

# THE SURFACE FINISHING EQUIPMENT GROUP

SALES – SERVICE - HIRE  
TRAINING – INSTALLATION

NORTH EAST BRANCH

**Hogg Blasting  
& Finishing Equipment Ltd**  
Washington. UK. NE37 1PR

Tel. 0191 415 3030  
info@hoggblasting.com

NORTH WEST BRANCH

**Abraclean Ltd and  
Jedtec Finishing Equipment**  
Stockport. UK. SK5 7PP

Tel: 0161 480 8087  
sales@abraclean.co.uk

- Shot Blasting Equipment
- Paint Spraying Equipment
- Powder Coating Equipment
- Fixed Extraction Booths
- Mobile Dust Extraction
- Personal Protection Equipment
- Shot Blasting Abrasives
- Spares and Consumables
- Plural Component Systems

**Ercon Finishing Systems**  
Willenhall. UK. WV13 2JW

Tel. 01902 601 312  
sales@erconfinishing.com

- Complete Finishing Plants
- Design engineers and CAD
- Industrial Ovens
- Conveyors
- Pre-treatment systems
- Electroplating Systems



Surface Finishing  
Equipment Group

## Nozzle Air Consumption

### COMPRESSOR SIZE IS IMPORTANT

Keep your productivity up - Maximise your compressed air pressure and volume.

A blast cleaning operation's productivity level directly depends on the volume and pressure of the air passing through the nozzle. In operations with slow production rates, there's usually not enough air volume (cfm) and pressure (psi). A larger compressor will provide more air to support a larger nozzle, and a larger nozzle gets the job done faster. Also ensure air lines and blast hoses are of the correct size to minimise pressure losses.

#### Hose And Nozzle Selection Guide - Blasting at 100 psi nozzle pressure

Order Code	Internal size mm (inches)	External size mm (inches)	Wall Thickness	Full Coil Length
Nozzle number	No. 4	No. 5	No. 6	No. 8
Nozzle Size	1/4"	5/16"	3/8"	1/2"
CFM at 100psi	103	158	229	407
Air Hose ID - minimum	25mm (1")	38mm (1 1/2")	38mm (1 1/2")	50mm (2")

#### Air Consumption in CFM for Blast Nozzle Size

Pressure at Nozzle / Nozzle Bore	50psi	80psi	100psi	140psi
No. 4 (1/4")	57	84	103	136
No. 5 (5/16")	89	131	158	214
No. 6 (3/8")	129	189	229	309
No. 8 (1/2")	229	336	407	549
Relative Efficiency	47%	74%	100%	165%

### FEATURES:

#### Get the most productivity from your air hose - use a larger ID hose -

When it comes to air compressor hose, bigger is better. Running a large I.D. air line (1 1/2" or 2") from your compressor to your blast pot reduces friction pressure loss caused in smaller, more restrictive sizes. Air pressure drops have a large impact on production.

#### Shorter is better. Don't loose pressure -

Keep your air hose and blast hose lengths short. Put your compressor as close to the blast pot as possible, and keep your pot near your blasters to shorten the distance the air has to travel and keep pressure drops to a minimum. It's especially helpful to keep blast hose length short since pressure drops are even greater than in air hose because you're pushing abrasive and compressed air through the line.

#### Minimum Recommended Compressor Air Supply Line Sizes

Nozzle Bore Size	Minimum Air Line Bore
1/4" (6.5mm)	1" (25mm)
5/16" (8mm)	1-1/4" (32mm)
3/8" (9.5mm)	1-1/2" (38mm)
1/2" (12.5mm)	2" (50mm)

#### Blasting Efficiency -

Every 1 psi below 100psi pressure at the nozzle equates to 1.5% LOSS of blasting efficiency

Pressure at Nozzle	Loss of Efficiency compared to 100 psi
94psi	9.40%
90psi	16%
80psi	35%
70psi	57%

Note :

All figures above are guide only and depend on factors such as nozzle wear and abrasive type. Always ensure equipment is rated to air pressure being used.