

Standard Fitting Construction

Major Axis	2005 SMACNA POSITIVE PRESSURE		STANDARD INNER SHELL		SPIRORIB INNER SHELL
	Spiral Seam	Fittings	Spiral Seam	Fittings	Spiral Seam
10"-24"	24	20	26	22	26
25"-36"	22	20	22	22	26
37"-48"	22	18	22	22	26
49"-60"	20	18	22	22	26
61"-70"	20	16	22	22	26
71" & up	18	16	22	22	24

	Frequency, Hz						
	125	250	500	1000	2000	4000	NRC
Standard insulation is 1" thick, 1 pound per cubic foot density, with a thermal conductivity (ASTM C 518) @ 75° F mean temperature of 0.26 (BTU-in./hr.ft 2°F)	0.17	0.24	0.62	0.79	0.88	0.96	0.65

Initial Spiral Size	MINOR AXIS																	MAJOR AXIS
	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	
8	10																	
9	12	11																
10	13	12	11															
11	15	14	13															
12	17	15	14	13														
13	18	17	16	15	14													
14	20	19	17	16	15													
15	21	20	19	18	17	16												
16	23	22	21	19	18	17												
17	24	23	22	21	20	19	18											
18	26	25	24	23	21	20	19											
19	28	26	25	24	23	22	21											
20	29	28	27	26	25	23	22	21										
21	31	30	28	27	26	25	24	23										
22	32	31	30	29	28	27	26	25										
23		33	32	30	29	28	27	26	25									
24		34	33	32	31	30	29	27	26									
25		36	35	34	32	31	30	29	28									
26		37	36	35	34	33	32	31	29	28								
27		39	38	37	36	34	33	32	31	30								
28		41	39	38	37	36	35	34	33	31	30							
29		42	41	40	39	38	36	35	34	33	32							
30		44	42	41	40	39	38	37	36	35	33	32						
32		47	46	45	43	42	41	40	39	38	37	35	34					
34		50	49	48	47	45	44	43	42	41	40	39	37	36				
36		53	52	51	50	49	47	46	45	44	43	42	41	39	38			
38		56	55	54	53	52	51	49	48	47	46	45	44	43	41	40		
40		59	58	57	56	55	54	53	51	50	49	48	47	46	45	43	42	
42		63	61	60	59	58	57	56	55	53	52	51	50	49	48	47	45	
44		66	65	63	62	61	60	59	58	57	55	54	53	52	51	50	49	
46		69	68	67	65	64	63	62	61	60	59	57	56	55	54	53	52	
48		72	71	70	69	67	66	65	64	63	62	61	59	58	57	56	55	
50			74	73	72	71	69	68	67	66	65	64	63	61	60	59	58	
52					75	74	73	71	70	69	68	67	66	65	63	62	61	
54							76	75	73	72	71	70	69	68	67	65	64	
56							79	78	77	75	74	73	72	71	70	69	67	
58								81	80	79	77	76	75	74	73	72	71	
60										82	81	79	78	77	76	75	74	
62										85	84	83	81	80	79	78	77	
64												86	85	83	82	81	80	
66														87	85	84	83	
68															89	87	86	
70																91	89	
72																	93	

Actual Spiral Oval Pipe Sizes

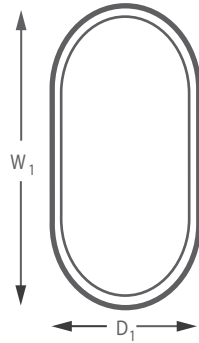
Initial Spiral Size	MINOR AXIS																	
	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	
8	10.28																	
9	11.85	10.71																
10	13.42	12.28	11.14															
11	15.00	13.85	12.71															
12	16.57	15.42	14.28	13.14														
13	18.14	17.00	15.85	14.71	13.57													
14	19.71	18.57	17.42	16.28	15.14													
15	21.28	20.14	19.00	17.85	16.71	15.57												
16	22.85	21.71	20.57	19.42	18.28	17.14												
17	24.42	23.28	22.14	21.00	19.85	18.71	17.57											
18	25.99	24.85	23.71	22.57	21.42	20.28	19.14											
19	27.56	26.42	25.28	24.14	23.00	21.85	20.71											
20	29.13	27.99	26.85	25.71	24.57	23.42	22.28	21.14										
21	30.70	29.56	28.42	27.28	26.14	25.00	23.85	22.71										
22	32.27	31.13	29.99	28.85	27.71	26.57	25.42	24.28										
23		32.70	31.56	30.42	29.28	28.14	27.00	25.85	24.71									
24		34.27	33.13	31.99	30.85	29.71	28.57	27.42	26.28									
25		35.85	34.70	33.56	32.42	31.28	30.14	29.00	27.85									
26		37.42	36.27	35.13	33.99	32.85	31.71	30.57	29.42	28.28								
27		38.99	37.85	36.70	35.56	34.42	33.28	32.14	31.00	29.85								
28		40.56	39.42	38.27	37.13	35.99	34.85	33.71	32.57	31.42	30.28							
29		42.13	40.99	39.85	38.70	37.56	36.42	35.28	34.14	33.00	31.85							
30		43.70	42.56	41.42	40.27	39.13	37.99	36.85	35.71	34.57	33.42	32.28						
32		46.84	45.70	44.56	43.42	42.27	41.13	39.99	38.85	37.71	36.57	35.42	34.28					
34		49.98	48.84	47.70	46.56	45.42	44.27	43.13	41.99	40.85	39.71	38.57	37.42	36.28				
36		53.12	51.98	50.84	49.70	48.56	47.42	46.27	45.13	43.99	42.85	41.71	40.57	39.42	38.28			
38		56.27	55.12	53.98	52.84	51.70	50.56	49.42	48.27	47.13	45.99	44.85	43.71	42.57	41.42	40.28		
40		59.41	58.27	57.12	55.98	54.84	53.70	52.56	51.42	50.27	49.13	47.99	46.85	45.71	44.57	43.42	42.28	
42		62.55	61.41	60.27	59.12	57.98	56.84	55.70	54.56	53.42	52.27	51.13	49.99	48.85	47.71	46.57	45.42	
44		65.69	64.55	63.41	62.27	61.12	59.98	58.84	57.70	56.56	55.42	54.27	53.13	51.99	50.85	49.71	48.57	
46		68.83	67.69	66.55	65.41	64.27	63.12	61.98	60.84	59.70	58.56	57.42	56.27	55.13	53.99	52.85	51.71	
48		71.87	70.83	69.69	68.55	67.41	66.27	65.12	63.98	62.84	61.70	60.56	59.42	58.27	57.13	55.99	54.85	
50			73.97	72.83	71.69	70.55	69.41	68.27	67.12	65.98	64.84	63.70	62.56	61.42	60.27	59.13	57.99	
52					74.83	73.69	72.55	71.41	70.27	69.12	67.98	66.84	65.70	64.56	63.42	62.27	61.13	
54							75.69	74.55	73.41	72.27	71.12	69.98	68.84	67.70	66.56	65.42	64.27	
56							78.83	77.69	76.55	75.41	74.27	73.12	71.98	70.84	69.70	68.56	67.42	
58								80.83	79.69	78.55	77.41	76.27	75.12	73.98	72.84	71.71	70.56	
60										81.69	80.55	79.41	78.27	77.12	75.98	74.84	73.70	
62										84.83	83.69	82.55	81.41	80.27	79.12	77.98	76.84	
64												85.69	84.55	83.41	82.27	81.12	79.98	
66														86.55	85.41	84.27	83.12	
68															88.55	87.41	86.27	
70																90.55	89.41	
72																	92.55	

MAJOR AXIS

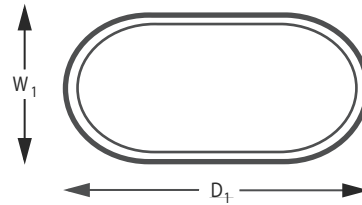
Example: To convert 18"x34" oval to a smaller size, first note the equivalent round size listed as 25.7". This means that 18"x34" oval spiral will have the same friction loss as 25.7" round spiral. Next, find 25.7" for an oval with a smaller minor axis. Two choices are 16"x38" with an equivalent round of 25.8", or 14"x45" with an equivalent round of 26.1". Either choice would be acceptable, but please note the initial spiral size increases as the minor axis decreases, thus adding to cost.

Initial Spiral Size	MINOR AXIS																	
	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	
8	6.7/10																	
9	7.2/12	8.4/11																
10	7.6/13	9.0/12	9.8/11															
11	8.0/15	9.5/14	10.5/13															
12	8.3/17	10.0/15	11.2/14	11.8/13														
13	8.7/18	10.5/17	11.8/16	12.6/15	13.0/14													
14	9.0/20	10.9/19	12.3/17	13.6/16	13.8/15													
15	9.3/21	11.4/20	12.9/19	14.0/18	14.6/17	15.0/16												
16	9.6/23	11.8/22	13.4/21	14.6/19	15.4/18	15.9/17												
17	9.8/24	12.1/23	13.9/22	15.2/21	16.2/20	16.7/19	17.0/18											
18	10.1/26	12.5/25	14.3/24	15.7/23	16.7/21	17.5/20	17.9/19											
19	10.3/28	12.8/26	14.7/25	16.2/24	17.4/23	18.2/22	18.7/21											
20	10.6/29	13.1/28	15.1/27	16.7/26	18.0/25	18.9/23	19.5/22	19.9/21										
21	10.8/31	13.5/30	15.5/28	17.2/27	18.5/26	19.5/25	20.3/24	20.8/23										
22	11.0/32	13.8/31	15.9/30	17.7/29	19.1/28	20.2/27	21.0/25	21.6/24										
23		14.0/33	16.3/32	18.1/30	19.6/29	20.8/28	21.7/27	22.3/26	22.8/25									
24		14.3/34	16.6/33	18.5/32	20.1/31	21.3/30	22.3/29	23.1/27	23.6/26									
25		14.6/36	17.0/35	18.9/34	20.6/32	21.9/31	22.9/30	23.8/29	24.4/28									
26		14.9/37	17.3/36	19.3/35	21.0/34	22.4/33	23.6/32	24.5/31	25.2/29	25.6/28								
27		15.1/39	17.6/38	19.7/37	21.5/36	22.9/34	24.1/33	25.1/32	25.9/31	26.4/30								
28		15.2/41	17.9/39	20.1/38	21.9/37	23.4/36	24.7/35	25.7/34	26.6/33	27.2/31	27.7/30							
29		15.6/42	18.2/41	20.4/40	22.3/39	23.9/38	25.2/36	26.3/35	27.3/34	28.0/33	28.5/32							
30		15.9/44	18.5/42	20.8/41	22.7/40	24.4/39	25.8/38	26.9/37	27.9/36	28.7/35	29.3/33	29.7/32						
32		16.3/47	19.1/46	21.5/45	23.5/43	25.3/42	26.8/41	28.1/40	29.1/39	30.0/38	30.8/37	31.3/35	31.7/34					
34		16.8/50	19.7/49	22.1/48	24.2/47	26.1/45	27.7/44	29.1/43	30.3/42	31.3/41	32.2/40	32.8/39	33.4/37	33.7/36				
36		17.2/53	20.2/52	22.7/51	25.0/50	26.9/49	28.6/47	30.1/46	31.4/45	32.5/44	33.5/43	34.3/42	34.9/41	35.4/39	35.8/38			
38		17.6/56	20.7/55	23.3/54	25.6/53	27.7/52	29.5/51	31.1/49	32.5/48	33.7/47	34.7/46	35.6/45	36.4/44	37.0/43	37.4/41	37.8/40		
40		18.0/59	21.1/58	23.9/57	26.3/56	28.4/55	30.3/54	32.0/53	33.5/51	34.8/50	35.9/49	36.9/48	37.8/47	38.5/46	39.0/45	39.5/43	39.8/42	
42		18.3/63	21.6/61	24.4/60	26.9/59	29.1/58	31.1/57	32.8/56	34.4/55	35.8/53	37.0/52	38.1/51	39.1/50	39.9/49	40.5/48	41.1/47	41.5/45	
44		18.7/66	22.1/65	25.0/63	27.5/62	29.8/61	31.8/60	33.7/59	35.3/58	36.8/57	38.1/55	39.3/54	40.3/53	41.2/52	42.0/51	42.6/50	43.1/49	
46		19.1/69	22.5/68	25.5/67	28.1/65	30.5/64	32.6/63	34.5/62	36.2/61	37.8/60	39.2/59	40.4/57	41.5/56	42.5/55	43.3/54	44.1/53	44.7/52	
48		19.4/72	22.9/71	26.0/70	28.7/69	31.1/67	33.3/66	35.3/65	37.1/64	38.7/63	49.1/62	41.5/61	42.7/59	43.7/58	44.6/57	45.5/56	46.2/55	
50			23.3/74	26.4/73	29.2/72	31.7/71	34.0/69	36.0/68	37.9/67	39.6/66	41.1/65	42.5/64	43.8/63	44.9/61	45.9/60	46.8/59	47.6/58	
52					29.7/75	32.3/74	34.6/73	36.7/71	38.7/70	40.4/69	42.0/68	43.5/67	44.8/66	46.0/65	47.1/63	48.1/62	48.9/61	
54							35.3/76	37.4/75	39.4/73	43.1/72	42.9/71	44.4/70	45.8/69	47.1/68	48.3/67	49.3/65	50.2/64	
56							35.9/79	38.1/78	40.2/77	42.1/75	43.8/74	45.4/73	46.8/72	48.2/71	49.4/70	50.5/69	51.5/67	
58								38.8/81	40.9/80	42.8/79	44.6/77	46.3/76	47.8/75	49.2/74	50.5/73	55.6/72	52.7/71	
60										43.6/82	45.4/81	47.2/79	48.7/78	50.2/77	51.5/76	52.7/75	53.9/74	
62										44.3/85	46.2/84	48.0/83	49.6/81	51.1/80	52.5/79	53.8/78	55.0/77	
64												48.8/86	50.5/85	52.1/83	53.5/82	54.9/81	56.1/80	
66														53.0/87	54.5/85	55.9/84	57.2/83	
68															55.4/89	56.9/87	58.2/86	
70																57.8/91	59.2/89	
72																	60.2/93	

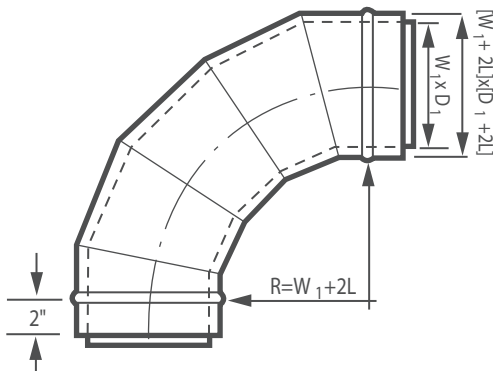
Hard Bend



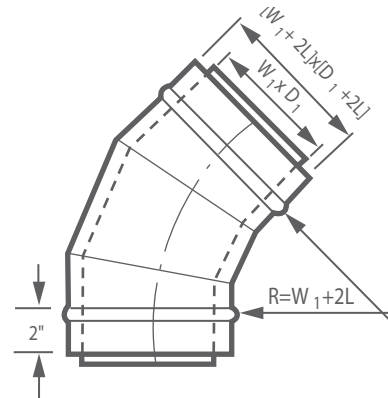
Easy Bend



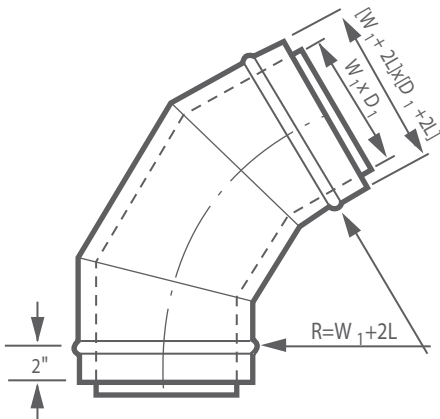
90° 5-Piece Elbow



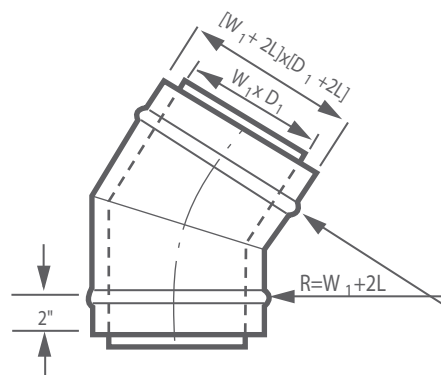
45° 3-Piece Elbow



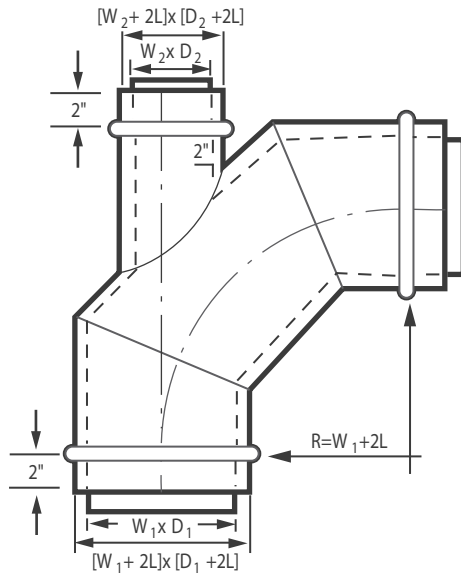
60° 3-Piece Elbow



22½° and 30° 2-Piece Elbow

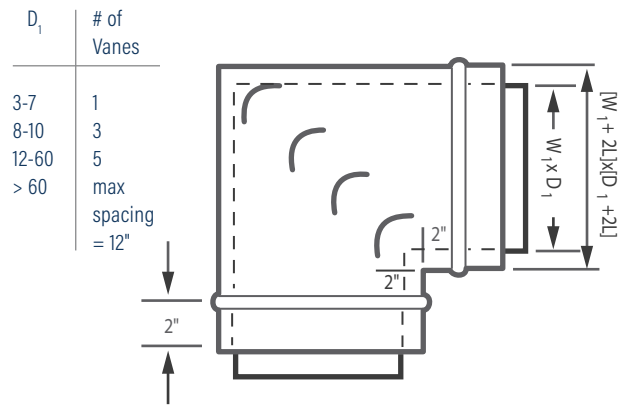


90° 3-Piece Elbow with Heel Tap

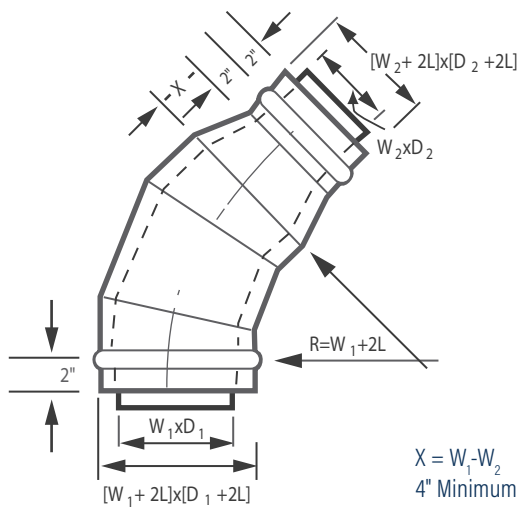


90° 2-Piece Mitered Elbow

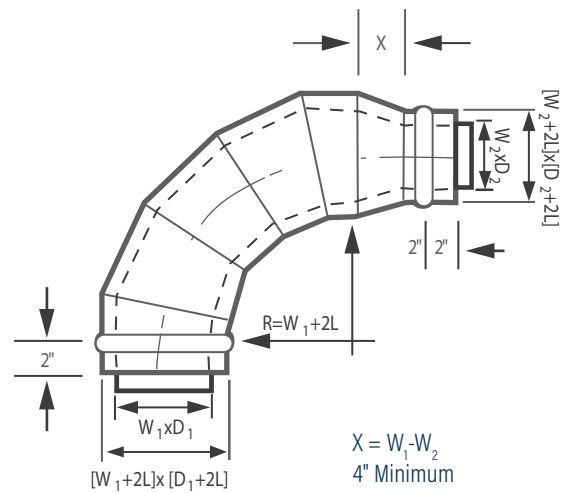
With or without vanes



45° 3-Piece Elbow with Reducer

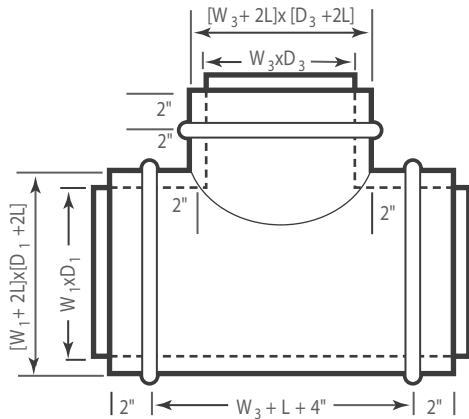


90° 5-Piece Elbow with Reducer

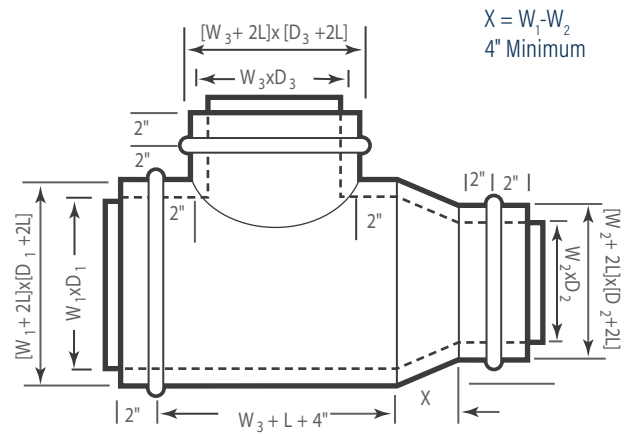


Straight Tees

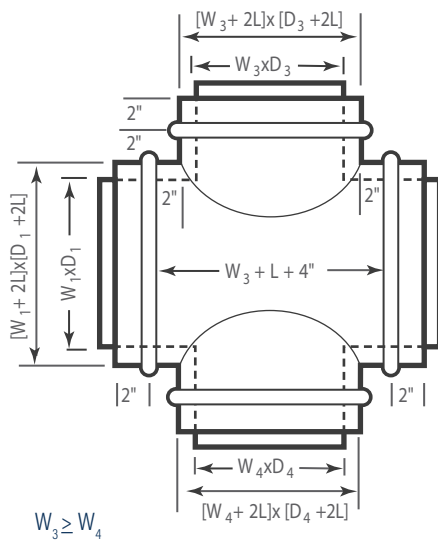
Tee



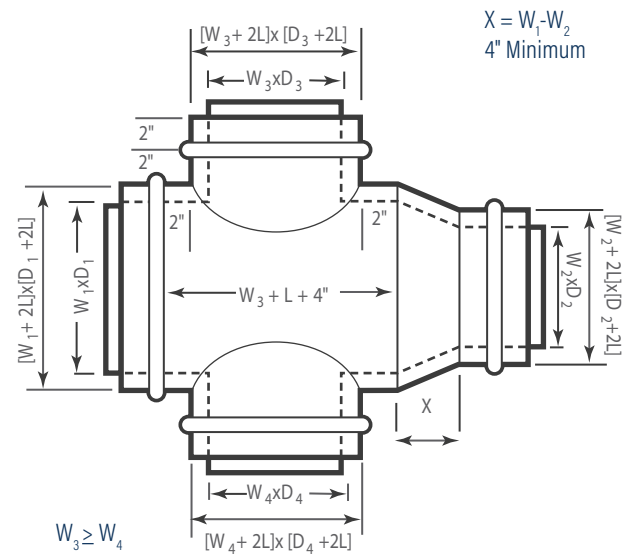
Reducing Tee



Cross Tee



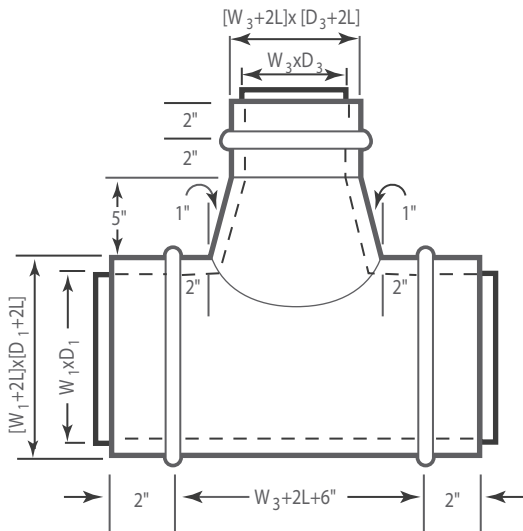
Reducing Cross Tee



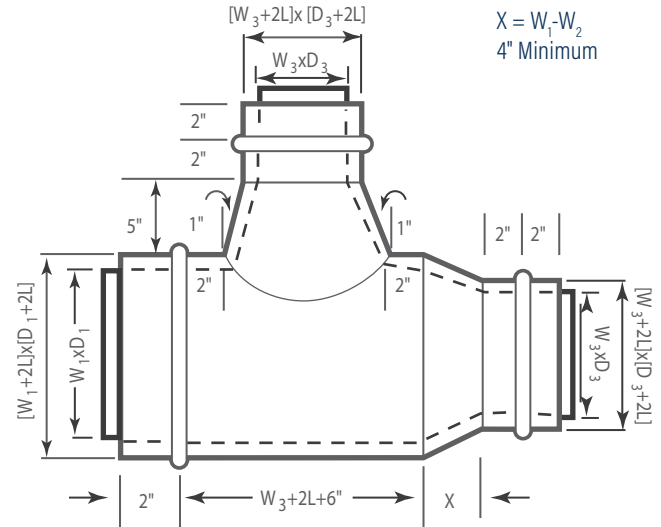
L = Liner thickness

Conical Tees

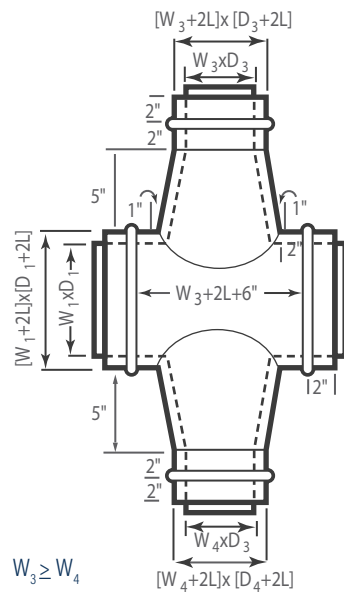
Combination Tee



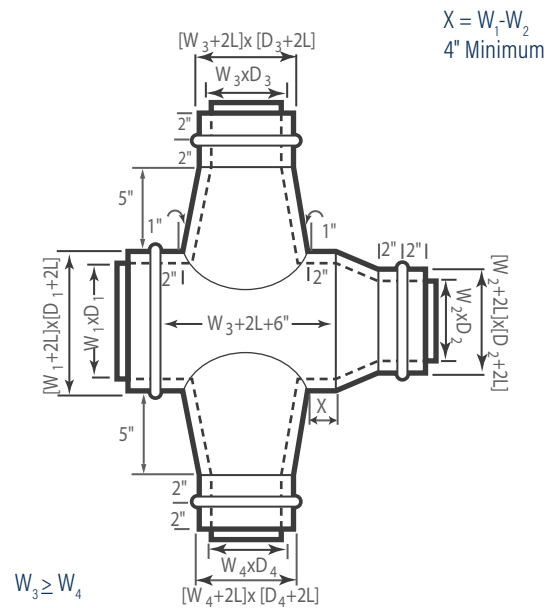
Reducing Conical Tee



Conical Cross



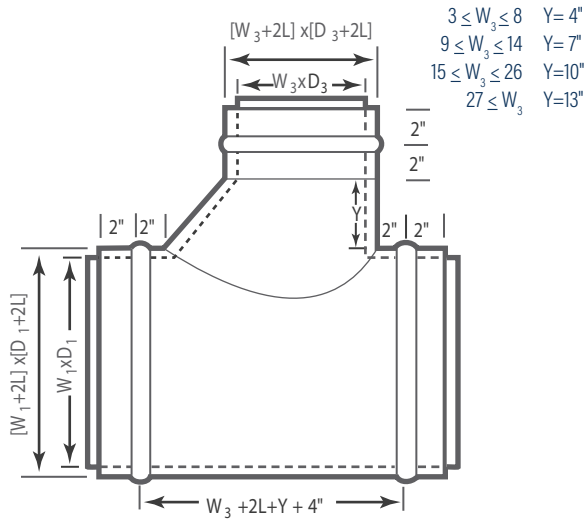
Reducing Conical Cross



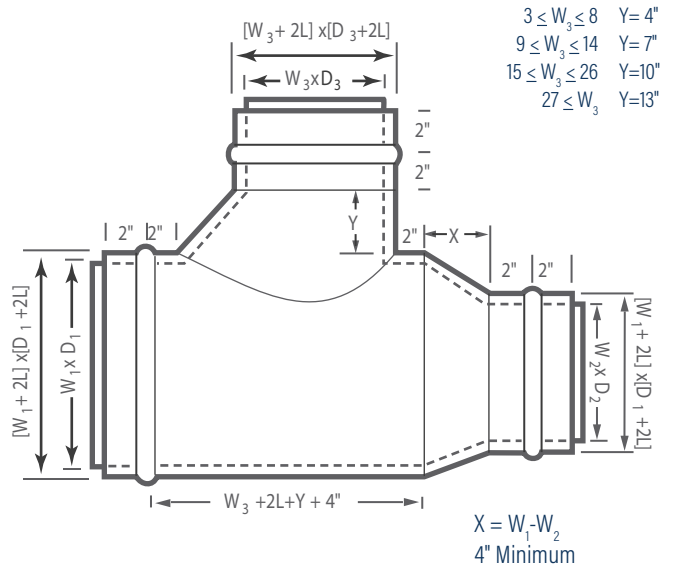
L = Liner thickness

Combination Tees

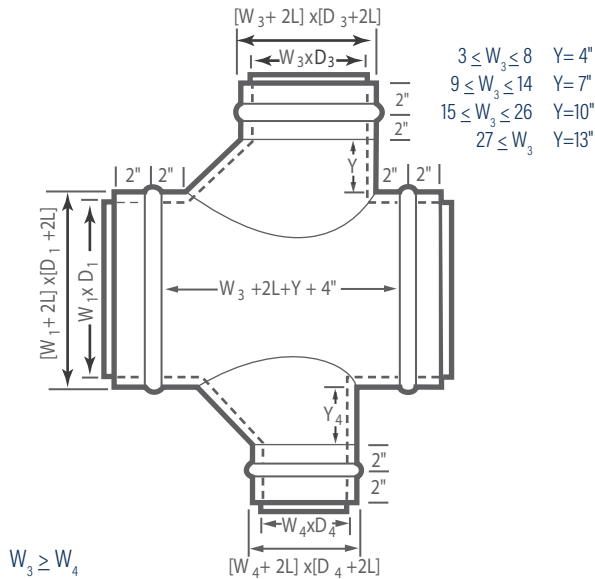
Combination Tee



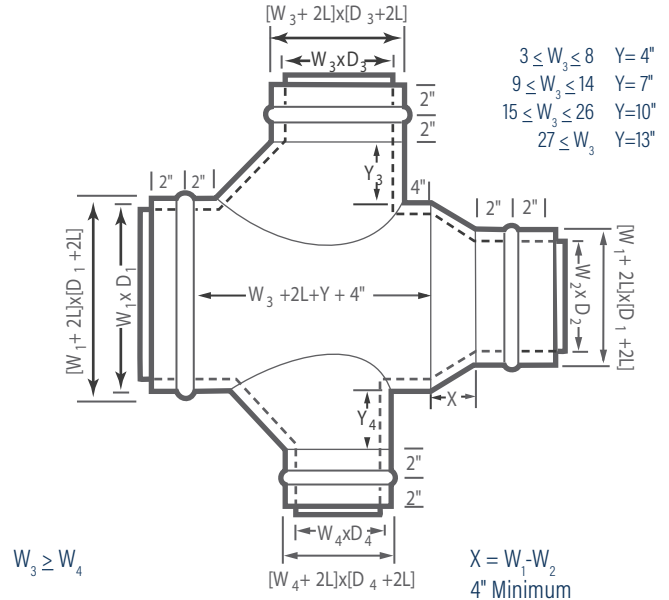
Reducing Combination Tee



Combination Cross

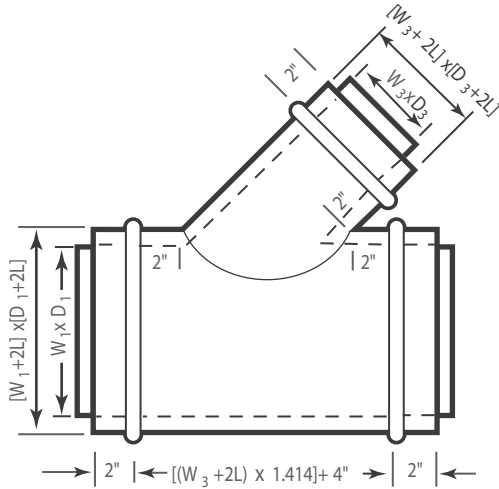


Reducing Combination Cross

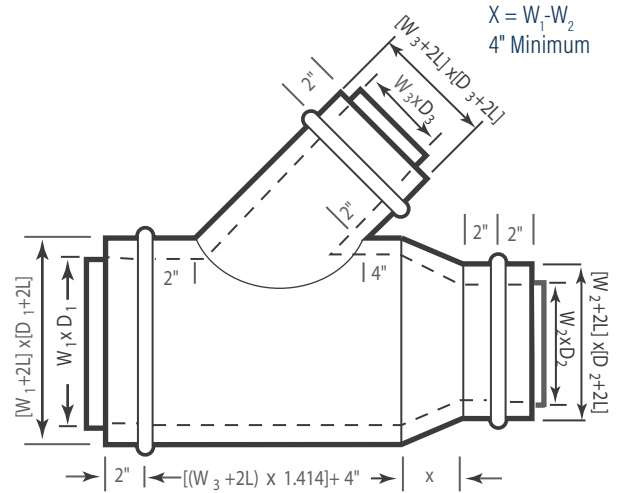


Straight Laterals

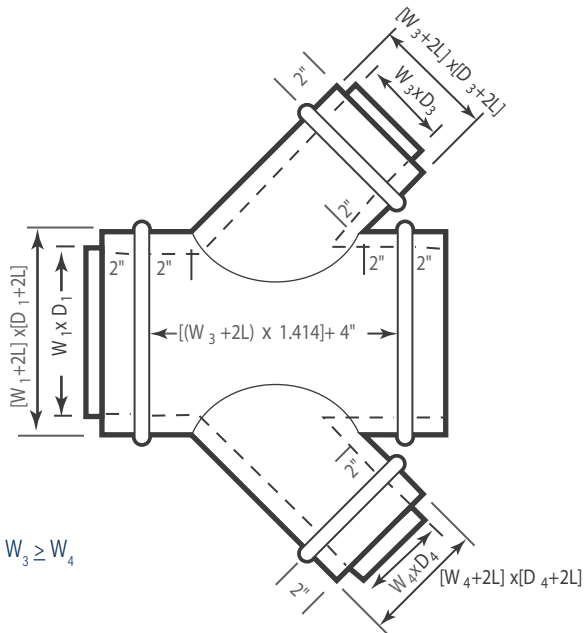
Lateral 45°



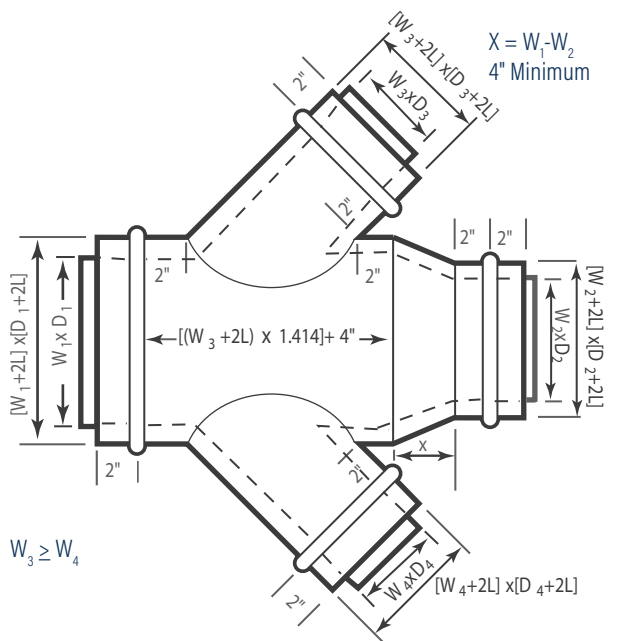
Reducing Lateral 45°



Lateral Cross 45°

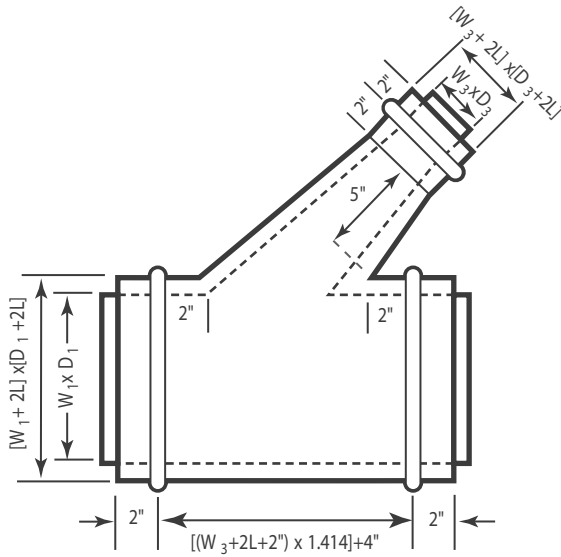


Reducing 45° Lateral Cross

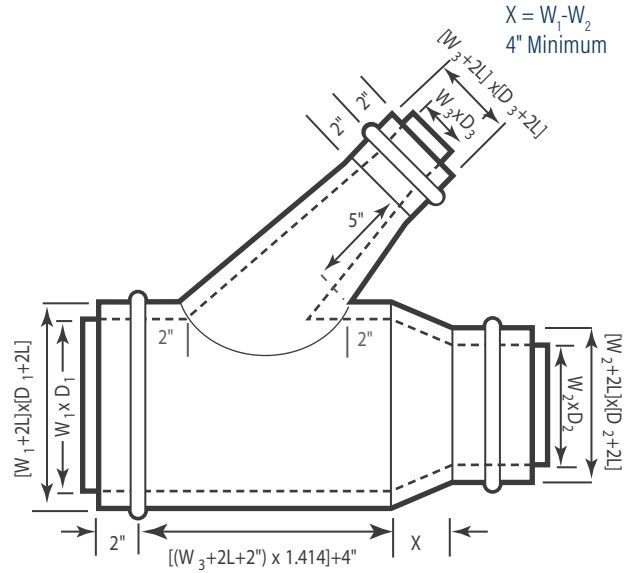


Conical Laterals

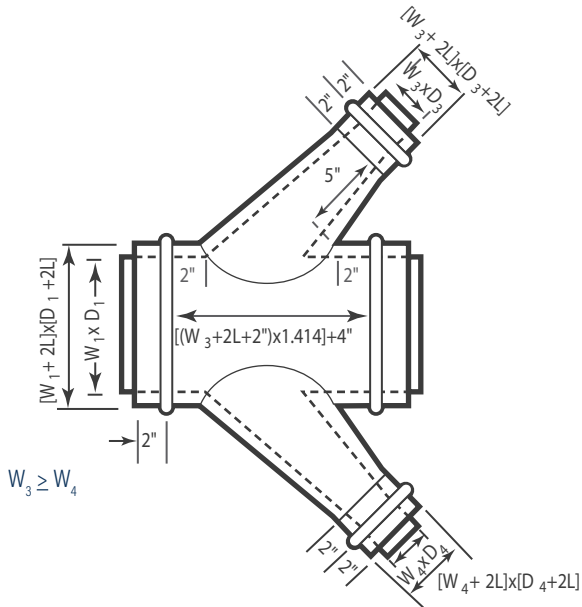
Conical Lateral 45°



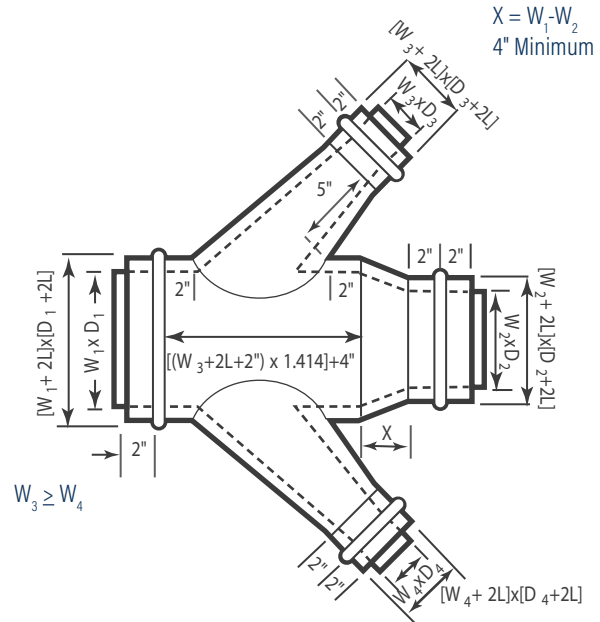
Reducing Conical Lateral 45°



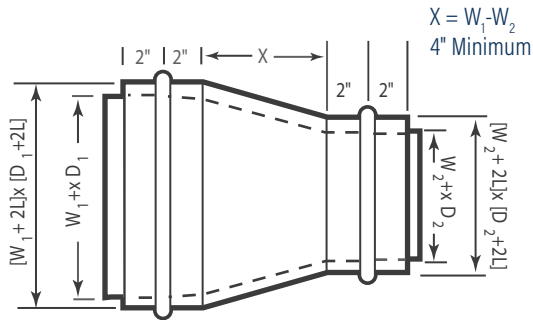
Conical Lateral 45° Cross



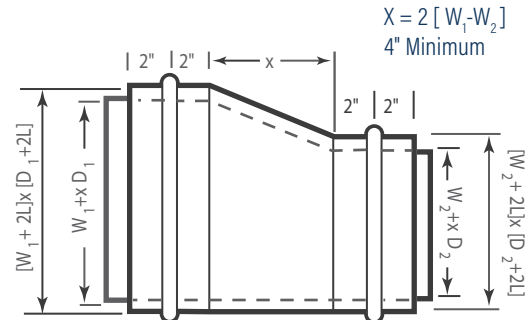
Reducing Conical 45° Lateral Cross



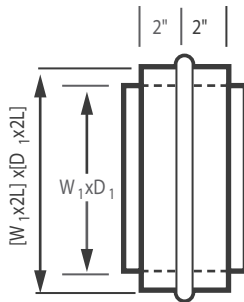
Concentric Reducer



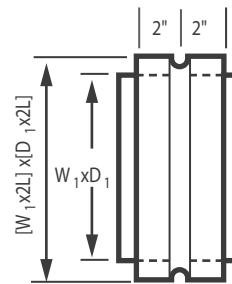
Eccentric Reducer



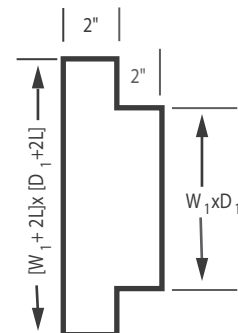
Pipe Couplings



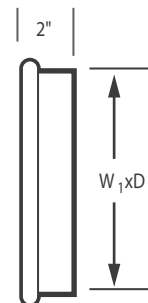
Fitting Couplings



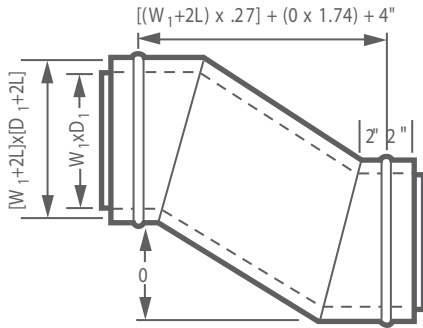
Spun End Cap



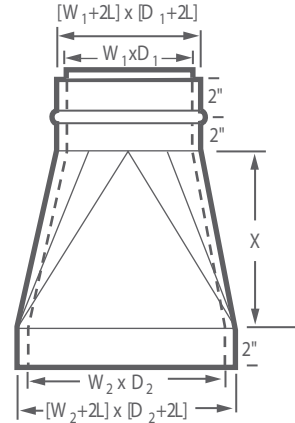
End Cap



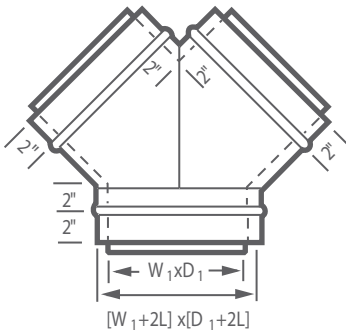
30° Offset



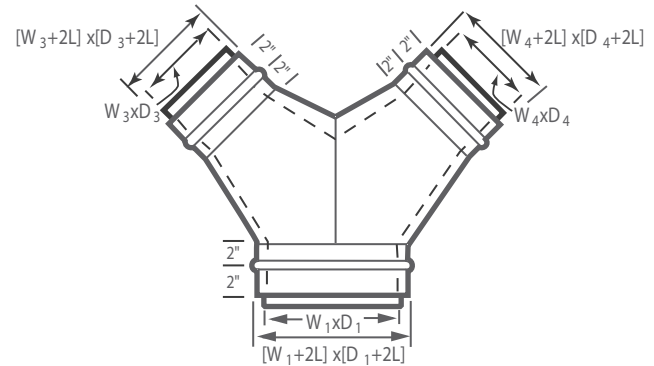
Rectangle to Oval



Wye Branch

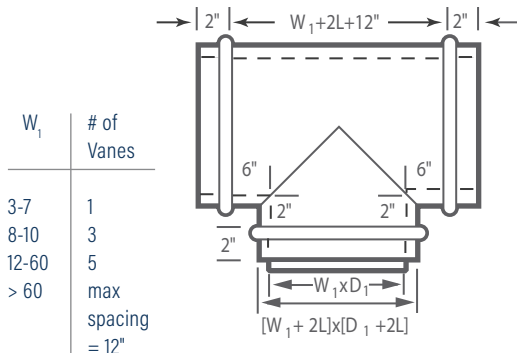


Reducing Wye Branch



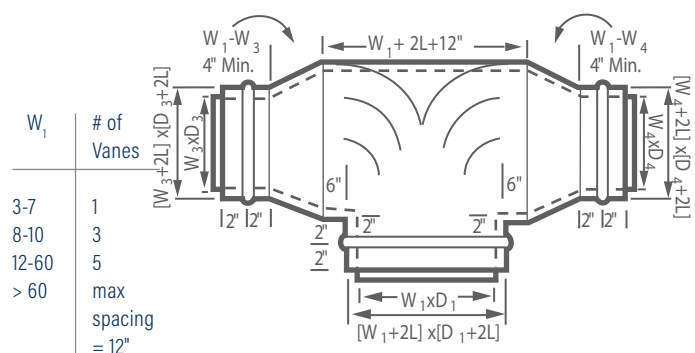
Bullhead Tee

With or without vanes



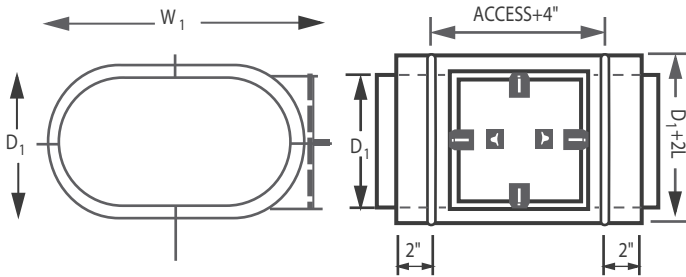
Reducing Bullhead Tee

With or without vanes



Rectangular Access Section

Also available as shop-installed SRTA or field-installed accessory FRTA.



D_1	Access Size
8" to 12"	8" x 8"
13" to 17"	12" x 12"
18" and over	18" x 18"

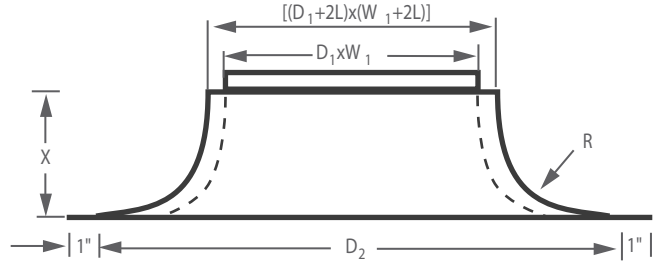
Negative and positive pressure.

Pressed Bellmouth

Galvanized only

D_1	R
4"	.394"
5"	.472"
6"	.787"
7"	1.0"
8"	1.0"
9"	1.0"
10"	1.0"
12"	1.0"

Spun Bellmouth

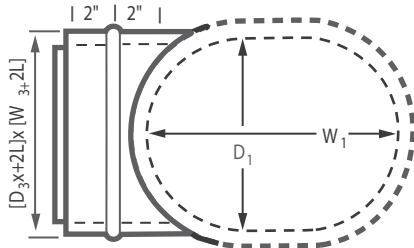


D_1	D_2	L	R	D_1	D_2	L
13"	19"	4"	3"	12"	14"	3½"
14"	21"	4"	3"	14"	16"	3½"
15"	24"	5"	4"	16"	18"	3½"
16"	26"	5"	4"	18"	20"	3½"
17"	25"	5"	4"	20"	22"	3½"
18"	26"	5"	4"	22"	24"	3½"
20"	28"	5"	4"	24"	26"	3½"
21"	29"	5"	4"	26"	28"	3½"
22"	32"	6"	5"	28"	30"	3½"
23"	33"	6"	5"	30"	32"	3½"
24"	34"	6"	5"	32"	34"	3½"
26"	38"	7"	6"	34"	36"	3½"
28"	40"	7"	6"	36"	38"	3½"
30"	42"	7"	6"	38"	40"	3½"
32"	46"	8"	7"	40"	42"	3½"
34"	48"	8"	7"	42"	44"	3½"
36"	50"	8"	7"	44"	46"	3½"
38"	52"	8"	7"	46"	48"	3½"
40"	56"	9"	8"	48"	40"	3½"
42"	58"	9"	8"	50"	52"	3½"
44"	60"	9"	8"	52"	54"	3½"
46"	62"	9"	8"	54"	56"	3½"
48"	64"	9"	8"	56"	58"	3½"
				58"	60"	3½"
				60"	62"	3½"

Accessories

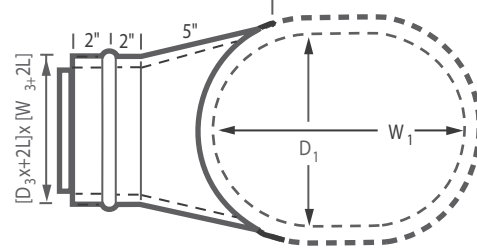
Shop Installed / Field Installed

Shop/Field Installed Tap



Standard flange is ½".
2" flange is also available.

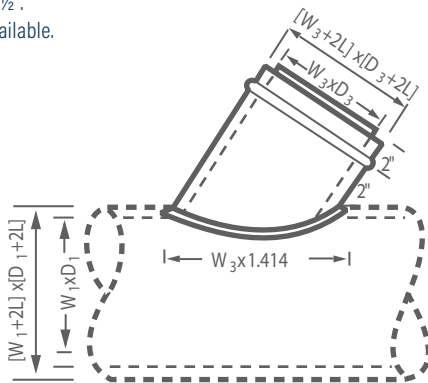
Shop/Field Installed Conical Tap



Standard flange is ½".
2" flange is also available.

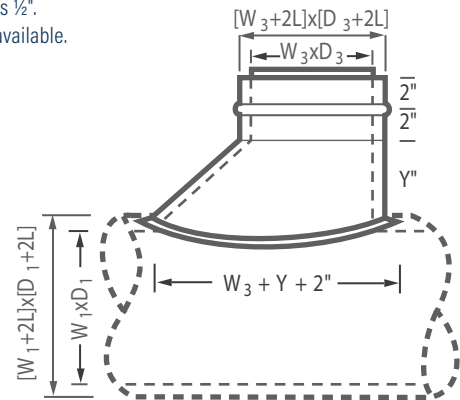
Shop/Field Installed Lateral Tap

Standard flange is ½".
2" flange is also available.

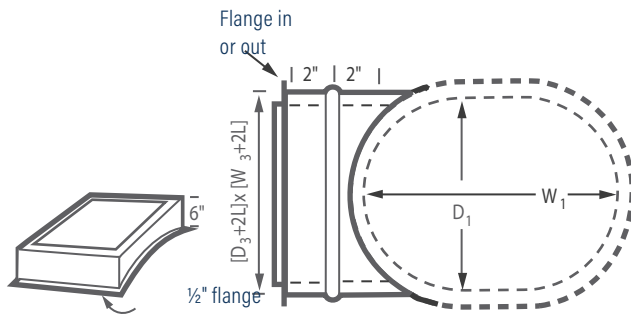


Shop/Field Installed Combination Tap

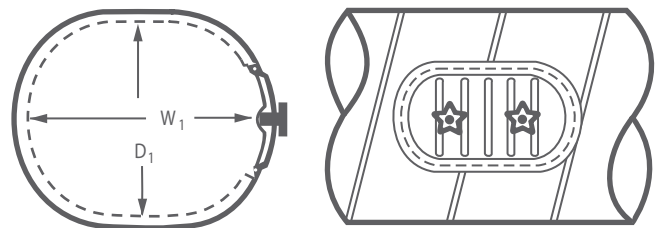
Standard flange is ½".
2" flange is also available.



Shop/Field Rectangle on Round



Field Installed Standard Door



Installation

DUAL WALL SLIP FIT

The inner and outer collars of fittings are sized to slip into, and should be used with, Corken Steel spiral duct. The inner collar projects beyond the outer collar. This permits the inner collar to be started into the inner liner of the spiral duct in a manner similar to the single wall technique. A tight fit is necessary to minimize friction loss and to promote proper sealing. Care should be taken during handling and installation to avoid dents and distortions that can cause improper fit or difficult installation.

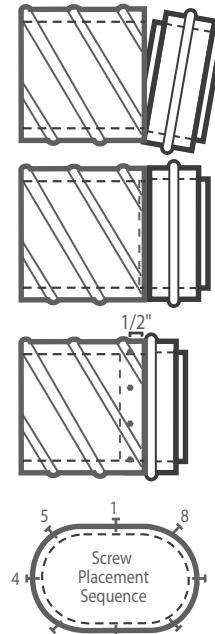
1. Bring the bottom of the inner fitting collar into the inner spiral duct at a slight angle.
2. Work the rest of the inner collar into the spiral duct.
3. When the inner collar is fully inserted, start the outer collar in the same manner.
4. Carefully work the rest of the collar into the spiral duct until approximately one inch of the collar remains exposed between the end of the spiral duct and the stop bead of the fitting collar. Do not use a screwdriver or knife to help make the connection. Apply pressure with the heel of your hand or with your fist to help slip the fitting into the duct.
5. Apply duct sealer to this exposed area.
6. Push the fitting into the spiral duct until the stop bead meets the edge of the spiral duct.
7. Fasten the fitting into the spiral duct with screws per the chart at right. The screws should be evenly spaced around the perimeter of the connection, approximately 1/2" back from the stop bead. Placement of the screws should be opposite of each other as demonstrated in the diagram.

FLANGE

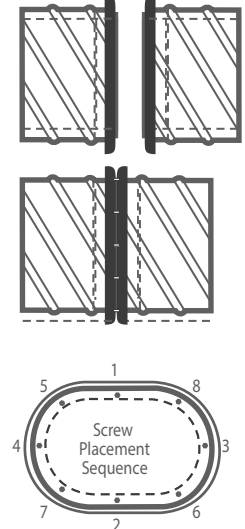
Flanges come factory-mounted on fittings and spiral duct. Flanges are standard for all duct over 71" major axis, but are available in smaller sizes. Dual wall flanges attach to both the outer wall and inner wall of the duct, eliminating the need to make an inner connection.

1. Place closed cell neoprene gasket on the face of one of the mating flanges.
2. Push the flanges together keeping the edges of the flanges aligned.
3. Clamp the flanges to help hold them in place.
4. Screw the flanges together with self-tapping screws per the chart at right. The screws should be evenly spaced around the perimeter of the connection. Placement of the screws should be opposite of each other as demonstrated in the diagram.

Installation of
Slip Joint Connector



Installation of
Flange Connector



Duct Perimeter Round Equiv.	# of Screws	
	Slip Fit	Flange
4"-9"	3	NA
10"	3	4
12"-16"	3	6
18"-20"	4	8
22"-26"	5	10
28"-30"	6	12
32"-36"	7	14
38"-42"	8	16
44"-46"	9	18
48"-52"	10	20
54"-56"	11	22
58"-60"	12	24
62"-66"	NA	26
68"-72"	NA	28
74"-76"	NA	30
78"-84"	NA	32