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

- **Sheet Metal Workers’ International Association**
  -Yellow Label
  -Washington, DC

- **Sheet Metal Air Conditioning Contractors’ National Association**
  -Chantilly, VA

- **SPIDA**
  -Spiral Duct Manufacturers Association
  -Irmo, SC

- **SMACNA Testing & Research Institute**
  -Chantilly, VA
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.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>THICKNESS</th>
<th>ASTM</th>
<th>TYPE</th>
<th>DUCT</th>
<th>END TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galvanized</td>
<td>26 - 18 gauge</td>
<td>A-653</td>
<td>G60-G90</td>
<td>44 1/2&quot;, 56 1/2&quot;, 68 1/2&quot;*</td>
<td>TDC</td>
</tr>
<tr>
<td>Paint Grip</td>
<td>24 - 18 gauge</td>
<td>A-653</td>
<td>A60</td>
<td>56 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>PVS</td>
<td>24 - 18 gauge</td>
<td>A-653</td>
<td>4 x 1, 4 x 4</td>
<td>56 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>.032 -.050</td>
<td>B-316</td>
<td>3003 H-14</td>
<td>44 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>24 - 20 gauge</td>
<td>A-240</td>
<td>304 or 316</td>
<td>44 1/2&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*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.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>THICKNESS</th>
<th>ASTM</th>
<th>TYPE</th>
<th>DUCT</th>
<th>END TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galvanized</td>
<td>26 - 18 gauge</td>
<td>A-653</td>
<td>G60-G90</td>
<td>47&quot;, 59&quot;, 71&quot;**</td>
<td>Slip and Drive</td>
</tr>
<tr>
<td>Paint Grip</td>
<td>24 - 18 gauge</td>
<td>A-653</td>
<td>A60</td>
<td>59&quot;</td>
<td></td>
</tr>
<tr>
<td>PVS</td>
<td>24 - 18 gauge</td>
<td>A-653</td>
<td>4 x 1, 4 x 4</td>
<td>59&quot;</td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>.032 -.050</td>
<td>B-316</td>
<td>3003 H-14</td>
<td>47&quot;</td>
<td></td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>24 - 20 gauge</td>
<td>A-240</td>
<td>304 or 316</td>
<td>47&quot;</td>
<td></td>
</tr>
</tbody>
</table>

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

Raw Ductwork and Fittings
Raw duct is fabricated for proprietary duct connection systems.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>THICKNESS</th>
<th>ASTM</th>
<th>TYPE</th>
<th>DUCT</th>
<th>END TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galvanized</td>
<td>26 - 18 gauge</td>
<td>A-653</td>
<td>G60-G90</td>
<td>48&quot;, 60&quot;, 72&quot;**</td>
<td>Raw Both Ends</td>
</tr>
<tr>
<td>Paint Grip</td>
<td>24 - 18 gauge</td>
<td>A-653</td>
<td>A60</td>
<td>60&quot;</td>
<td></td>
</tr>
<tr>
<td>PVS</td>
<td>24 - 18 gauge</td>
<td>A-653</td>
<td>4 x 1, 4 x 4</td>
<td>60&quot;</td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>.032 -.050</td>
<td>B-316</td>
<td>3003 H-14</td>
<td>48&quot;</td>
<td></td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>24 - 20 gauge</td>
<td>A-240</td>
<td>304 or 316</td>
<td>48&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*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.
**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 vane ..................36” maximum length
- 2” double turning vane ...............48” maximum length
- 4” double turning vane ..................72” maximum length
- 4” acoustical vane ......................72” 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**

<table>
<thead>
<tr>
<th>Elx 10-5</th>
<th>H x T</th>
<th>H x B x T</th>
<th>H x B x T</th>
<th>H x B x T</th>
<th>H x B x T</th>
<th>H x B x T</th>
<th>H x B x T</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C 2.5</td>
<td>1 x 18 Ga</td>
<td>1 x 10 Ga</td>
<td>1 x 10 Ga</td>
<td>1 x 10 Ga</td>
<td>1 x 10 Ga</td>
<td>1 x 10 Ga</td>
<td>1 x 10 Ga</td>
</tr>
<tr>
<td>D 5</td>
<td>1 1/4 x 20 Ga</td>
<td>1 1/4 x 16 Ga</td>
<td>1 1/4 x 16 Ga</td>
<td>1 1/4 x 16 Ga</td>
<td>1 1/4 x 16 Ga</td>
<td>1 1/4 x 16 Ga</td>
<td>1 1/4 x 16 Ga</td>
</tr>
<tr>
<td>E 10</td>
<td>1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F 15</td>
<td>1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G 25</td>
<td>1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1 1/4 x 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H 50</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
</tr>
<tr>
<td>I 75</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
</tr>
<tr>
<td>J 100</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
</tr>
<tr>
<td>K 150</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
</tr>
<tr>
<td>L 200</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
</tr>
<tr>
<td>M 300</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
<td>2 x 7/8</td>
</tr>
</tbody>
</table>

**In Stock For Immediate Shipment**
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.

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

<table>
<thead>
<tr>
<th>Velocity*</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 — 2500 FPM</td>
<td>3&quot;</td>
<td>12&quot;</td>
<td>4&quot;</td>
<td>6&quot;</td>
<td>18&quot;</td>
</tr>
<tr>
<td>2501 — 6000 FPM</td>
<td>3&quot;</td>
<td>6&quot;</td>
<td>4&quot;</td>
<td>6&quot;</td>
<td>16&quot;</td>
</tr>
</tbody>
</table>

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.

### Thermal Conductance “C” and Resistance “R” (ASTM C 177)

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>Conductance “C”</th>
<th>Resistance “R”</th>
</tr>
</thead>
<tbody>
<tr>
<td>.5&quot; - 2 # Cu. Ft.</td>
<td>.09</td>
<td>.48 (2.73)</td>
<td>2.1 (.37)</td>
</tr>
<tr>
<td>1&quot; - 1 1/2 # Cu. Ft.</td>
<td>.18</td>
<td>.24 (1.42)</td>
<td>4.2 (.74)</td>
</tr>
<tr>
<td>2&quot; - 1 1/2 # Cu. Ft.</td>
<td>.34</td>
<td>.13 (.74)</td>
<td>8.0 (1.41)</td>
</tr>
<tr>
<td>1&quot; - 3 # Cu. Ft.</td>
<td>.09</td>
<td>.24 (1.36)</td>
<td>4.2 (.73)</td>
</tr>
</tbody>
</table>

### Sound Absorption Coefficients (ASTM C 423, Type A Mounting)

<table>
<thead>
<tr>
<th>Type</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1000</th>
<th>2000</th>
<th>4000</th>
<th>NRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>.5&quot; - 2 # Cu. Ft.</td>
<td>.09</td>
<td>.14</td>
<td>.40</td>
<td>.60</td>
<td>.73</td>
<td>.82</td>
<td>.45</td>
</tr>
<tr>
<td>1&quot; - 1 1/2 # Cu. Ft.</td>
<td>.18</td>
<td>.36</td>
<td>.59</td>
<td>.86</td>
<td>.95</td>
<td>.90</td>
<td>.70</td>
</tr>
<tr>
<td>2&quot; - 1 1/2 # Cu. Ft.</td>
<td>.34</td>
<td>.64</td>
<td>.96</td>
<td>1.03</td>
<td>1.00</td>
<td>1.03</td>
<td>.90</td>
</tr>
<tr>
<td>1&quot; - 3 # Cu. Ft.</td>
<td>.09</td>
<td>.28</td>
<td>.63</td>
<td>.86</td>
<td>.91</td>
<td>.92</td>
<td>.65</td>
</tr>
</tbody>
</table>

Coefficients determined per ASTM E 795 Type A Mounting

Note: Pressure classifications are based on SMACNA Second Edition - 1995

### 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

<table>
<thead>
<tr>
<th>Neoprene</th>
<th>1/4&quot; x 1/2&quot;</th>
<th>(50 rolls - 1500’ per box)</th>
<th>E-Z Flange Jr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoprene</td>
<td>1/4&quot; x 3/4&quot;</td>
<td>(50 rolls - 1500’ per box)</td>
<td>E-Z Flange &amp; TDC</td>
</tr>
</tbody>
</table>
**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.
Square Throat Angle

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

Straight 90° Tap

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

Radius Angle

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

90° Increased Tap

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

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