



Precision Duct Systems

4570 Commerce Cir SW • Atlanta, GA 30336
Phone (404) 505-2542

Single Wall Round Submittal

Project Name: _____

Engineer: _____

Contractor: _____

Section Number: _____

Date Submitted: _____

Date Approved: _____

Pressure Class:

- 2005 Up to 10" wg
- 1995 2" wg pos
- 1995 4" wg pos
- 1995 10" wg
- 2005 neg WG: _____
- 1995 neg WG: _____
- Underground
- Special Gauge Per Spec

Material Type:

- G60
- G90
- Paint Grip
- Aluminum
- 304L SS
- 316L SS
- 4 x 1 Coated
- 4 x 4 Coated

Connections:

- Couplings
- Gasket 24" max
- Spiral Flange
- Vanstone Angle Ring
- Welded Angle Ring
- Weld Flange
- Raw Butt Weld

Pipe Construction:

- Spiral Lock Seam
- Long Seam Welded
- AcmeLock

Single:

- Single Wall

Grille Boxes:

- 4" Standard
- 4" Std with 1" liner
- 4" Std Double Wall
- 45 deg entry
- 45 deg entry with 1" liner
- 45 deg entry Double Wall

Construction:

- Gore Lock / Spot & Seal
- Continuously Welded

Misc:

- Access Doors at FD
- Reducers at VAV Boxes
- Single Low Pressure Dampers

Installation:

- Installed
- Loose
- Slot Only

Tee / Saddle:

- Full Body Fittings
- Loose Saddle Taps
- Manifold Saddle Taps

Tap Type:

- Straight Taps
- Conical Taps
- Combination Taps
- Lateral Tap

Additional Comments:

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Spiral Pipe

All pipe is fabricated from hot-dipped G90 galvanized steel in gauges that meet or exceed SMACNA standards for spiral ducts. The following chart illustrates approximate weights for spiral pipe. Areas in grey represent fabrication minimum gauges.

Diameter	26 Ga (lbs / ft)	24 Ga (lbs / ft)	22 Ga (lbs / ft)	20 Ga (lbs/ft)
6"	1.6	2.0	2.5	
8"	2.1	2.8	3.3	
10"	2.6	3.4	4.2	
12"	3.2	4.1	5.0	
14"	3.7	4.8	5.8	
16"	4.3	5.5	6.6	
18"	4.9	6.1	7.5	
20"	5.2	6.8	8.3	
22"		7.5	9.1	
24"		8.2	9.9	
26"		8.9	10.8	
28"		9.5	11.6	14.0
30"		10.2	12.4	15.0
32"		10.9	13.3	16.1
34"		11.6	14.1	17.1
36"		12.3	14.9	18.2
38				19.2
40"				20.3
42"				21.3
44"				22.4
46"				23.4
48"				24.5
50"				25.5

SMACNA Gauge Requirements for Round Duct Spiral Seam Unreinforced Positive Pressure*

Max Diameter	+2 W.G.	+4 W.G.	+10 W.G.	Precision Duct
6"	28 Ga	28 Ga	28 Ga	26 Ga
8"	28 Ga	28 Ga	28 Ga	26 Ga
10"	28 Ga	28 Ga	28 Ga	26 Ga
12"	28 Ga	28 Ga	26 Ga	26 Ga
14"	28 Ga	26 Ga	26 Ga	26 Ga
16"	26 Ga	26 Ga	24 Ga	24 Ga
18"	26 Ga	24 Ga	24 Ga	24 Ga
19"-26"	26 Ga	24 Ga	24 Ga	24 Ga
28"-36"	24 Ga	22 Ga	22 Ga	22 Ga
38"-50"	22 Ga	20 Ga	20 Ga	20 Ga
52"-60"	20 Ga	18 Ga	18 Ga	18 Ga

* Source: SMACNA HVAC Duct construction Standards Metal and Flexible – Second Edition 1995

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Connection Types

All fittings are made standard as male size (1/8" smaller) for slip fit into standard spiral ducts except for female coupling, which is made female size equivalent to standard spiral ducts. Fittings come standard unsealed, with sealing available on request. Fittings are fabricated from hot-dipped G90 galvanized steel that meets or exceeds SMACNA standards. Elbows, unless otherwise specified, are fabricated with centerline radius equal to 1-1/2 times the duct diameter. 90° and 45° elbows 5" diameter and smaller are of die-stamped construction. 90° elbows 6" diameter and larger are of 5-piece segmented construction. 45° elbows 6" diameter and larger are of 3-piece segmented construction. Elbow fittings are fabricated with segmented standing seam construction for maximum rigidity, durability, and air-tightness. Fittings are standard fabricated (but not limited to) the following chart:

SMACNA Gauge Requirements for Round Duct Longitudinal Seam Unreinforced Positive Pressure*

Max Diam	+2 W.G.	+4 W.G.	+10 W.G.	Precision Duct
6"	28 Ga	28 Ga	28 Ga	24 Ga
8"	28 Ga	28 Ga	26 Ga	24 Ga
10"	26 Ga	26 Ga	26 Ga	24 Ga
12"	26 Ga	26 Ga	24 Ga	24 Ga
14"	26 Ga	24 Ga	24 Ga	24 Ga
16"	24 Ga	24 Ga	22 Ga	24 Ga
18"	24 Ga	24 Ga	22 Ga	24 Ga
19"-24"	24 Ga	22 Ga	22 Ga	24 Ga
25"-28"	22 Ga	20 Ga	20 Ga	22 Ga
29"-50"	20 Ga	20 Ga	20 Ga	20 Ga

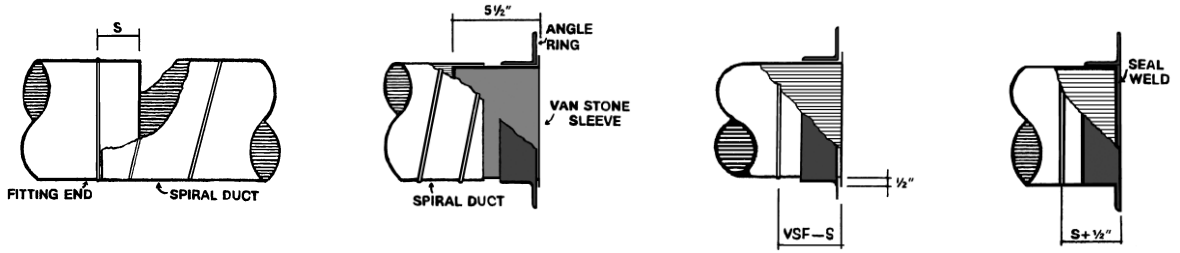
* Source: SMACNA HVAC Duct construction Standards Metal and Flexible – Second Edition 1995

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Connection Types



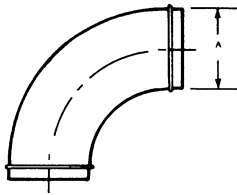
Slip-Fit Connection

Van Stone (Pipe)

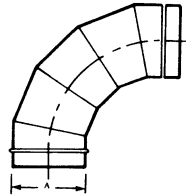
Van Stone (Fitting)

Welded Ring

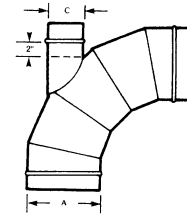
Elbows



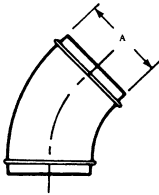
One-Piece Welded 90°



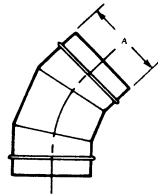
Five-Piece Gored 90°



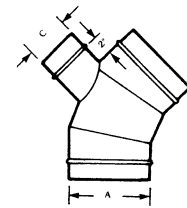
Five-Piece Gored 90°
With Tap



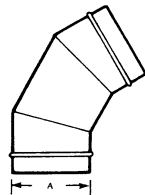
One-Piece Welded 45°



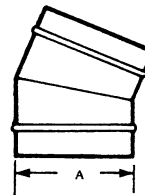
Three-Piece Gored 45°



Three-Piece Gored 45°
With Tap



Three-Piece Gored 60°



Two-Piece Gored 30°

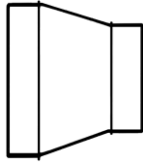
Centerline Radius = 1.5 x Diameter with 2" Straight After Bead
28" Diam. And Up Come Standard As (2) 45° Elbows With Connector. When Necessary, Specify As One Fitting

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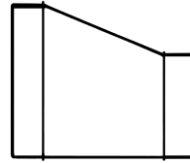
Single Wall Round Submittal

Reducers



Concentric

Length = Diam Change (minimum 4"), 2" Collars

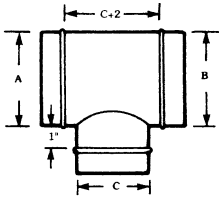


Eccentric

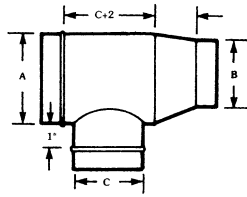
Length = 2 x Diam Change (minimum 4"), 2" Collars

Standard Fitting Type Is Concentric. Specify All Diameters And Changes If Not Concentric.

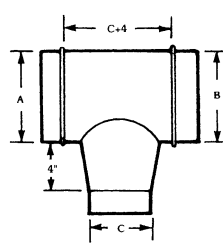
Tees



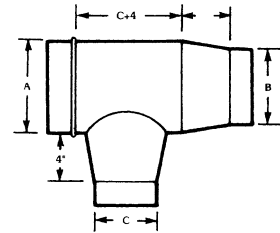
Straight Tee



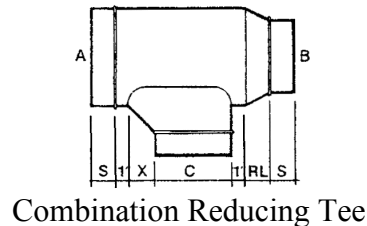
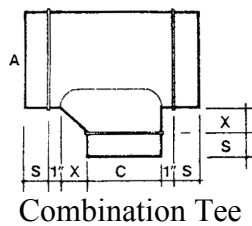
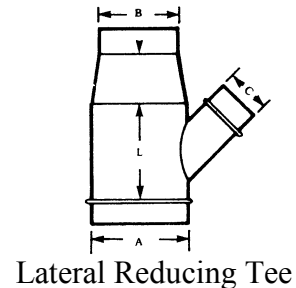
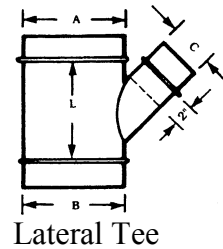
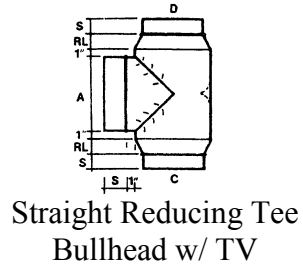
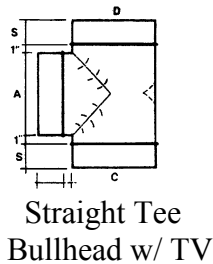
Straight Reducing Tee



Conical Tee



Conical Reducing Tee



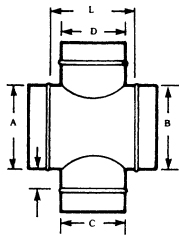
Specify All Diameters And Tee Type When Ordering
Branch Roots Are 2" Long, With 2" Collars
Standard Fitting Type Is Straight Tee, With Reducing Coupling (If Necessary)

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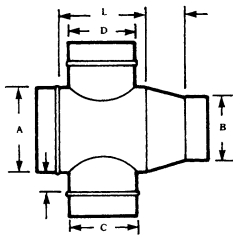
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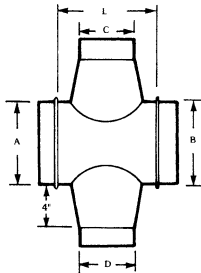
Crosses



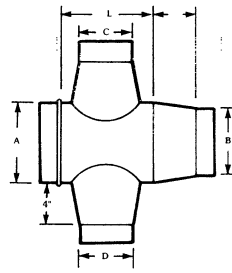
Straight Cross



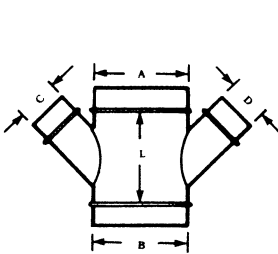
Straight Reducing Cross



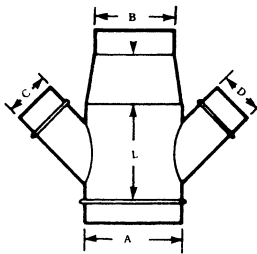
Conical Cross



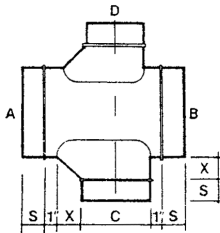
Conical Reducing Cross



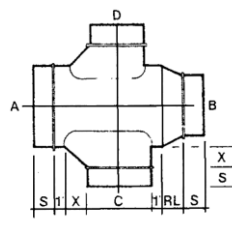
Lateral Cross



Lateral Reducing Cross



Combination Cross

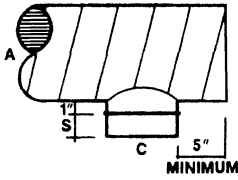


Combination Reducing Cross

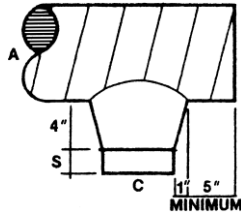
Specify All Diameters And Type When Ordering
 Branch Roots Are 2" Long, With 2" Collars
 Standard Fitting Type Is Straight Cross With Reducing Coupling (If Necessary)

Single Wall Round Submittal

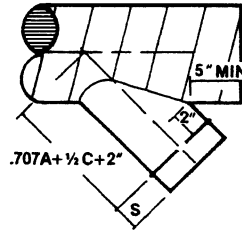
Round Taps



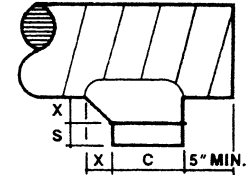
Straight Tap



Conical Tap



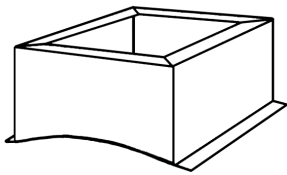
Lateral Tap



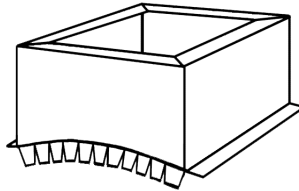
Combination Tap

Specify Type and Diameter When Ordering
 Standard Type is Straight Tap
 Straight Tap Is Precision Spun One-Piece Tap
 Conical, Lateral, and Combination Taps Are Fabricated Saddle-Type With 2" Flange

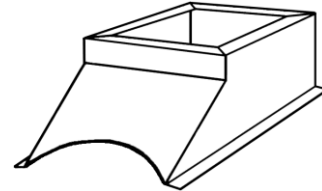
Rectangular Taps



Rectangular Access Tap Without Tabs



Rectangular Access Tap With Tabs



Shoe Access Tap (With or Without Tabs)

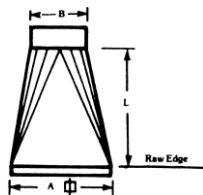
Please Specify With or Without Tabs, With Flange In, Flange Out, Or With Slip and Drive Connection
 Standard Fitting Type Is 6" Long Off Pipe, without Tabs, With 1" Flange In (Remember to Upsize From Register Size)

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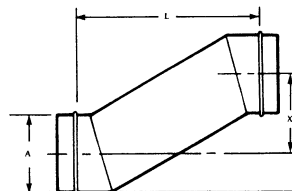
Single Wall Round Submittal

Square to Round



Specify Depth, Width, Length, And Diameter When Ordering
When Not Concentric, Supply Sketch
Length 12" Overall Standard Unless Dimensions Prohibit

Offset



Offset Length = $0.5 \times \text{Diam.} + 2 \times \text{Set}$ (Unless Size Prohibits)
Overall Length = Offset Length + 7" (3.5" Straight), 2" Collars
Specify All Lengths And Diameters When Ordering

Connectors & Caps

Male connector



Female connector



End Cap



Starting Collar



Male Connector	=	Spiral Slip fit, 4" Long
Female Connector	=	Normal Fit, 4.5" Long
End Cap	=	Spiral Slip Fit, 2" Long
Starting Collar	=	Spiral Slip Fit, 2" Long, 1" Tabs