

OPERATION INSTRUCTION GEAR BORE GAGE Series 2428

Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)
2428-12	8 - 12mm	2µm	0.5µm
2428-22	12 - 22mm	2µm	0.5µm
2428-55	22 - 55mm	2µm	0.5µm
2428-250	55 - 250mm	2µm	0.5µm
2428-510	250 - 510mm	2µm	0.5µm



1. The gear bore gages allow for the measuring of inner profiles, especially gears, in the application range of 8-510mm. Depending on the application, the deviation from the setting dimension can be indicated by a mechanical or digital dial gauge, precision indicator or electronic probes with Ø8 h6 outside diameter.

- 2. The bore gage consists of an upper part with a dial gage holder and a lower part with one fix and one movable measuring contact. To adapt the measuring contacts to the different profiles, the measuring contacts (= ball inserts) can be exchanged. The tungsten carbide balls of the ball inserts are available from Ø1mm , graduated by 0,001mm.
- 3. The interchangeable measuring pins are used, along with an increment washer and extensions if necessary, in order to approximate the dimension of the bore to be measured. The dial gauge is to be inserted into the dial gauge holder, until it reaches its indicating range and is fixed afterwards with the adjusting screw.
- 4. Use standard setting ring to set zero (fig.1). This has to be done with the centring plate at a slight angle. The gage should be set in the same position as it will be used afterwards. When the gage is slowly rocked around the fixed ball insert, a reversal point will appear on the display of the dial gauge. The reversal point can be identified by a change of direction of the indicator pointer.



- 5. The prepared gage is now inserted into the bore to the desired depth. By rocking it slowly, the reversal point appears on the indicator. The display shows the deviation from the setted dimension
- 6. The gage is neither waterproof nor rustproof. The externally accessible polished parts must be regularly wiped down with a cloth soaked in light oil. When using them at the machines where cutting coolants are used, the measuring head should be left submerged in a 95:5 petroleum ether/paraffin oil mixture overnight. In addition, the gages should be regularly dismantled, cleaned and maintained by a qualified technician or by the manufacturer. A comprehensive repair and maintenance manual can be provided by the manufacturer on request.



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