

Why 3 Point Bore Gauge ?

Trigabore/Truebore

Sangha Metrology UK

It is a very common practice to use dial bore gauge in tool room and other production areas to measure bore dia of the components which are produced in small quantity and also the bore in dies moulds etc.

However, the users experience confirms that dial bore gauge has some drawbacks. These can be effectively overcome with the use of 3 point bore gauges.

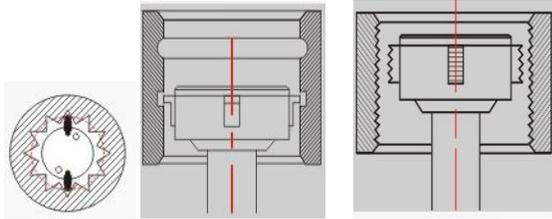
The comparison between 3 point bore gauge and dial bore gauge help you to understand why 3 point bore gauge should be preferred over dial bore gauges. Comparison is as follow:

3 Point Bore Gauge	Dial Bore Gauge
Setting and Measuring Procedure and Results	
Show absolute diameters	Comparative measurements w.r.t. master
Evan a semi skilled operator gets	Need a skilled operator and still



accurate and consistent result (Repeatability 2 micron and accuracy 4 micron.	the results may differ from operator to operator due to a process of finding a reversal point.
Self centering in the bore. Hence swinging in the bore to get reversal point is not required. Therefore; there is no wear of the setting rings. Hence frequent calibration checks of setting rings are not required.	Need to swing it in the bore to find the reversal point which causes wear of contact surface of the setting devices such as slip gauge, setting rings, micrometers. etc. Which requires frequently calibration checks.
Once the bore gauge set with a setting ring, it can be used for the complete range of the measuring head. e.g. Head of 40-50mm range can be used for entire range after it is set with a setting ring of any dia between 40-50mm	Dial bore gauge is being comparative instruments, has to be set with setting devices (Such as slip gauges, micrometer, rings etc) for each bore dia to be measured. Hence, it takes a long time for setting
Due to quick setting, valuable machine time is saved for the costly CNC machines	Delay in setting of dial bore gauge keeps costly CNC machines idle.
Lobbing in the bore can be detected.	Lobbing in the bore cannot be detected.
Blind bore is possible.	Blind bore is not possible.

Accessories for special application

Deep bore extensions available upto 3 meters	Extension are not available.
<p>Measuring heads for special applications such as groove, thread screw, spline, slot, deep hole, spherical can be provided.</p> 	Such special applications are not possible.

ISO 9000 Certificate Requirements

ISO 9000 requirements can be easily fulfilled and traceability can be established just by calibrating setting rings (Only 12 setting rings are required for the range of 6-200mm)

Number of setting master (Slip gauges, setting rings, setting master, etc) required to be calibrated for ISO 9000 certification and for establishing the traceability.