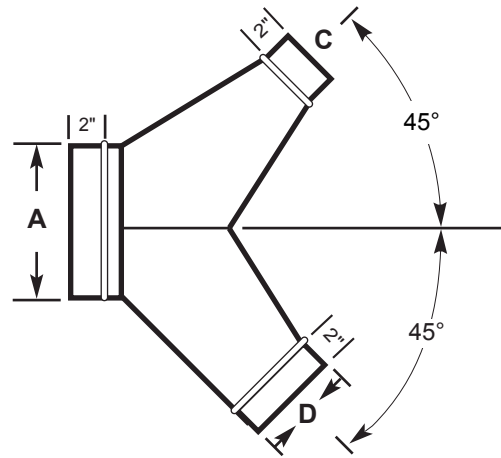
BULLHEAD VEE

**BV**



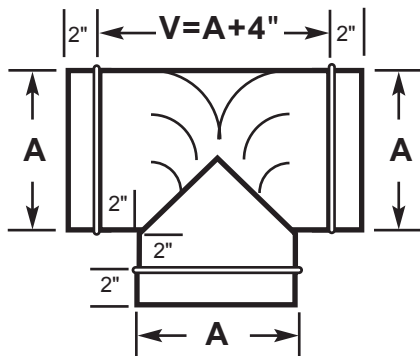
TAPERED Y BRANCH

**Y**



BULLHEAD TEE

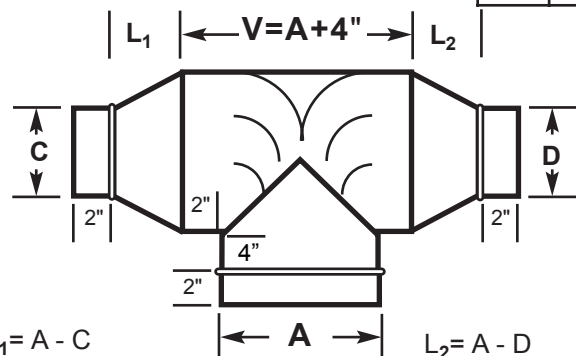
**BT**



A	No. of vanes
3-7	1
8-10	3
10-60	5

REDUCING BULLHEAD TEE

**TBVR**



A	No. of vanes
3-7	1
8-10	3
10-60	5

$L_1 = A - C$   
4" MINIMUM

$L_2 = A - D$   
4" MINIMUM

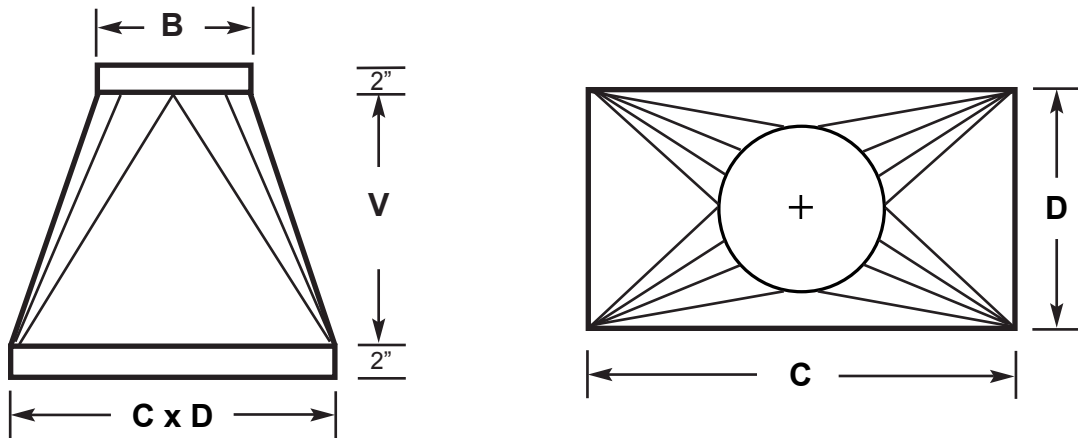


Air Distribution Corporation

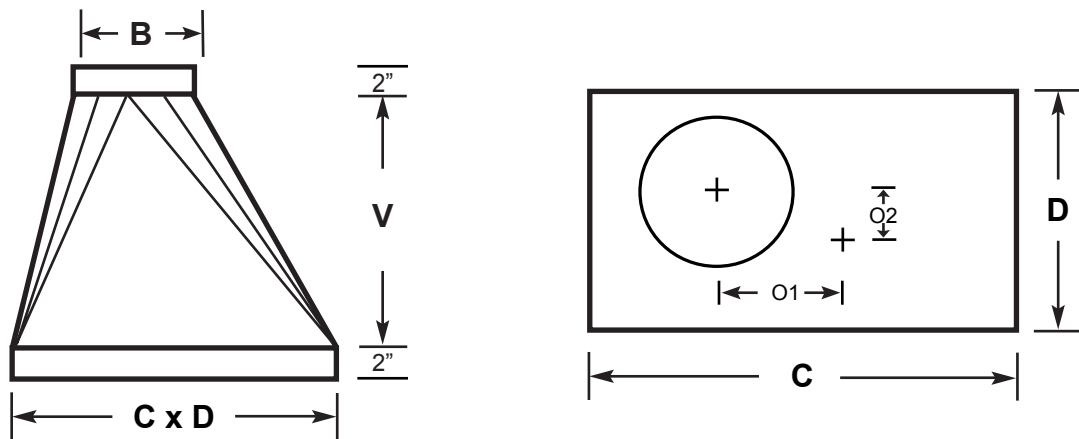
Single Wall Round

# TRANSITIONS

## CONCENTRIC RECTANGULAR TO ROUND RTR-C



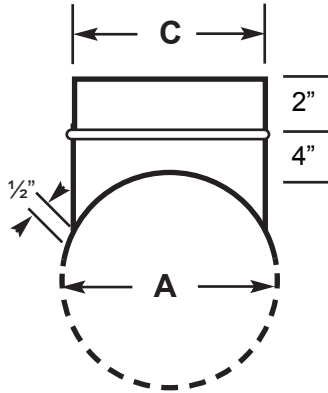
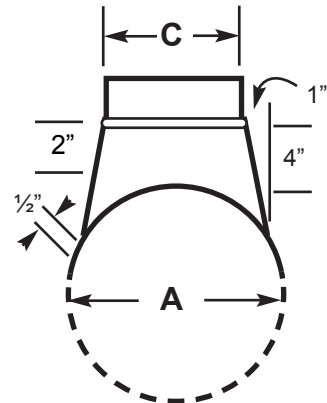
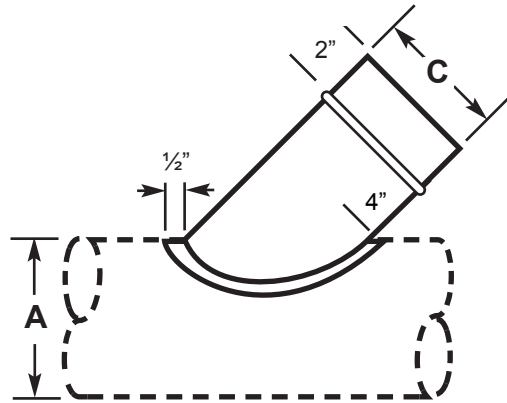
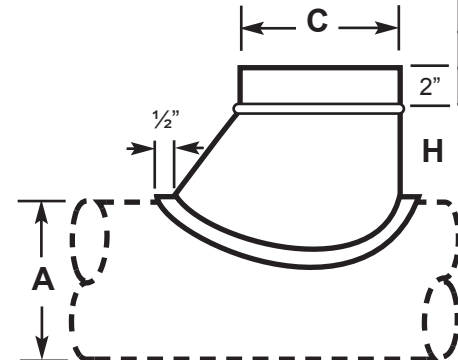
## NON-CENTRIC RECTANGULAR TO ROUND RTR-NC



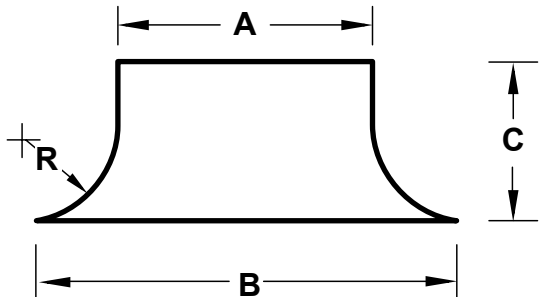
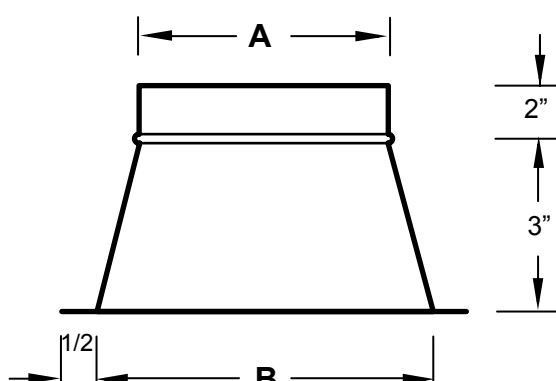


Air Distribution Corporation

# Single Wall Round ROUND TAPS

<p><b>STRAIGHT TAP DST</b></p>  <p>A = PIPE DIAMETER</p>	<p><b>CONICAL TAP CST</b></p>  <p>A = PIPE DIAMETER</p>										
<p><b>LATERAL TAP 45° LST</b></p>  <p>A = PIPE DIAMETER</p>	<p><b>LOLOSS TAP HEST</b></p>  <table border="1" data-bbox="1299 882 1461 1071"> <thead> <tr> <th>C</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>3 thru 8</td> <td>4"</td> </tr> <tr> <td>9 thru 16</td> <td>6"</td> </tr> <tr> <td>17 thru 26</td> <td>10"</td> </tr> <tr> <td>27 and up</td> <td>12"</td> </tr> </tbody> </table> <p>A = PIPE DIAMETER</p>	C	H	3 thru 8	4"	9 thru 16	6"	17 thru 26	10"	27 and up	12"
C	H										
3 thru 8	4"										
9 thru 16	6"										
17 thru 26	10"										
27 and up	12"										

# START TAPS

<p><b>BELLMOUTH START TAP BL</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>&lt; 18" Dia, C = 6" &gt; 18" Dia, C = 3"</p> </div>  <p>B = A + 4</p>	<p><b>CONICAL START TAP CT</b></p>  <p>B = A + 2</p>
---	--



Air Distribution Corporation

Single Wall Round

# RECTANGULAR TAPS

RST-R	RST-TI	RST-TO
A = Pipe Diameter	A = Pipe Diameter	A = Pipe Diameter B & C Are Inside Dimensions

45RST-R	45RST-TI	45RST-TO
A = Pipe Diameter Body Height = 6"	A = Pipe Diameter Body Height = 6"	A = Pipe Diameter B & C Are Inside Dimensions Body Height = 6"



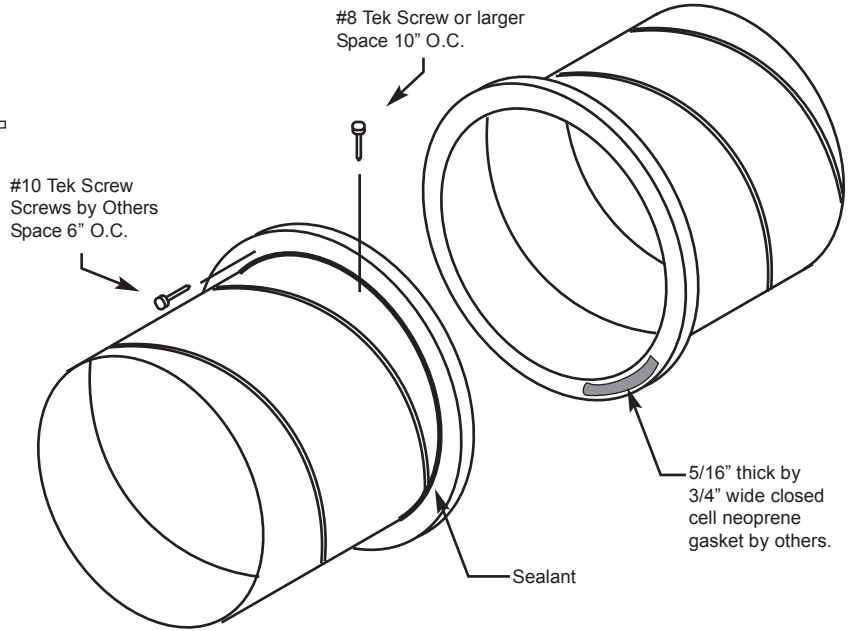
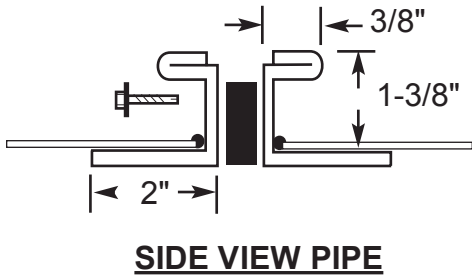
Air Distribution Corporation

# Single Wall Round CONNECTORS

## Slip Fit Connection



## Accuflange® Connection



**Spiral Pipe** - Customer specified duct length shall be flange face to flange face dimension.



Air Distribution Corporation

Single Wall Round

# Approximate Weight Spiral Duct

DIAMETER	WEIGHT PER FOOT					
	26 Gauge	24 Gauge	22 Gauge	20 Gauge	18 Gauge	16 Gauge
4	1.02	1.35	1.64	1.94		
5	1.28	1.69	2.06	2.42		
6	1.54	2.03	2.47	2.91	3.88	4.76
7	1.79	2.37	2.88	3.40	4.52	5.58
8	2.05	2.71	3.29	3.86	5.17	6.34
9	2.31	3.05	3.71	4.37	5.82	7.18
10	2.57	3.39	4.12	4.86	6.47	7.92
11	2.82	3.73	4.54	5.34	7.11	8.72
12	3.08	4.07	4.95	5.83	7.75	9.54
13	3.34	4.41	5.36	6.32	8.48	10.31
14	3.59	4.74	5.77	6.81	9.05	11.05
15	3.84	5.08	6.18	7.28	9.70	11.80
16	4.11	5.42	6.60	7.78	10.34	12.65
17	4.36	5.77	7.02	8.25	11.08	13.47
18	4.63	6.10	7.43	8.76	11.64	14.32
19	4.89	6.44	7.84	9.25	12.29	15.09
20	5.15	6.78	8.25	9.73	12.93	15.85
22	5.65	7.46	9.08	10.71	14.23	17.50
24	6.16	8.14	9.91	11.68	15.52	19.00
26	6.67	8.82	10.73	12.66	16.82	20.70
28	7.18	9.50	11.56	13.63	18.11	22.20
30	7.71	10.18	12.38	14.60	19.41	23.90
32	8.22	10.84	13.21	15.58	20.71	25.50
34	8.72	11.54	14.01	16.51	21.97	27.08
36	9.27	12.20	14.90	17.53	23.29	28.80
38	9.73	12.88	15.67	18.46	24.51	30.26
40	10.30	13.56	16.50	19.48	25.88	31.75
42	10.77	14.25	17.32	20.40	27.21	33.47
44	11.35	14.91	18.16	21.42	28.47	35.00
46	11.86	15.59	18.99	22.39	29.77	36.65
48	12.36	16.26	19.82	23.36	31.06	38.30
50	12.88	16.69	20.63	24.33	32.37	39.94
52	13.39	17.12	21.44	25.30	33.68	41.58
54	13.91	18.05	22.26	26.28	34.98	43.18
56	14.42	18.98	23.08	27.25	36.27	44.78
58	14.94	19.65	23.91	28.23	37.56	46.38
60	15.45	20.34	24.73	29.20	38.84	47.97

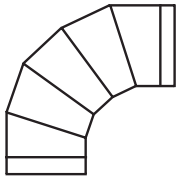
In pounds per linear foot - Based on galvanized steel



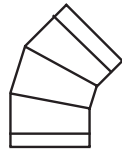
Air Distribution Corporation

Single Wall Round

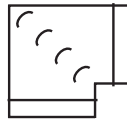
# ALL FITTINGS CHART



E90



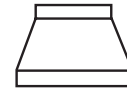
E45



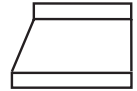
EM90



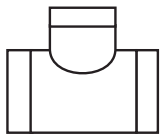
XELB



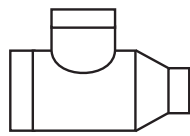
RC



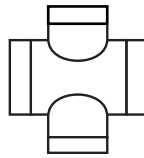
RE



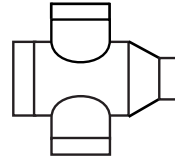
T



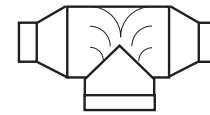
TR



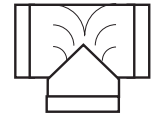
TX



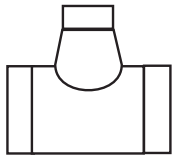
TXR



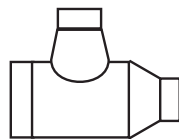
TBVR



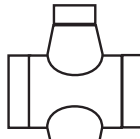
BT



TC



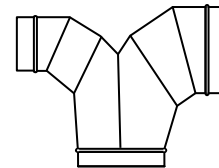
TCR



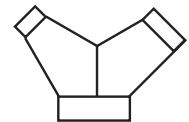
TXC



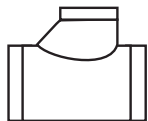
TXCR



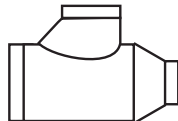
BV



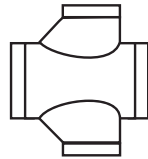
Y



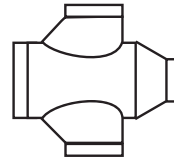
TL



TCR



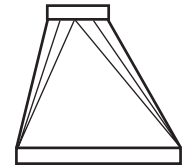
TLX



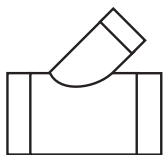
TLXR



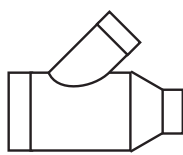
RTR-C



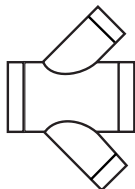
RTR-NC



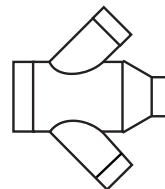
L



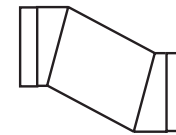
LR



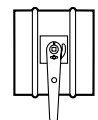
LX



LXR



Z



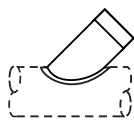
RBD



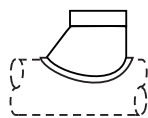
DST



CST



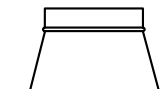
LST



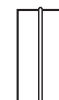
HEST



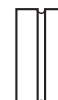
BL



CT



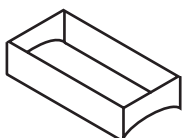
NP



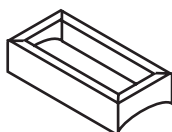
FCL



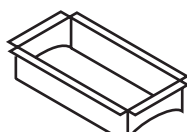
ES



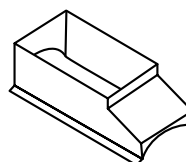
RST-R



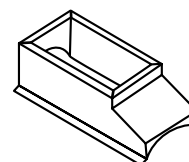
RTS-TI



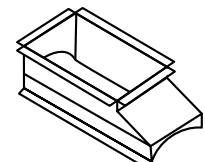
RST-TO



45RST-R



45RTS-TI



45RST-TO