Consumption Charts

Air Consumption Chart for Industrial Type Tools

Cubic Feet per Minute required to operate various pneumatic equipment at a pressure range of 70-90 psi.

Miscellaneous Portable Tools	Consumption (CFM) 15% Use FACTOR	Consumption (CFM) 25% Use FACTOR	Consumption (CFM) 35% Use FACTOR
Drill, 1/16″ to 3/8″	4	6	9
Drill, 3/8″ to 5/8″	5	9	12
Screw Driver #2 to #6 Screw	2	3	4
Screw Driver #5 to 5/16″ Screw	4	6	8
Trapper, to 3/8″	4	6	8
Nutsetters, to 3/8″	4	6	8
Nutsetters, to 9/16″	8	13	18
Nutsetters, to 3/4″	9	15	21
Impact Wrench, 1/4″	2	4	5
Impact Wrench, 3/8″	3	5	7
Impact Wrench, 1/2″	5	8	11
Impact Wrench, 5/8″	5	8	11
Impact Wrench, 3/4″	5	9	12
Impact Wrench, 1″	7	11	16
Impact Wrench, 1 1/4″	8	14	19
Die Grinder, small	2	4	5
Die Grinder, Medium	4	6	8
Horizontal Grinder, 2″	5	8	11
Horizontal Grinder, 4″	9	15	21
Horizontal Grinder, 6″	11	18	25
Horizontal Grinder, 8″	12	20	28
Vertical Grinders and Sanders, 5″ Pad	5	9	12
Vertical Grinders and Sanders, 7″ Pad	11	18	25
Vertical Grinders and Sanders, 9″ Pad	12	20	28
Buring Tool, Small	2	4	5
Buring Tool, Large	4	6	8

Consumption Charts *(continued)*

Air Consumption Chart for Industrial Type Tools *(continued)*

Miscellaneous	Consumption (CFM) 15% Use FACTOR	Consumption (CFM) 25% Use FACTOR	Consumption (CFM) 35% Use FACTOR
Rammers, Small	4	3	9
Rammer, Medium	5	9	12
Rammers, Large	6	10	14
Backfill Tamper	4	6	9
Compression Riveter	0.2 cu. ft. per cycle		
Air Motor, 1 HP	5	9	12
Air Motor, 2 HP	11	18	25
Air Motor, 3 HP	14	24	33
Air Motor Hoist, 1000#	1 cul ft. per foot or lift		
Air Motor Hoist, 2000#	1 cul ft. per foot or lift		
Paint Spray Gun (Production)	3	5	7
Hammers			
Scaling Hammer	2	3	4
Chipping Hammer	5	8	11
Riveting Hammer (Heavy)	5	8	11
Riveting Hammer (Light)	2	4	5
Saws			
Circular, 8"7	11	16	
Circular, 12"	10	16	24
Chain, Lightweight	4	7	10
Chain, Heavy Duty	13	22	31

Always check with tool manufactures for actual air consumption of tools being used. The above is based on averages and should not be considered accurate for any particular make of tool.

Above tools are rated based upon typical "on-load" performance characteristics.

For other use factors adjust the cfm air consumption on a proportional basis.
(Example: 30 seconds on; 30 seconds off use 50% as use factor)

Cubic Feet per Minute required to operate various pneumatic equipment at a pressure range of 70-90 psi.

Consumption Charts *(continued)*

Air Consumption Chart for Automotive Service Shops

Cubic Feet per Minute required to operate various pneumatic equipment, for average service shop usage factor.

Equipment Air Pressure Range in PSI		Compressor cfm Required Per Unit
	Portable Tools	
70-100	**Air Filter Cleaner	3
70-100	**Body Polisher	20
70-100	**Body Sander (Orbital)	10
70-100	Brake Tester	4
70-100	**Carbon Remover	3
90-100	Dusting Gun (Blow Gun)	2.5
70-100	Panel Cutter	4
70-90	**Drill, 1/16″-3/8″	4
70-90	**Impact Wrench 3/8″	3
70-90	**Impact Wrench 1/2″	4
70-90	**Impact Wrench 5/8″	5
70-90	**Impact Wrench 3/4″	6
70-90	**Impact Wrench 1″	12
70-90	**Die Grinder	5
90-100	**Vertical Disc Sanders	20
90-100	**Filing and Sawing Machine, (Small)	3
-100	**Filing and Sawing Machine, (Large)	5
90-100	**Burring Tool	5
	Tools	
125-150	Rim Stripper	6
125-150	Tire changer	1
125-150	Tire Inflation Line	2
-150	Tire Spreader	1
125-150	**Vacuum Cleaner	7
	Hammers	
90-100	**Air Hammer	4
90-100	Tire Hammer	12
125-150	Bead Breaker	12
90-100	Spring Oiler	4
	Guns	
90-100	**Engine Cleaner	5
-100	**Paint Spray Gun (production)	8
90-100	**Paint Spray gun (touch up)	4
90-100	**Paint Spray Gun (undercoat)	19
	Other Equipment	
120-150	**Grease Gun	3
145-175	Car Lift* (air powered hydraulic)	6

Consumption Charts *(continued)*

Air Consumption Chart for Automotive Service Shops *(continued)*

Equipment Air Pressure Range in PSI		Compressor cfm Required Per Unit
	Portable Tools	
125-150	Floor Jacks (air powered hydrailic)	6
120-150	Pneumatic Garage Door	3
90-100	Radiator Tester	1
90-100	Spark Plug Cleaner	5
90-100	Spark Plug Tester	0.5
70-100	Transmission and Differential Flusher	3
70-100	**Fender Hammer	9
70-100	**Car Washer	9
70-100	**6″ Medium Duty Sander	40

*This is for 8,000 lbs. capacity. Add .65 cfm for each 1,000 lbs. capacity over 8,000

**These devices are rated based upon typical "on-load" performance characteristics

Always check with tool manufactures for actual consumption of tools being used. The above is based on averages and should not be considered accurate for any particular make of tool

Consumption Charts *(continued)*

Compressor Selection Chart

After listing all the air operated devices to be supplied by the air compressor, determine, from the chart, the pressure range and volume of air required by each device. The air compressor must maintain a minimum pressure at least equal to the highest of these pressure ranges. For example, if the highest pressure range required by any one device in a given group is 120 psi to 150 psi, compressor cutting in at not less than 120 psi and cutting out at 150 psi should be recommended.

Compressor Pressure (psi)		Air Consumtion (cfm) of total equipment		Horsepower of Compressor Required	
Cut in	Cut Out	Average Use*	Continuous Operation**	Two Stage	Single Stage
80	100	Up to - 6.6	Up to - 1.9		1/2
80	100	6.7 - 10.5	2.0 - 3.0		3/4
80	100	10.6 - 13.6	3.1 - 3.9		1
80	100	Up to - 14.7	Up to - 4.2	1	
80	100	13.7 - 20.3	4.0 - 5.8		1 1/2
80	100	14.8 - 22.4	4.3 - 6.4	1 1/2	
80	100	20.4 - 26.6	5.9 - 7.6		2
80	100	22.5 - 30.4	6.5 - 8.7	2	
80	100	26.7 - 32.5	7.7 - 10.2		3
80	100	30.6 - 46.2	8.8 - 13.2	3	
80	100	32.6 - 38.0	10.3 - 18.0		5
80	100	46.3 - 60.0	13.3 - 20.0	5	
80	100	60.1 - 73.0	20.1 - 29.2	7 1/2	
80	100	73.1 - 100.0	29.3 - 40.0	10	
80	100	100.1 - 150.0	40.1 - 60.0	15	
80	100	150.1 - 200.0	60.1 - 80.0	20	
80	100	201.0 - 250.0	80.1 - 100.0	25	
120	150	Up to - 3.8	Up to - 1.1		1/2
120	150	3.9 - 7.3	1.2 - 2.1		3/4
120	150	7.4 - 10.1	2.2 - 2.9		1
120	150	Up to - 12.6	Up to - 3.6	1	
120	150	10.2 - 15.0	3.0 - 4.3		1 1/2
120	150	12.7 - 20.0	3.7 - 5.7	1 1/2	
120	150	15.1 - 20.0	4.4 - 5.7		2

Consumption Charts *(continued)*

Compressor Selection Chart *(continued)*

Compressor Pressure (psi)		Air Consumtion (cfm) of total equipment		Horsepower of Compressor Required	
Cut in	Cut Out	Average Use*	Continuous Operation**	Two Stage	Single Stage
120	150	20.1 - 25.9	5.8 - 7.4	2	
120	150	26.0 - 39.2	7.5 - 11.2	3	
120	150	39.3 - 51.9	11.3 - 17.3	5	
120	150	52.0 - 67.5	17.4 - 27.0	7 1/2	
120	150	67.6 - 92.5	27.1 - 37.0	10	
120	150	92.5 - 140.0	37.1 - 57.0	15	
120	150	140.1 - 190.0	57.1 - 77.0	20	
120	150	190.1 - 240.0	77.1 - 97.0	25	
145	175	Up to - 11.9	Up to - 3.4	1***	
145	175	12.0 - 18.5	3.5 - 5.3	1 1/2	
145	175	18.6 - 24.2	5.4 - 6.9	2	
145	175	24.3 - 36.4	7.0 - 10.4	3	
145	175	36.5 - 51.0	10.5 - 17.0	5*	
145	175	51.1 - 66.0	17.1 - 26.4	7 1/2	
145	175	66.1 - 88.2	26.5 - 35.3	10	
145	175	88.3 - 135.0	35.3 - 55.0	15	
145	175	135.1 - 185.0	55.1 - 75.0	20	
145	175	185.1 - 235.0	75.1 - 95.0	25	

*These figures are not to be regarded as the capacity of the compressor in free air output, but instead, are the combined free air consumption of all the tools the establishment, as well as tools anticipated for future added equipment. (A factor has been introduced to take into account intermittent operation of tools likely to be in use simultaneously in the average garage or industrial plant.

**These figures are to be employed when the nature of the device is such that normal operation requires a continuous supply of compressed air. Therefore, no factor for intermittent operation has been used, and the figures given represent the compressor capacity in free air output.

**Do not recommend a compressor of less than ½ Horsepower if the pneumatic equipment includes a lift of 8,000 lbs. capacity.