

Technical Bulletin 43

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Compressed Air Flow Through Orifices

by Brian S. Elliott

Many instances can arise within the context of the compression system which may call for the use of compressed air to flow unimpeded through an orifice. Generally speaking, this practice is considered the improper use of compressed air and should be avoided. However, there are those exceptions that simply can't be avoided. In these cases the air flow through any given size orifice is critical to the application and the compression system it's attached to. The chart below shows the SCFM requirement for various orifices at common pressures.

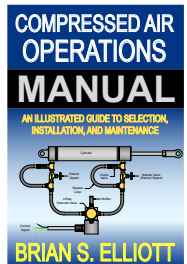
		Pressure (PSI)					Air Flow (SCFM)
		90	100	125	150	175	
Orifice Diameter (Inch)	1/64	0.32	0.35	0.43	0.51	0.66	
	1/32	1.29	1.40	1.71	2.02	2.64	
	3/64	2.87	3.15	3.85	4.55	5.95	
	1/16	5.10	5.60	6.85	8.09	10.60	
	3/32	11.50	12.60	15.40	18.20	23.80	
	1/8	20.40	22.40	27.40	32.40	42.30	
	3/16	45.60	50.40	61.60	72.80	95.20	
	1/4	81.60	89.60	110.00	129.00	169.00	
	3/8	184.00	202.00	246.00	291.00	381.00	
	1/2	326.00	358.00	438.00	518.00	677.00	
	5/8	510.00	560.00	685.00	809.00	-	
	3/4	734.00	806.00	986.00	-	-	
7/8	999.00	-	-	-	-		

SCFM: Standard Cubic Foot of Air Per Minute

SCF: 1 Cubic Foot of Air at Atmospheric Pressure

PSI: Pounds Per Square Inch

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.



www.Air-Options.com

Air Options, Inc.
P.O. Box 35984
Houston, Texas 77235-5984
Ph.: 713-721-9619
E-Mail: Info@Air-Options.com

AIR-OPTIONS, INC.

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