# Marameter 844 KS

## Self-centering dial bore gage

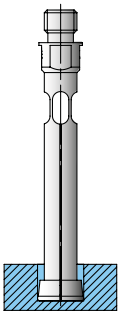
### FEATURES

- Measuring head made of hardened steel, hard chrome plated
- Constant measuring force as a result of built-in spring, eliminating user influence
- Extensive modular system is composed of measuring head, transfer needle, holder, depth extension, right angle attachments and setting rings

**The minimum set of a measuring instrument consists of:**

- Measuring head, transfer needle and holder plus indicator unit
- **Package contains:** Measuring holder 844 Kg, probe, expanding pin, wooden case, excludes indicator





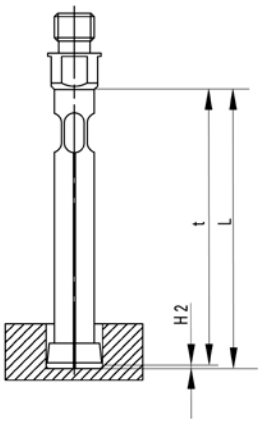
**Application:**
**Model for blind holes**

- For measurements near to the bottom of bores
- For indicating measurement of diameter and testing for roundness and conicity of bores
- Especially suitable for testing batches
- Determine the reversal point by rocking in the bore

### TECHNICAL DATA

| Order no. | Type | Nominal size | Individual probe measuring range | Measuring range | Number of measuring probes | Linearity deviation fe | Repeatability $f_w$ |
|---|---|---|---|---|---|---|---|
| | | mm | mm | mm | Piece | | µm |
| **4473207** | 844 KS | 4.00 | **3.70** –4.30 | 3.7 –9.8 | 12 | 1 %, min. 1 µm | 1 |
| | | 4.50 | 4.20 –4.80 | | | | |
| | | 5.00 | 4.70 –5.30 | | | | |
| | | 5.50 | 5.20 –5.80 | | | | |
| | | 6.00 | 5.70 –6.30 | | | | |
| | | 6.50 | 6.20 –6.80 | | | | |
| | | 7.00 | 6.70 –7.30 | | | | |
| | | 7.50 | 7.20 –7.80 | | | | |
| | | 8.00 | 7.70 –8.30 | | | | |
| | | 8.50 | 8.20 –8.80 | | | | |
| | | 9.00 | 8.70 –9.30 | | | | |
| | | 9.50 | 9.20 - **9.80** | | | | |
| **4473209** | 844 KS | 10.00 | **9.40** –10.60 | 9.4 –9.8 | 11 | 1 %, min. 1 µm | 1 |
| | | 11.00 | 10.40 –11.60 | | | | |
| | | 12.00 | 11.40 –12.60 | | | | |
| | | 13.00 | 12.40 –13.60 | | | | |
| | | 14.00 | 13.40 –14.60 | | | | |
| | | 15.00 | 14.40 –15.60 | | | | |
| | | 16.00 | 15.40 –16.60 | | | | |
| | | 17.00 | 16.40 –17.60 | | | | |
| | | 18.00 | 17.40 –18.60 | | | | |
| | | 19.00 | 18.40 –19.60 | | | | |
| | | 20.00 | 19.40 - **20.60** | | | | |

| Order no. | Nominal size | Individual probe measuring range | H1 | L | Measuring depth |
|---|---|---|---|---|---|
| | mm | mm | mm | mm | mm |
| **4473207** | 4.00 | **3.70** –4.30 | 0.5 | 47.30 | 38 |
| | 4.50 | 4.20 –4.80 | 0.5 | 47.30 | 38 |
| | 5.00 | 4.70 –5.30 | 0.5 | 47.30 | 38 |
| | 5.50 | 5.20 –5.80 | 0.5 | 47.30 | 38 |
| | 6.00 | 5.70 –6.30 | 0.5 | 47.30 | 38 |
| | 6.50 | 6.20 –6.80 | 0.5 | 47.30 | 38 |
| | 7.00 | 6.70 –7.30 | 0.5 | 47.30 | 38 |
| | 7.50 | 7.20 –7.80 | 0.5 | 47.30 | 38 |
| | 8.00 | 7.70 –8.30 | 0.5 | 47.30 | 38 |
| | 8.50 | 8.20 –8.80 | 1.0 | 48.50 | 45 |
| | 9.00 | 8.70 –9.30 | 1.0 | 48.50 | 45 |
| | 9.50 | 9.20 - **9.80** | 1.0 | 48.50 | 45 |
| **4473209** | 10.00 | **9.40** –10.60 | 1.0 | 48.50 | 45 |
| | 11.00 | 10.40 –11.60 | 1.0 | 48.50 | 45 |
| | 12.00 | 11.40 –12.60 | 1.0 | 48.50 | 45 |
| | 13.00 | 12.40 –13.60 | 1.0 | 48.50 | 45 |
| | 14.00 | 13.40 –14.60 | 1.0 | 48.50 | 45 |
| | 15.00 | 14.40 –15.60 | 1.0 | 48.50 | 45 |
| | 16.00 | 15.40 –16.60 | 1.0 | 48.50 | 45 |
| | 17.00 | 16.40 –17.60 | 1.0 | 48.50 | 45 |
| | 18.00 | 17.40 –18.60 | 1.0 | 48.50 | 45 |
| | 19.00 | 18.40 –19.60 | 1.0 | 48.50 | 45 |
| | 20.00 | 19.40 - **20.60** | 1.0 | 48.50 | 45 |



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## Self-centering dial bore gage

### ACCESSORIES

| Order no. | Connection thread | Description | Type |
|---|---|---|---|
| | | | |
| **4335000** | | Millimess 0.5 µm, ± 25 µm | 1002 |
| **4334000** | | Millimess 1 µm, ± 50 µm | 1003 |
| **4333000** | | Millimess 5 µm, ± 130 µm | 1004 |
| **4337662** | | Digital indicator, 0.0005 mm, 12.5 mm | 1087 BR |
| **4337664** | | Digital indicator, 0.0005 mm, 12.5 mm | 1087 BRi |
| **4473377** | | Setting rings in set for measuring range 4 –9.5 mm | 844 Ke |
| **4473379** | | Setting rings in set for measuring range 10 –20 mm | 844 Ke |
| **4473400** | M6 x 0.75 | Holder for indicator, Ø 8 mm / M6 x 0.75 | 844 Kg |
| **4473401** | M6 x 0.75 | Holder for indicator, Ø 8 mm / M6 x 0.75 | 844 Kga |
| **4473402** | M6 x 0.75 | Holder for indicator, Ø .375" / M6 x 0.75 | 844 Kgz |
| **4473405** | M6 x 0.75 | Extension for measuring depth, length 50 mm | 844 Kv |
| **4473406** | M6 x 0.75 | Extension for measuring depth, length 100 mm | 844 Kv |
| **4473407** | M6 x 0.75 | Extension for measuring depth, length 250 mm | 844 Kv |
| **4473409** | M6 x 0.75 | Right angle attachment, M6 x 0.75 | 844 Kw |



1004



1003



1002



1087 BR



844 Ke



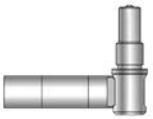
844 Kg;844 Kgz



844 Kga



844 Kv



844 Dw;844 Kw

# **Marameter** | Self-centering inner measuring device 844 K

## High-precision comparative measurements of holes

Inside measuring probes from the 844 K family are 2-point comparative measuring instruments used to determine a reversal point in a bore by oscillation. This reversal point equates to the minimum and thus the exact bore diameter.

### Measuring process

The measuring value is displayed with analog dial comparators or electronic dial indicators.

### Practical tip

An electronic dial indicator such as type 1087 BR or 1087 BRi, offers the major advantage of being able to automatically record the reversal point using the MIN function and display an absolute measuring value on the screen due to the PRESET setting. In addition, you can conveniently and reliably transfer the measuring data to a PC or a CAQ system by data cable or Integrated Wireless technology.









### Measuring process

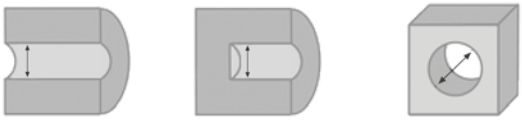
The reversal point (minimum value) is calculated by rocking in a bore.

### Setting the comparative measuring instrument

Setting rings are used to set the instrument to the respective nominal size.

### Typical applications of self-centering inside measuring probes

- Rapid testing of hole diameters



- Determining roundness and cylindricity deviations by rotating and moving to other bore depths





### Special advantages

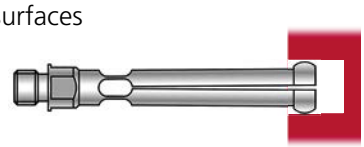
Setting rings are used to set the instrument to the respective nominal size.

- Self-centering in the hole
- Fast determination of reversal point by oscillation
- Measuring value displayed immediately
- Ideal for processing measuring values directly especially when used with digital indicating instruments

# Inside measuring probe models (split-ball probe)

### 844 K standard for common hole shapes

- Split-ball probe made of hardened steel
- Hard chrome-plated measuring surfaces



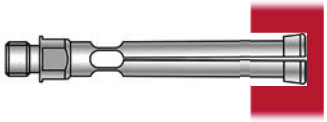


### 844 KC for common hole shapes with DLC coating

- Split-ball probe made of hardened steel
- Measuring surfaces and inner edges coated with DLC (hard diamond-like coating)
- Enhanced wear protection and very low friction coefficients, therefore ideal for measurements on sensitive or abrasive surfaces
- For common hole shapes

### 844 KS split-ball probe for bore measurements close to the bottom of the hole

- Split-ball probe made of hardened steel
- Hard chrome plated measuring surfaces



### Advantages of DLC coating

- **DLC coating** (diamond-like carbon)
- Extremely hard coating for **very high wear resistance**
- **Extremely low friction coefficient, thus preventing** e.g.
  - Streaking on precision-machined non-ferrous metal surfaces
  - Increased wear on abrasive materials
- DLC coating over entire measuring surfaces including inner contact point of driving needle, for **very high long-term accuracy (linearity)**
- **Visual wear display:** Visible light spot once coating is worn
- **Excellent corrosion prevention**

### Ideal equipment for long-term accuracy

Driving needles are inserted in the probe to transfer the measuring movement of the probe head to the indicating instrument. To ensure maximum service life and thus high linearity over a long period of time, Mahr drive needles are generally made of solid carbide.



### Modular system

When combined with extensive accessories (indicating instruments, inside measuring probes with driving needle, holders, extensions and right angle attachments), inside measuring probes become precision measuring instruments customized to the measuring task.

