

OPTIPRO

Trusted Technology.



**PRO 80
UFF**



UFF 300



UFF 500

UltraForm® Finishing

■ Aspheres and Freeforms

Powerfully Simple Set-Ups ■

■ Exceptional Ergonomics

Patented Finishing Process ■

SAVE TIME

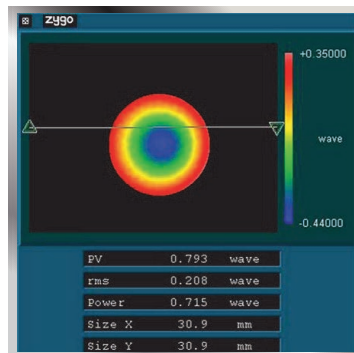
- ❑ Finish aspheres in a fraction of the time with high removal rates and precision
- ❑ Polish directly after grind...No need to pre-polish!
- ❑ On-board metrology for faster setups

MAKE MONEY

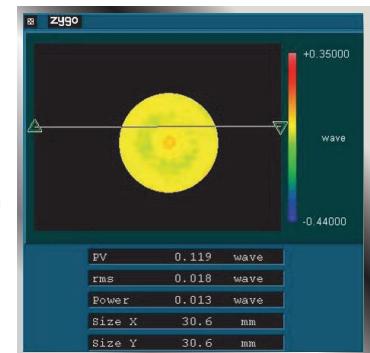
- ❑ Predictable low cost consumables
- ❑ Deterministic CNC polishing means consistent and reliable cycle times
- ❑ Multiple belt and slurry combinations allow UFF to polish glass, crystal, ceramic, and metal aspheric and freeform optics

PRECISION FINISHING

- ❑ Deterministic finishing of spheres, aspheres, and planos
- ❑ Figure error correction using feedback from an interferometer or profilometer down to $\lambda/8$



INITIAL SURFACE
PV: 0.793 λ ♦ RMS: 0.208 λ



FINAL SURFACE
PV: 0.119 λ ♦ RMS: 0.018 λ

Grinding

Polishing

UltraForm
UltraSmooth
Finishing

Measuring

Advanced
Process
Development

Training

Revolutionizing Asphere Production



UltraForm Finishing Specifications*	PRO 80 UFF	UFF 300	UFF 500
Workpiece Optimal Diameter Range Maximum Plano Diameter** Maximum Weight	10 - 80 mm (.39 - 3.14") 100 mm (3.9") 15 kg (33 lbs.)	10 - 300 mm (.39 - 11.8") 300 mm (11.8") 23 kg (51 lbs)	25 - 500 mm (.98" - 19.7") 500 mm (19.7") 170 kg (374.8 lbs.)
Work Spindle Spindle Speed Hydro-Expansion Vacuum Chuck C-Axis Position and Hold	0 - 1500 rpm Standard Standard Standard	0 - 500 rpm Standard Standard Standard	0 - 200 rpm Standard Standard Standard
Travels X - Axis Travel Y - Axis Travel Z - Axis Travel B - Axis Travel C- Axis Travel	250 mm (9.8") 6 mm (0.24") 140 mm (5.5") -60° to 60° 0° to 360°	500 mm (19.7") 400 mm (15.7") 500 mm (19.7") -90° to 90° 0° to 360°	1200 mm (47.2") 700 mm (27.6") 500 mm (19.7") -90° to 90° 0° to 360°
Communication Interface Ethernet USB	Standard Standard	Standard Standard	Standard Standard
Machine Dimensions Width Depth Height Weight	1,000 mm (39") 1,500 mm (59") 2,440 mm (96") 1,600 kg (3,500 lbs.)	2,110 mm (83") 2,515 mm (99") 2,700 mm (106") 3,400 kg (7,500 lbs.)	2,570 mm (101") 3,700 mm (146") 3,020 mm (119") 5,750 kg (12,650 lbs.)
Facility Requirements Electrical Air Supply	480V +/- 5%, 21A 100PSI, 5 CFM clean dry air	480V +/- 5%, 29A 100PSI, 5CFM clean dry air	480V +/- 5%, 35A 100PSI, 5CFM clean dry air
Workpiece Probing Tool Probing Asphere Fabrication Non-Rotational Correction Freeform Raster Fabrication	Standard Standard Standard Optional —	Standard Standard Standard Optional Optional	Standard Standard Standard Optional Optional

* Specifications subject to change. Contact OptiPro for the latest specifications.

** Machine is capable of manufacturing maximum plano size in small volume. For medium and large production quantities of max plano size, consider OptiPro's larger platform.



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versatile finishing >
 of complex optics

