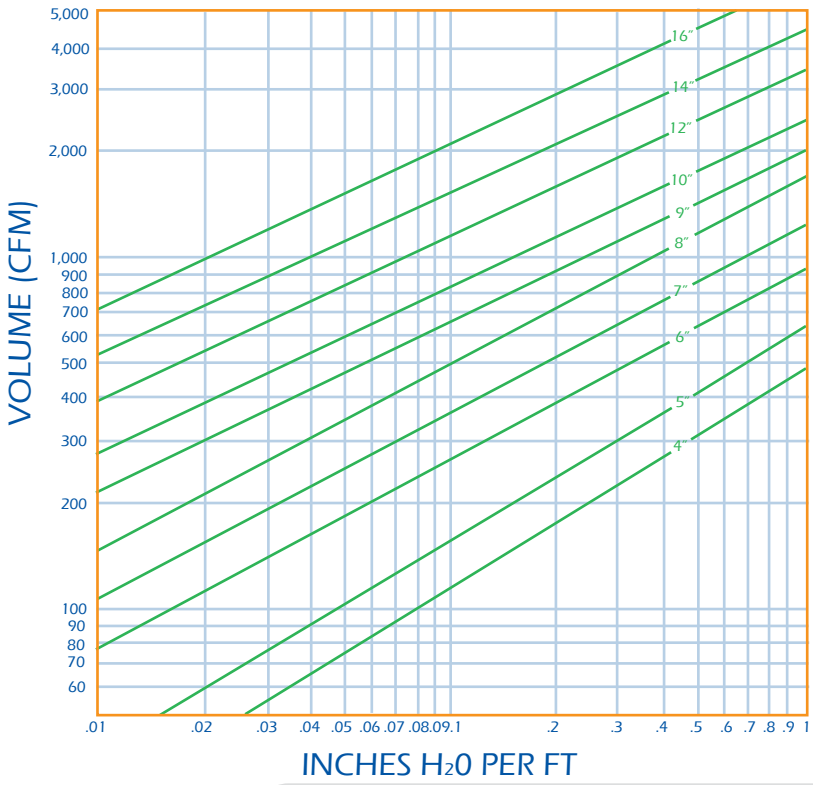
Flexmaster Duct Material - 90° Bend Friction Loss

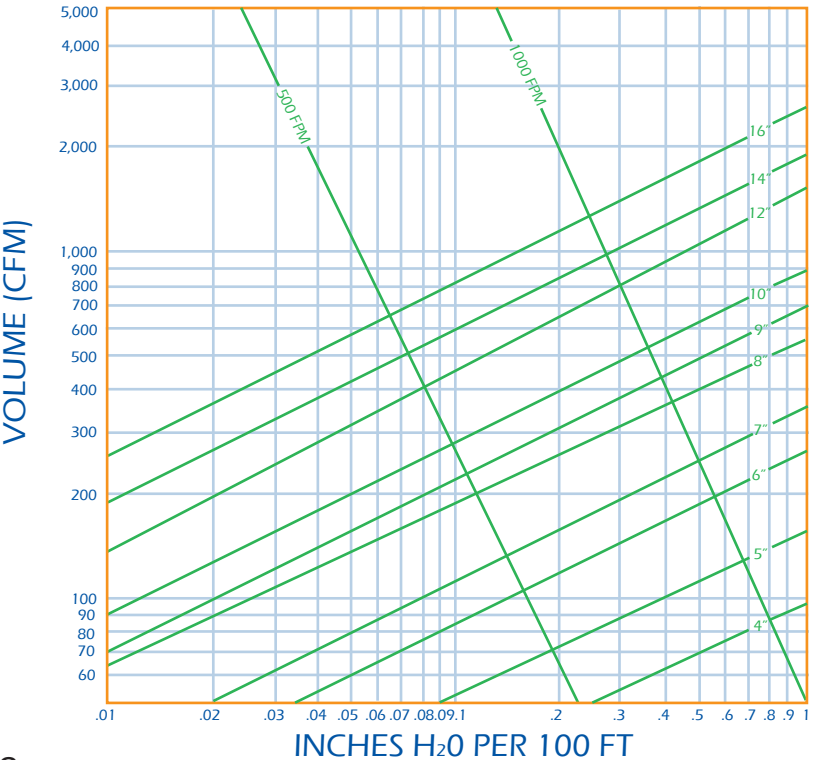


The data presented herein is based on reliable laboratory test. For all sizes the test bend was formed around a template of the same diameter as the duct resulting in a Radius to Diameter ratio of 1. The data has not been extrapolated for other bend ratios but must be considered when comparing values arrived at different R/D ratios.

By its very nature, flexible duct presents variations not present in the measurement of friction loss in rigid pipe. Variations exist between the test procedure and actual field installations and FLEXMASTER U.S.A., INC. assumes no responsibility for performance characteristics resulting from conditions which differ from those used in laboratory tests.

90° BEND - INCHES H20 PER FOOT - $\frac{\text{RADIUS}}{\text{DIAMETER}} = 1$

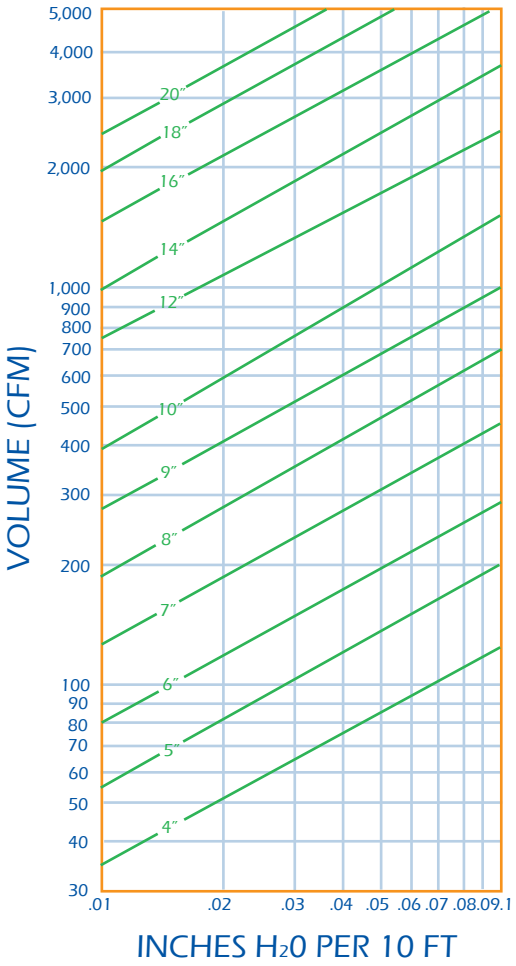
Flexmaster Duct Material - Straight Run Friction Loss



Round Duct Area Table

Duct Diameter (inches)	Cross Section Area (sq. ft.)
4"	.0873
5"	.1363
6"	.1963
7"	.2672
8"	.3490
9"	.4418
10"	.5454
12"	.7854
14"	1.069
16"	1.396
18"	1.767
20"	2.182

Flexmaster Triple Lock Metal Flexible Ducting - Straight Run Friction Loss

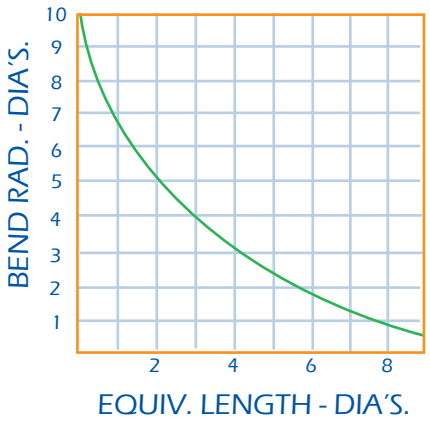


TRIPLE LOCK

All Metal • Corrosion Resistant

Air Tight • Permanent • High & Low Pressure

Equivalent length of ducting for any bend radius



DIA	WT/FT LBS	Bend Radius
4″	.15	6″
5″	.19	7″
6″	.22	9″
7″	.28	10″
8″	.31	12
9″	.35	13″
10″	.38	15″
12″	.44	18″
14″	.56	21″
16″	.62	24″

Hydronic Equivalents

One Gallon Water = 8.33 pounds
Specific heat (C_p) water = 1.00 Btu/lb °F (@68°F)
Specific heat (C_p) water vapor = 0.45 Btu/lb °F (@68°F)
One ft. of water = 0.433 psi

One cu. ft. of water = 62.4 lb = 7.49 gal.
One in. of mercury (Hg) = 13.6 in.w.g. = 1.13 ft. w.g.
Atmospheric Pressure = 19.92 in.Hg = 14.696 psi
One psi = 2.31 ft. w.g. = 2.04 in.Hg

$$TP = V_p + SP$$

$$V_p = \left(\frac{V}{4005}\right)^2$$

$$V = V_m \left[\frac{d(\text{other than standard})}{0.075\ (d = \text{std. air})}\right]$$

$$cfm = A \times V$$

$$TP = C \times V_p$$

TP = Total Pressure (in. w.g.)
V_p = Velocity Pressure (in. w.g.)
SP = Static Pressure (in. w.g.)
V = Velocity (fpm)
V_m = Measured Velocity (fpm)
d = Density (lb./cu ft)
A = Area of duct cross section (sq ft)
C = Duct Fitting Loss Coefficient