Marameter 844 KC

Self-centering dial bore gage

FEATURES

- Measuring head made in harden steel, DLC coated
- 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
- **Benefits of DLC Coating**

  - DLC = Diamond-Like Carbon
  - Extremely high wear resistance, for long service life even on hard or abrasive surfaces
  - Reduction of friction, ideal for sensitive surfaces such as non-ferrous metals and aluminium alloys
  - Wear indicator, worn areas appear as bright spots in the dark DLC coating

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:
Standard model with DLC-coated surface

- 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
4473105	844 KC	1.00 1.10 1.20 1.30 1.40	**0.95** –1.15 1.07 –1.25 1.17 –1.35 1.27 –1.45 1.37 - **1.55**	0.95 –1.55	5	2 %, min. 1 µm	1
4473106	844 KC	1.75 2.00 2.25 2.50 2.75 3.00 3.25 3.50 3.75	**1.50** –1.90 1.80 –2.20 2.05 –2.45 2.30 –2.70 2.55 –2.95 2.80 –3.20 3.05 –3.45 3.30 –3.70 3.55 - **3.95**	1.5 –3.95	9	1 %, min. 1 µm	1
4473107	844 KC	4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 8.00 8.50 9.00 9.50	**3.70** –4.30 4.20 –4.80 4.70 –5.30 5.20 –5.80 5.70 –6.30 6.20 –6.80 6.70 –7.30 7.20 –7.80 7.70 –8.30 8.20 –8.80 8.70 –9.30 9.20 - **9.80**	3.7 –9.8	12	1 %, min. 1 µm	1
4473108	844 KC	1.75 2.00 2.25 2.50 2.75 3.00 3.25 3.50 3.75 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 8.00 8.50 9.00 9.50	**1.50** –1.90 1.80 –2.20 2.05 –2.45 2.30 –2.70 2.55 –2.95 2.80 –3.20 3.05 –3.45 3.30 –3.70 3.55 –3.95 3.70 –4.30 4.20 –4.80 4.70 –5.30 5.20 –5.80 5.70 –6.30 6.20 –6.80 6.70 –7.30 7.20 –7.80 7.70 –8.30 8.20 –8.80 8.70 –9.30 9.20 - **9.80**	1.5 –9.8	21	1 %, min. 1 µm	1
4473109	844 KC	10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00	**9.40** –10.60 10.40 –11.60 11.40 –12.60 12.40 –13.60 13.40 –14.60 14.40 –15.60 15.40 –16.60 16.40 –17.60 17.40 –18.60 18.40 –19.60 19.40 - **20.60**	9.4 –20.6	11	1 %, min. 1 µm	1

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Order no.	Nominal size	Individual probe measuring range	H1	L	Measuring depth
	mm	mm	mm	mm	mm
4473105	1.00	**0.95** –1.15	0.6	19.50	10.5
	1.10	1.07 –1.25	0.6	19.50	10.5
	1.20	1.17 –1.35	0.6	19.50	10.5
	1.30	1.27 –1.45	0.6	19.50	10.5
	1.40	1.37 - **1.55**	0.6	19.50	10.5
4473106	1.75	**1.50** –1.90	0.9	25.30	16
	2.00	1.80 –2.20	0.9	25.30	16
	2.25	2.05 –2.45	0.9	25.30	16
	2.50	2.30 –2.70	1.2	30.60	21
	2.75	2.55 –2.95	1.2	30.60	21
	3.00	2.80 –3.20	1.2	30.60	21
	3.25	3.05 –3.45	1.2	30.60	21
	3.50	3.30 –3.70	1.2	30.60	21
	3.75	3.55 - **3.95**	1.2	30.60	21
4473107	4.00	**3.70** –4.30	2.0	47.30	38
	4.50	4.20 –4.80	2.0	47.30	38
	5.00	4.70 –5.30	2.0	47.30	38
	5.50	5.20 –5.80	2.0	47.30	38
	6.00	5.70 –6.30	2.0	47.30	38
	6.50	6.20 –6.80	2.0	47.30	38
	7.00	6.70 –7.30	2.0	47.30	38
	7.50	7.20 –7.80	2.0	47.30	38
	8.00	7.70 –8.30	2.0	47.30	38
	8.50	8.20 –8.80	2.0	47.30	38
	9.00	8.70 –9.30	2.0	47.30	38
	9.50	9.20 - **9.80**	2.0	47.30	38
4473108	1.75	**1.50** –1.90	0.9	25.30	16
	2.00	1.80 –2.20	0.9	25.30	16
	2.25	2.05 –2.45	0.9	25.30	16
	2.50	2.30 –2.70	1.2	30.60	21
	2.75	2.55 –2.95	1.2	30.60	21
	3.00	2.80 –3.20	1.2	30.60	21
	3.25	3.05 –3.45	1.2	30.60	21
	3.50	3.30 –3.70	1.2	30.60	21
	3.75	3.55 –3.95	1.2	30.60	21
	4.00	3.70 –4.30	2.0	47.30	38
	4.50	4.20 –4.80	2.0	47.30	38
	5.00	4.70 –5.30	2.0	47.30	38
	5.50	5.20 –5.80	2.0	47.30	38
	6.00	5.70 –6.30	2.0	47.30	38
	6.50	6.20 –6.80	2.0	47.30	38
	7.00	6.70 –7.30	2.0	47.30	38
	7.50	7.20 –7.80	2.0	47.30	38
	8.00	7.70 –8.30	2.0	47.30	38
	8.50	8.20 –8.80	2.0	47.30	38
	9.00	8.70 –9.30	2.0	47.30	38
	9.50	9.20 - **9.80**	2.0	47.30	38
4473109	10.00	**9.40** –10.60	3.3	48.50	45
	11.00	10.40 –11.60	3.3	48.50	45
	12.00	11.40 –12.60	3.3	48.50	45
	13.00	12.40 –13.60	3.3	48.50	45
	14.00	13.40 –14.60	3.3	48.50	45
	15.00	14.40 –15.60	3.3	48.50	45
	16.00	15.40 –16.60	3.3	48.50	45
	17.00	16.40 –17.60	3.3	48.50	45
	18.00	17.40 –18.60	3.3	48.50	45
	19.00	18.40 –19.60	3.3	48.50	45
	20.00	19.40 - **20.60**	3.3	48.50	45

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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
4473375		Setting rings in set for measuring range 1 –1.4 mm	844 Ke
4473376		Setting rings in set for measuring range 1.75 –3.75 mm	844 Ke
4473377		Setting rings in set for measuring range 4 –9.5 mm	844 Ke
4473378		Setting rings in set for measuring range 1.75 –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



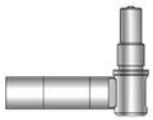
844 Kg;844 Kgz



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

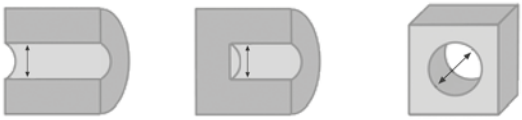
The reversal point (minimum value) is calculated by rocking in a bore.

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

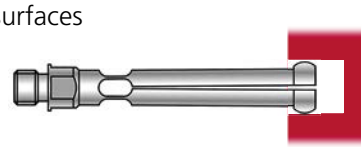
Setting rings are used to set the instrument to the respective nominal size.

- 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



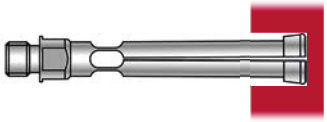


844 KC for common hole shapes with DLC coating

- 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.

