



Data Sheet

ENGLISH

Dial Bore Gauge Set



The Dial Bore Gauge provides a two point measuring system for comparative measurement of component hole sizes. It will also detect ovality and taper in bores. These instruments are fitted with spring loaded centralising mechanisms which ensure the measurement is taken across the true diameter of the component. All instruments are supplied in cases complete with probes and extensions as listed.

Set Range and Dimensions

RS Code	Manufacturers Code	Range	Stem Length	Overall Length	Dial Diameter	Dial Graduations	Dial Reading	Plunger Travel
7857872	55-200-150	50-160mm	150mm	340mm	57mm	0.01mm	0-100	3mm

Contents of Set

RS Code	Manufacturers Code	Range	Probe Type	Probe Qty.	Probe Range	Addit Ext
7857872	55-200-150	50-160mm	Threaded	5	50-62, 62-74, 74-86, 86-98, 98-110mm	60mm

Packed Weight and Dimensions

RS Code	Manufacturers Code	Range	Weight g	W mm	H mm	L mm
7857872	55-200-150	50-160mm	1030	140	60	375

Setting Procedures

Note: New Instruments, remove the plastic cap from the dial indicator and the plastic ring from the top of the bore gauge stem



Screwed Probe Type

Remove dial indicator from protective shroud.
Insert indicator stem into top of bore gauge.
Position indicator into bore gauge stem with one revolution of dial gauge hand. Use knurled thumbscrew on split clamp to clamp indicator.
Select a probe with a range which suits the required measurement size.
Fit knurled lock nut to probe.
Screw probe into bore gauge foot.
Select setting master (see previous instructions)
Insert bore gauge probes between setting master faces and adjust screwed probe to bring dial gauge hand to zero position.
Rock bore gauge in ring or between the setting master faces to achieve the reversal point of the dial indicator hand.
Fine adjust dial hand to zero by either adjusting screwed probe, moving dial indicator up or down in bore gauge and finally revolving bezel to obtain final zero.

Taking Measurements

Insert pre-set bore gauge into component hole.
Rock bore gauge in hole.
Note reversal point of dial gauge hand.
Add or deduct the variance from zero to the setting master nominal size, to obtain the measured diameter of the component hole.

Instrument Accuracy Check

There are no International Standards covering the calibration procedure and accuracy specifications for Dial Bore Gauges
The following information describes a convenient method generally accepted by industrial users to check this type of comparative measuring instrument

Remove the dial indicator from the bore gauge and calibrate the indicator
This can be done by clamping the indicator in a suitable stand and using Gauge Blocks to determine the accuracy
See manufacturer's accuracy specifications for new instruments listed below
Re-fit the indicator to the bore gauge
Set the bore gauge in a suitable ring gauge and test for repeatability of the reading
Manufacturer's repeatability tolerance is $\pm 1/2$ a division

Note:
This method does not take into consideration any error in the fulcrum of the instrument

Dial Indicator Accuracy Specifications:

Metric Indicators (New)

Range mm	Grads. mm	Total Number Of Revs	Each 0.1mm mm	Each 0.5mm mm	Each 1.0mm mm	Each 2mm mm	Total Travel mm
3	0.01	5	0.005	0.008	0.01	0.015	0.016