Saber Blast™ Nozzle

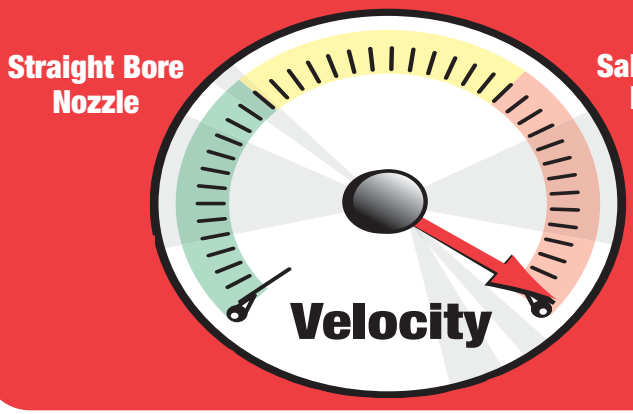
ABRASIVE BLASTING NOZZLES

A Revolutionary Innovation in Abrasive Nozzle Design

- Improve production speeds by up to 50%
- Increase abrasive velocity
- Use with conventional abrasives like steel grit, garnet, coal slag and Sponge Media abrasives
- Blast like having 25% more air pressure

For maximum efficiency use at least 190l/sec (10.5m³/min) at 7bar (400CFM at 100psi)

Comparing Media Velocity with Nozzle Type



SPECIFICATIONS:

Liner:
Composite of silicon nitride and other advanced materials

Jacket:
Anodized aluminum on a urethane core

Thread Options:
1-1/4-in Standard Brass Thread

50mm Coarse Aluminium Thread

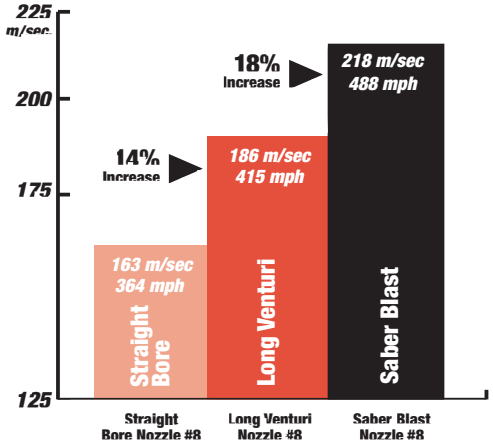
MODELS:

SIZE:	NUMBER:	ID:	THREAD:	LENGTH:	OD:	WEIGHT:
#10	**HP-NZ-10-SBR-50**	16mm(.625in)	50mm Coarse Aluminium	37cm / 14½-in	5cm / 1⅞-in	2lb 9oz / 1.3kg
#8	**HP-NZ-8-SBR**	12.7mm(.5in)	1¼-in Stand. Brass-NPS	37cm / 14½-in	5cm / 1⅞-in	2lb 9oz / 1.3kg
#8	**HP-NZ-8-SBR-50**	12.7mm(.5in)	50mm Coarse Aluminium	37cm / 14½-in	5cm / 1⅞-in	2lb 9oz / 1.3kg
#6	**HP-NZ-6-SBR**	9.5mm(.375in)	1¼-in Stand. Brass-NPS	37cm / 14½-in	5cm / 1⅞-in	2lb 9oz / 1.3kg
#6	**HP-NZ-6-SBR-50**	9.5mm(.375in)	50mm Coarse Aluminium	37cm / 14½-in	5cm / 1⅞-in	2lb 9oz / 1.3kg

To find an authorized Saber Blast nozzle dealer, call Sponge-Jet at 1-603-610-7950

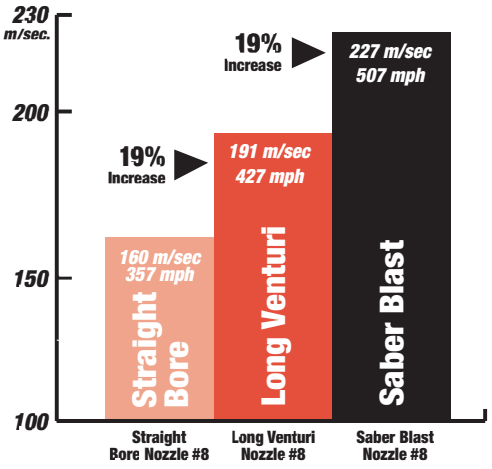
Comparing Nozzle Velocity using G-50 STEEL GRIT ABRASIVES

This bar graph depicts test results measuring G-50 Steel Grit abrasive velocity exiting a Straight Bore, a Long Venturi and a Saber Blast nozzle with a nozzle pressure of 8 bar (120psi).



Comparing Nozzle Velocity using SPONGE MEDIA™ ABRASIVES

This bar graph depicts test results measuring Silver 30 Sponge Media™ abrasive velocity exiting a Straight Bore, a Long Venturi and a Saber Blast nozzle with a nozzle pressure of 6 bar (90psi).



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HOW IT WORKS:

The new Saber Blast™ nozzle increases production speeds up to 50%, using advanced gas dynamic concepts to maximize the velocity of abrasives hitting the surface. By viewing the abrasive and air streams as separate components, engineers were able to create the optimal speed/volume relationship between the two components. They developed a revolutionary nozzle design that accelerates abrasive particles to higher speeds using the same air pressure and flow, thus increasing overall efficiency and productivity.

Higher Abrasive Speed = Higher Efficiency = Higher Production:

Physics theory offers that kinetic energy equals half the mass of an object times its velocity squared - or... **½ mass (Velocity)^2.** Therefore a 20% increase in abrasive speed provides a 44% increase in kinetic energy, which positively effects overall production.

The Economy of Compressed Air

Without changing compressors or blast equipment, the Saber Blast nozzle accelerates abrasive impact velocity to the point where its like blasting with 25% more nozzle pressure, or 1.4 -1.8 bar (20-25psi).

RETURN ON INVESTMENT:

The financial analysis below shows how this revolutionary nozzle design would typically justify the replacement of long venturi nozzles with only a 2% increase in productivity.* As tested, it can often yield from 10 to 20 times that increase. By replacing a long venturi nozzle with the Saber Blast nozzle, an annual net savings of $32,400 per blaster could be achieved.

Productivity Savings					**Increased Nozzle Cost**				**Net Savings Per Nozzle**
Total Operating Cost Per Blast Hour**	x	% Productivity Increase with Saber Blast nozzle	x	Blasting Hours Per Year	-	Hourly Offset Cost of Saber Blast Nozzle***	x	Blasting Hours Per Year	=	Net Savings Per Nozzle/Year
EXAMPLE $100	x	20%	x	1,800	-	$2	x	1,800	=	$32,400
WORKSHEET ____	x	____	x	____	-	$2	x	____	=	_____

*The Saber Blast nozzle costs approximately $2 per hour more than the average Long Venturi nozzle (estimated with 200 hour life). Assuming the Total Operating Cost Per Blast Hour is $100, divide $2 by that number (or 2/100), which totals 2%. If the Saber Bast nozzle improves blasting production over 2%, every percent of production increase over 2% could be realized as profit.

**Assumption: Total Operating Cost Per Blast Hour is $100, including the hourly labor rate, abrasives, compressor costs and all employee benefits and other consumables.

***Assumption: The average operating life of a either nozzle is 200 hours.