

# SCHMITT INDUSTRIES, INC.

## Lasercheck® SURFACE ROUGHNESS MEASUREMENT GAGES

Full line of Portable, Automated, & OEM Systems providing economical and reliable Non-Contact measurements

Model 8826 Lasercheck Head Measuring Roughness Between Lobes on Camshaft



### Durable

- Lasercheck heads are virtually indestructible
- Eliminates high maintenance and calibration costs

### Fast and On-Line Capable

- Single measurements in a fraction of a second
- Measure moving surfaces with high precision
- Multiple input trigger and output monitor options

### Reliable

- Superior repeatability for dependable results
- Runs for years without performance degradation

### The Perfect Manufacturing Floor Solution

Lasercheck is specifically designed for portable or on-line use in production and manufacturing environments. Patented "light scatter" detection technology provides superior durability, measurement speed, and repeatability to any competing surface finish technology.

### Monitor the Process

Operators on the production floor can use Lasercheck to easily and quickly check products ensuring the process and quality is in control. Lasercheck provides immediate testing of surfaces without concern for damage to fragile measurement equipment or surfaces.



Micro 8826 Head



Mini 6212 Head



Standard 5872 Head



Portable  
"B" Controller



Automated  
"A" Controller



OEM Card  
"C" Controller

### Save Maintenance Time and Cost

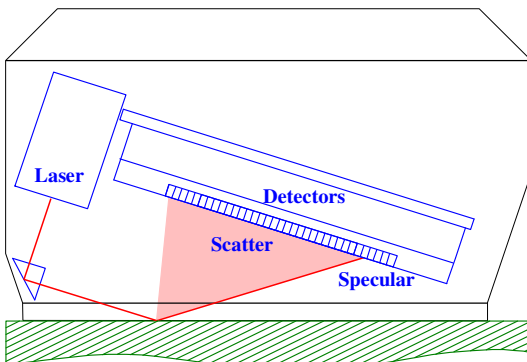
Lasercheck measurements and instruments have no moving parts or stylus tips to maintain. Once set up and calibrated, Lasercheck never changes, reducing maintenance & re-calibration time & cost.

### Use the Right Tool at the Right Place

Lasercheck allows practical use of fragile stylus & optical profilers. These analytical devices are better protected in labs performing audit & process development measurements while Lasercheck performs high volume manufacturing QC work. Using technology where it is best suited provides maximum benefit.

### Principal of Operation

- Detectors inside measurement head measures distribution of specular & scattered laser light reflected from surface
- Increased roughness creates less specular & more scattered light
- Electronics and software digitize signals and calculate Ra (Average) surface roughness



## Measurement Heads—Specifications

	Micro 8826 Head	Mini 6212 Head	Standard 5872 Head
<b>Dimensions</b>	0.990" X 0.75" X 2.05"	3.00" X 1.40" X 1.75"	12.00" X 5.5" X 5.25"
<b>Measurement range (Ra Roughness)</b>	1.00 μinch to 80 μinch 0.025 μm to 2.0 μm	0.50 μinch to 80 μinch 0.0125 μm to 2.0 μm	0.25 μinch to 40 μinch 0.00625 μm to 1.0 μm
<b>Shapes Measured</b>	Flats, Cylinders > 0.75" Ø	Flats, Cylinders, Wires, Bores > 2.00" Ø	Flats, Cylinders > 0.50" Ø
<b>Surfaces Measured</b>	Works on any material (rubbers, glass, metals, ceramics etc.); customization for low reflectivity		
<b>Processes Measured</b>	Ground, Sanded, Polished, Honed, Super-Finished, Fine-Turned, Shot-Blast		
<b>Repeatability</b>	± 3.0% of measured value	± 3.0% of measured value	± 3.0% of measured value
<b>Measurement Size</b>	5 mm X 1 mm	5 mm X 1 mm	5 mm X 1 mm

## Controllers—Specifications

	Automated "A" Controller	Portable "B" Controller	OEM Card "C" Controller
<b>Dimensions</b>	8.00" X 9.00" X 4.00"	4.20" X 1.75" X 7.60"	3.35" X 2.90"
<b>Measurement speed</b>	10 measurements per second	Single measurement < 1 second	10 measurements per second
<b>Inputs</b>	Pushbutton Serial Port (Lasercheck SW) External Trigger Port	Pushbutton	Serial Port (User SW)
<b>Outputs</b>	LCD Display Serial Port (Lasercheck SW) Failed Part Trigger Out Analog (0-10V / 4-20mA)	LCD Display Serial Port (with optional cable and Lasercheck SW)	Serial Port (User SW)
<b>Storage</b>	All Ra Values (no limit) Min, Max, Std Dev, Time/Date Graphical Plot & Display ASCII Formatted File	Up to 10,000 Ra Values Time/Date ASCII Formatted Files	n/a—no storage on board

Model 6212 Lasercheck Head Measures Shock Absorber Rod Using Cylindrical Alignment Fixture



### Options

- Alignment fixtures for cylindrical parts
- Storage / carrying case
- Certified specimen plates and certificates
- Pre-wired triggering sensors
- Mounting & positioning hardware

### Storage Computer Requirements

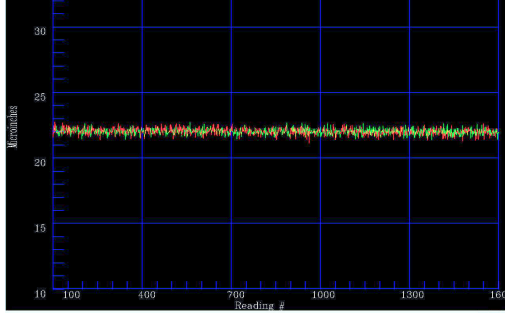
- Windows 98 or newer
- Available serial port



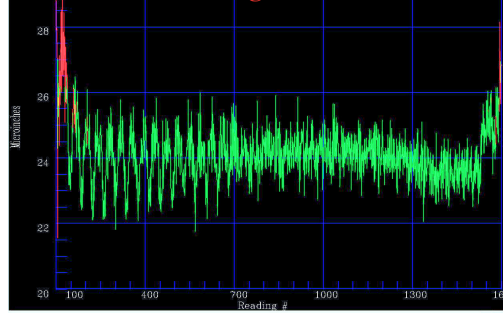
Certified Specimen Plate



Ra Roughness Graph of Uniformly Ground Surface



Ra Roughness Graph of Ground Surface with Grinding Wheel Marks



### SAFETY PRECAUTIONS

Lasercheck is a class II laser product emitting red visible (650-nm) laser radiation. The beam is not hazardous during normal operation. Avoid staring directly into the laser beam or at the direct reflection from a specular surface.



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