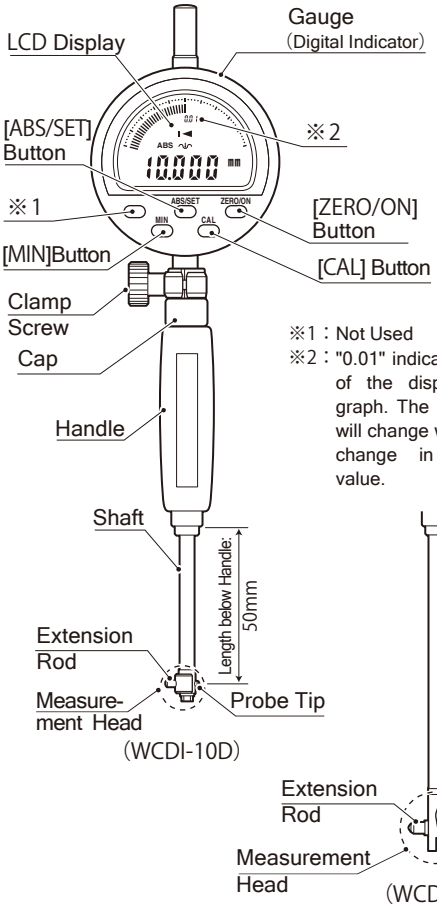
SK DIGITAL BORE GAUGE

Instruction Manual

Model : WCDI-10D／WCDI-18D <combined>

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

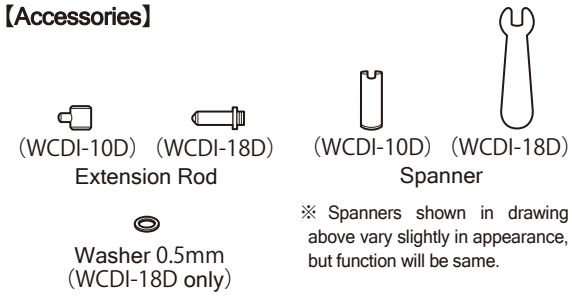
■ PART IDENTIFICATION



※1：Not Used

※2："0.01" indicates the resolution of the display's digital bar graph. The bar graph display will change with each 0.01mm change in the measured value.

【Accessories】



※ Spanners shown in drawing above vary slightly in appearance, but function will be same.

■ SPECIFICATIONS

＊: Including supplied Digital Gauge

※ Not including quantization error (±1 count)

Model No.		WCDI-10D	WCDI-18D
Measuring Range	(mm)	6-10	10-18
Resolution	(mm)	0.002	0.002
※＊Wide Range Acc'y	(μm)	12	12
※＊Adjacent Error	(μm)	5	5
※＊Repeat Accuracy	(μm)	3	3
Single Stroke Range	(mm)	0.7	0.9
Washer	(mm)		0.5
Weight	(g)	265	300

ACCESSORIES

- Extension Rods
  WCDI-10D… 6・6.5・7・7.5・8・8.5・9・9.5・10mm（9 pieces）
  WCDI-18D… 10・11・12・13・14・15・16・17・18mm（9 pieces）
- Spanner ……1x
- Battery…… CR2032 Lithium button cell, 1x (for test)

⚠ NOTICE

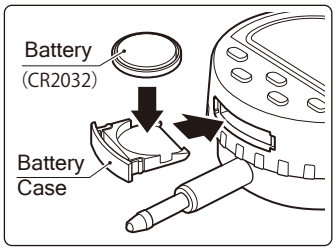
- This is a precision instrument, handle with care.
- Do not disassemble or modify.
- Keep instrument away from water and oil.
- Use only with supplied Extension Rods and Washer.
- Keep instrument away from direct sunlight and high temperatures such as in a car, or near a stove or heat source.
- After use, remove any dirt or cutting chips and apply rust preventative oil to to Extension Rod and Washer. When not in use store in supplied storage case.
- This product is for measuring inside diameter; use only as directed. Improper use may cause accident or injury.
- Avoid using in high electric fields, such as near fluorescent lights or switching power supplies.
  Electrical interference may cause incorrect readings.

■ INSERTING・REPLACING BATTERY

Pull out the case from the two side edges to remove. Insert battery with (＋) side facing down.

⚠ NOTICE

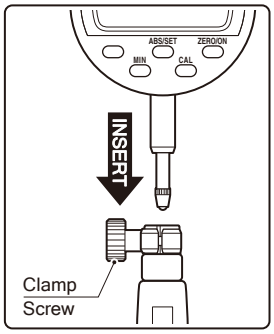
Use only CR2032 type lithium button cell.



■ ASSEMBLY

① Loosen the Clamp Screw and insert the Digital Indicator into the gauge body. Tighten the Clamp Screw to secure.

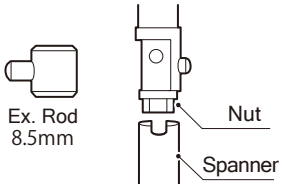
※ After attaching, press the [ZERO/ON] Button on the Digital Indicator to turn on power. Confirm that the displayed reading changes by gently squeezing the measurement head. If necessary, adjust the depth that the Digital Indicator is inserted into the gauge body.



② Select the Extension Rod, washer (WCDI-18Donly) for the desired measurement range.

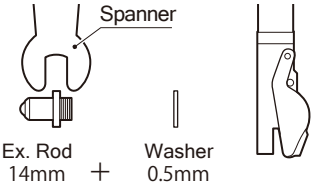
Ex.）WCDI-10D set to 8.5mm

1. Use the Spanner to loosen the Nut at the bottom of Measurement Head.
2. Install the Extension Rod and tighten.



Ex.）WCDI-18D set to 14.5mm

Attach the Extension Rod, Washer to the bottom of the Measurement Head and tighten with the Spanner.



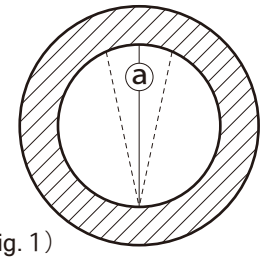
■ MEASUREMENT

For accurate measurements, follow the procedure described below.

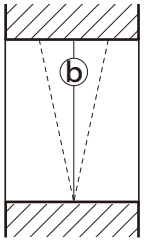
① In cross section perpendicular to the axis of the bore, as shown in Figure 1, position the gauge along diameter ⓐ. This is the maximum distance, and at this point the Indicator will read the maximum value. The Guide will automatically position the Measurement Head to diameter ⓐ when inserted.

※ WCDI-10D does not have a guide on the Measurement Head so please manually position at this maximum value.

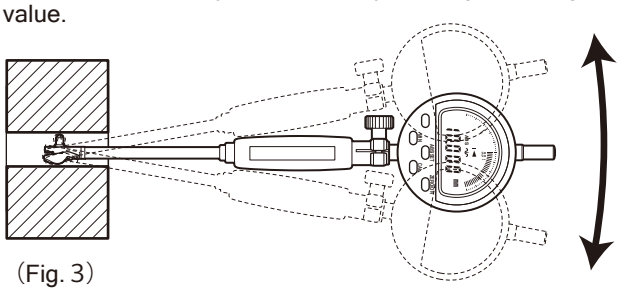
② In cross section parallel to to the axis of the bore through diameter ⓐ, position the indicator to minimize the distance ⓑ. (Figure 2) In this position the Indicator will read the minimum value. This position must be manually determined by pivoting the Gauge as shown in Figure 3 while watching the Indicator to find the minimum value.



(Fig. 1)



(Fig. 2)


(Fig. 3)

■ OPERATION

① Before use, please make sure the Measurement Head components are not loose and tighten if necessary.

② Clean the Measurement Head and the ID of a Ring Gauge Standard using parts cleaner or cleaning solution.

③ Press the [ZERO/ON] Button to turn on power. ※ A long press to the [ZERO/ON] Button will turn power off.

ABSOLUTE MODE (ABS) ※ Measure absolute dimension of workpiece

① Turn on power. If the " ◄ " or " ∿ " symbols are displayed on the LCD, press the [MIN] Button to turn off.

② Adjust the "SET" value of the Bore Gauge to match the ID of the Ring Gauge Standard. Press and hold the [ABS/SET] Button until "SET" blinks on the display.

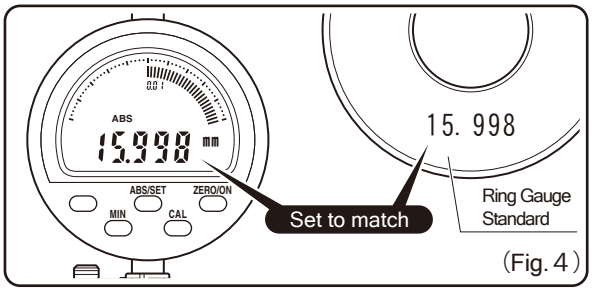
③ Continue holding the [ABS/SET] Button and the display character to the left will blink. Use a short press of the [ABS/SET] Button to change the value, and a long press to change the character being modified. Repeat this process to enter the dimension of the Ring Gauge Standard on the LCD display. (Figure 4)

④ When the value is entered the flashing position will return to "SET". A short press of the [ABS/SET] Button to turn off the flashing.

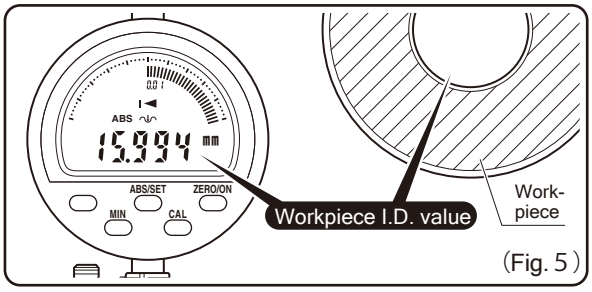
⑤ Insert the Measurement Head into the Ring Gauge Standard and press the [MIN] Button to put the Indicator into minimum-mode. Slowly pivot the gauge (Figure 3) to display the minimum value.

⑥ Remove the gauge from the Ring Gauge and press the [CAL] button until "OK" is momentarily displayed. Preparation for measurement is now complete.

⑦ Put the gauge into the workpiece to be measured, and pivot the gauge slowly. (Figure 3) The LCD will display the measured value. (Figure 5)
※ Press the [ON/ZERO] Button momentarily to reset display in preparation to measure the next workpiece.



(Fig. 4)



(Fig. 5)

COMPARATIVE MEASUREMENTS ※ Difference between workpiece and reference

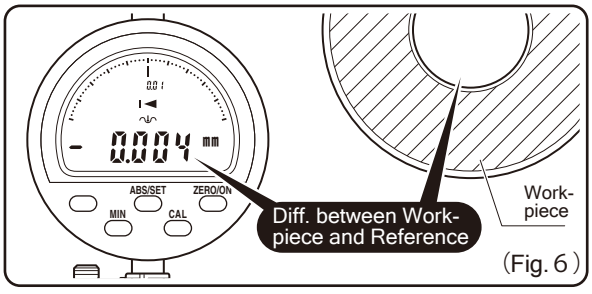
① Turn on power. If " ◄ " or " ∿ " symbols are displayed on the LCD, press the [MIN] Button to turn off. If "ABS" is displayed press the [ABS/SET] Button to turn off.

② Insert the Measurement Head into the Ring Gauge Standard and press [MIN] Button to put the Indicator into minimum-mode. Slowly pivot the gauge (Figure 3) to display the minimum value.

③ Remove the gauge from the Ring Gauge and press the [CAL] button until "OK" is momentarily displayed.
Preparation for measurement is now complete.

④ Put the gauge into the workpiece to be measured, and pivot the gauge slowly. (Figure 3) The LCD will display the difference between the measured workpiece and the calibration standard. (Figure 6)

※ Press the [ON/ZERO] Button momentarily to reset display in preparation to measure the next workpiece.



(Fig. 6)

■TROUBLESHOOTING

ERROR	CORRECTIVE ACTION
● 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.

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