

The Saturn

WET BLAST MACHINE



A high performance manual or semi-automatic operated WET BLAST MACHINE developed specifically for general purpose continuous production use offering...

- Single operation cleaning – grease, oil, burnt-on carbon, paint, grime, scale... all removed simultaneously
- Complete elimination of dust and heat during cleaning
- No component erosion or media impregnation – threads, bearing areas and other critical measurements maintained
- No toxic or harmful chemicals – no atmospheric or environmental pollution
- Capable of processing all types of materials
- Lower media and maintenance cost than conventional dry blasting

This steel cabinet range of Wet Blast processing machines has been developed to meet heavy-duty surface finishing demands yet maintaining good health and safety in the workplace. The Saturn range is custom designed to meet the needs of today's customer for flexibility, output and cost savings.

These features enable a customer to choose a basic machine and then select additional factory fitted equipment from a wide range of standard options that will best suit their application needs and budget requirements.

Choose from three basic Saturn cabinet sizes:

1300mm x 1300mm

1500mm x 1500mm

1800mm x 1800mm

Each size Saturn cabinet is a working unit equipped with either a single or dual speed glandless slurry pump feeding one or more process guns in the machine.

Each cabinet offers these features...

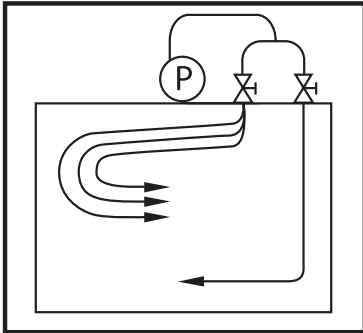
- ✓ A heavy duty insulated double skin steel cabinet that reduces operational noise levels to international requirements and allows for component loads of 1000 kg or more.
- ✓ A machine sump that has component load/unload height to a 1050 mm maximum.
- ✓ An operator station incorporating a wide window with spray and wiper, twin gloved armholes and knee operated push buttons for pump and compressed air control. Wide access doors on the right-hand side or both sides.
- ✓ Rubber curtains for interior protection, a heavy duty urethane lined turntable and high intensity fluorescent lighting. A rinse gun fed from mains water supply is also provided.

These are the standard 'SATURN' cabinets; see the next pages for the options.

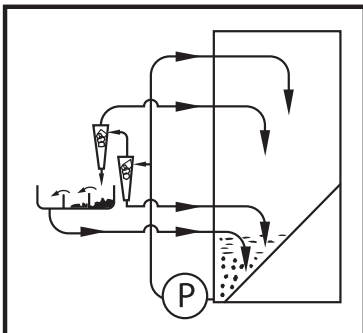
Versatility...

the Saturn features a wide range of options to increase output, facilitate component handling, control waste products and increase operational efficiency.

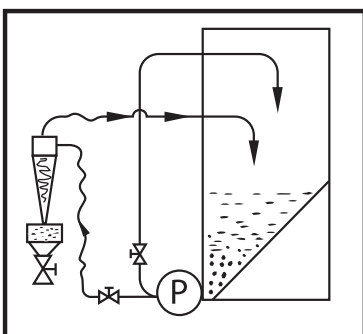
Extra Process Capability



Extra Process Guns



Fines Extraction & Collection



Total Solids Extraction

Extra Process Guns

Increased component coverage and therefore speed of processing is achieved by fitting extra process guns, all fed from the one Wet Blast slurry pump. Cabinet size dictates the number of extra guns. The SATURN 1300 has a five gun capacity, the SATURN 1500 and SATURN 1800 will each take a total of nine guns.

Multiple Inlets

Media pipework and air pipework may be split to provide separate inlets, each controlled by manual or automatic valve(s). Two inlets can be fitted to the SATURN 1300 and three to the SATURN 1500 or SATURN 1800.

Fines Extraction and Collection

A system is available which constantly takes off a proportion of the liquid flow from pump to guns. Utilising two mini cyclones, it separates good media from fines. Recovery occurs with the primary (first) mini-cyclone and fines extraction and grey water recycling with the secondary mini-cyclone. Grey water returned to the machine may be used for automatic rinsing.

Automatic Media Top-up

With worn out media being extracted, concentration of good media in the system can be maintained by this device that feeds a controlled quantity of fresh media into the machine at preset intervals.

Total Solids Extraction

A portable wet cyclone separator may be added. With media flow diverted through this device the solids content of the machine will be rapidly extracted and collected, the water being returned and retained in the cabinet. Better utilising this precious resource.

Turntable Drive

Once in the cabinet, the components may be presented to the process by powered rotation of the table. A variable speed drive system is available which is suitable for either fixed or a trolley mounted turntable.



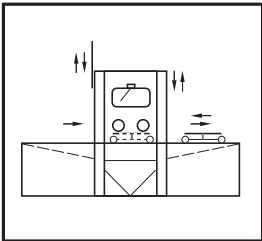
The Vaqua Saturn

Component Handling Features

Careful consideration has been given to the handling of components, particularly heavy ones, and as a result the following options are offered.

External Load/Unload Facilities

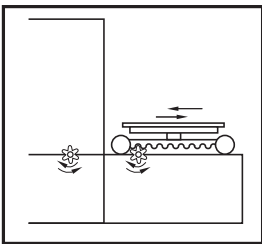
Cabinet rails are extended out onto a load/unload platform and the cabinet turntable is mounted on a trolley which runs on those rails. A second load/unload station with additional trolley and table may be mounted on the other side of the cabinet to provide a 'one in/one out' system. Vertical sliding doors are required with this system that are optional with all models.



External Load/Unload Facilities

Trolley Drive

For movement of heavy loads in and out of the cabinet, a trolley drive is available. Either cable attached under the trolley driven through pulleys or interconnected driven sprockets between the rails mesh with a rack mounted under the trolley.



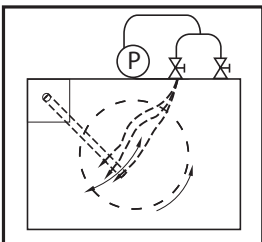
Trolley Drive

Automatic Gun Movement

Automatic gun oscillation systems are available to minimise the number of process guns required to obtain fast and uniform component coverage.

Horizontal Swing Arm Oscillation

A variable speed pneumatic oscillation system mounted externally on the cabinet roof swings the guns in an arc across the turntable.



Horizontal Swing Arm Oscillation

Vertical Linear Oscillation

Vertical gun movement is provided by a heavy duty oscillation unit externally mounted on the cabinet roof, the guns being mounted on a shaft protruding into the cabinet.

Pneumatics are offered where a fast stroke is required, a DC driven electro mechanical system can be offered for slow but uniform gun movement. Stroke length and speed are adjustable.

Because of the unique ability of the Wet Blast process to simultaneously degrease, the system is called upon to handle grease of all types. Once removed from the components the grease must be taken out of the system, but must not be discharged to drain. Choice of the method used for this and subsequent separation and collection will depend on the type of grease.

Electrical Equipment

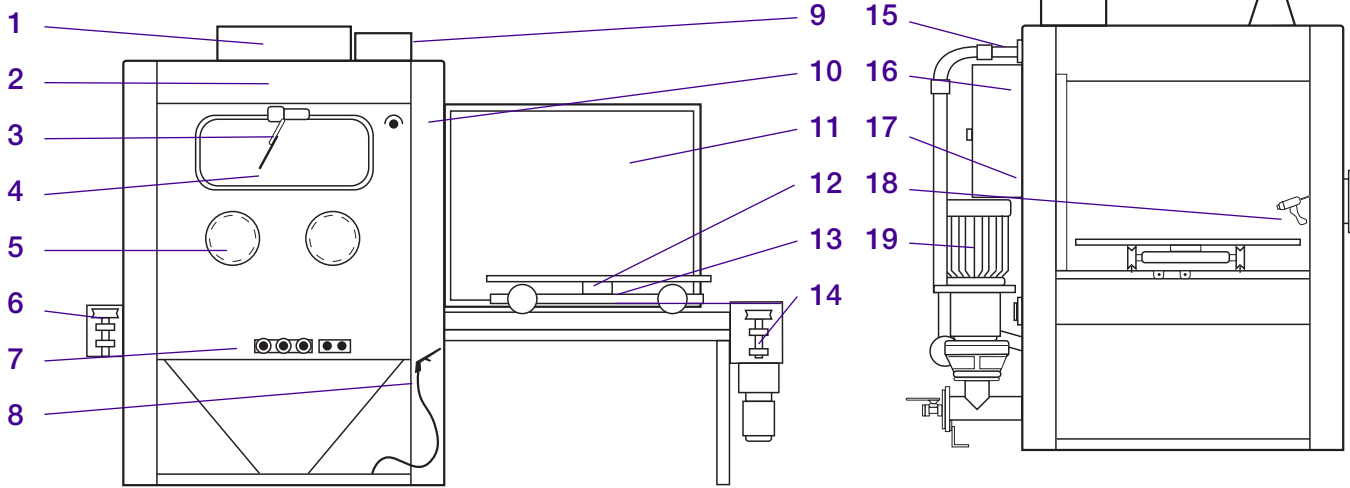
The controls for all electrical functions chosen are fitted into a push button panel at the front and/or side of the machine. Depending on the machine configuration the electrical control box may contain PLC's, timers, transformers, stroke counters and other instrumentation to manage the power and control voltage needs of the machine.

Safety switches cut out all functions if a cabinet door(s) is opened and emergency stop buttons are fitted.

A PROGRAMMABLE CONTROL SYSTEM IS AVAILABLE AS A FURTHER OPTION.

Dana-Ridge operates a policy of continuous improvement and reserves the right to change, without notice, any of the specifications of its products. All information, data and illustrations given in this leaflet are subject to variation and are intended for general guidance only.





Front View

Right Side View

INDEX TO ILLUSTRATIONS

- 1 Fluorescent Light Unit
- 2 Fabricated Steel Blast Cabinet
- 3 Window Wiper
- 4 Safety Glass Window
- 5 Arm Holes complete with Shoulder Length Gloves
- 6 Idler Pulley for (optional) Trolley Drive System
- 7 Knee Buttons for Pump & Compressed Air Control
- 8 Rinse Gun complete with Hose
- 9 Exhaust Vent
- 10 Control Valve for Window Spray
- 11 Right Hand Cabinet Door shown fully open
- 12 Trolley & Turntable
- 13 Trolley Rails – extend from Load End into Cabinet
- 14 Trolley Drive System (optional)
- 15 Mains Compressed Air & Water Connections
- 16 Electrical Control Panel
- 17 Electrical Entry Point
- 18 Blast Processing Gun
- 19 Wet Blast Pump

SPECIFICATIONS

Electrical

Media Pump Motor	7.5 or 11 kW 3-phase motor
Machine lighting	3 x 20 Watt fluorescent tubes
Control Voltage	24 Volts AC

Electrical Supply

Basic machine	415 Volts, 3-phase, 50 Hz
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Water Supply

Connection	1/2" BSP
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Compressed Air Supply

Connection	1/2" to 1" BSP
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Inlet pressure to gun 5.0 to 7.0 Bar (74 to 104 psi)

Air Consumption:

Process gun fitted with 6.75 mm (17/64") diameter air jet and 12.5 mm (1/2") diameter process nozzle:
 Approximately 1.5 to 1.70 m³/min (40-60 CFM)
 depending on air pressure setting required for application. Where multiple process guns are required for the application, a higher nominal free air volume is needed.



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