



Air Distribution Corporation

# Double Wall ROUND

## DUAL WALL ROUND DUCT AND FITTINGS CONSTRUCTION STANDARDS

### Outer Shell Positive Pressure

Gauge selection for galvanized (ASTM A653). Fittings are manufactured with standing seam, welded seam, spot welded, or button punched locked construction. All Spiral Duct and Fittings are manufactured in accordance with applicable SMACNA, ASHRAE and SPIDA standards.

#### SMACNA Low Pressure Duct Standards (Up to 2" W.G. Static Pressure)

Gauge Schedule		Gauge Schedule	
Size Dia.	Spiral Pipe	Size Dia.	Fittings
3" - 16"	26	3" - 12"	26
18" - 26"	24	14" - 24"	24
28" - 40"	22	26" - 36"	22
42" - 50"	20	38" - 48"	20
52" - 84"	18	50" - 84"	18

Fittings conform to SMACNA seal Class "C" construction

#### SMACNA High Pressure Duct Standards (Up to 10" W.G. Static Pressure)

Gauge Schedule		Gauge Schedule	
Size Dia.	Spiral Pipe	Size Dia.	Fittings
3" - 16"	26	3" - 12"	26
18" - 26"	24	14" - 20"	24
28" - 40"	22	22" - 26"	22
42" - 50"	20	28" - 40"	20
52" - 84"	18	42" - 84"	18

Fittings conform to SMACNA seal Class "A" construction

### Inner Shell

Gauge selection for inner shell. Standard material for the inner shell of spiral pipe is perforated steel (ASTM A653), with 3/32" holes on 3/16" staggered centers for a free area of 23%. Standard material for the inner shell of fittings is solid steel.

Duct Dia.	Inner Shell	Fittings
3" - 12"	24	26
14" - 24"	24	24
26" - 34"	24	22
36" - 48"	22	20
50" - 84"	22	18

Standard Insulation is 1" thick, 1 pound per cubic foot density, with a thermal conductivity (ASTM C 518) @ 75°F mean temperature of 0.27 (BTU-in./hr.ft.<sup>2</sup>°F)

Surface burning characteristics (ASTM E 84, UL 723)

25 flame spread

50 smoke developed



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## Dimensional Code & Ordering Information

### **DIMENSIONING CODE**

All dimensions are in inches, all angles are in degrees

**A** - Main barrel inlet diameter

**B** - Main barrel outlet diameter

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

**R** - Center Line Radius

**V** - Body length of fitting

**H** - See Loloss Tee

### **ORDERING**

Specify type of fittings and list the following dimensions:

**ELBOWS** - A, R

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

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

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

**ACCESSORIES** - As Noted

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

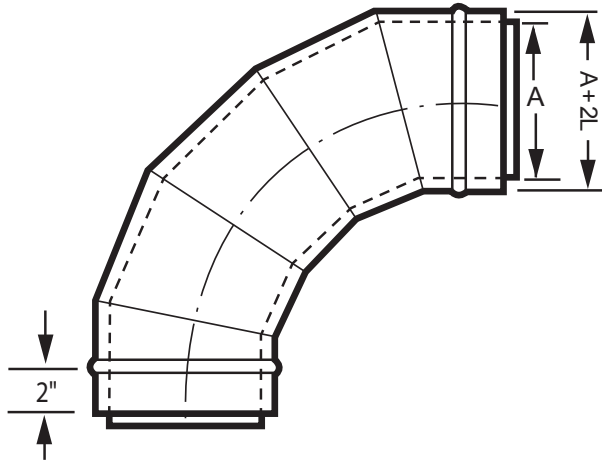
For flanged fittings see connectors detail for all dimensioning.



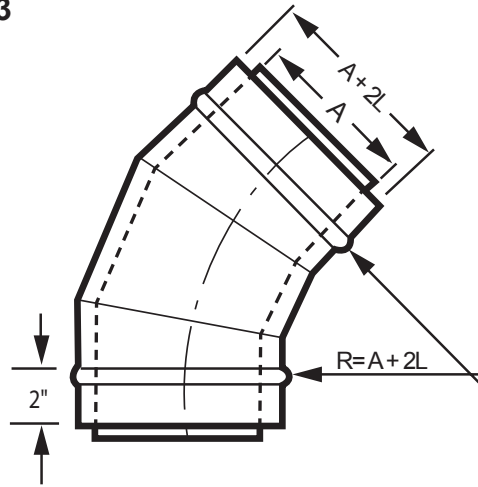
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# Double Wall Round ELBOWS

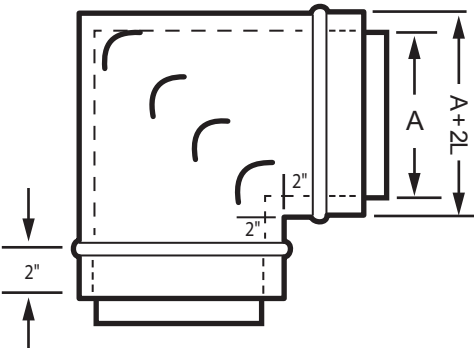
90° 5-PC ELBOW  
**E905**



45° 3-PC ELBOW  
**E453**

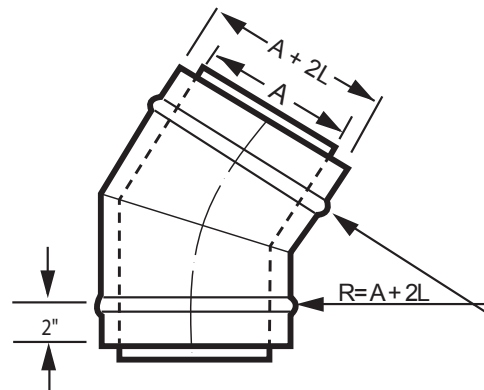


90° 2-PC MITRED ELBOW  
**E290 / E290V**



A	No. of vanes
6-9	2
10-14	3
15-19	4
20-60	5

CUSTOM ELBOW  
**XELB**

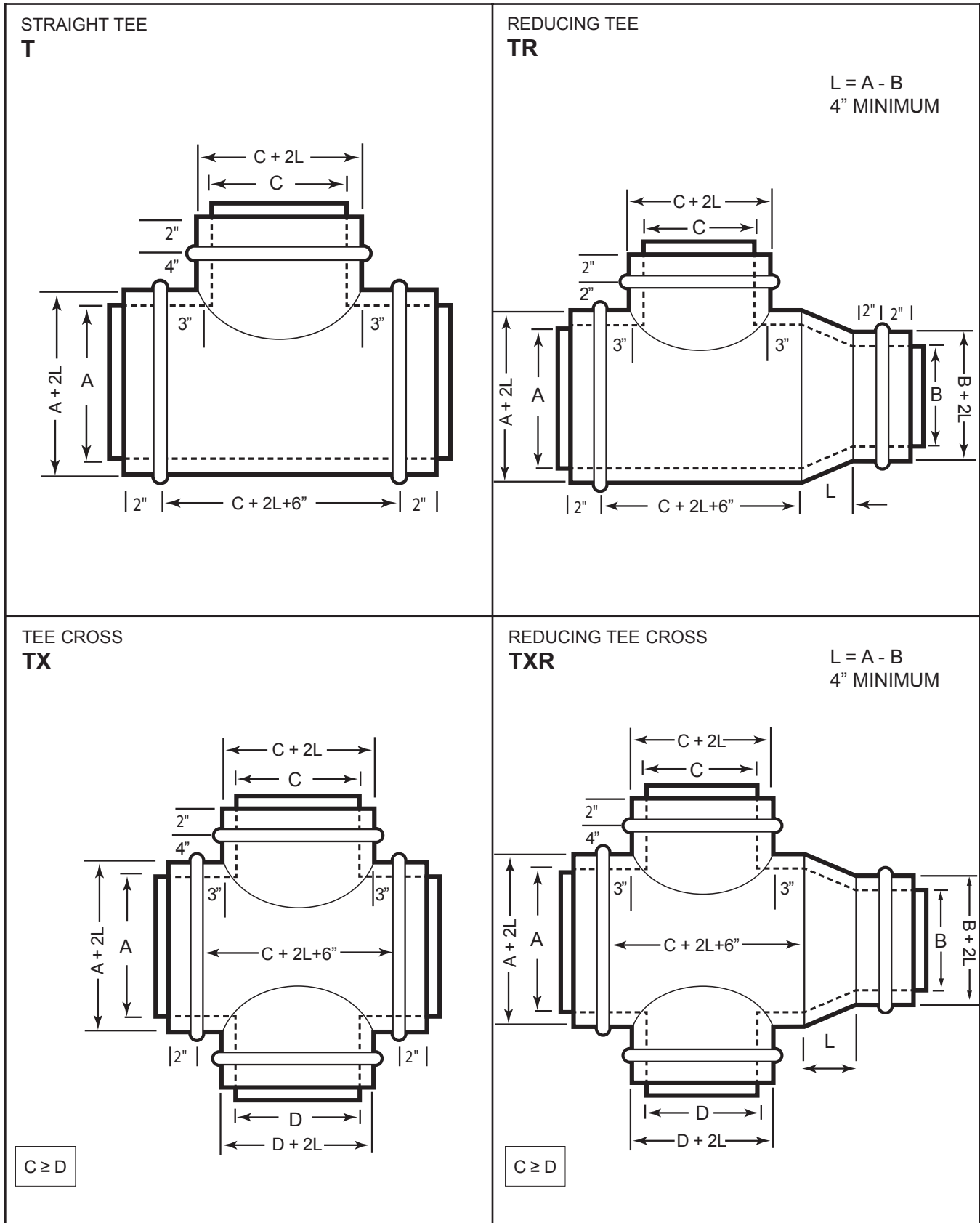


\*SPECIFY (Elbow Angle & Radius of Centerline)



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# Double Wall Round STRAIGHT TEES

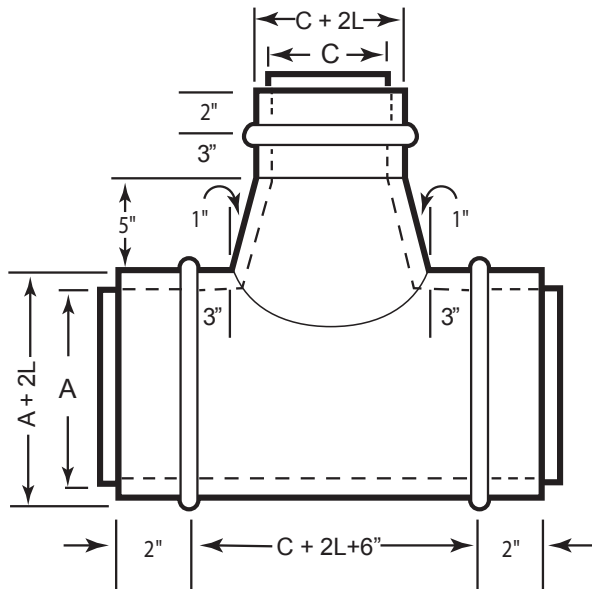




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# Double Wall Round CONICAL TEES

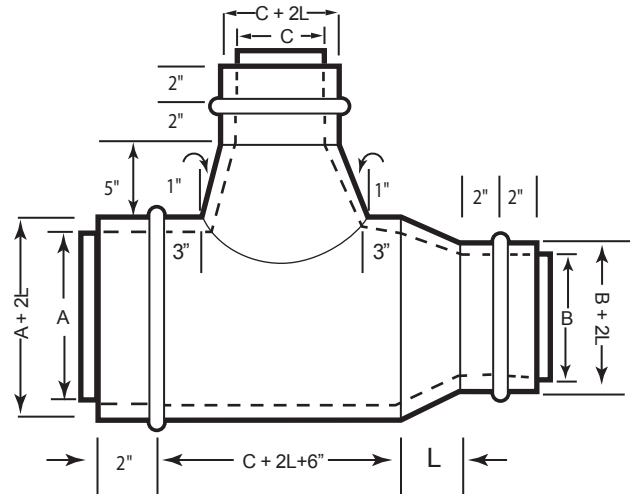
CONICAL TEE  
TC



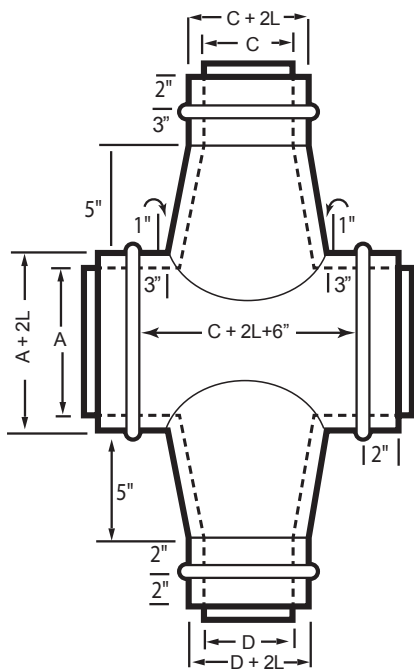
REDUCING CONICAL TEE  
TCR

$$L = A - B$$

4" MINIMUM



CONICAL TEE CROSS  
TXC

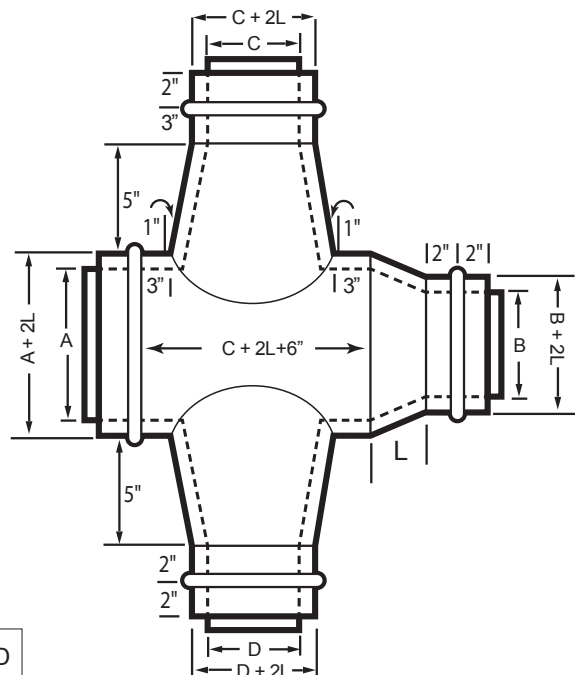


$$C \geq D$$

REDUCING CONICAL TEE CROSS  
TXCR

$$L = A - B$$

4" MINIMUM



$$C \geq D$$



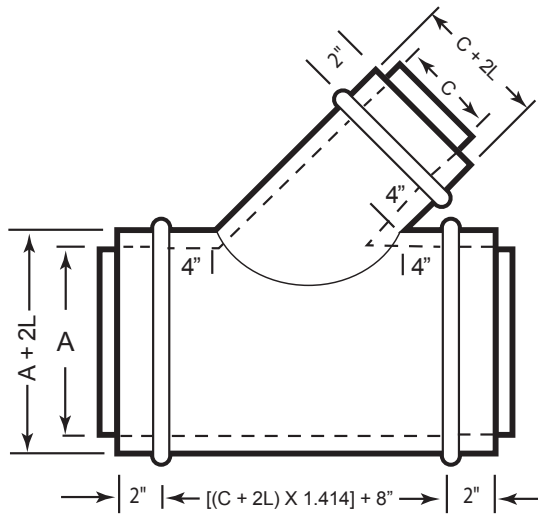
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Double Wall Round

# STRAIGHT LATERAL

45° LATERAL

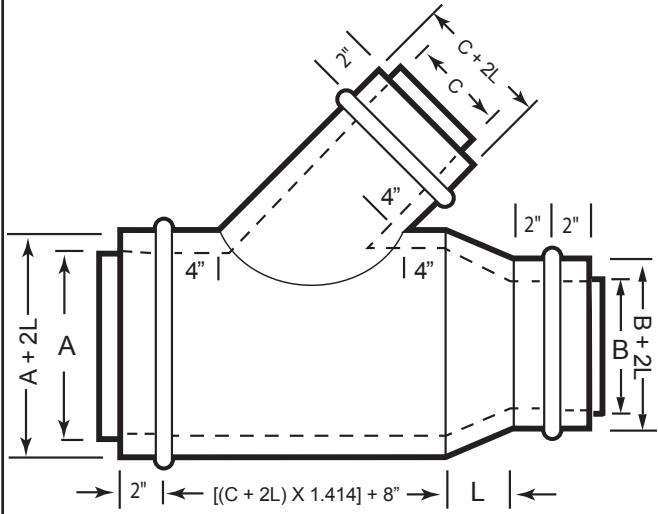
**L**



45° REDUCING LATERAL

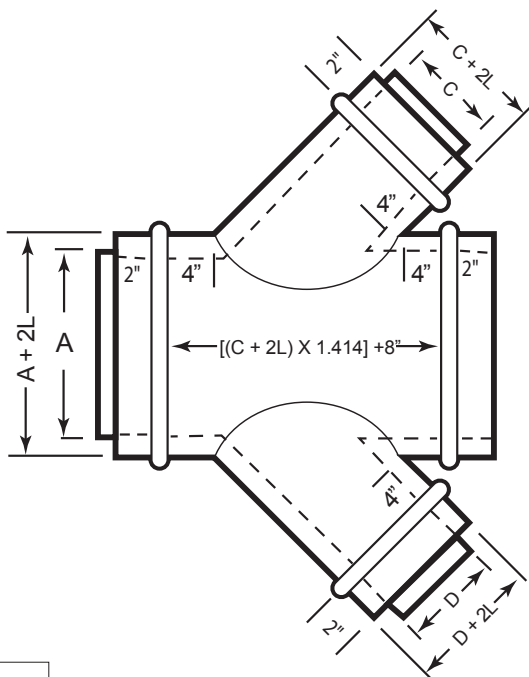
**LR**

$L = A - B$   
4" MINIMUM



45° LATERAL CROSS

**LX**

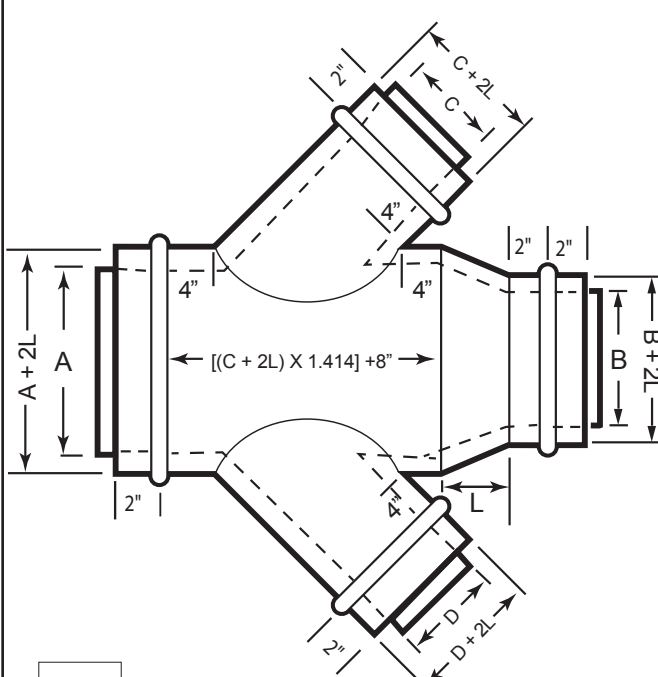


$C \geq D$

45° REDUCING LATERAL CROSS

**LXR**

$L = A - B$   
4" MINIMUM



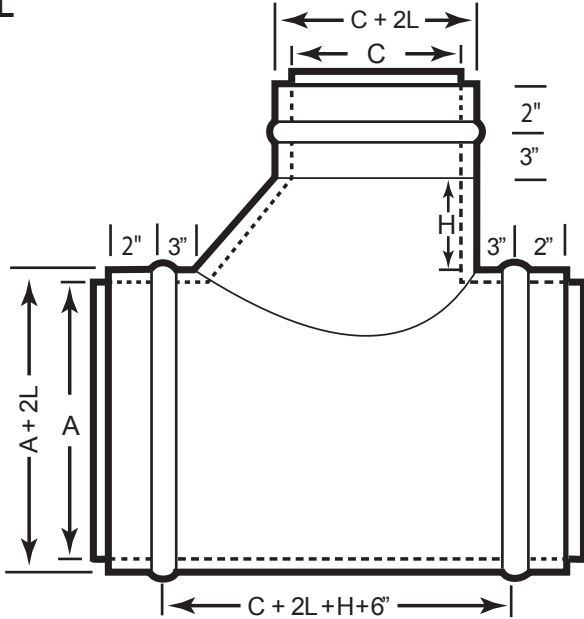
$C \geq D$



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# Double Wall Round LOLOSS TEES

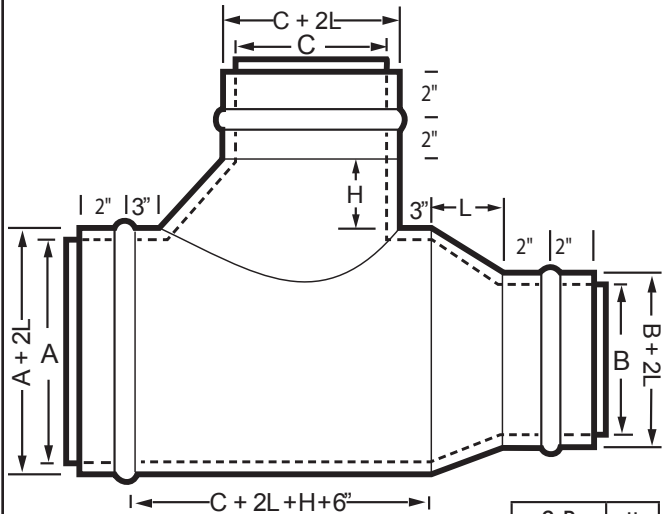
LOLOSS TEE  
TL



C, D	H
3 thru 8	4"
9 thru 16	6"
17 thru 26	10"
27 and up	12"

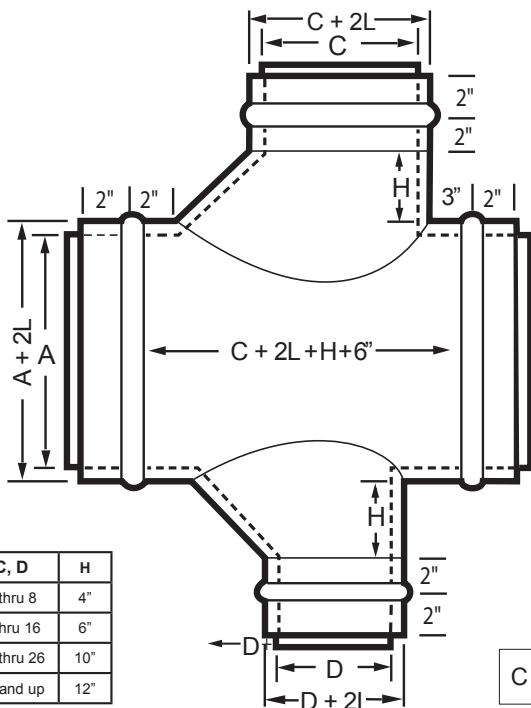
REDUCING LOLOSS TEE  
TLR

$L = A - B$   
4" MINIMUM



C, D	H
3 thru 8	4"
9 thru 16	6"
17 thru 26	10"
27 and up	12"

LOLOSS TEE CROSS  
TLX

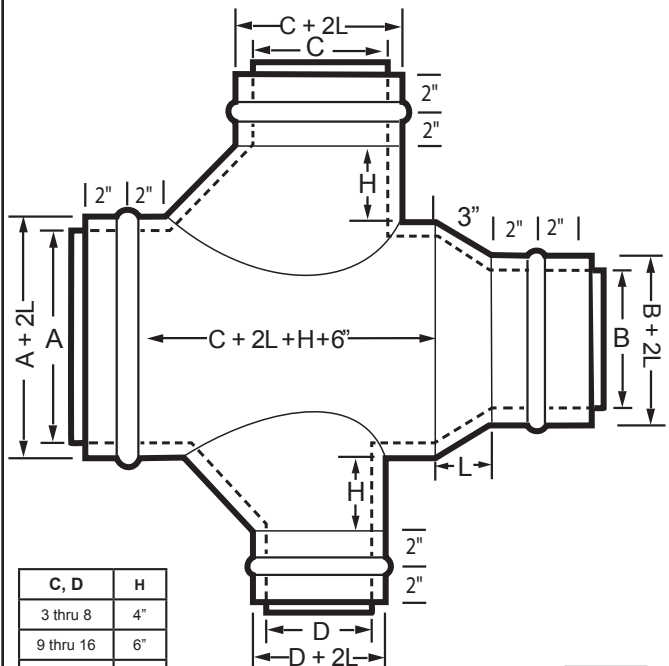


C, D	H
3 thru 8	4"
9 thru 16	6"
17 thru 26	10"
27 and up	12"

$C \geq D$

REDUCING LOLOSS TEE CROSS  
TLXR

$L = A - B$   
4" MINIMUM



C, D	H
3 thru 8	4"
9 thru 16	6"
17 thru 26	10"
27 and up	12"

$C \geq D$



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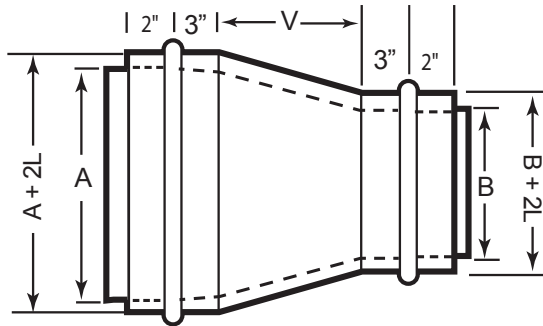
# Double Wall Round MISCELLANEOUS

CONCENTRIC REDUCER

**R**

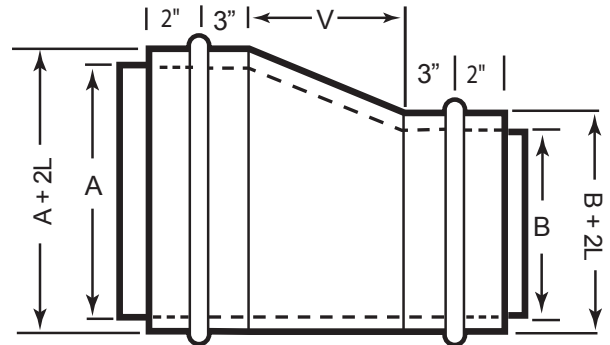
$$V = A - B$$

4" MINIMUM



ECCENTRIC REDUCER

**RE**

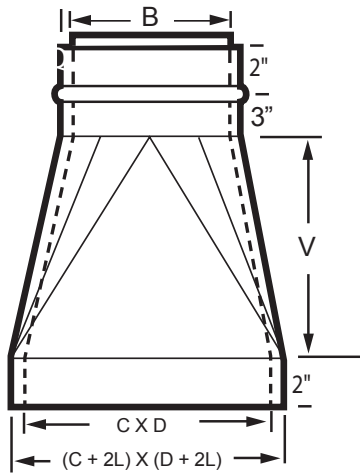


$$V = A - B$$

4" MINIMUM

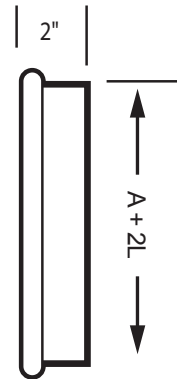
RECTANGULAR TO ROUND

**RTR**



END CAP

**EC**

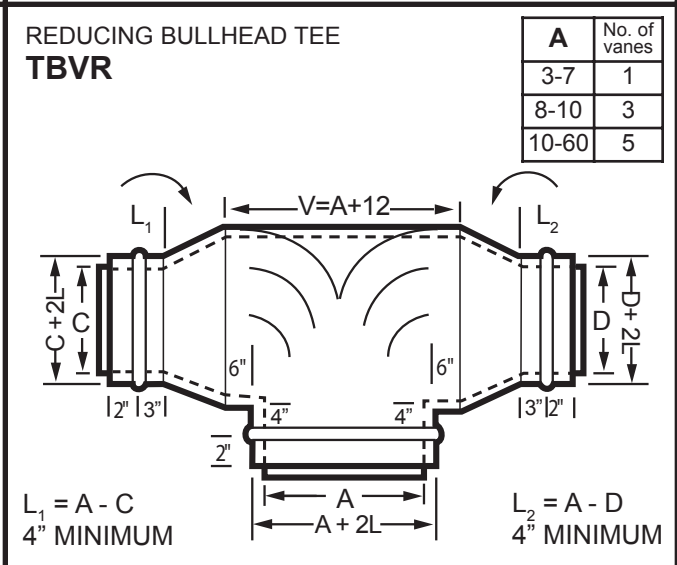
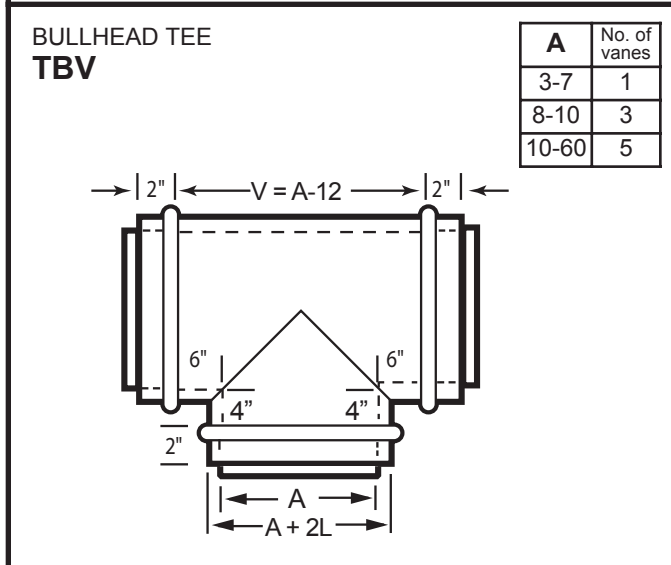
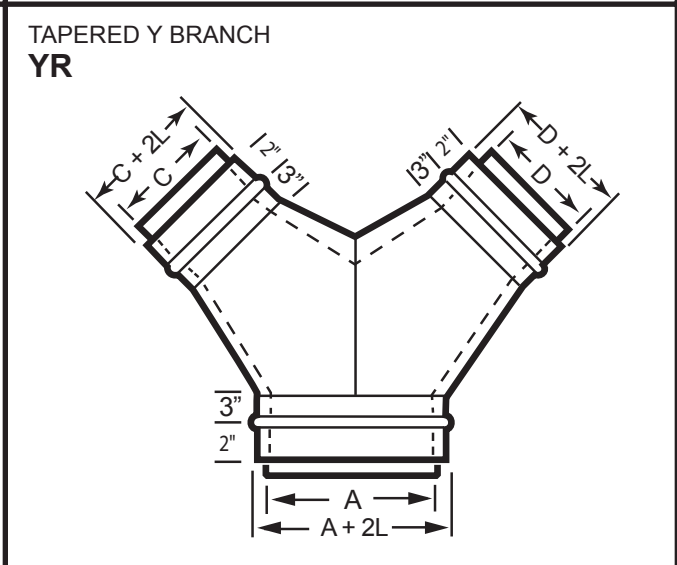
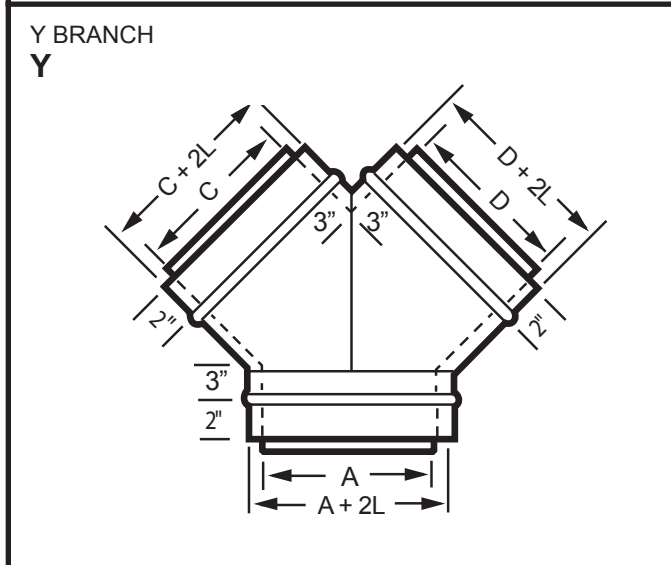
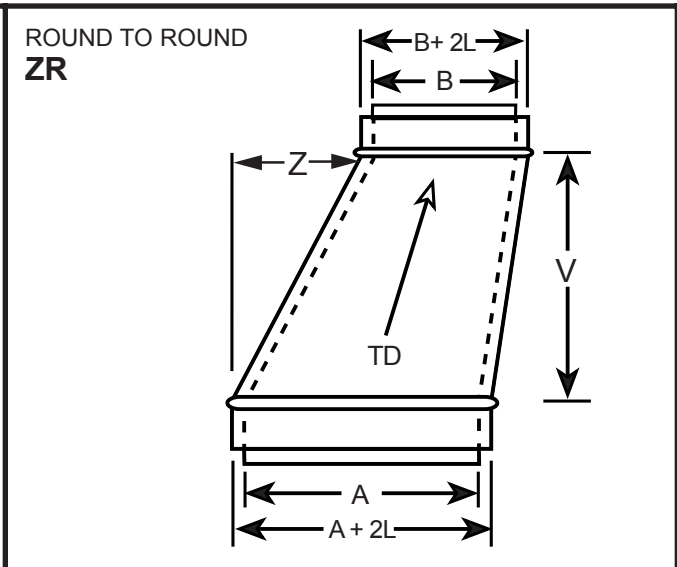
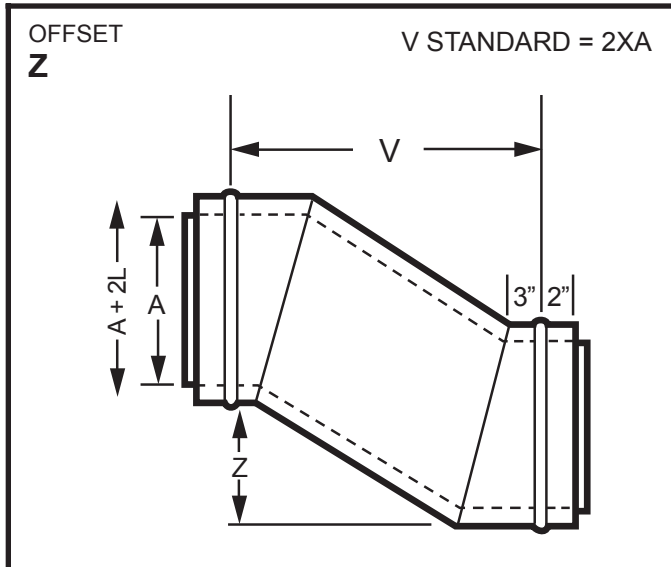






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# Double Wall Round MISCELLANEOUS





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# Double Wall Round TAPS

<p><b>STRAIGHT TAP PT</b></p> <p>Standard flange is 1/2". 2" flange is also available.</p>	<p><b>CONICAL TAP PTC</b></p>										
<p><b>LATERAL TAP 45° PL</b></p>	<p><b>LOLOSS TAP PTL</b></p> <table border="1"> <thead> <tr> <th>C</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>3 thru 8</td> <td>4"</td> </tr> <tr> <td>9 thru 16</td> <td>6"</td> </tr> <tr> <td>17 thru 26</td> <td>10"</td> </tr> <tr> <td>27 and up</td> <td>12"</td> </tr> </tbody> </table>	C	H	3 thru 8	4"	9 thru 16	6"	17 thru 26	10"	27 and up	12"
C	H										
3 thru 8	4"										
9 thru 16	6"										
17 thru 26	10"										
27 and up	12"										

## RECTANGULAR TAPS

<p><b>RST-R</b></p> <p>A = PIPE DIAMETER</p>	<p><b>RST-TI</b></p> <p>A = PIPE DIAMETER</p>	<p><b>RST-TO</b></p> <p>A = PIPE DIAMETER B &amp; C ARE INSIDE DIMENSIONS</p>
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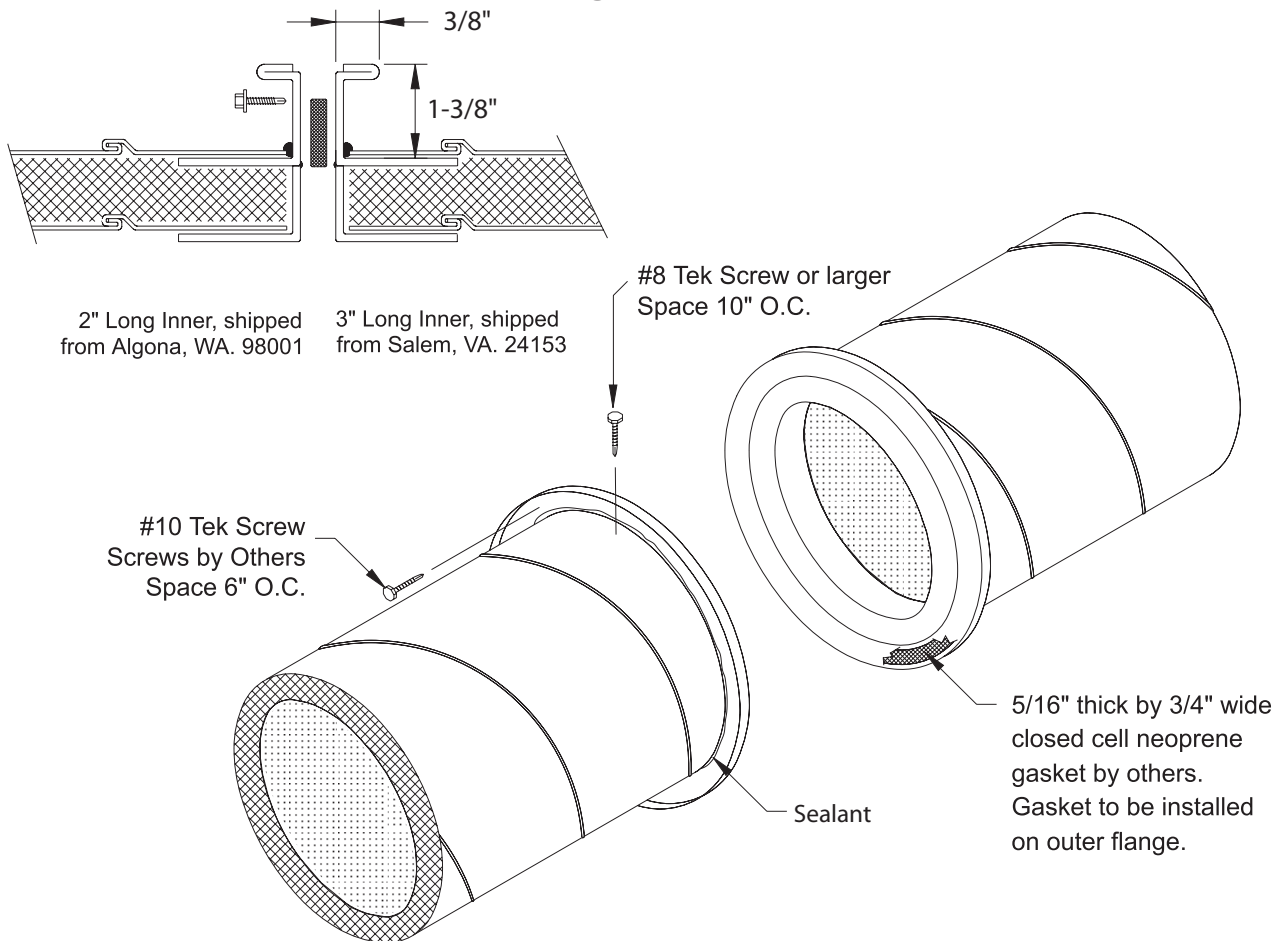


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# Double Wall Round CONNECTORS

## Slip Fit Connection

## Accuflange® Connection



### ACCUFLANGE ORDERING NOTES:

**Fittings** - The bead is shown for reference only. All fitting connection dimensions increase 2 1/4" to accommodate Accuflange.

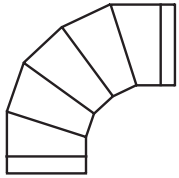
**Spiral Pipe** - Customer specified duct length shall be flange face to flange face dimensions.



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Double Wall Round

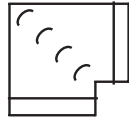
# ALL FITTINGS CHART



E90



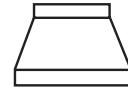
E45



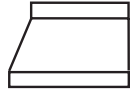
E290/E290V



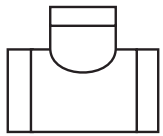
XELB



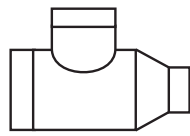
RC



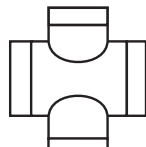
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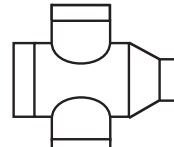
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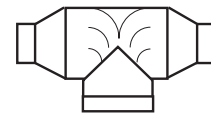
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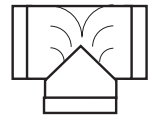
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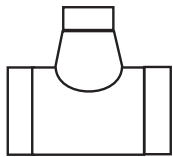
TXR



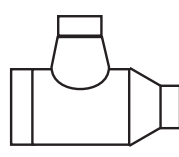
TBVR



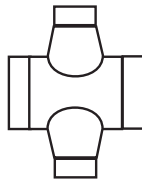
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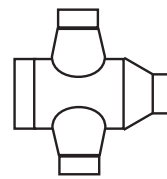
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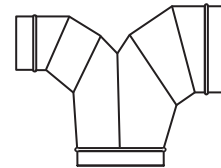
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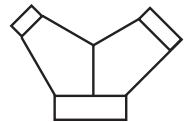
TXC



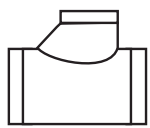
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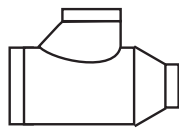
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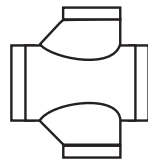
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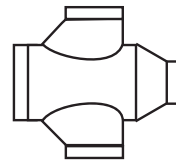
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TCR



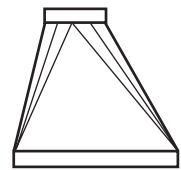
TLX



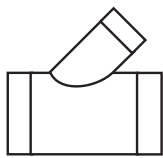
TLXR



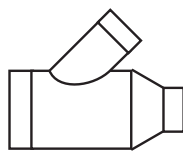
RTR-C



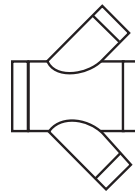
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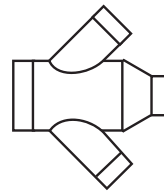
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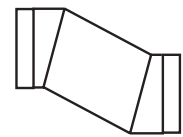
LR



LX



LXR



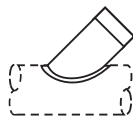
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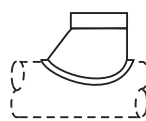
DST



CST



LST



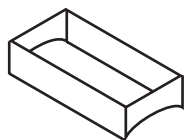
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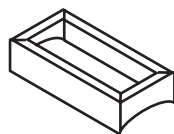
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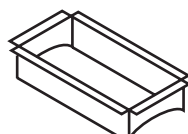
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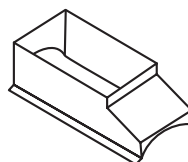
RST-R



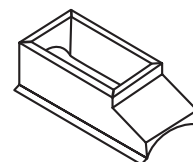
RTS-TI



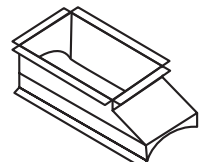
RST-TO



45RST-R



45RTS-TI



45RST-TO