



CLEMCO
The Performance System

TECHNICAL DATA SHEET

Note: For safe, efficient blasting, read and follow the owner's manual and seek training for everyone who will use this equipment.

Purpose

A blast nozzle accelerates the air and abrasive as the mixture exits the end of the hose. The length of the nozzle's inlet determines the pattern and velocity of the abrasive exiting the nozzle. The composition of the liner material determines its resistance to wear.

Requirements for Operation

Nozzles are sized by the diameter of their orifices in 1/16-inch increments. A No. 4 nozzle has a 4/16-inch (1/4-inch) orifice, a No. 5 nozzle has a 5/16-inch orifice, etc. The size of the nozzle orifice determines abrasive and air consumption. Air consumption is measured in cubic feet per minute (cfm) at a given pressure. See the air and abrasive consumption chart on the back of this page.

When choosing a nozzle, consider the volume of available air in cfm, the capacity of the blast machine and the inside diameter of the piping, the blast and air hoses. If too large a nozzle is used, low blast pressure and rapid wear on the blast hose will occur. If too small a nozzle is used, smooth media flow will be difficult to achieve.

Description of Operation

The operator attaches the nozzle to the nozzle holder on the coupled blast hose by turning the nozzle clockwise until the nozzle fully seats and is threaded in place. The Clemco nozzle holder keeps the nozzle firmly installed.

Description

An angle nozzle is designed to blast into tubing or pipe; structural angles inaccessible with a straight nozzle. CAM nozzles are tungsten carbide lined, and are available with one or three outlets. All CAM style nozzles are 2-3/4" in length and have three orifice diameters: 1/4", 5/16" and 3/8", all with 1-1/4" straight pipe threads.



CAM-6X1 AND 6X3 shown

With all related equipment correctly assembled and tested, the operator points the nozzle outlet at the surface to be blasted and presses the remote control handle to begin blasting. The operator holds the nozzle 3 to 6 inches from the surface and moves it smoothly at a rate that produces the desired cleanliness. Each pass should overlap slightly.

The operator must replace the nozzle once the orifice wears 1/16-inch beyond its original size.

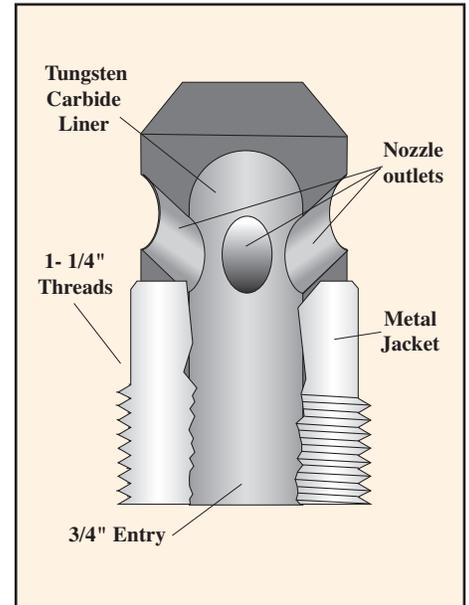
Advantages

- Tungsten carbide liner material is the most rugged and durable and offers the best value.
- Angle nozzles are designed for blasting "blind" or otherwise hard to access surfaces.
- Expected wear life with expendable abrasives is approximately 300 hours.

Nozzles

Tungsten Carbide Lined Metal Jacketed

Short, Angled Outlet, CAM Series



Replacement Parts

Description	Stock No.
NW-3 Nozzle washers (Pkg of 10)	21583

Specifications	
Nozzle Model	CAM
Mounting Thread	1-1/4"
Entry Diameter	3/4"
Liner	Tungsten Carbide
Liner Style	45° Angled outlet
Jacket Material	Aluminum
Length	2-3/4"

Authorized Distributor:

Compressed Air and Abrasive Consumption for CAM Nozzles

Nozzle Orifice	Pressure at the Nozzle (psi)								Air (in cfm) Abrasive & HP requirements
	50	60	70	80	90	100	125	140	
CAM 4 X 1 (1/4")	47	54	61	68	74	81	98	110	Air (cfm)
	2.68	3.12	3.54	4.08	4.48	4.94	6.08	6.81	Abrasive (cu.ft./hr & Lbs/hr)
	11	12	14	16	17	18	22	25	Compressor hp
CAM 4 X 3 (1/4")	141	162	183	204	222	243	294	330	Air (cfm)
	8.04	9.36	10.62	12.24	13.44	14.82	18.24	20.43	Abrasive (cu.ft./hr & Lbs/hr)
	804	936	1,062	1,224	1,344	1,482	1,824	2,043	Compressor hp
CAM 5 X 1 (5/16")	77	89	101	113	126	137	168	188	Air (cfm)
	4.68	5.34	6.04	6.72	7.40	8.12	9.82	11.0	Abrasive (cu.ft./hr & Lbs/hr)
	468	534	604	672	740	812	982	1,100	Compressor hp
CAM 5 X 3 (5/16")	231	267	303	339	378	411	504	564	Air (cfm)
	14.04	16.0	18.12	20.16	22.20	24.36	29.46	33.0	Abrasive (cu.ft./hr & Lbs/hr)
	1,404	1,602	1,812	2,016	2,220	2,436	2,946	3,300	Compressor hp
CAM 6 X 1 (3/8")	108	126	143	161	173	196	237	265	Air (cfm)
	6.68	7.64	8.64	9.60	10.52	11.52	13.93	15.60	Abrasive (cu.ft./hr & Lbs/hr)
	668	764	864	960	1,052	1,152	1,393	1,560	Compressor hp
CAM 6 X 3 (3/8")	324	378	429	483	519	588	711	795	Air (cfm)
	20.04	22.92	25.92	28.80	31.56	34.56	41.79	46.80	Abrasive (cu.ft./hr & Lbs/hr)
	2,004	2,292	2,592	2,880	3,156	3,456	4,179	4,680	Compressor hp

Chart shows air consumption in cubic feet per minute (cfm), abrasive consumption in pounds per hour and cubic feet per hour for abrasives weighing 100 pounds per cubic foot, and compressor horsepower (hp) based on 4 to 4.5 cfm per horsepower.

NOTE: Figures 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.

When nozzle orifice is 3/8-inch or larger, blast machine valves and piping must be 1-1/4-inch or larger to provide sufficient air volume.

Ordering Information								
	Stock No.	Model No.	Orifice ID	Length	Holder	Washer	Net Wt.	Pkg'd Wt.
1-1/4" Thread	01442	CAM 4 x 1	1/4" x 1	2-3/4"	CHE Series	NW-3	2 lb	2.5 lb
	01444	CAM 4 x 3	1/4" x 3	2-3/4"		NW-3	2 lb	2.5 lb
	01445	CAM 5 x 1	5/16" x 1	2-3/4"		NW-3	2 lb	2.5 lb
	01447	CAM 5 x 3	5/16" x 3	2-3/4"		NW-3	2 lb	2.5 lb
	01448	CAM 6 x 1	3/8" x 1	2-3/4"		NW-3	2 lb	2.5 lb
	01450	CAM 6 x 3	3/8" x 3	2-3/4"		NW-3	2 lb	2.5 lb