

Hose Characteristics

FRICION OF AIR IN HOSE

This table may be used to determine the pressure loss in hose connected to pneumatic tools. It is correct for hose with smooth inside lining. Hose with rough lining may have friction loss as much as 50% greater than the figures given below.

Size Of Hose	Gage Pressure at Line(PSI)	Cubic Feet Free Air per minute passing through 50 ft. lengths of Hose													
		20	30	40	50	60	70	80	90	100	110	120	130	140	150
		Loss of Pressure in lbs./sq. in. (Hose length 50 ft.)													
0.500" with coupling at each end	50	1.8	5.0	10.1	18.1	-	-	-	-	-	-	-	-	-	-
	60	1.3	4.0	8.4	14.8	23.4	-	-	-	-	-	-	-	-	-
	70	1.0	3.4	7.0	12.4	20.0	28.4	-	-	-	-	-	-	-	-
	80	.9	2.8	6.0	10.8	17.4	25.2	34.6	-	-	-	-	-	-	-
	90	.8	2.4	5.4	9.5	14.8	22.0	30.5	41.0	-	-	-	-	-	-
	100	.7	2.3	4.8	8.4	13.3	19.3	27.2	36.6	-	-	-	-	-	-
0.750" with coupling at each end	110	.6	2.0	4.3	7.6	12.0	17.6	24.6	33.3	44.5	-	-	-	-	-
	50	.4	.8	1.5	2.4	3.5	4.4	6.5	8.5	11.4	14.2	-	-	-	-
	60	.3	.6	1.2	1.9	2.8	3.8	5.2	6.8	8.6	11.2	-	-	-	-
	70	.2	.5	.9	1.5	2.3	3.2	4.2	5.5	7.0	8.8	11.0	-	-	-
	80	.2	.4	.8	1.3	1.9	2.8	3.6	4.7	5.8	7.2	8.8	10.6	-	-
	90	.2	.4	.7	1.1	1.6	2.3	3.1	4.0	5.0	6.2	7.5	9.0	-	-
1.000" with coupling at each end	100	.2	.4	.6	1.0	1.4	2.0	2.7	3.5	4.4	5.4	6.6	7.9	9.4	11.1
	110	.1	.3	.5	.9	1.3	1.8	2.4	3.1	3.9	4.9	5.9	7.1	8.4	9.9
	50	.1	.2	.3	.5	.8	1.1	1.5	2.0	2.6	3.5	4.8	7.0	-	-
	60	.1	.2	.3	.4	.6	.8	1.2	1.5	2.0	2.6	3.3	4.2	5.5	7.2
	70	-	.1	.2	.4	.5	.7	1.0	1.3	1.6	2.0	2.5	3.1	3.8	4.7
	80	-	.1	.2	.3	.5	.7	.8	1.1	1.4	1.7	2.0	2.4	2.7	3.5
1.000" with coupling at each end	90	-	.1	.2	.3	.4	.6	.7	.9	1.2	1.4	1.7	2.0	2.4	2.8
	100	-	.1	.2	.2	.4	.5	.6	.8	1.0	1.2	1.5	1.8	2.1	2.4
	110	-	.1	.1	.2	.3	.4	.6	.7	.9	1.1	1.3	1.5	1.8	2.1

For longer or shorter lengths of hose the friction loss is proportional to the length: i.e., for 25 ft., 1/2 of the above; for 150 ft., 3 times above, etc.

FLOW CHART

The Flow Chart takes into account the loss in pressure due to friction. Capacities will be reduced 2% to 5% with amount of bending and type of coupling used. For heavier or slower flowing liquids, capacity will vary in proportion.

Gals. per Min.	PER 100 FEET OF HOSE		
	Inside Diameter		
	0.500"	0.750"	1.000"
	Intake Pressure-Pounds-Water-Square Inch		
5	27	5	-
10	98	15	4
15	210	32	10
20	-	32	10
25	-	78	24
30	-	115	33
40	-	195	51
50	-	-	77
60	-	-	104
70	-	-	130