

Technical Bulletin

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Recommended Pipe Sizes for Compressed Air

Pipe sizing is very important in any compression system, yet many plants are plumbed based on guess work, rather than the proper data. Invariably, this leads to a situation that pushes the limits of the delivery system and, in most cases, all manner of patches and band-aids are applied to try to work around the problem.

Be smart. Don't use old plumbing systems that may be left over from some other application. It is very difficult to determine the condition of the old pipe, fittings and valves, which in many cases, weren't designed for compressed air in the first place. Adapting an existing plumbing system to your compressed air requirements usually requires more work to bring it up to specification than simply putting in a new system. Follow the plumbing recommendations outlined in the technical bulletin "Basic Compressed Air Plumbing" and use the data provided in the table to the right to select the proper size pipe for your specific requirement.

Recommended Pipe Sizes for Compressed Air to Maintain Less than 1 PSI Pressure Drop

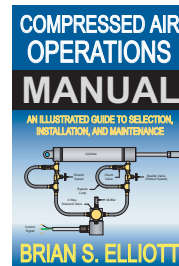
		Length of Run in Feet								
		25	50	75	100	150	200	300	500	1000
Flow Rate in SCFM	6	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4
	18	1/2	1/2	1/2	3/4	3/4	3/4	3/4	1	1
	30	3/4	3/4	3/4	3/4	1	1	1	1-1/4	1-1/4
	45	3/4	3/4	1	1	1	1	1-1/4	1-1/4	1-1/4
	60	3/4	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2
	90	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	2
	120	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2	2	2
	150	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	2	2	2	2-1/2
	180	1-1/4	1-1/2	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2
	240	1-1/4	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	3
	300	1-1/2	2	2	2	2	2-1/2	2-1/2	3	3
	360	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	3	3
	450	2	2	2	2-1/2	2-1/2	3	3	3	3-1/2
	600	2	2-1/2	2-1/2	2-1/2	3	3	3	3-1/2	4
	750	2	2-1/2	2-1/2	3	3	3	3-1/2	3-1/2	4
1000	2-1/2	3	3	3	3-1/2	3-1/2	4	4	5	

Recommended Pipe Sizes @ 100 PSI (Schdule 40 Pipe)

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Comprehensive information on compressed air systems is provided in the book "Compressed Air Operations Manual" by Brian S. Elliott, ISBN: 0-07-147526-5 Published by the McGraw-Hill Book Co.



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