ASB

Tungsten Carbide Spinnerblast Nozzle with Aluminium Jacket

AIRBLAST

Airblast high velocity venturi style nozzles have been designed specifically to give maximum blast cleaning rates, uniform abrasive distribution and efficiency over an extensive operating life. Through the venturi principle the air and abrasive mixture is accelerated as it exits the nozzle. Venturi nozzles increase productivity and reduce abrasive consumption with approximately 40% as compared to straight bore nozzles. Airblast offers a full selection of nozzles with different orifice diameters, sizes, and insert / jacket materials.

Size

The orifice size of the blasting nozzle determines the cleaning rate, abrasive consumption and air consumption. When choosing a nozzle you should consider the cleaning rate required, available compressed air, size of the blast pot and the internal diameter of the piping, the blast hose and the air hose. In most blasting operations a number 5 (with 8 mm orifice) or number 6 (with 9,5 mm orifice) nozzle is used. Have a look at the consumption chart on the back of this datasheet for the compatible combinations.

Material

Tungsten carbide is the market standard and is a cost effective yet durable option. Silicon Carbide and Silicon Nitride nozzles are more wear resistant and reduce operator fatigue due to their light weight. Boron carbide nozzles offer the best resistance against wear.

As blast nozzles wear the orifice enlarges increasing air consumption and decreasing the venture effect resulting in slower abrasive speeds – nozzle wear should be monitored on a daily basis and worn nozzles replaced to maintain effective and efficient production.

ASB - Tungsten Carbide Spinnerblast Nozzles with fine 26 mm thread

Part no.	Description	Orifice	Lenght	Inlet
2107000	ASB–13 TC Spinnerblast Nozzle	6.5 mm	55 mm	13 mm
2108000	ASB–14 TC Spinnerblast Nozzle	8,0 mm	55 mm	13 mm
2109000	ASB–15 TC Spinnerblast Nozzle	8.0 mm	85 mm	13 mm
2110000	ASB–16 TC Spinnerblast Nozzle	9.5 mm	65 mm	13 mm
2111000	ASB–17 TC Spinnerblast Nozzle	9.5 mm	108 mm	13 mm

COMPATIBILITY GUIDE

No.	Nozzle Orifice	Recommended range		Minimum Blast Machine capacity	Minimum Pipe ID	Blast Hose ID	Minimum Air Hose ID
		m³/min	CFM				
3	5.0 mm	1.27 - 2.29	45 - 81	60 ltr.	1″	¾″	1″
4	6.5 mm	2.29 - 3.88	81 - 137	60 ltr.	1″	1″ - 1¼″	1¼″
5	8.0 mm	3.88 - 5.55	137 - 196	100 ltr.	1″	1″ - 1¼″	1¼″
6	9.5 mm	5.55 - 7.19	196 - 254	200 ltr.	1¼″	1¼″	1½″
7	11.0 mm	7.19 - 9,57	254 - 338	200 ltr.	1¼″	1¼″ - 1½″	2″
8	12.5 mm	9.57 - 15.52	338 - 548	200 ltr.	1¼″	1½″	2″

Note: Best performance is obtained when sizes of nozzle, blast machine piping, blast hose and air hose are properly matched.
- m³/min and CFM range is based on blasting at 7 bar (100 psi) for the life of the nozzle.
- Blast machine capacity should allow 20 to 30 minutes of blasting.
- Hose ID should be three to four times the size of the nozzle orifice.

NOZZLE PRESSURE / NOZZLE DIAMETER GUIDE

ORIFICE (mm) (“)	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”	30.0 171.0 7	0.85 77.00 5.3	33.0 196.0 8	0.93 89.00 5.6	38.0 216.0 9	1.08 96.00 6.4	41.0 238.0 10	1.16 108.00 7.1	45.0 264.0 10	1.27 120.00 7.5	58.0 375.0 12	1.64 170.00 9.0	REQUIRED AIR REQUIRED ABRASIVE REQUIRED POWER	CFM Lbs./hr. hp	m³/min KG/hr. * kw
6,5 mm 4/16”	54.0 312.0 12	1.53 141.00 9.0	61.0 354.0 14	1.73 160.00 10.1	68.0 408.0 16	1.93 185.00 11.6	74.0 448.0 17	2.10 203.00 12.4	81.0 494.0 18	2.29 224.00 13.5	105.0 660.0 22	2.97 300.00 16.2	REQUIRED AIR REQUIRED ABRASIVE REQUIRED POWER	CFM Lbs./hr. hp	m³/min KG/hr. * kw
8.0 mm 5/16”	89.0 534.0 20	2.52 242.00 15.0	101.0 604.0 23	2.86 274.00 19.1	113.0 672.0 26	3.20 305.00 20.2	126.0 740.0 28	3.57 335.00 21.0	137.0 850.0 31	3.88 385.00 22.9	160.0 1.050.0 37	4.53 476.00 27.5	REQUIRED AIR REQUIRED ABRASIVE REQUIRED POWER	CFM Lbs./hr. hp	m³/min KG/hr. * kw
9.5 mm 6/16”	126.0 764.0 28	3.57 346.00 21.0	143.0 864.0 32	4.05 392.00 24.0	161.0 960.0 36	4.56 425.00 27.0	173.0 1.052.0 39	4.90 477.00 28.9	196.0 1.152.0 44	5.55 523.00 33.0	235.0 1.475.0 52	6.65 669.00 39.6	REQUIRED AIR REQUIRED ABRASIVE REQUIRED POWER	CFM Lbs./hr. hp	m³/min KG/hr. * kw
11.0 mm 7/16”	170.0 1.032.0 38	4.81 468.00 28.5	184.0 1.176.0 44	5.21 533.00 32.6	217.0 1.312.0 49	6.14 595.00 36.4	240.0 1.448.0 54	6.80 657.00 40.1	254.0 1.584.0 57	7.19 719.00 42.4	315.0 2.050.0 69	8.92 930.00 50.9	REQUIRED AIR REQUIRED ABRASIVE REQUIRED POWER	CFM Lbs./hr. hp	m³/min KG/hr. * kw
12.5 mm 8/16”	224.0 1.336.0 50	6.34 606.00 37.5	252.0 1.512.0 56	7.14 686.00 42.0	280.0 1.680.0 63	7.93 762.00 46.9	309.0 1.856.0 69	8.75 842.00 51.8	338.0 2.024.0 75	9.57 918.00 56.3	410.0 2.650.0 90	11.61 1.202.00 67.6	REQUIRED AIR REQUIRED ABRASIVE REQUIRED POWER	CFM Lbs./hr. hp	m³/min KG/hr. * kw

Chart shows calculated consumption rates of air and abrasive for new nozzles. When slecting 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.

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