

## 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

#### 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

Catalog no.	Measuring range		Number of meas. probes	Order no.*
	mm	(inch)		
<b>844 K</b>	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**
<b>844 KH</b>	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**
<b>844 KS</b>	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**

#### 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
<b>Compramess 1004 / 1004 Z</b>	5 μm/ .0001"	4333000/4333900
<b>Millimess 1003 / 1003 Z</b>	1 μm/ .00005"	4334000/4334900
<b>Millimess 1003 XL</b>	2 μm	4334001
<b>Supramess 1002 / 1002 Z</b>	0.5 μm/ .00002"	4335000/4335900
<b>Extramess 2000</b>	0.2 μm/ .00001"	
	0.5 μm/ .00002"	4346000*
	1 μm/ .00005"	
<b>Extramess 2001</b>	0.2 μm/ .00001"	
	0.5 μm/ .00002"	4346100*
	1 μm/ .00005"	
<b>μMax μm</b>	.001mm/.00005"	EDI-10302**

\* Includes holder, measuring probe, expanding pin and wooden case, but not indicating instrument

\*\* Additionally includes measuring force spring 4470828 and disk 4470821

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

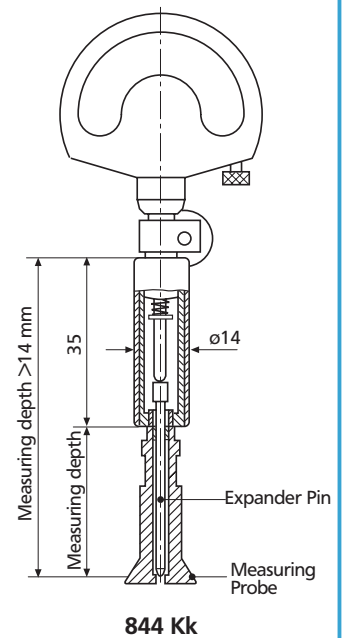
Nominal dimension mm	Measuring range mm	Measuring depth mm	Measuring probe hard chrome plated	Expanding pin steel	Measuring probe carbide tipped	Expander pin carbide	Ring gage	
0.50	0.47 - 0.53	1.25	4470586	4470801			4482300	
0.55	0.52 - 0.58	1.5	4470587				4482301	
0.60	0.57 - 0.67	1.7	4470588	4470802			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				4482307	
1.20	1.17 - 1.35	10.5	4470594	4470803			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				4471204	4482320
4.50	4.20 - 4.80	38	4470608	4471607	4482320			
5.00	4.70 - 5.30	38	4470609	4471608	4482321			
5.50	5.20 - 5.80	38	4470610	4471609	4482322			
6.00	5.70 - 6.30	38	4470611	4471610	4482323			
6.50	6.20 - 6.80	38	4470612	4471611	4482324			
7.00	6.70 - 7.30	38	4470613	4471612	4482325			
7.50	7.20 - 7.80	38	4470615	4470806	4471613	4471200	4482326	
8.00	7.70 - 8.30	38	4470616				4471615	4482327
8.50	8.20 - 8.80	45	4470617				4471616	4482328
9.00	8.70 - 9.30	45	4470618				4471617	4482329
9.50	9.20 - 9.80	45	4470619				4471618	4482330
10.00	9.70 - 10.30	45	4470620				4471619	4482331
10.00	9.40 - 10.60	45	4470621				4471620	4482332
11.00	10.40 - 11.60	45	4470622				4471621	4482332
12.00	11.40 - 12.60	45	4470623	4471622	4482333			
13.00	12.40 - 13.60	45	4470624	4471623	4482334			
14.00	13.40 - 14.60	45	4470625	4471624	4482335			
15.00	14.40 - 15.60	45	4470626	4471625	4482336			
16.00	15.40 - 16.60	80	4470627	4470808	4471626	4471202	4482337	
17.00	16.40 - 17.60	80	4470628				4471627	4482338
17.00	16.40 - 17.60	80	4470628				4471628	4482339
18.00	17.40 - 18.60	80	4470629				4471629	4482340

## 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	4482301	
2.75	2.55 - 2.95	21	4482227	
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	



## 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

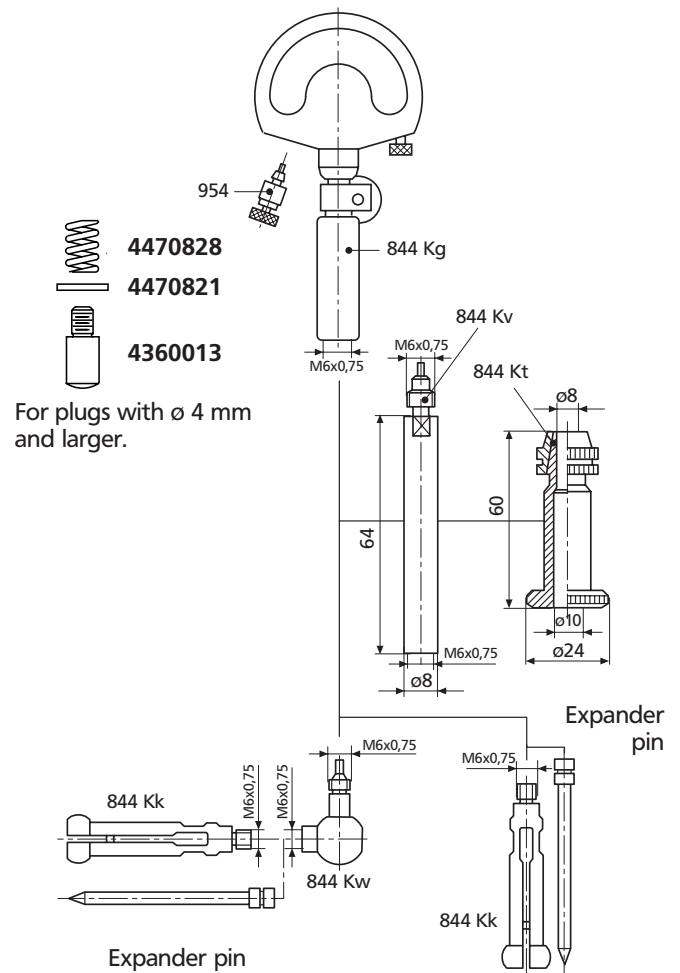
Facilitates insertion of measuring probe in bore by lifting measuring spindle of dial comparator.

Order no. 4372030

### Depth Stop 844 Kt

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

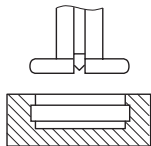
Order no. 4470115



## Measuring Probes for Special Applications

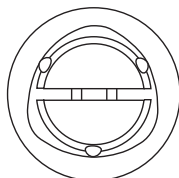
For measurement of blind holes, diameters of recesses, distances between plane-parallel surfaces, etc. special models of measuring probes are available on request.

1. Measurement of the diameter of recesses\*

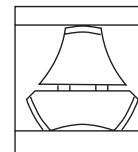


\* Requires holder 4471196

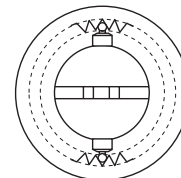
3. Measurement of polygon bores



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

