

# **CNC Optical Centering Machine**



#### Innovative Machines for Precision Optics and Technical Ceramics





Ultrasonic

Machining Centers

CNC Optical

Centering Machine

CNC Spherical Polishing Machines

CNC Asphere/Freeform Polishing Machines Planetary Polishing Machines Non-Contact Metrology Solutions

CNC Optical Grinding Machines

#### Exceptional precision and repeatability.

Efficient centering of precision optics can noticeably increase your bottom line. Watch parts go out the door faster with the exceptional precision, production, and repeatability of the PRO 160C CNC optical centering machine. Save time and money with fast job setups, optimal cycle times, and quick turnaround times. Accomplish fast and precise centering of spheres and aspheres or perform truncations, facets, steps, bevels, tapers, and freeform edge shaping. Whether your job requires precision centering of glass, ceramics, or IR materials, the advanced capabilities of the PRO 160C will help your company prosper.



Efficient centering of spheres and aspheres from 5-200 mm Laser alignment with transmission for optical glasses or ceramics and optional reflection alignment for UV materials



#### **High Performance Machines**

Engineered for precision and repeatability



accuracy



High quality machine components including quick-change high speed HSK63F tool spindles and tungsten carbide centering bells



Tungsten carbide centering bells made by OptiPro with precision to minimize any damage risk to the surface of the clamped optic

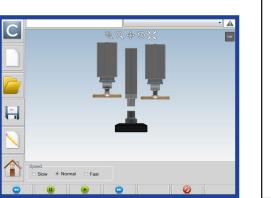
## Intelligent Software Technology

C Series Software: User-friendly yet highly capable

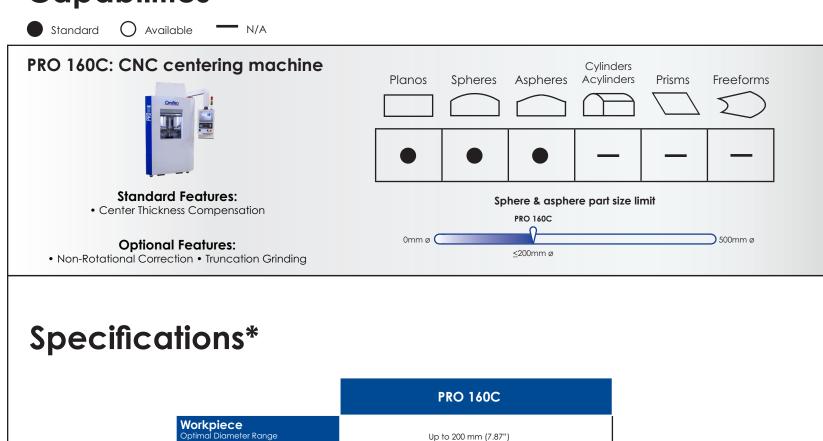


• Clear and simple interface guides the operator through all aspects of optical centering

- For parts that have multiple geometric features, more than one operation can be completed in a single cycle
- 3D animation preview of the part program displays the wheels and part geometry as you build the program and detects any potential collisions



# Capabilities



	PRO 160C
<b>Workpiece</b> Optimal Diameter Range Maximum Workpiece Height	Up to 200 mm (7.87'') Up to 70 mm (2.76'')
Work Spindle Spindle Speed Hydro-Expansion Chuck C-Axis Position and Hold Precise Clamping Pressure	0-200 rpm 25mm (Standard and Custom Bells Available) Standard Up to 1,000N
<b>Tool Spindle</b> Tool Holder Style Maximum Tool Diameter Maximum Tool Weight Tool Spindle Speed Spindle Power	Quick Change HSK63F 220 mm (8.66") 6 kg (13.2") 1,000 - 12,000 rpm 7kW (9.5hp)
Travels X1 - Axis Travel X2 - Axis Travel Z1 - Axis Travel Z2 - Axis Travel Z3 - Axis Travel C1 - Axis Travel C2 - Axis Travel Repeatable Positioning Accuracy	68 mm (2.68") 68 mm (2.68") 130 mm (5.12") 130 mm (5.12") 93 mm (3.66") 360° Continuous 360° Continuous +/- 0.001 mm
Communication Interface	Standard Standard
Machine Dimensions Width Depth Height Weight	1,278 mm (50.3'') 2,032 mm (80'') 2,282 mm (89.8'') 2,494 kg (5,500 lbs.)
Facility Requirements Electrical Air Supply	480V +/- 10%, 58A 100PSI, 5 CFM clean dry air

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

# **Design Your Own Centering Bells**

Available in Toolbox™ Design Software



- Quickly configure centering bells based on diameter, wall thickness and height
- Centering bell limits based on capabilities of PRO 160C, but further customization is available upon request
- Toolbox displays Active Warnings if input geometries would cause errors in rules that drive the generation of parts
- Available to PRO-Tect customers, Toolbox software simplifies the centering bell design process, making your company more productive and profitable

# **Tungsten Carbide Centering Bells**

Achieve Exceptional Centering Results



- Precisely manufactured with state-of-the-art metalworking equipment in-house by OptiPro's team of machinists
- Made from one solid piece of 100% Tungsten Carbide for added integrity
- High quality centering bells minimize any damage risk to the clamped optic
- Available in 12mm and 25mm shaft sizes with a 6-8 week delivery
- Centering bells are customizable for specific job requirements





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