

TABLE 1: AquaAir™ Friction Loss Chart

Flowrate: 1.5 CFM to 1.8 CFM

Feet	1/2" Tubing			5/8" Tubing		
	5 PSI	10 PSI	25 PSI	5 PSI	10 PSI	25 PSI
100	0.2	0.16	0.12	0.12	0.09	0.07
200	0.41	0.32	0.24	0.24	0.18	0.14
300	0.62	0.49	0.37	0.37	0.27	0.21
400	0.83	0.66	0.49	0.49	0.37	0.28
500	1.06	0.84	0.62	0.62	0.46	0.36
600	1.29	1.02	0.75	0.75	0.56	0.43
700	1.53	1.2	0.88	0.89	0.66	0.5
800	1.77	1.39	1.02	1.02	0.76	0.58
900	2.02	1.58	1.15	1.16	0.86	0.65
1000	2.28	1.77	1.29	1.3	0.96	0.73
1200	2.78	2.15	1.56	1.58	1.17	0.87
1400	3.35	2.57	1.86	1.88	1.38	1.03
1600	3.95	3.01	2.16	2.19	1.61	1.19
1800	4.6	3.48	2.47	2.51	1.84	1.35
2000		3.96	2.8	2.85	2.08	1.51
2400		4.89	3.42	3.5	2.53	1.82
2800		5.99	4.13		3.05	2.16
3200		7.23	4.9		3.61	2.52
3600			5.73		4.22	2.88
4000			6.63		4.86	3.26
4400			7.62		5.57	3.65
4800			8.68		6.32	4.06
5200			9.85		7.15	4.48

Note: 25 psi columns are for the piston compressors only!

To calculate maximum air tubing run, add PSI value of longest length footage run to PSI value of deepest diffuser depth (1 PSI loss for every 27" of depth). Add 1 additional PSI for diffuser operation. The total should not exceed 10 PSI for rotary vane compressors, and 25 psi for piston compressors.

Example:

AquaAir™ system with longest tubing length run of 1000' (1/2" air tubing) with deepest diffuser placement at a depth of 10'. Using the chart above (1/2" Tubing), 1000' will lose 1.77 PSI operating at 10 PSI. The diffuser depth is 10', or 120" divided by 27 (remember, 1 PSI is lost for every 27" of depth) which equals a loss of 4.4 PSI. Now add 1.77 and 4.4 plus 1 PSI (operating loss). The total is 7.17 PSI. This total does not exceed 10 PSI, therefore it is an acceptable application.

Glossary:

CFM: cubic feet per minute

PSI: pounds per square inch