

ABCS

Boron Carbide Stick-up Nozzle with Aluminium Jacket



AIRBLAST



ABCS (Stick-up)

The ABCS range comprises of Boron Carbide lined "stick-up" nozzles with Aluminium Jackets. "Stick-up" nozzles fit directly into the blast hose without using a nozzle holder – this allows for increased maneuverability in restricted areas such as behind re-enforcement beams. Boron Carbide is the most durable liner available – therefore these nozzles perform especially well with aggressive abrasives such as aluminum oxide, silicon carbide and steel grit, and are therefore often used in blast rooms.

The ABCS series is available for use with 25 mm and 32 mm blast hose.

Airblast high velocity venturi style nozzles have been designed to maximize blast cleaning rates and provide uniform abrasive distribution. The venturi design accelerates the air / abrasive mix as it exits the nozzle providing additional momentum – this can increase productivity and reduce abrasive consumption by up to 40% when compared with straight bore nozzles.

Airblast offers a full selection of nozzles with various orifice sizes, nozzle lengths, insert and liner materials. Contact Airblast to discuss which nozzle is most suitable for your specific application.

ABCS Boron Carbide Stick-up Nozzles with Aluminium Jacket

Part no.	Description	Orifice	Lenght	For hose ID
2119000	ABCS-3/25 BC Stick-up Nozzle	5.0 mm	100 mm	25 mm
2119100	ABCS-4/25 BC Stick-up Nozzle	6,0 mm	100 mm	25 mm
2119200	ABCS-5/25 BC Stick-up Nozzle	8,0 mm	100 mm	25 mm
2119300	ABCS-6/25 BC Stick-up Nozzle	10,0 mm	100 mm	25 mm
2119400	ABCS-4/32 BC Stick-up Nozzle	6,0 mm	110 mm	32 mm
2119500	ABCS-5/32 BC Stick-up Nozzle	8,0 mm	110 mm	32 mm
2119600	ABCS-6/32 BC Stick-up Nozzle	10,0 mm	110 mm	32 mm
2119601	ABCS-7/32 BC Stick-up Nozzle	11,0 mm	110 mm	32 mm
2119700	ABCS-8/32 BC Stick-up Nozzle	12.0 mm	110 mm	32 mm
2119800	ABCS-9/32 BC Stick-up Nozzle	14,0 mm	110 mm	32 mm

COMPATIBILITY GUIDE

No.	Nozzle Orifice	Recommended range		Minimum Blast Machine capacity	Minimum Pipe ID	Blast Hose ID	Minimum Air Hose ID
		m ³ /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) (")	NOZZLE PRESSURE / NOZZLE DIAMETER GUIDE												REQUIRED AIR	REQUIRED ABRASIVE	REQUIRED POWER	CFM Lbs./hr. hp	m ³ /min KG/hr.* kw
	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.