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OPTOFORM®

Sterling
ULTRA PRECISION

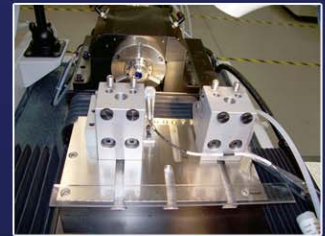


Overview

Low cost two-axis, computer controlled contouring lathe designed for high speed lathing of spherical, multi-curve, aspheric, and edge design contact lenses and intraocular lenses. It is the world's most competitively-priced Ultra-Precision Lathe precisely designed for contact lenses or Intra-ocular Lenses. The machine control software is extremely flexible, accommodating all applications.

Product Technical Data

System/Control	Description
Configuration	Two-axis contouring machine, "T" configuration
Control System	On-board computer, PMAC servo control of linear motors, nanometer position feedback, with ergonomic menu type interface on a flat panel high quality color touch screen
Base	Natural granite supported on a welded steel frame
Vibration Isolation	Passive mount vibration isolation system
Machine capability	
	Spherical, Aspherical
	Non-rotationally symmetric with FTS-1000 or Variform™ attachment
Machine Slides	X and Z-axis
Type	Preloaded hydrostatic air bearing design
Travel	X-axis 200mm (8"), Z-axis 100mm (4")
Speed	0.001 - 1,500mm/min (60"/min)
Drive System	Linear AC Synchronous motor
Workholding Spindle	HS 75 High Speed Heavy Duty Spindle
Type	Air bearing
Speed Range	100-10,000 RPM
Stiffness	Axial Stiffness 105 N/μm, Radial Stiffness 35 N/μm
Load Capacity	Air actuated collet mechanism
Acc/Dec Time	Less than 5 seconds
Machine Requirements	
Power	208 or 230VAC, 1 phase 50/60 Hz, 3.0 Kva
Air	10 SCFM@90PSIG, 5 l/s @ 6 bar
Floor Space	990mm x 860mm x 760mm (39" x 34" x 30")



Design Features

- High speed lathing of spherical, multi-curve, aspherical, and non-rotationally symmetric contact lenses and intraocular lenses.
- Form accuracy of less than 0.3 μm and Surface Finish of 8-10nm Ra.
- Built on a natural granite base, and utilizes a passive mount vibration isolation system.
- User defined edge configurations including asymmetric edge can be specified, incorporated into the lens/mold design and directly machined.
- Air Slides provide stiff 200mm (X-axis) and 100mm (Z-axis) of travel with linear motor technology
- Less than 10 nm resolution linear laser scales for positioning feedback.
- Ergonomic "ease of use" controls accessed from high-quality color touch screen.
- Comes standard with separate dual tool holders, front surface probe, and can hold up to 6 diamond tools
- Task light and vacuum chip extraction

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