

# FACTORY RECOMMENDED BLASTING OPTIMIZATION

## PRESSURE POT EQUIPMENT SETUP

### COMPRESSOR

Set the compressor as high as necessary to deliver minimum 100 PSI at the nozzle during blasting.

### AIR DRYER & POT

For dry blasting it is important to use an air dryer upstream of the pot. Use the largest diameter and shortest length possible air supply hose to connect the compressor to the air dryer and/or pot. Minimum 2" diameter bull hose is recommended for a single nozzle blast pot. Check all fittings for leaks and reappear if needed.

### ABRASIVE METERING VALVE

Metering valves will be set lower with superalloy abrasives than with other abrasives. Plunger-style valves are recommended for best performance. Slotted abrasive valve sleeves are available for more precise metering. Contact 10X for details.

### NOZZLES

Use an orifice gauge to check for nozzle wear and replace if the nozzle is 1/16" (one nozzle size) larger than its original size.

### COMPRESSED AIR (CFM)

Nozzle air demand at 100 PSI:

NUMBER OF NOZZLES	NOZZLE SIZE					
	#4 (1/4")	#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")	#10 (5/8")
1 Nozzle	85	133	191	260	340	531
2 Nozzles	170	266	383	521	680	1,063
3 Nozzles	255	399	574	781	1,020	1,594
4 Nozzles	340	531	765	1,042	1,360	2,126

The total air requirement includes the nozzles, breathing air, air-powered exhaust fans, etc. All of these demands need to be considered when selecting compressor size.

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### BLASTING WITH KINETIX SUPEROXALLOY ABRASIVES

#### VERIFY NOZZLE CONDITION

**Use a properly maintained blast nozzle.** Use an orifice gauge to check for nozzle wear and replace if the nozzle is 1/16" (one nozzle size) larger than its nominal size.

#### MAINTAIN PRESSURE

**Maintain pressure at the nozzle above 100 PSI.** Measure pressure at the nozzle(s) before blasting using a needle pressure gauge in the hose just upstream of the nozzle. To measure pressure, close the abrasive metering valve, activate the dead-man switch, and wait for the pressure to stabilize. Do not operate with a partially closed choke valve. **The needle gauge should read at least 100 PSI. Higher pressure is beneficial for fastest removal of difficult coatings.** Do not operate with partially closed choke valve.

#### OPTIMIZE MEDIA FLOW RATE

**Plunger-style valves are recommended when using superalloy abrasives. When the valve is set properly, the abrasive will be nearly invisible coming out of the nozzle, dust will be very low, and the blast pattern will be full and fast.** 1) Start with the metering valve closed and open to 1 full turn of the valve knob. 2) Activate the dead-man switch and test blast for 15-30 seconds with the desired nozzle distance. 3) If not enough abrasive, open the valve ½ turn at a time, test blasting for 15-30 seconds at each ½ turn. After 2 adjustments (2 turns open), open valve ¼ turn each adjustment and test blast. Repeat until the abrasive is blasting effectively. 4) Make only minor adjustments (< ¼ turn) from this valve position. **At the optimal valve setting, superalloy abrasives are extremely efficient and very low in dust.**

#### BLAST CONSISTENTLY

**Use proper blasting technique. Move the nozzle as fast as possible** using a smooth and constant sweeping motion at a slight angle to the surface for best results. Maintain a consistent nozzle distance from the work surface. Start at a nozzle distance of 18-24" and adjust based on working conditions.

For vapor, slurry and mixed media dry ice blasting or blasting applications where metallized coatings will be thermally applied, contact 10X for technical details before blasting.