

# ADCOLE OptiShaft S135

## OPTICAL SHAFT MEASURING MACHINE

The Adcole OptiShaft S60 is a large capacity precision optical shaft measuring instrument designed for shop floor environments but is equally suited for the measurement laboratory. Rugged and reliable, OptiShaft systems use a completely telecentric, large field of view optical system that measures parts with diameters up to 135 mm, and lengths up to 1.2-meters.

### Measure Within Seconds

Fast measurements on part lengths up to 1.2 meters and diameters up to 135mm.

### 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

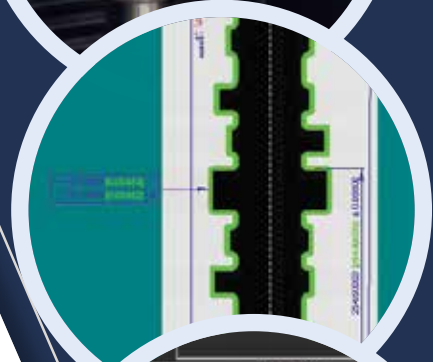
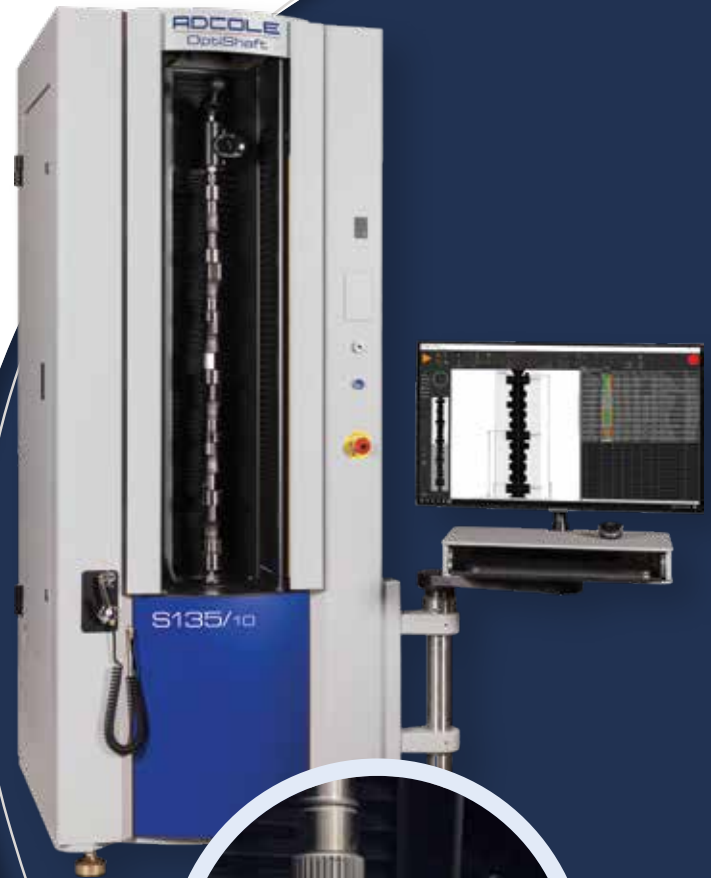
The granite base supports the rotary table providing a rigid base and vibration isolation.

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

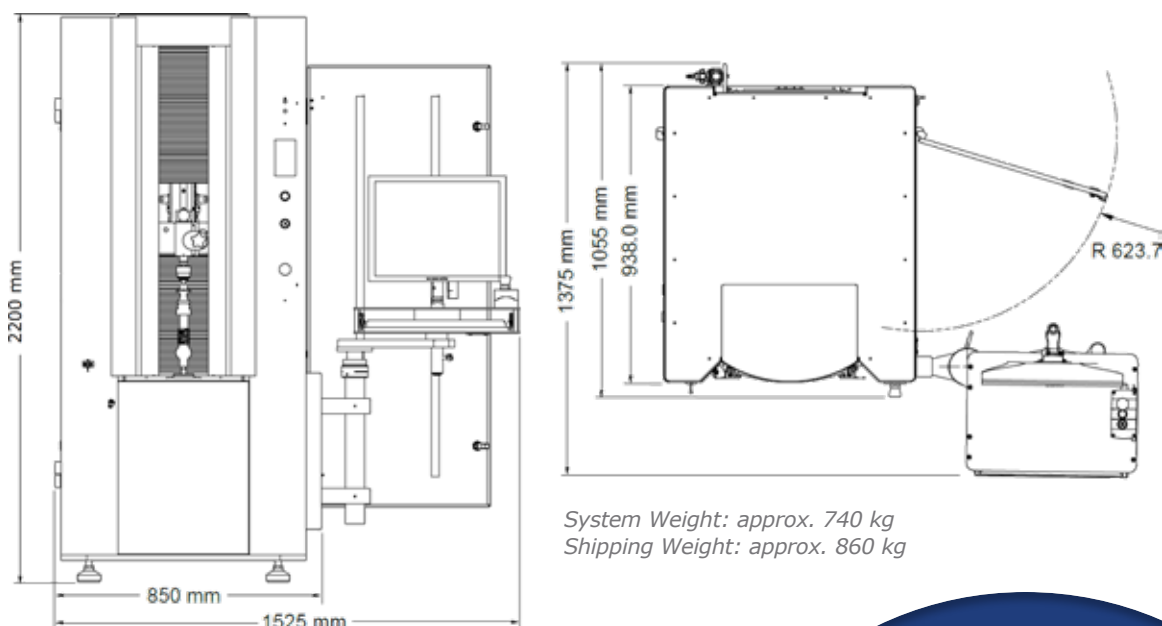
- Innovative telecentric optics enabling a large depth of field with minimal distortion
- Advanced edge-detection technology providing sub-pixel resolution for superior accuracy and repeatability
- Automatic data point generation and simple feature extraction
- Exceptional image analysis software allows 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     |
|----------------|-----------|-----------|
| 1 Diameter     | Green     | +55.00000 |
| 2 Offset       | Red       | +00.00000 |
| 3 Diameter     | Green     | +55.00500 |
| 4 Offset       | Red       | +00.00000 |
| 5 Diameter     | Green     | +55.00500 |
| 6 Offset       | Red       | +00.00000 |
| 7 Diameter     | Green     | +55.00000 |
| 8 Offset       | Red       | +00.00000 |
| 9 Diameter     | Green     | +55.00500 |
| 10 Offset      | Red       | +00.00000 |
| 11 Circularity | Green     | +00.00000 |
| 12 Circularity | Green     | +00.00000 |
| 13 Circularity | Green     | +00.00000 |
| 14 Circularity | Green     | +00.00000 |
| 15 Circularity | Green     | +00.00000 |
| 16 Radius      | Green     | +00.00000 |

# OptiShaft S135 Specifications

| Measurement Capacity & Machine Size <sup>i</sup> | S135/10  | S135/12            |
|--|--|--------------------|
| Vertical Measuring Range                         | 1000mm   | 1200mm             |
| Maximum Diameter Measuring Range                 | 135mm  | 135mm              |
| Maximum Part Size                                | Ø 175mm x L 1000mm   | Ø 175mm x L 1200mm |
| Machine Size                                     | 850mm x 1055mm x 2200mm  |                    |
| Machine Size w/ Optional Workstation             | 1525mm x 1055mm x 2200mm   |                    |
| <b>System Performance</b>                        |  |                    |
| 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                               | 120 kg   |                    |
| <b>Accuracy <sup>ii</sup></b>                    |  |                    |
| Diameter Measurement                             | 1.8 + D/100 µm   |                    |
| Diameter Repeatability                           | 1.0 µm   |                    |
| Length Measurement                               | 3.0 + L/150 µm   |                    |
| Length Repeatability                             | 2.0 µm   |                    |
| <b>Rated Environment &amp; Facilities</b>        |  |                    |
| 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 or better |                    |
| 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  |                    |



- 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.

