

AUTOMATED SURFACE ROUGHNESS MEASUREMENT GAGE

Lasercheck® surface roughness measurement systems are unique patented measurement technology and instruments optimized for high volume manufacturing applications. Lasercheck® systems provide high speed and repeatability. They can be installed in automated manufacturing or inspection systems for fully automated reliable real time monitoring of surface finish. Lasercheck® can be run independently by production personnel for quick production check of surfaces or placed under control of external equipment. Lasercheck® can ensure you never produce or ship out of specification parts.

Speed and Performance

Production personnel working in high volume surface finishing operations such as grinding, sanding, polishing, honing and sand-blasting can do quick and easy checks of product surfaces, ensuring process and quality control. Lasercheck non-contact technology provides results in less than one second in production protecting fragile contact and optical surface equipment better suited for use in QC labs.

Automation

The compact measurement sensor head can be mounted in a manufacturing process under automated control from production or automated QC equipment. Precise, repeatable roughness measurement results are displayed in a fraction of one second. The system is designed for use on the shop floor, providing laboratory quality measurements during surface finishing operations on a surface or material.

Systems can be installed post-process in production finishing line. Accessories are available for mounting and automatic measurement of parts exiting finishing operation.

Data Management

Measurements can be saved in electronic controllers, then output to a PC to be saved to any location on your company network. Data formats include graphical Lasercheck display and ASCII text file format for direct input to commercial SPC and spreadsheet software packages.

Reliability and Durability

Lasercheck® is the most rugged surface roughness gage ever produced. There are no moving parts to maintain and no fragile and expensive stylus tips to constantly replace. It withstands moisture and shop floor handling. No complicated adjustments or calibration procedures are required; just occasional simple window cleaning that can be performed in seconds. You can rely on years of trouble free shop floor operation and no maintenance costs.

Ease of Use

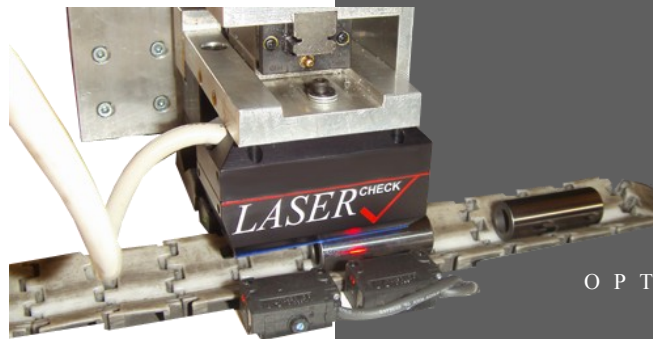
The simple to handle compact measurement sensor heads weighs less than 1 pound. There are no complicated alignment procedures required for manual use. Position the measurement head on a surface and select start from the control unit touch screen or pushbuttons. Easy to read roughness values are instantly displayed on the LCD screen or on an attached PC screen.

Automation Installation and Setup

Measurement heads include drilled and tapped holes for quick, easy mounting in production and automated QC equipment. Options are available to aid mounting, positioning, and focusing sensor heads over surfaces in production or transport conveyors.

Controllers contain built-in trigger and output ports to simplify automation. Optional sensors pre-wired for Lasercheck® controller electronics allow quick installation of triggers for 100% automation of in-process or post-process surface finish inspection.

LASER CHECK ✓



OPTICAL DIMENSIONS

Lasercheck® Performing Automated Measurements of Piston Pins on Conveyor

Lasercheck® Sensor Heads	Model 6212 Mini Head	Model 8826 Micro Head
Dimensions (L x W x H)	3.00 x 1.40 x 1.75 in (76 x 35.5 x 44.5 mm)	2.05 x 0.75 x 0.990 in. (52 x 19 x 25 mm)
Roughness Measurement Range	0.50 µin - 40 µin 0.0125 µm - 1.0 µm	1.5 µin - 40 µin 0.035 µm - 1.0 µm
Features and Optimization	Rugged, Automated Operation	Compact, Portable Operation
Shapes Measured	Large Flat Areas, Any Diameter Cylinder, ID Bores > 2.0 in. / 51 mm Ø	
Surfaces Measured	Works on any material (rubber, glass, metals, ceramics etc)	
Compatible Finishing Processes	Grinding, Sanding, Polishing, Honing, Super-Finishing, Shot-Blasting, Brushed and Sanded Rolled Metal	
Repeatability	± 3.0% of measured value	

Lasercheck® Controllers	Model Auto Controller	Model A Controller
Dimensions (L x W x H)	6.75 x 3.62 x 1.47 in (171.5 x 92.0 x 37.4 mm)	9.00 x 8.00 x 4.15 in. (228.6 x 203.3 x 105.4 mm)
Input and Controls	Windows® CE Touch Screen 2 Input Triggers (Start, Stop)	Front Panel Pushbuttons 3 Input Triggers (Start, Stop, Save)
Output Options	Failed Part, Ethernet / USB / RS232	Failed Part, 0-10 Volt or 4-20 mA, Current Loop, RS232
Features and Optimization	User Friendly Touch Screen Control, Flexibility for Manual or Automated	High Speed, High Repeatability, Powerful Electronics Optimized for Multiple Automation Configurations
Power Requirements	110 / 220 VAC, 50 / 60 Hz	

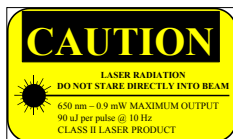


Model 6212 Sensor Head and A Controller



Optical Dimensions reserves the right to change specifications without notice.

U.S. Patent No. 5,608,527



SAFETY PRECAUTIONS

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.



Model 8826 Sensor Head and Auto Controller



OPTICAL DIMENSIONS