

6360 CD

Precision Stamper Thickness Measurement System

Description

The Model 6360 CD Stamper Thickness System is a semi-automated gauging platform and data analysis system for the measurement of compact disc, DVD, CD-R, or CD-ROM stampers. It uses Microsense's patented non-contact capacitive sensors to determine the stamper thickness. A personal computer is provided to run the gauging platform, acquire data and display results. A Microsoft Windows based application is provided - stamper measurements are easy to acquire, store, recall and analyze. The 6360 CD is outfitted with a "Universal Platter" which holds nearly any size stamper.

Software (continued)

A thickness profile may be graphically displayed or printed.

The data is displayed in either English or metric units.

ASCII data export is provided.

Data connectivity for network usage.

Thickness Statistics

The software determines and displays maximum thickness, minimum thickness, average thickness, and taper (TTV) for each measurement scan.

A limit for maximum and minimum thickness may be set for pass/fail indication.

The taper start and end points can be set by the user.

Built In Database

A built-in database saves thickness data along with other important parameters.

The database fields may be configured for tracking, sorting and reporting user defined criteria (i.e. selection, cut number, bath number & operator, etc.)

Self Calibration & Diagnostics

The system is automatically calibrated before each thickness scan using a built-in NIST traceable gage block.

The platform's operating status is monitored by built-in machine diagnostics and error trapping.

Context sensitive help provides additional technical support.



Features

Automated Gauging Platform

The non-contact capacitive sensors never touch the stamper.

The motorized arm positions the sensors for rapid traverse over an entire stamper radius. The thickness is measured continually and recorded every 2.5 mm.

A "Universal Platter" accepts punched or unpunched stampers up to a diameter of 230 mm. Embedded magnets hold the stamper flat against the hub.

The Universal Platter and application software are configured for 4 radial thickness scans 90° apart.

Windows™ Based System Software

The Windows based system software controls the gauging platform. It acquires and displays data for radial scans with a color coded thickness display. Data can be stored in a built-in database.

The Mouse pointer may be positioned over the color coded thickness graph to display numerical values.

- ▲ High-precision, non-contact thickness measurements
- ▲ Semi-automated gauging platform
- ▲ Built in database
- ▲ Self calibrating
- ▲ Thickness accuracy within $\pm 1.0 \mu\text{m}$
- ▲ Thickness resolution within $\pm 0.25 \mu\text{m}$



6360 CD - Specifications

System Performance

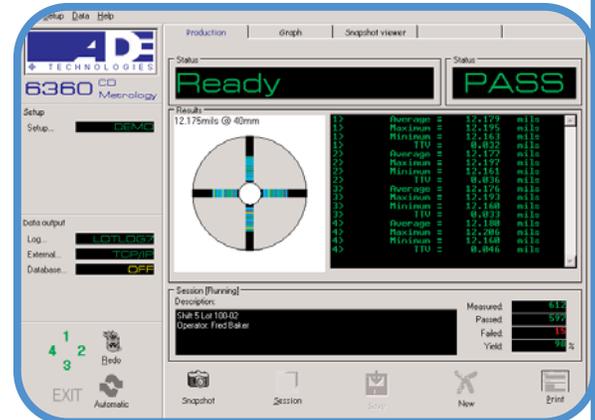
- Thickness Accuracy: $\pm 1.0 \mu\text{m}$
Thickness Resolution: $\pm 0.25 \mu\text{m}$
Thickness Repeatability: 1 sigma = $0.60 \mu\text{m}$
Thickness Range: Stampers from $200 \mu\text{m}$ to $400 \mu\text{m}$
(other thicknesses may be available upon request)
Measurement Interval: 0.25 mm
Probe Standoff: $500 \mu\text{m}$
(nominal distance from sensor to stamper surface)
Measurement Time: ~ 4 seconds per scan
(exclusive of operator handling speed)

Gaging Platform

- Cast aluminum housing
- Motorized probe slide assembly
- Two non-contact capacitive sensors
- Universal platter: accepts all diameter stampers up to 230 mm, cut or uncut. (300 mm optional)
- Integrated NIST traceable calibration masters
- Foot switch and power cord

System Software

- 32 bit, for use with MS Windows
- Motor control, calibration & machine diagnostics.
- Data acquisition, analysis, storage & recall.
- Built-in database with user definable fields, e.g. selection, cut number, bath number & operator, etc.
- Printer support



6360 CD System Software showing thickness scan data

System Computer

- Intel® Celeron™ or better
- 64 MB RAM
- 1.44 MB 3.5" diskette drive
- Min. 4.3 GB hard disk drive
- Color SVGA monitor. Optional LCD monitor available.
- Mouse and keyboard
- Windows 2000 installed
- Data acquisition card (for gaging platform interface) installed and tested.

Physical Dimensions (H x W x D)

- Gaging Platform: 8" x 11" x 23"
CPU: 4" x 17" x 17"
Monitor: 14" x 16" x 15"
Keyboard: 2" x 20" x 9"

Weight

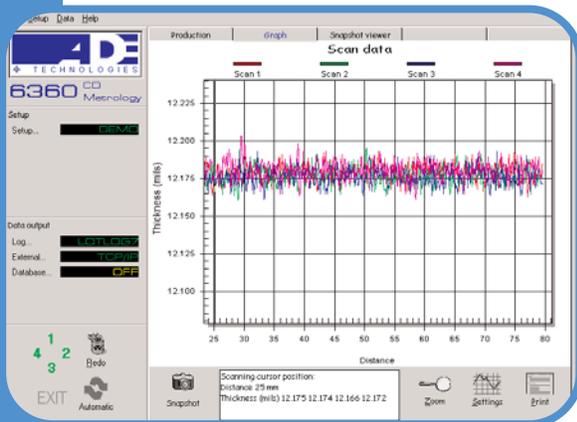
- Gaging Platform: 20 lbs.
CPU: 20 lbs.
Monitor: 30 lbs.
Keyboard: 5 lbs.

Operating Environment

- Temperature: 5° to 50° C (41° to 122° F)
Humidity: 10 to 95% RH (non-condensing)

Power Requirements

90 - 250 VAC, 47-63 Hz, 200 Watts Maximum



Graph of four thickness scans



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