

Self-Centering Dial Bore Gages 844 K Intramess



Features

- Measuring the diameter, roundness and conicity of bores
- Spring-loaded halves of measuring probe are split via expanding pin with precision lapped taper. This movement is transferred to indicating instrument
- Maximum wear-resistance due to hard chrome plating. From 4 mm alternatively with carbide tipped available on request
- Constant measuring force as a result of built-in spring thus eliminating user influence
- Highly versatile, each gage covers a large range. Within the respective limits, quickly and easily adjustable to any size and any type of measuring application
- Measuring probe, holder, depth extensions, right-angle attachments and depth stops are part of an extensive modular system
- Supplied with: Holder, probe, expanding pin and a wooden case, excludes an indicating instrument

Technical Data

Complete Instrument

- 844 K** Measuring heads hard chrome plated, expanding pin made of stainless steel
- 844 KH** Measuring heads carbide tipped on both sides, carbide expanding pin
- 844 KS** Blind hole measuring heads hard chrome plated, expanding pin made of stainless steel

Catalog no.	Measuring range mm	Number of meas. probes	Order no.*
844 K	0.47 - 0.97	6	4470000
	0.95 - 1.55	5	4470001
	1.5 - 4.2	10	4470002
	3.7 - 7.3	7	4470003**
	6.7 - 10.3	7	4470004**
	9.4 - 18.6	9	4470005**
844 KH	1.5 - 4.2	10	4471002
	3.7 - 7.3	7	4471003**
	6.7 - 10.3	7	4471004**
	9.4 - 18.6	9	4471005**
844 KS	1.5 - 4.2	10	4482163
	3.7 - 7.3	7	4482164**
	6.7 - 10.3	7	4482165**
	9.4 - 18.6	9	4482166**

* Excludes an indicating instrument

**Additionally includes measuring force spring 4470828 and disk 4470821

Accuracy

Deviation of linearity

- ≤ 2 % measuring ranges 0.47-1.55 mm
- ≤ 1 % measuring ranges 1.5-18.6 mm

Repeatability

- 1 μm manual measurement
- ≤ 0.5 μm measurement with Stand 844 Kst and Floating Holder 844 Ksts

Indicating Instruments

All indicating instruments that has a 8 mm mounting shank may be used. Recommended are:

Indicators	Readings	Order no.
Compramess 1004	5 μm	4333000
Millimess 1003	1 μm	4334000
Millimess 1003 XL	2 μm	4334001
Supramess 1002	0.5 μm	4335000
Extramess 2000	0.2 μm, 0.5 μm, 1 μm	4346000
Extramess 2001	0.2 μm, 0.5 μm, 1 μm	4346100
MarCator 1087 BR	1 μm, 2 μm, 4 μm, 10 μm	4337162

Digital Indicators see Chapter 5
Electrical Indicating Instruments see Chapter 7

Modular Unit System for 844 K Standard Measuring Probes

In addition complete Dial Bore Gages 844 K, modular units area available for assembly as required to suit an individual measuring task and or application.

Measuring Probe 844 Kk, Expander Pin, individual Ring Gage for 844 Ke

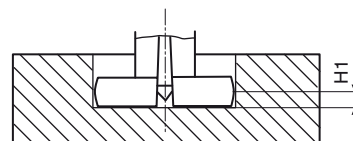
Nominal dimension mm	Measuring range mm	Measuring depth mm	Measuring probe hard chrome plated	Expanding pin steel	Measuring probe carbide tipped	Expander pin carbide	Ring gage	
0.50	0.47 - 0.53	1.25	4470586	4470801			4482300	
0.55	0.52 - 0.58	1.5	4470587				4482301	
0.60	0.57 - 0.67	1.7	4470588	4470802			4482302	
0.70	0.65 - 0.77	2.2	4470589				4482303	
0.80	0.75 - 0.87	2.55	4470590				4482304	
0.90	0.85 - 0.97	2.65	4470591				4482305	
1.00	0.95 - 1.15	10.5	4470592				4470803	
1.10	1.07 - 1.25	10.5	4470593	4482307				
1.20	1.17 - 1.35	10.5	4470594	4482308				
1.30	1.27 - 1.45	10.5	4470595	4482309				
1.40	1.37 - 1.55	10.5	4470596	4482310				
1.75	1.50 - 1.90	16	4470597	4470804	4471234	4471207	4482311	
2.00	1.80 - 2.20	16	4470598				4471206	4482312
2.25	2.05 - 2.45	16	4470599	4470805	4471812	4471819	4482313	
2.50	2.30 - 2.70	21	4470600				4471813	4482314
2.75	2.55 - 2.95	21	4470601				4471814	4482315
3.00	2.80 - 3.20	21	4470602				4471208	4482316
3.25	3.05 - 3.45	21	4470603				4471815	4482317
3.50	3.30 - 3.70	21	4470604				4471816	4482318
3.75	3.55 - 3.95	21	4470605				4471817	4482319
4.00	3.80 - 4.20	21	4470606				4471204	4482320
4.00	3.70 - 4.30	38	4470607				4471607	4482320
4.50	4.20 - 4.80	38	4470608				4471608	4482321
5.00	4.70 - 5.30	38	4470609	4471609	4482322			
5.50	5.20 - 5.80	38	4470610	4471610	4482323			
6.00	5.70 - 6.30	38	4470611	4471611	4482324			
6.50	6.20 - 6.80	38	4470612	4471612	4482325			
7.00	6.70 - 7.30	38	4470613	4470806	4471613	4471200	4482326	
7.50	7.20 - 7.80	38	4470615				4471615	4482327
8.00	7.70 - 8.30	38	4470616				4471616	4482328
8.50	8.20 - 8.80	45	4470617				4471617	4482329
9.00	8.70 - 9.30	45	4470618				4471618	4482330
9.50	9.20 - 9.80	45	4470619				4471619	4482331
10.00	9.70 - 10.30	45	4470620				4471620	4482332
10.00	9.40 - 10.60	45	4470621				4471621	4482332
11.00	10.40 - 11.60	45	4470622				4471622	4482333
12.00	11.40 - 12.60	45	4470623				4471623	4482334
13.00	12.40 - 13.60	45	4470624	4471624	4482335			
14.00	13.40 - 14.60	45	4470625	4470808	4471625	4471202	4482336	
15.00	14.40 - 15.60	45	4470626				4471626	4482337
16.00	15.40 - 16.60	80	4470627				4471627	4482338
17.00	16.40 - 17.60	80	4470628				4471628	4482339
18.00	17.40 - 18.60	80	4470629				4471629	4482340



for further technical data (e.g. nominal dimensions up to 40 mm) see **WebCode 11070**

Nominal dimension mm	L mm	H 1 mm
0.50	19.50	0.25
0.55	19.50	0.27
0.60	19.50	0.29
0.70	19.50	0.31
0.80	19.50	0.33
0.90	19.50	0.35
1.00	19.50	0.60
1.75	25.30	0.90
2.50	30.60	1.20
4.00	47.30	2.00
10.00	48.50	3.30

Minimum measurement height

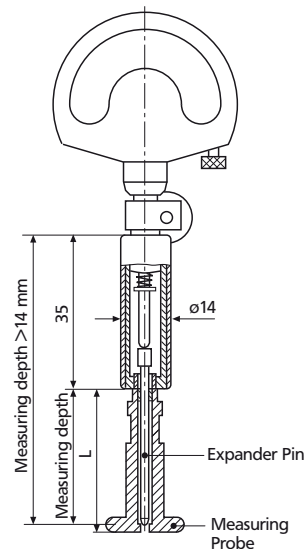


Modular Unit System for 844 KS Blind Hole Measuring Probes

In addition to complete Dial Bore Gages 844 KS, modular units are available for assembly as required to suit a individual measuring task and or application.

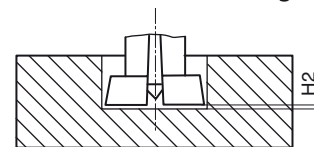
Blind Hole Measuring Probe 844 Kk, Blind Hole Expander Pin

Nominal dimension mm	Measuring range mm	Measuring depth mm	Blind hole measuring probe hard chrome plated	Blind hole expander pin steel
1.75	1.50 - 1.90	16	4482228	4482176
2.00	1.80 - 2.20	16	4482229	
2.25	2.05 - 2.45	16	4482230	
2.50	2.30 - 2.70	21	4470301	
2.75	2.55 - 2.95	21	4482227	
3.00	2.80 - 3.20	21	4482178	
3.25	3.05 - 3.45	21	4482179	4482177
3.50	3.30 - 3.70	21	4470300	
3.75	3.55 - 3.95	21	4482188	
4.00	3.80 - 4.20	21	4482180	
4.00	3.70 - 4.30	38	4482057	
4.50	4.20 - 4.80	38	4482162	
5.00	4.70 - 5.30	38	4482056	
5.50	5.20 - 5.80	38	4470953	
6.00	5.70 - 6.30	38	4482140	
6.50	6.20 - 6.80	38	4482055	
7.00	6.70 - 7.30	38	4482108	4482028
7.50	7.20 - 7.80	38	4482204	
8.00	7.70 - 8.30	38	4482054	
8.50	8.20 - 8.80	45	4482206	
9.00	8.70 - 9.30	45	4482170	
9.50	9.20 - 9.80	45	4482182	
10.00	9.70 - 10.30	45	4470375	
10.00	9.40 - 10.60	45	4482205	
11.00	10.40 - 11.60	45	4482042	
12.00	11.40 - 12.60	45	4482112	
13.00	12.40 - 13.60	45	4482102	
14.00	13.40 - 14.60	45	4482181	4482192
15.00	14.40 - 15.60	45	4482202	
16.00	15.40 - 16.60	80	4482021	
17.00	16.40 - 17.60	80	4482203	
18.00	17.40 - 18.60	80	4482113	




844 Kk

Minimum measurement height



Nominal dimension mm	L mm	H 2 mm
1.75	2.25	25.30
2.50	4.00	30.60
4.00	10.00	47.30
10.00	18.00	48.50

 for further technical data (e.g. nominal dimensions up to 40 mm) see **WebCode 11070**

Ring Gage Sets 844 Ke

For setting Dial Bore Gages 844 K, 844 KH and 844 KS. Supplied in sets to match the measuring ranges of these instruments. Can be stored in the wooden case of the bore gages.

Diameter tolerance $\pm 1 \mu\text{m}$

Ring Gages 844 Ke are only available with the diameters shown in the table.

For all other dimensions, Ring Gages 355 E with dimensions as per DIN 2250 and with actual deviation engraved are available.

For Meas. range mm	Diameter mm	Order no.
0.47 - 0.97	0.5/0.55/0.6/0.7/0.8/0.9	4470160
0.95 - 1.55	1/1.1/1.2/1.3/1.4	4470161
1.5 - 4.2	1.75/2/2.25/2.5/2.75/ 3/3.25/3.5/3.75/4	4470162
3.7 - 7.3	4/4.5/5/5.5/6/6.5/7	4470163
6.7 - 10.3	7/7.5/8/8.5/9/9.5/10	4470164
9.4 - 18.6	10/11/12/13/14/15/ 16/17/18	4470165

Modular Unit System for 844 K

Holder 844 Kg

With locking clamp for an indicating instrument and a connecting thread for a **Measuring Head 844 Kk**. Heat insulated handle

Order no. 4470851

Extensions 844 Kv

For extra-deep bores. Screws in between Holder 844 Kg and Measuring Head 844 Kk for measuring range 10-18 mm. Length 64 mm, \varnothing 8 mm,

Order no. 4470070

Right Angle Attachment 844 Kw

For measuring bores which are difficult to reach, e.g. in tight spaces, on machine tools or when work piece bores are inconveniently located. For screwing in between Holder 844 Kg and Measuring Head 844 Kk

Order no. 4470110

Lifter 954

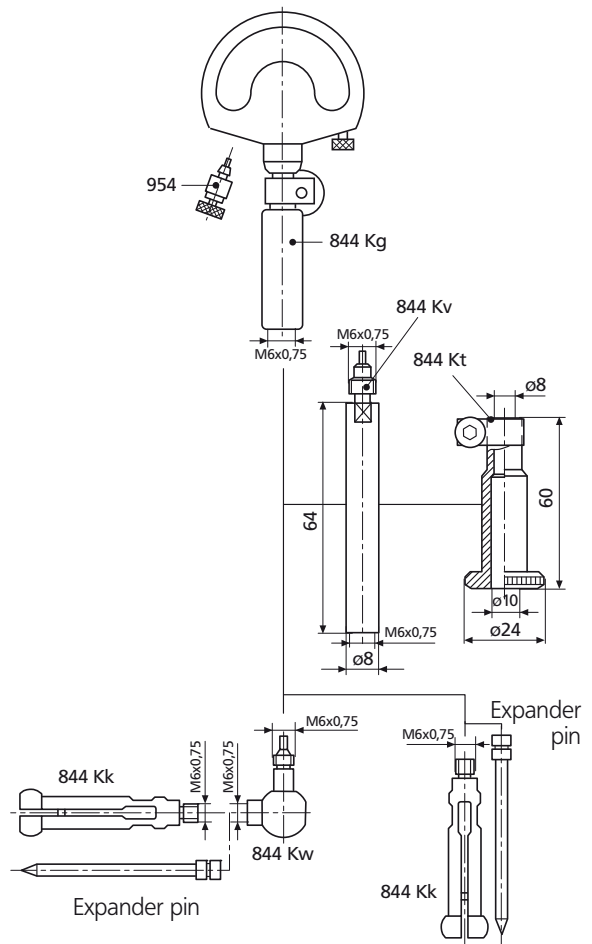
Facilitates insertion of measuring probe in bore by lifting measuring spindle of dial comparator.

Order no. 4372030

Depth Stop 844 Kt

For checking diameter of bores at prescribed depth. Only to be used with Extension 844 Kv.

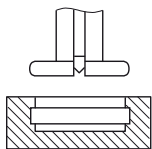
Order no. 4470115



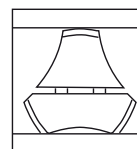
Measuring Probes for Special Applications

For measurement of blind holes, diameters of recesses, distances between plane-parallel surfaces, etc. special models of measuring probes are available on request.

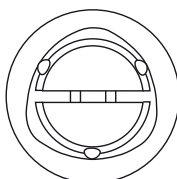
1. Measurement of the diameter of recesses



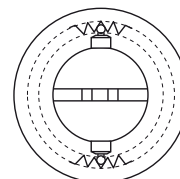
2. Measurement of plane-parallel surfaces



3. Measurement of polygon bores



4. Measurement of inside serrations, see 844 Z Page 9-70



Accessories

Stand 844 Kst



Floating Holder 844 Ksts



Features

For quick checks of bores in small work pieces. Hardened table plate can be raised with lever, thus moving test piece into position. Plate can be clamped at any height for checking eccentricity. Particularly suited to use with digital indicators, where appropriate in conjunction with data printers or computer equipment, in cases where the determination of the reversal point is inappropriate.

Table dia.	58 mm
Throat depth of arm	45 mm
Table stroke	30 mm
Max. work piece height	ca. 100 mm

Order no. 4470100

Features

For use in conjunction with Stand 844 Kst. Enables measuring probe to find common axis of bore and measuring instrument quickly and easily on insertion into hole, thus providing optimum measuring speed and high accuracy. Particularly suitable for small diameters, as measuring confidence is considerably enhanced.

Order no. 4470105

Angle Stop 844 Ka

Facilitates positioning of cylindrical work pieces under measuring instrument. For clamping to Stand 844 Kst.

Order no. 4470120

