

ADCOLE OptiShaft S100

OPTICAL SHAFT MEASURING MACHINE

The Adcole OptiShaft S100 is a precision optical shaft measuring instrument designed for shop floor environments. Rugged and reliable, OptiShaft systems use a completely telecentric, large field of view optical system that measures parts with diameters up to 100mm.

Measure Within Seconds

Fast measurements on part lengths up to 1.2 meters and diameters up to 100mm.

Collimated LED Illumination

Reduces distortion to provide superior image quality and improved measurement of critical dimensions of all feature types.

Engineered for Shop-Floor Use

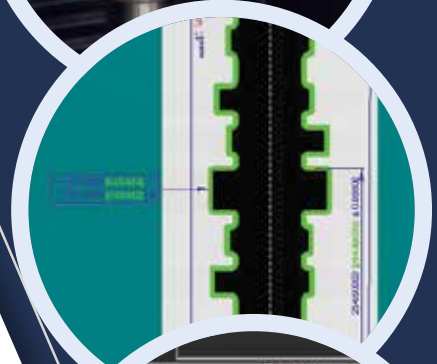
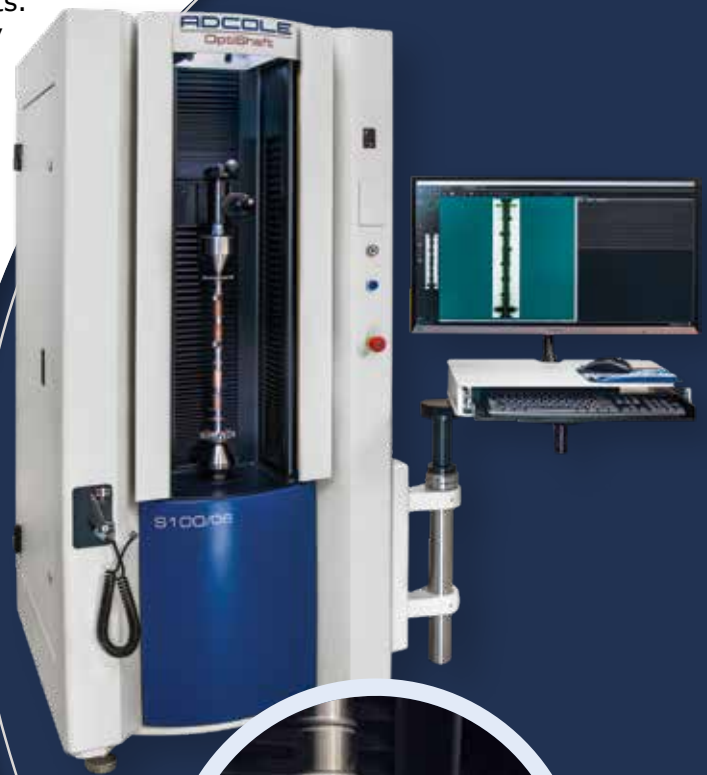
The granite base supports the rotary table providing a rigid base and vibration isolation.

Optics drop down below the stage for protection when machine is not in use.

Convenient air blow-off mounted to the front of the machine for cleaning parts prior to measurement.

Features & Benefits

- Innovative telecentric optics enabling a large depth of field with minimal distortion
- Advanced edge-detection technology providing sub-pixel resolution for superior accuracy and repeatability
- Automatic data point generation and simple feature extraction
- Exceptional image analysis software allows for simple feature extraction and measurement
- Program using DXF CAD models
- True high definition of part image display
- Optional Smartprofile® software for 3D analysis and advanced GD&T
- Easy loading – one-handed tailstock operation
- Built-in light curtain to safeguard the operator during automatic measurement
- Additional optional workholding kits available for parts that do not have centers
- User-friendly interface that makes it easy to quickly integrate the system into a factory or audit room workflow



Type	Indicator	Value
Diameter	+55.00000	+55.00000
Offset	+00.00000	+00.00000
Diameter	+55.00500	+55.00500
Offset	+00.00000	+00.00000
Diameter	+55.00500	+55.00500
Offset	+00.00000	+00.00000
Diameter	+55.00000	+55.00000
Offset	+00.00000	+00.00000
Diameter	+55.00500	+55.00500
Offset	+00.00000	+00.00000
Circularity	+00.00000	+00.00000
Circularity	+00.00000	+00.00000
Circularity	+00.00000	+00.00000
Circularity	+00.00000	+00.00000
Radius	+00.00000	+00.00000

OptiShaft S100 Specifications

Measurement Capacity & Machine Size ⁱ	S100/04	S100/06	S100/08	S100/12
Vertical Measuring Range	400mm	600mm	800mm	1200mm
Maximum Diameter Measuring Range	100mm	100mm	100mm	100mm
Maximum Part Size	Ø 175mm x L 400mm	Ø 175mm x L 600mm	Ø 175mm x L 800mm	Ø 175mm x L 1200mm
Machine Size	850mm x 1055mm x 1870mm			850mm x 1055mm x 2200mm
Machine Size w/ Optional Workstation	1525mm x 1375mm x 1870mm			1525mm x 1375mm x 2200mm

System Performance

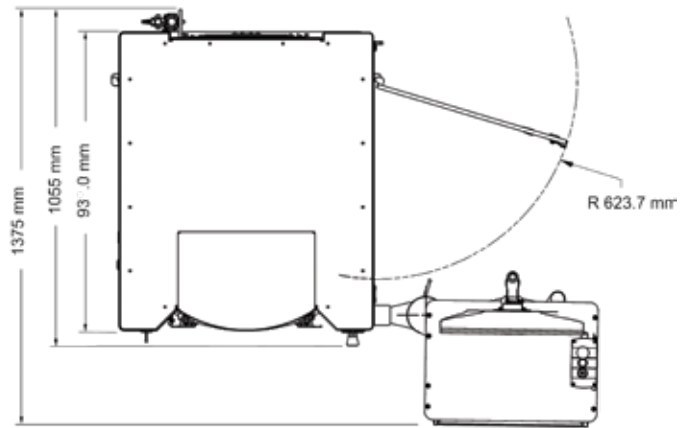
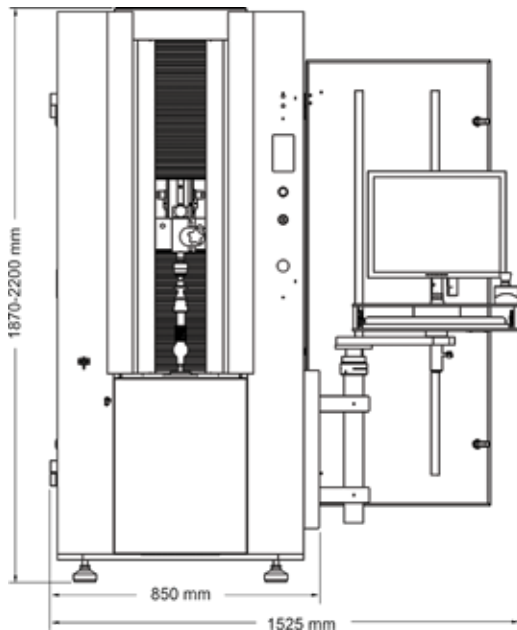
Vertical Spinning Speed	100mm/sec
Rotational Scanning Speed	60 RPM
Vertical Scale Resolution	0.1 µm
Video Edge Resolution	0.5 µm
Rotational Scale Resolution	0.001°
Rated Spindle Load	80 kg

Accuracy ⁱⁱ

Diameter Measurement	1.0 + D/200 µm
Diameter Repeatability	0.5 µm
Length Measurement	3.0 + L/200 µm
Length Repeatability	2.0 µm

Rated Environment & Facilities

Power Requirements	100-120 VAC or 200-240 VAC, 50/60 Hz, 1-Phase, 650 W
Compressed Air Requirements	Air pressure: 0.4 MPa; Minimum Flow capacity: 175 l/min; Air quality ISO 8573-1:2010 Class 4.3.4
Safe Operating Environment	15-30°C, non-condensing
Rated Environment Temperature	18-22°C, 30-80% humidity, vibration <0.001g below 15 Hz or better



System Weight: approx. 530 - 740 kg
Shipping Weight: approx. 630 - 860 kg

ⁱ Between standard centers

ⁱⁱ Where D, L = measuring length in mm. Applier to thermally stable system in rate environment. Maximum rate of temperature change: 1°C/hour. Maximum vertical temperature gradient: 1°C/meter.