Universal Length Measuring Instrument

SAVE
Time & Cost
Improved efficiency & accuracy

EASY
QUICK
ACCURATE
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: ±4°
- Up-down tilt angle: ±3°

**Resolution**: 0.0001mm/0.000001"

**Measuring accuracy**: ±(0.5+L/200)um

**Uncertainty of measurement**: (0.2+L/200)um

**Measuring force**: 0·1.5·2.5N

**The best temperature of measurement**: 20°C ± 1°C

**Power**: 220V±10%

**Instrument weight**: 100KG

**Instrument dimension**: 1000x380x450mm

**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

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

Innova�on Design R&D
Patented Technology Award

Design Assembly Inspection
**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

- External thread gauge measurement
- Internal thread gauge measurement
- Data input
- Preset value
- External accuracy compensation
- Internal accuracy compensation
- Color settings
- Report settings
- Section correction
- Temperature compensation
**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)