



Bioceramics for Implants



Rotary Table Surface Grinding System

Business Case - Bioceramics

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Rotary Surface Grinding System for Bioceramics

Rotary Table Surface Grinder with Horizontal Spindle for Bioceramics Processing

Rotary surface grinding is a fast and precise solution when a flat surface is required on ceramics, silicon, glass, quartz, and silicon carbide (SiC), and other materials. Our rotary table surface grinding machines are specifically designed to meet strict tolerance and precision grinding requirements for our clients in semiconductor, medical, and optic industries.

A global bioceramics manufacturer in the U.S. was looking for a rotating table surface grinder to machine their bioceramics materials. As the materials are used in bioimplantable devices and orthopaedic components, a key priority was to use high purity and high strength ceramics material for biocompatibility.

To meet this requirement, the client was looking for surface grinding machines with the following features:

- Rugged steel weldment base with hand-scraped steel box ways for vibration dampening
- Capacity to hold $<3\mu\text{m}$ flatness and parallelism
- Automatic grinding wheel dresser
- Hydrostatic metal bearings in the spindle structure for durability
- HMI touch screen controlled
- Inverter driven spindle movement
- Magnetic chuck
- Durable steel weldment column design

Our **horizontal rotating surface grinder model H600** was the perfect choice. The client was most impressed with the H600's magnetic chuck design, which simplifies maintenance and reduces downtime.



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Moreover, our HMI touch screen and user-friendly interface make our surface grinders easier to operate. For the client, this helps control for product quality by lowering the expertise and training required for each employee, while maintaining consistent grinding quality.

H600 Rotary Table Surface Grinder Advantages

- 1) Our experience allows us to provide customized jigs and fixtures, no matter how small your workpiece sizes
- 2) The magnetic chuck is energized and de-energized by a controller that minimizes heat-related impact on the chuck life
- 3) Excellent combination of grinding wheel speed and spindle drive horsepower
- 4) Servo-linear axes for the carriage X-Axis and the spindle head Z-Axis for precise movement



H600 Model – Horizontal Spindle Rotary Table Surface Grinder System



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	Item	H600
Capacity	Diameter of rotary table	φ600 mm
	Load of rotary table	450 kg
	Distance from center of spindle to chuck top	120 mm
Table	Speed of rotary table	0~130
	Tilt angle of table	±1
	Motor	2.0 kW/AC Servo
Spindle	Grinding wheel size (OD x W x ID)	φ405×50×φ127 mm
	Speed of wheel spindle	0 ~ 1,300 RPM
	Motor	7.5kW/4P
Z - axis	Travel	450 mm
	Feed rate mm/time	0.001~
	Motor/AC Servo	1 kw
X - axis	Travel	700 mm
	Feed rate mm/time	0~700
	Motor/AC Servo	1 kw
Machine	Floor space (L x W) mm	3,200x
		1,900
	Height mm	1,900
	Weight mm	5,000

Please check [a video clip of H600](#) for its design and movement.



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