

Indicating Plug Gages 844 D



Features

- For the rapid testing of diameter, roundness and conicity of bores
- Especially suitable for testing batches with tight tolerances
- No rocking in the bore is required to determine the reversal point
- Therefore ideal for use in conjunction with a digital indicating instrument and for subsequent processing of measured values
- Measuring head has a hardened, hard chromium-plated guide cylinder and carbide-tipped anvils
- The carbide expanding pin transfers radial movement to indicating instrument
- Constant measuring force as a result of built-in spring, thus eliminating user influence
- Measuring head, holder, depth extension, right angle attachments and depth stops are part of an extensive modular system

Technical Data of the Measuring Heads

Nominal diameter of the bore	Measuring range starting from the minimum bore dimension to be measured	844 Dk/844Dkr	844 Dks (from 4 mm)
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2,98 - 8 mm	= - 0,02 + 0,1 mm	= - 0,02 + 0,1 mm
over 8 - 16 mm	= - 0,02 + 0,15 mm	= - 0,02 + 0,15 mm
over 16 - 32 mm	= - 0,02 + 0,2 mm	= - 0,02 + 0,15 mm
over 32 - 70 mm	= - 0,03 + 0,2 mm	= - 0,03 + 0,15 mm
over 70 - 200 mm	= - 0,04 + 0,2 mm	= - 0,04 + 0,15 mm

When placing an order please quote the nominal diameter and tolerances, for example:

Bore diameter	Tolerance	
35 D7	+ 80	+105 μm
35 H7	+ 0	+25 μm
35 R7	- 50	-25 μm

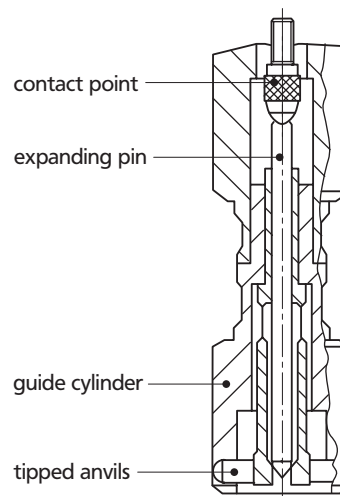
The diameter of the guide cylinder is produced between 0.02 and 0.07 mm smaller than the minimum dimension of the bore to be checked.

Example:

Plug Gage 844 Dk for bore 35 D7
 Nominal diameter: 35 mm
 Minimum dimension: 35.080 mm
 Maximum dimension: 35.105 mm
 Meas. range: 35.050 - 35.280 mm

Accuracy

Hysteresis	$\leq 0.4 \mu\text{m}$
Repeatability	$\leq 1 \mu\text{m}$
Linearity	$\leq 1 \%$
Linearity 844 Dks >16 mm	$\leq 2 \%$



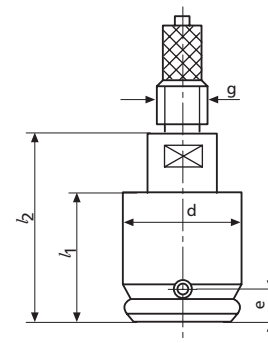
Plug Gages

Measuring Head 844 Dk

Standard version

	Diameter		l_1	Dimensions		e	Connection thread
	d mm	inch		l_2 mm	g		
	2.98 - 8	.12 - .3"	23	31	1.5		M6 x 0.75*
over	8 - 16	.3 - .6"	25	33.5	3		M6 x 0.75
over	16 - 32	.6 - 1.26"	26	39	3.5		M10 x 1
over	32 - 44	1.26 - 1.73"	26	39	3.5		M10 x 1
over	44 - 70	1.73 - 2.75"	26	39	4		M10 x 1
over	70 - 200	2.75 - 8"	33	39	4		M10 x 1

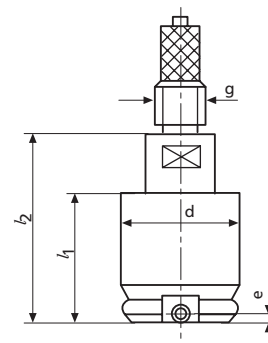
* With an Adapter for connection to the Holder



Measuring Head 844 Dks

For the measurement of blind holes.

	Diameter		l_1	Dimensions		e	Connection thread
	d mm	inch		l_2 mm	g		
	4 - 8	.16 - .3"	23	31	0.6	M6 x 0.75*	
over	8 - 16	.3 - .6"	25	33.5	0.6	M6 x 0.75	
over	16 - 32	.6 - 1.26"	26	39	1	M10 x 1	
over	32 - 44	1.26 - 1.73"	26	39	1	M10 x 1	
over	44 - 70	1.73 - 2.75"	26	39	1	M10 x 1	
over	70 - 150	2.75 - 6"	33	39	1	M10 x 1	

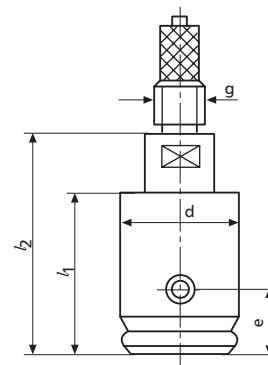


Measuring Head 844 Dkr

With an extended guide cylinder for the measurement of through holes from the edge of the bore. These are particularly suitable for narrow parts.

	Diameter		l_1	Dimensions		e	Connection thread
	d mm	<i>inch</i>		l_2 mm	g		
	2.98 - 8	.12 - .3"	28	36	6	M6 x 0.75*	
over	8 - 16	.3 - .6"	31	40	9	M6 x 0.75	
over	16 - 32	.6 - 1.26"	32	45	9.5	M10 x 1	
over	32 - 44	1.26 - 1.73"	32	45	9.5	M10 x 1	
over	44 - 70	1.73 - 2.75"	26	46.5	10.5	M10 x 1	
over	70 - 200	2.75 - 8"	33	51	15	M10 x 1	

* With an Adapter for connection to the Holder



Measuring Heads for Special Applications

Available for example with 3 anvils for concentricity and polygon tests, with flat anvils for plane-parallel surfaces, with anvils made of plastic, ruby, ceramic or diamond for particular material characteristics.

Modular Unit System 844 D

Standard Holder 844 Kg/844 Dg

With locking clamp for an indicating instrument and a connecting thread for a measuring head. Heat insulated handle. The model 844 Dg is made from Invar steel.

Cat. no.	Connecting thread g	Length L mm/inch	Handle dia. D mm/inch	Order no.
844 Kg	M6 x 0.75	50/ 1.98"	14/ .55"	4470851
844 Dg	M10 x 1	150/ 6"	26/ 1"	4478851

Short Holder 844 Dgk

With locking clamp for an indicating instrument and a connecting thread for a measuring head. Heat insulated handle.

Cat. no.	Connecting thread g	Length L mm/inch	Handle dia. D mm/inch	Order no.
844 Dgk	M10 x 1	61/ 2.4"	26/ 1"	4478050

Holder 844 Dge for Inductive Measuring Probes

With long sleeve for shock and waterproof mounting of inductive measuring probes. Strain relief clamp for probe cable. Threaded connection for measuring heads. Heat insulated handle.

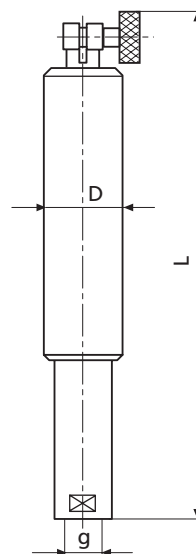
Cat. no.	Connecting thread g	Length L mm/inch	Handle dia. D mm/inch	Order no.
844 Dge	M6 x 0.75	195/ 7.7"	33/ 1.3"	4478020
	M10 x 1	195/ 7.7"	33/ 1.3"	4478021

Right Angle (Elbow) Attachment

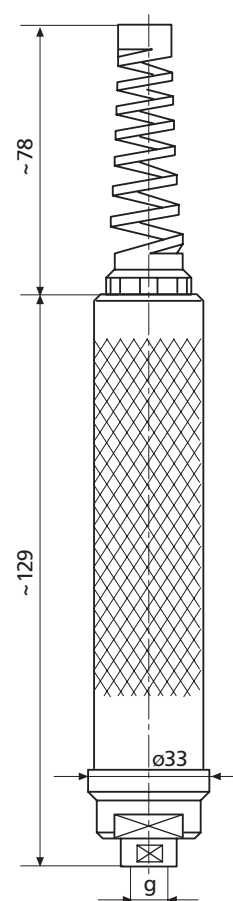
For measuring difficult to reach bores, e.g. in tight spaces, on a machine tool or when work piece bores are inconveniently located. For screwing in between holder and measuring head.

Cat. no.	Connecting thread g mm	Elbow		Order no.
		Length L mm/inch	Height H mm/inch	
844 Kw	M6 x 0.75	26.5/ 1.04"	22.5/ .89"	4470110
844 Dw	M10 x 1	36.7/ 1.44"	17/ .67"	4478110

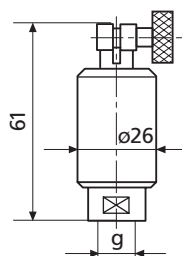
844 Kg / 844 Dg



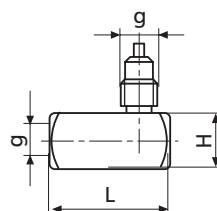
844 Dge



844 Dgk



844 Kw / 844 Dw



Modular Unit System 844 D

Extensions

For extra-deep bores. Screws in between holder and measuring heads. Several extensions can be screwed together as of 8 mm. Models 844 Dv and 844 Dvk made of Invar steel.

Cat. no.	Connecting thread g	Length L mm/inch	dia. D mm/inch	Order no.
844 Dvk	M6x0.75/M3.5x0.35	64/2.5"	3.8/.15"	4478080
844 Kv	M6 x 0.75	64/2.5"	8/.32"	4470070
844 Dv	M10 x 1	64/2.5"	15/.6"	4478070
844 Dv	M10 x 1	80/3"	15/.6"	4478071
844 Dv	M10 x 1	100/4"	15/.6"	4478072
844 Dv	M10 x 1	125/5"	15/.6"	4478073
844 Dv	M10 x 1	250/10"	15/.6"	4478074
844 Dv	M10 x 1	500/20"	15/.6"	4478075
844 Dv	M10 x 1	750/30"	15/.6"	4478076

Depth Stops

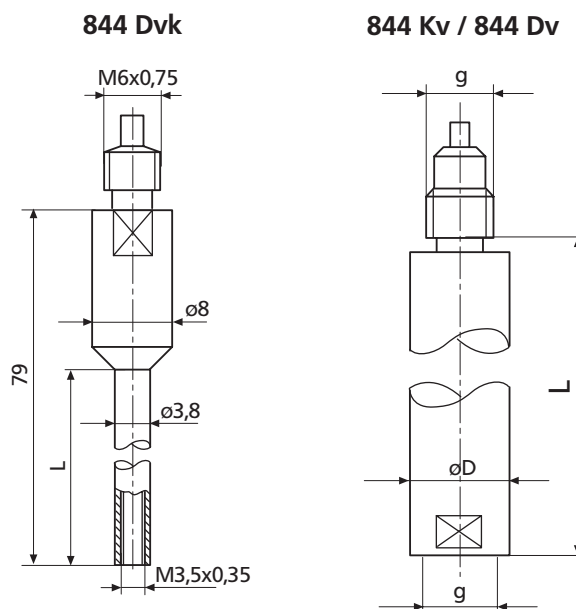
For limiting depth of insertion of measuring head in bore. Can be attached to Extensions 844 Kv or 844 Dv. With clamping screw.

Cat. no.	Mounting hole dia. d mm/inch	Stop surface dia. A mm/inch	Order no.
844 Kt	8/.32"	25/ 1"	4470115
844 Dt	15/.6"	45/ 1.8"	4478115
844 Dt	15/.6"	75/ 3"	4478116
844 Dt	15/.6"	110/ 4.3"	4478117
844 Dt	15/.6"	160/ 6.3"	4478118
844 Dt	15/.6"	220/ 8.6"	4478119

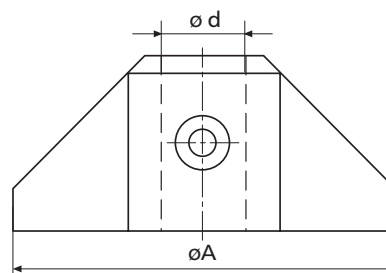
Depth Stop Rings

For limiting depth of insertion of measuring head in bore. Clamped onto the measuring head.

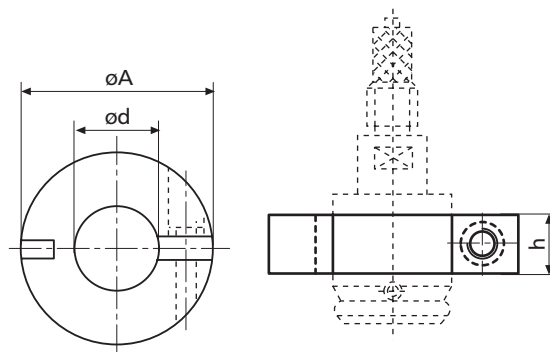
Cat. no.	Mounting hole dia. d mm	Stop surface dia. A mm/inch	Height h mm/inch	Order no.
844 Dtr	3 - 5	27/ 1.1"	10/ .4"	4478130
	5 - 8	30/ 1.2"	10/ .4"	4478130
	8 - 11	33/ 1.3"	10/ .4"	4478130
	11 - 15	37/ 1.5"	10/ .4"	4478130
	15 - 20	42/ 1.7"	10/ .4"	4478130
	20 - 25	51/ 2.0"	12/ .5"	4478131
	25 - 30	56/ 2.2"	12/ .5"	4478131
	30 - 35	61/ 2.4"	12/ .5"	4478131
	35 - 40	66/ 2.6"	12/ .5"	4478131
	40 - 44	71/ 2.8"	12/ .5"	4478131
	44 - 50	76/ 2.9"	12/ .5"	4478132
	50 - 60	86/ 3.4"	12/ .5"	4478132
	60 - 70	96/ 3.8"	12/ .5"	4478132
	70 - 80	106/ 4.1"	12/ .5"	4478132
	80 - 90	116/ 4.6"	12/ .5"	4478133
	90 - 100	126/ 4.9"	12/ .5"	4478133



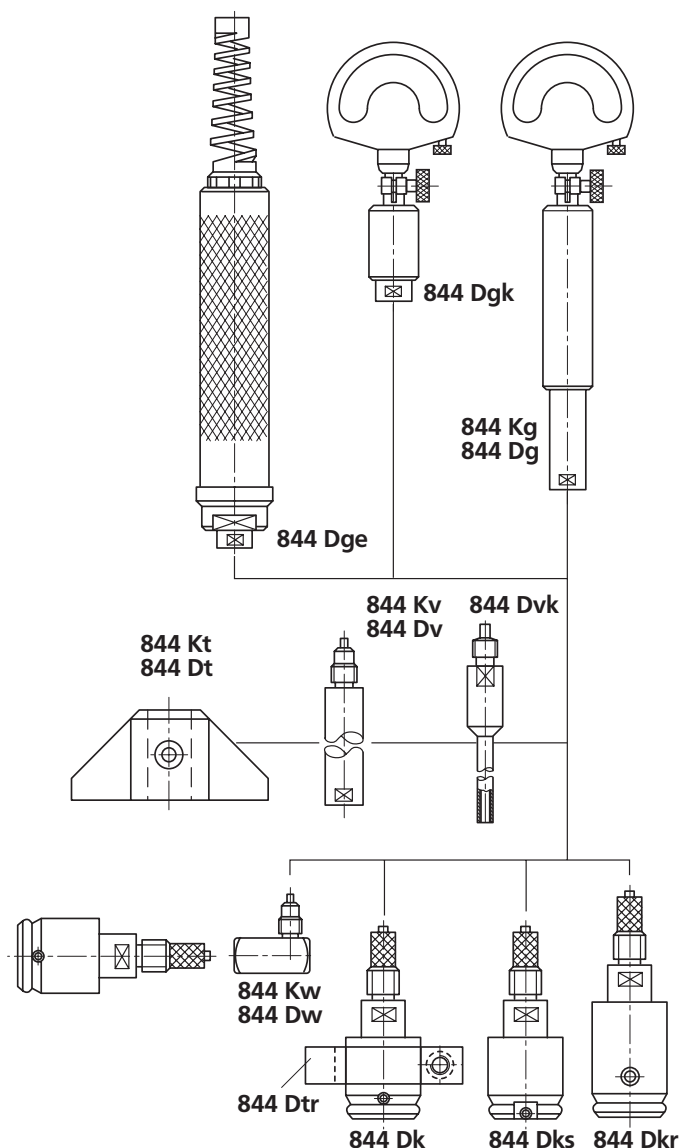
844 Kt / 844 Dt



844 Dtr



Modular Units	Diameter of Measuring Heads			
	2.98 - 8 mm (.16 - .3")	8 - 16 mm (.3" - .6")	over 16 mm (over .6")	
844 Kg	4470851			
844 Dg				
844 Dgk				
844 Dge				
	4478020		4478021	
844 Dvk 844 Kv 844 Dv	4478080	4470070	4478070 to 4478076	
844 Kt 844 Dt		4470115	4478115 to 4478119	
844 Kw 844 Dw	4470110		4478110	
844 Dk 844 Dks 844 Dkr	• •	• •	• • •	
Modular Unit	Diameter of Measuring Heads			
	2,98 - 20 (.16-.787")	20 - 44 (.787-1.72")	44 - 80 (1.72-3.15")	80 - 100 (3.15-3.94")
844 Dtr	4478130	4478131	4478132	4478133



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
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	0.5 µm/ .00002"	EDI-20302**

Digital Indicators see Chapter 5

Electrical Indicating Instruments see Chapter 7

* 230 V, for 115 V please refer to page 6-5 ** requires contact 4360045

Adjustment of Plug Gages 844 D

Ring Gage 355 E:

Special wear-resistant gage steel. Hardened and lapped. With actual deviation engraved.

Dimensions: DIN 2250, type C
Manufacturing tolerance: DIN 2250
Available diameters: 0.5-200 mm