

For over 76 years, Pattons has partnered with thousands of customers supplying best in class compressed air products, parts, and accessories supported by responsive service.

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AIR COMPRESSORS AND VACUUM SYSTEMS	
Lubricated Rotary Screw Air Compressors	
Oil Free Rotary Screw Air Compressors	
Reciprocating Air Compressors	medical medical
Medical Grade Air Compressors	EKKER
Portable Air Compressors	
Scroll Air Compressors	
High Pressure Air Compressors	
Rotary Vane and Liquid Ring Vacuum Pumps	
Medical Vacuum Systems	Sauer Compressors
AIR TREATMENT	
Refrigerated Air Dryers	
Regenerative Air Dryers	
Mist Eliminators	PURIFICATION SOLUTIONS
Inline Filters	
Dewpoint Suppression Dryers	Engineered Air Products
 Condensate Management (Oil Water Separators / Drains) 	
Nitrogen (N2) Generation Systems	
COOLING AND CHILLERS	
Ory-Bulb Cooling Systems	
Evaporative Open And Closed Loop Systems	
Heat Exchanger	Thermal Precision
Pump Skids	
Cabinet Cooling	Pfannenberg Purification solutions
Ochillers	
SYSTEMS MANAGEMENT AND ACCESSORIES	
Control Systems	
Remote Monitoring	
Continuous Monitoring Sensors	
Leak Free Aluminum Piping Systems	
Filter Regulator Lubricator Combinations	
Hose Reels	
 Safety Quick Couplers 	

LOCATIONS

Atlanta, GA 6709 Tribble Street Litonia, GA 30058 T 770 484 9226

Birmingham, AL 20 Monroe Drive Pelham, AL 35124 T 205 780 1344

Charlotte, NC 4610 Entrance Drive, Suite H Charlotte, NC 28273 T 704 523 4122

Florence, SC 2112 National Avenue Florence, SC 29501 T 843 395 0555

Greenville, SC

297 Garlington Road, Suite C Greenville, SC 29615 T 864 292 6007 2612 Discovery Drive Raleigh, NC 27616 **T** 919 872 6411

Raleigh, NC

Richmond, VA

10394 Lakeridge Pkwy, Suite 400 Ashland, VA 23005 T 804 249 6827

llsofu		versions	Fraction	Inches	mm	Fraction	Inches	mm
		1/32	.03125	0.7938	17/32	.53125	13.4930	
	FLOV	V	1/16	.06250	1.5875	9/16	.56250	14.2870
1 cfm	=	0.02832 m3/min	3/32	.09375	2.3813	19/32	.59375	15.0810
1 cfm	=	0.47195 l/sec	1/8	.12500	3.1750	5/8	.62500	15.8750
1 m3/min	=	35.315 cfm	5/32	.15625	3.9688	21/32	.65625	16.6680
1 l/sec	=	2.119 cfm	3/16	.18750	4.7625	11/16	.68750	17.4620
PR	ESS	JRE	7/32	.21875	5.5563	23/32	.71875	18.2560
1 psi	=	0.06895 bar	1/4	.25000	6.3500	3/4	.75000	19.0500
1 psi	=	6.8948 K Pa	9/32	.28125	7.1438	25/32	.78125	19.8430
1 bar	=	14.5038 psi	5/16	.3125	7.9375	13/16	.81250	20.6375
1 kPa	=	0.14504 psi	11/32	.34375	8 7313	27/32	84375	21 4310
1 Torr	=	0.01934 psi			0.7515	21/52	.0+375	21.4310
POV	VER/	HEAT	3/8	.37500	9.5250	7/8	.87500	22.2251
1 HP	=	2547 BTU/hour	13/32	.40625	10.3188	29/32	.90625	23.0188
1 kW	=	3415 BTU/hour	7/16	.43750	11.1125	15/16	.93750	23.8126
ST	ORA	\GE	1 [/22	46075	44.00.00	24/22	06075	24 6062
1Gallon	=	0.13368 Cu Ft	15/32	.46875	11.9063	31/32	.96875	24.6063
1 Cu Ft	=	7.4805 Gallons	1/2	.50000	12.7001	1	1.00000	25.4001

PIPE SIZE RECOMMENDATIONS											
PIPE	SIZE	0.5 IN	0.75 IN	1.0 IN	1.25 IN	1.5 IN	2.0 IN	2.5 IN	3.0 IN	4.0 IN	6.0 IN
PRESSURE Maximum CFM at pressure to stay under 1 psi pressure drop per 100 feet of equivalent piping											
Aluminum	80	10	28	63	115	186	394	713	1,155	2,480	7,215
/ Copper	100	11	32	70	126	206	442	798	1,281	2,762	7,975
	120	12	35	75	136	225	479	860	1,394	3,006	8,735
	80	7	20	42	76	122	266	483	793	1,687	4,880
Black	100	7	21	47	83	134	297	533	862	1,841	5,367
non	120	8	22	50	89	146	320	579	945	2,004	5,859
1											

NOTE: FLOWS CAN BE DOUBLED IF IN A LOOPED CONFIGURATION

PLAN FOR THE FUTURE: IF YOU ARE AT 120 PSIG TODAY, DOES NOT MEAN YOU WILL NOT BE AT 80 PSI TOMORROW

Leak Size	Pressure (psig)	Flow ¹ (scfm)	Cost/Year ²
1/16 in	120	6.9	\$ 928
1/8 in	120	27.5	\$ 3,714
3/16 in	120	61.9	\$ 8,356
1/4 in	120	110.1	\$ 14,856
1/16 in	100	5.7	\$ 774
1/8 in	100	22.9	\$ 3,095
3/16 in	100	51.6	\$ 6,964
1/4 in	100	91.8	\$ 12,379
1/16 in	80	4.6	\$ 619
1/8 in	80	18.4	\$ 2,475
3/16 in	80	41.3	\$ 5,570
1/4 in	80	73.4	\$ 9,903

¹Flow calculations are based on perfect orifices and 14.7psia ²Cost is based on 22 kW/ 100 scfm, 8760 hours per year and \$ 0.07 / kWh energy Cost

USEFUL FORMULAS

kW (3 Phase) =

Energy Cost Per Year (\$) = kW x Hours per year x energy cost in \$ per kWh

1000

746

BHP x 0.746

kW (3 Phase) =

Motor Efficiency

RULES OF THUMB

An increase in pressure of 2 psi = 1% increase in main motor power An increase in pressure of 1 psig = 1% increase in unregulated demands



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