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)

<table>
<thead>
<tr>
<th>Size Dia.</th>
<th>Spiral Pipe</th>
<th>Fittings</th>
</tr>
</thead>
<tbody>
<tr>
<td>3” - 16”</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>18” - 26”</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>28” - 40”</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>42” - 50”</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>52” - 84”</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

Fittings conform to SMACNA seal Class “C” construction

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

<table>
<thead>
<tr>
<th>Size Dia.</th>
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<td>18</td>
<td></td>
</tr>
</tbody>
</table>

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” holds on 3/16” staggered centers for a free area of 23%. Standard material for the inner shell of fittings is solid steel.

<table>
<thead>
<tr>
<th>Duct Dia.</th>
<th>Inner Shell</th>
<th>Fittings</th>
</tr>
</thead>
<tbody>
<tr>
<td>3” - 12”</td>
<td>24</td>
<td>26</td>
</tr>
<tr>
<td>14” - 24”</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>26” - 34”</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>36” - 48”</td>
<td>22</td>
<td>20</td>
</tr>
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</tr>
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</table>

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.2°F)
Surface burning characteristics (ASTM E 84, UL 723)
25 flame spread
50 smoke developed
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.
90° 5-PC ELBOW  
E905

90° 2-PC MITRED ELBOW  
E290 / E290V

45° 3-PC ELBOW  
E453

CUSTOM ELBOW  
XELB

*A SPECIFY (Elbow Angle & Radius of Centerline)

<table>
<thead>
<tr>
<th>A</th>
<th>No. of vanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-9</td>
<td>2</td>
</tr>
<tr>
<td>10-14</td>
<td>3</td>
</tr>
<tr>
<td>15-19</td>
<td>4</td>
</tr>
<tr>
<td>20-60</td>
<td>5</td>
</tr>
</tbody>
</table>
CONICAL TEES

CONICAL TEE
TC

REDUCING CONICAL TEE
TCR

L = A - B
4" MINIMUM

CONICAL TEE CROSS
TXC

REDUCING CONICAL TEE CROSS
TXCR

L = A - B
4" MINIMUM
LOLOSS TEES

**LOLOSS TEE**

TL

**REDUCING LOLOSS TEE**

TLR

L = A - B
4" MINIMUM

**LOLOSS TEE CROSS**

TLX

**REDUCING LOLOSS TEE CROSS**

TLXR

L = A - B
4" MINIMUM

<table>
<thead>
<tr>
<th>C, D</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 thru 8</td>
<td>4&quot;</td>
</tr>
<tr>
<td>9 thru 16</td>
<td>6&quot;</td>
</tr>
<tr>
<td>17 thru 26</td>
<td>10&quot;</td>
</tr>
<tr>
<td>27 and up</td>
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**MISCELLANEOUS**

**CONCENTRIC REDUCER (R)**

\[ V = A - B \]

4" MINIMUM

**ECCENTRIC REDUCER (RE)**

\[ V = A - B \]

4" MINIMUM

**RECTANGULAR TO ROUND (RTR)**

\[ V = A - B \]

4" MINIMUM

**END CAP (EC)**

\[ V = A - B \]
Slip Fit Connection

Accuflange® Connection

2" Long Inner, shipped from Algona, WA. 98001
3" Long Inner, shipped from Salem, VA. 24153

#8 Tek Screw or larger
Space 10" O.C.

#10 Tek Screw
Screws by Others
Space 6" O.C.

5/16" thick by 3/4" wide
closed cell neoprene
gasket by others.
Gasket to be installed
on outer flange.

Sealant

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.