

METROLOGY®

Universal Length Measuring Instrument

SAVE

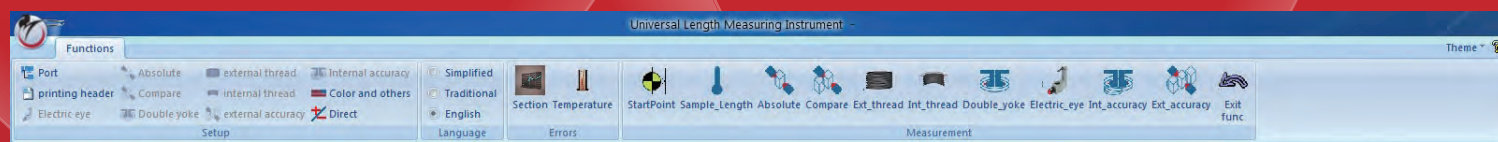
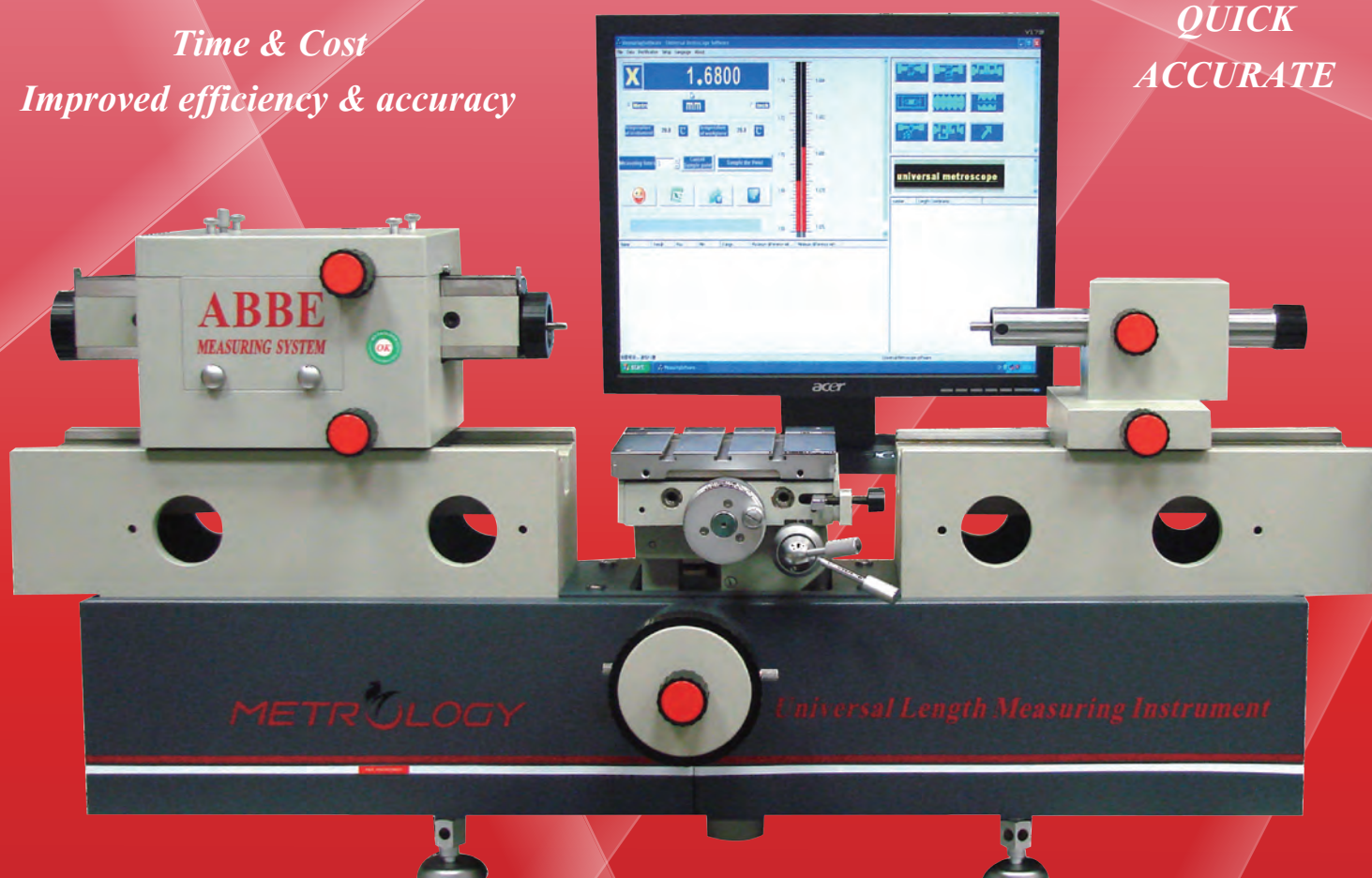
Time & Cost

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: 1-60mm
Internal comparison measuring range: 10-450mm
External thread measuring range: till 200mm
Internal thread measuring range: M13 - M90
Expandable M6 – M200 (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 : $(0.2 + L/200)\mu\text{m}$

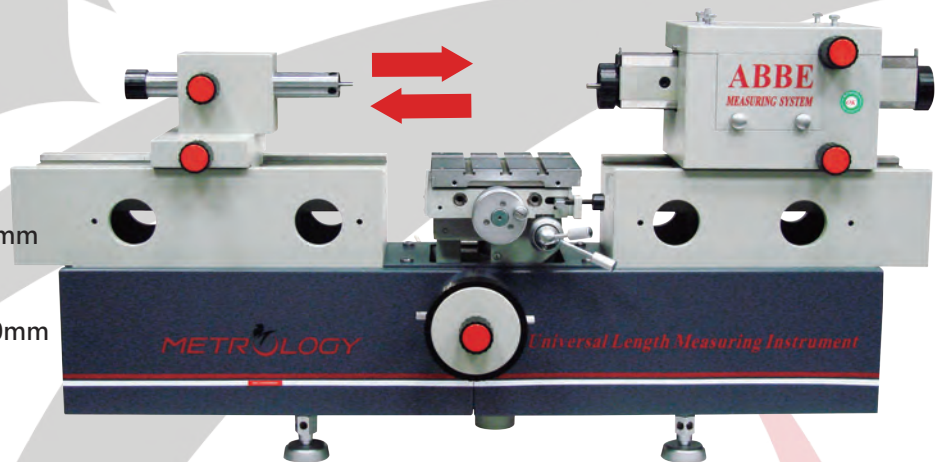
Measuring force : 0 · 1.5 · 2.5N

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

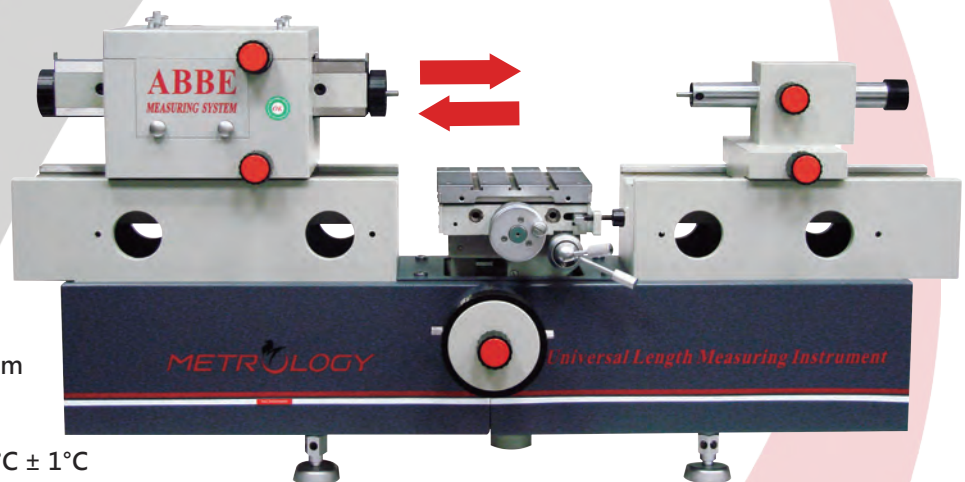
Power : 220V $\pm 10\%$

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

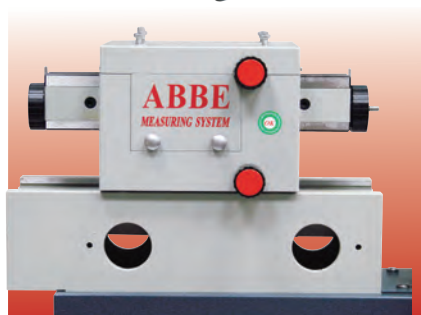


Innovation Design R&D
Patented Technology Award

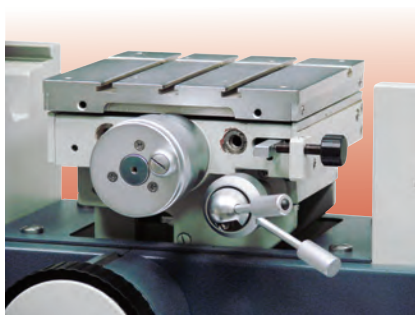


Design Assembly Inspection

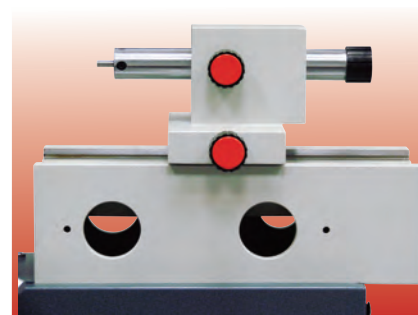
ULM-9000C



ABBE Digital Abbe head



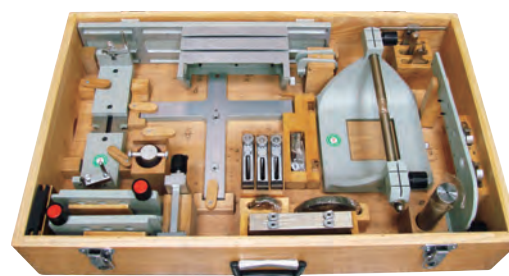
ABBE Worktable



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"



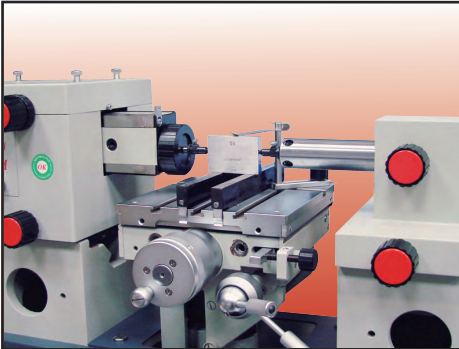
Measuring anvils
for Internal thread
measurement

Setting gauges for
Internal thread
measurement

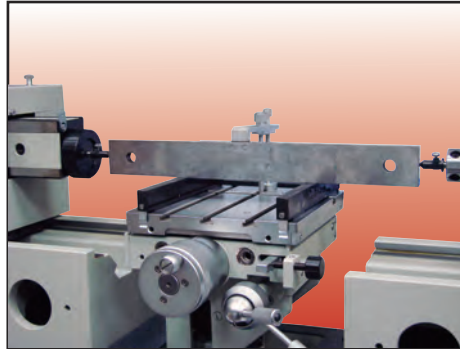


■ **ABBE** 5-way precision measurements

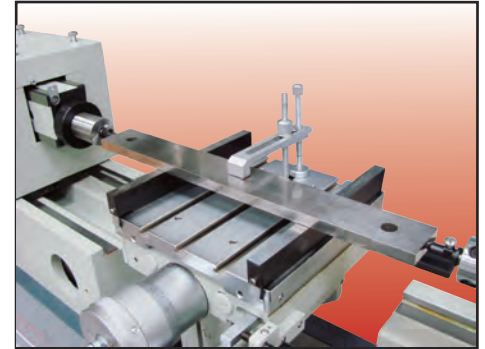
Measuring application diagram



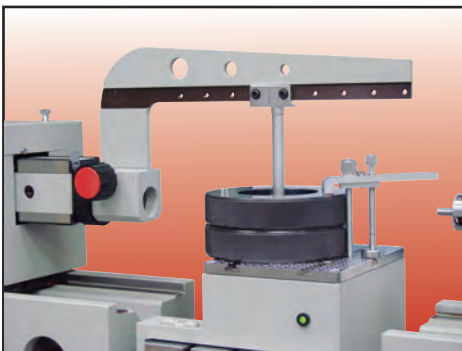
Standard gauge block absolute calibration



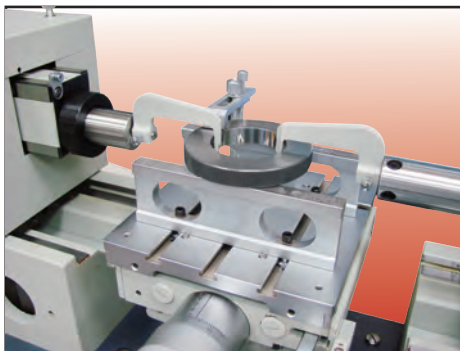
Long gauge block comparison calibration (vertical)



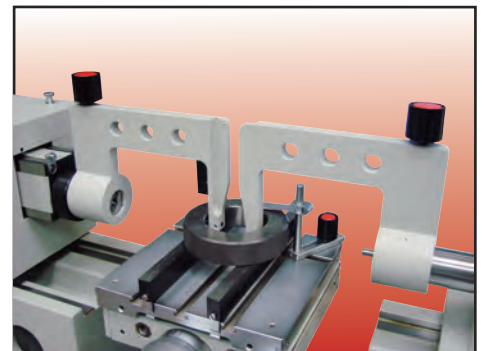
Long gauge block comparison calibration (horizontal)



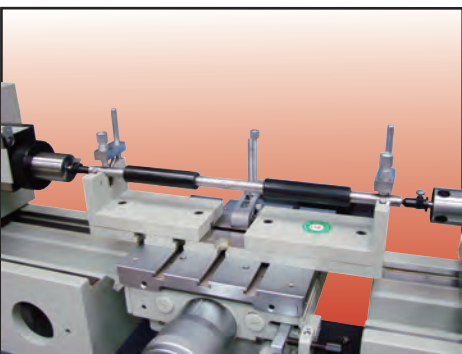
Large size ring gauge calibration with magic eyes device



Small size ring gauge calibration with inner double yoke



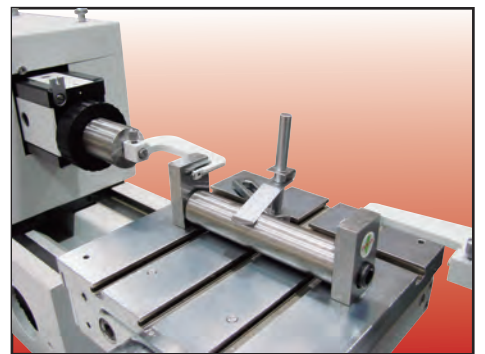
Medium size ring gauge calibration with inner double yokes



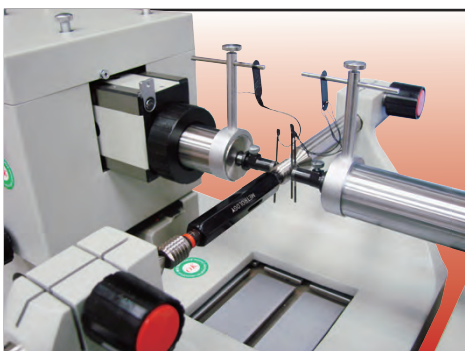
Standard bar calibration



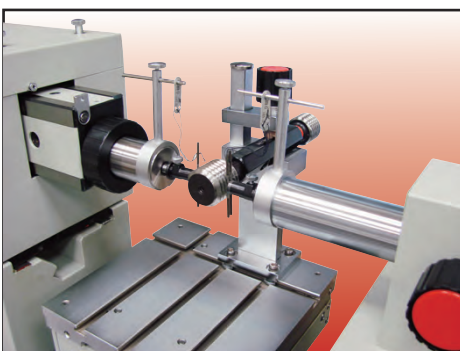
External snap gauge calibration



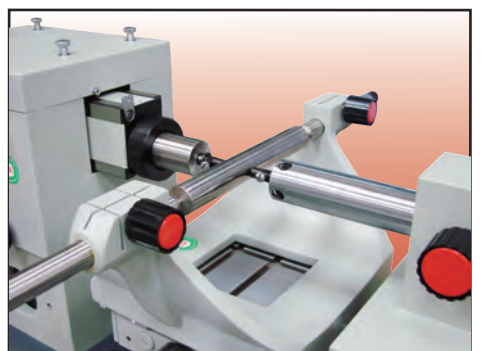
Internal setting gauge calibration



3 wire External thread gauge measurement with center carrier



3 wire External thread gauge measurement with V-type holder

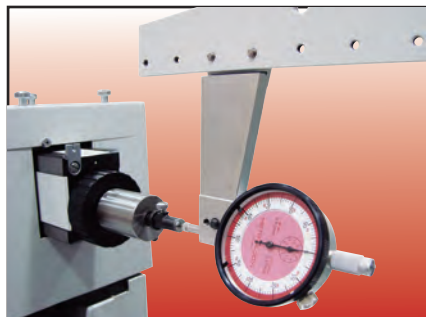


Concentric bar External measurement with center carrier

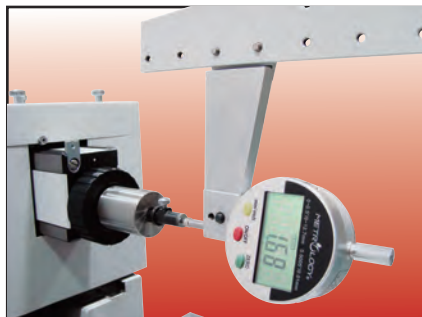
MORE
CALIBRATION & MEASURING FUNCTION

■ **ABBE** 5-way precision measurements

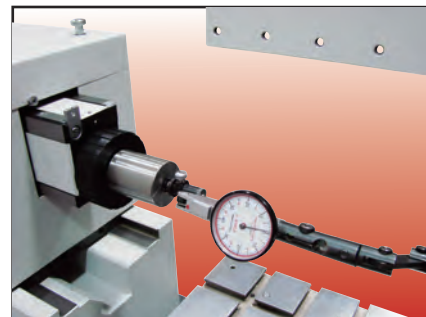
Measuring application diagram



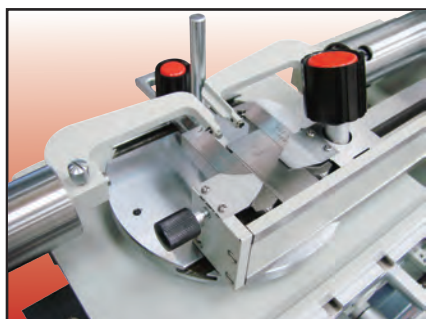
Dial gauge calibration



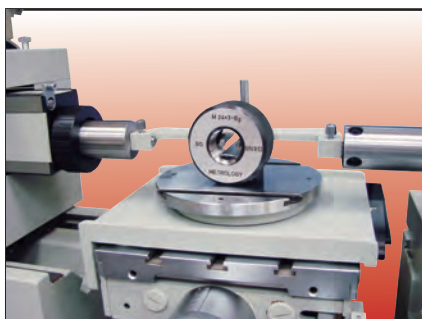
Digital dial gauge calibration



Level-type indicator calibration



Setting inner thread with set gauge



Inner thread gauge measurement with double yokes



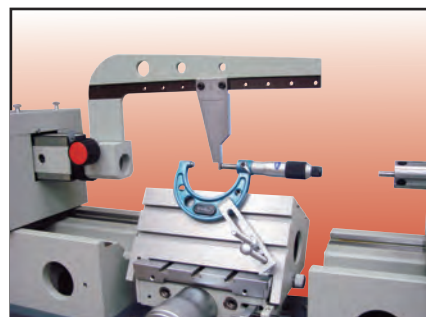
Inner thread gauge measurement



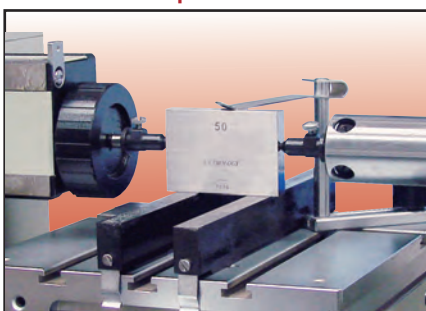
Plug gauge calibration with V-shaped carrier



Cylinder gauge calibration



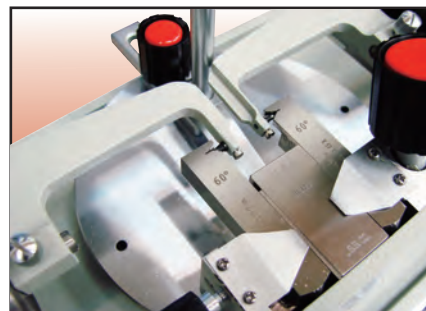
External micrometer calibration



Gauge block calibration with spherical measuring anvil



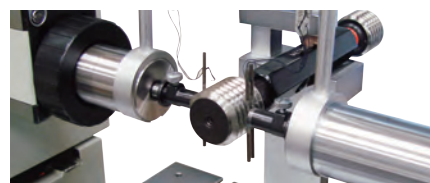
Small size ring gauge calibration with magic eye device



Setting zero for inner thread set gauge

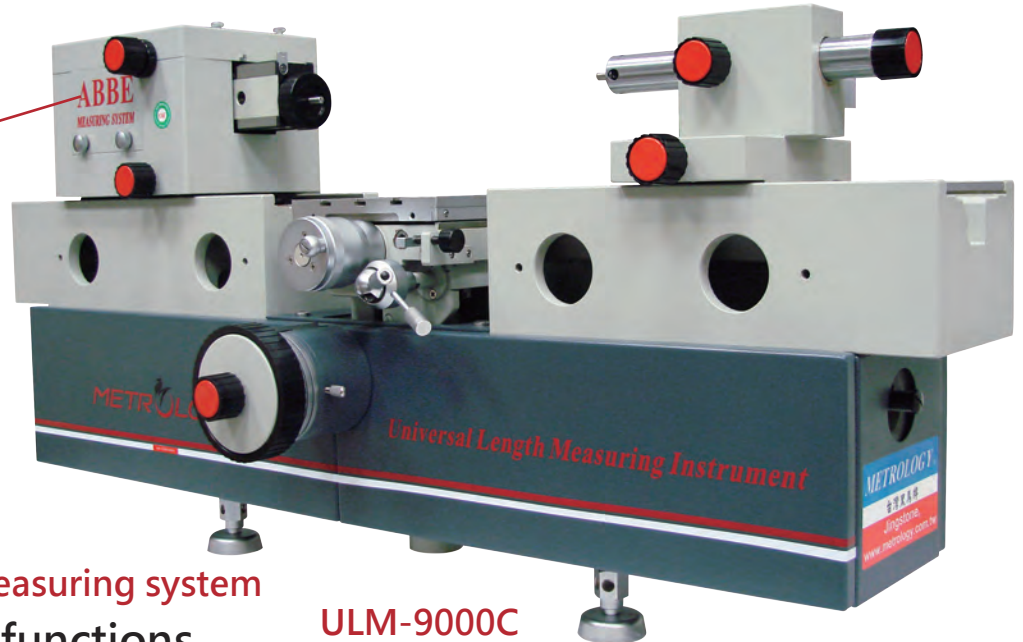
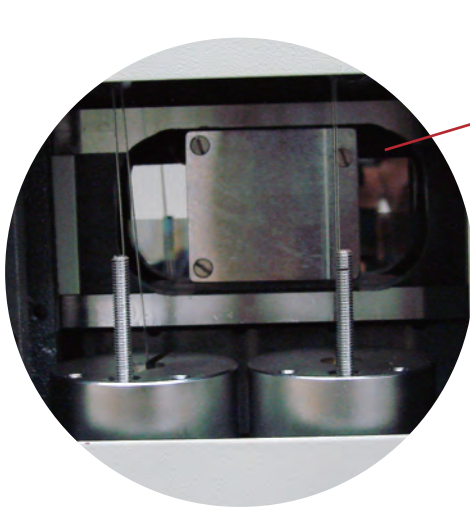


Optional accessories 3 wire thread gauge (for External thread measurement)



MORE
CALIBRATION & MEASURING FUNCTION

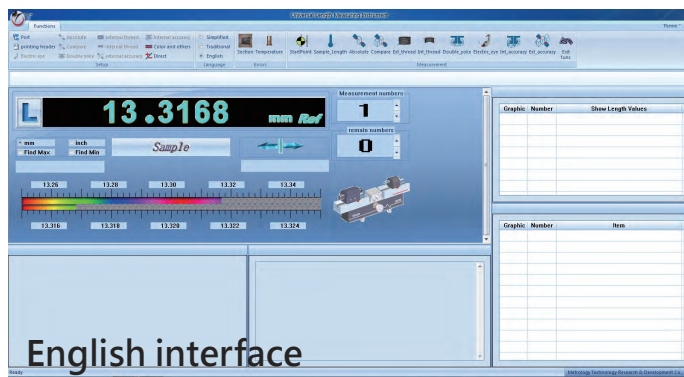
■ Universal Length Measuring Instrument ISO The best tool of length measurement and calibration



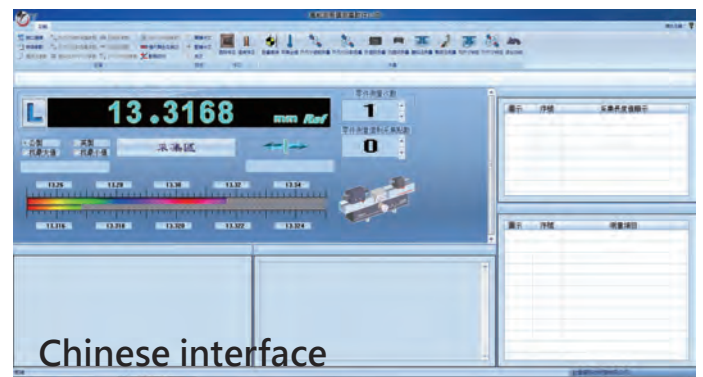
ABBE
Precision optical & force measuring system

■ Measuring software functions

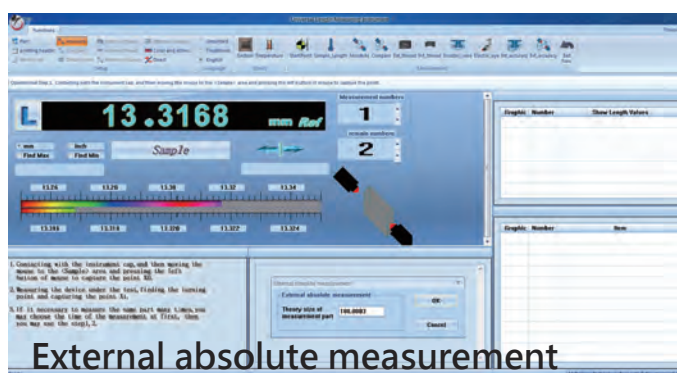
ULM-9000C



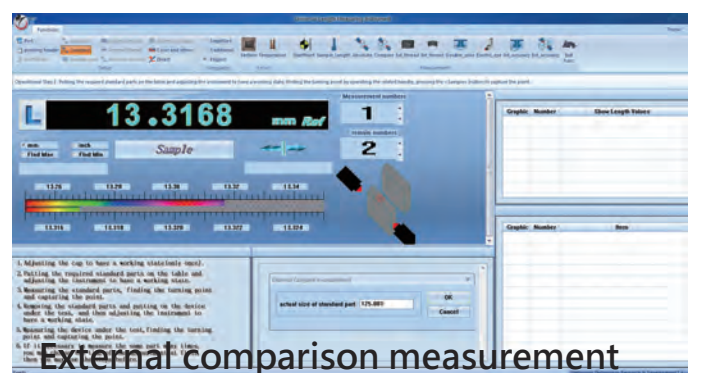
English interface



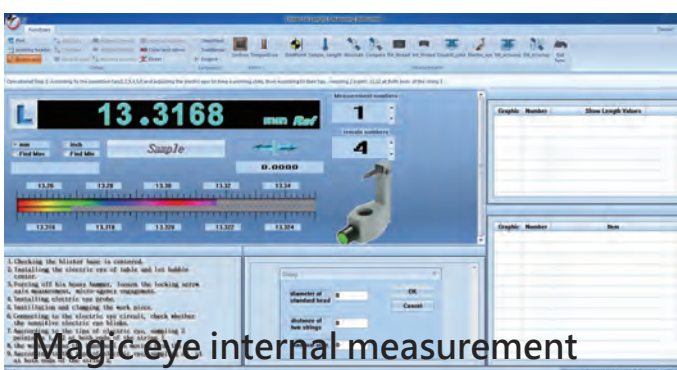
Chinese interface



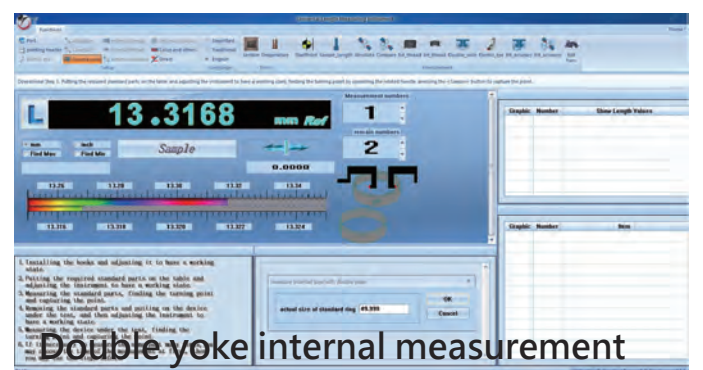
External absolute measurement



External comparison measurement

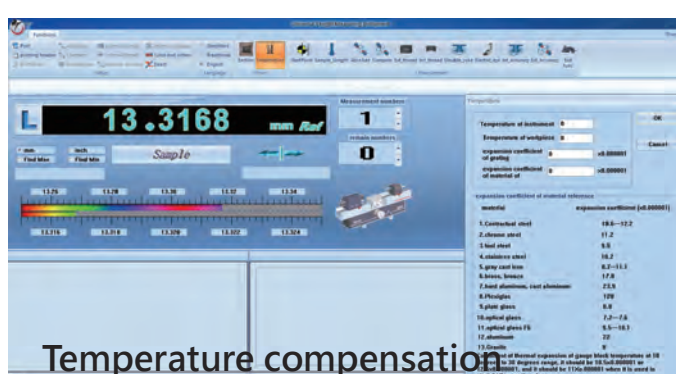
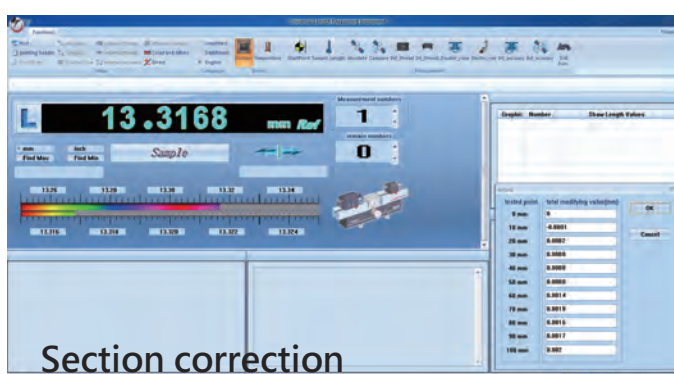
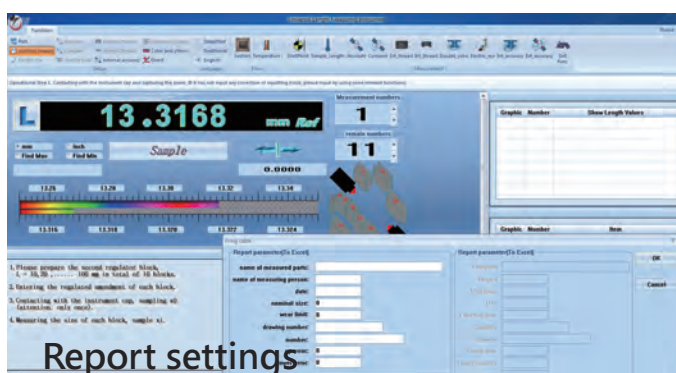
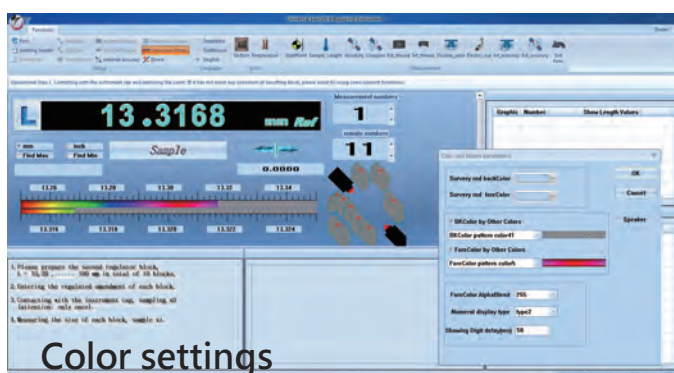
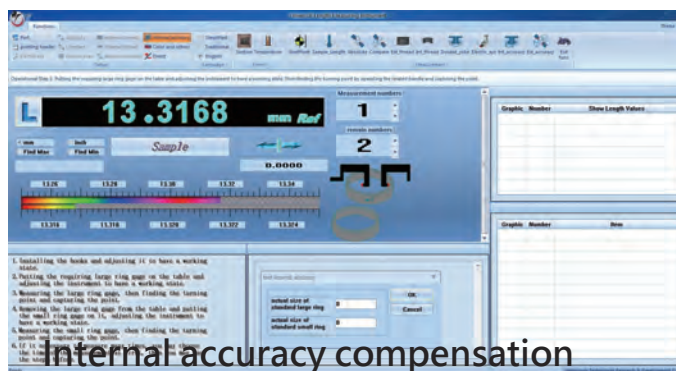
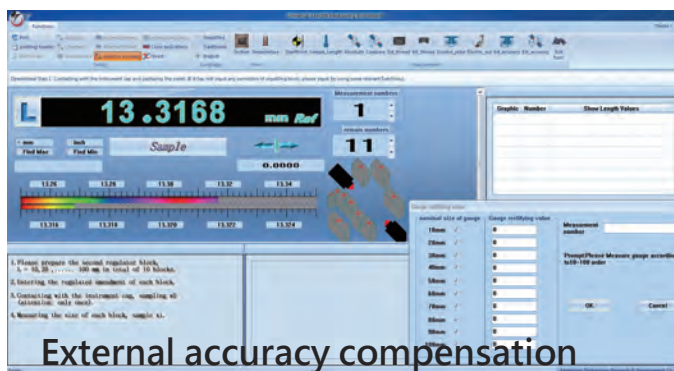
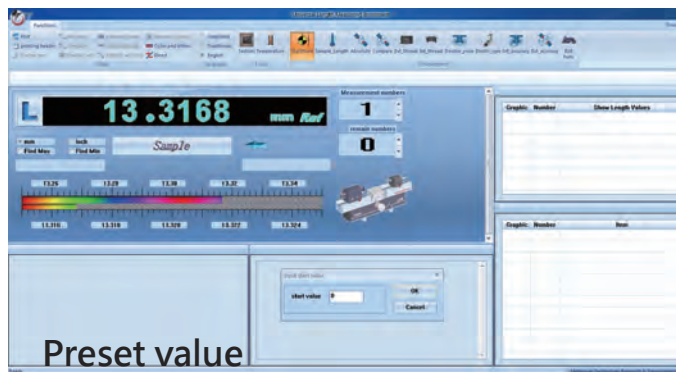
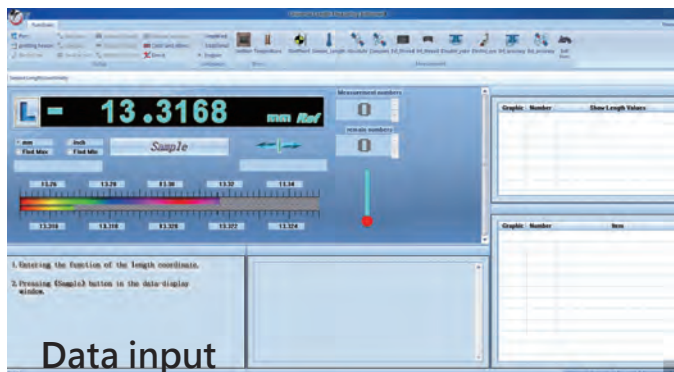
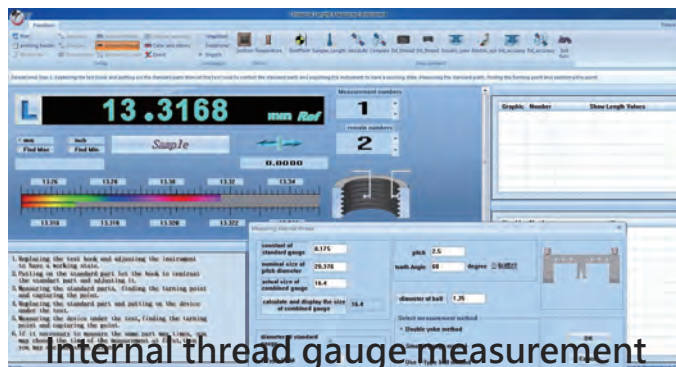
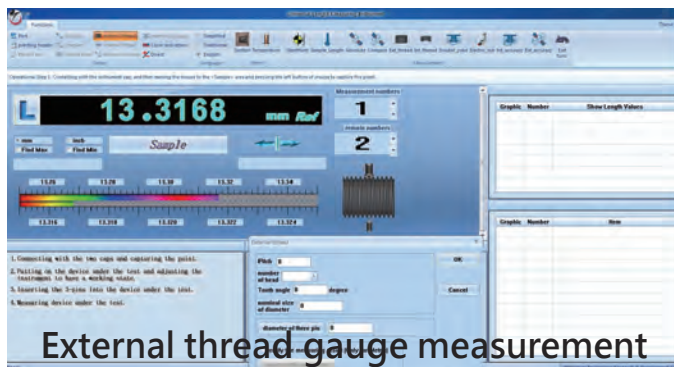


Magic eye internal measurement

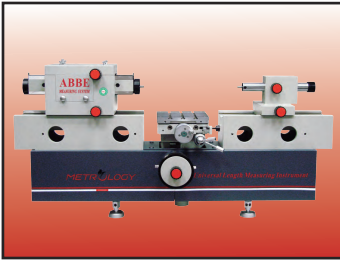


Double yoke internal measurement

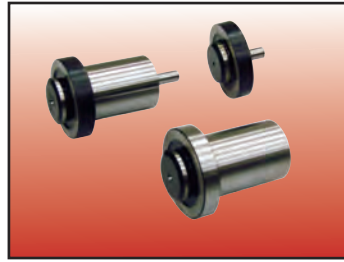
■ Measuring software functions



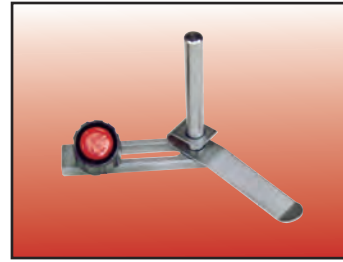
■ Accessories list ISO The best tool of length measurement and calibration



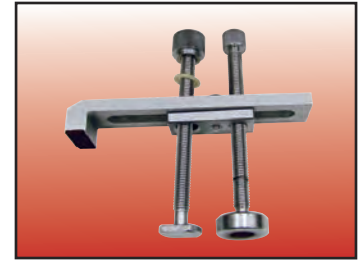
Main body



Spindle for measuring jaws



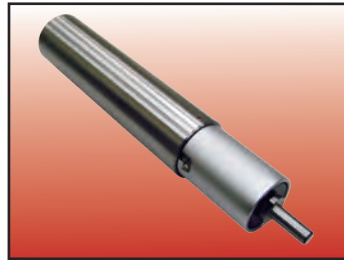
Spring clamp



Adjustable clamp



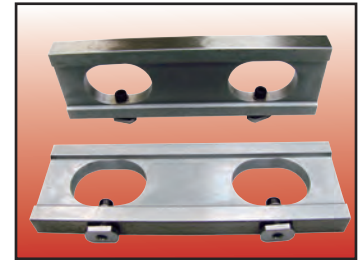
Adjustable tailstock spindle



Fixed tailstock spindle



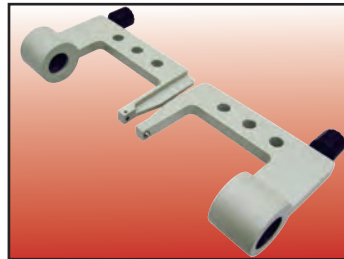
Small parallel blocks



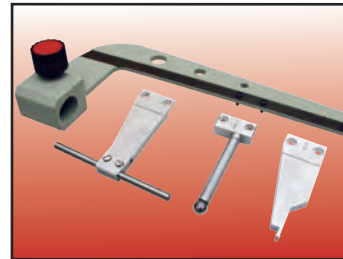
Large parallel blocks (optional)



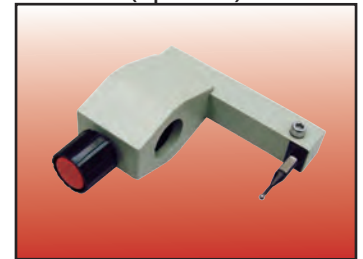
Small inner yokes



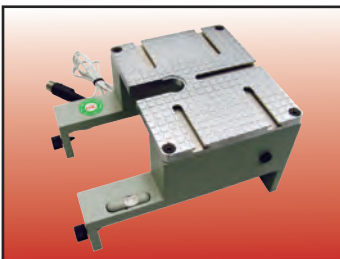
Large inner yokes



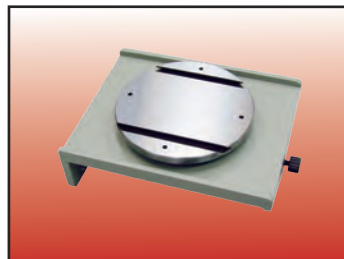
Universal yokes (optional)



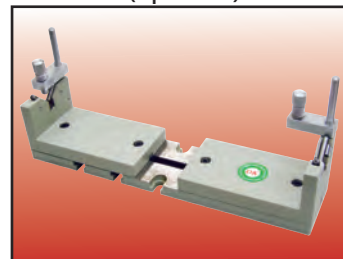
Inner yokes for "magic eye"



Measuring stand for "magic eye" inner yokes



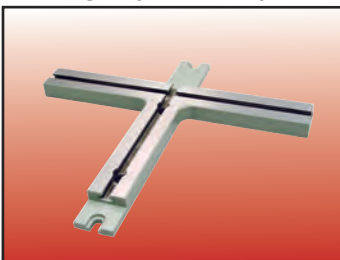
Floating worktable



Double V-shaped carrier



Center carrier



Snap gauge holder (optional)



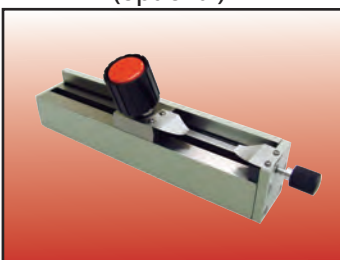
Micrometer holder (optional)



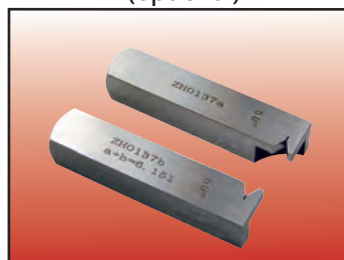
Single V-shaped carrier



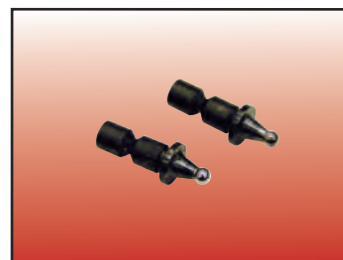
Measuring anvils



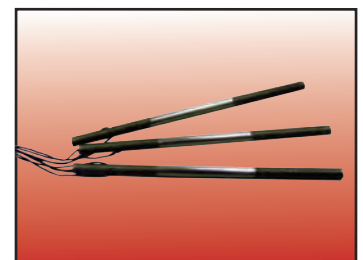
Internal thread setting gauge device



60° internal thread setting gauge (55° optional)



Internal thread measuring ball anvil



3 wire thread gauge (optional)