

Dial Bore Gage for Internal Serrations 844 Z



Dial Bore Gage 844 Z
 Diametrical two ball measurement "Mdk" from 3.5 - 333 mm

Modular Unit Parts 844 Kk
 "Mdk" from 3.5 - 26.1 mm
 (see table below)

Modular Unit Parts 844 Z
 "Mdk" 26 - 333 mm (see table on opposite page)

Modular Unit Parts:

Diametrical two ball measurement „M_{dk}“ from 3.5 - 26.1 mm

Ball dimen. M _{dk} (mm)	Order no. ball dia. 1-5 graduation 0.5	Ball dia. according to table	Order no. ball dia. 7.5-10 graduation 0.5	Expander pin Steel	
3.5 - 4.1	4482450	4482550		4470806	
4.0 - 4.6	4482451	4482551			
4.5 - 5.1	4482452	4482552			
5.0 - 5.6	4482453	4482553			
5.5 - 6.1	4482454	4482554			
6.0 - 6.6	4482455	4482555			
6.5 - 7.1	4482456	4482556			
7.0 - 7.6	4482457	4482557			
7.5 - 8.1	4482458	4482558			
8.0 - 8.6	4482459	4482559			
8.5 - 9.1	4482460	4482560			
9.0 - 9.6	4482461	4482561			
9.3 - 10.6	4482462	4482562	4482662		4470808
10.3 - 11.6	4482463	4482563	4482663		
11.3 - 12.6	4482464	4482564	4482664		
12.3 - 13.6	4482465	4482565	4482665		
13.3 - 14.6	4482466	4482566	4482666		
14.5 - 16.1	4482467	4482567	4482667		
15.5 - 17.1	4482468	4482568	4482668		
16.5 - 18.1	4482469	4482569	4482669		
17.5 - 19.1	4482470	4482570	4482670		
18.5 - 20.1	4482471	4482571	4482671		
19.5 - 21.1	4482472	4482572	4482672		
20.5 - 22.1	4482473	4482573	4482673		
21.5 - 23.1	4482474	4482574	4482674		
22.5 - 24.1	4482475	4482575	4482675		
23.5 - 25.1	4482476	4482576	4482676		
24.5 - 26.1	4482477	4482577	4482677		

Table (Sizes in mm)

0.500 - 0.551 - 0.620 - 0.623 - 0.630 - 0.722 - 0.862 - 0.895 - 0.965 - 1.100 - 1.118 - 1.125 - 1.250
 1.350 - 1.372 - 1.385 - 1.524 - 1.540 - 1.600 - 1.650 - 1.700 - 1.750 - 1.782 - 1.800 - 1.829 - 1.900
 2.032 - 2.250 - 2.284 - 2.386 - 2.438 - 2.667 - 2.704 - 2.713 - 2.721 - 2.743 - 2.750 - 3.048 - 3.250
 3.400 - 3.658 - 4.835 - 5.250 - 5.486 - 5.500 - 6.000 - 6.096 - 6.350 - 6.500 - 7.000

Features

- For diametrical two ball measurement Mdk, to obtain the pitch diameter and conical form of internal gears in any position and at any depth
- For ball dimensions from 3.5 to 26.1 mm use the 844 Kk with carbide ball anvils and in conjunction with an expander pin
- For ball dimensions >26 mm the measuring heads 844 z1 or 844 z2 with the appropriate modular units are to be employed
- Maximum wear resistance due to carbide ball anvils
- Constant measuring force due to built-in spring thus eliminating user influence
- Anvils, measuring heads, holder, spacer (intermediate piece) and depth extensions form a very comprehensive modular system which can rapidly be converted to measure further gear sizes

Lifting Knob 954

enables the dial bore gage to gently guided into the serration. The measuring spindle of the indicating instrument can also be lifted.

Order no. 4372030

Holder 844 Kg

with a clamping device for the indicating instrument. The mounting bore diameter 8 mm

Order no. 4470851

Extension 844 Kv

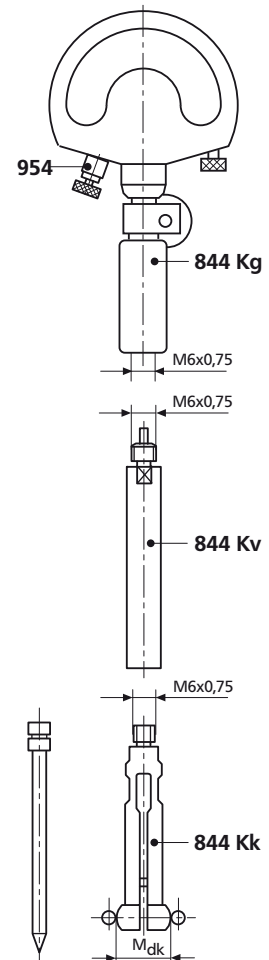
for measuring in depth bores; length 64 mm

Order no. 4470070

844 Kk Anvil

for internal serrations. ball dimension „M_{dk}“ from

3.5 - 26.1 mm



Modular Unit Parts

Diametrical two ball measurement from M_{dk} 26-333 mm

Measuring Heads

844 z1, for M_{dk} 26 - 130,5 mm

844 z2, for M_{dk} 48.5 - 333 mm

Order no.

4485000

4485001

Floating Ball Anvils with carbide ball

	Grad. (mm)	Ball dia. mm	
844 z3 Meas. range 3 mm, for Meas. Head 844 z1	0.5	1.0 - 5.0	4488300
		acc. to table	4488301
	0.5	7.5 - 10	4488302
844 z4 Meas. range 3 mm, for Meas. Head 844 z2	0.5	1.0 - 5.0	4488310
		acc. to table	4488311
	0.5	7.5 - 10	4488312

Ball Anvils with carbide ball

844 z5 , Length 2.5 mm	0.5	1.0 - 5.0	4488320
		acc. to table	4488321
	0.5	7.5 - 10	4488322
844 z6 , Length 5.0 mm	0.5	1.0 - 5.0	4488330
		acc. to table	4488331
	0.5	7.5 - 10	4488332
844 z7 , Length 7.5 mm	0.5	1.0 - 5.0	4488340
		acc. to table	4488341
	0.5	7.5 - 10	4488342
844 z8 , Length 10.0 mm	0.5	1.0 - 5.0	4488350
		acc. to table	4488351
	0.5	7.5 - 10	4488352
844 z15 , Length adjustable from 24-34 mm	0.5	1.0 - 5.0	4488360
		acc. to table	4488361
	0.5	7.5 - 10	4488362

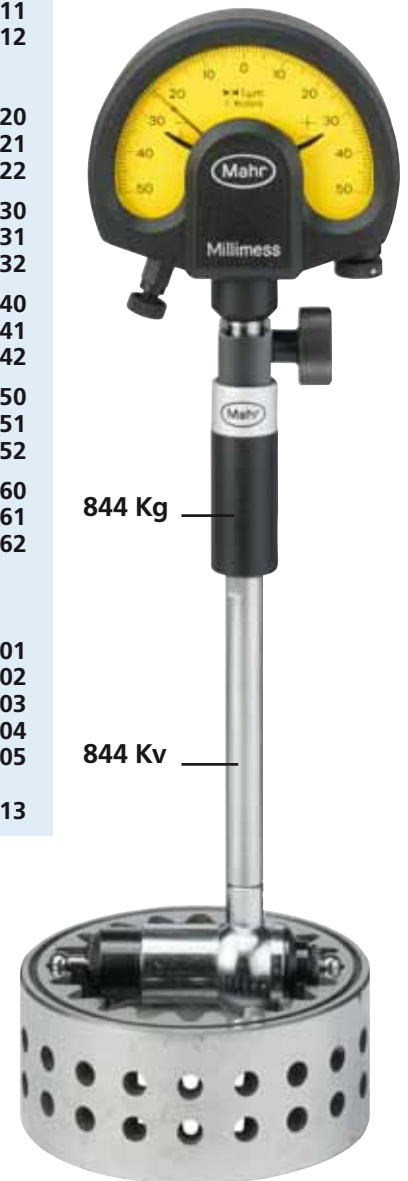
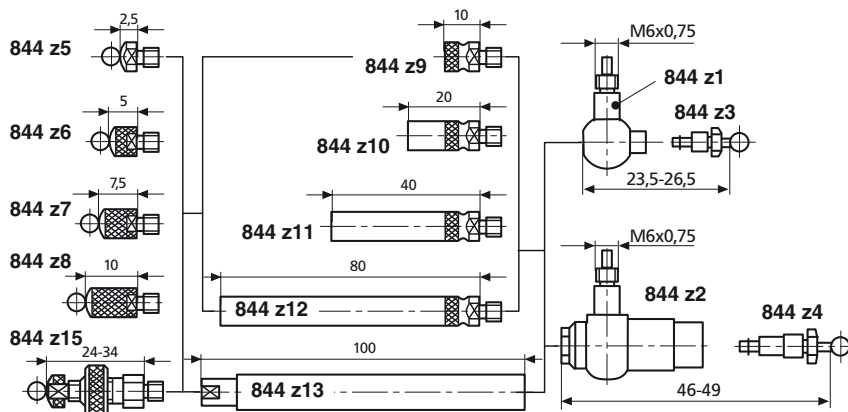
Spacer (intermediate piece)

	Length (mm)	
844 z9	10	4486501
844 z10	20	4486502
844 z11	40	4486503
844 z12	80	4486504
844 z13	100 *	4486505

Wooden case

4485013

* Only for 844 z2



Dial Bore Gage for Internal Serrations 844 Z

Selecting Modular Unit Parts Measuring Head 844 z1 and Floating Ball Anvil 844 z3

M _{dk} in mm	844 z5	844 z6	844 z7	844 z8	844 z15	844 z9	844 z10	844 z11	844 z12	844 z13
26.0 - 29.0	x									
28.5 - 31.5		x								
31.0 - 34.0			x							
33.5 - 36.5				x						
36.0 - 39.0	x					x				
38.5 - 41.5		x				x				
41.0 - 44.0			x			x				
43.5 - 46.5				x		x				
46.0 - 49.0	x						x			
47.5 - 60.5					x					
48.5 - 51.5		x					x			
51.0 - 54.0			x				x			
53.5 - 56.5				x			x			
56.0 - 59.0	x					x	x			
57.5 - 70.5					x	x				
58.5 - 61.5		x				x	x			
61.0 - 64.0			x			x	x			
63.5 - 66.5				x		x	x			
66.0 - 69.0	x							x		
67.5 - 80.5					x		x			
68.5 - 71.5		x						x		
71.0 - 74.0			x					x		
73.5 - 76.5				x				x		
76.0 - 79.0	x					x		x		
77.5 - 90.5					x	x	x			
78.5 - 81.5		x				x		x		
81.0 - 84.0			x			x		x		
83.5 - 86.5				x		x		x		
86.0 - 89.0	x						x	x		
87.5 - 100.5					x			x		
88.5 - 91.5		x					x	x		
91.0 - 94.0			x				x	x		
93.5 - 96.5				x			x	x		
96.0 - 99.0	x					x	x	x		
97.5 - 110.5					x		x	x		
98.5 - 101.5		x				x	x	x		
101.0 - 104.0			x			x	x	x		
103.5 - 106.5				x		x	x	x		
107.5 - 120.5					x		x	x		
117.5 - 130.5					x	x	x	x		

Example:

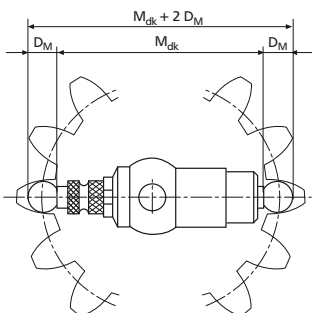
Diametrical two ball meas. M _{dk}	73.0 mm
Ball dia.	5.486 mm

When placing an order please quote the ball diameter of the modular unit system for 844 z3 - 844 z8, as well as 844 z15. On the basis of the above specified example above result several combinations that are possible to choice from is dependent upon the work piece. For further details please refer to the illustration on Page 9-67.

The measuring application can be solved with either one of the following 4 versions:

Type	Description	Ball dia. mm	Length mm	Order no.
Version 1				
844 z1	Meas. Head		23.5-26.5	4485000
844 z3	Floating Ball Anvil	5.486		4488301
844 z7	Ball Anvil	5.486	7.5	4488341
844 z11	Spacer		40.0	4486503
Meas. range			71.0-74.0	
Version 2				
844 z1	Meas. Head		23.5-26.5	4485000
844 z3	Floating Ball Anvil	5.486		4488301
844 z15	Ball Anvil	5.486	24.0-34.0	4488361
844 z10	Spacer		20.0	4486502
Meas. range			67.5-80.5	
Version 3				
844 z2	Meas. Head		46.0-49.0	4485001
844 z4	Floating Ball Anvil	5.486		4488311
844 z6	Ball Anvil	5.486	5.0	4488331
844 z10	Spacer		20.0	4486502
Meas. range			71.0-74.0	
Version 4				
844 z2	Meas. Head		46.0-49.0	4485001
844 z4	Floating Ball Anvil	5.486		4488311
844 z15	Ball Anvil	5.486	24.0-34.0	4488361
Meas. range			70.0-83.0	

Determination of setting values



D_M = Ball diameter of the ball anvil

M_{dk} = Diametrical two ball measurement

$M_{dk} + 2 D_M$ = Setting value (length of the gage block required for setting)

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

Digital Indicators see Chapter 5
Electrical Indicating Instruments see Chapter 7

