

ULTRAPRO3D-II

PRECISION
ROBOTIC
POLISHER



Your source for leading-edge surface processing solutions



Robot-Assisted Polisher

With the UltraPRo 3D-II Robotic Assisted Polisher, Axus Technology introduces a completely automated system for precision polishing of round, square, and rectangular 3-dimensional components. This polisher incorporates an industrial grade, 6-axis articulated robot with unique force/torque sensing and control capability as the polishing mechanism.

The UltraPRo 3D-II provides complete 3D access for polishing standard and odd-shaped components such as those used for precision optical applications, sputtering targets, ion implantation, rings, and electrodes made of silicon, silicon carbide, ceramics, optical glass, and more. This system has the capability of polishing flat areas, ID and OD edges, bevels and chamfers; all in one set-up without having to reset the part.

The robot can choose from any one of eight different polishing tools from the Multi-Unit tool-rack center for the appropriate polishing requirement. A polishing slurry reservoir, mixing, and distribution system is available as is a slurry temperature control system for process stability.

FEATURES

- Fully automated and programmable robot-assisted polishing tool for complex parts that require multiple polishing steps.
- Capable of polishing round, oval, and odd-shaped parts
- Multi-unit tool-rack center with 8 different polishing tools for multiple step polishing and continuous cycling
- Multi-recipe driven system with multi-step programming capability



3D access for polishing standard and odd shaped components.

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FEATURES	BENEFITS
High quality industrial grade, 6-axis articulated robot with force/torque sensing and control	The robot provides operational consistency for repeatable polishing performance, and programmable speed, down force, and polish recipe sequential cycling. Automatically adjusts down force or torque for process consistency.
Multi-recipe driven system with multi-step programming capability	For parts that have multiple areas that require polishing, this enables multi-recipe and multi-step polishing without having to manually replace or relocate the part or the polishing pad.
Multi-unit tool center tray design	Various shaped polishing tools can be used for multiple step polishing sequences and continuous cycling.
Vacuum chuck work holding platen for up to 17-inch (432 mm) diameter parts (larger systems are available)	The vacuum chuck facilitates quick and easy part centering for accurate placement within the polisher.
Vacuum pumping system with automatic fluid drain	This feature draws and maintains the vacuum to hold the part during the polishing process and automatically drains fluid from the system even during the polishing cycle.
Programmable variable speed platen	Allows for customized programming of the system for various sized parts to optimize polishing results.
Polishing slurry reservoir, mixing and distribution system	Polyethylene reservoir with built-in agitation system to insure consistent polishing slurry mixing and distribution.
Compact footprint	Will fit in most laboratories and manufacturing settings without having to greatly reposition neighboring tools.
Automatic polishing pad conditioning system	Automatically dresses the polishing pad to enhance the polishing pad's effective lifetime, and to provide consistent results part-to-part.
LCD Flat Panel Display – water resistant	For ergonomic reasons, the display is mounted on a fully adjustable platform.
OPC server on the HMI to download process performance data	Process engineers can monitor the operational performance of the UltraPRO 3D-II from remote locations.
PLC controller with EtherCAT embedded PC master	Provides for ease of recipe writing plus reliable and consistent polishing machine operation and troubleshooting activities.

