

## Single-Wall Round UNI-GASKET™ Fitting and Related Product Dimensions

McGill AirFlow Corporation offers UNI-GASKET fittings featuring an EPDM rubber gasket that provides a reliable, airtight seal. Testing has shown that UNI-GASKET fittings meet or exceed SMACNA<sup>1</sup> Class 3 for leakage at - 20 in. wg to + 20 in. wg. The galvanized steel construction<sup>5</sup> meets SMACNA's 10 in. wg positive pressure standards<sup>2</sup>. UNI-GASKET fittings are compatible and available with all of McGill AirFlow's round, single-wall duct types in 1-inch increments for 3- through 12-inch diameters and in 2-inch increments in 14- through 24-inch diameters.

**Table 1 - Positive Pressure, Single-wall, Round Duct and Fitting, Galvanized Steel Gauges**

Diameters (inches)	UNI-SEAL™ Spiral Lockseam Duct <sup>3</sup>	UNI-RIB® Spiral Lockseam with Standing Rib Duct <sup>3,4</sup>	UNI-GASKET™ Fittings
3	28	NA	26
4	28	NA	26
5	28	NA	26
6	28	NA	26
7	28	NA	26
8	28	NA	26
9	28	28	26
10	28	28	26
11	26	28	24
12	26	28	24
14	26	28	24
16	24	28	22
18	24	28	22
20	24	28	22
22	24	28	22
24	24	28	22

<sup>1</sup> SMACNA is the Sheet Metal and Air Conditioning Contractors National Association.

<sup>2</sup> McGill AirFlow single-wall, round duct and ungasketed fittings are available in diameters of 3 through 90 inches in many gauges of various materials. See the Single-Wall and Single-Wall Lined, Round Duct and Fittings Dimensions booklet for the full range of available sizes.

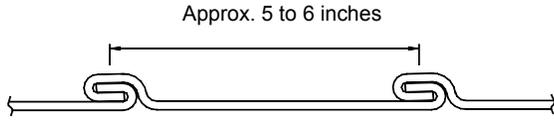
<sup>3</sup> Standard lengths of round UNI-SEAL and UNI-RIB duct are 10, 12, and 20 feet; longer lengths are available on special order.

<sup>4</sup> The rating of +10 in. wg for Spiral Lockseam with Standing Rib Duct is based on McGill AirFlow laboratory testing.

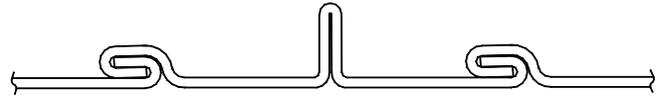
<sup>5</sup> Available in galvanized, paintable galvanized, and SilverGuard™ precoated ductwork with antimicrobial.

**Duct Construction**

**Spiral Lockseam**

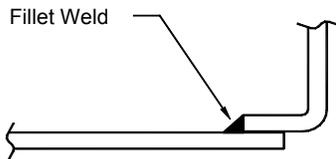


**Spiral Lockseam with Standing Rib**

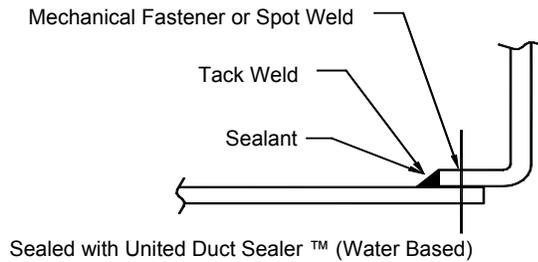


**Fitting Construction**

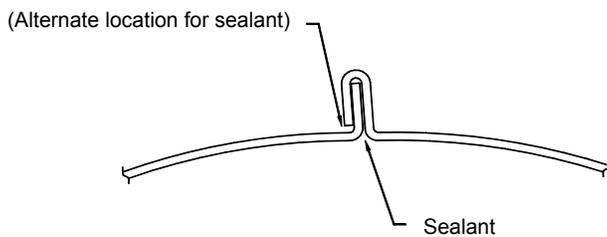
**Solid Welded**



**Spot Welded, Tack Welded or Mechanically Fastened**



**Standing Lockseam**



**Resistance Welded Lap Seam**



## **Dimensioning:**

All alphanumeric 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** - Centerline radius
- S** - Slip-fit dimension of a fitting
- F, H, J, L, Q, V, Z, m, α** - Miscellaneous dimensions (refer to specific drawings)
- θ or Φ** - Angular measurements (refer to specific drawings)
- #** - Number of elbow gores

## **Designations:**

McGill AirFlow uses a designation system that simplifies product nomenclature. Gasketed fitting products can be accurately identified using a concise alphanumeric designator. Each character in the designation defines a characteristic of the product.

Example: SR0PT refers to a single-wall (S), round (R), 10 in. wg positive pressure class (0), straight tee tap (PT).

1<sup>st</sup> Character: **Wall Configuration - SR0PT**

**S** = Single-wall

2<sup>nd</sup> Character: **Shape - SR0PT**

**R** = Round

3<sup>rd</sup> Character: **Pressure Class - SR0PT**

**0** = +4 to +10 in. wg

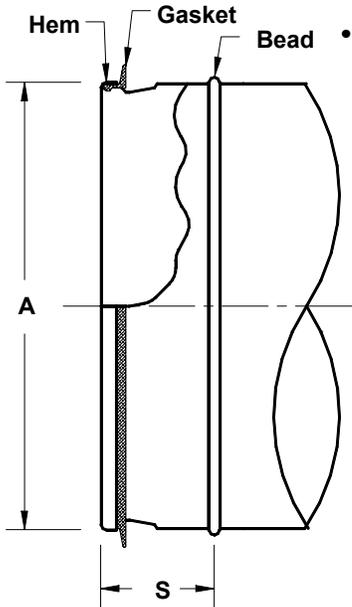
**S** = standard gauge of product type

4<sup>th</sup> and Subsequent Characters: **Product Type - SR0PT**

**PT** = Straight Tee Tap (90<sup>E</sup> branch tap)

**General Notes:**

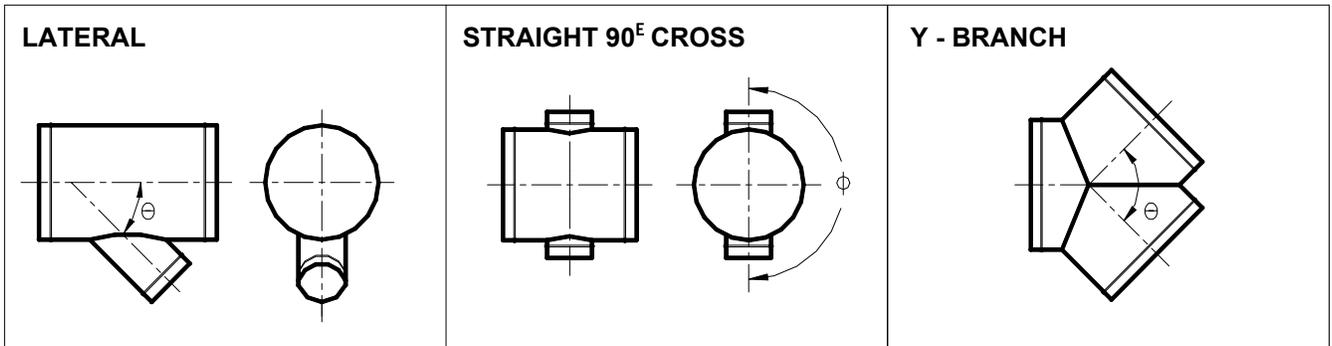
- Dimensions other than diameters are held within a  $\pm 1/4$ -inch tolerance.



- Unless ordered otherwise, a given diameter of single-wall, round fittings is sized to slip fit into the same diameter of single-wall, round duct.

Where:  $S = 1 \frac{1}{2}$  inches for diameters  $\# 8$  inches  
 $S = 1 \frac{5}{8}$  inches for diameters  $\$ 9$  inches

- Galvanized steel meets ASTM Numbers A653 and A924
- Unless ordered otherwise, the branch taps of laterals, crosses, lateral crosses and Y-branches are installed at standard angles to the fittings' bodies and to each other, as shown in the following drawings:



For all:

Laterals -  $\theta$  standard = 45<sup>E</sup>

Straight Crosses -  $\theta$  standard = 90<sup>E</sup>,  $\Phi$  standard = 180<sup>E</sup>

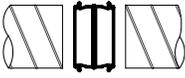
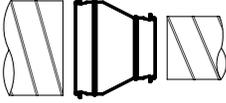
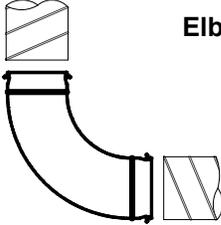
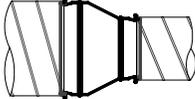
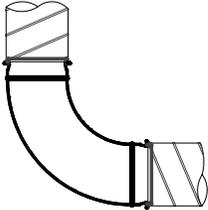
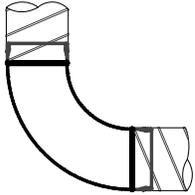
Lateral Crosses -  $\theta$  standard = 45<sup>E</sup>,  $\Phi$  standard = 180<sup>E</sup>

Y - Branch -  $\theta$  standard = 90<sup>E</sup>

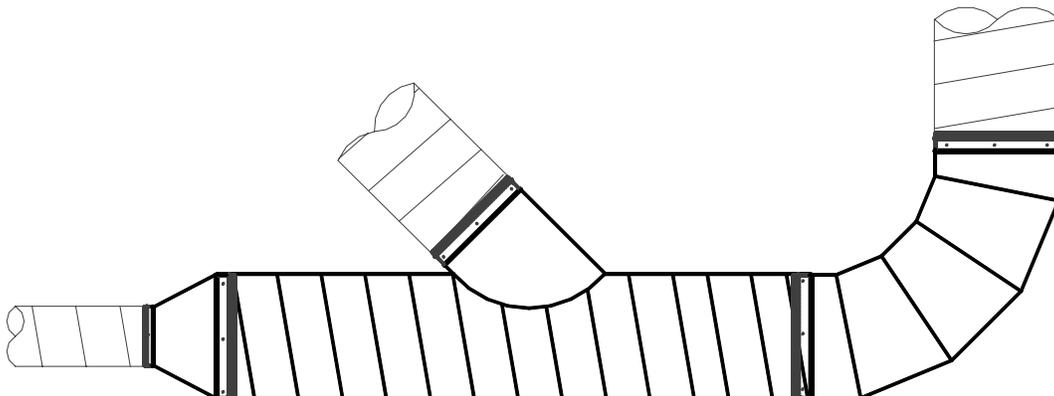
**Note:**  $\Phi$  is the included angle between taps as viewed in cross section (standard is 180<sup>E</sup>). When ordering fittings of nonstandard  $\Phi$ , please include an end view sketch.

**Installation:**

- Make sure the end of the duct or gasketed fitting is not damaged.
- Insert the gasketed fitting into the spiral duct up to the fitting bead. Turning the fitting slightly as it is inserted may make installation easier.
- Secure the fitting to the duct with self-tapping screws uniformly located around the circumference according to SMACNA recommendations. Use at least one screw for every 15 inches of circumference with a minimum of three screws for 14-inch or smaller diameters.
- The following chart illustrates some typical gasketed assemblies:

Coupling	Reducer	Elbow
 <p style="text-align: right;">1</p>	 <p style="text-align: right;">1</p>	 <p style="text-align: right;">1</p>
 <p style="text-align: right;">2</p>	 <p style="text-align: right;">2</p>	 <p style="text-align: right;">2</p>
 <p style="text-align: right;">3</p>	 <p style="text-align: right;">3</p>	 <p style="text-align: right;">3</p>

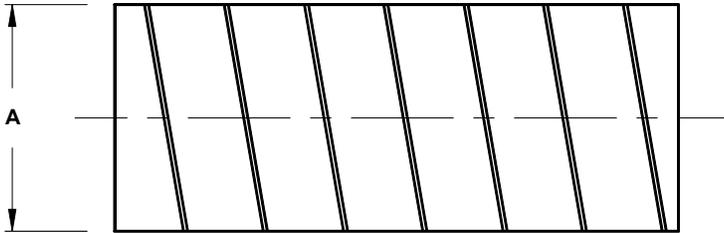
- The following figure illustrates gasketed fittings assembled to ductwork with a manifolded tap:



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**UNI-SEAL DUCT**  
(Spiral lockseam)

**Designation:**  
**SR0SD**

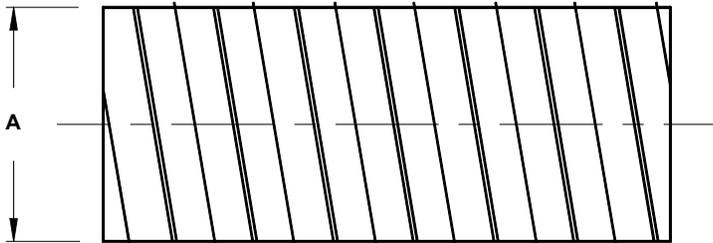


**Diameters:**  
3-inch minimum  
84-inch maximum

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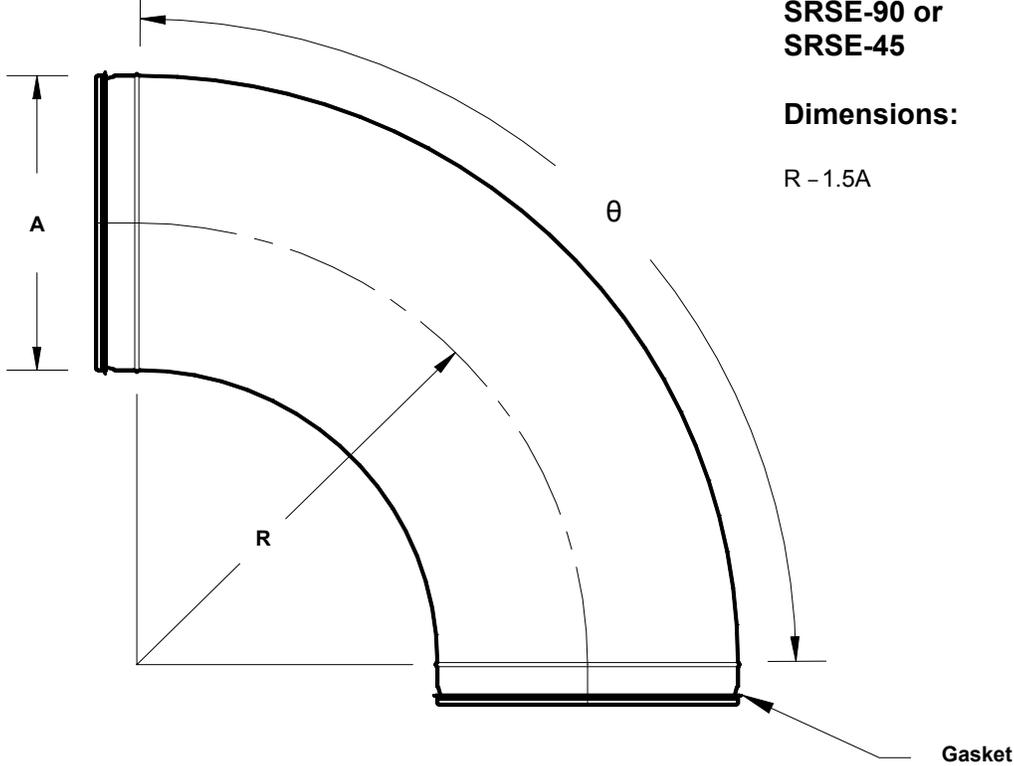
**UNI-RIB DUCT**  
(Spiral lockseam with a standing rib between the seams)

**Designation:**  
**SRSRD**



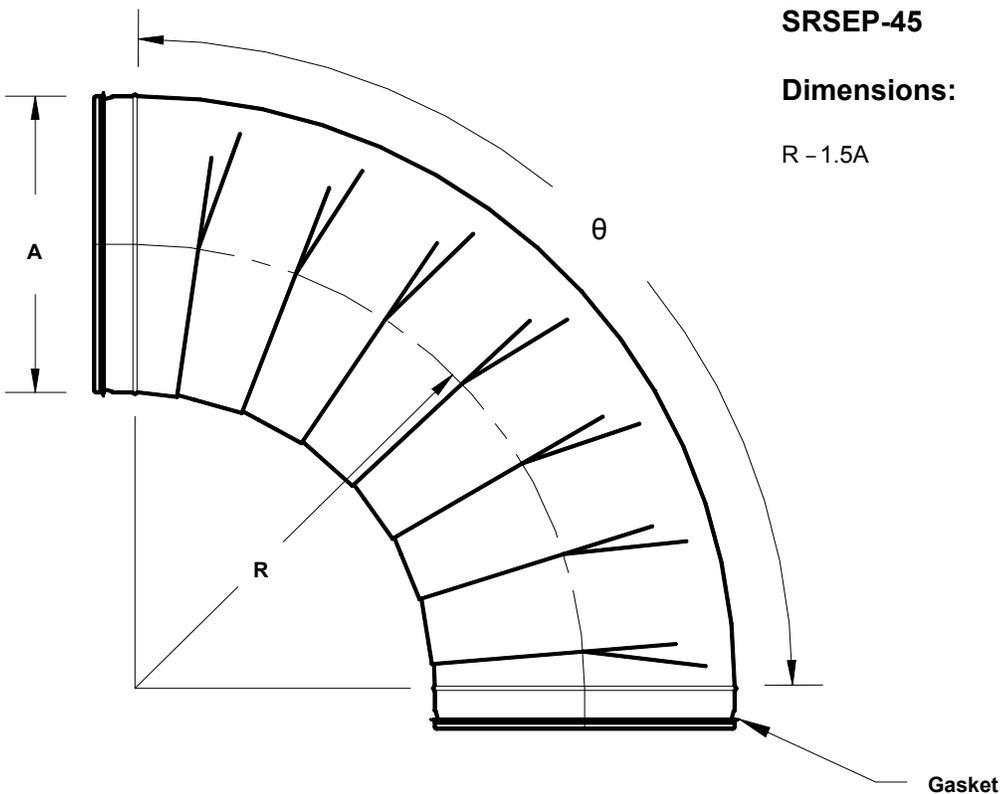
**Diameters:**  
9-inch minimum  
60-inch maximum

## PRESSED ELBOW



Available Diameters (inches)	
$\theta = 45^{\circ}$ (inches)	$\theta = 90^{\circ}$ (inches)
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
14	NA

## PLEATED ELBOW



Available Diameters (inches)	
$\theta = 45^{\circ}$ (inches)	$\theta = 90^{\circ}$ (inches)
4	4
5	5
6	6
7	7
8	8
10	10
11	11
12	12
14	14
16	NA

GORED ELBOW

Designation:  
SR0E#- $\theta$

Where:

$\theta$	Number of gores (#)
0-35 <sup>E</sup>	2
36-71 <sup>E</sup>	3
72-90 <sup>E</sup>	5

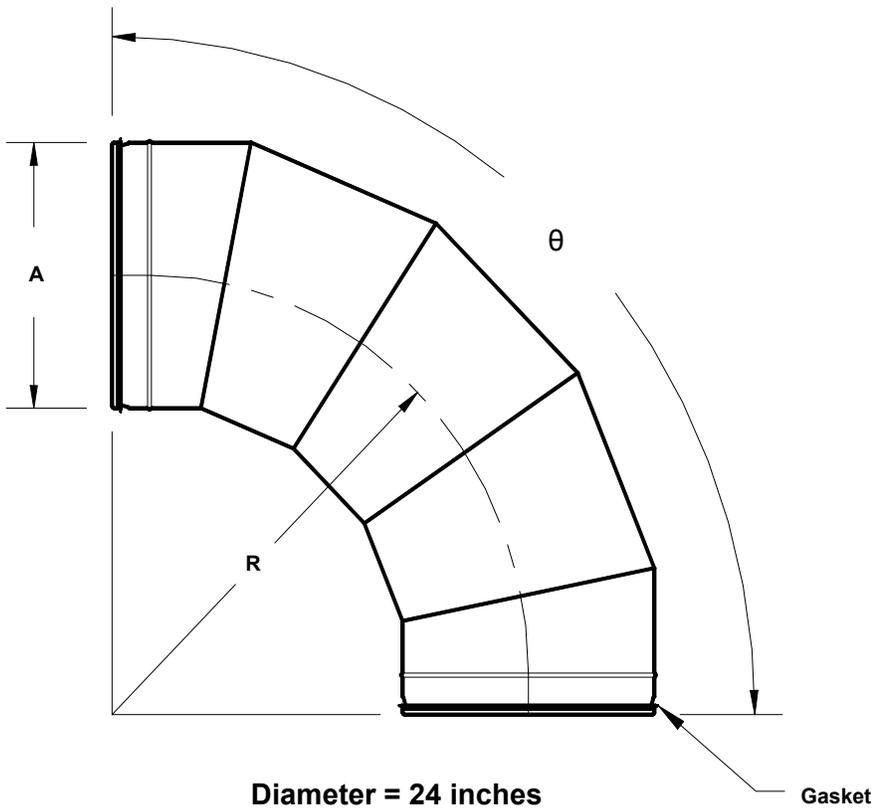
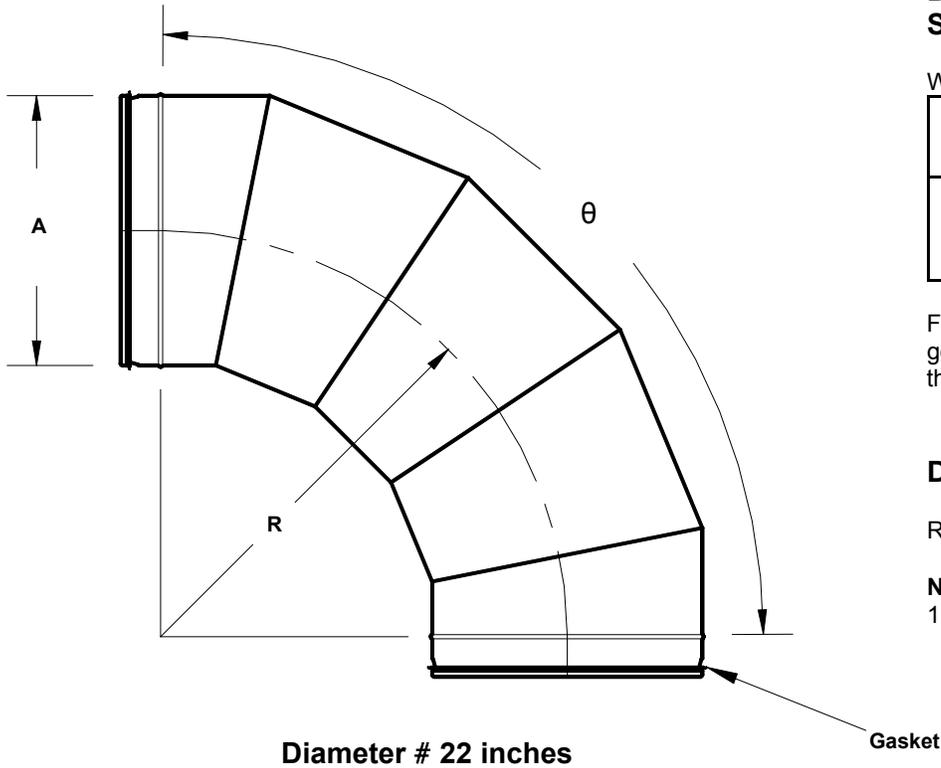
For elbows where  $\theta$  exceeds 90<sup>E</sup>, add one gore for each additional 18<sup>E</sup> or fraction thereof.

Dimensions:

R - 1.5A

Note:

- McGill AirFlow UNI-SEAM (standing seam) construction will be used on the following available sizes: 9 through 12 in 1-inch increments, 14 through 24-inches in 2-inch increments.
- Nonstandard elbows with a different centerline radius and a different number of gores are available.

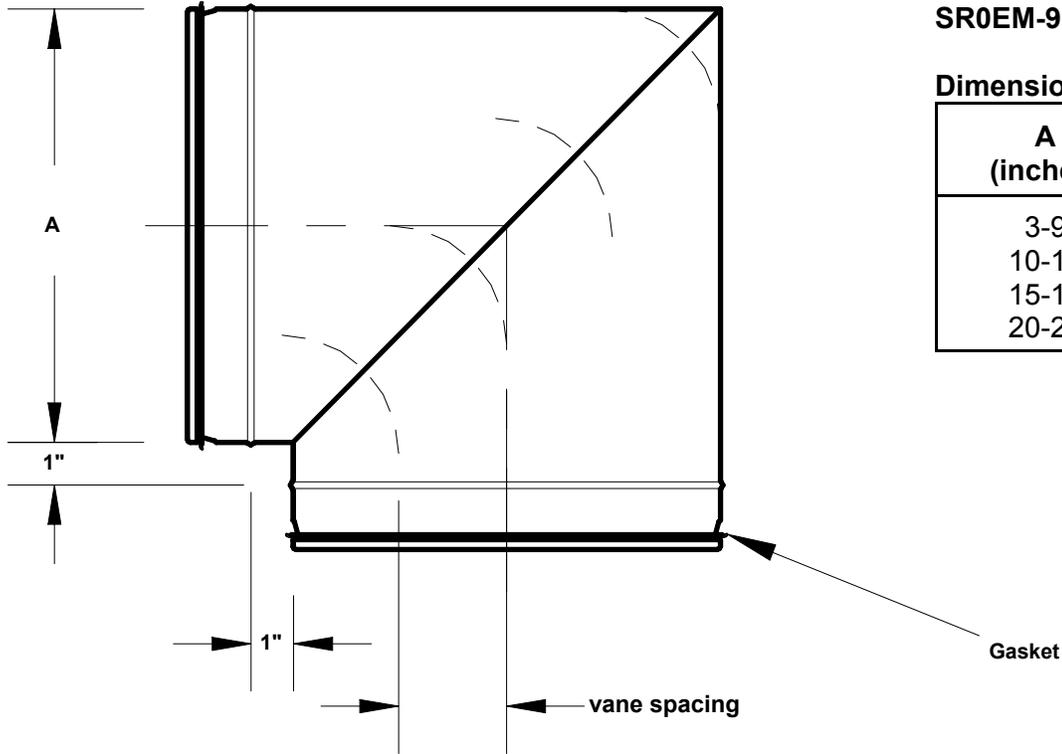


MITERED 90° ELBOW WITH VANES

Designation:  
 SR0EMV-90  
 SR0EM-90 (without vanes)

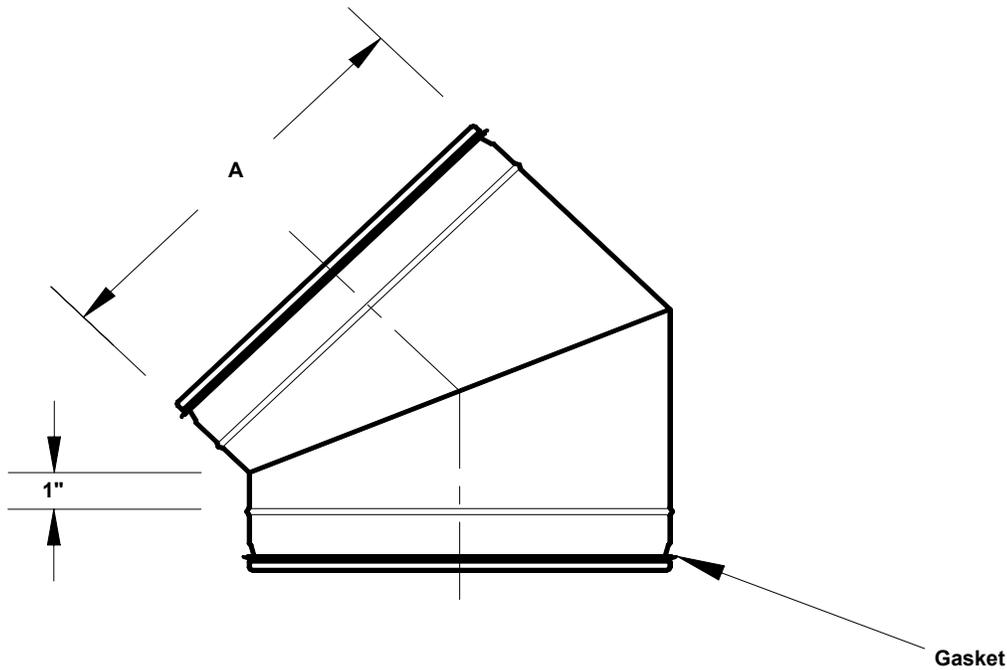
Dimensions:

A (inches)	Number of vanes (#)
3-9	2
10-14	3
15-19	4
20-24	5



MITERED 45° ELBOW

Designation:  
 SR0EM-45

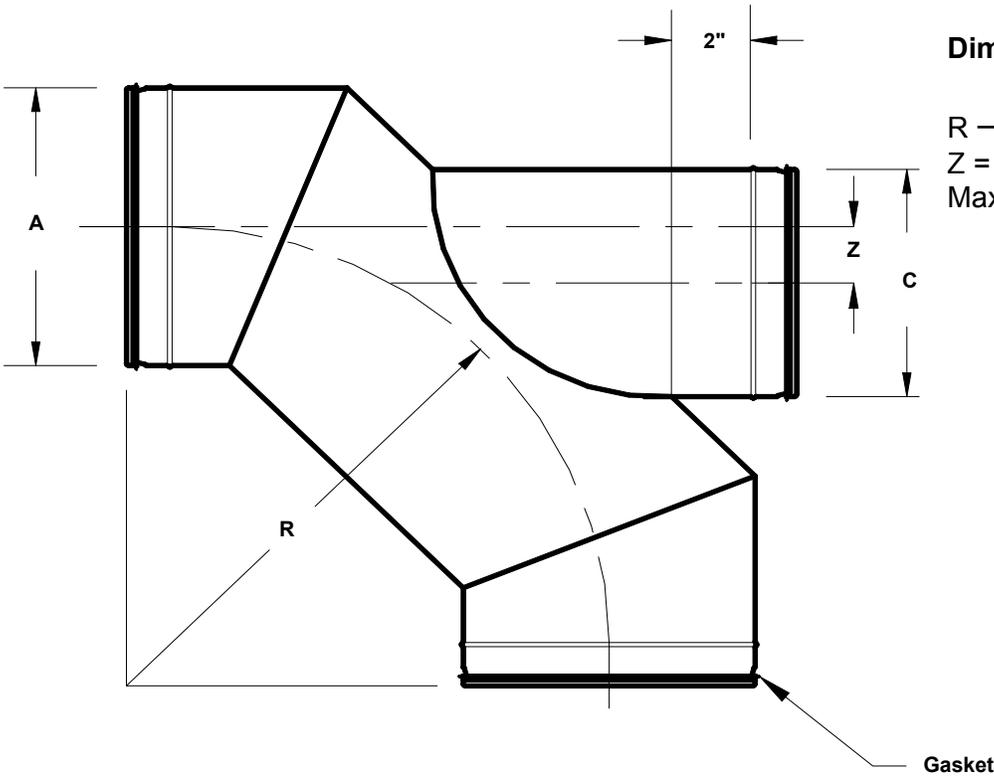


HEEL-TAPPED 90° ELBOW

Designation:  
SR0ET3-90

Dimensions:

$R = 1.5A$   
 $Z = 0.086A$   
Maximum  $C = A$

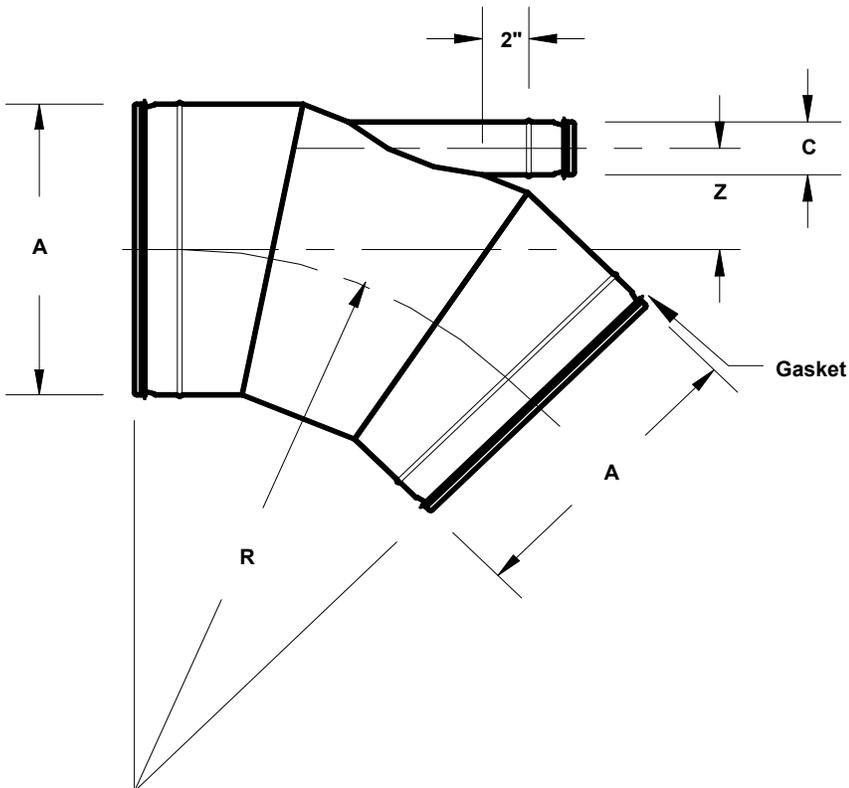


HEEL-TAPPED 45° ELBOW

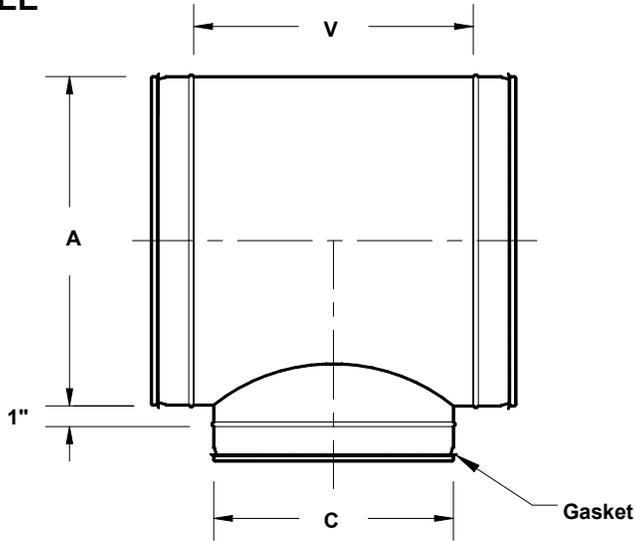
Designation:  
SR0ET3-45

Dimensions:

$R = 1.5A$   
 $Z = 0.348A$   
Maximum  $C = 0.3A$



**STRAIGHT TEE**

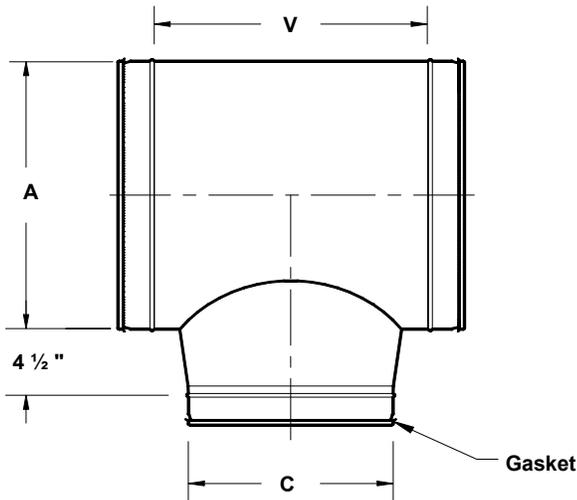


**Designation:**  
SR0T

**Dimensions:**

$V = C + 2$   
Maximum  $C = A$

**CONICAL TEE**

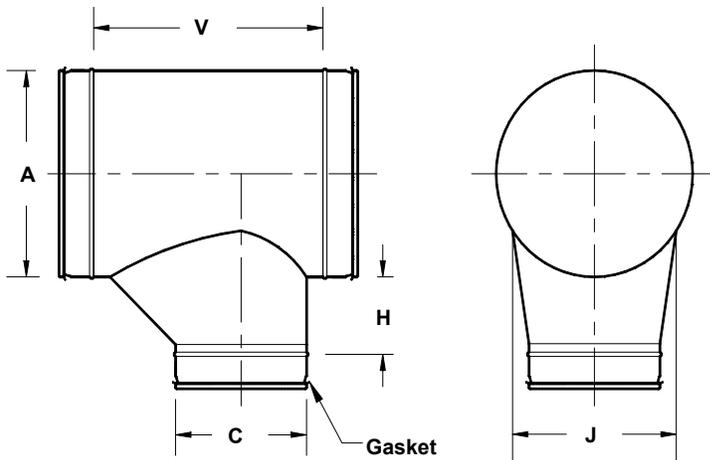


**Designation:**  
SR0TC

**Dimensions:**

$V = C + 4$   
Maximum  $C = A - 2$

**LO-LOSS™ TEE**



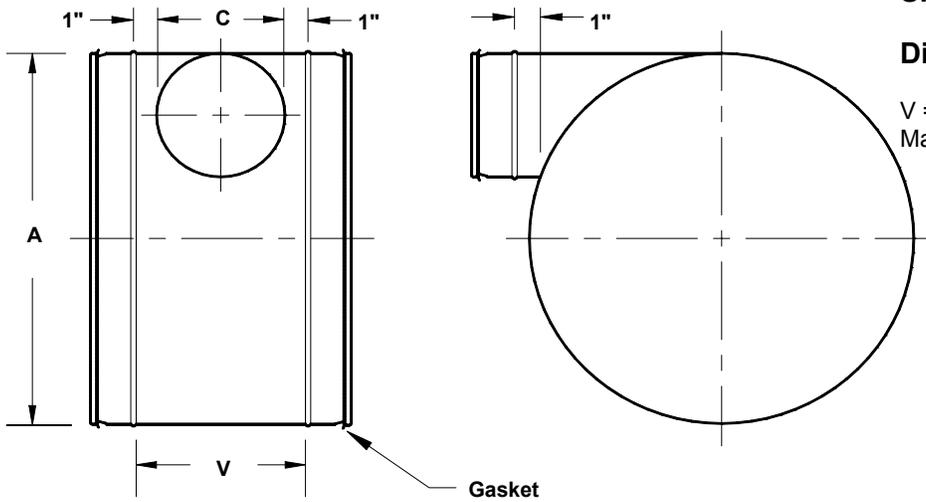
**Designation:**  
SR0TL

**Dimensions:**

$V = C + H + 1\frac{1}{2}$   
 $J = C + 2$  (for  $C \# A - 2$ )  
 $J = C$  (for  $C > A - 2$ )  
Maximum  $C = A$

Available Tap (C) Sizes (inches)	H (inches)
3-8	4½
9-14	7½
16- 24	10½

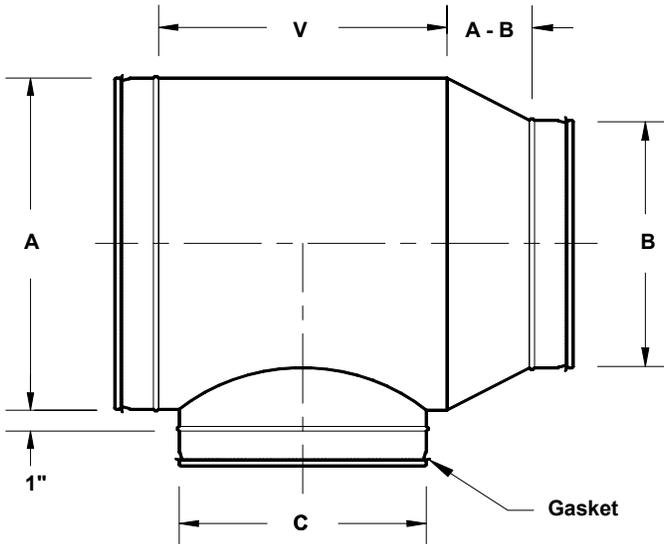
TANGENTIAL TEE



Designation:  
SR0TT

Dimensions:  
 $V = C + 2$   
Maximum  $C = A$

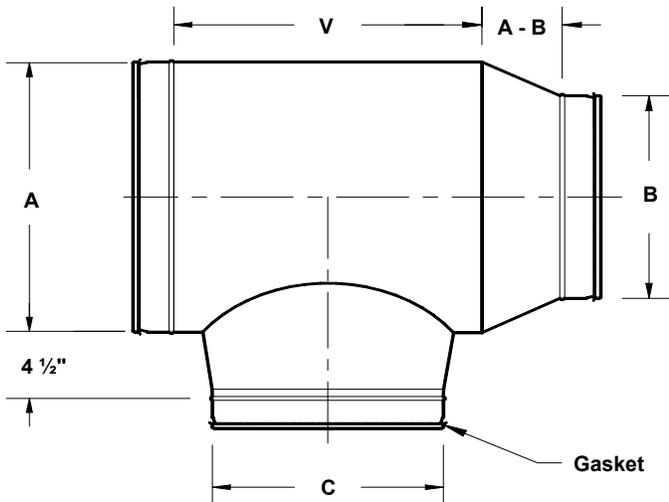
REDUCING STRAIGHT TEE



Designation:  
SR0TR

Dimensions:  
 $V = C + 2$   
Maximum  $C = A$   
 $A - B$  (1-inch minimum, 12-inch maximum)

REDUCING CONICAL TEE

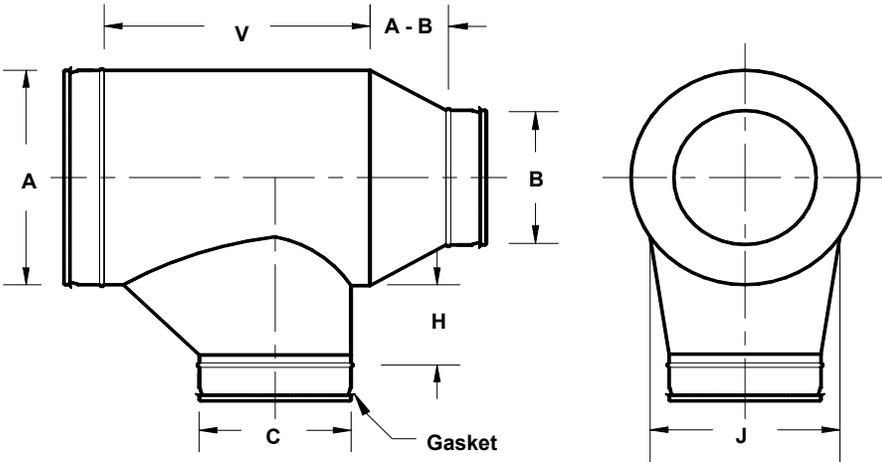


Designation:  
SR0TCR

Dimensions:  
 $V = C + 4$   
Maximum  $C = A - 2$   
 $A - B$  (1-inch minimum, 12-inch maximum)

# TEES

## REDUCING LO-LOSS™ TEE



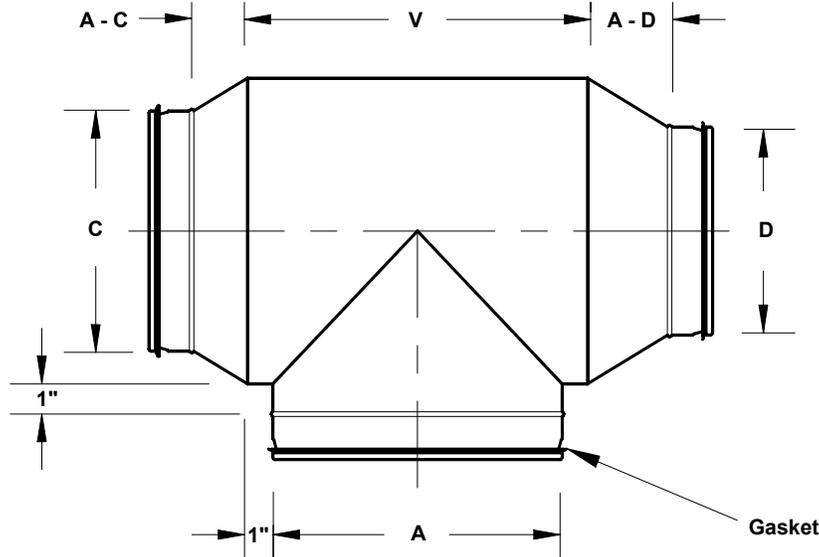
**Designation:**  
SR0TLR

**Dimensions:**

$V = C + H + 1\frac{1}{2}$   
 $J = C + 2$  (for  $C \neq A - 2$ )  
 $J = C$  (for  $C > A - 2$ )  
 Maximum  $C = A$   
 $A - B$  (1-inch minimum 12-inch maximum)

Available Tap (C) Sizes (inches)	H (inches)
3-9	4½
9-14	7½
16- 24	10½

## REDUCING BULLHEAD TEE

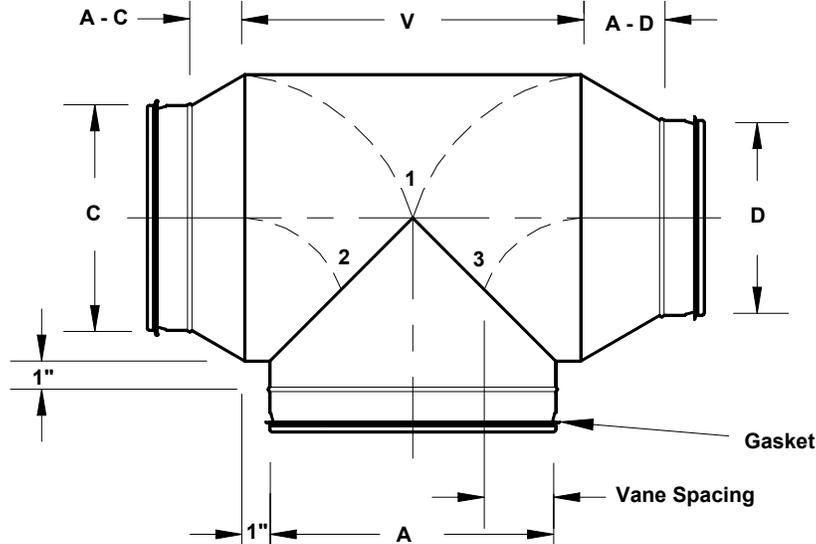


**Designation:**  
SR0TBR

**Dimensions:**

$V = A + 2$   
 $A - C$  or  $A - D$   
 (1-inch minimum or 12-inch maximum)

## REDUCING BULLHEAD TEE WITH VANES



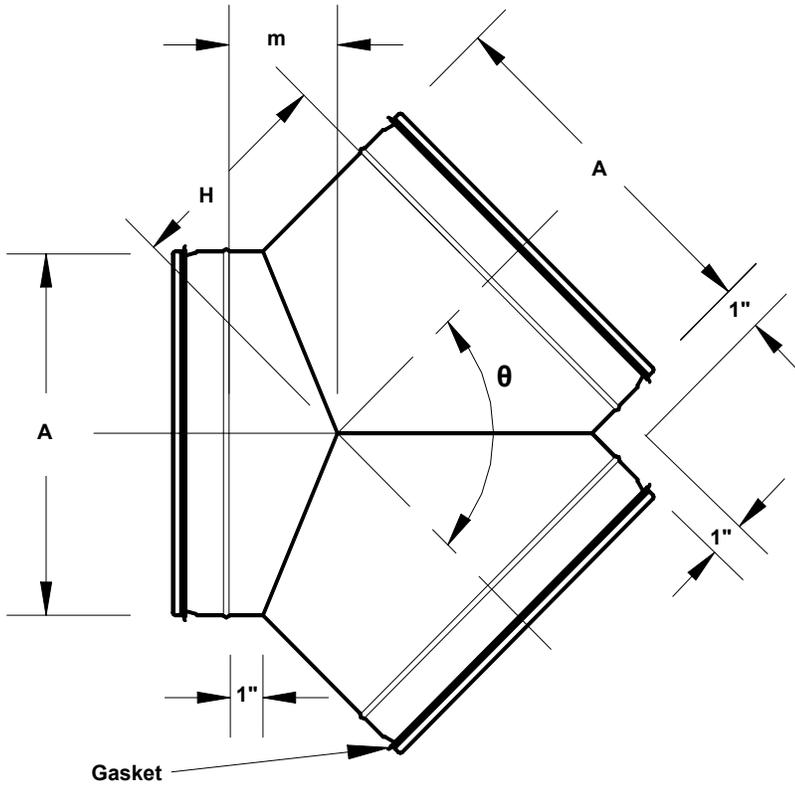
**Designation:**  
SR0TBVR

**Dimensions:**

$V = A + 2$   
 $A - C$  or  $A - D$   
 (1-inch minimum or 12-inch maximum)

A (inches)	Number of Vanes (#)
3-6	1
7-9	3
10-24	5

## Y-BRANCH



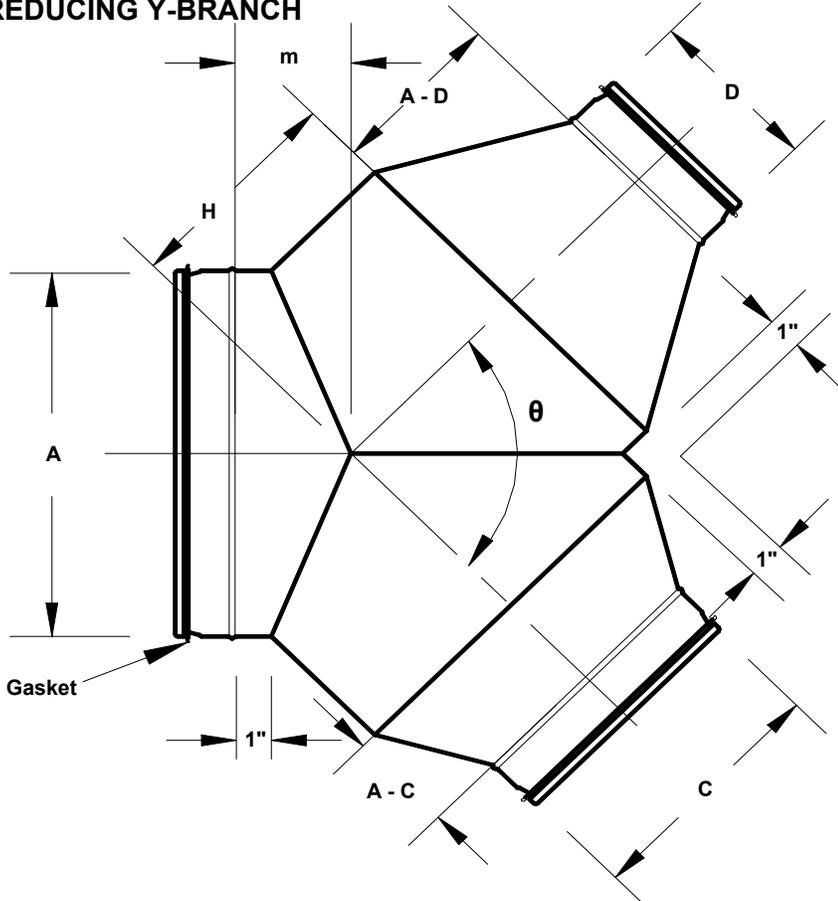
**Designation:**  
**SR0Y**  
 (-θ if θ ...90E)

**Dimensions:**

$$H = \frac{A}{2 \tan \frac{\theta}{2}} + 1$$

$$m = \frac{A}{2} \tan \frac{\theta}{4}$$

## REDUCING Y-BRANCH



**Designation:**  
**SR0YR**  
 (-θ if θ ...90E)

**Dimensions:**

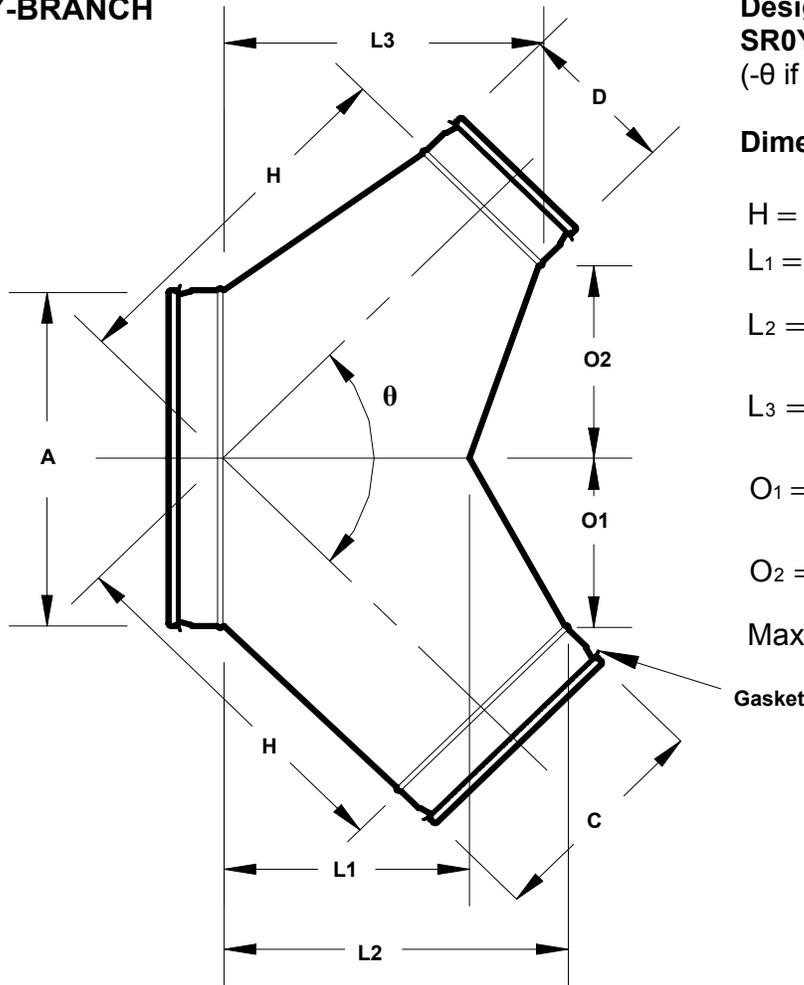
$$H = \frac{A}{2 \tan \frac{\theta}{2}} + 1$$

$$m = \frac{A}{2} \tan \frac{\theta}{4}$$

A - C or A - D  
 (1-inch minimum or 12-inch maximum)

Maximum C or D = A

## TAPERED Y-BRANCH



**Designation:**  
**SR0YP**  
 (-θ if θ ...90E)

**Dimensions:**

$$H = 1.25A$$

$$L_1 = A$$

$$L_2 = [Hx\cos\frac{\theta}{2}] + [\frac{C}{2}x\sin\frac{\theta}{2}]$$

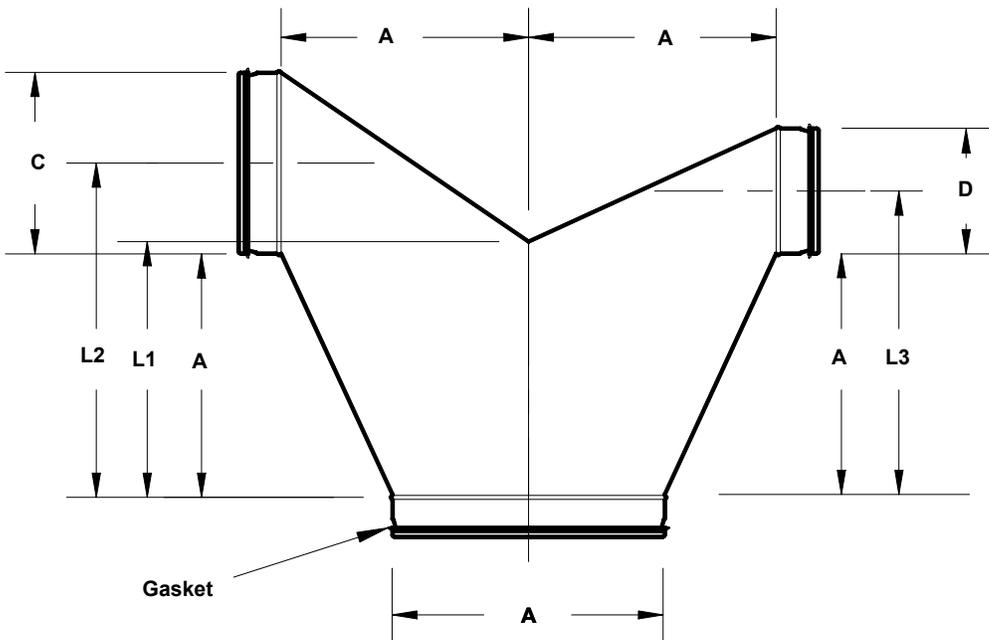
$$L_3 = [Hx\cos\frac{\theta}{2}] + [\frac{D}{2}x\sin\frac{\theta}{2}]$$

$$O_1 = [Hx\sin\frac{\theta}{2}] - [\frac{C}{2}x\cos\frac{\theta}{2}]$$

$$O_2 = [Hx\sin\frac{\theta}{2}] - [\frac{D}{2}x\cos\frac{\theta}{2}]$$

Maximum C or D = A

## VEE FITTING



**Designation:**  
**SROVE**  
**SROVER**  
 (reducing shown)

**Dimensions:**

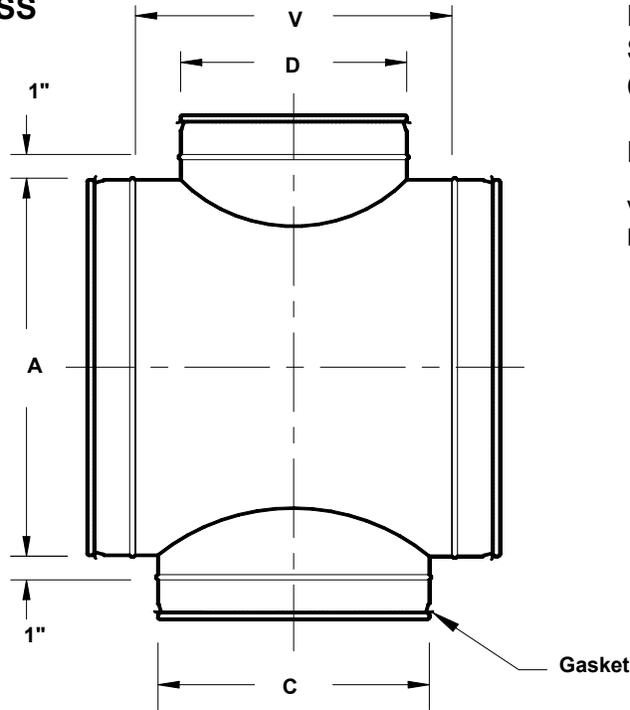
$$L_1 = A$$

$$L_2 = A + (C/2)$$

$$L_3 = A + (D/2)$$

Maximum C or D = A

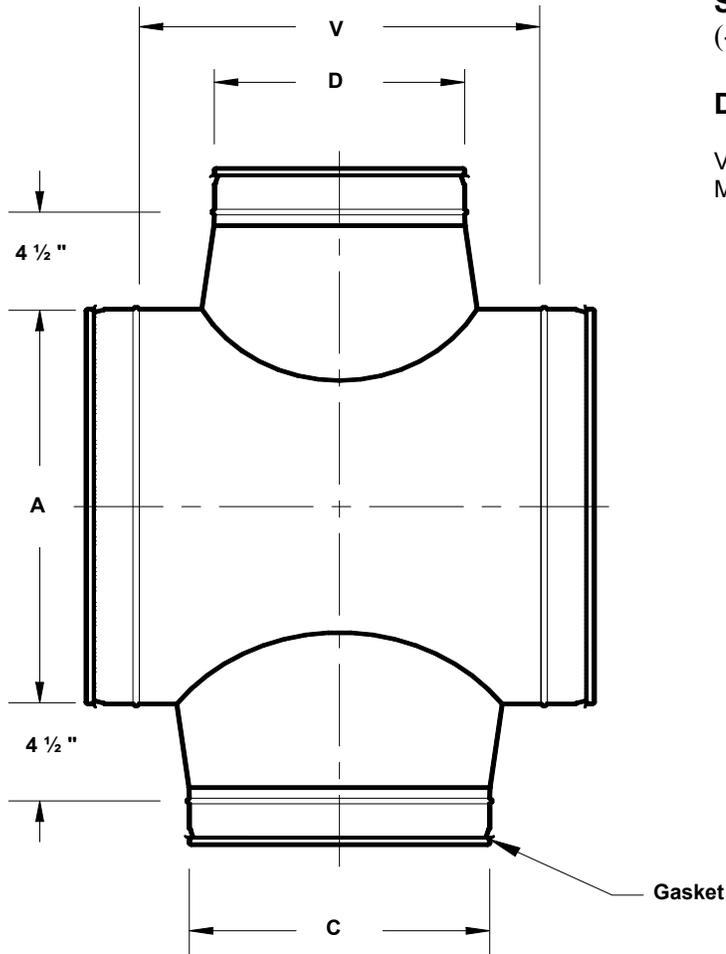
STRAIGHT 90<sup>E</sup> CROSS



Designation:  
**SR0TX**  
(-Φ if Φ ...180E)

Dimensions:  
 $V = C + 2$   
Maximum C or D = A

CONICAL 90<sup>E</sup> CROSS



Designation:  
**SR0TXC**  
(-Φ if Φ ...180E)

Dimensions:  
 $V = C + 4$   
Maximum C or D = A - 2

LO-LOSS™ 90<sup>E</sup> CROSS

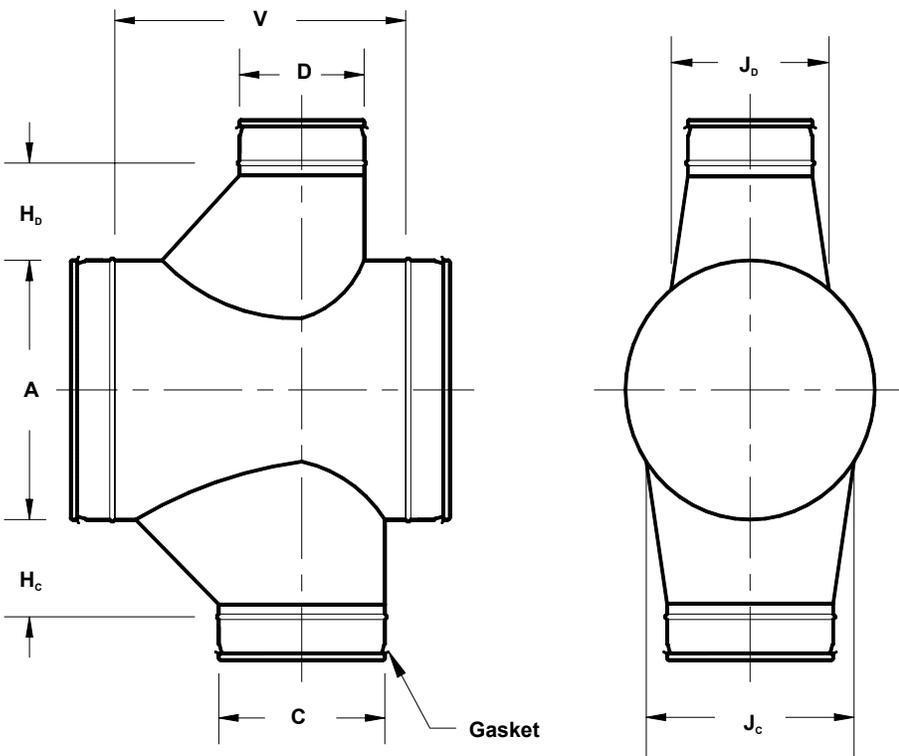
Designation:  
**SR0TXL**  
 (-Φ if Φ ...180E)

Dimensions:

$V = C + H_c + 2$   
 $J_c = C + 2$  (for  $C \# A - 2$ )  
 $J_c = C$  (for  $C > A - 2$ )  
 $J_D = D + 2$  (for  $D \# A - 2$ )  
 $J_D = D$  (for  $D > A - 2$ )

Maximum  $C = A$

C or D Sizes (inches)	H <sub>c</sub> or H <sub>D</sub> (inches)
3-9	4½
9-14	7½
16- 24	10½



REDUCING LO-LOSS™ 90<sup>E</sup> CROSS

Designation:  
**SR0TXLR**  
 (-Φ if Φ ...180E)

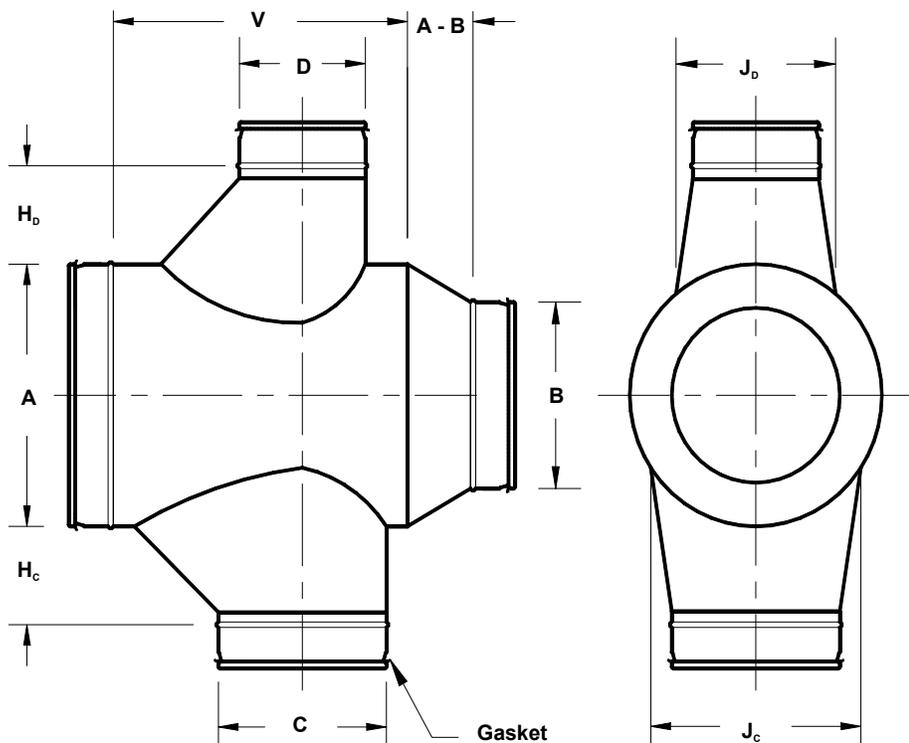
Dimensions:

$V = C + H_c + 2$   
 $J_c = C + 2$  (for  $C \# A - 2$ )  
 $J_c = C$  (for  $C > A - 2$ )  
 $J_D = D + 2$  (for  $D \# A - 2$ )  
 $J_D = D$  (for  $D > A - 2$ )

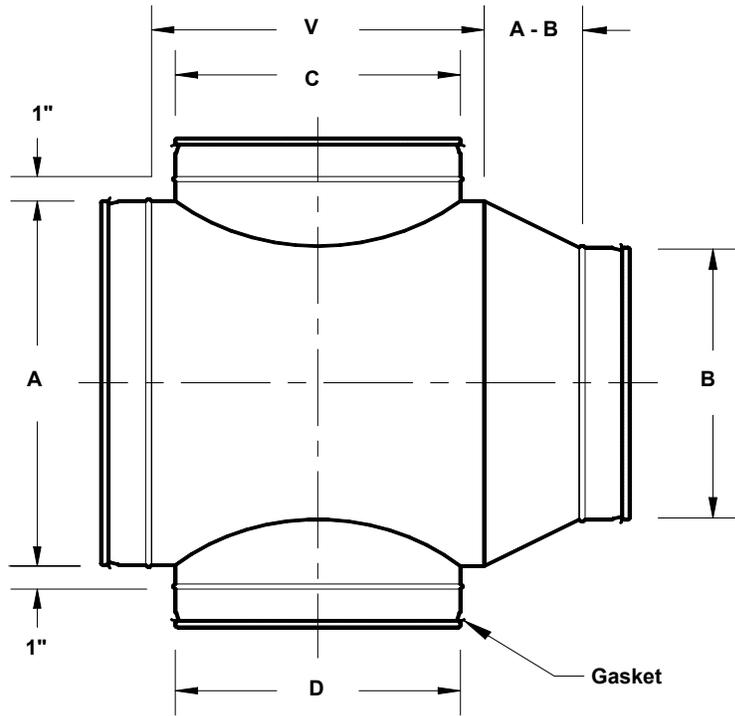
Maximum  $C = A$

A - B (1-inch minimum, 12-inch maximum)

C or D Sizes (inches)	H <sub>c</sub> or H <sub>D</sub> (inches)
3-9	4½
9-14	7½
16- 24	10½



REDUCING STRAIGHT CROSS

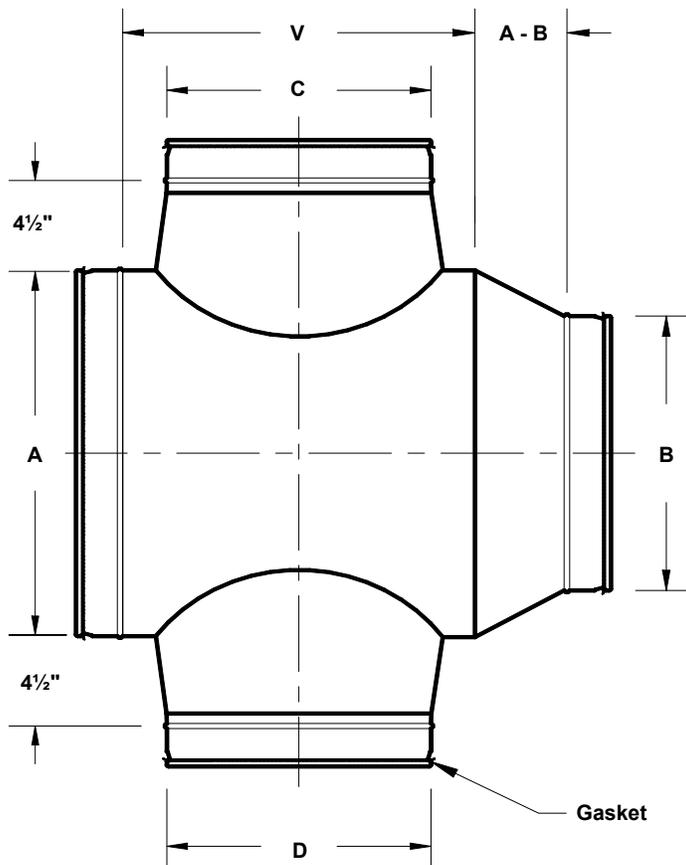


Designation:  
**SR0TXR**  
 (-Φ if Φ ...180E)

Dimensions:

$V = C + 2$   
 Maximum C or D = A  
 A - B (1-inch minimum, 12-inch maximum)

REDUCING CONICAL CROSS



Designation:  
**SR0TXCR**  
 (-Φ if Φ ...180E)

Dimensions:

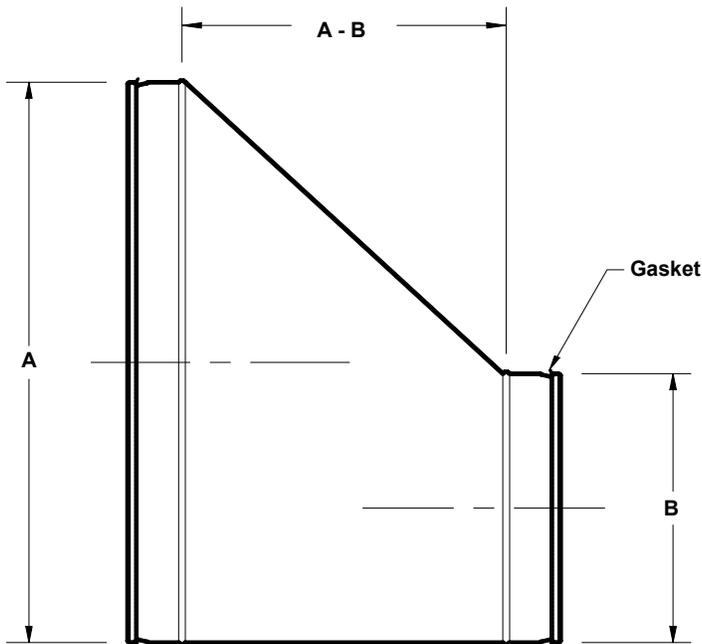
$V = C + 4$   
 Maximum C = A - 2  
 A - B (1-inch minimum, 12-inch maximum)

**ECCENTRIC REDUCER**

**Designation:**  
**SR0RE**

**Dimensions:**

A - B (4-inch minimum 12-inch maximum)

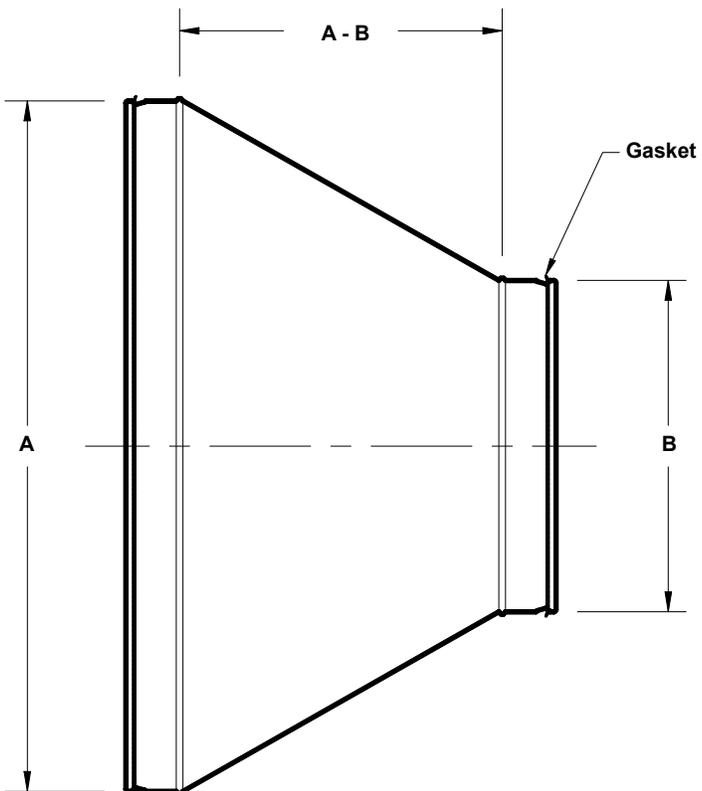


**CONCENTRIC REDUCER**

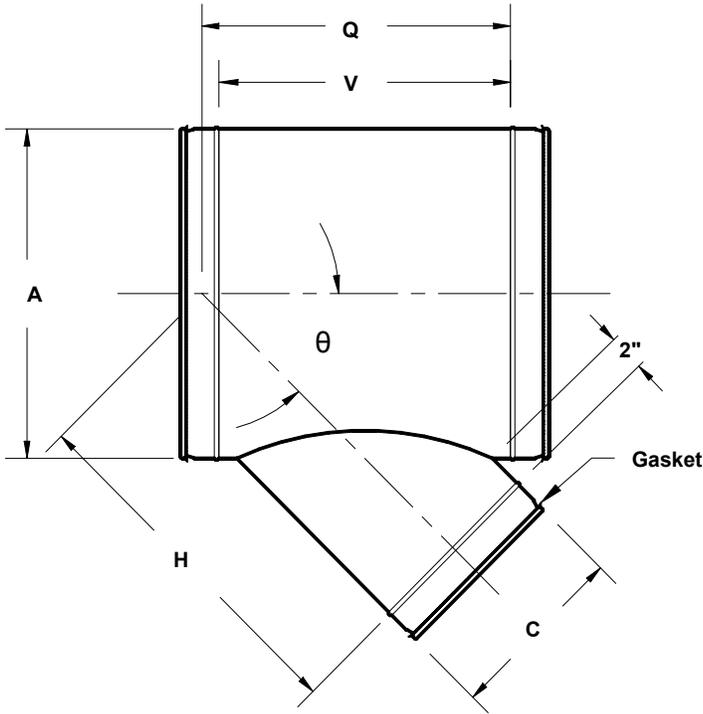
**Designation:**  
**SR0R**

**Dimensions:**

A - B (1-inch minimum 12-inch maximum)



## STRAIGHT LATERAL



**Designation:**

**SR0L**

(-θ if θ ...45E)

**Dimensions:**

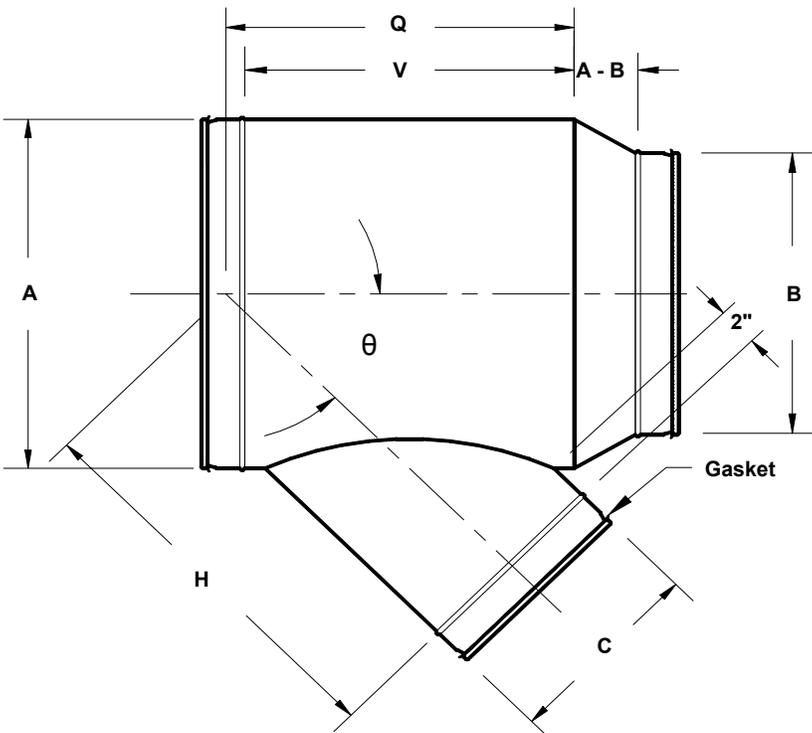
$$V = \frac{C}{\sin \theta} + 2$$

$$Q = \frac{A}{2 \tan \theta} + \frac{C}{2 \sin \theta} + 1$$

$$H = \frac{A}{2 \sin \theta} + \frac{C}{2 \tan \theta} + 2$$

Maximum C = A

## REDUCING LATERAL



**Designation:**

**SR0LR**

(-θ if θ ...45E)

**Dimensions:**

$$V = \frac{C}{\sin \theta} + 2$$

$$Q = \frac{A}{2 \tan \theta} + \frac{C}{2 \sin \theta} + 1$$

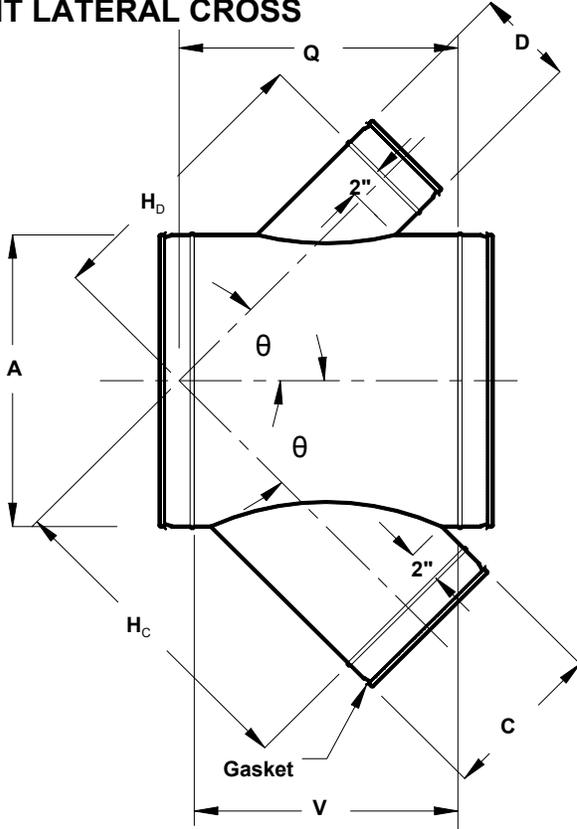
$$H = \frac{A}{2 \sin \theta} + \frac{C}{2 \tan \theta} + 2$$

Maximum C or D = A

A - B (1-inch minimum 12-inch maximum)

# LATERALS

## STRAIGHT LATERAL CROSS



**Designation:**

**SR0LX**

( $-\theta$  if  $\theta \dots 45E, -\Phi$  if  $\Phi \dots 180E$ )

**Dimensions:**

$$V = \frac{C}{\sin \theta} + 2$$

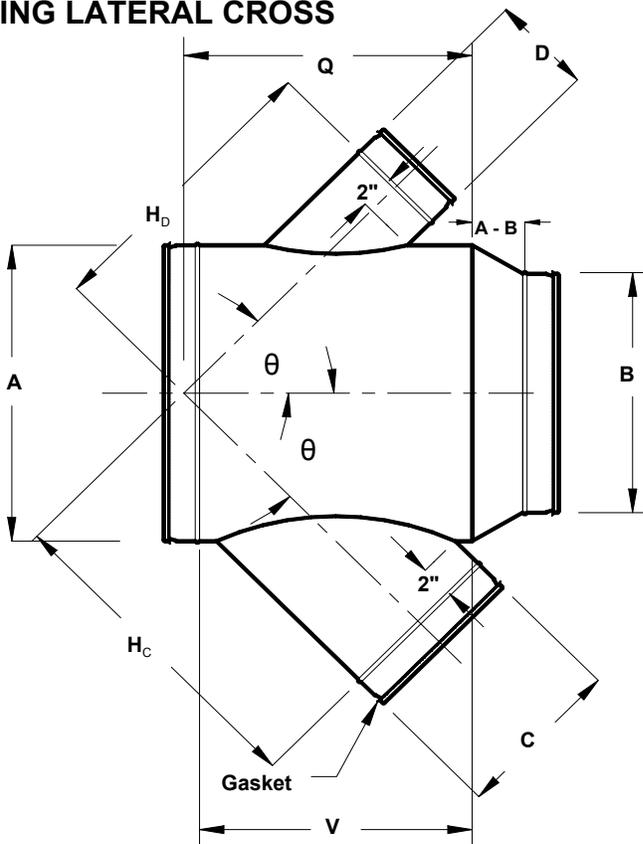
$$Q = \frac{A}{2 \tan \theta} + \frac{C}{2 \sin \theta} + 1$$

$$H_c = \frac{A}{2 \sin \theta} + \frac{C}{2 \tan \theta} + 2$$

$$H_d = \frac{A}{2 \sin \theta} + \frac{D}{2 \tan \theta} + 2$$

Maximum C or D = A

## REDUCING LATERAL CROSS



**Designation:**

**SR0LXR**

( $-\theta$  if  $\theta \dots 45E, -\Phi$  if  $\Phi \dots 180E$ )

**Dimensions:**

$$V = \frac{C}{\sin \theta} + 2$$

$$Q = \frac{A}{2 \tan \theta} + \frac{C}{2 \sin \theta} + 1$$

$$H_c = \frac{A}{2 \sin \theta} + \frac{C}{2 \tan \theta} + 2$$

$$H_d = \frac{A}{2 \sin \theta} + \frac{D}{2 \tan \theta} + 2$$

Maximum C or D = A

A - B (1-inch minimum 12-inch maximum)

## CONTOURED FLANGED AND SADDLE STRAIGHT TEE TAP

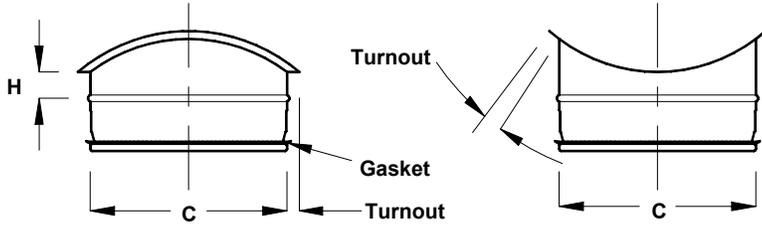
**Designation:**  
SR0PT

**Dimensions:**

Specify diameter of duct, to which tap will be attached, as A

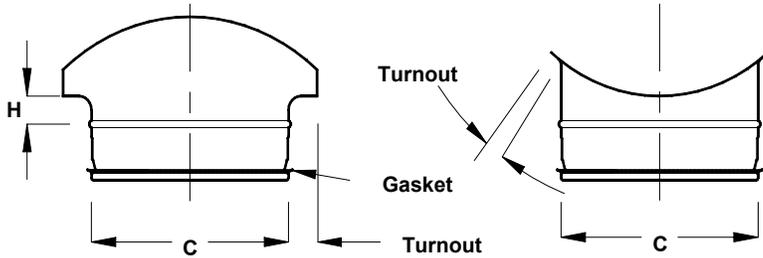
Maximum C = A

Available Sizes:



**CONTOURED FLANGED**

C (inches)	A (inches)	Type	Turnout (inches)	H (inches)
4	4,6,8,10, 12	Cont	1/2	1
6	6	Cont	1/2	1
6	8,10,12	Saddle	1	1 1/2
8	8	Cont	1/2	1
8	10,12,14,16	Saddle	1	1 1/2
10	10	Cont	1/2	1
10	12,14,16	Saddle	2	1 3/8
12	12	Cont	1/2	1
12	14,16,18	Saddle	2	1 3/8
14	14,16,18,20	Cont	1/2	1
16	16,20,22,24	Cont	1/2	1



**SADDLE**

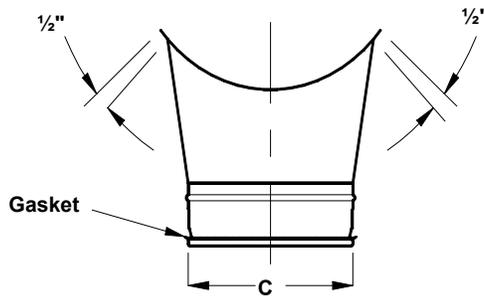
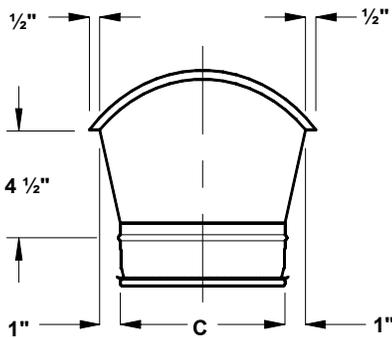
## CONTOURED FLANGED CONICAL TEE TAP

**Designation:**  
SR0PTC

**Dimensions:**

Specify diameter of duct, to which tap will be attached, as A

Maximum C = A - 2



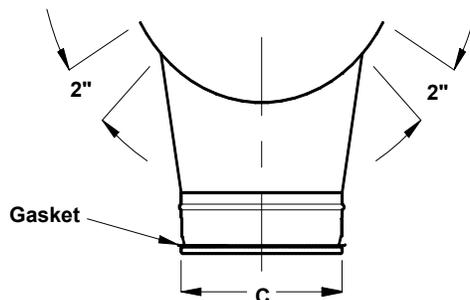
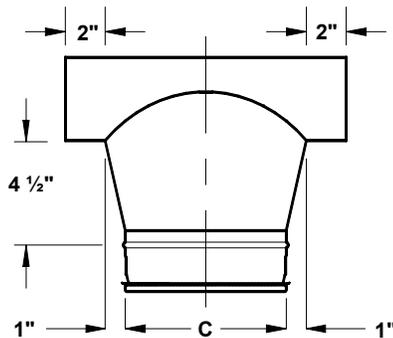
## SADDLE CONICAL TEE TAP

**Designation:**  
SR0PTCS

**Dimensions:**

Specify diameter of duct, to which tap will be attached, as A

Maximum C = A - 2



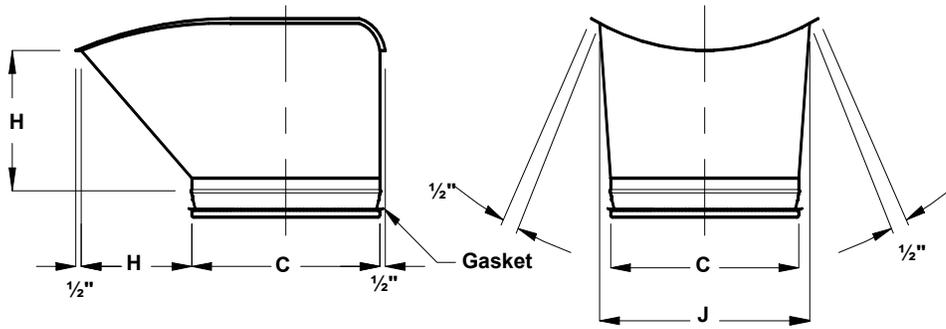
**SADDLE**

## CONTOUR FLANGED LO-LOSS™ TEE TAP

**Designation:**  
SR0PTL

**Dimensions:**

$J = C + 2$  (for  $C \leq A - 2$ )  
 $J = C$  (for  $C > A - 2$ )  
 Maximum  $C = A$



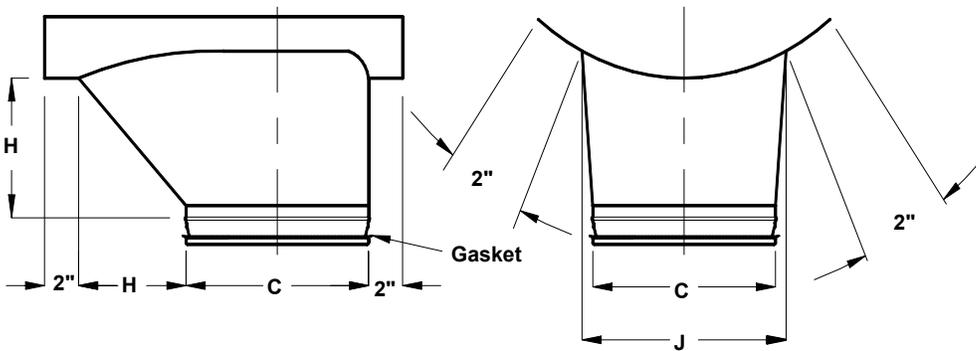
Available Tap (C) Sizes (inches)	H (inches)
4, 6, and 8	4½
10, 12, and 14	7½
16, 18, 20, 22, and 24	10½

## SADDLE LO-LOSS™ TEE TAP

**Designation:**  
SR0PTLS

**Dimensions:**

$J = C + 2$  (for  $C \leq A - 2$ )  
 $J = C$  (for  $C > A - 2$ )  
 Maximum  $C = A$



Available Tap (C) Sizes (inches)	H (inches)
4, 6, and 8	4½
10, 12, and 14	7½
16, 18, 20, 22, and 24	10½

CONTOURED FLANGED LATERAL TAPS

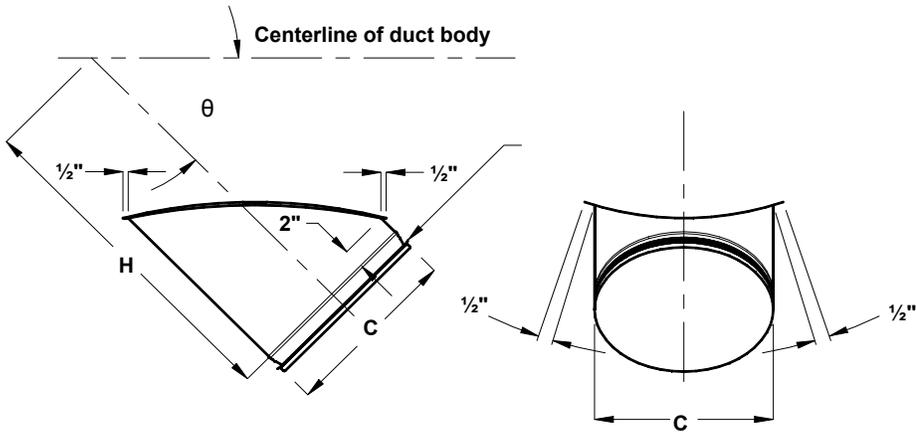
Designation:  
**SR0PL**  
 (-θ if θ ...45°)

Dimensions:

Specify diameter of duct, to which tap will be attached, as A

$$H = (A / 2 \sin \theta) + (C / 2 \tan \theta) + 2$$

Maximum C = A



SADDLE LATERAL TAPS

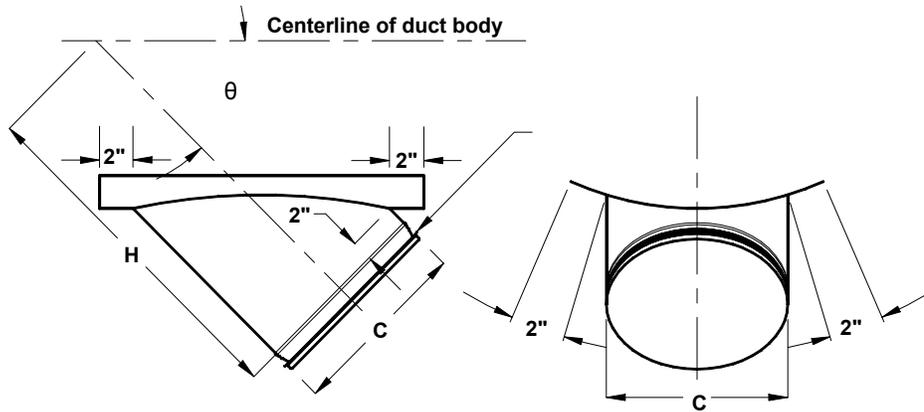
Designation:  
**SR0PL**  
**SR0PLS**  
 (-θ if θ ...45°)

Dimensions:

Specify diameter of duct, to which tap will be attached, as A

$$H = (A / 2 \sin \theta) + (C / 2 \tan \theta) + 2$$

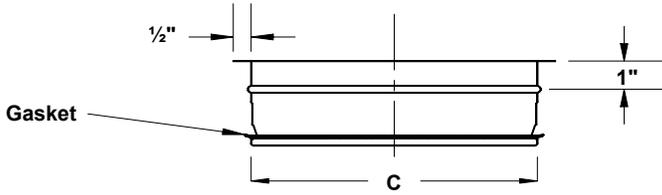
Maximum C = A



# TAPS OFF FLAT SURFACE

## STRAIGHT TAP OFF FLAT SURFACE

Designation:  
SR0PT

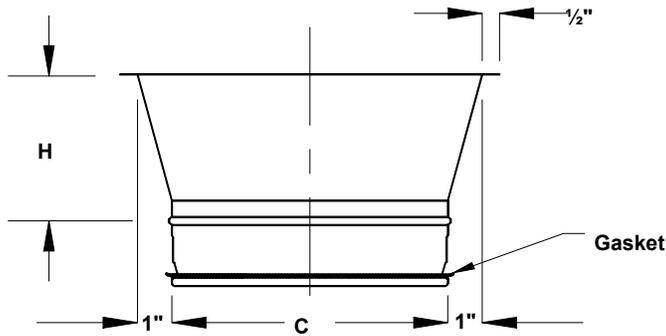


## CONICAL TAP AND BELLMOUTH OFF FLAT SURFACE

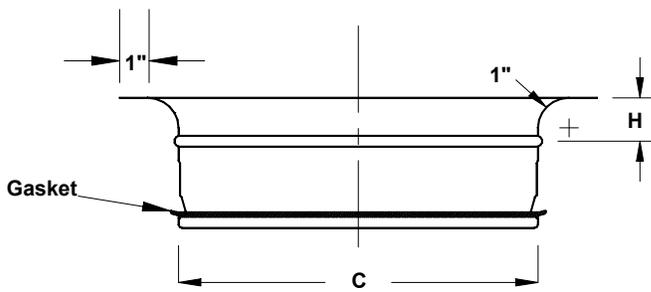
Designation:  
SR0PTC

Dimensions:

Available Sizes:



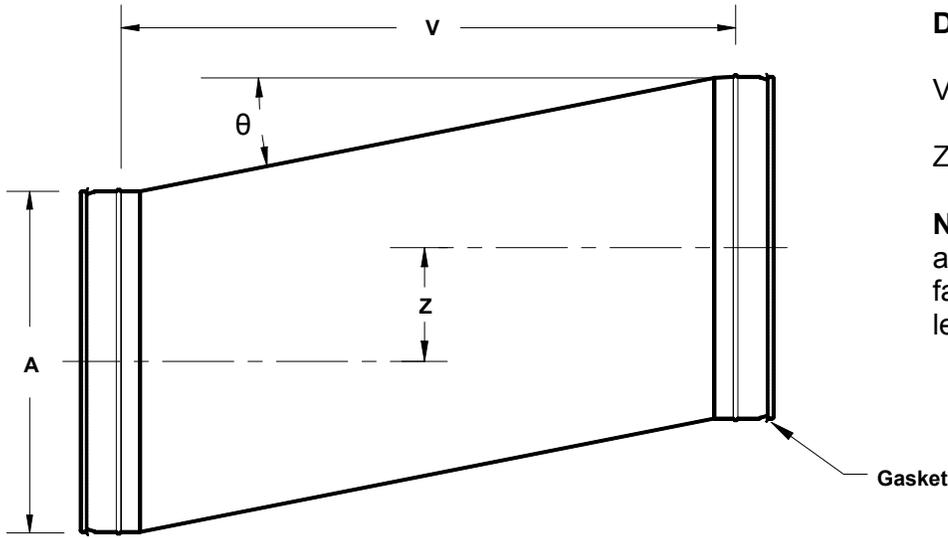
**CONICAL TAP**



**BELLMOUTH TAP**

C (inches)	Type	H (inches)
4	CONICAL	4 1/2
6	BELLMOUTH	2 3/8
8	BELLMOUTH	2 3/8
10	BELLMOUTH	2 3/4
12	BELLMOUTH	2 3/4
14	CONICAL	4 1/2
16	CONICAL	4 1/2
18	CONICAL	4 1/2
20	CONICAL	4 1/2
22	CONICAL	4 1/2
24	CONICAL	4 1/2

## OFFSET



**Designation:**  
SR0Z

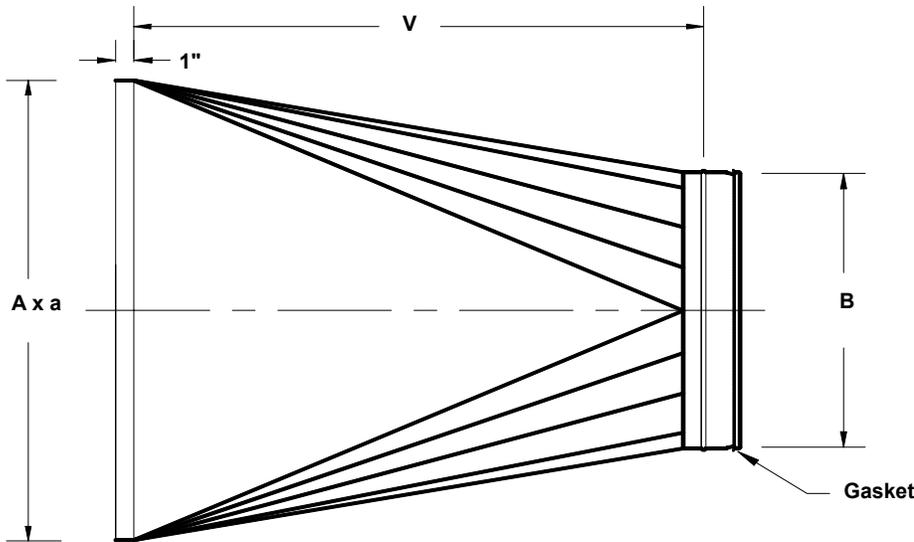
**Dimensions:**

$V = 2A$

Z = Must be specified

**Note:** Z should not exceed 0.75 A or angle be larger than 60E. If larger use fabricated elbows and a straight length of duct.

## SQUARE-TO-ROUND



**Designation:**  
SR0QR

**Dimensions:**

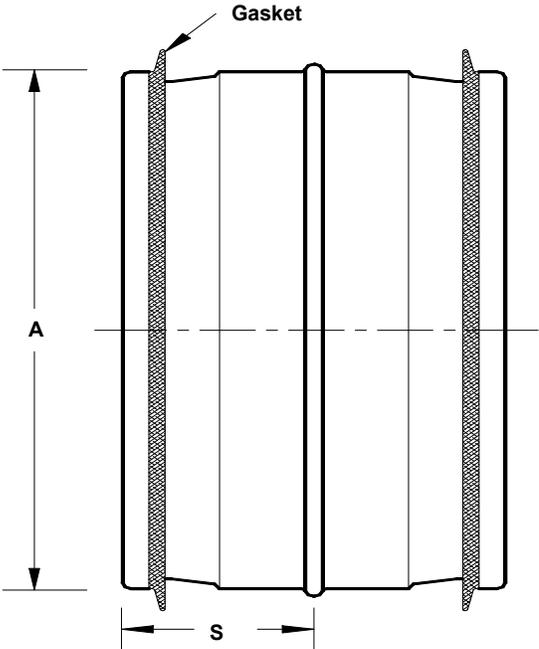
$V = 12, 24, 36, \text{ or } 48$

A = Major axis of rectangular side  
a = Minor axis of rectangular side

# COUPLING and END PLUG

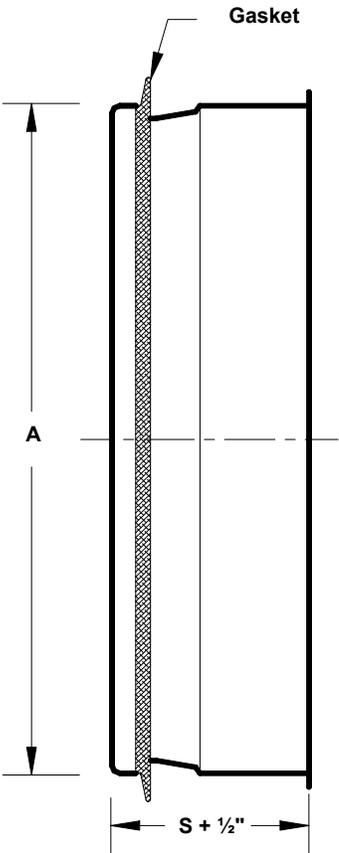
## COUPLING

Designation:  
SR0C



## END PLUG

Designation:  
SR0ENPL



# McGill AirFlow LLC

An enterprise of United McGill Corporation —  
Founded in 1951

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