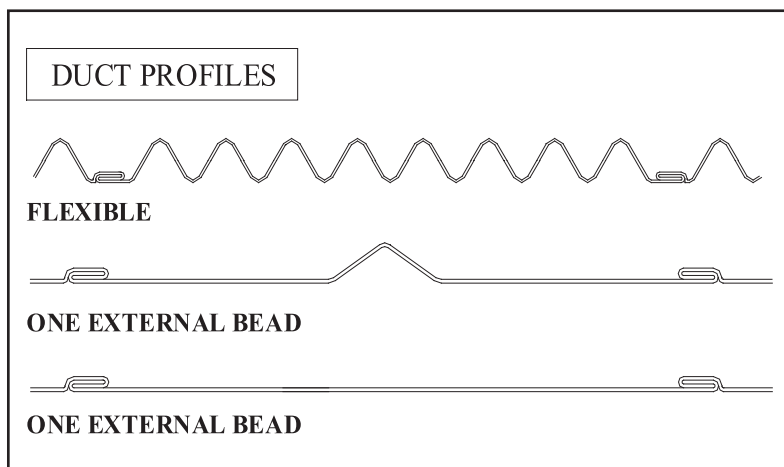


Nam Foong is the Distributor for Metal Flex Machinery range of Air Duct Products



## 1. Spiral Seam Air Duct

Metal Flex Machinery has the machine, which produces Galvanized Spiral Duct in Metal Gauges conforming to SMACNA HVAC DUCT Construction Standards. It is produced by quick change of profiling rolls.



The diameter forming is within "Live Rollers" that moved to threaded bolt circles marked for each diameter.

The "Live Rollers" on bearings roll with surface of the metal. This low resistance system and precision enables production with aluminium, galvanized steel and stainless steel in thickness from .004 to .036 inches (0.1 to 0.9mm) depending on metal type and duct profile.

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**One External Bead - Steel**

Duct Diameter	2"W.G. Positive	10"W.G. Positive	2"W.G. Negative
5 thru 8	32	32	32
10 thru 14	32	32	32
16 thru 26	30	30	30
28 thru 40	26/24	26/24	26/24

Manufacturer Recommendation - Based on Lock Spacing, Profile and U.L. Listing of Steel Duct.

**Plain Profile - Aluminium Flexible**

Duct Diameter	2"W.G. Positive	10"W.G. Positive	2"W.G. Negative
5 thru 8	.025"	n/a	.025"
10 thru 14	.025"	n/a	.025"
16 thru 26	.032"	n/a	.032"
28 thru 40	.032"	n/a	.032"

SMACNA Recommendation - Table 3-2 HVAC DUCT Construction Standard for 4 thru 14-Inch Diameters.

Manufacturer Recommendation - 4 thru 40-Inch Diameters for External Bead Profile.

**Gauge (Metal Thickness) Selection For Spiral Seam Air Duct**

**Plain Profile - Steel**

Duct Diameter	2"W.G. Positive	10"W.G. Positive	2"W.G. Negative
5 thru 8	28	26	28
10 thru 14	28	26	26
16 thru 26	26	24	24
28 thru 40	24	22	22

SMACNA Recommendation - Table 3-2 HVAC DUCT Construction Standard

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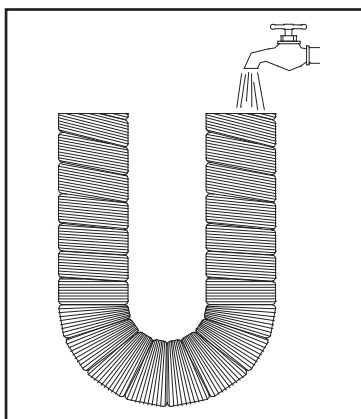
## 2. Flexible Duct

Type 100A Un-Insulated: For High and Low Pressure Heating, Cooling & Ventilating

### Feature:

1. U.L. Class O fire hazard classification permits installation in return plenum ceilings or other areas where the use of Class 1 air duct would contribute to smoke and flame spread in the event of fire.
2. All aluminium construction permits duct to be installed within walls, wall chases or ceilings where inaccessibility necessitates a duct with a life expectancy of the the building without concern for long term delaminating erosion or increase permeance.
3. Near Zero permeability and leakage reduces energy loss by delivering dried, moistened, cooled or heated air to the terminal without un-expected transmission loss.
4. Assured attainment of designed air-flow METALDUCT will not droop between six foot supports, nor can it be installed with severe bends that cause bunch-up, ovaling and restriction at every turn. Also METALDUCT is pulled open to the desired length and can be re-compressed where too long providing shortest point to point air flow.

### No limitation to installed Length.



PERFORMANCE STANDARDS	
Static Pressure 3" to 10" diameters	12 Inches W.G. Positive and Negative
12" to 18" diameters	8 Inches W.G. Positive and Negative
Maximum Velocity	5000 f.p.m
Temperature Range	- 100 deg. F to 435 deg. F
Permeance	Near Zero
Limitations to installed length	NONE

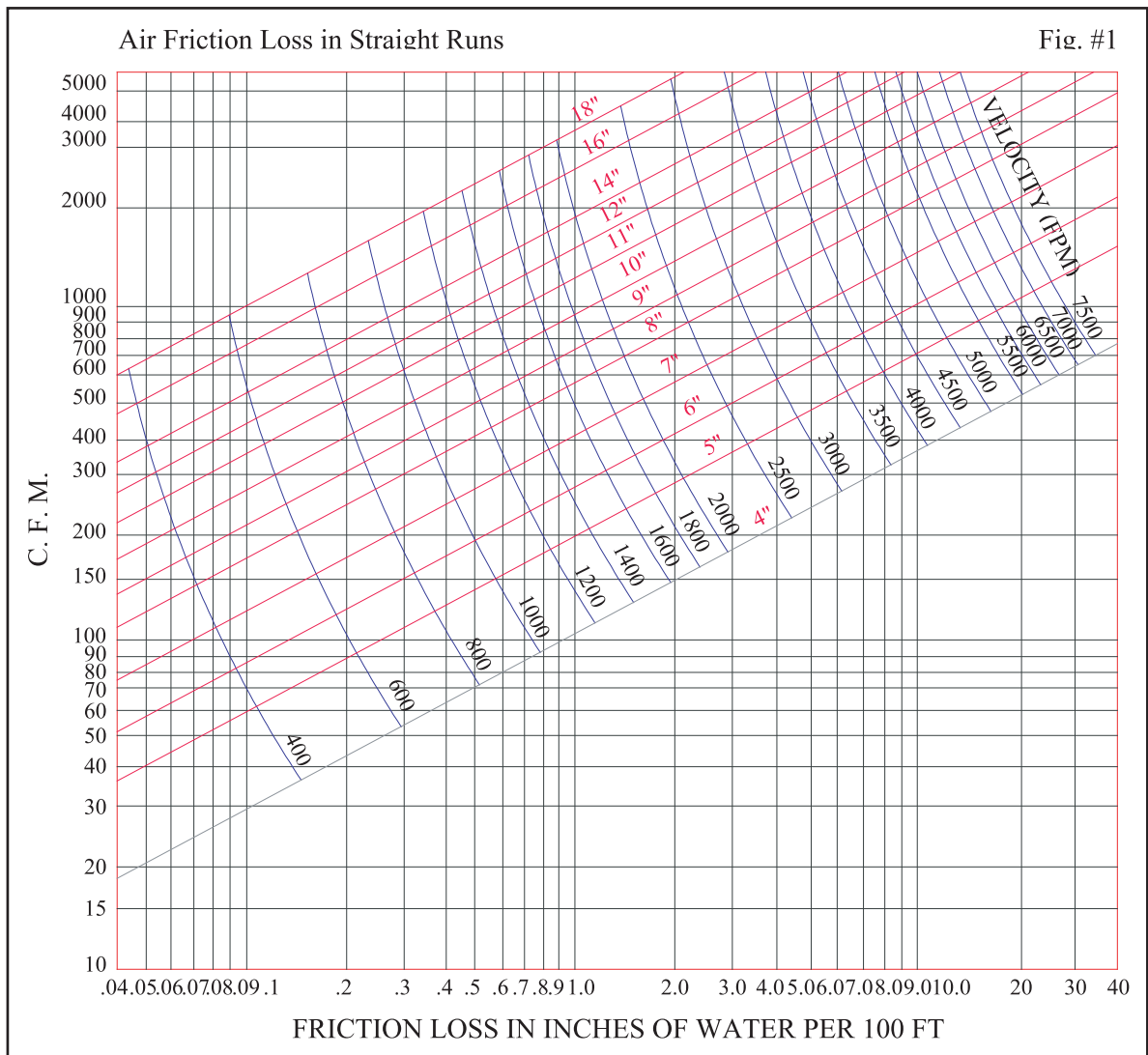
Will not delaminate or dry rot when heat aged.

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**Low Resistance Air Flow:**

METALDUCT presents only slightly higher resistance to air flow than rigid, straight duct, when good installation practices are followed, such as avoiding unnecessary sharp, short radius bends.



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**Pressure Loss - Friction Loss:**

Total pressure loss for ducts runs of a specific size at a given velocity equals straight lengths in feet to the intersection of their center line at 90° bends plus pressure loss as equivalent lengths of straight duct determined by the radius ratio R/D for each 90° bend.

Example : 6" diameter METALDUCT at 2000FPM with 90° bend centerline radius R of 9". L1 = 30' and L2 = 30'.

$R/D = 9/6 = 1.5$  which Fig. #2 gives 5.2' equivalent straight length. Total loss length = 5.2' + 30' + 30' = 65.2'.

See Air Friction Loss. Fig #1 the friction loss per 100' for 6" duct at 2000 FPM is 1.8 inches of water.

Therefore, the loss of 65.2' is  $65.2 / 100 \times 1.8 = 1.17"$  of water

**Note :** Consider R/D ratios greater than 3, the same as 3 because greater R/D ratios are straight curves.

