

CLEMTEX



Corrosion Control Equipment and Supplies

Houston Office
248 McCarty Dr.
P.O. Box 15214
Houston TX, 77220-5214
(713) 672-8251
Fax (713) 672-6336
Email clemtex@clemtex.com

1-800-CLEMTEX
www.clemtex.com

Corpus Christi Branch
4750 Westway
P.O. Box 5036
Corpus Christi, TX 78465
(361) 882-8282
Fax (361) 882-6029

Dallas Branch
4770 Gretna
Dallas, TX 75207
(214) 631-0584
Fax (214) 631-5824
1-800-BLAST 97

Compressed Air and Abrasive Consumption

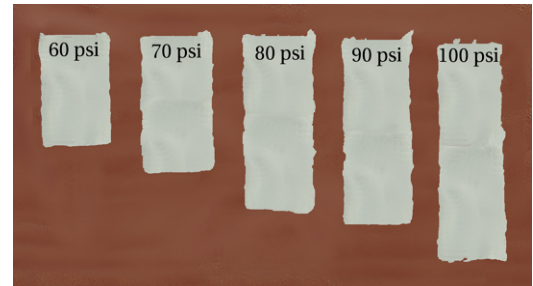
Nozzle Orifice	Pressure at the Nozzle (psi)						Air, Abrasive and HP Requirements
	50	60	70	80	90	100	
No. 2 (1/8")	11	13	15	17	18.5	20	Air (cfm)
	0.67	0.77	0.88	1.01	1.12	1.23	Abrasive (cu.ft./hr & lbs/hr)
	67	77	88	101	112	123	Compressor hp
	2.5	3	3.5	4	4.5	5	Air (cfm)
No. 3 (3/16")	26	30	33	38	41	45	Abrasive (cu.ft./hr & lbs/hr)
	1.5	1.71	1.96	2.16	2.38	2.64	Compressor hp
	150	171	196	216	238	264	Air (cfm)
	6	7	8	9	10	10	Abrasive (cu.ft./hr & lbs/hr)
No. 4 (1/4")	47	54	61	68	74	81	Compressor hp
	2.68	3.12	3.54	4.08	4.48	4.94	Abrasive (cu.ft./hr & lbs/hr)
	268	312	354	408	448	494	Compressor hp
	11	12	14	16	17	18	Air (cfm)
No. 5 (5/16")	77	89	101	113	126	137	Abrasive (cu.ft./hr & lbs/hr)
	4.68	5.34	6.04	6.72	7.4	8.12	Compressor hp
	468	534	604	672	740	812	Air (cfm)
	18	20	23	26	28	31	Abrasive (cu.ft./hr & lbs/hr)
No. 6 (3/8")	108	126	143	161	173	196	Compressor hp
	6.68	7.64	8.64	9.6	10.52	11.52	Abrasive (cu.ft./hr & lbs/hr)
	668	764	864	960	1052	1152	Compressor hp
	24	28	32	36	39	44	Air (cfm)
No. 7 (7/16")	147	170	194	217	240	254	Abrasive (cu.ft./hr & lbs/hr)
	8.96	10.32	11.76	13.12	14.48	15.84	Compressor hp
	896	1032	1176	1312	1448	1584	Air (cfm)
	33	38	44	49	54	57	Abrasive (cu.ft./hr & lbs/hr)
No. 8 (1/2")	195	224	252	280	309	338	Compressor hp
	11.6	13.36	15.12	16.8	18.56	20.24	Abrasive (cu.ft./hr & lbs/hr)
	1160	1336	1512	1680	1856	2024	Compressor hp
	44	50	56	63	69	75	Air (cfm)

Pressure Loss in Air Hose

I.D.	Pressure Loss	Production Loss
3/4"	1.1 psi	16.6%
1"	2.4 psi	3.6%
1-1/4"	0.7 psi	1.0%
1-1/2"	0.2 psi	0.3%

Minimum Compressor Air Line Sizes

Nozzle	Orifice Size	Increase in Air Consumption
No. 4	1/4" 6.5mm	
No. 5	5/16" 8.0mm	60% more than No. 4
No. 6	3/8" 9.5mm	38% more than No. 5
No. 7	7/16" 11.0mm	36% more than No. 6
No. 8	1/2" 12.5mm	33% more than No. 7



The importance of nozzle pressure is illustrated above. Proper nozzle pressure (90-100 psi) results in high production cleaning and low abrasive use in the same amount of time.

System Air Volume Requirements at 100 psig

Nozzle	Orifice Size	Volume of Air	Plus Helmet	Plus 50% (reserve)	Minimum Air Required
No. 4	1/4"	81	20	50	151 cfm
	6.5mm	2.3	0.5	1.4	4.2 m ³ /min
No. 5	5/16"	137	20	79	236 cfm
	8.0mm	3.9	0.5	2.2	6.6 m ³ /min
No. 6	3/8"	196	20	108	324 cfm
	9.5mm	5.5	0.5	3	9.0 m ³ /min
No. 7	7/16"	254	20	137	411 cfm
	11.0mm	7.2	0.5	3.9	11.6 m ³ /min
No. 8	1/2"	338	20	179	537 cfm
	12.5mm	9.6	0.5	5	16.1 m ³ /min

Minimum Compressor Air Line Sizes

Nozzle	Nozzle Orifice Size	Minimum Air Line ID
No. 3	3/16"	1"
	5.0mm	25.0mm
No. 4	1/4"	1"
	6.5mm	25.0mm
No. 5	5/16"	1-1/4"
	8.0mm	32.0mm
No. 6	3/8"	1-1/2"
	9.5mm	38.0mm
No. 7	7/16"	2"
	11.0mm	50.0mm
No. 8	1/2"	2"
	12.5mm	50.0mm
No. 10	5/8"	2-1/2"
	16.0mm	64.0mm
No. 12	3/4"	3"
	19.0mm	76.0mm

Abrasive Consumption

Material	Mesh Size	Shape	Density lbs/ft ³	Mohs	Friability	Source	Typical Applications
Slag	8-80	Angular	85-112	7.0-7.5	high	By-Product	Outdoor blast cleaning
Steel Grit	10-325	Angular	230	8.0	low	Manufactured	Removing heavy scale
Steel Shot	8-200	Spherical	280	8.0	low	Manufactured	Cleaning, Peening
Al. Oxide	12-325	Angular	125	8.9-9.0+	med	Manufactured	Cleaning, Finishing, Deburring, Etching
Glass Beads	10-400	Spherical	85-90	5.5	med	Manufactured	Cleaning, Finishing
Garnet	12-80	Angular	45-60	3.0-4.0	low/med	Manufactured	Paint Stripping, Deflashing, Cleaning
Green Lightening	120	Angular	115	7.0	med	Natural	Paint Stripping, Cleaning
Corn Cob	8-40	Angular	35-45	2.0-4.5	med	By-Product	Removing paint from delicate surfaces

"We stock the most complete line of Corrosion Control Equipment and Supplies in the Southwest."