

# METROLOGY®

## *Micro Height Gauge*



Technic Combination

**SAVE**

*Time & Cost*

*Improved efficiency & accuracy*

**EASY**

**QUICK**

**ACCURATE**



■ Micro Height Gauge



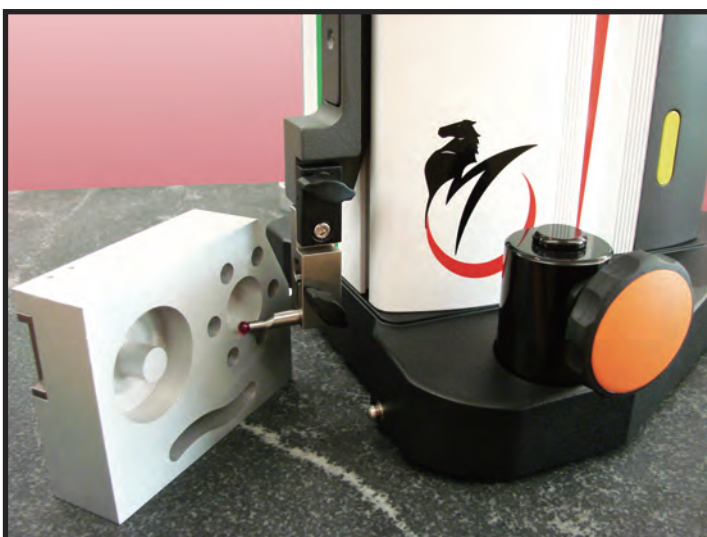
Innovation Design R&D  
Patented Technology Award

Electric measuring  
aircushion floating

*MICRO plus I&II*

FEATURE

- 1 Applicable to geometric elements measuring including: height, depth, thickness, slot width, outside & inside hole, automatic highest and lowest point search, parallelism, flatness, concentricity, angle, squareness 1D basic or 2D measuring.
- 2 0.5um high precision magnetic sensing system, fast probing and constant measuring motor control reinforce the measuring speed and repeatability.
- 3 Specially designed body cover reduces dust particles from entering inside the measuring column assembly.
- 4 High quality, hardened and lapped stainless steel air bearing pads with built in air compressor that provide smooth movement of the instrument on granite surface plate.
- 5 European genuine 1D & 2D micro process controller, clean and powerful measuring interface including multilingual switch, both USB and RS232 data output.
- 6 Specified storage temperature for MHG is 10°C to 40°C, ideal for precision measuring at all work sites and environments.
- 7 With temperature expansion coefficient compensation function, which can reduce the measurement uncertainty caused by temperature changes



(The best standard operating temperature is 20°C ± 1°C)

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DESCRIPTION OF INSTRUMENT

*MICRO plus I&II*



Innovation Design R&D  
Patented Technology Award



- |                                    |                                     |
|------------------------------------|-------------------------------------|
| <b>1</b> Machine column            | <b>6</b> UP/DOWN Jogging keys       |
| <b>2</b> Measuring controller unit | <b>7</b> Air cushioning switch      |
| <b>3</b> Upper probe holder        | <b>8</b> Machine handle             |
| <b>4</b> Handle for manual movemnt | <b>9</b> Hi-accuracy magnetic scale |
| <b>5</b> Mechanical probe          | <b>10</b> Machine base              |



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DESCRIPTION OF INSTRUMENT

*MICRO plus I&II*

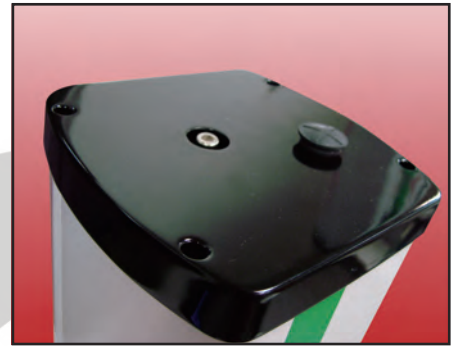
*MICRO plus Unbeatable precision combination*



Machine base



Mechanical probe



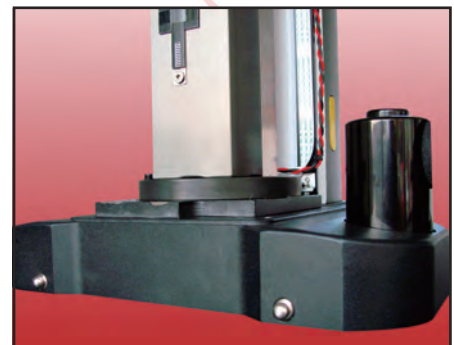
Traveling lock (upper cover)



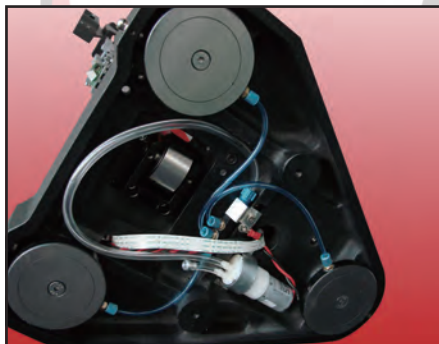
Interface port



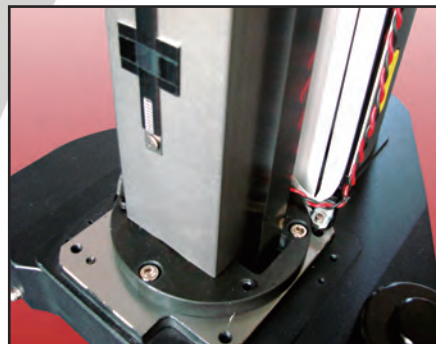
Rechargeable battery



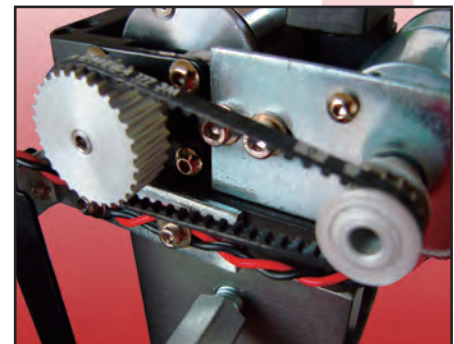
Workpiece stopper



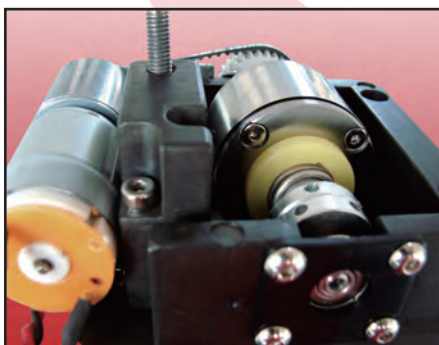
Air bearing (bottom)



Hardened aluminum column



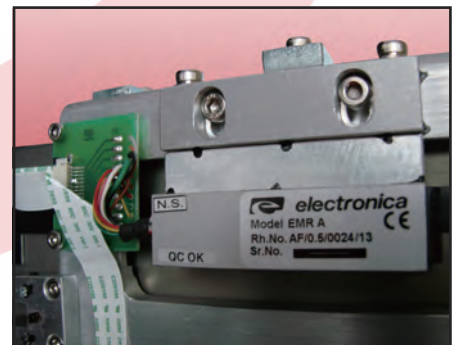
Servomotor



Clutch



Linear bearing slider



Magnetic sensor

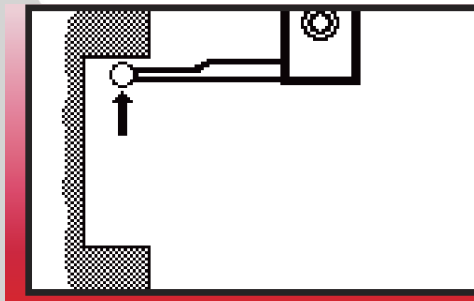
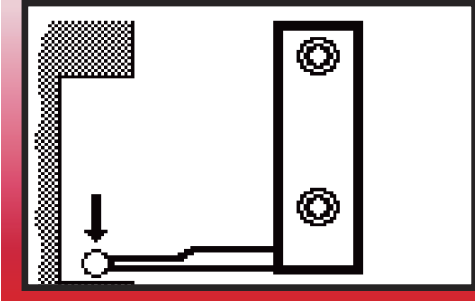
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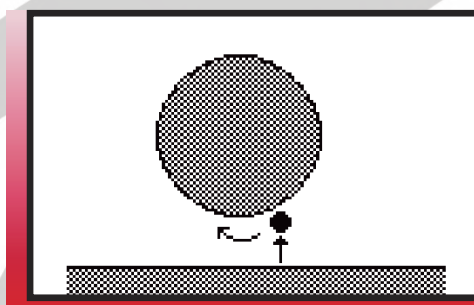
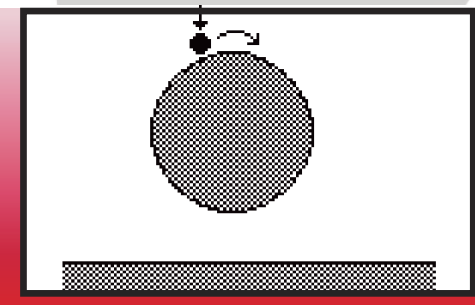
BASIC MEASUREMENTS

*MICRO plus I&II*

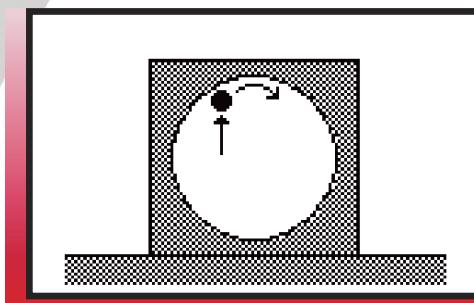
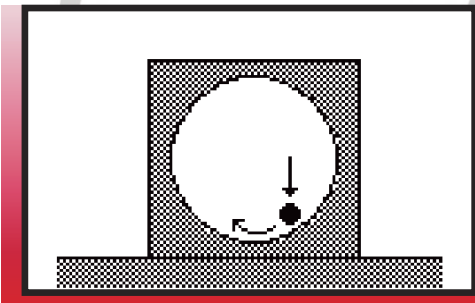
1. Surface measurement (Height, Depth, Thickness, Distance, Flatness, Parallelism)



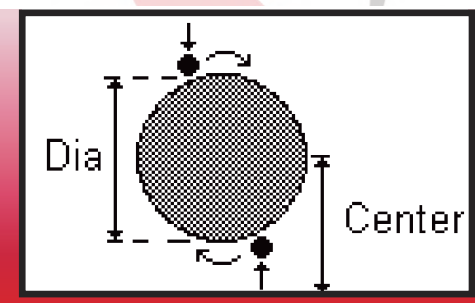
2. Shaft measurement (Diameter, Concentricity)



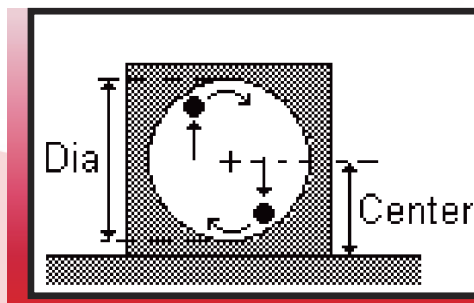
3. Bore measurement (Diameter, Concentricity)



4. Shaft diameter & Center measurement



5. Bore diameter & Center measurement



*MHG-E600I(1D)*



Electric measuring  
aircushion floating

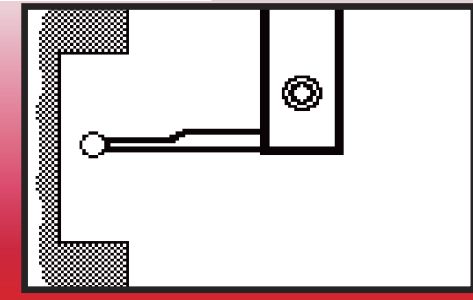
**MICRO plus I&II**

*Unbelievably fast cool accurate*

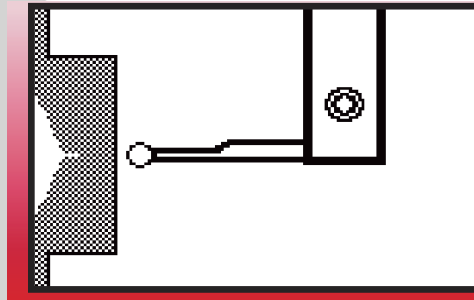
■ Micro Height Gauge

**BASIC MEASUREMENTS**

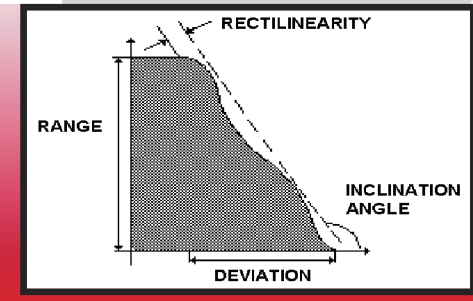
6. Groove width & Center measurement



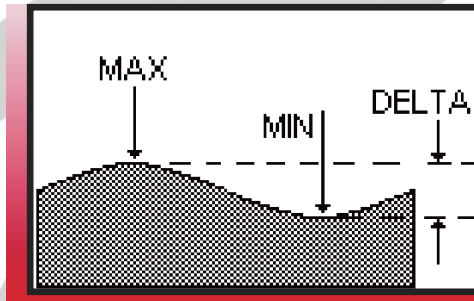
7. Ledge width & Center measurement



8. Squareness (perpendicularity) measurement

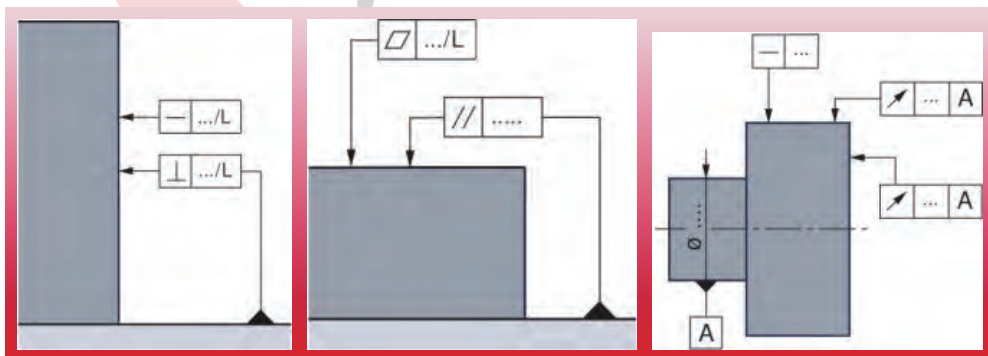
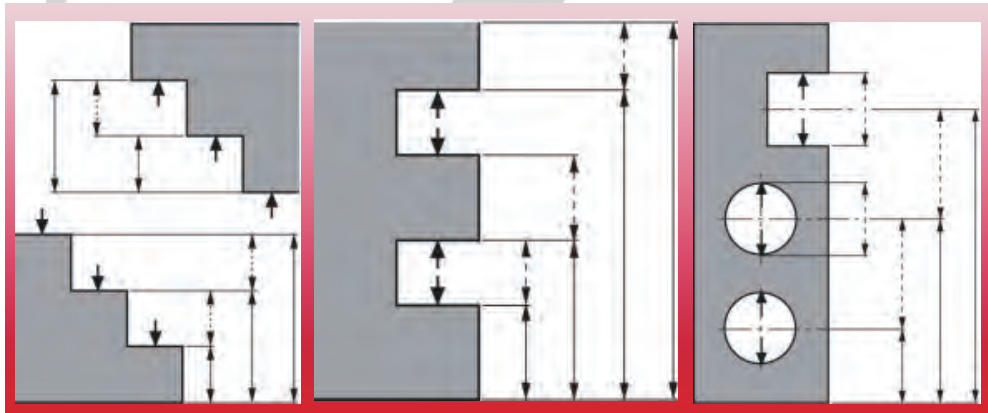


9. Min., Max., DELTA measurement



10. Offset Function (Expendable measuring range)

**Application examples**



**MHG-E1000II(2D)**

Micro Height Gauge

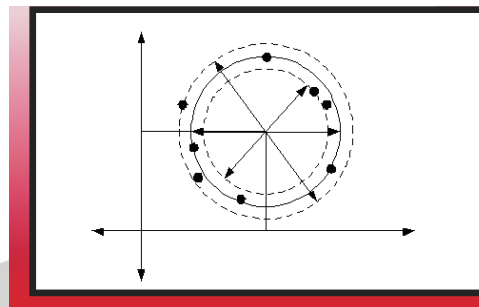
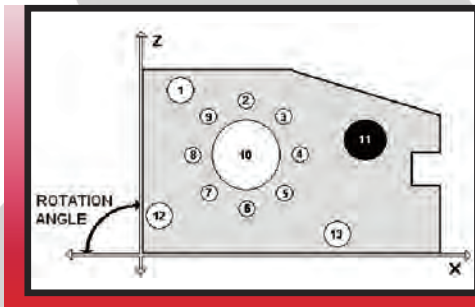
Electric measuring  
aircushion floating

2D DIMENSIONAL MEASUREMENT

MICRO *plus I&II*

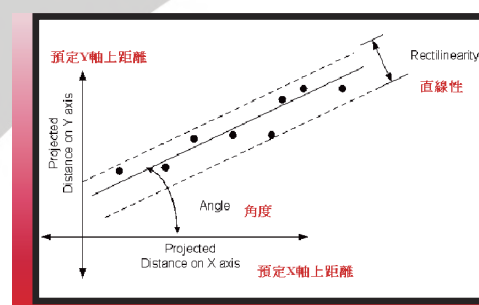
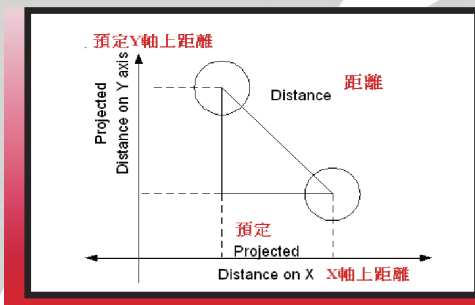
1. 2D measuring of bore, shaft, groove, ledge, line, distance, angle.

2. PCD (pitch circle diameter) function  
DMIN, DMAX, PCD of the XY center coordinates

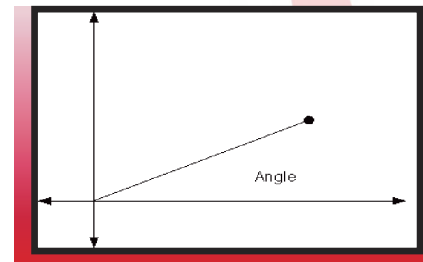
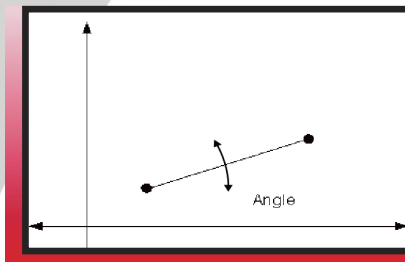
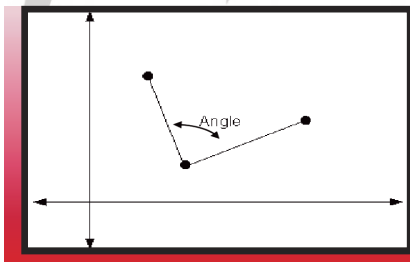


3. Distance function

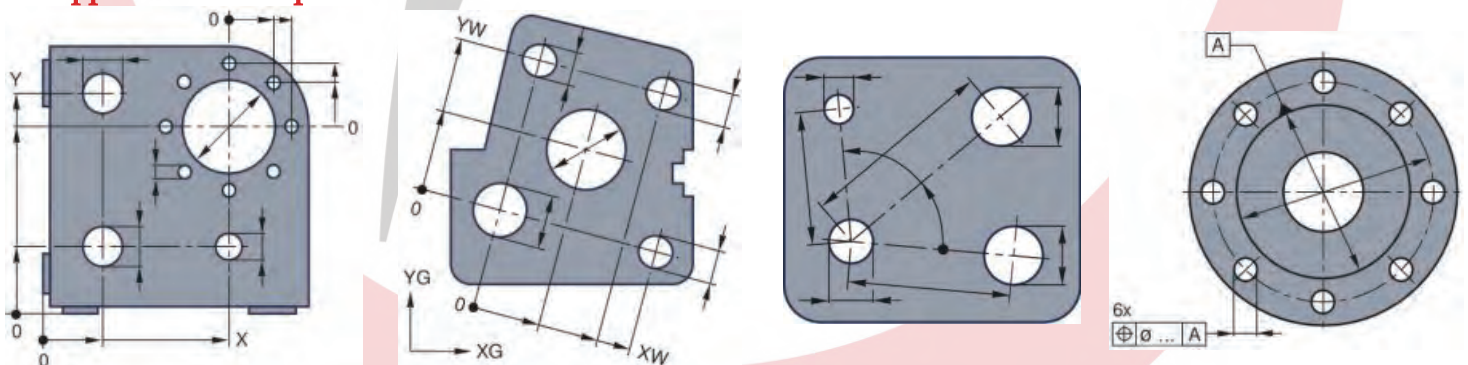
4. Line function



5. Angle function



Application examples



Other functions and settings

- 1 Programming & Replay
- 2 Tolerance mode

- 3 Report Generation using PC utility
- 4 Printer settings and operation
- 5 Statistical Analysis of the results

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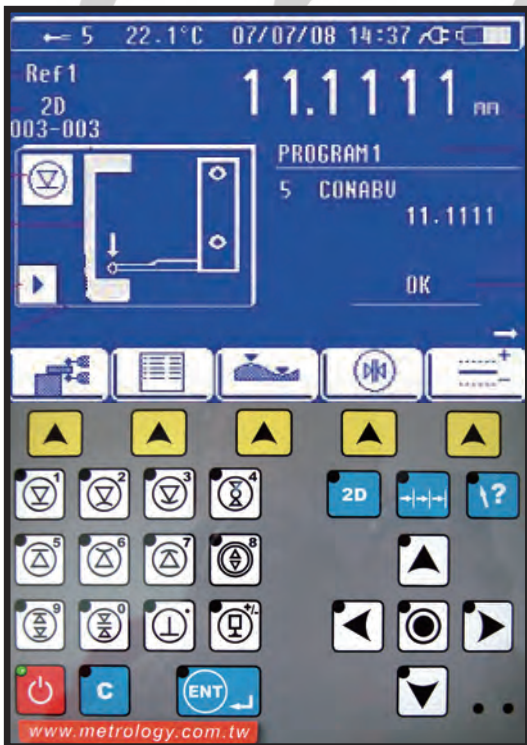
**MICRO plus I&II**

**SPECIFICATION**

Model no.	MHG-E450I(II)	MHG-E600I(II)	MHG-E1000I(II)
Measuring range	450 mm	600 mm	1000 mm
Expendable range	765 mm	915 mm	1315 mm
Resolution	0.0005 mm / 0.00002 in.		
Measuring accuracy	1D : 3+L/400um (2D: 2+L/400um) L=length in mm		
Repeatability (2σ)	plane : 0.0015 mm      bore : 0.003 mm		
Squareness	1D : 6um (2D : 4um)	1D : 9um (2D : 6um)	1D : 13um (2D : 8um)
MAX. counting speed	600mm/sec		
Measuring force	1 N ± 0.2N		
Battery charging time	1D : 8 hours      2D : 4 hours		
Battery operation life	1D : 16 hours      2D : 8 hours		
AC Adapter Specification	Input 100 – 240 VAC , 50/60 Hz Output 24 VDC , 2.5A		
Weight of instrument	23kg	25kg	30kg

\* Models with 0.1um high resolution and higher measurement accuracy also can be supplied upon request  
\* (II) Model with 2D measurement function

**2D Controller unit**



**Language**

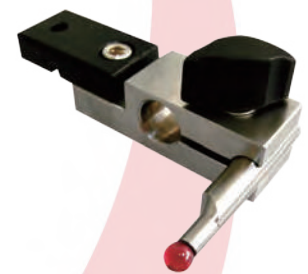
English	German	French
Italian	Czech	Polish

**Standard accessories**

- MHG main unit
- 1D or 2D microprocessor DRO
- φ6mm carbide or ruby tip
- Setting gauge
- Power supply
- JCC calibration report



Setting gauge



φ6mm tip & holder  
1D : Tungsten steel tip  
2D : Ruby tip

**Optional accessories**



Electronic probe(1D/2D)  
For squareness measurement



Ruby tip

Φ1.0mm Φ2.0mm Φ3.0mm  
Φ4.0mm Φ5.0mm  
\*Optional: special tip