Please read through this owners manual carefully before using your new tool. Use your tool properly and only for its intended use. Refer to the product information CD for additional operating instructions.

FOWLER 1.4 to 6" Electronic Cylinder Bore Gage Manual

• Range: 1.4-6"/35mm - 150mm (Combination of 1.4-2.0" and 2-6")
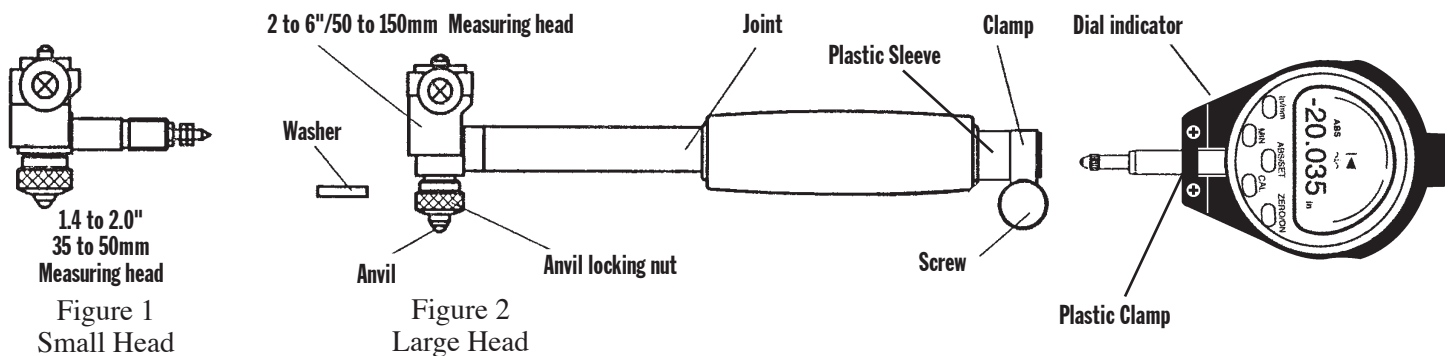• Grad: 0.0005"

Accuracy Table

Total error	Repeatability	Self-centering error
0.0006"	0.0004"	0.00025"

• Accessory specifications

Range	Anvil Quantity	Anvil Range											Sub-anvil		Washer Quantity	Washer size		
		No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	Quantity	Size		No.1	No.2	No.3
1.4-2.0"	4	1.4"	1.6"	1.8"	2.0"										3	0.02"	0.05"	0.1"
2-6"	11	2.0"	2.2"	2.4"	2.6"	2.8"	3.0"	3.2"	3.4"	3.6"	3.8"	4.0"	1	2"				

*No.1 anvil is already installed in the measuring head.

• Name and construction of the parts

Figure 1
Small Head

Figure 2
Large Head

This tool is provided with two interchangeable heads. The "small head" (Figure 1) is for taking measurements between 1.4"/35mm and 2.0"/50mm. The "large head" (Figure 2) is for measuring between 2.0"/50mm and 6.0"/150mm. To interchange between ranges simply unscrew the measuring head from the joint and screw in the desired measuring head. Each anvil measures up to the dimension specified in the above anvil range table. Use the washers to obtain dimensions in between anvil ranges. To measure 4.0"/100mm and above, the 2.0"/50mm extension must also be installed on the bore gage.

Insert the dial indicator's stem into the bore gage handle and tighten the clamp. The dial gage must be inserted deep enough to "preload" the setting.

Choose the proper head, anvil length, washer (spacer) and extension combination to match the bore size to be measured. For example, to measure 3.15 inches install the number 6 anvil and washer numbers 2 and 3.

Note: To get the most accurate representation of the bore diameter, measurements should be taken at several positions.

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FOWLER   # 1.4 to 6" Electronic Cylinder Bore Gage Manual

Powering on and powering off the Bore Gage
1) Press the Zero key lightly, the gage turns on.
2) Hold the Zero key down to turn the gage off.

Setting the Bore Gage to a known size
1) Before proceeding, select inch or metric by briefly tapping the IN/MM button.
2) Press and hold the ABS/SET button.
3) Holding down the ABS/SET will cause the numeric values to flash in sequence from left to right.
4) Release the ABS/SET button on the flashing numeral. Tapping lightly on ABS/SET button will change the numeric value. When the desired numeral is set, hold down the ABS/SET button to move the next digit and repeat the process.
5) After the desired number is set, hold down the ABS/SET button until the "set" icon is flashing. Tap lightly on the ABS/SET button to confirm. The preset has been stored.

Calibrating the Bore Gage in a Master Ring
1) Insert the bore gage into the master ring (not included) with the appropriate post/spacers attached. The measuring faces should be touching the ring with enough allowable movement remaining in both directions to facilitate change to proper sweeping.
2) Ensure the bore gage is in ABS mode by pushing the ABS button. The ABS icon will appear on the indicator.
3) Tap the MIN button to initiate calibration. Sweep the bore gage back and forth in the ring. See Figure 2.
4) Observe the analog scale on the indicator watching for a reversal point.
5) When the reversal point is obtained, remove the gage from the ring. Press and hold the CAL button. This will set the ring to the master. An "o.k" icon will flash to confirm successful calibration while holding down the CAL button.
6) With the indicator still in MIN mode, insert the bore gage into the setting ring.
7) Sweep the bore gage back and forth to obtain the minimum lock. The value displayed should match the ring size. Use the ZERO button to reset MIN mode and repeat to test repeatability.
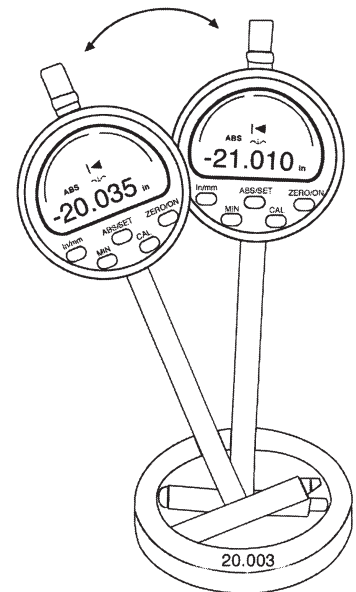8) If the correct value is not achieved, repeat this section.

Figure 2

Standard Usage
1) With the bore gage calibrated and still set in the MIN mode from the earlier calibration, insert the bore gage into the bore to be measured and press the zero button. This will reinitialize the MIN mode. Rock the bore gage back and forth in the test bore to lock on to the diameter under test.
2) Remove gage, insert into the next test bore and reinitialize MIN mode.
3) Repeat the measuring process

*Calibrating the Bore Gage with a Micrometer
1) Open the micrometer to the desired size and lock the micrometer in that position. Follow the procedure for "Cali brating the bore gage in a master ring" above, substituting the micrometer for the master ring.

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