CFM Requirements for Blast Nozzles

Compressed air each nozzle uses, by orifice size and pressure

AIRBLAST

How to read: find your nozzle in the left column and read across to your blasting pressure. Size your compressor on the **air used while blasting** figure.

Nozzle No. is the orifice size in sixteenths of an inch, so a No. 6 nozzle has a 6/16" (3/8") orifice. Pressures are shown in psi, with bar underneath.

Air used while blasting

cfm, air carrying abrasive

Typical blasting pressures

No.	Orifice	mm	30 2.1	40 2.8	50 3.4	60 4.1	70 4.8	80 5.5	90 6.2	100 6.9	psi bar
2	1/8"	3.2	8	10	11.3	13.2	15.1	17	18	20.3	
3	3/16"	4.8	18	22	26	30	33	38	41	45	
4	1/4"	6.4	34	41	47	54	61	68	74	81	
5	5/16"	7.9	53	65	77	89	101	113	126	137	
6	3/8"	9.5	76	91	108	126	143	161	173	196	
7	7/16"	11.1	100	124	147	170	194	217	240	254	
8	1/2"	12.7	137	165	195	224	252	280	309	338	
10	5/8"	15.9	212	257.6	295	341.3	391.2	429	494	518	
12	3/4"	19.1	304.5	371.2	423.4	490.7	562.8	619	712.4	739.2	
14	7/8"	22.2	415	504	575.2	666.2	762	811.2	967.2	1,017.6	
16	1"	25.4	543	661.6	759	877.5	1,002	1,105.5	1,263.6	1,324.8	

Compressor motor size

approximate electric motor hp needed to supply that air

No.	Orifice	30 2.1	40 2.8	50 3.4	60 4.1	70 4.8	80 5.5	90 6.2	100 6.9	psi bar
2	1/8"	1	1.3	1.6	2.1	2.6	3.1	3.5	4.2	
3	3/16"	1.2	2.7	3.6	4.6	5.5	7	7.9	9.3	
4	1/4"	3.5	5	6.4	8.3	10.2	12.4	14.2	16.8	
5	5/16"	5.5	8	10	13	16.3	19.4	23.5	27	
6	3/8"	7.8	11.1	14.8	19.3	23.9	29.3	33.2	40.6	
7	7/16"	10.3	15.1	20.1	26	32.4	39.5	46.1	52.6	
8	1/2"	14.1	20.1	26.7	34.3	42.1	51	59.3	70	
10	5/8"	21.9	32.2	40.4	52.5	65.2	78	95	108	
12	3/4"	31.4	46.4	58	75.5	93.8	112.5	137	154	
14	7/8"	42.8	63	78.8	102.5	127	147.5	186	212	
16	1"	56	82.7	104	135	167	201	243	276	

Free air through the nozzle

cfm, air only (no abrasive)

No.	Orifice	mm	5 0.3	10 0.7	15 1.0	20 1.4	25 1.7	30 2.1	35 2.4	40 2.8	45 3.1	50 3.4	55 3.8	60 4.1	70 4.8	80 5.5	90 6.2	100 6.9	psi bar
2	1/8"	3.2	3.9	5.5	6.7	7.7	–	10	–	12.3	–	14.5	–	16.8	19	21.2	21.7	25.8	
3	3/16"	4.8	–	–	–	–	–	21.8	–	25.6	–	32.4	–	36.8	40.2	47.6	48.9	55.8	
4	1/4"	6.4	15.4	21.8	26.7	30.8	34.5	40	44.7	49.1	53.8	58.2	63	67	76	85	92.8	103	
5	5/16"	7.9	24.1	34	41.7	48.2	54	63	70	76.7	84	91	96	105	119	132	146	162	
6	3/8"	9.5	34.6	49	60	69	77	90	100	110.4	120.5	130	140.4	151	171	191	212	231	
7	7/16"	11.1	47.3	66.6	81.8	94.6	105.8	123.5	137.2	150.4	164.6	178.4	191.5	205.8	233.2	260.7	285	326	
8	1/2"	12.7	61.6	87	107	123	138	161	179.2	196.3	215	232	251	268	304	340	377	412	
10	5/8"	15.9	96.5	136	167	193	216	252	280	306.8	336	364	396	420	476	532	589	645	
12	3/4"	19.1	133	196	240	277	310	362	400	441.6	482	522	563	604	685	765	850	925	
14	7/8"	22.2	189	267	326	378	422	493	550	601.3	658	710	766	822	930	1,004	1,158	1,270	
16	1"	25.4	247	350	427	494	570	644	717	786	861	932	–	1,080	1,224	1,368	1,510	1,658	

All figures are approximate. A worn nozzle uses more air: a No. 6 worn to No. 7 needs about 30% more at 100 psi (196 to 254 cfm). – = no figure listed.

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