

NOG

Nozzle Orifice Gauge



The Airblast Nozzle Orifice Gauge is designed to measure the orifice size of an abrasive blasting nozzle. Proper use of this gauge can determine nozzle orifice wear that causes low nozzle pressure and decreased efficiency in the performance of the nozzles venturi. This wear results in decreased productivity, increased abrasive consumption and improper surface profile.

STEPS TO FOLLOW:

1. Unscrew cap from gauge body
 2. Remove grease pencil from inside body
 3. Rub grease pencil along the rounded side of the gauge body
- NOTE:** Area from 3/16" to 5/8" should be marked with grease pencil.
4. Screw cap on gauge
 5. Insert gauge into the back (threaded side) of the blast nozzle
 6. Rotate gauge against the liner in the nozzle
 7. Remove gauge and record the line scratched in the grease mark

NOTE: The nozzle should be replaced when the orifice is worn more than 1/16" larger than the original orifice size as this is the point that performance begins to dramatically decline.

ORIFICE (mm) (")	NOZZLE PRESSURE / NOZZLE DIAMETER GUIDE														
	60 PSI	4.2 BAR	70 PSI	4.9 BAR	80 PSI	5.6 BAR	90 PSI	6.3 BAR	100 PSI	7.0 BAR	120 PSI	8.5 BAR			
5.0 mm 3/16"	30.0	0.85	33.0	0.93	38.0	1.08	41.0	1.16	45.0	1.27	58.0	1.64	REQUIRED AIR	CFM	m ³ /min
	171.0	77.00	196.0	89.00	216.0	96.00	238.0	108.00	264.0	120.00	375.0	170.00	REQUIRED ABRASIVE	Lbs./hr.	KG/hr. *
	7	5.3	8	5.6	9	6.4	10	7.1	10	7.5	12	9.0	REQUIRED POWER	hp	kw
6.5 mm 4/16"	54.0	1.53	61.0	1.73	68.0	1.93	74.0	2.10	81.0	2.29	105.0	2.97	REQUIRED AIR	CFM	m ³ /min
	312.0	141.00	354.0	160.00	408.0	185.00	448.0	203.00	494.0	224.00	660.0	300.00	REQUIRED ABRASIVE	Lbs./hr.	KG/hr. *
	12	9.0	14	10.1	16	11.6	17	12.4	18	13.5	22	16.2	REQUIRED POWER	hp	kw
8.0 mm 5/16"	89.0	2.52	101.0	2.86	113.0	3.20	126.0	3.57	137.0	3.88	160.0	4.53	REQUIRED AIR	CFM	m ³ /min
	534.0	242.00	604.0	274.00	672.0	305.00	740.0	335.00	850.0	385.00	1.050.0	476.00	REQUIRED ABRASIVE	Lbs./hr.	KG/hr. *
	20	15.0	23	19.1	26	20.2	28	21.0	31	22.9	37	27.5	REQUIRED POWER	hp	kw
9.5 mm 6/16"	126.0	3.57	143.0	4.05	161.0	4.56	173.0	4.90	196.0	5.55	235.0	6.65	REQUIRED AIR	CFM	m ³ /min
	764.0	346.00	864.0	392.00	960.0	425.00	1.052.0	477.00	1.152.0	523.00	1.475.0	669.00	REQUIRED ABRASIVE	Lbs./hr.	KG/hr. *
	28	21.0	32	24.0	36	27.0	39	28.9	44	33.0	52	39.6	REQUIRED POWER	hp	kw
11.0 mm 7/16"	170.0	4.81	184.0	5.21	217.0	6.14	240.0	6.80	254.0	7.19	315.0	8.92	REQUIRED AIR	CFM	m ³ /min
	1.032.0	468.00	1.176.0	533.00	1.312.0	595.00	1.448.0	657.00	1.584.0	719.00	2.050.0	930.00	REQUIRED ABRASIVE	Lbs./hr.	KG/hr. *
	38	28.5	44	32.6	49	36.4	54	40.1	57	42.4	69	50.9	REQUIRED POWER	hp	kw
12.5 mm 8/16"	224.0	6.34	252.0	7.14	280.0	7.93	309.0	8.75	338.0	9.57	410.0	11.61	REQUIRED AIR	CFM	m ³ /min
	1.336.0	606.00	1.512.0	686.00	1.680.0	762.00	1.856.0	842.00	2.024.0	918.00	2.650.0	1.202.00	REQUIRED ABRASIVE	Lbs./hr.	KG/hr. *
	50	37.5	56	42.0	63	46.9	69	51.8	75	56.3	90	67.6	REQUIRED POWER	hp	kw

Chart shows calculated consumption rates of air and abrasive for new nozzles. When selecting a compressor add 50% to above figures to allow for normal nozzle wear and friction loss.

* Based on abrasive density of 1,5 kgs. per liter.

NOTE: Figures may vary depending upon working conditions. To maintain desired air pressure as nozzle orifice wears, air consumption increases. The effects of nozzle wear on air consumption must be considered when selecting nozzles and the compressors that support them.