

Wet Blast Equipment- Competitive Advantages

Section 7

Major Salient Features and Advantages with the Pressure Blast Variable Velocity Blast Circuit

This system incorporates a rugged, (long lasting), air operated double diaphragm pump.

Operation/Usage:

- Abrasive Flow and Volume: The nozzle can easily be adjusted with a simple air regulator provided with pump.
- Compressed air: The gun can also be adjusted with a standard air regulator to the gun. *The Variable Velocity Blast* provides the most variable and flexible combination of slurry and air pressure to achieve the desired surface finish.
- Slurry agitation systems: Pressure Blast system incorporates an independent slurry agitation system which is provided by a variable speed rotating propeller located in the slurry hopper. The variable speed capability creates a whirlpool effect for agitation, enabling the system to utilize a wide range of different blast media in a wide range of media mesh sizes. The impeller pump used in the slurry delivery to the blast gun also is used to divert slurry as the agitation. This system with wear can often cause the gun slurry to become weak and inconsistent. It is also more limited to the size range and volume of different blast media to be agitated.

* **Note:** Most impeller pumps only deliver slurry to the blast gun at a “*high or low*” speed setting limiting the range of possible pressure settings.

Cost :

- The double diaphragm pumps like those used on our equipment are easily maintained and very inexpensive to repair. Repair kits usually range from \$150.00 to \$200.00, and a proficient mechanic can tear down and reassemble a complete pump in less than 1 hour. Most impeller pump parts are much more expensive and generally are a maintenance nightmare with several hours to perhaps a full day of overhaul and repair in many cases.

Overall systems cost breakdown:

- Double diaphragm pump requires approximately 40 CFM of air @ 80PSI. This is equivalent to operating an 8.8 horse power air compressor daily of dedicated air usage. Daily usage is intermittent and not continuous. If a compressed air storage tank is used in the air line this cost drops dramatically. The impeller pumps are all driven by an electric motor of 5 horse power or greater, and must run continuously for free and unrestricted blasting, usually resulting in very high electrical operating costs.