

Thank you for purchasing the Digital Outside Micrometer.  
Please read this manual thoroughly before use for proper operation.

### FEATURES

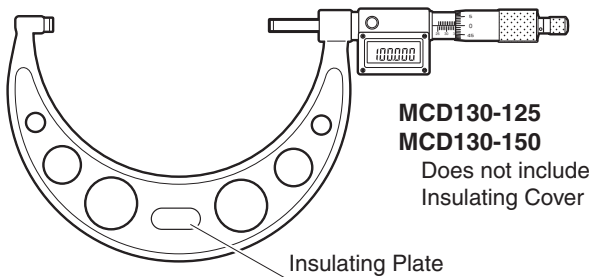
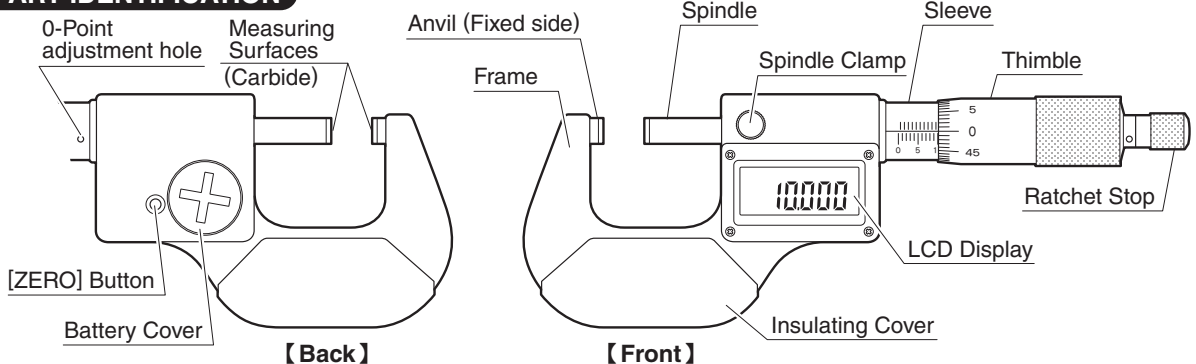
- Easy to read digital display.
- Carbide measuring surfaces.
- Constant pressure ratchet mechanism.
- Auto-on feature.
- Auto-display-off function (approx. 6 minutes)
- Insulating cover (Excluding: MCD130-125, MCD130-150)
- Spherical Anvil Attachment (SR2.5) included.
- SR44 (silver oxide battery) included for testing.

### SPECIFICATIONS

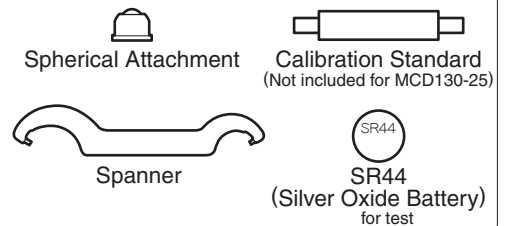
	Measurement Range (mm)	Resolution (mm)	Maximum Instrument Error ( $\mu\text{m}$ )	Weight (g)
MCD130-25	0 - 25	0.001	4	260
MCD130-50	25 - 50	0.001	4	380
MCD130-75	50 - 75	0.001	6	470
MCD130-100	75 - 100	0.001	6	640
MCD130-125	100 - 125	0.001	6	490
MCD130-150	125 - 150	0.001	6	570

Maximum Instrument Error does not include quantization error ( $\pm 1$  count)

### PART IDENTIFICATION



### [ACCESSORIES]



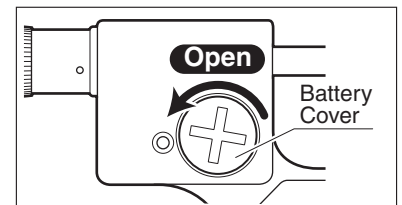
### TROUBLESHOOTING

Error Condition	Corrective Action
LCD displays "inc" and incorrect reading	Press and hold [ZERO] Button on rear for 2 seconds.
LCD display reads "E 1"	Measurement range exceeded. Return spindle to measurement range, press [ZERO] Button.
LCD display reads "E 3"	Measurement range exceeded. Cycle power by removing and replacing battery.
Measured value is wrong	Clean measuring surfaces with cloth. Confirm 0-Point setting and press [ZERO] Button.
LCD does not display Displayed value is unstable Display is not clear	Cycle power by removing and replacing battery. Replace battery with new one.

If problem persists, or if you have any questions, please contact distributor or place of purchase. Please note, manufacturer is unable to respond to inquires or provide service directly. Please contact distributor or place of purchase.

### INSERTING THE BATTERY

Rotate the battery cover on rear using coin or similar tool.



Insert battery with "+" side up.  
Replace battery cover.

### CAUTION

Only use SR44 type Battery.

See Reverse for Operation

## POWER

When thimble is turned, power turns on automatically and the LCD will display the measured value. When idle for approximately six minutes, power supply will automatically turn off.

## ZERO POINT SETTING

Remove any grease and dust from the measuring surfaces using a clean cloth, such as a lens cleaning cloth. Make sure no foreign matter is adhered to the surfaces.

With spindle clamp loose, turn spindle until measuring surfaces touch. Turn until ratchet stop clicks 2~3 times. **Figure 1**

※ For models other than MCD-130-25, Please insert the supplied calibration standard between measuring surfaces.

To set the Scale 0-Point reference lines on the thimble to align.

1. Tighten spindle clamp to lock spindle. **Figure 2**
2. Insert the spanner into 0-Point Adjustment Hole on rear of Sleeve.
3. Use spanner to rotate Sleeve to align the 0-Point lines. **Figure 3**

When 0-Point lines match, press (short press) the [ZERO] Button on the back of unit. **Figure 4**

“Set” will display for 0.5 seconds, and then the display will read as shown below:

MCD130-25·····0.000	MCD130-100·····75.000
MCD130-50·····25.000	MCD130-125·····100.000
MCD130-75·····50.000	MCD130-150·····125.000

The Gauge is now ready to take measurements.

## OPERATION

Remove any grease and dust from the measuring surfaces using a clean cloth, such as lens cleaning cloth. Make sure no foreign objects are adhered to the surfaces.

Place object to be measured between the anvil and spindle.

With the thimble clamp loose, turn the thimble to capture the measured object between the measuring surfaces. Please stop after 2~3 “Clicks” from the spindle ratchet. **Figure 5**

The measured value is displayed on the LCD display. Measurement can also be read off thimble and sleeve as for a standard micrometer.

## SPHERICAL ATTACHMENT

The Spherical Anvil Attachment can be attached as required. **Figure 6**  
After mounting, please set 0-Point following the procedure “Zero Point Setting” above.

When the spherical attachment is mounted, the measurement indicated on the sleeve scale will read 5mm larger than actual size.

## CAUTION

Always remove dirt from measuring surfaces with lens cloth before use.  
Do not turn spindle more than 3mm above upper measurement range.  
This is a precision instrument, handle with care. Do not drop or subject to excessive forces.

Keep away from high voltage and strong magnetic fields; instrument damage may result.  
Do not use or store in direct sunlight or locations with high temperatures such as in a car, or near a stove or heat source.

Keep instrument away from water and oil.

Please do not disassemble or modify.

Remove dust and cutting chips after use and apply rust preventative oil to metallic surfaces. Please keep out of reach of children.

Please do not use organic solvents to clean the body of the instrument.

When not being used for long period of time, please remove battery.

Only use as directed. Improper use may cause accident or injury.

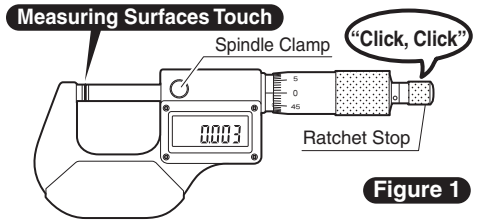


Figure 1

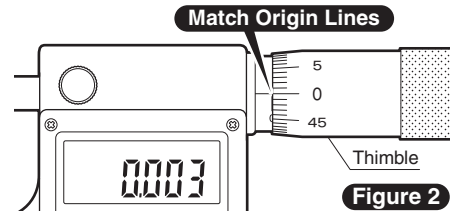


Figure 2

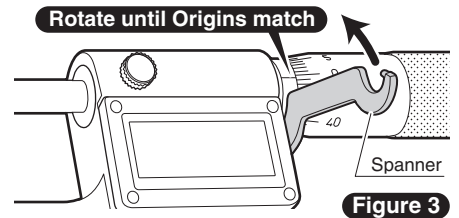


Figure 3

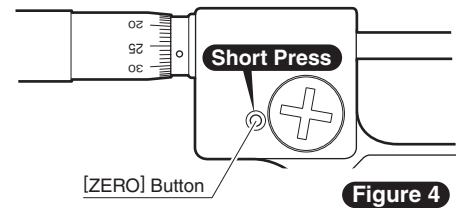


Figure 4

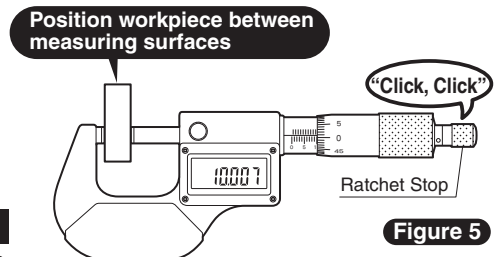


Figure 5

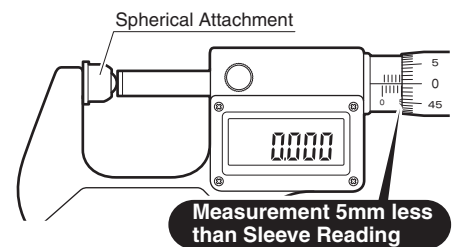


Figure 6

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