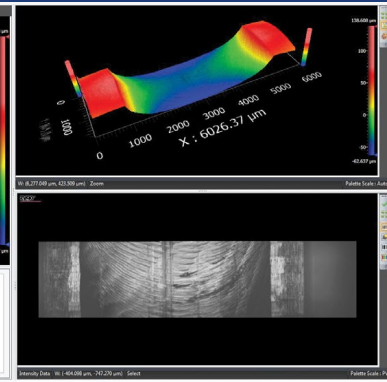
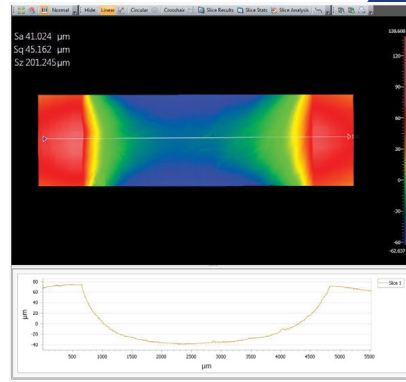
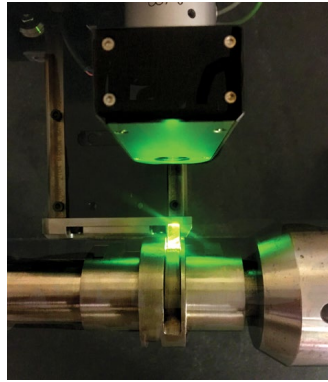


## ADCOLE 1000-Z

### Optical & Tactile Surface Roughness Gage

### MODEL 1000-Z



The Adcole 1000-Z gage provides extremely accurate optical and tactile surface roughness data for high value component manufacturing

The Adcole Model 1000-Z features both optical and tactile measuring heads to deliver high precision surface measurements of camshafts, crankshafts and turned parts. The non-contact interferometric probe expands on the measurement capabilities from the diamond tipped contact probe of the standard Adcole 1000 gage, because the optical accessory can precisely measure surface finish of hard-to-reach features such as groove bottoms, sidewalls, and more.

Profilometers such as the 1000-Z quantify surface roughness and are relied on to maintain quality and identify potential problems in the manufacturing and coating process.

#### The Model 1000-Z is engineered to measure intricate features on:

- Camshafts
- Crankshafts
- Sliding Camshafts
- Gears & Transmission Shafts
- Precision Hydraulic Cylinders
- Balance Shafts
- Eccentric Shafts
- Robotic Shafts & Cylinders
- Pump Lobes / Pump Shafts

#### Features:

- Offers fully automated surface finish checks and inspection
- Extends the proven reliability of Adcole 1000 diamond tipped contact probe
- Enables intuitive diagnostics routines and part identification capabilities
- Uses commonly available stylus tip sizes: 2µm, 5 µm, or 10µm radius
- Offers ZYGO® (ZeGage™) optical surface finish measurements based on white light interferometry to provide resolutions of less than 1 nm and lateral resolutions of 3.3 micrometers (evaluation region of 3.3 x 3.3 mm)
- Provides online or offline programming of measuring sequences and reports via easy-to-use utilities

#### Benefits:

- Provides fully automated, push-of-a-button surface finish inspection system
- Hybrid tactile/optical design provides for the best measurement method for each specific feature
- Affords fast, accurate, repeatable measurements of complex features
- Statistical data can be maintained for process control, or forwarded to centralized SPC data collection point
- Enables easy programming using intuitive menu-driven software and easy-to-use interface with touchscreen monitor

# 1000-Z Gage Specifications

<b>Sensor Specifications</b>	Tactile	Diamond tipped skidded inductive
	Optical	Non-contact 3D Coherence Scanning Interferometry (CSI)
<b>General Specifications</b>	Part Length	Up to 915 mm (36")
	Swing Diameter	170mm (6.7")
	Part Weight (Max)	100 kg (222 lbs.)
	Rotational Speed (Max)	1 to 20 RPM
<b>Base Gage Dimensions</b>	Gage Width	762mm (30")
	Gage Height	1575mm (62")
	Gage Depth	1321mm (52")
	Gage Weight	2495 kg (5,500 lbs.)

## Features Measured

- Main bearing journals
- Pin journal sidewalls
- Post and flange diameters
- Rod journals
- Thrust faces
- Camshaft journals and lobes

## Technical Data

<b>Optical</b>	Lateral Resolution	3.3 micrometers
	Evaluation Region	3.3 mm x 3.3 mm
	Resolution	< 1 nm
<b>Tactile</b>	Stylus Force	0.7 mN to 1 mN selectable
	Stylus Range	40 micrometers
	Lateral Resolution	0.5 micrometers
	Stylus Measuring Speed	1 mm/s (adjustable)
	Resolution	< 1 nm
	Evaluation Length	4 mm (adjustable)
	Cut-off Value	0.08 to 8.0 mm (0.003" to 0.3") configurable
	Filter	2CR, Gaussian, Robust Gaussian
	Overall Error	<10% of typical industry part tolerance

## Gage Capacities

Roughness Parameters (Tactile)			Roughness Parameters (Optical)	
Ra	Rpm	MR1	Ra	R3z
Rp	RzDIN	MR2	Rsk	Rmax
Tp (Rmr)	Rp/Rt	R3z	Rpm	Area Parameters (added upon request)
Rsk	Rk	RzJIS	RzDIN	
Htp-1/2/3/4/5/6 (Rdc)	Rpk			
Rt	Rvk			

## Adcole Machine Support

Adcole machine support is provided by a factory trained field service team that is backed by 50 years of industry experience and ISO 9000 certification. Machine and application support, machine retrofit and upgrade services, plus part inspection and gage recertification services are offered to our global customer base. Adcole's support regions include Japan, Korea, China, Brazil, Mexico, India, Europe and North America. Regular and after hours email and phone support is available 8am-11pm EST.

ZYGO® is a registered trademark of Zygo Corporation. ZeGage™ is a trademark of Zygo Corporation. SB-0349D 02/19