



Corporate Headquarters

SHEET METAL CONNECTORS, INC.

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Manufacturing Facilities

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



YELLOW LABEL

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



HVAC EXPERTISE
PERFORMANCE • TRAINING • STANDARDS

Rectangular Single Wall Duct & Fittings

Sheet Metal Connectors, Inc. (SMC) TDC, Slip/Drive and Raw

Sheet Metal Connectors, Inc. rectangular duct and fittings are one part of our complete line of HVAC products. SMC manufactures coil line ductwork in 4'-5'-6' lengths. All ductwork comes standard with stiffening beads. Ductwork is fabricated with either Snap Lock or Pittsburgh longitudinal seams. Sealant is available in the seams upon request. Rectangular ductwork is manufactured in three different styles. They are as follows:

- Wrap Around Duct
- L-Shape Duct All sizes shall be listed using outside dimensions.
- 4 Piece Duct

Please refer to the following charts for specific materials, gauges, and end treatments.

TDC Ductwork and Fittings

SMACNA recommended TDC™ duct is a 4-bolt system with a difference. Instead of cutting, assembling and installing a separate flange onto the ductwork, the TDC flange is roll formed directly onto the duct. This provides a solid metal connection that reduces leakage which is why the TDC system is the best for minimum leakage application. A TDC assembly instruction manual is available upon request.

MATERIAL	THICKNESS	ASTM	TYPE	DUCT	END TREATMENT
Galvanized	26 - 18 gauge	A-653	G60-G90	44 1/2", 56 1/2", 68 1/2"*	TDC
Paint Grip	24 - 18 gauge	A-653	A60	56 1/2"	
PVS	24 - 18 gauge	A-653	4 x 1, 4 x 4	56 1/2"	
Aluminum	.032 - .050	B-316	3003 H-14	44 1/2"	
Stainless Steel	24 - 20 gauge	A-240	304 or 316	44 1/2"	

*Check with factory for availability of 68 1/2" in 26 gauge galvanized

Slip and Drive Ductwork and Fittings

Slip and drive ductwork is the traditional system using s-slip and drive connectors.

MATERIAL	THICKNESS	ASTM	TYPE	DUCT	END TREATMENT
Galvanized	26 - 18 gauge	A-653	G60-G90	47", 59", 71"*	Slip and Drive
Paint Grip	24 - 18 gauge	A-653	A60	59"	
PVS	24 - 18 gauge	A-653	4 x 1, 4 x 4	59"	
Aluminum	.032 - .050	B-316	3003 H-14	47"	
Stainless Steel	24 - 20 gauge	A-240	304 or 316	47"	

*Check with factory for availability of 71" in 26 gauge galvanized

Raw Ductwork and Fittings

Raw duct is fabricated for proprietary duct connection systems.

MATERIAL	THICKNESS	ASTM	TYPE	DUCT	END TREATMENT
Galvanized	26 - 18 gauge	A-653	G60-G90	48", 60", 72"*	Raw Both Ends
Paint Grip	24 - 18 gauge	A-653	A60	60"	
PVS	24 - 18 gauge	A-653	4 x 1, 4 x 4	60"	
Aluminum	.032 - .050	B-316	3003 H-14	48"	
Stainless Steel	24 - 20 gauge	A-240	304 or 316	48"	

*Check with factory for availability of 72" in 26 gauge galvanized



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.



SHEET METAL CONNECTORS, INC.

FABRICATION THAT PERFORMS

MINNEAPOLIS, MN 1-800-328-1966 • ROCKFORD, IL 1-866-504-4600

May 2013

Sheet Metal Connectors, Inc.

Fittings

Sheet Metal Connectors, Inc. manufactures rectangular fittings in most sizes and configurations. Fittings are manufactured on our state of the art fabrication equipment. All fittings are fabricated with stiffening beads on duct sizes 19" wide and larger which have more than 10 square feet of unbraced panel. Fittings shall be beaded unless duct will have an insulation covering or an acoustical liner. This requirement is applicable to 20 gauge or less in thickness and 3" W.G. or less. Most all fittings are fabricated with Pittsburgh seams. Fittings are available completely assembled with all accessories (reinforcement, vane & rail, etc...) installed. Fittings are also available knocked down to reduce shipping and handling costs.

Turning Vane and Rail

SMC manufactures several types of turning vane and E-Z rail. Turning vane and E-Z rail are recommended for square throat elbows and tees. When using turning vane and E-Z rail performance is greatly enhanced in the HVAC duct system. Test data is available upon request.

Maximum Unsupported Vane Length

- 4" single turning vane36" maximum length
- 2" double turning vane48" maximum length
- 4" double turning vane72" maximum length
- 4" acoustical vane72" maximum length

When exceeding maximum vane length, vanes can be installed in sections or a tie rod can be tack welded to the face of the turning vane.

Transverse Joint and Intermediate Reinforcement

SMC manufactures many different types of reinforcement. SMC's most popular types are as follows:

- Tie Rod Reinforcement: threaded inserts installed into each end of thin wall (emt) conduit. These are installed internally at both the joint and/or intermediate duct spacing.
- R-Angle Reinforcement: roll formed pre-punched angle iron reinforcement. See chart below.

Rigidity Comparison Chart

Minimum Rigidity Class	Commercial Angle	Lockformer R-Angle 16	Lockformer R-Angle 14	Lockformer R-Angle 12	Lockformer R-Angle 10	Lockformer R 16 Back to Back	Lockformer R 14 Back to Back	Lockformer R 12 Back to Back	Lockformer R 10 Back to Back	
Eix	10-5 H x T	H x B x T	H x B x T	H x B x T	H x B x T	H x B x T	H x B x T	H x B x T	H x B x T	
A	0.5									
B	1.0									
C	2.5	1 x 18 Ga 1 x 16 Ga 3/4 x 1/8								
D	5	1 1/4 x 20 Ga 1 x 1/8								
E	10	1 1/4 x .090 1 1/2 x 16 Ga	1 1/2 x 1 1/2 x 16 Ga							
F	15	1 1/4 x 1/8	1 5/8 x 1 1/2 x 16 Ga	1 1/2 x 1 1/2 x 14 Ga	1 1/2 x 1 1/2 x 12 Ga					
G	25	1 1/2 x 3/16	2 x 1 1/2 x 16 Ga	1 7/8 x 1 1/2 x 14 Ga	1 9/8 x 1 1/2 x 12 Ga	1 1/2 x 1 1/2 x 10 Ga	1 1/2 x 1 1/2 x 16 Ga	1 1/2 x 1 1/2 x 14 Ga	1 1/2 x 1 1/2 x 12 Ga	
H	50	2 x 1/8	2 1/2 x 1 1/2 x 16 Ga	2 3/8 x 1 1/2 x 14 Ga	2 1/8 x 1 1/2 x 12 Ga	2 x 1 1/2 x 10 Ga	2 x 1 1/2 x 16 Ga	1 7/8 x 1 1/2 x 14 Ga	1 9/8 x 1 1/2 x 12 Ga	1 1/2 x 1 1/2 x 10 Ga
I	75	2 x 3/16	2 7/8 x 1 1/2 x 16 Ga	2 3/4 x 1 1/2 x 14 Ga	2 1/2 x 1 1/2 x 12 Ga	2 1/4 x 1 1/2 x 10 Ga	2 1/4 x 1 1/2 x 16 Ga	2 1/8 x 1 1/2 x 14 Ga	1 7/8 x 1 1/2 x 12 Ga	1 3/4 x 1 1/2 x 10 Ga
J	100	2 x 1/4 2 1/2 x 1/8	3 1/4 x 1 1/2 x 16 Ga	3 x 1 1/2 x 14 Ga	2 3/4 x 1 1/2 x 12 Ga	2 1/2 x 1 1/2 x 10 Ga	2 1/2 x 1 1/2 x 16 Ga	2 3/8 x 1 1/2 x 14 Ga	2 1/8 x 1 1/2 x 12 Ga	2 x 1 1/2 x 10 Ga
K	150	2 1/2 x 3/16	-----	3 1/2 x 1 1/2 x 14 Ga	3 1/8 x 1 1/2 x 12 Ga	2 7/8 x 1 1/2 x 10 Ga	3 x 1 1/2 x 16 Ga	2 3/4 x 1 1/2 x 14 Ga	2 1/2 x 1 1/2 x 12 Ga	2 1/4 x 1 1/2 x 10 Ga
L	200	2 1/2 x 1/4	-----	-----	3 1/2 x 1 1/2 x 12 Ga	3 1/4 x 1 1/2 x 10 Ga	3 1/4 x 1 1/2 x 14 Ga	2 3/4 x 1 1/2 x 12 Ga	2 1/2 x 1 1/2 x 10 Ga	-----
M	300	2 1/2 x 3/16	-----	-----	-----	-----	-----	3 1/2 x 1 1/2 x 14 Ga	3 1/8 x 1 1/2 x 12 Ga	2 7/8 x 1 1/2 x 10 Ga

In Stock For Immediate Shipment



SHEET METAL CONNECTORS, INC.

FABRICATION THAT PERFORMS

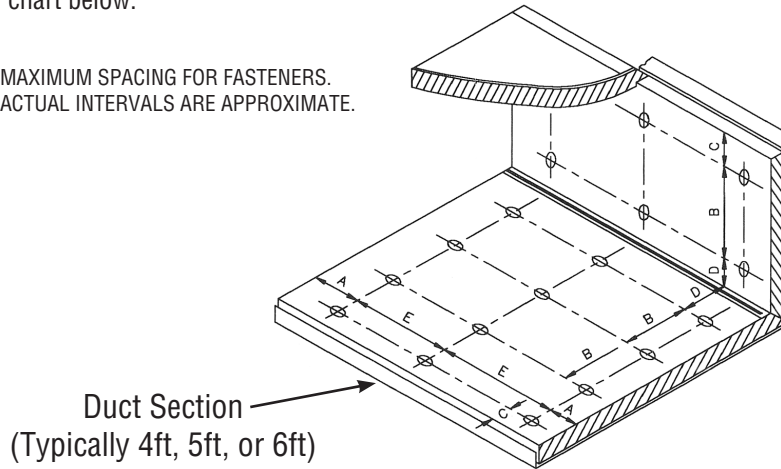
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Sheet Metal Connectors, Inc.

Insulation

Sheet Metal Connectors, Inc. duct liner shall be of the specified material, thickness, and density of the contractors request. The duct dimensions shall be increased as necessary to compensate for liner thickness. All sizes shall be listed using outside dimensions. Each layer of duct liner shall be attached with a minimum of 90% coverage of adhesive at the liner contact surface area. Pin placement as in chart below.

MAXIMUM SPACING FOR FASTENERS.
ACTUAL INTERVALS ARE APPROXIMATE.



“A” PIN ROW MAY BE OMITTED WHEN METAL NOSING IS USED. “E” THEN STARTS FROM THE NOSING.

Velocity*	Dimensions				
	A	B	C	D	E
0 — 2500 FPM	3"	12"	4"	6"	18"
2501 — 6000 FPM	3"	6"	4"	6"	16"

Standard insulation is 1" thick with 1 1/2 lb. per cubic foot density. See chart below for specifications. Many other thickness' and densities are available, consult factory.

SOUND ABSORPTION COEFFICIENTS (ASTM C 423, Type A Mounting)							
1/3 Octave Band Center Frequency (cycles/sec.)							
Type	125	250	500	1000	2000	4000	NRC
.5" - 2 # Cu. Ft.	.09	.14	.40	.60	.73	.82	.45
1" - 1 1/2 # Cu. Ft.	.18	.36	.59	.86	.95	.90	.70
2" - 1 1/2 # Cu. Ft.	.34	.64	.96	1.03	1.00	1.03	.90
1" - 3 # Cu. Ft.	.09	.28	.63	.86	.91	.92	.65

THERMAL CONDUCTANCE "C" AND RESISTANCE "R"		
(ASTM C 177)		
Product	Mean Temperature 75°F (24°)	
	Conductance "C" ⁽¹⁾	Resistance "R" ⁽²⁾
.5" - 2 # Cu. Ft.	.48 (2.73)	2.1 (.37)
1" - 1 1/2 # Cu. Ft.	.24 (1.42)	4.2 (.74)
2" - 1 1/2 # Cu. Ft.	.13 (.74)	8.0 (1.41)
1" - 3 # Cu. Ft.	.24 (1.36)	4.2 (.73)

Coefficients determined per ASTM E 795 Type A Mounting
Note: Pressure classifications are based on SMACNA Second Edition - 1995

1 The lower the value, the better the performance. 2 The higher the value, the better the performance.

Specification Compliance

SMC standard insulation meets the requirements of the following codes and specifications:

- NFPA 90A and NFPA 90B
- NAIMA Standard AHC-101
- ASTM C 1071 Type 1 Replaces HH-I-545B Type 1

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

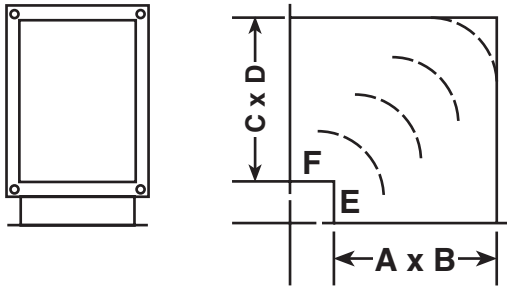


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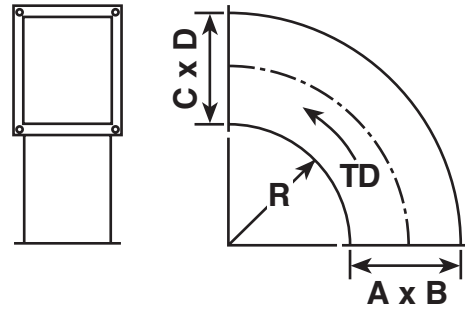
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Square Throat Elbow



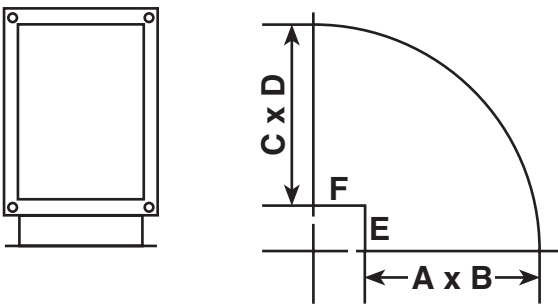
- TDC
- S&D
- Raw
- Dimensions are O.D.

Radius Elbow



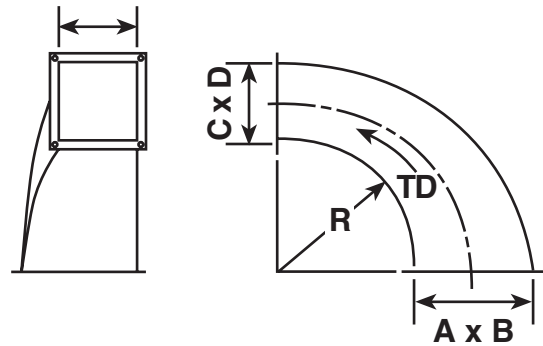
- TDC
- S&D
- Raw
- Dimensions are O.D.

Radius Elbow (With Square Throat)



- TDC
- S&D
- Raw
- Dimensions are O.D.

Reducing Radius Elbow (Left or Right)



- TDC
- S&D
- Raw
- Dimensions are O.D.

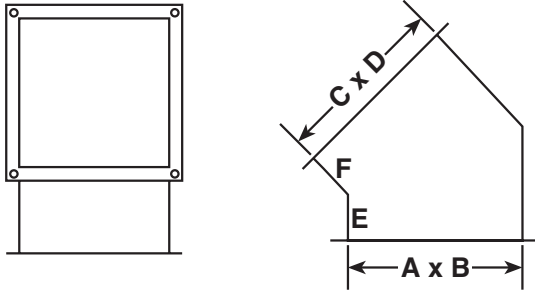


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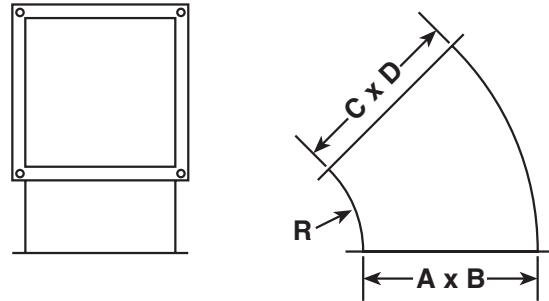
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Square Throat Angle



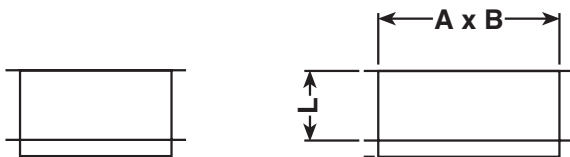
- TDC
- S&D
- Raw
- Dimensions are O.D.

Radius Angle



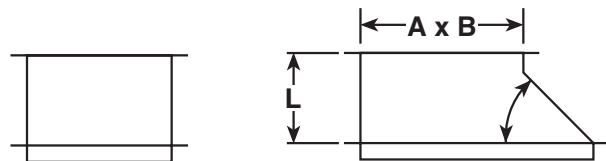
- TDC
- S&D
- Raw
- Dimensions are O.D.

Straight 90° Tap



- TDC
- S&D
- Raw
- Dimensions are O.D.

90° Increased Tap



- TDC
- S&D
- Raw
- Dimensions are O.D.

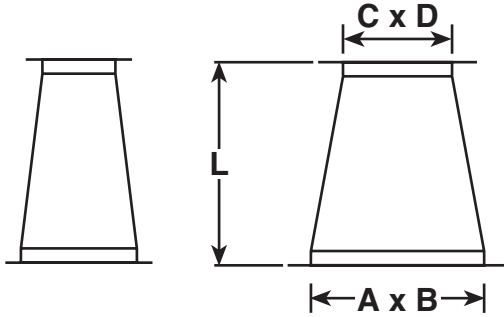


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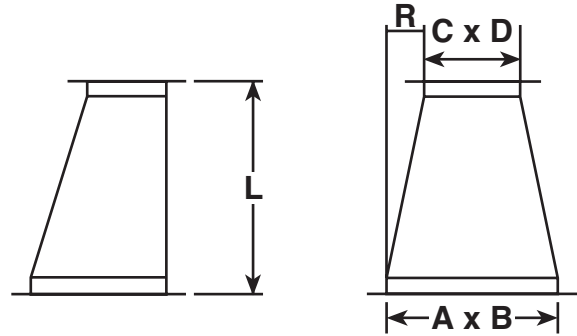
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Concentric Transition



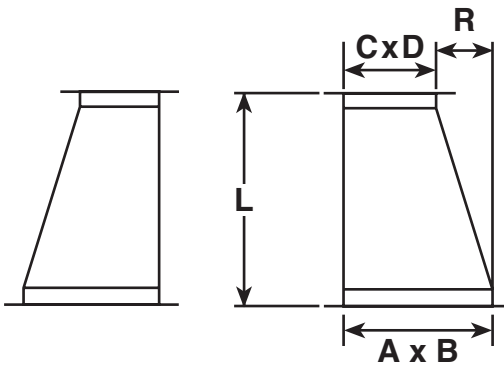
- TDC
- S&D
- Raw
- Dimensions are O.D.

Top or Bottom Flat Transition



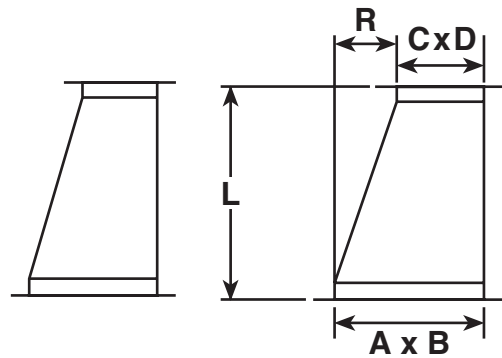
- TDC
- S&D
- Raw
- Dimensions are O.D.

**Transition
(Top and Left Sides Flat)**



- TDC
- S&D
- Raw
- Dimensions are O.D.

**Transition
(Top and Right Sides Flat)**



- TDC
- S&D
- Raw
- Dimensions are O.D.

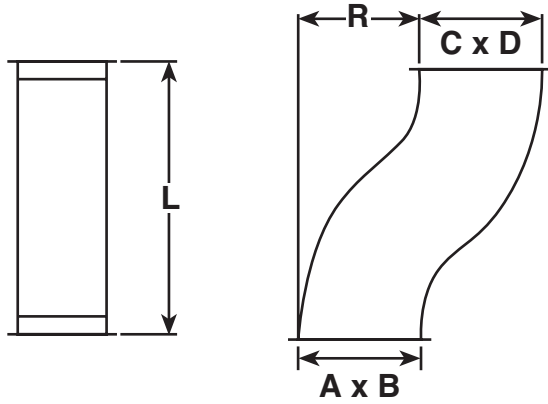


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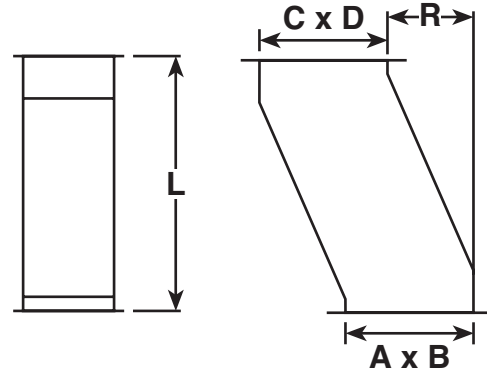
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Radius Offset



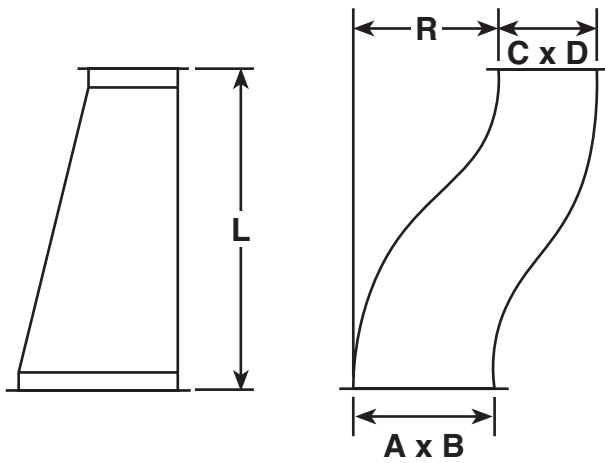
- TDC
- S&D
- Raw
- Dimensions are O.D.

Offset



- TDC
- S&D
- Raw
- Dimensions are O.D.

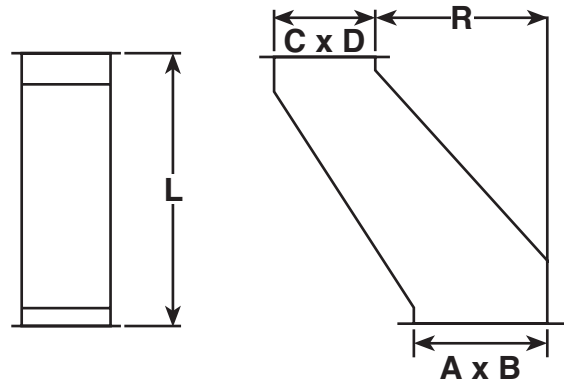
Reducing Offset



- TDC
- S&D
- Raw
- Dimensions are O.D.

Reducing Offset

(Left or Right)



- TDC
- S&D
- Raw
- Dimensions are O.D.

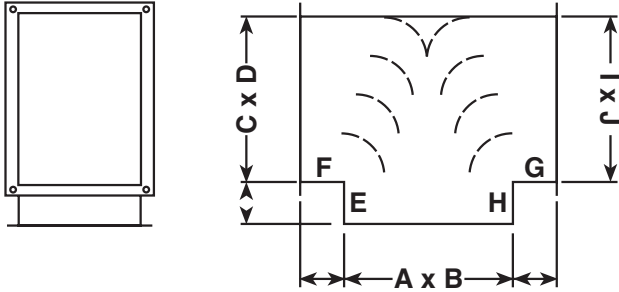


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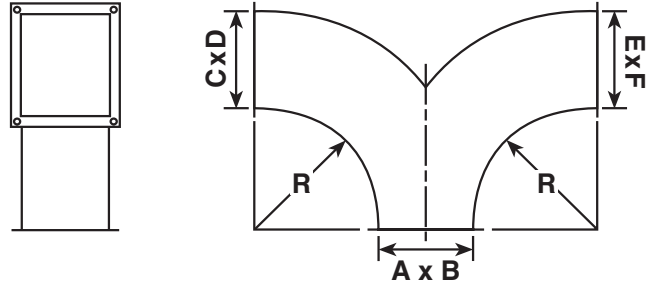
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Bullhead Tee



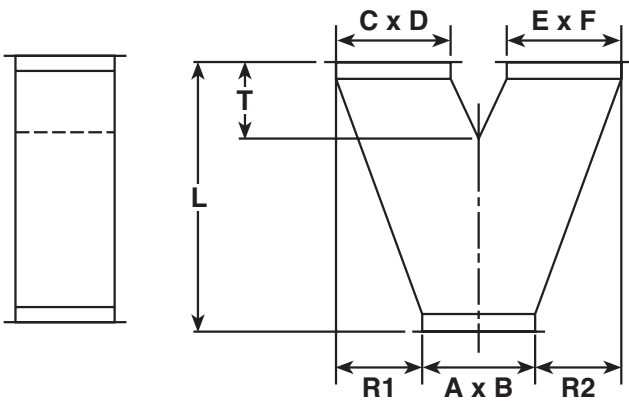
- TDC
- S&D
- Raw
- Dimensions are O.D.

Y-Branch



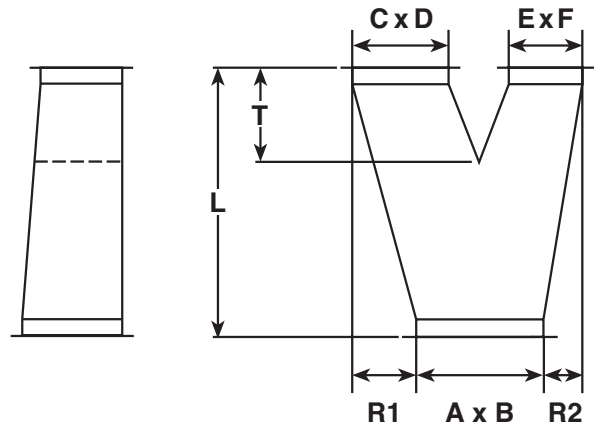
- TDC
- S&D
- Raw
- Dimensions are O.D.

Pants



- TDC
- S&D
- Raw
- Dimensions are O.D.

Pants



- TDC
- S&D
- Raw
- Dimensions are O.D.



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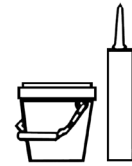
DP1010 WATER BASED DUCT SEALANT - Gray

A smooth, water based, premium quality, U.L. 181 Classified, high velocity duct sealant for commercial and residential use. Available in 1/12 gallon tubes or 1 gallon pail.

Recommended Uses:

- Sealing metal joints on air duct where a smooth finish is desired
- Sealing connections on flexible duct or fiberglass ductboard
- Intended for use on duct systems which do not exceed 15 inches water column pressure

Meets LEED Requirements for Low Emitting Materials



DP1090 SOLVENT BASED DUCT SEALANT

A premium quality UL Classified high velocity duct sealant, for commercial use. Available in 1/12 gallon tubes or 1 gallon pail.

Recommended Uses:

- DP1090 is formulated for sealing low, medium and high-pressure metal duct systems in commercial and industrial applications
- DP1090 is intended for use on duct systems which do not exceed 15 inches water column pressure
- DP1090 is ideal for sealing rectangular, round, oval and metal flexible ducts.

Meets LEED Requirements for Low Emitting Materials



DP2501 WATER BASED DUCT LINER ADHESIVE - Clear

A water based, premium quality U.L. Classified duct liner adhesive. DP 2501 is specifically formulated for roller and low pressure spray applications.

Available in 5 gallon pails, 54 gallon drum

Recommended Uses:

- Bonding fibrous duct liner installation to galvanized ductwork
- Sealing cut edges of fiberglass insulation
- Bonding kraft backed foil coverings to fiberglass and urethane flat stock or pipe insulation
- Bonding multiple layers of fibrous insulation board



DP2502 WATER BASED DUCT LINER ADHESIVE - Clear

A water based, premium quality U.L. Classified duct liner adhesive. DP 2502 is a higher viscosity version of DP 2501. DP 2502 is specifically formulated for spray, brush, and roller applications.

Available in 5 gallon pails, 54 gallon drum

Recommended Uses:

- Bonding fibrous duct liner installation to galvanized ductwork
- Sealing cut edges of fiberglass insulation
- Bonding kraft backed foil coverings to fiberglass and urethane flat stock or pipe insulation
- Bonding multiple layers of fibrous insulation board



DP 2590 SOLVENT BASED SPRAY ADHESIVE

A premium quality, solvent based, fast drying, non-flammable, pressure sensitive insulation adhesive. DP 2590 is supplied in a convenient spray system which is both portable and cost effective.

Available in 12# canister or 40# canister. Pro spray gun and 12' hose sold separately.

Recommended Uses:

- Bonding fiberglass duct liner to galvanized steel, stainless steel and aluminum HVAC duct
- Bonding fiberglass insulation to the exterior of galvanized steel, stainless steel and aluminum HVAC duct
- Sealing and bonding laps in HVAC duct insulation
- Adhering kraft backed foil and foil jacketing to urethane foam



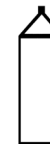
DP 77 INDUSTRIAL SPRAY ADHESIVE

Solvent based industrial strength aerosol duct liner spray adhesive.

Available in 12 oz. spray cans.

Recommended Uses:

- Bonding galvanized metal, wood, fiberglass, foam rubber, cardboard, textiles, cloth and plastics



DP 2" CHIP BRUSH



DUCT TAPE

Product Number	Description Application	Colors	Adhesive	Total Thickness mils (mm)	Tensile Strength lbs/in (Kg/cm)	Adhesion To Steel ozs/in (g/cm)
557 Printed	Premium performance duct tape specifically engineered for flex duct systems. Meets UL 181B-FX & UL 723	Grey	Natural Rubber	14.0 (0.36)	45 (8.01)	50 (560)
229	Heavy duty contractor grade duct tape with extra thick adhesive for conformability Meets UL 723	Grey	Natural Rubber	12.0 (0.30)	25 (4.45)	70 (784)
339 Printed	Dead-soft aluminum foil backed duct tape for fiberglass duct systems. UL 181 A-P approved	Silver	Acrylic	4.4 (0.11)	25 (4.45)	72 (806)
330	All-weather duct tape, working temperature range of -35°F to 260°F, plain dead soft aluminum foil, extremely conformable.	Silver	Acrylic	3.5 (0.08)	20 (3.56)	45 (504)



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