

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

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		Number of meas. probes	Order no.*
	mm	(inch)		
844 K	0.47 - 0.97	(.018 - .038")	6	4470000
	0.95 - 1.55	(.037 - .060")	5	4470001
	1.5 - 4.2	(.060 - .160")	10	4470002
	3.7 - 7.3	(.145 - .29")	7	4470003**
	6.7 - 10.3	(.26 - .40")	7	4470004**
	9.4 - 18.6	(.37 - .73")	9	4470005**
844 KH	1.5 - 4.2	(.060 - .160")	10	4471002
	3.7 - 7.3	(.145 - .29")	7	4471003**
	6.7 - 10.3	(.26 - .40")	7	4471004**
	9.4 - 18.6	(.37 - .73")	9	4471005**
844 KS	1.5 - 4.2	(.060 - .160")	10	4482163
	3.7 - 7.3	(.145 - .29")	7	4482164**
	6.7 - 10.3	(.26 - .40")	7	4482165**
	9.4 - 18.6	(.37 - .73")	9	4482166**

* Includes holder, measuring probe, expanding pin and wooden case, but not 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:

Dial Comparator	Readings mm / inch	Order no. mm / inch
Compramess 1004 / 1004 Z	5 µm/ .0001"	4333000/4333900
Millimess 1003 / 1003 Z	1 µm/ .00005"	4334000/4334900
Millimess 1003 XL	2 µm	4334001
Supramess 1002 / 1002 Z	0.5 µm/ .00002"	4335000/4335900
Extramess 2000	0.2 µm/ .00001"	
	0.5 µm/ .00002"	4346000*
	1 µm/ .00005"	
Extramess 2001	0.2 µm/ .00001"	
	0.5 µm/ .00002"	4346100*
	1 µm/ .00005"	
µMaxµm	.001mm/.00005"	EDI-10302**

Digital Indicators see Chapter 5

Electrical Indicating Instruments see Chapter 7

* 230 V, for 115 V please refer to page 6-5

** requires contact 4360107

Modular Unit System for 844 K Standard Measuring Probes

In addition to complete Dial Bore Gages 844 K, modular units can also be compiled as required to suit a individual measuring task and or application.

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

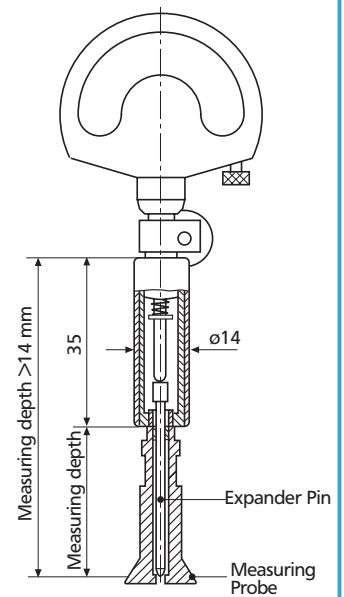
Nominal dimension mm	Measuring range mm	Measuring depth mm	Measuring probe hard chrome plated	Expanding pin steel	Measuring probe carbide tipped	Expander pin carbide	Ring gage	
0.50	0.47 - 0.53	1.25	4470586	4470801			4482300	
0.55	0.52 - 0.58	1.5	4470587				4482301	
0.60	0.57 - 0.67	1.7	4470588	4470802			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				4482306	
1.10	1.07 - 1.25	10.5	4470593	4470803			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				4482311	
2.00	1.80 - 2.20	16	4470598	4470804	4471234	4471207	4482312	
2.25	2.05 - 2.45	16	4470599				4471206	4482313
2.50	2.30 - 2.70	21	4470600	4470805	4471812		4482314	
2.75	2.55 - 2.95	21	4470601				4471813	4482315
3.00	2.80 - 3.20	21	4470602				4471814	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				4471818	4482320
4.00	3.70 - 4.30	38	4470607	4470806	4471204		4482320	
4.50	4.20 - 4.80	38	4470608				4471607	4482321
5.00	4.70 - 5.30	38	4470609				4471608	4482322
5.50	5.20 - 5.80	38	4470610				4471609	4482323
6.00	5.70 - 6.30	38	4470611				4471610	4482324
6.50	6.20 - 6.80	38	4470612				4471611	4482325
7.00	6.70 - 7.30	38	4470613				4471612	4482326
7.50	7.20 - 7.80	38	4470614	4471613	4482327			
8.00	7.70 - 8.30	38	4470615	4471614	4482328			
8.50	8.20 - 8.80	45	4470616	4471615	4482329			
9.00	8.70 - 9.30	45	4470617	4471616	4482330			
9.50	9.20 - 9.80	45	4470618	4471617	4482331			
10.00	9.70 - 10.30	45	4470619	4471618	4482332			
10.00	9.40 - 10.60	45	4470620	4471619	4482333			
11.00	10.40 - 11.60	45	4470621	4471620	4482334			
12.00	11.40 - 12.60	45	4470622	4471621	4482335			
13.00	12.40 - 13.60	45	4470623	4471622	4482336			
14.00	13.40 - 14.60	45	4470624	4471623	4482337			
15.00	14.40 - 15.60	45	4470625	4471624	4482338			
16.00	15.40 - 16.60	45	4470626	4471625	4482339			
17.00	16.40 - 17.60	80	4470627	4471626	4482340			
18.00	17.40 - 18.60	80	4470628	4471627				
			4470629	4471628				
				4471629				

Modular Unit System for 844 K 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	4480301		
2.75	2.55 - 2.95	21	4482227	4482177	
3.00	2.80 - 3.20	21	4482178		
3.25	3.05 - 3.45	21	4482179		
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		4482028
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		
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	4482192	
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		
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

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 wooden case of bore gages.

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

Ring Gages 844 Ke are only available with the diameters given in the table on the right.

For all other dimensions use must be made of Ring Gages 355 E with dimensions as per DIN 2250 and with actual deviation engraved.

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 64mm, \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

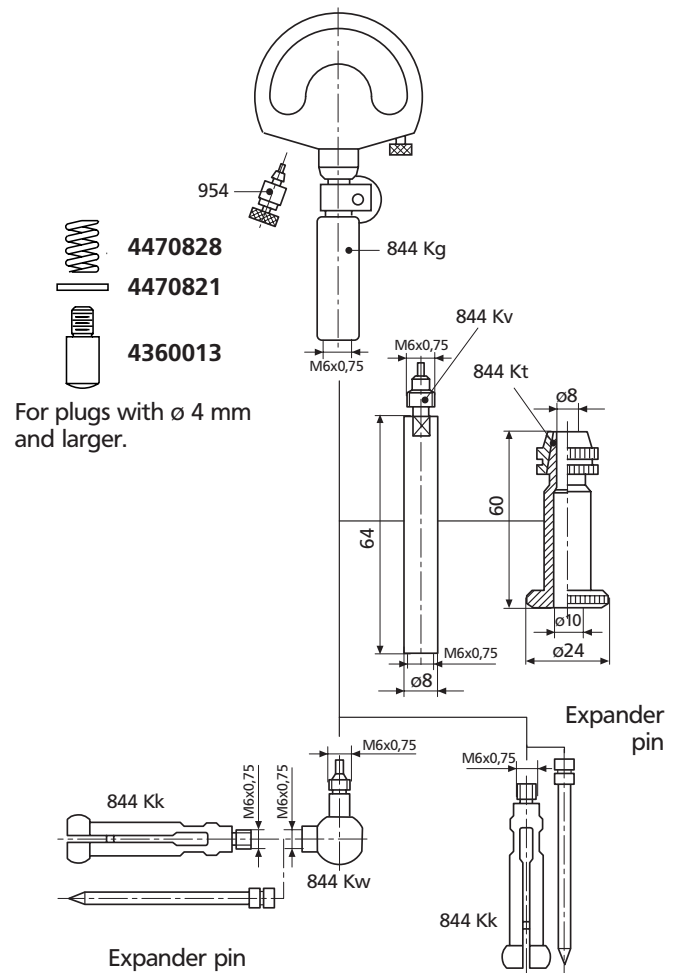
Facilitates insertion of measuring probe in bore by lifting measuring spindle of dial comparator.

Order no. 4372030

Depth Stop 844 Kt

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

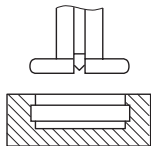
Order no. 4470115



Measuring Probes for Special Applications

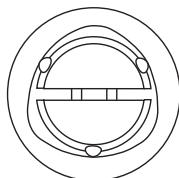
For measurement of blind holes, diameters of recesses, distances between plane-parallel surfaces, etc. special models of measuring probes are available on request.

1. Measurement of the diameter of recesses*

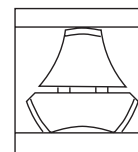


* Requires holder 4471196

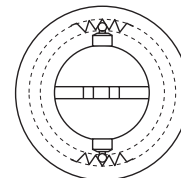
3. Measurement of polygon bores



2. Measurement of plane-parallel surfaces



4. Measurement of inside serrations, see 844 Z Page 9-60



Accessories

Stand 844 Kst



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 determination of reversal point is inappropriate.

Table dia.	58 mm / 2.28"
Throat depth of arm	45 mm / 1.77"
Table stroke	30 mm / 1.18"
Max. work piece height	approx. 100 mm / 4"

Order no. 4470100

Angle Stop 844 Ka

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

Order no. 4470120

Floating Holder 844 Ksts



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

