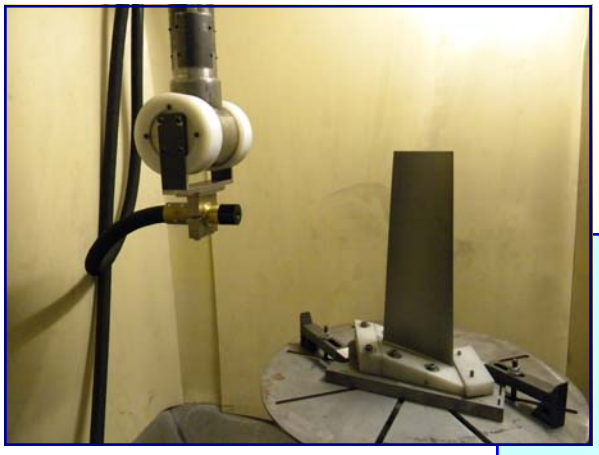
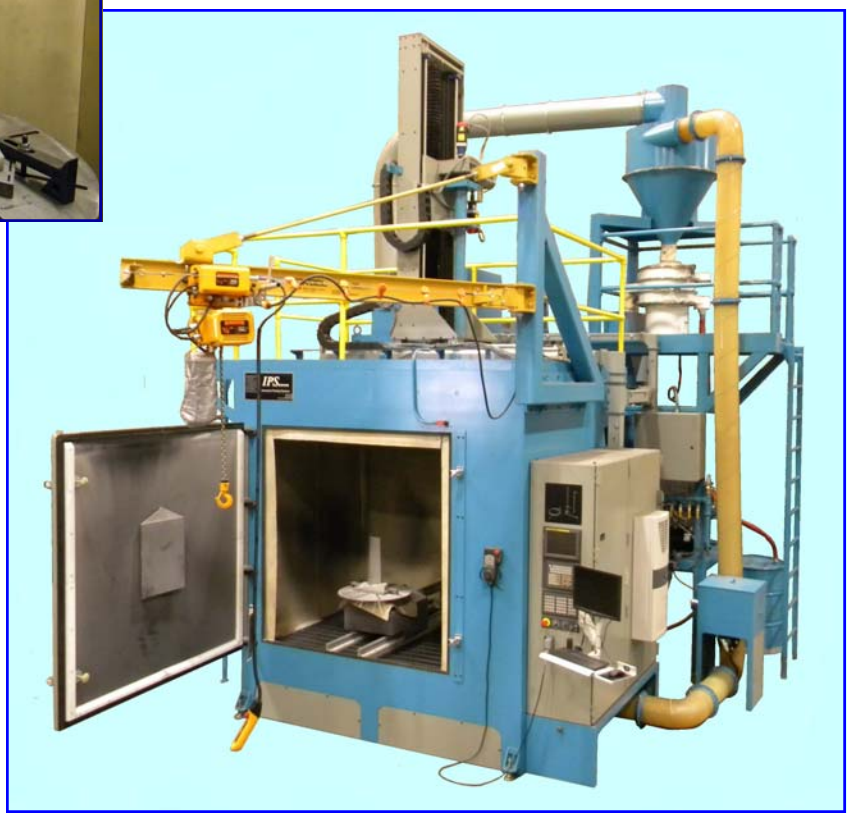
Six Axis Rotary Table CNC Robotic Computer Controlled Shot Peening System

This CNC motion shot peen machine offers consistent accuracy and part recipe programming. The nozzle manipulator is four axis CNC; X (horizontal), Z (vertical), A (nozzle Tilt) and B (yaw) and fifth axis C (rotary spindle) has indexing or revolving capabilities with CNC coordination. The sixth axis is a rotary table slide axis that is also part of the CNC package. All linear axes utilize stiff, cam follower type slides and precision ball screws for high speed and exceptional accuracy and repeatability. Rotary axes use low backlash gearboxes, and precision gearing. Over travel and home sensing are provided with rotary and conventional limit switches. All axes use high torque, brushless servo motors for high performance and low maintenance. The Motion control system of the machine will consist of a Fanuc 30i CNC controller. The GE Fanuc 16i CNC mounts the entire CNC control behind the flat panel LCD display significantly reducing panel space and thus reducing the required floor space. The control supports the Fanuc Serial Servo Bus, or FSSB. This high-speed bus allows the connection to the high-performance Alpha Series Servo Drives. All machine level controls are handled through the PLC side of the control with simple to understand and troubleshoot ladder diagram programming. High level programming on the drive side of the controller allows the system to create complex and smooth motion paths that are monitored by means of the CNC controller that continually monitors the current position of each axis and compare it to the expected position of each axis. This constant monitoring allows the machine to shut down immediately if the motion path is not being maintained. During the process, other process parameters such as airflow, air pressure, recovery system and machine interlocks are constantly being monitored. If any of the process parameters fall outside of the acceptable limits the machine will automatically interrupt the peening process and alert the machine operator that a fault condition has occurred with all error information displayed. Motion programs are created by jogging the axes with the pendant and pressing the insert button on the CNC keyboard. Arcs are programmed by teaching three points on the arc. Optional CIMCAP monitoring system is designed for both the operator and the process engineer. Each CIMCAP system is fully configured for it's specific application. Extensive context sensitive help and intuitive Windows based controls make using the CIMCAP system operator friendly. CIMCAP also allows for easy programming by using mouse click commands that write CNC G code. For example, the programmer can change the air pressure by clicking on the CIMCAP air pressure button then entering the new pressure. CIMCAP will write and enter the code into the part program. These quick programming buttons include, but are not limited to; dwell, axis speed, part rotation speed, air pressure, shot flow and other key parameters.





Standard Features:

- CNC Nozzle Manipulator
- Shot Recovery System
- Screen Classifier
- Rigid Urethane Duct
- Slide table for easy loading
- 1/2" steel plate enclosure
- 1/4" steel reclaim
- Rubber lined Enclosure
- Fanuc 30i CNC controller
- Easy Point and Teach Programming
- Ladder Access Points

Options:

- Continuous Pressure Vessel
- Multiple axis choices
- Digital shot flow controls
- CIMCAP Process Monitoring Software
- Multiple Nozzle
- Hoist
- Auto Media Add
- Other

IPS....

Innovative Peening Systems

2825 Simpson Circle
Norcross, GA 30071
Phone 770-246-9883
Fax 770-246-9860
innovativepeening.com