

METROLOGY®

Universal Length Measuring Instrument

SAVE

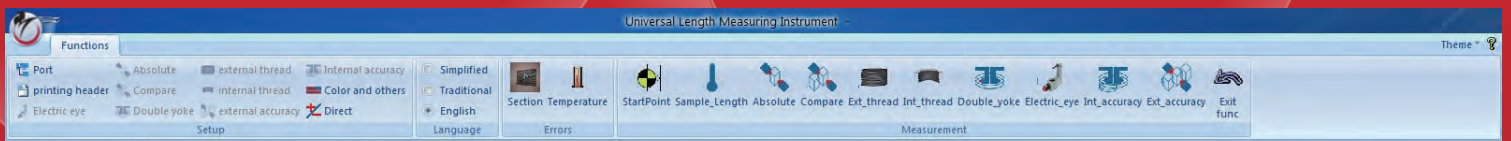
Time & Cost

Improved efficiency & accuracy

EASY

QUICK

ACCURATE





Innovation Design R&D
Patented Technology Award

Universal Length Measuring Instrument

The best tool of length measurement and calibration.

Established in 19 century East Germany by physicist Ernst Karl Abbe's invention
ABBE Principle — Foundation of modern precision measurement

Technical specification

Measuring range

- External direct measuring range: 0-100mm
- External comparison measuring range: 0-700mm
- Internal direct measuring range: 2-100mm
- Internal comparison measuring range: 10-450mm
- External thread measuring range: till 200mm
- Internal thread measuring range: M13 - M90
M6 – M15 (optional)

Work table

- Vertical distance: 0-100mm/1mm
- Horizontal distance: 0-25mm/ 0.01mm
- Left-right swivel angle: $\pm 4^\circ$
- Up-down tilt angle: $\pm 3^\circ$

Resolution : 0.0001mm/0.000001"

Measuring accuracy : $\pm(0.5+L/200)\mu\text{m}$

Uncertainty of measurement : $(0.2+L/200)\mu\text{m}$

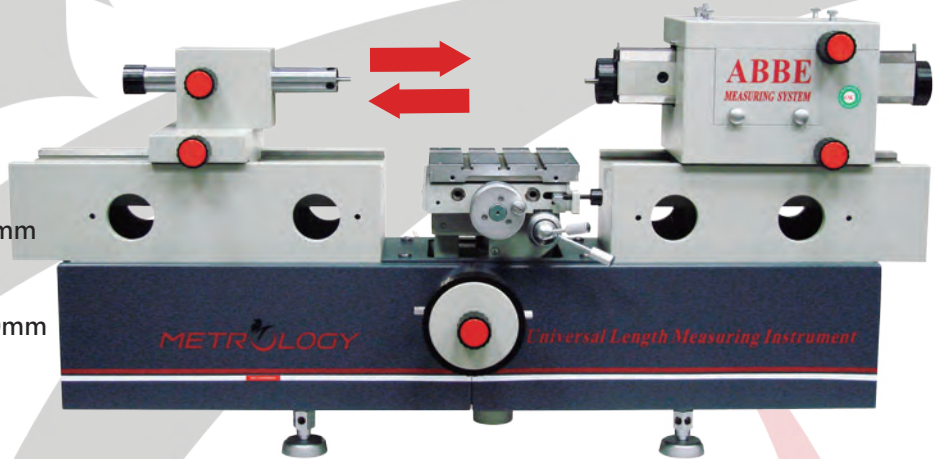
Measuring force : 0 · 1.5 · 2.5N

The best temperature of measurement : $20^\circ\text{C} \pm 1^\circ\text{C}$

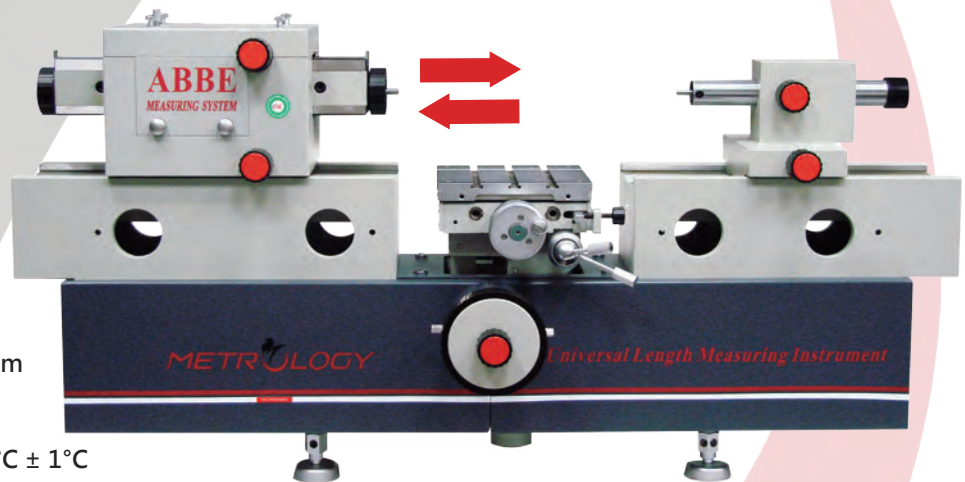
Power : 220V \pm 10%

Instrument weight : 100KG

Instrument dimension : 1000x380x450mm

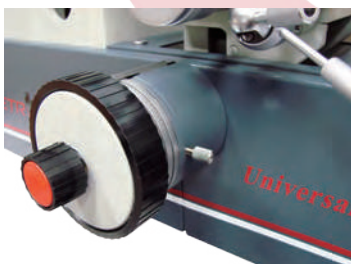


ULM-9000C ABBE Right side measuring head



ULM-9000C ABBE Left side measuring head

5-way measurements



Vertical up & down hand wheel



Vertical forward & backward micrometer head



Left & right swivel fine adjustment knob



Up and down tilt setting knob

■ Universal Length Measuring Instrument

ABBE Precision measuring system

The best tool of length measurement and calibration

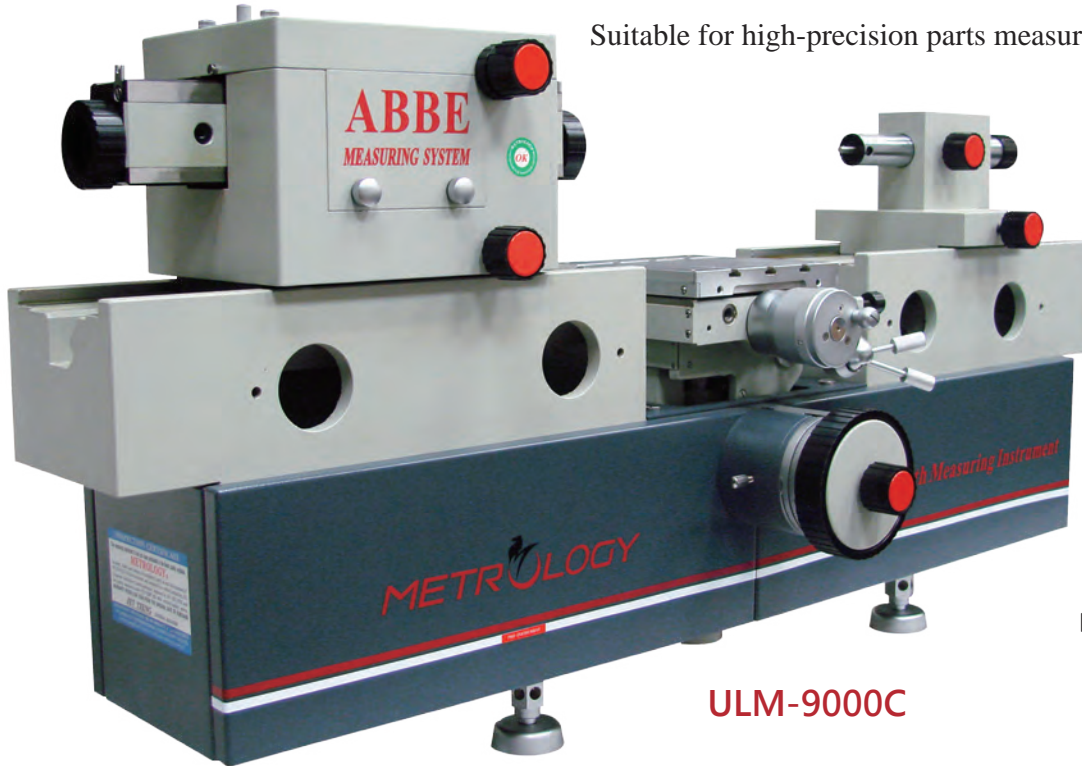
Suitable for high-precision parts measurement and gauge calibration



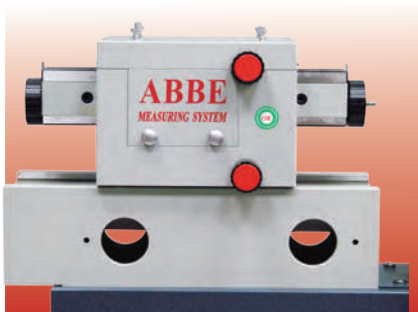
Innovation Design R&D
Patented Technology Award



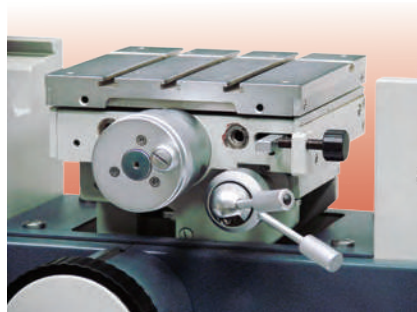
Design Assembly Inspection



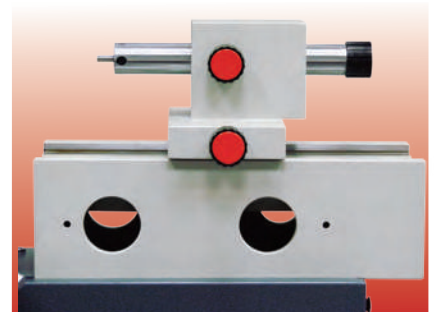
ULM-9000C



ABBE measuring head



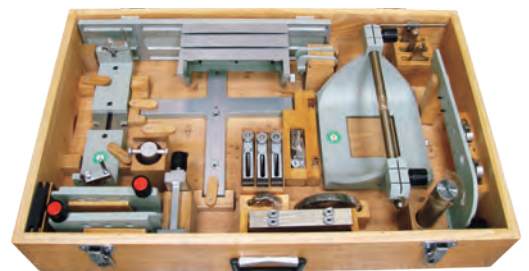
ABBE Worktable



ABBE Tailstock

Standard accessories

- ABBE Measuring instrument
- Full set measuring equipment and clamp accessories
- Internal and External measuring anvils
- Internal thread measuring anvils
- Computer and measuring software



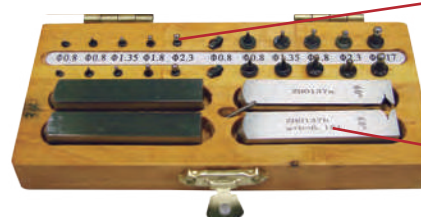
Measuring anvils for External dimension

Measuring anvils for Internal "magic eye"

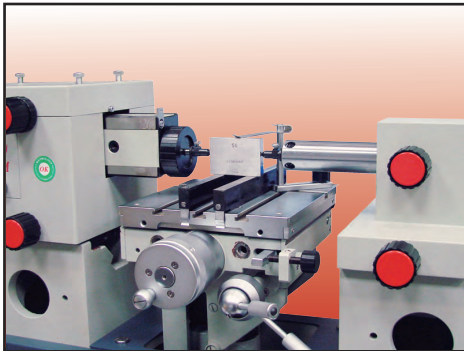


Measuring anvils for Internal thread measurement

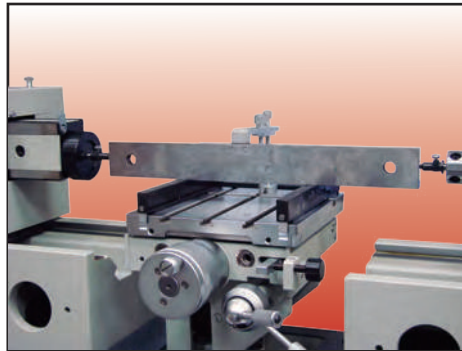
Setting gauges for Internal thread measurement



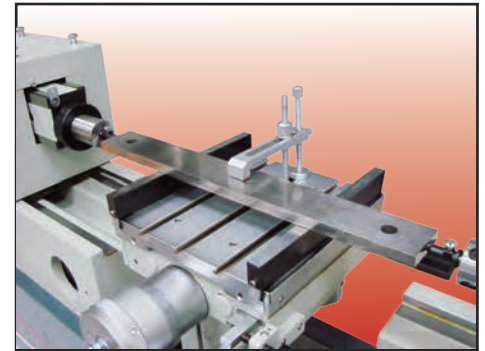
■ **ABBE** 5-way precision measurements
Measuring application diagram



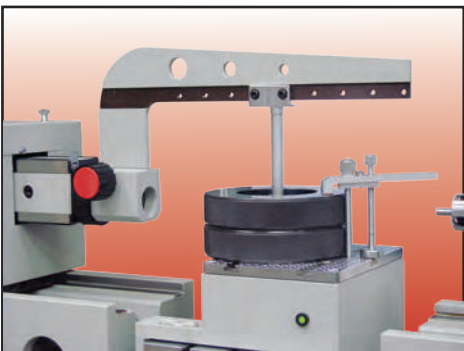
Standard gauge block absolute calibration



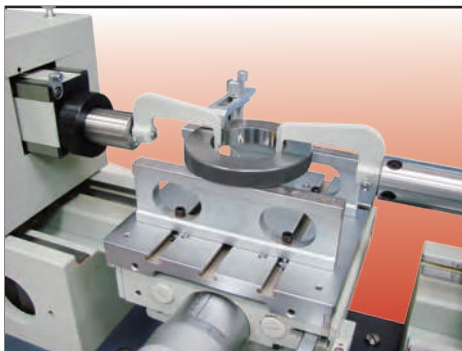
Long gauge block comparison calibration (vertical)



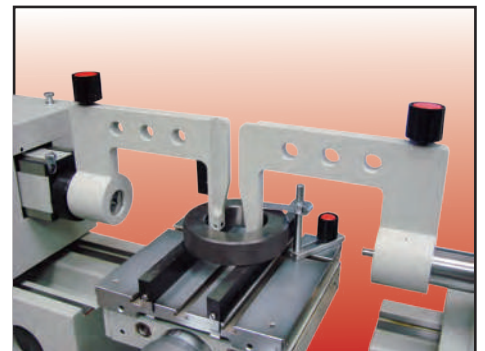
Long gauge block comparison calibration (horizontal)



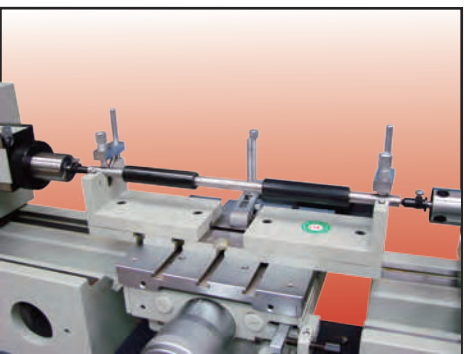
Large size ring gauge calibration with magic eyes device



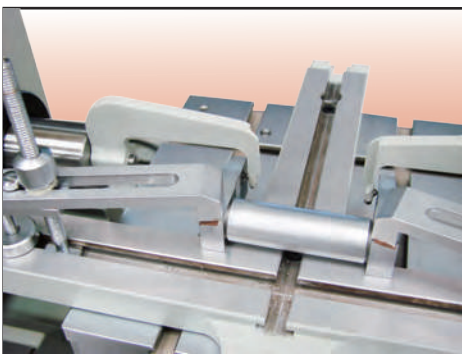
Small size ring gauge calibration with inner double yoke



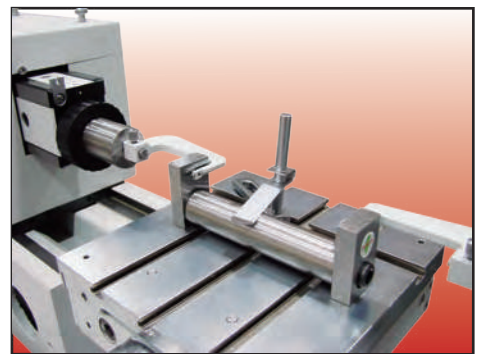
Medium size ring gauge calibration with inner double yokes



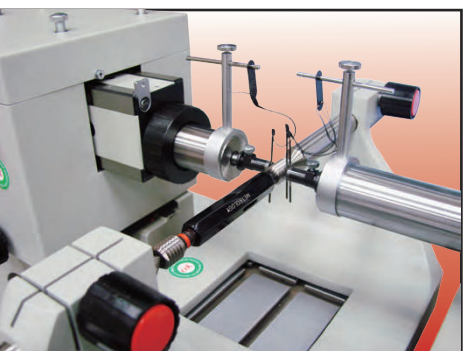
Standard bar calibration



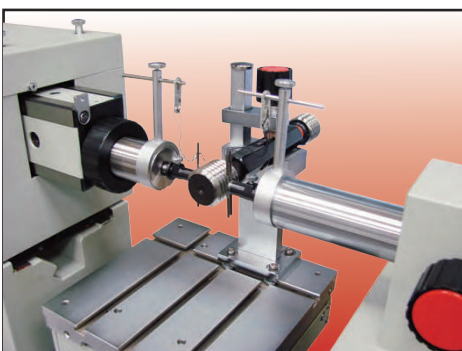
External snap gauge calibration



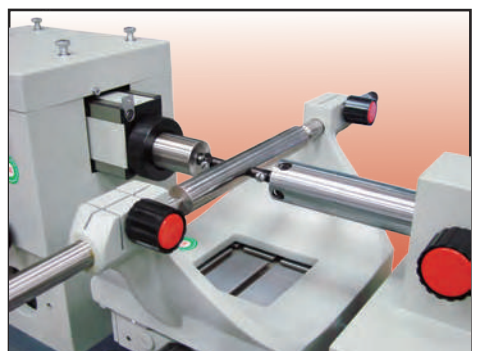
Internal setting gauge calibration



3 wire External thread gauge measurement with center carrier



3 wire External thread gauge measurement with V-type holder

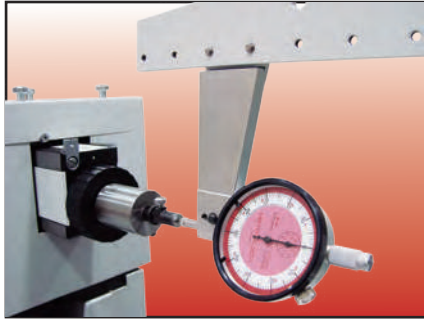


Concentric bar External measurement with center carrier

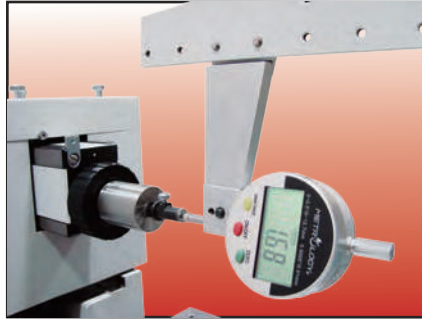
MORE
CALIBRATION & MEASURING FUNCTION

■ **ABBE** 5-way precision measurements

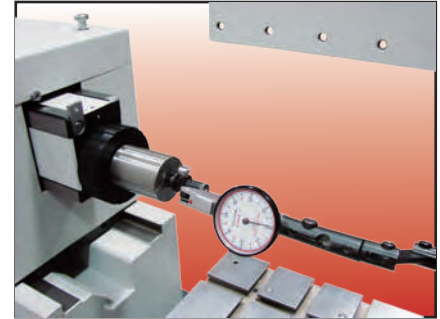
Measuring application diagram



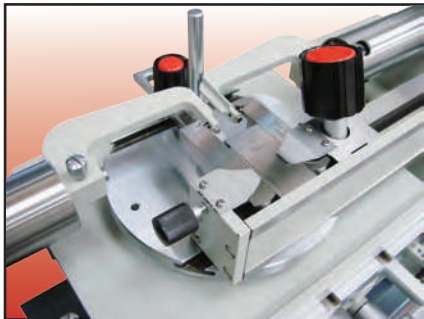
Dial gauge calibration



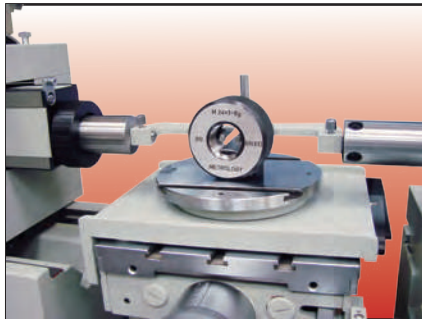
Digital dial gauge calibration



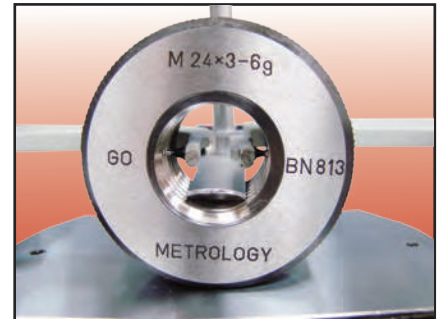
Level-type indicator calibration



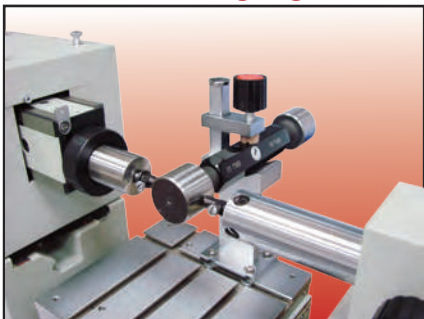
Setting inner thread with set gauge



Inner thread gauge measurement with double yokes



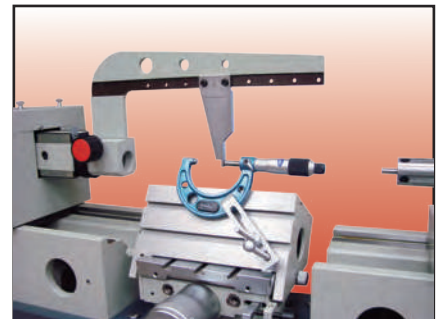
Inner thread gauge measurement



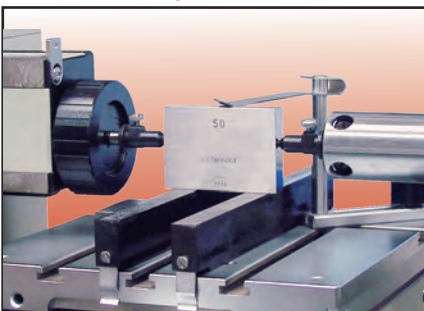
Plug gauge calibration with V-shaped carrier



Cylinder gauge calibration



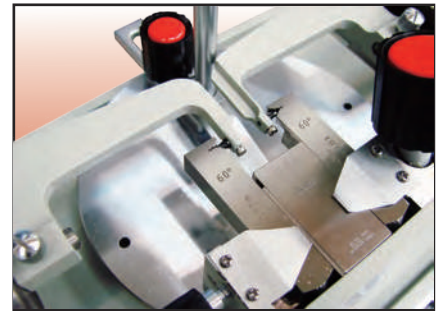
External micrometer calibration



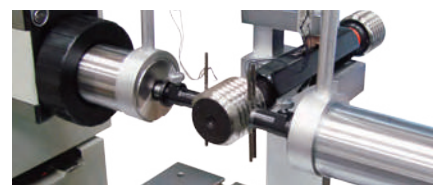
Gauge block calibration with spherical measuring anvil



Small size ring gauge calibration with magic eye device



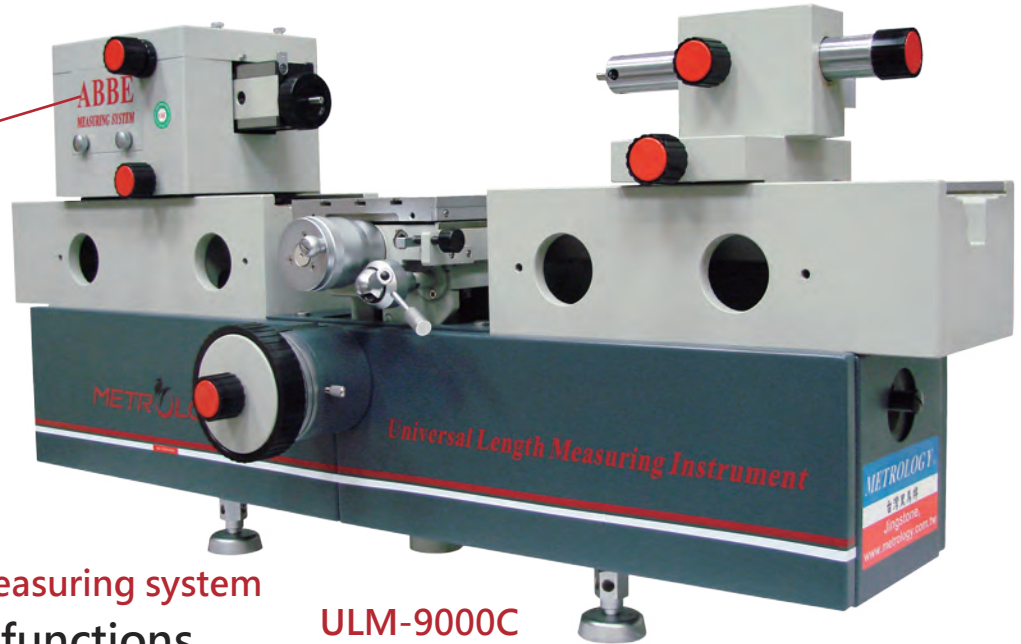
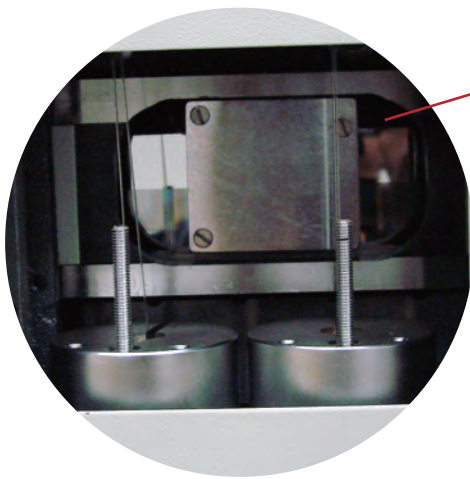
Setting zero for inner thread set gauge



Optional accessories 3 wire thread gauge (for External thread measurement)

MORE
CALIBRATION & MEASURING FUNCTION

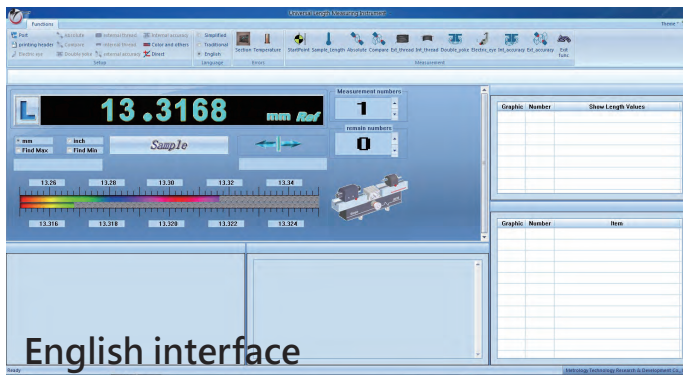
■ Universal Length Measuring Instrument
ISO The best tool of length measurement and calibration



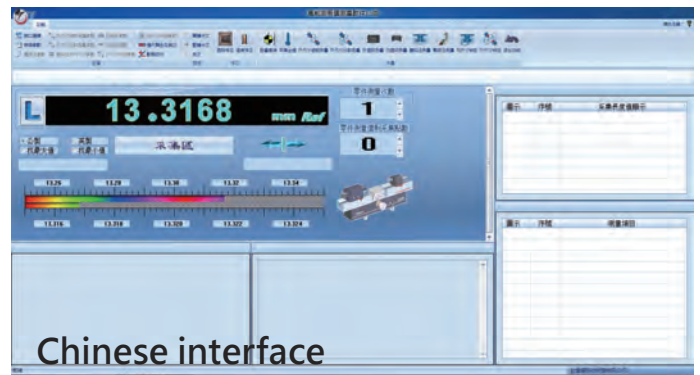
ABBE
 Precision optical & force measuring system

ULM-9000C

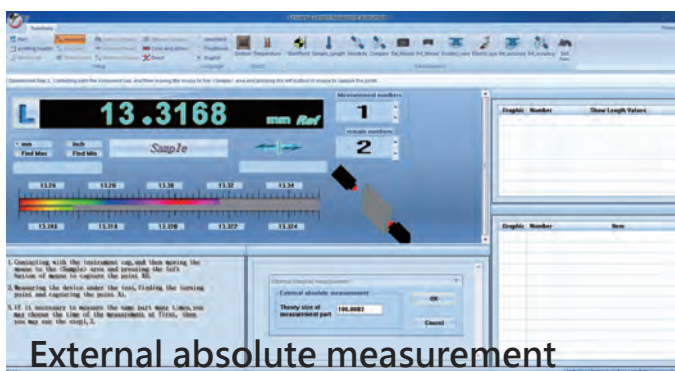
■ Measuring software functions



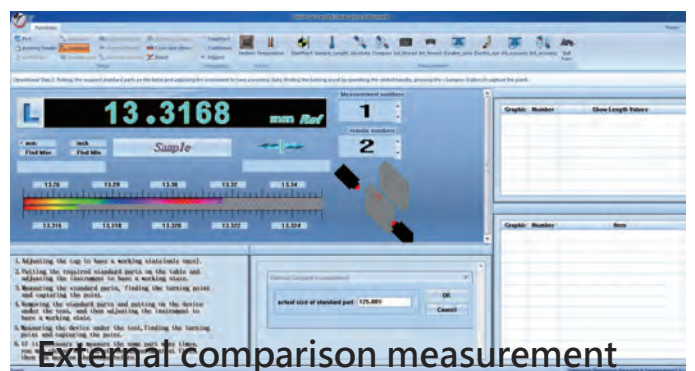
English interface



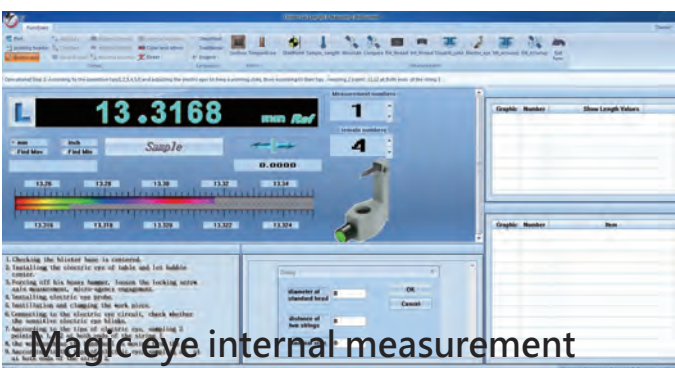
Chinese interface



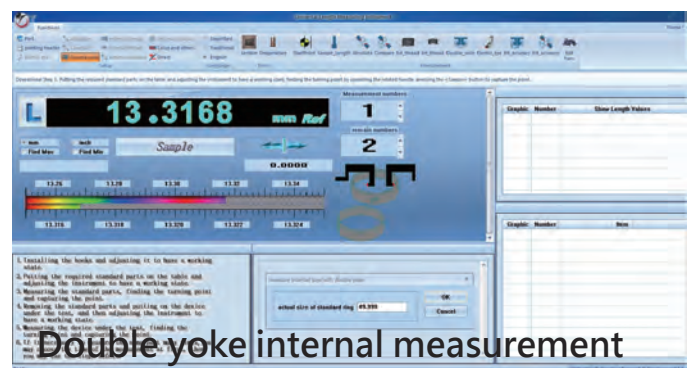
External absolute measurement



External comparison measurement

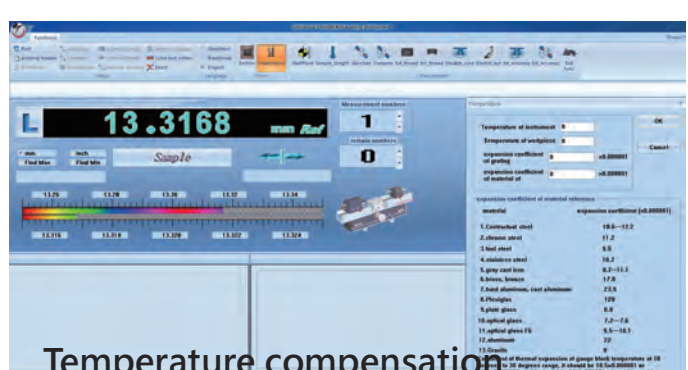
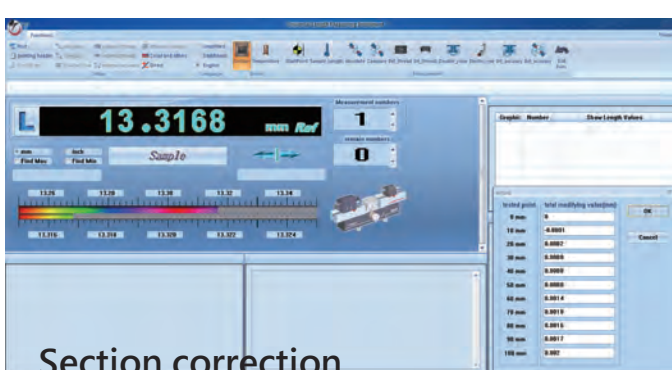
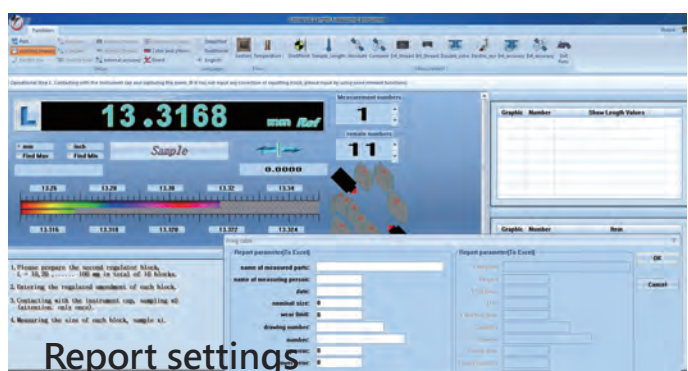
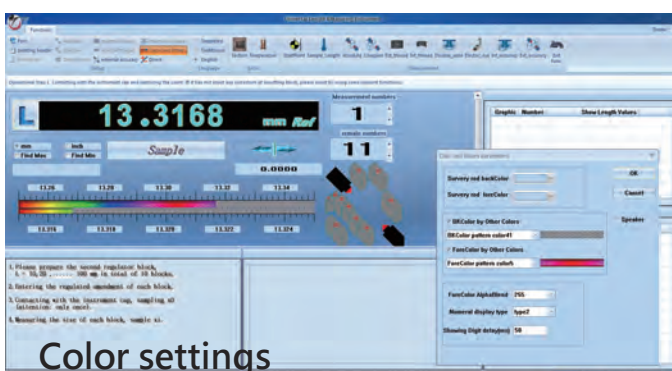
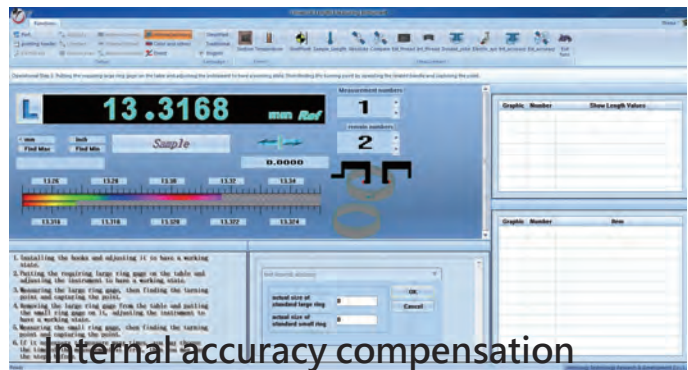
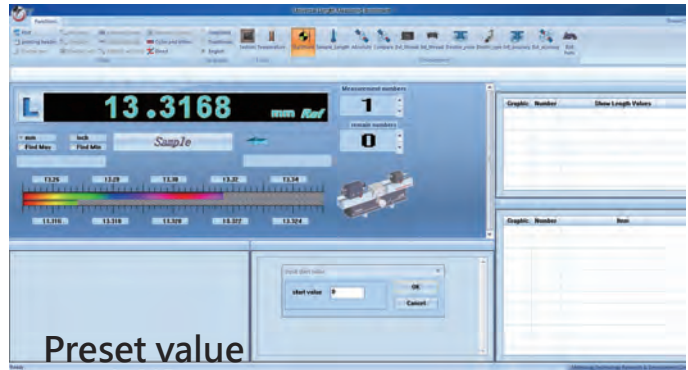
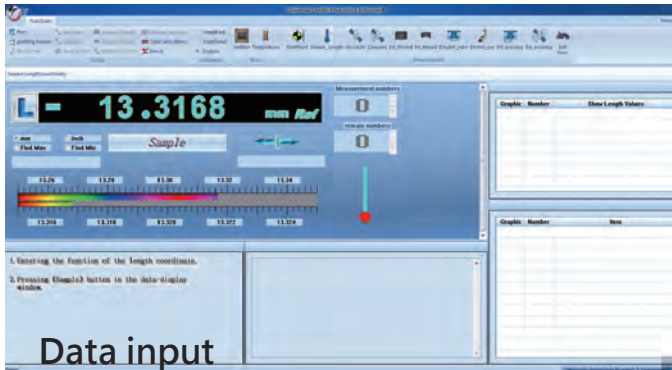
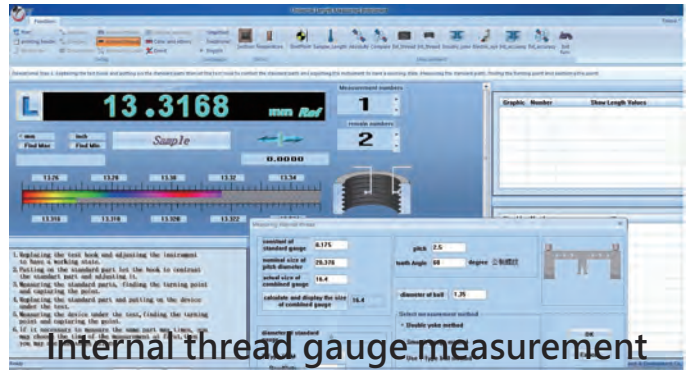
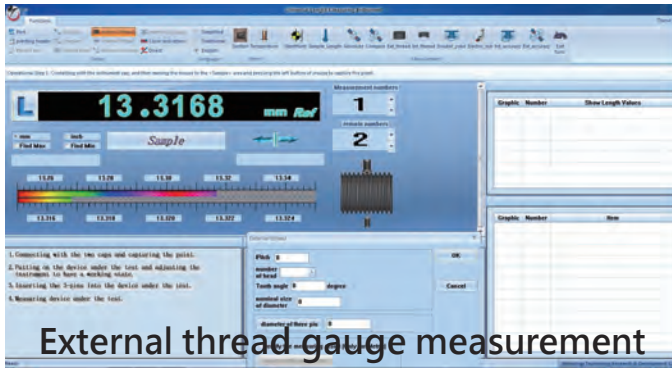


Magic eye internal measurement

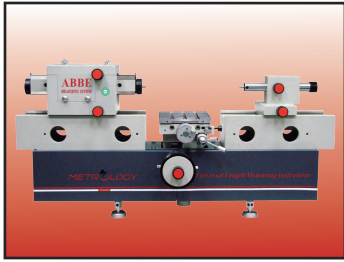


Double yoke internal measurement

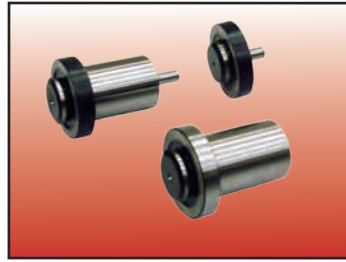
■ Measuring software functions



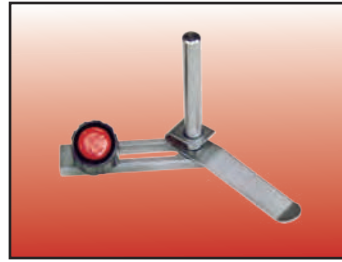
■ Accessories list ISO The best tool of length measurement and calibration



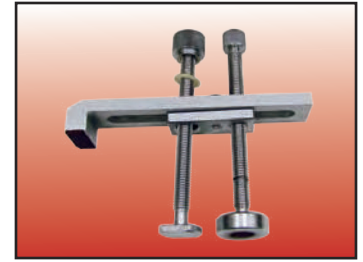
Main body



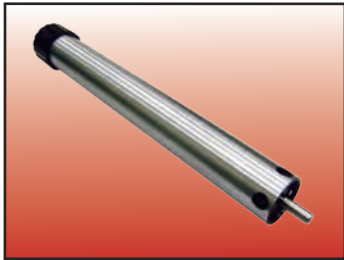
Spindle for measuring jaws



Spring clamp



Adjustable clamp



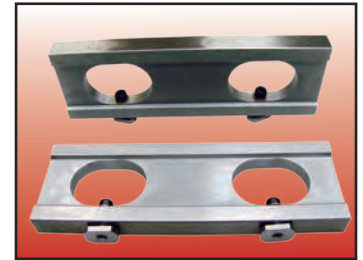
Adjustable tailstock spindle



Fixed tailstock spindle



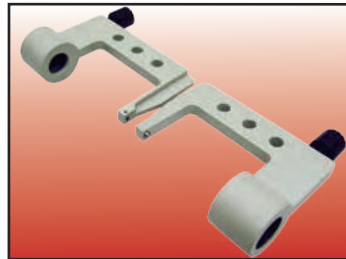
Small parallel blocks



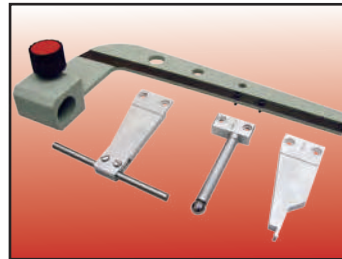
Large parallel blocks (optional)



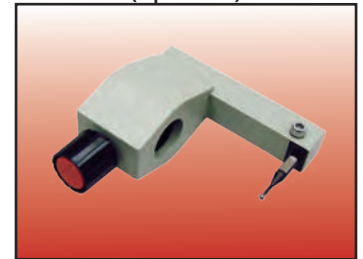
Small inner yokes



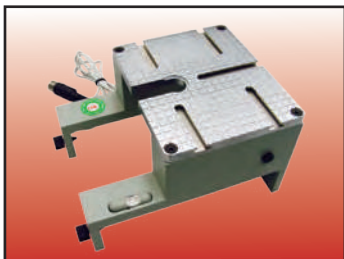
Large inner yokes



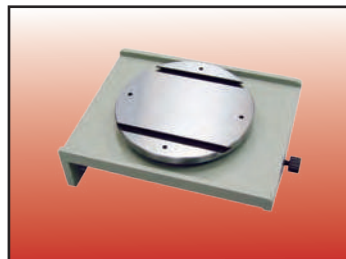
Universal yokes (optional)



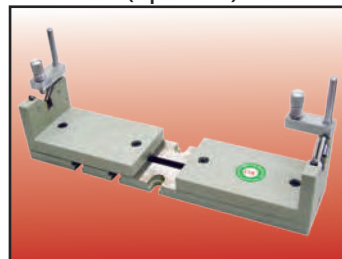
Inner yokes for "magic eye"



Measuring stand for "magic eye" inner yokes



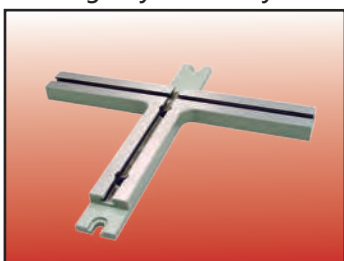
Floating worktable



Double V-shaped carrier



Center carrier



Snap gauge holder (optional)



Micrometer holder (optional)



Single V-shaped carrier



Measuring anvils



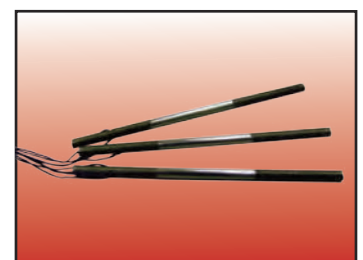
Internal thread setting gauge device



60° internal thread setting gauge (55° optional)



Internal thread measuring ball anvil



3 wire thread gauge (optional)