

ML Series: Rotary Table CNC Batch Shot Peening Machine

This CNC shot peen machine offers CNC motion and part recipe control. Multiple parts can be processed in one cycle thus allowing for operators to load and then perform other duties while the machine processes all of the loaded parts. The operator can load all the fixtures or just some of the fixtures and the machine will only peen or blast those that are loaded. The nozzle manipulator is four axis CNC; X (horizontal), Z (vertical) A (nozzle Tilt), B (nozzle yaw) and a fifth axis C (rotary spindle) has indexing or revolving capabilities. The Motion control system of the machine will consist of a CNC controller in G code format with integrated PLC. This combination allows the high level of numerically controlled precision with the ease of basic PLC programming and Trouble shooting. 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 take simple point to point instructions and create complex and smooth motion paths that are monitored by means of a virtual tool path 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 proper 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 three axis Nozzle Manipulator
- ◆ Shot Recovery System
- ◆ Screen Classifier
- ◆ Rigid Urethane Duct
- ◆ 3/8" steel plate enclosure
- ◆ Rubber lined Enclosure
- ◆ Fanuc CNC controller G code format
- ◆ Easy Point and Teach Programming

Options:

- ◆ Digital shot flow controls
- ◆ CIMCAP Process Monitoring Software
- ◆ Multiple Nozzle
- ◆ Rotary Lance for hole peening
- ◆ Nozzle Yaw axis

IPS...

Innovative Peening Systems

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