



# UltraForm® Finishing

## CNC Asphere/Freeform Polishing Machines



PRO 80 UFF



PRO 160 UFF



UFF 300



UFF 500

*Innovative Machines for Precision Optics and Technical Ceramics*



CNC Optical  
Grinding Machines



Ultrasonic  
Machining Centers



Optical  
Centering Machines



CNC Spherical  
Polishing Machines



CNC Asphere/Freeform  
Polishing Machines



Planetary  
Polishing Machines



Non-Contact  
Metrology Solutions

# Revolutionizing asphere and freeform polishing

Improve your precision, capability and predictability along with your bottom line with **UltraForm® Finishing (UFF™)**, OptiPro's patented sub-aperture polishing system. Efficiently polish aspheres, cylinders, acylinders, or freeform optics to sub-micron specifications. With UFF, surfaces can be polished directly after grinding with high removal rates, allowing you to polish precision optics in a fraction of the time. UFF is compatible with a variety of polishing belts ranging from classic polyurethane to fixed abrasive for polishing a wide range of materials, including optical glasses, crystals, advanced ceramics, and metals. Whether your application involves a 10mm asphere or 500mm window, we have the right UFF machine for you.



## High Performance Machines

Engineered for precision and repeatability

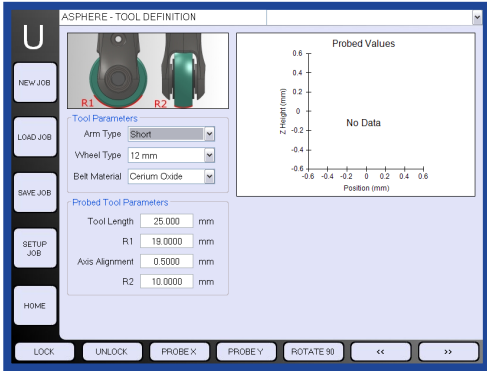


## Intelligent Software Technology

U Series Software: User-friendly yet highly capable



- Clear and simple interface guides the operator through all aspects of asphere polishing
- Uniform removal or metrology based figure correction using the R-Theta or Raster Process
- Quick and error-free entering of lens prescription and tool definition
- Optimal tool path is generated based on several factors, including removal function and initial surface quality, to deliver predictable polishing results



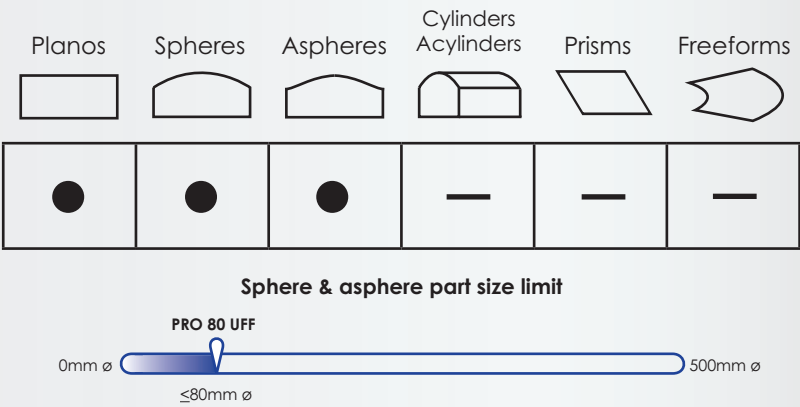
## Capabilities

● Standard ○ Available — N/A

### PRO 80 UFF: CNC asphere polisher



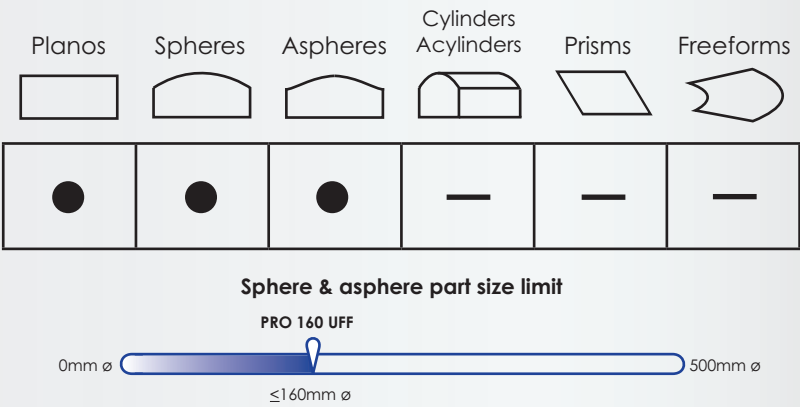
- Standard Features:**
- Workpiece Probing • Tool Probing
  - Asphere Fabrication in U Series
- Optional Features:**
- Non-Rotational Correction



### PRO 160 UFF: CNC asphere polisher



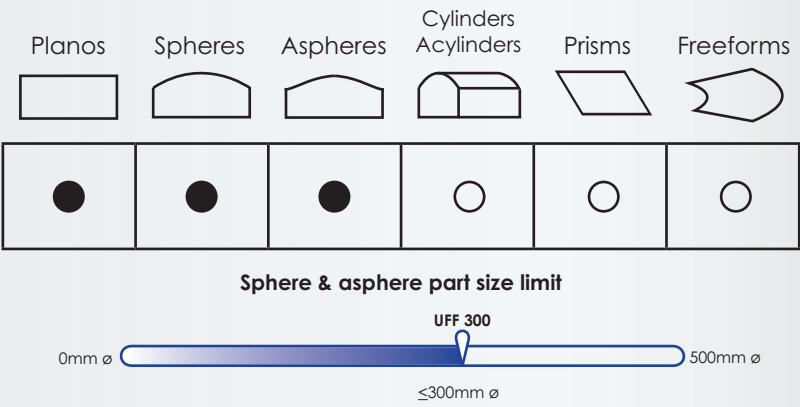
- Standard Features:**
- Workpiece Probing • Tool Probing
  - Asphere Fabrication in U Series
- Optional Features:**
- Non-Rotational Correction



### UFF 300: CNC asphere/freeform polisher



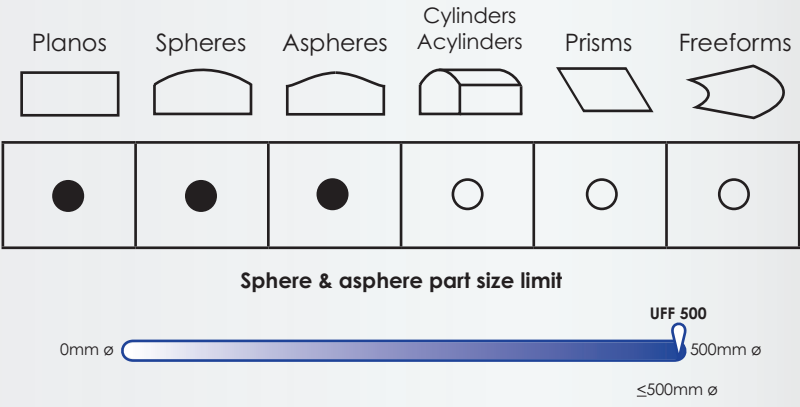
- Standard Features:**
- Workpiece Probing • Tool Probing
  - Asphere Fabrication in U Series
- Optional Features:**
- Non-Rotational Correction
  - Freeform Fabrication with PROSurf Software



### UFF 500: Large asphere/freeform polisher



- Standard Features:**
- Workpiece Probing • Tool Probing
  - Asphere Fabrication in U Series
- Optional Features:**
- Non-Rotational Correction
  - Freeform Fabrication with PROSurf Software





# Specifications\*

	PRO 80 UFF	PRO 160 UFF	UFF 300	UFF 500
<b>Workpiece</b> Optimal Diameter Range Maximum Plano Diameter** Maximum Weight	10-80 mm (.39-3.1") 100 mm (3.9") 15 kg (33 lbs.)	10-160 mm (.39-6.3") 200 mm (7.87") 25 kg (55 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.)
<b>Work Spindle</b> Spindle Speed Hydro-Expansion Vacuum Chuck C-Axis Position and Hold	0-1,500 rpm Standard Standard Standard	0-600 rpm Standard Standard Standard	0-500 rpm Standard Standard Standard	0-200 rpm Standard Standard Standard
<b>Travels</b> 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°	420 mm (16.5") 6 mm (0.24") 220 mm (8.7") -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°
<b>Communication Interface</b> Ethernet USB	Standard Standard	Standard Standard	Standard Standard	Standard Standard
<b>Machine Dimensions</b> Width Depth Height Weight	1,000 mm (39") 1,500 mm (59") 2,440 mm (96") 1,600 kg (3,500 lbs.)	1,400 mm (55") 1,730 mm (68") 2,440 mm (96") 1,950 kg (4,300 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.)
<b>Facility Requirements</b> Electrical Air Supply	480V +/- 5%, 21A 100PSI, 5 CFM clean dry air	480V +/- 5%, 21A 100PSI, 5 CFM clean dry air	480V +/- 5%, 29A 100PSI, 5 CFM clean dry air	480V +/- 5%, 35A 100PSI, 5 CFM clean dry air

\* 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 this plano size, consider OptiPro's larger platform.

## Unparalleled Dedication to Customer Success

### Sales

Developing Partnerships

### Service

Reinforcing Relationships

### Support

Ensuring Excellence

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