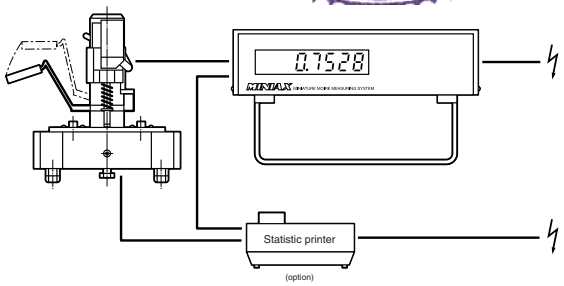
MINIAX

Dedicated High Precision Wafer Thickness Measuring System

Wafer Thickness Measuring Instruments

Picture shows 6-inch model



Various Wafer Sizes

Models are available to measure the thickness of φ3", φ4", φ5", φ6", φ8" and φ12" wafers.

Easy to Operate

Changes between different wafer sizes can be performed by simply changing the position of the stopper pin.

Moire Scale Provides 0.1 μm Min. Resolution

The high-precision Moire scale provides repeatability of 0.2 μm and a highly precise cumulative indication error of ±0.15 μm.

Fine Adjustment of Measuring Point

The downward measuring point can be adjusted up or down, ensuring correct measurement of the thickness even when the wafer is slightly warped.

Easy Setting of Wafers

The front of the measuring surface plate is completely open, making it easy to set and remove wafers.

Printout with Lift Lever

The lift lever incorporates a printout command switch. This enables data to be printed as soon as measurement has been completed.

Set Lever to Measuring or Retract Position

The home position of the manual lever that lifts and lowers the spindle can be set to the measuring status or the retract status.

Connection to Statistic Printer

The unit can optionally be connected to a printer to facilitate on-site quality control.

Specifications

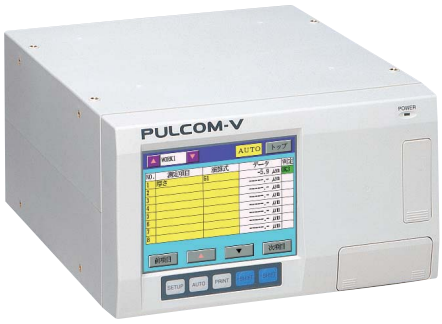
Model		6 inch Wafers	8 inch Wafers	12 inch Wafers
Accuracy (at temperature of 20°C± 1°C)		Cumulative indication error: ±0.15 μm / within 3mm stroke Repeatability: 0.2 μm (2σ)		
Measuring unit	Detector	PH-01L		
	Measuring force	1.2 - 2 N / 0 - 5mm stroke		
	Wafer diameter	φ3", φ4", φ5", φ6"	φ3", φ4", φ5", φ6", φ8"	φ3", φ4", φ5", φ6", φ8", φ12"
	Retract stroke	5 mm	5 mm	5 mm
	Dimensions	160(W) × 175(D) × 185(H) mm	200(W) × 210(D) × 185(H) mm	300(W) × 291(D) × 185(H) mm
Display unit	Model	DH-151		
	Display	Green fluorescent display tube		
	Digits	7 and "–" symbol		
	Min. display value	0.0001 mm (0.1 μm)		
	Dimensions/weight	278(W) × 300(D) × 81(H) mm, Approx. 2.7 kg		
	Power source	AC 85 – 250 V, 50/60 Hz, 10 VA		
	Power cable	3m		

High Precision Digital Measuring Instruments

Dedicated Air Servo Type Wafer Thickness Measuring System

Wafer Thickness Measuring Instrument (patented)

●Non-contact measuring system achieved through adoption of air floating type servo nozzle.



Air Floating Enables Non-Contact Measurements

Measuring is performed without any contact by blowing compressed air on the surface that is not being measured.

Long Displacement / High Resolution

The unit features a measuring range of 9 mm with a resolution of 0.1 μm.

Not Influenced by Material or Color

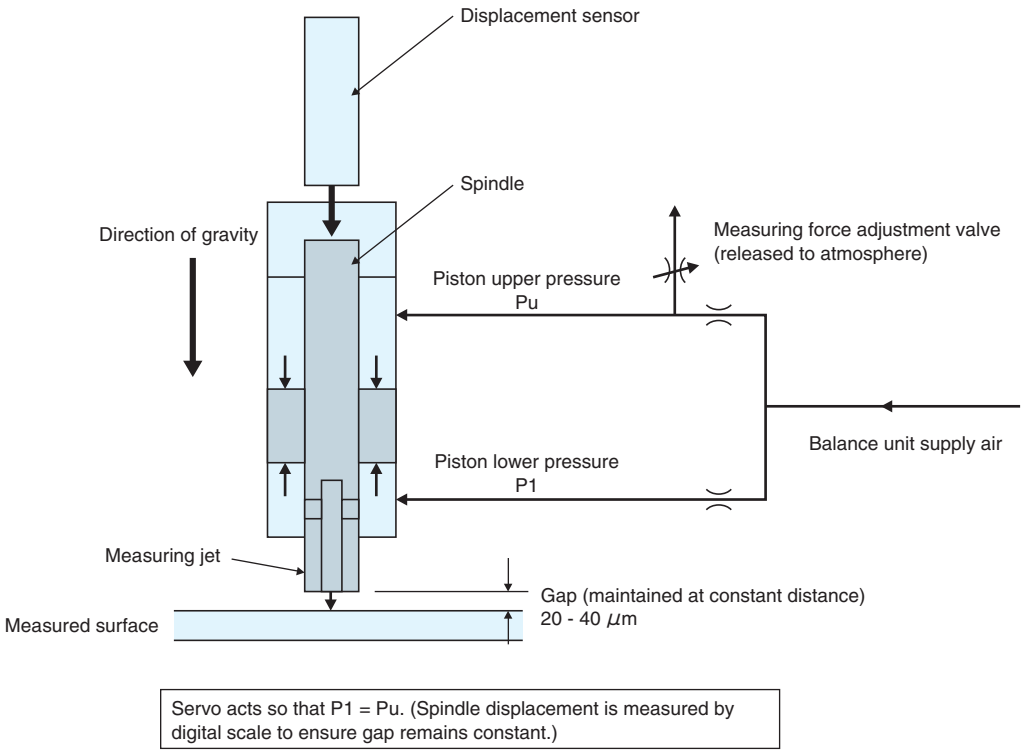
Since air is used to make measurements, the unit is free from the influence of the material or color of the tape that is applied to the surface.

Ideal for Measurement of Film, Rubber or Foam Sheets

■ Main Specifications

- Repeatability : 1 μm / ±2σ
- Measuring range : 9 mm
- Display resolution : 0.1 μm
- Air pressure used : 0.25 MPa
- Weight : 17.5 kg

■ Sensor Principle Diagram



Servo acts so that P1 = Pu. (Spindle displacement is measured by digital scale to ensure gap remains constant.)