

COMPRESSOR SELECTION GUIDE *CrystalBlast*TM

The following is an explanation of the recommendation for air compressor sizing for proper *CrystalBlast* operation. This recommendation considers the standard nozzle size, 3/32" i.d., additional nozzle wear and proper operation of the blast machine pneumatic controls.

Customer Question: "What air compressor do you recommend I buy for the *CrystalBlast*?"

Answer: The standard nozzle, 3/32, has a compressed air requirement of 5.7 cfm at 30 psi blasting pressure. The compressor line pressure must always remain 30 psi greater than the blasting pressure for proper operation of the machine controls. A blasting pressure of 40 psi would require 7 cfm with a minimum line pressure of 70 psi.

Inform the customer that as the nozzle wears out the i.d. hole of the nozzle will get larger and the compressed air requirement will increase. For this reason, it is recommended that roughly 2 times the amount of compressed air be supplied above what is actually required for the machine nozzle size related to blasting pressure. This is not a hard rule but rather a suggestion. The machine will operate on a compressor that supplies 6-7 cfm, but care must be taken for proper machine operation. Any time spent during a minute with your foot removed from the blast pedal computes to compressed air saved, lowering the cfm needed for proper operation. The *CrystalBlast* machine is equipped with instant on-off blast cycling feature allowing foot operated blast control for compressed air reduction.

The compressor cfm performance should be 9-10 cfm. Do not confuse compressor displacement with cfm supplied when air is stored inside the tank. The compressor will have one or two additional air delivery figures. Purchase something that will supply 9-10 cfm at 90 psi compressor working pressure.

Not all compressors are created equal and the motor horsepower is the last item the customer should consider. Always look at the cfm delivery performance and consider the motor horsepower as a rule of thumb. All machines, even the *CrystalBlast*, will operate with less air than recommended but special operation of the machine will be required.

The chart below is listed for you convenience...

PRESSURE BLAST CFM CONSUMPTION										
Nozzle Size		CFM CONSUMPTION AT SPECIFIC PRESSURES								
		20 PSI	30 PSI	40PSI	50PSI	60PSI	70PSI	80PSI	90PSI	100PSI
1/16"	0.062	2.00	2.50	3.10	3.70	4.20	4.80	5.40	5.90	6.50
3/32"	0.094	4.40	5.70	7.00	8.20	9.50	10.80	12.10	13.30	14.60
1/8" (#2)	0.125	7.90	8.38	10.29	12.20	14.02	15.93	17.76	19.67	21.80
3/16" (#3)	0.187	15.00	18.92	23.24	27.39	31.54	35.85	40.08	44.15	49.00
1/4" (#4)	0.250	26.00	33.62	41.17	48.64	56.11	63.66	71.13	78.68	85.00
5/16" (#5)	0.312	42.00	54.61	67.06	79.10	91.13	103.63	115.66	127.74	140.00
3/8" (#6)	0.375	58.00	75.61	92.96	109.56	126.16	143.59	160.19	176.79	194.00
7/16" (#7)	0.437	83.00	105.03	128.65	152.31	175.55	199.20	222.44	245.68	268.00
1/2" (#8)	0.500	105.00	143.46	164.34	195.05	224.93	254.81	284.69	314.57	346.00

**standard CrystalBlast nozzle size*



MBA

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