

## APPLICATION:

- \* Development, Inspection and Measurement of the Mobile-lens, Digital-Camera lens and Pick-Up lens, etc.

### FEATURE:

- \* Inspection/Measurement for the “Inclination” and Slant of the Centering” of the Both sides (Top surface and Bottom surface) of lens Decentration at the same time.
- \* Automatic-Inspection/Measurement system.
- \* Special designed for the small diameter of the standard lens and aspheric lens.  
(Diameter of the specimen: 0.5mm – 10.0mm)
- \* Minimum Resolution: 10”
- \* Easy to find out and recognize the “Top” and “Bottom” surface of the lens with Target-Focusing Mechanism.
- \* Reflecting type illumination
- \* CCD Camera observation

### Sample/specimen Specifications:

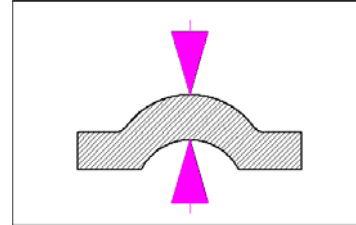
- Diameter of the specimen: 0.5  $\phi$  — 10.0  $\phi$   
(with Optional clamp, up to 16.0  $\phi$  diameter will be available)
- Measuring Range of the “R”:  $\pm 0.2 R$  —  $\pm 5.0 R$

### Accuracy of the Mechanism:

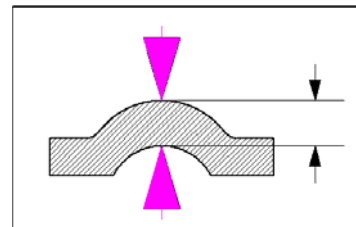
- Up-Down Z-axis slide movement : Within 2 micron  
(both of upper and down movement)
- Up-Down Optical path accuracy: Within 2 micron
- Accuracy of the Stage Centering: Within  $\pm 2$  micron
- Accuracy of the lens clamp accuracy: Within  $\pm 2$  micron  
Accuracy of the lens clamp repeatability: less than 1 micron

### Measurement (for example):

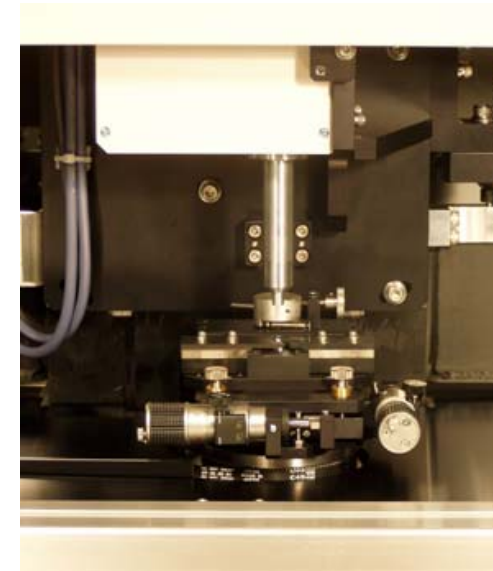
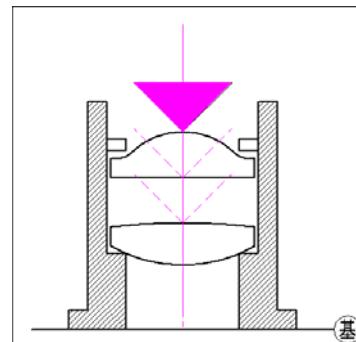
- Measurement of the lens decentration:  
Not only the measurement of the one side but also both side (Top and Bottom) of the lens surface.



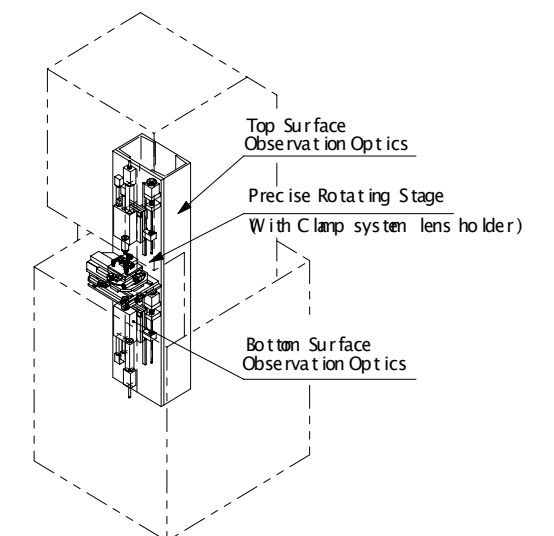
- Measurement of the thickness of the lens:  
With the built-in target focusing mechanism in the optics, the lens thickness measurement will be available.



- Measurement of the precision of the combined lens assembly: With the built-in target focusing mechanism in the optics, the height measurement of the each lens from the standard surface and measurement of the decentration of the each lens will be available during the lens assembly.



The External Front:



**System Configuration:**

Base, Stand and Column: Stable heavy duty stand  
 Cross-Roller Up-down Motorized movement mechanism  
 Upper side movement: 150mm Down side movement: 150mm  
 Both of Top-surface and Bottom surface observation

Optics: Objective lens: 12.2X and 26.52X(with auxiliary lens)  
 With Target Focusing device. (both of Top-surface and Bottom surface observation)

CCD camera: Sensitive Black and White CCD camera 2 pieces  
 Illumination: High-Intensity LED illumination (Top and Bottom)  
 (For measurement and Target focus device -- 2 sets)

Stage: Fixed type Motorized Rotating Stage (360°) Guide: Precise bearing mechanism  
 With pre-setting adjustment mechanism

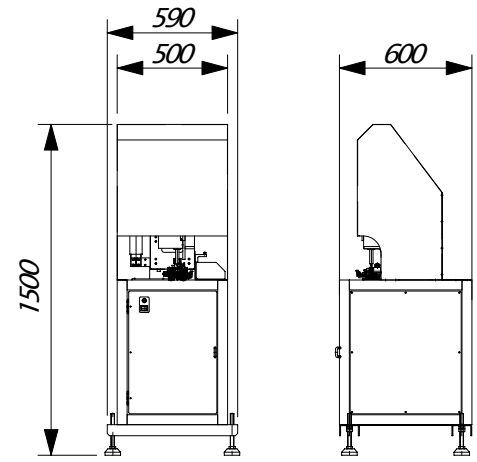
Lens clamp holder Outside-diameter clamping mechanism  
 Type A: sample diameter 0.5 φ—5.0 φ  
 Type B: sample diameter 4.5 φ—10.0 φ  
 Type C: sample diameter up to 16.0 φ (Optional accessory)

Controller: PC with monitor Inspection and Measurement soft-ware  
 Total weight: 150.0 kgs.

# Dual type Precise Lens Centering/Decentration Inspection/Measurement Apparatus

Comparison Chart (Lens Centering / Decentration Apparatus)											
	Recognition of the lens surface	Measurement					Measuring Specimen and Sample			Modification & Custom-made	System Preparation
		"Top" & "Bottom" Dual measurement	Measuring Accuracy	Thickness Measurement	Measuring Soft-ware	Measuring Tact-time	Aspheric lens	Small diameter lens	Large diameter lens		
A-Company Made	×	×	○	×	×	30~90S	△	○	◎	×	×
KUNOH Single type SFD-100	◎	×	◎	×	◎	25S	◎	Clamp A:0.3 φ-5.0 φ Clamp B:4.5 φ-10.0 φ	Clamp C: Up to 16.0 φ	◎	○
KUNOH Dual type DFD-1000	◎	◎	◎	◎	◎	25S	◎	Clamp A:0.3 φ-5.0 φ Clamp B:4.5 φ-10.0 φ	Clamp C: Up to 16.0 φ	◎	○

# DFD-1000



Single type Precise Lens Centering / Decentration  
 Inspection/Measurement Apparatus

**Model SDF-100**

Reasonable price, Manual operation, Single type Precise lens  
 Centering / Decentration Inspection /Measurement Apparatus  
 Model SDF-100 will be available.

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