



SHEET METAL CONNECTORS, INC.

www.smduct.com

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Double-Wall Round Spiral Pipe & Fittings

Sheet Metal Connectors, Inc. (SMC) Double Wall Pipe and Fittings with E-Z Flange and Barrel Clamp or Standard Slip Connection

Sheet Metal Connectors, Inc. double wall round spiral duct and fittings are one part of our complete line of HVAC products. Double wall round spiral duct has two different types of applications:

- Acoustical double wall for noise control
- Thermal double wall duct for temperature control

SMC double wall round spiral pipe and fittings are manufactured with an E-Z Flange with Barrel Clamp, E-Z Flange Jr. with Barrel Clamp or standard slip construction. All sizes shall be listed using inside dimensions.

Acoustical Double Wall

Standard acoustical double wall is for noise control. Constructed of a perforated inner shell surrounded by a layer of insulation and covered by a solid outer shell. The perforated inner shell has 3/32" diameter holes staggered at 3/16" on center for a clear open area of 23%.

Solid Outer Shell

DIAMETER	MATERIAL	THICKNESS	ASTM	TYPE	LENGTH
5" - 96"	Galvanized	26 - 14 gauge	A-653	G60-G90	1' - 20', 10' Standard
5" - 96"	Paint Grip	24 - 18 gauge	A-653	A60	1' - 20', 10' Standard
5" - 96"	PVS*	24 - 16 gauge	A-653	4 x 1, 4 x 4	1' - 20', 10' Standard
5" - 60"	Aluminum	.032 - .063	B-316	3003 H-14	1' - 20', 10' Standard
5" - 60"	Stainless Steel	24 - 18 gauge	A-240	304 or 316	1' - 20', 10' Standard

*PVS specification book available

Perforated Inner Shell

DIAMETER	MATERIAL	THICKNESS	ASTM	TYPE	LENGTH
3" - 94"	Galvanized	24 - 22 gauge	A-653	G60-G90	1' - 20', 10' Standard

*Special order perforated available in other materials - consult factory

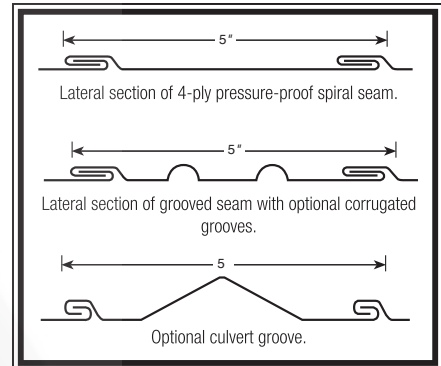
Thermal Double Wall

Standard thermal double wall is for temperature control. Constructed of a solid shell surrounded by a layer of insulation and covered by a solid outer shell.

Solid Outer and Inner Shell

DIAMETER	MATERIAL	THICKNESS	ASTM	TYPE	LENGTH
3" - 96"	Galvanized	26 - 14 gauge	A-653	G60-G90	1' - 20', 10' Standard
3" - 96"	Paint Grip	24 - 18 gauge	A-653	A60	1' - 20', 10' Standard
3" - 96"	PVS*	24 - 16 gauge	A-653	4 x 1, 4 x 4	1' - 20', 10' Standard
3" - 60"	Aluminum	.032 - .063	B-316	3003 H-14	1' - 20', 10' Standard
3" - 60"	Stainless Steel	24 - 18 gauge	A-240	304 or 316	

*PVS specification book available



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.



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Double Wall Fittings

Sheet Metal Connectors, Inc. double wall duct has a complete line of compatible fittings. Fittings can be fabricated with standing seam, elbow lock or welded seam construction. Double wall fittings can be fabricated to desired length and many different configurations. All sizes shall be listed using inside dimensions.

All fittings can be manufactured with:

- Double Wall E-Z Flange Jr. with Barrel Clamp
6" to 24" Diameter
- Double Wall E-Z Flange with Barrel Clamp
26" to 96" Diameter
- Double Wall Couplings

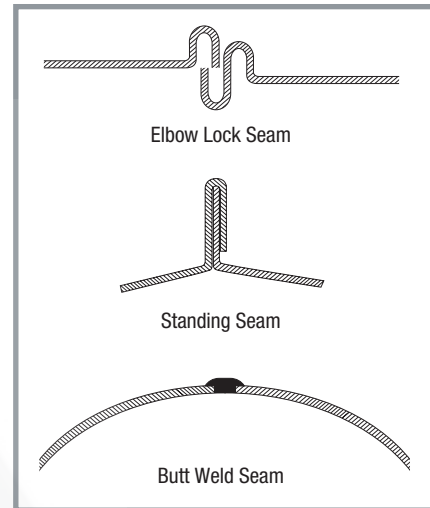
Insulation

SMC double wall round spiral duct is a dependable, erosion resistant alternative to lined round spiral duct, providing improved protection for insulation exposed to the airstream. In double wall round spiral duct a metal inner liner insures that high airflow velocities cannot separate insulation by pulling away from the duct's outer wall and creating erosion or airflow problems.

SMC constructs each piece with an inner shell (perforated or solid) surrounded by a layer of insulation and covered by a solid outer shell. The insulation is used in both acoustical and thermal duct systems.

SMC solves air quality problems caused by bacteria and other contaminants that can embed in fibrous materials, which can be a health hazard in environments such as schools, hospitals, laboratories, and food or pharmaceutical plants. In cases where additional erosion or contamination protection is desired for such an environment, we can provide a customer specified barrier material (mylar) between the insulation and the perforated liner.

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
1" - 1 1/2 # Cu. Ft.	.09	.31	.55	.72	.86	.93	.60
2" - 1 1/2 # Cu. Ft.	.18	.58	.79	1.02	1.06	.99	.85
1" - 3 # Cu. Ft.	.09	.28	.63	.86	.91	.92	.65

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

THERMAL CONDUCTANCE "C" AND RESISTANCE "R" (ASTM C 177)		
Product	Mean Temperature 75°F (24°)	
	Conductance "C" ⁽¹⁾	Resistance "R" ⁽²⁾
1" - 1 1/2 # Cu. Ft.	.28 (1.59)	3.6 (.36)
2" - 1 1/2 # Cu. Ft.	.14 (.80)	7.1 (1.26)
1" - 3 # Cu. Ft.	.24 (1.36)	4.2 (.73)

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

