



VERDICT

EST ENGLAND 1938

METROLOGY CATALOGUE 5

Precision Measuring Tools
For Engineers

Introduction

Verdict Gauge Limited was founded in 1938 and based for many years in Dartford, North Kent. The company rapidly established a reputation for the manufacture and supply of precision metrology instrumentation. We are pleased to say that in a few years, the name of Verdict had attained "Household Brand", status and become synonymous with quality, precision and service in all parts of the world.

Our reputation has been relied upon by engineers for decades. We are very proud of our tradition and continue to provide instrumentation at the quality and price that you, our customer needs. To be certain of maintaining our leading position in the present and future markets which will demand an ever increasing investment in research and development, the decision was made to join the M J Allen Group of Companies.

We hope that you find this catalogue helpful in meeting your requirements for measuring equipment. Should you need any further information, please call our Sales Line on 01233 631554, or visit our website at www.mjallen.co.uk.

General Specification

The standard range of Verdict indicators incorporate, the principle of Lever and Worm spiral magnification. By this method and in particular the unique design of the coil type worm spiral, friction and loading of the transfer movements have been reduced to a minimum. Indicators have contact styli which operate within an arc of 180 degree and are reversible by means of a switch lever. Dials are rotatable for zero setting. Dial markings are clearly defined affording clarity of reading. All component parts are manufactured from the finest quality material available. Special features relating to various indicators are illustrated throughout the catalogue.

Dial Test Indicators

One of the reasons for the popularity of the Verdict dial test indicator is the unique pear shaped stylus which increases the versatility and obviates the cosine error. We claim that our invention of the **pear** shaped stylus point overcomes the errors which occur with the spherical point; the error being due to the reduced horizontal stylus length when it is tilted at an angle. With the pear shaped point, the point of contact remains the same horizontal distance from the indicator pivot even when a stylus is tilted within an angle of 36 degree to the center line of the indicator body.

The required profile of the stylus point is dependent on its diameter and the length between the contact point and the pivot. *Example:- The error that can arise with the spherical point and how it is overcome by the Pear shape.*

Spares and Servicing

Our servicing department offers facilities for a quick return on repairs including gauges of other manufacturers. Spares are readily available for companies operating their own servicing Department.

Rapid Dial Test Indicators

The Verdict "Rapid" presents the dial face inclined to the work piece surface ensuring good visual accessibility obviating parallax error. "Rapids" incorporate a rear swivel spigot enabling use for centering without additional attachments. All models have dovetail clamping slides top and bottom.

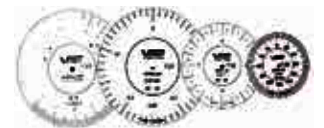


Worm Mechanism

Specification

Code No	Model	Dial Dia	Reading	Grad	Range	Stylus Length
01/3025	T25 Imperial	1 1/8"	0.0001"	0-5-0	0.01"	0.541"
01/3125	T25 Metric	26.5 mm	2 um	0-120-0	0.24 mm	13.06 mm
01/3026	T26 Imperial	2.0"	0.0001"	0-3-0	0.006"	0.420"
01/3126	T26 Metric	50 mm	2 um	0-80-0	0.16 mm	10.67 mm
01/3027	T27 Imperial	2.0"	0.0005"	0-10-0	0.02"	0.811"
01/3127	T27 Metric	50 mm	0.01 mm	0-0.25-0	0.5 mm	20.29 mm
01/3028	T28 Imperial	2.0"	0.0001"	0-5-0	0.01"	0.553"
01/3128	T28 Metric	50 mm	2 um	0-120-0	0.24 mm	13.06 mm
01/3029	T29 Imperial	1 3/8"	0.0001"	0-5-0	0.01"	0.553"
01/3129	T29 Metric	35 mm	2 um	0-120-0	0.24 mm	13.06 mm
01/3030	T30 Imperial	1 3/8"	0.0005"	0-10-0	0.02"	0.811"
01/3130	T30 Metric	35 mm	0.01 mm	0-0.25-0	0.5 mm	20.29 mm
01/3031	T31 Imperial	1 3/8"	0.0005"	0-20-0	0.04"	1.622"
01/3131	T31 Metric	35 mm	0.01 mm	0-0.5-0	1.0 mm	40.59 mm
01/3032	T32 Imperial	1 3/8"	0.001"	0-40-0	0.08"	3.244"
01/3132	T32 Metric	35 mm	0.02 mm	0-1.0-0	2.0 mm	81.18mm
01/3033	T33 Imperial	2.0"	0.001"	5-0-5	0.01"	1.622"
			0.0005"	2.5-0-2.5	0.005"	0.811"
			0.0001"	2-0-2	0.004"	0.541"
01/3133	T33 Metric	50 mm	0.01mm	0.12-0-0.12	0.24 mm	40.59 mm
			0.005 mm	0.06-0-0.06	0.12 mm	20.29 mm
			2 um	0.04-0-0.04	0.08 mm	13.06 mm

- Clamping facilities by means of dove tail or end spigot
- Dial rotates for zero setting
- Automatic reversal movement
- Jewelled
- Stylus swivels through an arc of 180 degrees
- Hand Travels in one direction
- Lever pivots are mounted in ball bearings
- Imperial instruments fitted with 1/4" diameter spigot (metric 4 mm)
- Swivel spigot standard on all models



Dial Test Indicators

The Dual Reading "Metrinch"

Answer to the imperial/metric conversion problem

- Fitted with pear shaped contact point
- Clamping facilities by means of dovetail or end spigot
- Dial rotates for zero setting
- Automatic reversal movement
- Jewelled
- Stylus swivels through an arc of 180 degrees
- Hand travels in one direction
- Lever pivots are mounted in ball bearings
- Instruments fitted with 1/4" diameter spigot
- Swivel spigot incorporated in body

Indicator body machined with dovetail to suit attachments
15/5010, 15/4010, 15/5013 and 15/5050.



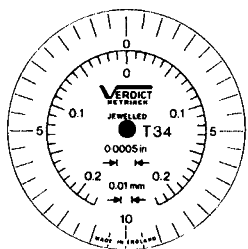
Direct reading in either system. Two colour dial.

Code No	Model	Dial Dia	Reading	Grad	Range	Stylus Length
08/3001	Metrinch 1	1 3/8"	0.0005"	0-10-0	0.020"	0.770"
		36 mm	0.01 mm	0.22-0-0.22	0.44 mm	19.5 mm
01/3034	T34	1 3/8"	0.0005"	0-10-0	0.02"	0.811"
	Metrinch	36 mm	0.01 mm	0.22-0-0.22	0.44 mm	20.60 mm

Dual Reading "T34 Metrinch"

Direct reading inch and Metric in either system

Code:- 01/3034



Dial Test Indicators

Specification

Code No	Model	Dial Dia	Reading	Grad	Range	Stylus Length
05/2001	T1 Imperial	1"	0.0005"	0-15-0	0.030"	0.514"
05/1001	T1 Metric	25 mm	0.01 mm	0-0.4-0	0.8 mm	13.7 mm
05/2002	T2 Imperial	1 3/8"	0.0005"	0-15-0	0.030"	0.514"
05/1002	T2 Metric	35 mm	0.01 mm	0-0.4-0	0.8 mm	13.7 mm
05/2003	T3 Imperial	2"	0.0001"	0-10-0	0.020"	0.343"
05/1003	T3 Metric	50 mm	0.005 mm	0-0.4-0	0.8 mm	13.7 mm
05/2006	T6 Imperial	2"	0.0005"	0-30-0	0.060"	1.028"
05/1006	T6 Metric	50 mm	0.01 mm	0-0.8-0	1.6 mm	27.4 mm
08/2008	T8 Imperial	1 1/8"	0.0005"	0-10-0	0.020"	0.780"
08/2009	T8 Metric	26.5 mm	0.01 mm	0-0.25-0	0.5 mm	19.5 mm
05/6015	G Imperial	1 3/8"	0.001"	0-50-0	0.1"	1.028"
05/6020	G Metric	35 mm	0.025 mm	1.0-0-1.0	2 mm	26.0 mm



Dial Test Indicators

T1, T2, T3, T6 & G Indicators have a switch lever for reversing the direction of movement. Lever pivots are mounted in ball bearings. T1, T2, T6 & G Indicators are fitted with 4 mm or ¼" diameter top spigot which accepts rods up to 6.5 mm (0.256")

Indicator body machined with dovetail to suit attachments.

T6 and G indicators are designed around the need for a long stylus to overcome many measuring problems, supplied with round styli point only.



T2



T3



T6



G



T8

T8 dial indicators incorporate an automatic reversal movement. Their rugged design and fine graduations provide maximum versatility for use in either the workshop or inspection department.

Clamping facilities back and front, by means of a dovetail and by a spigot at the top.

Lever pivots are mounted in ball bearings.

- Dial rotates for zero setting
- Jewelled
- Stylus swivels through an arc of 180 degrees
- Hand travels in two directions without the need of a reversible lever.
- Swivel spigot incorporated in body
- Fitted with pear shaped stylus which obviates the cosine error.

Dial Test Indicators

23/K30

Dial Test Indicator K30
Shockproof, non-magnetic
Reading 0.01mm
Range 0.8mm
Bezel dia 32mm
Length of contact point 12.8mm

23/K33

Dial Test Indicator K33
Shockproof, non-magnetic
Reading 0.01mm
Range 0.5mm
Bezel dia 32mm
Length of contact point 35.7mm

23/K37

Dial Test Indicator K37
Shockproof, non-magnetic
Reading 0.002mm
Range 0.2mm
Bezel dia 32mm
Length of contact point 12.8mm



23/K30/1

Dial Test Indicator K30/1
Shockproof, non-magnetic
Reading 0.01 mm
Range 1.0 mm
Bezel dia 32 mm
Length of contact point 16.6 mm

23/K32

Dial Test Indicator K32
Shockproof, non-magnetic
Reading 0.01 mm
Range 0.8 mm
Bezel dia 32 mm
Length of contact point 12.8 mm

Attachments and Accessories



Swivel Spigot
1/4" dia
15/5017

Swivel Spigot
4 mm dia
15/4017



Dovetail Holder
Bore dia:- 1/4" and 3/8"
15/5010

Dovetail Holder
Bore dia:- 9.5 mm and 4 mm
15/4010



Minor Thumb Clamp
Bore dia of 1/4" and up to 0.256"
15/5011



English Type B Holder **15/5002**
1/2" x 1/4" with 1/4" dia pin

Metric type B Holder **15/4002**
1/2" x 1/4" with 4 mm dia pin



Single and double jointed holders fit all dovetail equipped Indicators may be swivelled to any angular position. The extended reach enable large diameter centering, making these ideal jig boring attachments.

Single Pointed **15/5050**



With the Swivel Knuckle Joint holder, awkward set ups are obviated and it is a particularly simple yet extremely effective attachment for hole hole location.

15/5013

Screw in StylII

Code No	Length	Shape & Tip Dia	Imperial	Metric
109/02500 V50	0.343"	Pear	T3	
109/02510 V51	0.343"	0.080"	T3	
109/02520 V52	0.343"	0.031"	T3	
109/02530 V53	0.416"	Pear	T5,T7,T4A,T500,T26	T26
109/02540 V54	0.416"	0.080"	T5,T7,T4A,T500,T26	T26
109/02550 V55	0.416"	0.031"	T5,T7,T4A,T500,T26	T26
109/02570 V57	0.514"	Pear	T1,T2, T4	
109/02580 V58	0.514"	0.080"	T1,T2, T4	
109/02590 V59	0.514"	0.031"	T1,T2, T4	
109/02610 V61	0.770"	Pear	Metrinch 1	Metrinch 1, T8, T4B
109/02620 V62	0.770"	0.080"	Metrinch 1	Metrinch 1, T8, T4B
109/02630 V63	0.770"	0.031"	Metrinch 1	Metrinch 1, T8, T4B
109/02640 V64	0.780"	Pear	T8,T4B	
109/02650 V65	0.780"	0.080"	T8,T4B	
109/02660 V66	0.780"	0.031"	T8,T4B	
109/02670 V67	0.844"	0.080"	T11,T15	
109/02680 V68	1.028"	0.080"	G,G1,T6	G
109/02690 V69	1.028"	0.031"	G,G1,T6	G
109/02710 V71	1.688"	0.080"	T12,T16	
109/02730 V73	3.376"	0.080"	T17,T13	
109/02740 V74	1.170"	0.080"	T4C	
109/02750 V75	1.170"	0.031"	T4C	
109/02800 V80	13.7 mm	Pear		T1,T2,T3,T4
109/02810 V81	13.7 mm	0.080"		T1,T2,T3,T4
109/02820 V82	13.7 mm	0.031"		T1,T2,T3,T4
109/02830 V83	27.4 mm	0.080"		T6
109/02840 V84	27.4 mm	0.031"		T6
109/02850 V85	10.4 mm	Pear		T5,T7,T4A,T500
109/02860 V86	10.4 mm	0.080"		T5,T7,T4A,T500
109/02870 V87	10.4 mm	0.031"		T5,T7,T4A,T500



Screw In Styli

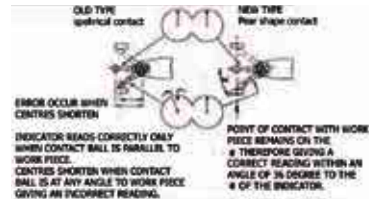
Pear Shaped Angle Compensating Point

Spherical Contact Ball

Errors occur when centres shorten. Indicator reads correctly only when contact ball is parallel to work piece. Centres shorten when the contact ball is at any angle to the base of the gauge body.

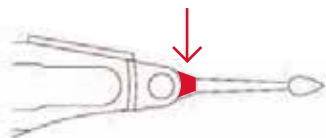
Pear Shaped Contact Ball

Point of contact with work piece remains on the C, therefore giving reading with an angle of 36 degrees to the L of the indicator body.



Code No	Length	Shape and Tip dia	Inch	Metric
109/22080 V2208	3.224"	0.080"	T32	
109/22100 V2210	81.20 mm	2 mm		T32
109/22120 V2212	1.622"	0.080"	T31, T33	
109/22140 V2214	40.6 mm	2 mm		T31, T33
109/22170 V2217	0.553"	0.030"	T25, T28, T29, T33	
109/22430 V2243	0.811"	Pear	T27, T30, T33, T34	T34
109/22440 V2244	20.3 mm	Pear		T27, T30, T33
109/22450 V2245	0.533"	Pear	T25, T28, T29, T33	
109/22480 V2248	0.811"	0.080"	T27, T30, T33, T34	
109/22490 V2249	20.3 mm	2 mm		T27, T30, T33
109/22500 V2250	0.553"	0.080"	T25, T28, T29, T33	
109/22600 V2260	0.811"	0.030"	T27, T30, T33, T34	T34
109/22610 V2261	20.3 mm	0.75 mm		T27, T30, T33
109/22790 V2279	13.30 mm	2 mm		T25, T28, T29, T33
109/22800 V2280	13.30 mm	0.75 mm		T25, T28, T29, T33
109/22810 V2281	13.30 mm	Pear		T25, T28, T29, T33

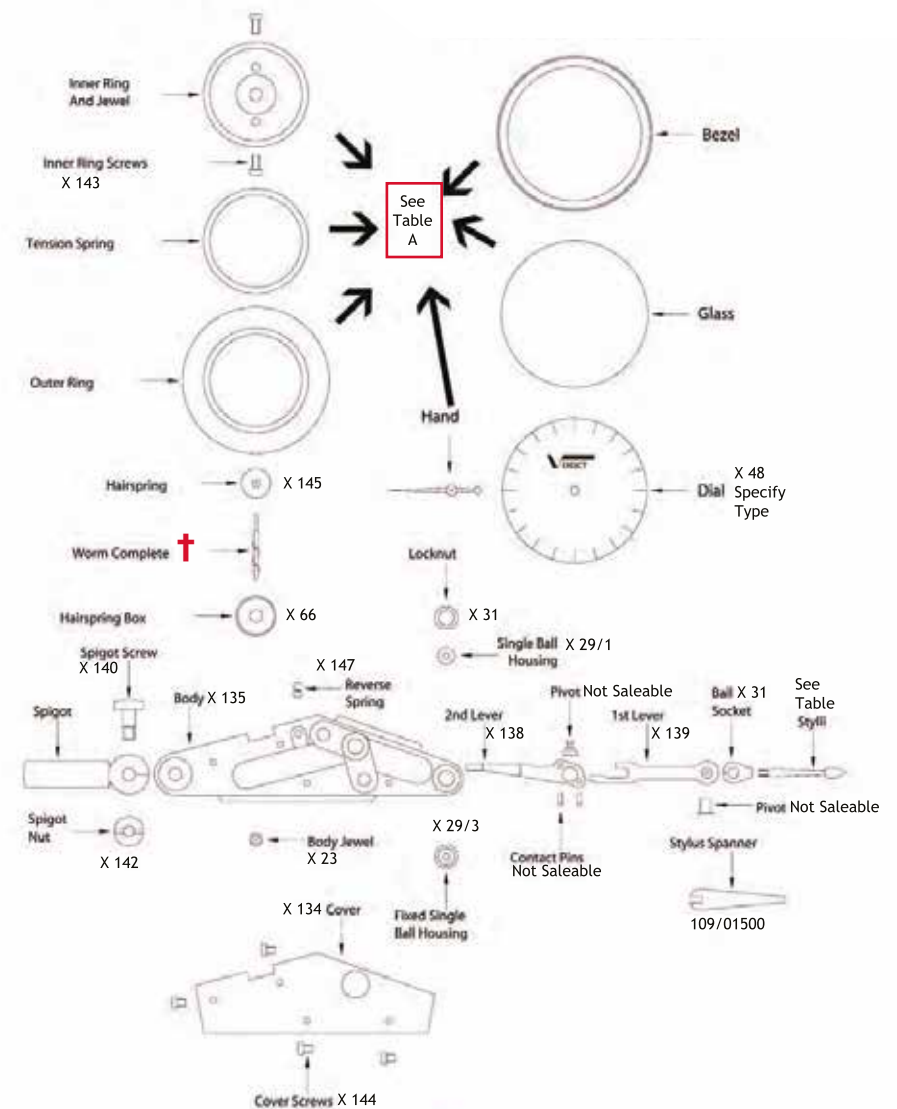
BALL SOCKET
109/00310



STYLUS SPANNER
109/01500



Rapid T25-T34 Spare Parts



† T25, T26, T28, T29 - XI29R
T27, T30, T31, T32, T34 - XI28R

Table A

Part	Gauge Type	Part no.
Inner Ring	T25	X78
	T26, T27, T28, T29	X80
	T30, T31, T32, T34	
Outer Ring	T25	X100
	T29, T30, T31, T34	X101
	T26, T27, T28, T33	X102
Tension Spring	T25	X125
	T26, T27, T28, T29	X126
	T30, T31, T32, T34, T33	
Hands	T25	X68
	T29, T30, T31, T32, T34	X69
	T26, T27, T28, T33	X70
Glass	T26, T27, T28, T33	X57
	T29, T30, T31, T32, T34	X56
	T25	X54
Bezel	T26, T27, T28, T33	X57
	T29, T30, T31, T32, T34	X26
	T25	
Glass + Bezel	T25	X59 (109/00590)
Assembly	T29, T30, T31, T32, T34	X60 A (109/0060A)
	T26, T27, T28, T33	X61 D (109/0061D)

Gauges T1, T2, T3, T6+G Spare Parts

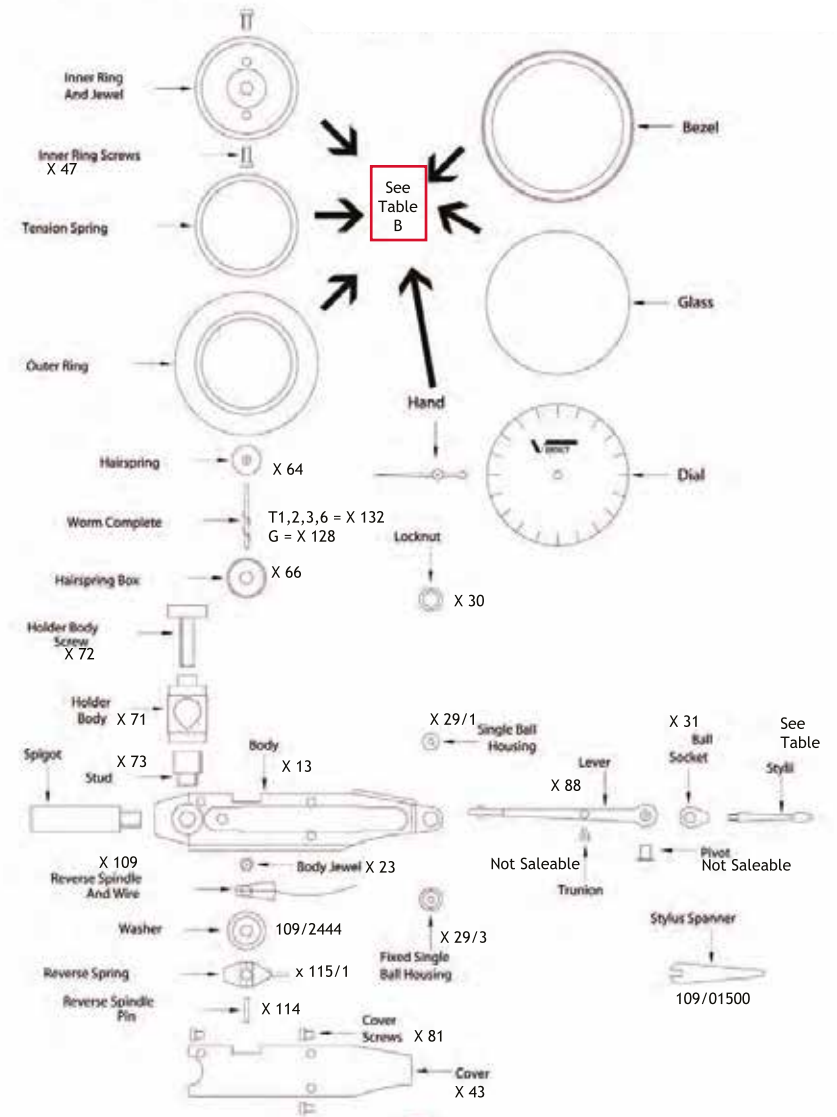


Table B

Part	Gauge Type	Part no.
Inner Ring	G, T6, T3, T2	X80
	T1	X78
Outer Ring	G, T2	X101
	T6, T3	X102
	T1	X99
Tension Spring	G, T6, T3, T2	X126
	T1	X125
Hands	G, T2	X69
	T3, T6	X70
	T1	X67
Glass & Bezel	T6, T3	I09/006ID
Glass together	G, T2	I09/0060A
	T1	I09/0058BC
Bezel	T6, T3	X27
	G, T2	X26
	T1	X24

Adjustable Centering Attachment Model 187

A rack and pinion movement is incorporated to give a more controlled method of setting. Designed to give ease of operation, the slide locking and traverse thumb nuts are combined on one spindle.

Code 16/0001

A 6"/150mm extension is available for the 187 Centering Attachments allowing centering of components up to 12"/300mm diameter.

Code 16/0003 for 187



Diacator

For Precise Concentrical Aligning

The DIACATOR is an instrument with a stationary indicator and a rotating probe for fast and accurate concentrical alignment of bores and shafts on most rotary machine tools.

Applications:

Concentrical alignment of boxes and shafts on milling, drilling and boring machines; Alignment of the footstock on milling and cylindrical grinding machines and of the tailstock on lathers; Accurate concentrical alignment of indexing heads and tables, of grinding fixture, of drill sleeves in tool holders and of many other special fixtures.

Design Features:

The DIACATOR is mounted in two suspension ball bearings that render it entirely free from play. The probe yoke is provided with a safety clutch as a precaution against damage to the instrument should the probe hang up on some obstacle while in motion.

Code No. 63/6000



Diacator

Advantages:

Contrary to other aligning methods, the machine is in motion during the aligning operation. Thus alignment takes place under the same conditions (uniform oil film on spindle bearings and constant speed) as the subsequent work. The dial remains stationary and is positioned to face the operator so that they may conveniently and accurately follow the process.

During alignment the revolving probe and the working spindle form a single unit. Possible off centre of the tool chuck caused by an inaccurate chuck, closer, sleeve, etc, in no way influences the centering operation of its accuracy.

Code No. 63/6000

Chucking Possibilities:

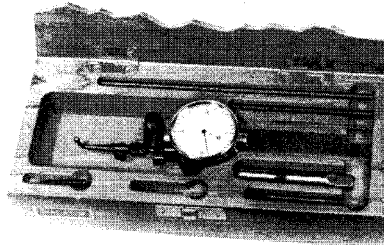
8mm and 3/8", 1/2" and 5/8" draw-in collect chuck; three or four jaw chucks; inside Morse taper No. 1. For larger tapers use standard taper sleeves.

Specifications:

Inside Diameter Range: 0.06" to 4.72" (1.5 to 120mm)
Outside Diameter Range: 0.04" to 4.33" (1.0 to 110mm)

Standard Set Includes:

- 1 Dial Indicator
- 1 Pendulum Probe 86" (22mm) (for small bores)
- 2 Off-set Probes 98" and 1.89" (25 and 48mm)
- 1 Screw-on Morse Taper No. 1
- 3 Screw-on Spacers 3/8", 1/2" and 5/8" or 10, 12 and 16mm
(please specify choice when ordering)
- 1 Stop-rod 160mm long (61/4")
- 1 Socket-head Wrench 0.08" (2mm)
- 1 Hardwood case



SURFACE GAUGE STAND



Standard Type:

- Designed for marking out and general purpose use.
- Base, ground at one end and on the bottom face.
- Vee groove for locating on cylindrical workpieces.
- Two retractable locating pins.
- One handed fine adjustment over a limited range.
- Supplied with one 4mm diameter scriber.

Code No.	Main Body			Main Stem		Needle		Weight
	H	W	L	L	Dia	L	Dia	
17/II902	25	74	77	280	8	205	4	1.2

Dimensions in mm

MINORMAG



The Minormag is a compact universal permanent magnetic stand. Its small size and exceptional magnetic pull makes easy application of dial test indicator to machine tools for the purpose of setting and checking work pieces.

Code No. 34/0001

Specification

Base Diameter:	1"	Total Height:	3"
Base Height:	1"	Magnetic Pull:	15lbs

ADJUSTABLE MINORMAG



Specification

Stem Diameter:	6.35mm (0.25")
Base Diameter:	27mm (1.06")
Total Height:	88mm (3.5")
Magnetic Pull:	(11 lb)

Code No. 34/0004

Magnetic Bases



Code No.	Work Magnetic Force	Main body			Main L	Stem Dia	Diameter of Hole	Cross L	Stem Dia	Work Angle	Weight Kg
		H	W	L							
32/10203	784N (80kg)	55	50	69	176	12	4.5/8.0+0.02	160	10	150°	1.7
							or 4.5/9.5+0.02				
32/10602	588N (60kg)	60	46	70	230	16	6.0-8.0 main body	260	16	135°	2.3
32/10801	588N (60kg)	55	50	63	350		Length 6.5 8.0+0.02 9.5+0.02	n/a	n/a	150°	1.9

Snake Flexible Arm with Base



Code No.	Work Magnetic Force	Main body			Main L	Stem Dia	Diameter of Hole Dia		Work Angle	Weight Kg
		H	W	L						
32/10901	588N (60kg)	55	50	63	350	16	6.5	8.0 or 9.5	150°	1.6
32/10902	588N (60kg)	55	50	63	315	16		4-10	150°	1.6
32/10903	588N (60kg)	55	50	63	355	16	6.5	8.0 or 9.5	150°	1.6
32/10904	588N (60kg)	55	50	63	360	16		4-13	150°	1.6
32/10905	588N (60kg)	55	50	63	270	16		4 and 8	150°	1.6
32/10906	147N (15kg)	Diameter			270	10		3.0-6.5	150°	0.6
		35x30H								

High Precision Dial Gauges

The FEINIKA high precision Dial Gauges have similar movements to those of our range of COMPIKA Comparator Gauges. The travel of the plunger is transmitted and magnified by means of a lever device to the hand.

This lever transmission movement has two advantages. It provides extremely high accuracy, as well as an effective shockproof system.

The new waterproof model FEINIKA FM 1101 W has a hermetically sealed housing and plunger and are well suited for use in any workplace where accurate Dial Gauges are in contact with oil and water, or with spraymist.



Code No.	Type	Graduation	Range	Bezel - Ø	Stem - Ø
23/FM1101	FEINIKA FM 1101	0.001mm	1mm	58mm	8mm h 6
23/FM1101W	FEINIKA FM 1101W	0.001mm	1mm	61mm	8mm h 6

Dial gauges FEINIKA for exact measurements

Error Free Dial Gauges with Extra Lift in Spindle

In order to avoid reading errors the measuring range of these Dial Gauges is limited to slightly less than one rotation of the pointer. Therefore a measurement can only be performed within the range of one rotation of the pointer guaranteeing an error free reading of the Dial Gauge.

Nevertheless the construction allows lifting the spindle sufficiently so that test pieces can be put into the measuring device without any difficulty.

Both Dial Gauges are shock resistant. The scales can rotate by 360° in keeping with DIN878.



Specifications of the Technical Data of Error Free Dial Gauges with Extra Lift in Spindle

Code No.	Type	Graduation Range	Measuring in Spindle	Extra Lift - Ø	Bezel
23/SI-90	SI-90	0.01mm	0.8mm	9mm	58mm
23/SI-90X	SI-90X	0.01mm	0.8mm	7mm	58mm

The Dial Gauges SI-90X from our 'X' series offers an excellent combination of quality injection molded parts and standard metal parts. This design permits high precision at an incredibly low price.

We can also supply Dial Gauges with free lift in spindle and impact protection in waterproof versions. Available on request.

Dial gauges with extra lift = error free reading of the scale

High Precision Dial Gauges

Quickmess Basic 1,3,5mm

(Code No. 23/QUICK BASIS)

The integrated measuring stop is an innovative new development. It makes Quickmess Basic the measuring instrument of choice whenever small parts need to be checked directly at the production location or at varying places. The awkward process of clamping in measuring device or supports has been eliminated completely. You are not tied to a specific measuring location and can make measurements at any time. This saves you time and thus money.



■ Graduation	0.01mm	■ Measuring range	30mm
■ Maximum part diameter	5mm	■ Measuring insert diameter	3mm
■ Measuring stop diameter	3mm	■ Pre-setting screw	No
■ Equipment supplied	Measuring inserts 1,3,5mm		
	Measuring stops 1,3,5mm		

Quickmess MAXI 1,3,5mm

(Code No. 23/QUICK MAXI)

Quickmess Maxi has a pre-setting facility in addition to its integrated measuring stop. This makes it child's play to set tools properly. The tool is only fixed loosely and is then inserted in the measuring stop. The pre-set measuring range with the fixed measuring pin positions the tool at the correct, pre-set length.



■ Graduation	0.01mm	■ Measuring range	30mm
■ Maximum part diameter	5mm	■ Measuring insert diameter	3mm
■ Measuring stop diameter	3mm	■ Pre-setting screw	Yes
■ Equipment supplied	Measuring inserts 1,3,5mm		
	Measuring stops 1,3,5mm		

The Advantages at a Glance

- Wide range of possible applications
- Rapid hand-held measurements with no clamping
- Reliable measurements due to fixed stop
- Measurements wherever required
- Measuring unit with precise, high-quality measuring gauge
- Extremely precise, sturdy design
- Easy, unmistakable reading thanks to the clearly arranged dial

DIGI-MET Indicators



Specification

- Aluminium housing
- Hardened, rustproof spindle
- Outer ring dia. 60mm
- Replaceable probe tip M 2.5mm
- Type of protection IP51
- Clamping shank dia. 8mm/h6
- Revolving display module 270°
- With large LCD display
- Manufactures standard
- Supplied in: carton

Electronic Functions

- On/off switch
- Zero setting at any point
- Mm/inch selector
- Data output opto RS 232
- Hold function
- +/- PRESET function

Measuring Range		Reading		Accuracy	Code No.
mm	inch	mm	inch	mm	
12.5	0.5	0.001	.00005	0.005	101/0691 701
25.0	1.0	0.001	.00005	0.005	101/0691 702
50.0	2.0	0.001	.00005	0.012	101/0691 703
100.0	4.0	0.001	.00005	0.012	101/0691 704
12.5	0.5	0.01	.005	0.01	101/0691 711
25.0	1.0	0.01	.005	0.01	101/0691 712
50.0	2.0	0.01	.005	0.02	101/0691 713
100.0	4.0	0.01	.005	0.02	101/0691 714

Specification

- Aluminium housing
- Hardened, rustproof spindle
- Outer ring dia. 60mm
- Replaceable probe tip M 2.5mm
- Type of protection IP51
- Clamping shank dia. 8mm/h6
- Revolving display module 270°
- With large LCD display
- Manufactures standard
- Supplied in: carton

Electronic Functions

- On/off switch
- Zero setting at any point
- Mm/inch selector
- Data output opto RS 232
- Hold function
- +/- PRESET function
- Min/max value memory

Measuring Range		Reading		Accuracy	Code No.
mm	inch	mm	inch	mm	
12.5	0.5	0.001	.00005	0.005	101/0691 721
25.0	1.0	0.001	.00005	0.005	101/0691 722

Specification

For RS 232 interface
With optocoupling
Suitable for all DIGI-MET gauges
Length: 2m

Code No.

101/0996 701



Code 23/FM 1000/ST

Dial Gauge FM 1000/5 T

- Graduation 0.001mm
- Measuring Range 5mm
- 1 Revolution of the pointer 0.2mm
- Scale 200 Scale Marks
- Bezel – Ø 58mm
- Stem – Ø 8 h 6

High precision and high resolution of the measured value.

The extremely precise design of High Precision Dial Gauges ensures reliability. The most important points of the movements are located in sapphire bearing jewels. There is a screwed-on protective sleeve on the upper end of the Dial Gauges.

The information on this page contains an overview of our standard High Precision Dial Gauges. New models are the impact-protected types FM1001 S and FM1001/5 SK, as well as the error-free Dial Gauge DI-901 with extra lift in spindle. Ask for further information.

High Precision Dial Gauges are also available in waterproof or water protected versions.

Code 23/FM 1000 T

M 1000 T

- Graduation 0.001mm
- Measuring Range 1mm
- 1 Revolution of the pointer 0.2mm
- Scale 200 Scale Marks
- Bezel – Ø 58mm
- Stem – Ø 8 h 6

Plunger Dial Indicators

23/5035

Dial Gauge M 2/30 T
Graduation 0.01mm
Measuring Range 30mm

23/2058

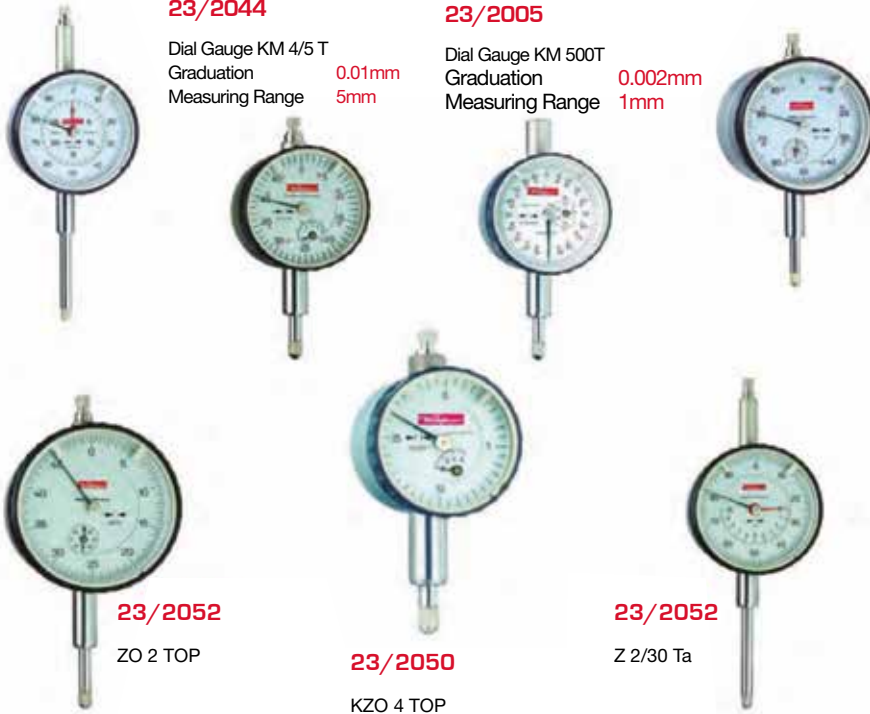
Dial Gauge M 2T
Graduation 0.01mm
Measuring Range 10mm

23/2044

Dial Gauge KM 4/5 T
Graduation 0.01mm
Measuring Range 5mm

23/2005

Dial Gauge KM 500T
Graduation 0.002mm
Measuring Range 1mm



23/2052

ZO 2 TOP

23/2050

KZO 4 TOP

23/2052

Z 2/30 Ta

These instruments have a stem diameter of 3/8", whereas all other types have one of 8mm h 6. The threads for the feelers are 4/48 NF.

The Dial Gauges will be supplied with flat backs. If fixing is required on the back, the Dial Gauges have to be ordered with a gripping lug.

For Bezel diameter 40mm – part code 23/5052

For Bezel diameter 58mm – part code 23/5051

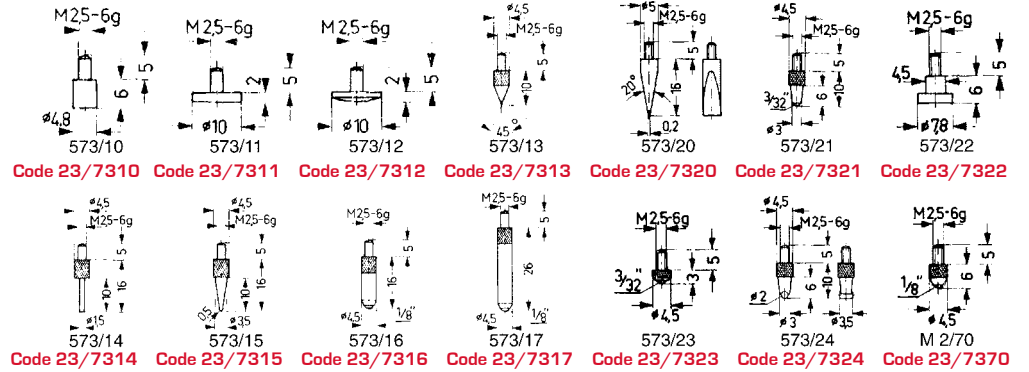
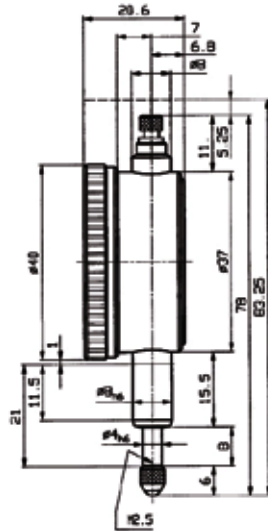
If desired quotations will be offered for our waterproof dial gauges, dial gauges with rear stem, shock-proof gauges, etc.

Specifications of the technical data of Metric Dial Gauges

Code No.	Type	Graduation	Measuring Range	Bezel Diameter	Special Feature
23/2061	Dial Gauge M 2 S	0.01mm	10mm	58mm	Shockproof
23/2062	Dial Gauge M 2 SN	0.01mm	10mm	58mm	Shockproof
23/4001	Dial Gauge M 2 SW	0.01mm	10mm	61mm	Waterproof
23/2058	Dial Gauge M 2 T	0.01mm	10mm	58mm	
23/2059	Dial Gauge M 2 X	0.01mm	10mm	58mm	
23/2060	Dial Gauge M 2 TOP	0.01mm	10mm	58mm	
23/5045	Dial Gauge M 2/30 S	0.01mm	30mm	58mm	Shockproof
23/5035	Dial Gauge M 2/30 T	0.01mm	30mm	58mm	
23/5050	Dial Gauge M 2/50 S	0.01mm	50mm	58mm	Shockproof
23/5020	Dial Gauge M 2/50 T	0.01mm	50mm	58mm	
23/2056	Dial Gauge KM 4 XS	0.01mm	3mm	40mm	Shockproof
23/2042	Dial Gauge KM 4/5 S	0.01mm	5mm	40mm	Shockproof
23/2044	Dial Gauge KM 4/5 T	0.01mm	5mm	40mm	
23/2057	Dial Gauge KM 4/5 X	0.01mm	5mm	40mm	
23/2041	Dial Gauge KM 4 S	0.01mm	3mm	40mm	Shockproof
23/4002	Dial Gauge KM 4 SW	0.01mm	3mm	44mm	Waterproof
23/2043	Dial Gauge KM 4 T	0.01mm	3mm	40mm	
23/5040	Dial Gauge GM 80/30 T	0.01mm	30mm	80mm	
23/5025	Dial Gauge GM 80/50 T	0.01mm	50mm	80mm	
23/5030	Dial Gauge GM 80/100 T	0.01mm	100mm	80mm	
23/2065	Dial Gauge GM 100/50 T	0.01mm	50mm	100mm	
23/2040	Dial Gauge KM 6 T	0.01mm	3mm	32mm	
23/2000	Dial Gauge KM 500 S	0.002mm	1mm	40mm	Shockproof
23/4004	Dial Gauge KM 500 SW	0.002mm	1mm	44mm	Waterproof
23/2005	Dial Gauge KM 500 T	0.002mm	1mm	40mm	
23/2015	Dial Gauge KM 1000 S	0.001mm	1mm	40mm	Shockproof
23/2010	Dial Gauge KM 1000 T	0.001mm	1mm	40mm	
23/4003	Dial Gauge FM 1000 SW	0.001mm	1mm	61mm	Waterproof
23/2035	Dial Gauge FM 1000/5 T	0.001mm	5mm	58mm	

Specifications of the technical data of Inch Dial Gauges

Code No.	Type	Graduation	1 Revolution of the Pointer	Dial Reading	Measuring Range	Bezel Diameter
23/2050	KZO 4 T	.001"	.020"	0-20	.120"	1 9/16"
23/2052	ZO 2 T	.001"	.100"	0-100	.500"	2 1/4"
23/5012	*Z 2/30 Ta	.001"	.100"	0-100	1.000"	2 1/4"
23/5000	*Z 2/50 Ta	.001"	.100"	0-100	2.000"	2 1/4"
23/5015	*Z 3/30 Ta	.0005"	.050"	0-50	1.000"	2 1/4"
23/5005	*Z 3/50 Ta	.0005"	.050"	0-50	2.000"	2 1/4"
23/2053	ZO 3 S	.0005"	.050"	0-50	.400"	2 1/4"
23/2054	ZO 3 T	.0005"	.050"	0-50	.500"	2 1/4"
23/2055	ZO 3 X	.0005"	.050"	0-50	.400"	2 1/4"
23/2063	GZ 80 T	.0005"	.050"	0-50	.500"	3 1/8"
23/5010	*GZ 80/100 T	.001"	.100"	0-100	4.000"	3 1/8"
23/2064	GZ 100 T	.0005"	.050"	0-50	.500"	3 15/16"
23/2020	KFZO T	.0001"	.010"	0-10	.040"	1 9/16"
23/2025	FZO T	.0001"	.010"	0-10	.040"	2 1/4"
23/2030	FZO 5 T	.0001"	.010"	0-10	.200"	2 1/46"

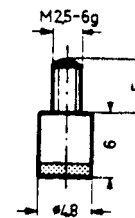


Please indicate on your order text for feelers 573/18 and 573/19 which ball diameter is required. Example: Feeler 573/18, ball dia. 4mm

Dimension A (used at Dial Gauges with a spindle of 4mm diam.) ...4mm
 Dimension A (used at Dial Gauges with a spindle of 5mm diam.) ...5mm
 Dimension B available in the following lengths: 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95 and 100mm. Special lengths are also available.

FEELERS WITH CARBIDE INSERTS

See table below for Code Nos

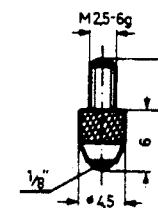


573/10 H
 Flat feeler
 carbide tipped execution
23/7411

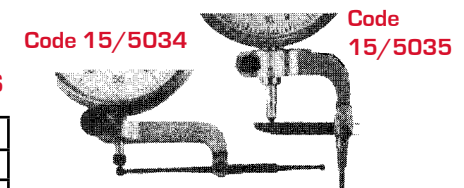
Type	Note
23/7410 M2/70 H	6mm long, spherical
23/7411 573/10 H	4.8mm dia., flat
23/7412 573/11 H	10mm dia., flat
23/7413 573/12 H	convex
23/7414 573/13 H	45° point, 10mm long
23/7415 573/14 H	Rod. 1.5mm dia.
23/7416 573/16 H	16mm long, spherical
23/7417 573/17 H	26mm long, spherical
23/7418 573/20 H	Knife edge, 5mm wide

Ordering Code No. for Extensions	
23/2070 10 m/m	23/7060 60 m/m
23/7015 15 m/m	23/7065 65 m/m
23/7020 20 m/m	23/7070 70 m/m
23/7025 25 m/m	23/7075 75 m/m
23/7030 30 m/m	23/7080 80 m/m
23/7035 35 m/m	23/7085 85 m/m
23/7040 40 m/m	23/7090 90 m/m
23/7045 45 m/m	23/7095 95 m/m
23/7050 50 m/m	23/7100 100 m/m
23/7055 55 m/m	

FEELERS WITH RUBY OR SAPPHIRE INSERTS



Type	Note
23/7420 M2/70 R	6mm long, ruby ball
23/7412 573/16 R	16mm long, ruby ball
23/7422 573/17 R	26mm long, ruby ball
23/7423 M2/70 S	6mm long, sapphire ball
23/7424 573/16 S	16mm long, sapphire ball
23/7425 573/17 S	26mm long, sapphire ball



Lever Attachments

These enable readings to be taken from bored and internal faces and other positions where the dial indicator contact cannot be directly applied. Suitable for all indicators with up to 12mm/1/2" range.

Back Plate with Fixing Lug

Available in 2 sizes for

- a) Indicators with 58mm bezel diameter
- b) Indicators with 40mm bezel diameter

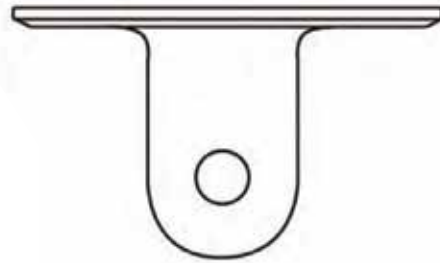
Code - 23/5051 - 58mm

Code - 23/5052 - 40mm

Code - 23/5053

The lifting attachment permits quick lifting of the main shaft. The attachment itself is articulated and permits its use in the most comfortable position.

Dial indicators with measuring capacity up to 10mm inclusive of small Dial Gauges can, on request, be supplied with this attachment.



Code - 23/5054

Magnetic Back Plates

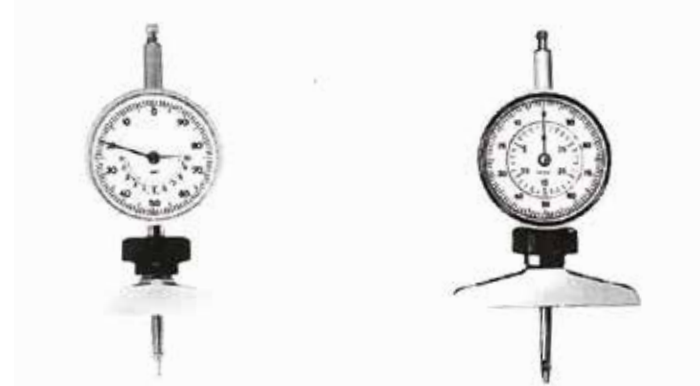
These can be used on all Kafer standard indicators with the exception of

- Indicators with reverse spindle
- And the X range

High holding power

Magnetic plates can be fitted at any time.

Dial Depth Gauges



Dial Depth Gauge TM/2 - 23/9030

Dial Depth Gauge TZ/2 - 23/9031

Graduation	0.01 mm		Graduation	0.001"
1 revolution of the pointer	1 mm		1 revolution of the pointer	0.100"
Measuring range	10 mm		Measuring range	0.400"
Bezel Diameter	58 mm		Bezel Diameter	2 1/4"
Base dimensions	8 x 15 mm		Base dimensions	80 x 15 mm

Extension pieces 10 to 100 mm long are available for the metric range. Extension pieces 0.400" to 4.000" are available for depth gauges with read out in inches.

All depth gauges are equipped with 10 mm ball insert 573/21. The pointed insert 573/13 is of the same overall length. The latter is suitable for instance for measuring the depth of an engraving.

Dial Depth Gauge TM2/30 - 23/9032

Dial Depth Gauge TZ2/30 - 23/9033

Graduation	0.01 mm		Graduation	0.001"
1 revolution of the pointer	1 mm		1 revolution of the pointer	0.100"
Measuring range	30 mm		Measuring range	1.000"
Clear reading due to a concentric	Second pointer		Clear reading due to a concentric second pointer	
Bezel diameter	58 mm		Bezel diameter	2 1/4"
Base dimensions	80 x 15 mm		Base dimensions	80 x 15 mm

Extensions 30, 60 and 90 mm long are available for the metric range and extensions 1, 2 and 3" long for depth gauges with inch read out.

The bases of all types are dull chromed and hardened. Their supporting plates are lapped. The collect attachment guarantees a reliable fixing of the dial gauges. The dial depth gauges are supplied in solid cases completely mounted.

Bases with a width of 50 mm, 120 mm and 170 mm are available on request.

Digital Height Gauge

DIGI-MET Electronic Height Gauge

Cast iron base, beam made from stainless steel, scriber carbide tipped.

Repeatability 2 microns/0.0001"

FEATURES:

- ON/OFF Switch
- Resolution:- 0.01 mm/0.0005"
- Zero setting at every point
- Battery: 3V Lithium battery
- Mm/inch conversion
- Max measuring speed: 1.5 m/sec
- RS232 opto electronic data output
- HOLD function
- Preset function



Measuring Range mm/inch	Beam Dimension Diameter mm	Reading mm/inch	Repeatability mm/inch	Base Dimensions dia mm	Code No.	Weight gr
300/12"	25 x 10	0.01mm/0.0005"	10 microns/0.0005" (+/- 2s)	90 x 40 x 140	101/340701	4.050
600/24"	25 x 10	0.01mm/0.0005"	10 microns/0.0005" (=/- 2s)	90 x 40 x 140	101/340702	

External Micrometers



101/01/630

Ratchet friction thimble Chrome plated frame 23/9031

Features

- Spindle thread pitch: 1 mm
- The measurement can be read directly from the 100 step graduation thimble
- Carbide measuring faces
- Resolution: 0.01 mm, 0.0005"
- Metric gauge

Code No	Range	Accuracy	A	B	L
101/01/630	0-25 mm	0.004 mm	6 mm	24 mm	32 mm
101/02/630	25-50 mm	0.004 mm	8 mm	32 mm	57 mm
101/03/630	50-75 mm	0.005 mm	8 mm	45 mm	82 mm
101/04/630	75-100 mm	0.005 mm	8 mm	57 mm	107 mm
101/05/630	100-125 mm	0.006 mm	8 mm	70 mm	133 mm
101/06/630	125-150 mm	0.006 mm	8 mm	82 mm	158 mm
101/07/630	150-175 mm	0.007 mm	8 mm	95 mm	183 mm
101/08/630	175-200 mm	0.007 mm	8 mm	107 mm	209 mm

Micrometers with interchangeable anvils



101/13X/XX/4XX Series

- 0: Metric
- 1: Inch
- 2: Friction thimble
- 3: Ratchet friction th
- Range No.
- Within 300mm (12")
- 2: Steel-plate frame
- Over 300mm (12")
- 4: Pipe combined fr

101/132/06/420 Friction thimble steel-plate frame

Measurement Range	Accuracy	Anvils	Standards
0-150 mm	0.006 mm	6	5



Mechanical Micrometer Sets

Supplied in polished wooden cases, packed flat including setting standards.

Code No.	Range
101/1811025	0-3"
101/1811026	0-4"
101/1811027	0-6"
101/1811015	0-75 mm
101/1811016	0-100 mm
101/1811017	0-150 mm

Tube Micrometers



Specification

- Reading 0.01 mm
- Reading parts are satin chrome
- Cast iron frame
- Manufacturers standard
- Measuring force regulated by ratchet stop
- Hardened measuring surfaces

Code No	Measuring range mm	Spindle dia mm	Thimble dia mm	Pitch mm
101/0824 302	0-15 mm	6.5	20	0.5
101/0824 303	0-25 mm	6.5	20	0.5

Double Display Digit Micrometers



101/191/01/620 (type A)

Friction thimble

IP54

Chrome plated frame

Code No	Range	Accuracy
101/191/01/620	0-30 mm	0.004 mm
101/191/02/620	25-55 mm	0.004 mm
101/191/03/620	50-80 mm	0.005 mm
101/191/04/620	75-105 mm	0.005 mm
101/191/05/620	100-130 mm	0.006 mm
101/191/06/620	125-155 mm	0.006 mm
101/191/07/620	150-180 mm	0.007 mm
101/191/08/620	175-205 mm	0.007 mm

Electronic Point Micrometers

Features

- Pointed spindle and anvil for measuring drills, grooves and hard to reach dimensions
- Carbide tipped measuring faces



101/232/41/410

IP54

Code No	Range	Accuracy
101/232/41/410	0-25 mm	0.004 mm
101/232/42/410	25-50 mm	0.004 mm
101/232/43/410	50-75 mm	0.005 mm
101/232/44/410	75-100 mm	0.005 mm

Blade Micrometers

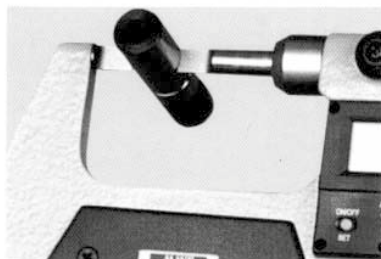


101/20X/XX/XXX Series

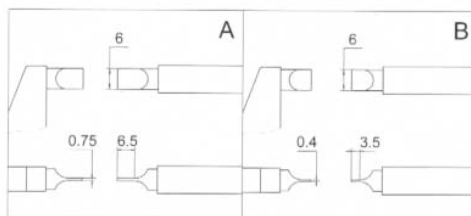
- 0: Metric
- 1: Inch
- 0: Ratchet stop
- 2: Friction thimble
- 3: Ratchet friction thimble
- Range No.
- 2: Type A
- 0: Type B
- A Type A
- 1: Painted frame
- 2: Chrome-plated frame
- Type B
- 5: Painted frame
- 6: Chrome-plated frame

101/201/21/000

Ratchet Stop
Type A
Painted frame



Type A



Code No	Range	Accuracy
101/201/21/000	0-25 mm	0.004 mm
101/201/22/000	25-50 mm	0.004 mm
101/201/23/000	50-75 mm	0.005 mm
101/201/24/000	75-100 mm	0.005 mm
101/201/25/000	100-125 mm	0.006 mm
101/201/26/000	125-150 mm	0.006 mm
101/201/27/000	150-175 mm	0.007 mm

Tubing Micrometers

Tubing Micrometers have a half frame with extended anvil to measure the thickness of tubing. Micrometer measures to a minimum of 3/8" inside diameter.



- Spindle hardened to Rc62-64 with lead error held to within 0.00005"
- Reading to 0.001" or 0.1 mm
- Lock nut and ratchet stop standard
- Silver mist chrome finish head
- Black lines and numbers for easy reading
- Durable black wrinkle finish frame
- Fitted wooden case available

Imperial			
Code No	Range Inches	Grad Inch	Faces
08/1611/04	0-1	0.001	Steel
08/1612/04	1-2	0.001	Steel
08/1613/04	2-3	0.001	Steel

Metric				Wood Case
Code No	Range Metric mm	Grad mm	Faces	Code No
08/1611/22	0-25	0.01	Steel	99/0008/00
08/1612/22	25-50	0.01	Steel	99/0009/00
08/1613/22	50-75	0.01	Steel	99/0010/00

Disc Micrometers

1 1/2 inch diameter discs on this micrometer are designed to get those hard to reach measurements. Spindle and anvil discs are 0.015" thick at the edge, tapered to 1/16" at the centre, making it ideal for measuring fins, lands, ribs, cutting edges and other difficult to gauge sections. Accurate measurements to 0.001" can be taken on paper, rubber, plastics and other materials with this micrometer. Anvil and spindle faces are lapped flat and parallel over the entire disc surface.

- "Feathertouch" tubular steel frame with durable black wrinkle finish
- Spindle hardened to Rc 62-64 with lead error held to 0.00005"
- Reading to 0.001" or 0.01 mm
- 1/2" diameter hardened steel spindle and anvil disc lapped flat and parallel over entire surface.
- Lock nut and ratchet stop standard
- Silver mist chrome finish head
- Fitted wooden case available



Imperial				Metric				Wood Case
Code No	Range Inches	Grad Inch	Faces	Code No	Range Metric mm	Grad mm	Faces	Code No
08/0401/04	0-1	0.001	Steel	08/0401/22	0-25	0.01	Steel	99/0108/00
08/0403/04	2-3	0.001	Steel	08/0402/22	25-50	0.01	Steel	99/0109/00
				08/0403/22	50-75	0.01	Steel	99/0110/00

Tubular Inside Micrometers

By combining measuring rods it can enable a wide measuring range. Supplied with a standard for zero setting. Carbide tipped measuring faces.

Positive locking screw.

Extension rods 15.5 mm diameter. Sizes available, up to 60"/1500 mm, resolution 0.01 mm/0.001"

Accuracy Metric +/- (3+M+I/50 microns)
Imperial +/- (0.00005 (3+M=L/2))"



Code No	Range
101/2211051	50-63 mm
101/2211052	50-100 mm
101/2211053	50-150 mm
101/2211054	50-300 mm
101/2211055	50-500 mm
101/2211056	50-1000 mm
101/2211057	50-1500 mm

Code No	Range
101/2211061	2-2.5"
101/2211062	2-4 "
101/2211063	2-6"
101/2211064	2-12"
101/2211065	2-20"
101/2211066	2-40"
101/2211067	2-60"

Mechanical 3 Point Bore Micrometer Sets

High accuracy mechanical 3 point bore micrometers.
 Accuracy 0.004 mm up to 40 mm/1.6", 0.005 mm up to 100 mm/4".
 High durability due to carbide measuring faces.
 Blind bores can be measured.
 Resolution up to 12 mm/0.5", 0.001 mm metric/0.0001" imperial.
 Over 12 mm/0.5" 0.005 mm metric/0.0002 Imperial
 Packed in aluminium airline style case, including setting rings,
 extension rods and adjusting spanners.



Digital 3 Point Bore Micrometers

Self centering 3 point micrometers for accurate measurement of
 internal diameters.
 Anvils for blind bores, deep hole extensions available.
 Carbide tipped contact points.
 Resolution 0.001 mm/0.00005".
 Automatic switch off.
 Large LCD
 Five function keys. Absolute. Incremental Inch/Metric conversion.
 Power on tolerance setting and origin data recall for absolute measurement.
 Setting rings included.
 Accuracy up to 40 mm/1.6" 0.004 mm/0.00016" up to 100 mm/4" 0.005 mm/0.0002".
 Packed in polished wooden boxes.



Code No	Range
101/2011151	6-12 mm
101/2011152	12-20 mm
101/2011153	20-50 mm
101/2011154	50-100 mm

Code No	Range
101/2011161	0.275-0.5"
101/2011162	0.5-0.8"
101/2011163	0.8-2"
101/2011164	2-4"

Code No	Range
101/1211501	6-8 mm/0.275-0.35"
101/1211502	8-10 mm/0.35-0.425"
101/1211503	10-12 mm/0.425 - 0.5"
101/1211504	12-16 mm/0.5-0.65"
101/1211505	16-20 mm/0.65 - 0.8"
101/1211506	20-25 mm/0.8-1"
101/1211507	25-30 mm/1-1.2"
101/1211508	30-40 mm/1.02 - 1.6
101/1211509	40-50 mm/1.6 - 2"
101/1211510	50-63 mm/2 -2.5"
101/1211511	52-75 mm/2.5 - 3"
101/1211512	75-88 mm/3 -3.5"
101/1211513	87-100 mm/3.5 - 4"

Digital 3 point Micrometer Sets

Specification as individual instruments

Sets available 6-12 mm/ 12-20 mm/ 20-50 mm/ 50-100 mm.

Packed in aluminium airline style case, including setting rings and extension rods.



Code No	Range
101/1211101	6-12 mm/0.275 – 0.5"
101/1211102	12-20 mm/0.5 -0.8"
101/1211103	20-50 mm/ 0.8 – 2"
101/1211104	50-100 mm/2 – 4"

3 Point Mechanical Bore Micrometers

High accuracy mechanical 3 point bore micrometers.

Accuracy 0.004 mm up to 40 mm/1.6", 0.005 mm up to 100 mm/4".

High durability due to carbide measuring faces.

Blind bores can be measured.

Resolution up to 12 mm/0.5, 0.001 mm metric/0.0001" imperial.

Over 12 mm/0.5" 0.005 mm metric/0.0002 Imperial



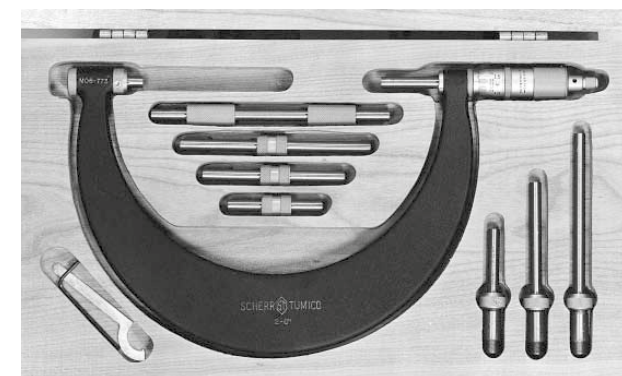
Code No	Range
101/2011111	6-8 mm
101/2011112	8-10 mm
101/2011113	10-12 mm
101/2011114	12-16 mm
101/2011115	16-20 mm
101/2011116	20-25 mm
101/2011117	25-30 mm
101/2011118	30-40 mm
101/2011119	40-50 mm
101/2011120	50-63 mm
101/2011121	62-75 mm
101/2011122	75-88 mm
101/2011123	87-100 mm

Code No	Range
101/2011131	0.275"-0.35"
101/2011132	0.35-0.425"
101/2011133	0.425-0.5"
101/2011134	0.5-0.65"
101/2011135	0.65-0.8"
101/2011136	0.8-1"
101/2011137	1-1.2"
101/2011138	1.2-1.6"
101/2011139	1.6-2"
101/2011140	2-2.5"
101/2011141	2.5-3"
101/2011142	3-3.5"
101/2011143	3.5-4"

Mandrel Micrometers

Mandrel micrometers have interchangeable mandrels to give an extended range of measurement. One micrometer conveniently includes mandrels, checking standards and fitted wood case. Our exclusive "Feather touch" tubular steel frame is lightweight and balanced to help get accurate readings (except 05/0004/04 and 05/0004/22).

- Tubular steel frame
- Spindle hardened to Rc 62-64 with lead error held to 0.00005"
- Reading to 0.001" or 0.01 mm available.
- Hardened steel measuring faces
- Lock nut and ratchet stop standard
- Silver mist chrome finish head
- Checking standards with handles
- Includes fitted wooden case



Imperial				Metric				Wooden Case
Code No	Range Inch	Grad Inch	Faces	Code No	Range Metric	Grad mm	Faces	
05/0004/04	0-4	0.001	Steel	05/0004/22	0-100	0.01	Steel	Included
05/0005/04	0-4	0.001	Steel	05/0005/22	0-100	0.01	Steel	Included
05/0007/04	0-6	0.001	Steel	05/0007/22	0-150	0.01	Steel	Included
05/0006/04	2-6	0.001	Steel	05/0006/22	50-150	0.01	Steel	Included
05/0009/04	6-9	0.001	Steel	05/0009/22	150-225	0.01	Steel	Included
05/0012/04	9-12	0.001	Steel	05/0012/22	225-300	0.01	Steel	Included
05/0016/04	12-16	0.001	Steel	05/0016/22	300-400	0.01	Steel	Included
05/0020/04	16-20	0.001	Steel	05/0020/22	400-500	0.01	Steel	Included
05/0024/04	20-24	0.001	Steel	05/0024/22	500-600	0.01	Steel	Included

Mandrel Blade Micrometer Set

Mandrel Blade micrometers feature a "Feathertouch" tubular frame and interchangeable mandrels. The mandrels provide an extended range of measurement from one tool. Blades are 0.017" thick to measure those hard to reach areas. Sets include mandrels, checking standards and fitted wood case.

- Tubular steel frame
- Spindle hardened to Rc 62-64 with lead error held to 0.00005"
- Reading to 0.001" or 0.01 mm available.
- Carbide spindle and anvil standard
- 0.017" thick blades
- Lock nut
- Non-rotating spindle
- Silver mist chrome finish head
- Includes checking standards
- Includes fitted wooden case

Imperial				Metric			
Code No	Range Inch	Grad Inch	Faces	Code No	Range Metric	Grad mm	Faces
07/1030/12	0-3	0.001	Carbide	07/1030/30	0-75	0.01	Carbide
07/1050/12	2-5	0.001	Carbide	07/1050/30	50-125	0.01	Carbide
07/1080/12	5-8	0.001	Carbide	07/1080/30	125-200	0.01	Carbide
07/1110/12	8-11	0.001	Carbide	07/1110/30	200-275	0.01	Carbide

Note:
Larger Sizes
Available



Electronic Micrometer Heads

IP54

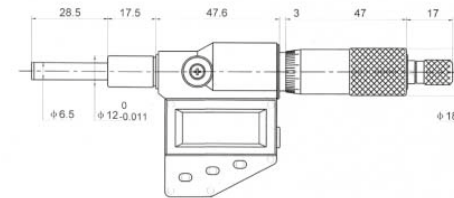


101/0303/410

Code No	Range	Accuracy
Ratchet Stop		
101/0303/410	0-25 mm	+/- 0.002 mm
101/0303/610	0-25 mm	+/- 0.002 mm
Friction Thimble		
101/0303/420	0-25 mm	+/- 0.002 mm
101/0303/620	0-25 mm	+/- 0.002 mm
Ratchet Friction Thimble		
101/0303/430	0-25 mm	+/- 0.002 mm
101/0303/630	0-25 mm	+/- 0.002 mm

Features

- P54 level protection
- Function: Power switch; Origin data set; Metric-inch conversion; Absolute and incremental measurement conversion; Data output; Clock.
- One SR44 battery. Power consumption < 35µA. Automatic power off.
- Resolution: 0.001mm/0.00005".
- RS232 data output. Connecting cable: P1102 (Optional).
- Criterion: DIN863/1, DIN40050/IEC529.



Code No	Range	Accuracy
Ratchet Stop		
101/0393/410	0-50 mm	+/-0.003 mm
Friction Thimble		
101/0393/420	0-50 mm	+/-0.003 mm
Ratchet Friction Thimble		
101/0393/430	0-50 mm	+/-0.003 mm

Inside Micrometer Single Rod

Made from high quality steel. Reading parts satin chromed. Carbide tipped measuring face. Locking screw. Insulated holder. Diameter of rod 16 mm.

Resolution metric models 0.01 mm. Imperial models 0.001"

Available in sizes up to 1000 mm (40"), in 1"/25 mm increments.

Accuracy:-

Up to 125 mm/5"	0.006 mm
Up to 350 mm/14"	0.009 mm
Up to 650 mm/26"	0.012 mm
Up to 875 mm/35"	0.015 mm
Up to 1000 mm/40"	0.017 mm



Code No	Range
101/2411501	25-35 mm
101/2411502	50-75 mm
101/2411503	75-100 mm
101/2411504	100-125 mm
101/2411505	125-150 mm
101/2411506	150-175 mm
101/2411507	175-200 mm

Code No	Range
101/2411521	1-1.25"
101/2411522	2-3"
101/2411523	3-4"
101/2411524	4-5"
101/2411525	5-6"
101/2411526	6-72
101/2411527	7-8"
101/2411528	8-9"
101/2411529	9-10"
101/2411530	10-11"
101/2411531	11-12"

O Vee Wire Gauges

APPLICATION

Setters

Set screwing tools more accurately. Setting to low limits gives maximum runs without re-setting. Direct work approaching high limits before producing rejects. Make plating allowances.

Inspectors

Use this very handy method of control at the machine in addition to normal routine inspection. Check border line rejects and worn plug gauges.

Storekeepers

Replace worn taps by periodic checks with special O Vee gauges for taps.

Quality Control Personnel

Will find this a convenient method of obtaining Effective diameter measurement for recording purposes.

ADVANTAGES

No Calculations necessary

The high and low limits "over the wires" are clearly marked on the data plate.

No reference books or tables required

Data plate shows correct tolerances for any specified fit.

No grips or supports needed

The O Vee gauges are manufactured from heat treated, high tensile steel wire specially selected for accuracy and are well within B.S.I. Gauge tolerances.

Versatility

O Vee gauges are available for any thread form, right, left hand, single and multi start threads.

Low Cost

Gauges for both standard and non standard threads involve a very modest outlay. Acceptance of border line rejects Knowledge of the actual size facilitates a discretionary acceptance.

Standard O Vee Gauges

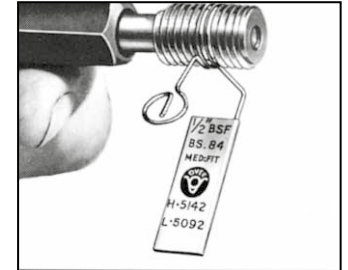
Intended for general production checking, quality control and for setting screwing tools.

Special O Vee Gauges

Can be made for threads of special pitches or diameters. Gauges can be supplied in boxed sets.

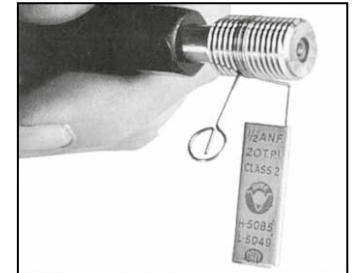
INSERT

Keep coil expanded by depressing lever and screw in component.



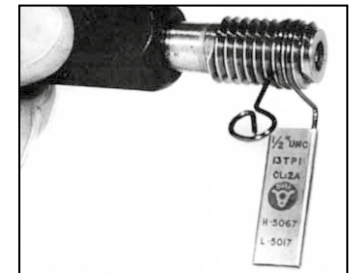
MEASURE

Take reading over coils.



COMPARE

Checks reading with limits on data plate.



O Vee Wire Gauges

The O-Vee measuring system provides quick, simple and accurate internal and external measurement of threaded components. The effective diameter is measured over the wires, by a standard type micrometer, without recourse to calculations or reference to tables.

The data plate shows maximum and minimum limits over wires and current tolerances for any specified fit.

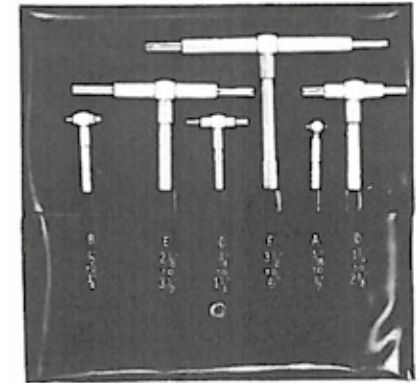
ISO METRIC BS3643	Standard Gauge	Special Gauge	internal Gauge	
M1.6-M3	✓	✓	N/A	
M3-M305	✓	✓	✓	N/A below 15 mm
BA (BRITISH ASSOCIATION) BS93				
0BA-5BA	✓	✓	N/A	
6BA-10BA	✓	✓	N/A	
UNIFIED: UNF/UN/UNFE/UNS BS1580 & WHIT FORM: BSW/BSF BS84				
1/32" – 1/8"	✓	✓	N/A	
5/32" – 12"	✓	✓	✓	N/A Below 5/8"
BSP (BRITISH STANDARD PIPE) BS2279				
1/8" – 5/8"	✓	✓	✓	N/A
3/4" – 1 1/2"	✓	✓	✓	
1 5/8" – 2 1/2"	✓	✓	✓	
2 3/4" – 3 1/2"	✓	✓	✓	
3 3/4" – 4 1/2"	✓	✓	✓	
4 3/4" – 5 1/2"	✓	✓	✓	
6"	✓	✓	✓	

Telescoping Gauges

Telescoping gauges are designed with a double plunger to check inside measurements difficult to obtain with inside micrometers. Compress plunger and lock into place with a slight turn of knurled knob on handle's end. Insert gauge into hole or slot, release and plunger expands to exact size. Lock again and remove gauge to take measurement.

- Precision ground plungers
- Rigid handle – self centering
- Constant, uniform spring tension
- Hardened radius contacts
- Furnished in case

Code No	Range	Description
64/0017/00	1/2-6	Set up five
64/0017/00	5/16-6	Set of six
64/0018/00	5/16 – 2 1/8	Set of four
64/0001/00	5/16 – 1/2	One gauge
64/0002/00	1/2 – 3/4	One gauge
64/0003/00	3/4 – 1 1/4	One gauge
64/0004/00	1 1/4 – 2 1/8	One gauge
64/0005/00	2 1/8 – 3 1/2	One gauge
64/0006/00	3 1/2 – 6	One gauge



Group 2 Small Hole Gauges

These gauges consist of a hardened split full round contact with a flat bottom. This permits measurements of small holes, slots, grooves and recesses. They are adjusted to size by a knurled knob at the end of a handle. Final size is obtained by use of a micrometer over the contacts.

- Precision Ground
- Hardened contact surfaces
- Split full round contact with flat bottom
- Furnished in case

Code No	Range Inch	Description
64/0012/00	0.125 – 0.500	Set of four
64/0048/00	0.125 – 0.625	Set of five

64/0007/00



64/0012/00

Height Marking Gauge

Specification

- Hardened steel base
- With dust grooves
- Base upper face surface ground
- Special steel measuring rule
- Vernier and scale satin chrome plated
- Parallax free reading
- With locking screw
- With mounting arm for dial gauges, dia 8 mm H7
- Replaceable carbide tipped scriber
- Protective cover
- With fine adjustment
- Pack : individually packed



Vertical Digital Height Gauge

Specification

- Hardened steel foot
- With dust grooves
- Surface ground
- Special steel
- LCD Display
- With locking screw
- With mounting arm for dial gauges, dia 8 mm H7
- Replaceable carbide tipped scriber
- Protective cover
- With fine adjustment
- Pack : individually packed

Electronic Functions

- ON/OFF switch
- Zero point setting in any position
- mm/inch selector
- Data output Opto RS232
- Hold function (measured value memory)
- +/- PRESET function
- (Measured value memory)



	Code No	Measuring Range mm	Beam Section mm	Reading mm	Weight Kg
Foot 60 x 40 x 100 mm					
	101/0336/301	300	25 x 6	0.02	3.65
Foot 110 x 50 x 160 mm					
	101/0336/302	600	30 x 12	0.02	13.60
	101/0336/304	1000	30 x 12	0.02	18.45
	101/0336/305	1500			
	101/0336/306	2000			

	Code No	Measuring Range mm	Measuring Range inch	Beam Section Mm	Reading MM	Weight Kg
Foot 60 x 40 x 100 mm						
	101/0342/701	300	12	25 x 6	0.01	3.55
Foot 110 x 50 x 160 mm						
	101/0342/702	600	24	30 x 12	0.01	13.00
	101/0342/704	1000	40	30 x 12	0.01	17.80

Vertical Digital Height Gauge

Specification

- With cast base
- LCD Display
- With locking screw
- Replaceable carbide tipped scriber
- Protective cover
- With fine adjustment
- Pack : Expanded polystyrene

Electronic Functions

- ON/OFF switch
- Zero point setting in any position
- mm/inch selector
- Data output Opto RS232
- Hold function (measured value memory)
- +/- PRESET function
- (Measured value memory)



	Code No	Measuring Range mm	Measuring Range inch	Beam Section Mm	Reading mm/ inch	Weight Kg
Foot 90 x 40 x 140 mm						
	101/0340/701	300	12	25 x 10	0.01/0.0005"	4.05
	101/0340/702	600	24	25 x 10	0.01/0.0005"	4.53

Connecting cable for DIGI-MET gauges

- For RS 232 interface
- With opto-coupling
- Suitable for all DIGI-MET gauges
- Length 2 m

Code No	Weight kg
101/0996/701	0.04



Digital Caliper

Stainless steel. Four way measurement. Absolute measurement. Inch/Metric

Data output. No thumb roller. Resolution 0.01"/0.0005".

Supplied in plastic case with a spare battery.



Code No	Range
101/5010001	150 mm/6"
101/5010002	200 mm/8"
101/5010003	300 mm/12"

Moisture Proof Caliper

Protection against coolant and moisture. Auto switch ON/Off.

Zero any position. Four way measurement with thumb roller. Packed in plastic case with a spare battery. Also available 200 and 300 mm.



Code No	Range
101/5010501	0-150 mm
101/5010502	0-200 mm
101/5010503	0-300 mm

DIGI-MET CALIPERS

Specification

- Stainless Steel
- LCD display 6 mm
- Locking screw
- With knife points
- Without fine adjustment
- Supplied in wooden box

Electronic Functions

- On/Off switch
- Zero setting at any position
- mm/inch conversion
- Data output opto RS232
- Hold function

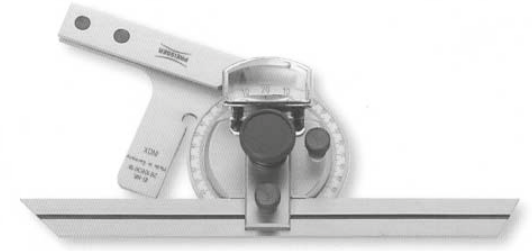


Code No	Measuring Range		Jaw length		Reading	
Stepped jaws for inside measurements 10 mm, DIN 862						
	mm	inch	mm	inch	mm	inch
101/0222701	300	12	90	3.5	0.01	0.0005
Stepped jaws for inside measurements 20 mm, DIN 862						
101/0222702	500	20	125	5.0	0.01	0.0005
101/0222703	800	32	150	6.0	0.01	0.0005
101/0222704	1000	40	150	6.0	0.01	0.0005
Stepped jaws for inside measurements 30 mm, factory standard						
101/0222724	1500	60	200	8.0	0.01	0.0005
101/0222726	2000	80	200	8.0	0.01	0.0005

Protractors

Specification

- Parallax-free reading
- Stainless steel
- Reading parts satin chromed
- Hardened Beam
- Locking screw
- Vernier scale 5 minutes
- With fine adjustment
- Pack – wooden case



Code No	Segments	Bar mm	Weight
101/0422/501	4 x 90 degrees	150	0.40
101/0422/502	4 x 90 degrees	200	0.42
101/0422/503	4 x 90 degrees	300	0.45
101/0422/504	4x 90 degrees	500	0.60

Specification

- Stainless steel
- Locking screw
- Vernier scale 5 minutes
- Pack – wooden case



Electronic functions

- On/off switch
- Accuracy:- 1 angular minute or 0.01 angular degree
- Display differential +/- 0.5 angular min

Code No	Bar mm	Weight
101/0425/701	150	0.32
101/0425/702	200	0.34
101/0425/703	300	0.37

Digi-Met Depth Gauges

Specification

- Stainless Steel
- LCD display 6 mm
- Locking screw
- Replaceable pin, dia 2 x 8 mm
- Larger measuring ranges on application
- Supplied in wooden box

Electronic Functions

- On/Off switch
- Zero setting at any position
- mm/inch conversion
- Data output opto RS232
- Hold function

Code No	Measuring range		Jaw length		Reading	
	mm	inch	mm	inch	mm	inch
101/0276700	200	8	100	4	0.01	0.0005
101/0276701	300	12	150	6	0.01	0.0005

Replacement pin for Digi-Met vernier depth gauges Code No. 101/0276 711



Digi-Met Small Depth Gauge

Specification

- Stainless Steel
- LCD display 6 mm
- Measuring pin, dia 2 mm
- Supplied in wooden box

Electronic functions

- On/off switch
- Zero setting at any position
- mm/inch conversion
- Data output upto RS 232
- Hold function

Code No	Measuring range		Jaw length		Reading	
	mm	inch	mm	inch	mm	inch
101/0277701	25	1	48	1.97	0.01	0.0005



Digi-Met Offset Depth Gauges

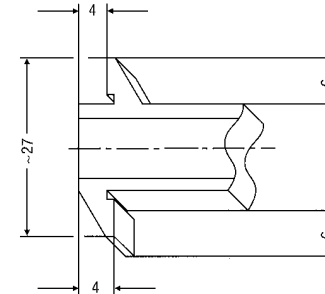
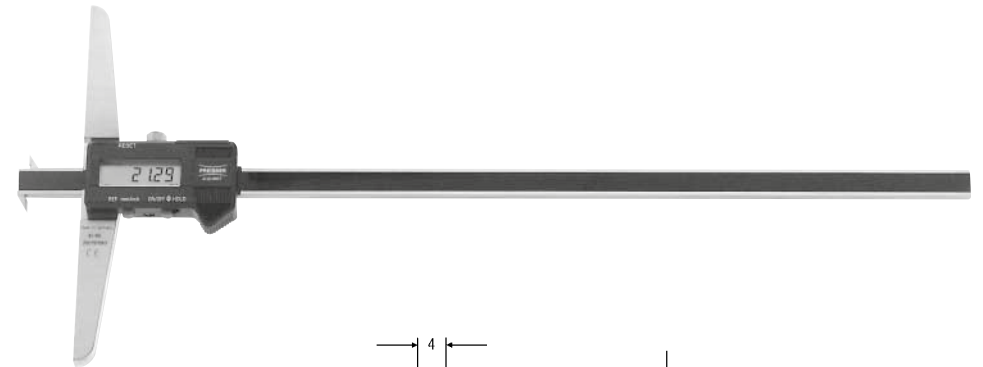
Specification

- Stainless Steel
- LCD display 6 mm
- Locking screw
- Larger ranges available
- Supplied in wooden box
- Offset measuring rod

Electronic functions

- On/off switch
- Zero setting at any position
- mm / inch conversion
- Data output upto RS 232
- Hold function

Code No	Measuring Range		Jaw length		Reading	
	mm	inch	mm	inch	mm	inch
101/0278700	200	8	100	4	0.01	0.0005
101/0278701	300	12	150	6	0.01	0.0005



Digital Depth Micrometers

Large LCD display for easy reading, SPC output.

5 function keys:-

1. Absolute and incremental measurement
2. Inch/metric conversion
3. On/Off
4. Data Hold
5. Preset

High accuracy. Interchangeable anvils. Reading does not have to be reset when changing anvils. Ratchet stop and locking screw.

Resolution 0.001 mm/0.00005"

Accuracy:-

- Up to 50mm/2" +/- 0.004 mm
- Up to 150 mm/6" +/- 0.005 mm
- Up to 300 mm/12" +/- 0.007 mm



Internal Groove Gauge



Specification

- Stainless Steel
- LCD display 6 mm
- Locking screw
- Supplied in wooden box

Electronic functions

- On/off switch
- Zero setting at any position
- mm/inch conversion
- Data output opto RS232
- Hold function (Measured value memory)
- +/- PRESET function (Measured value preset)

Code No	Range
101/1111041	0-1" / 0-25 mm
101/1111042	0-2"/0-50 mm
101/1111043	0-4"/ 0-100 mm
101/1111044	0-6"/ 0-150 mm
101/1111045	0-12"/ 0-300 mm

Code No	Measuring Range	Jaw length		Reading		Weight
		mm	inch	mm	inch	
101/0258/701	10-160	25	1	0.01	0.0005	0.15
101/0258/702	20-160	40	2	0.01	0.0005	0.20

External Dial Calipers

Reading 0.01 mm
Leg Length 63 mm

Code No	Range
30/1071	0-20 mm
30/1072	10-30 mm
30/1073	20-40 mm
30/1074	30-50 mm
30/1075	40-60 mm
30/1076	50-70 mm
30/1077	60-80 mm
30/1078	70-90 mm
30/1079	80-100 mm
30/1080	90-110 mm

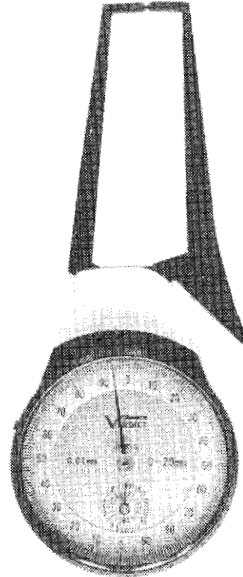


Photo Representative Only

Reading 0.0005"
Leg length 2.48"

Code No	Range
30/2071	0"-0.8"
30/2072	0.4"-1.2"
30/2073	0.8"-1.6"
30/2074	1.2"-2.0"
30/2075	1.6"-2.4"
30/2076	2.0"-2.8"
30/2077	2.4"-3.2"
30/2078	2.8"-3.6"
30/2079	3.2"-4.0"
30/2080	3.6"-4.4"

External Dial Calipers

- For checking wall thickness, castings, sheet thickness etc
- Button for opening arms
- Bezel locking device
- Arms automatically close when button is released
- Carbide measuring points
- Dial diameter 2" (50 mm)

Reading 0.001"
Leg length 3 1/4"

Code No	Range
30/2041	0"-1"
30/2042	0.375"-1.375"
30/2043	0.750"-1.750"
30/2044	1.125"-2.125"
30/2045	1.500"-2.500"
30/2046	1.875"-2.875"
30/2047	2.250"-3.250"
30/2048	2.875"-3.875"
30/2049	3.250"-4.250"
30/2050	3.625"-4.625"

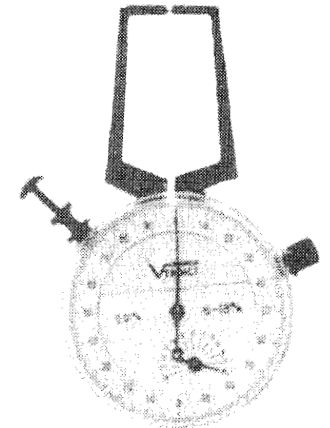


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Internal Dial Calipers

Reading 0.01 mm
Leg length 63 mm

Code No	Range
30/1060	5-15 mm
30/1061	10-30 mm
30/1062	20-40 mm
30/1063	30-50 mm
30/1064	40-60 mm
30/1065	50-70 mm
30/1066	60-80 mm
30/1067	70-90 mm
30/1068	80-100 mm
30/1069	90-110 mm
30/1070	100-120 mm

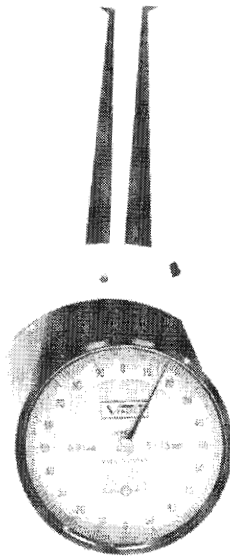


Photo Representative Only

Reading 0.0005"
Leg Length 2.48"

Code No	Range
30/2060	0.2"-0.6"
30/2061	0.4"-1.2"
30/2062	0.8"-1.6"
30/2063	1.2"-2.0"
30/2064	1.6"-2.4"
30/2065	2.0"-2.8"
30/2066	2.4"-3.2"
30/2067	2.8"-3.6"
30/2068	3.2"-4.0"
30/2069	3.6"-4.4"
30/2070	4.0"-4.8"

External Dial Calipers

Reading 0.01 mm
Leg Length 40 mm

Code No	Range
30/1031	0-12 mm
30/1032	10-22 mm
30/1033	20-32 mm
30/1034	30-42 mm
30/1035	40-52 mm
30/1036	50-62 mm
30/1037	60-72 mm
30/1038	70-82 mm
30/1039	80-92 mm
30/1040	90-102 mm

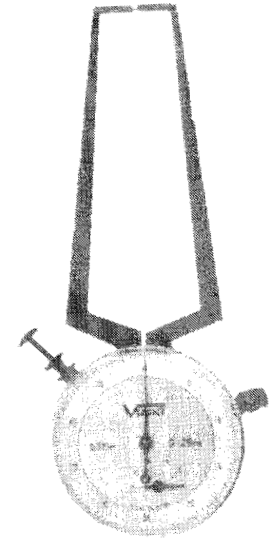


Photo Representative Only

Reading 0.02 mm
Leg Length 80 mm

Code No	Range
30/1041	0-25 mm
30/1042	10-35 mm
30/1043	20-45 mm
30/1044	30-55 mm
30/1045	40-65 mm
30/1046	50-75 mm
30/1047	60-85 mm
30/1048	70-95 mm
30/1049	80-105 mm
30/1050	90-115 mm

Internal Dial Calipers

- For checking internal bores, recess diameters etc
- Can be set with an external micrometer or standard setting piece
- Button for closing arms
- Bezel locking device
- Arms automatically open when button is released
- Dial diameter 2" (50 mm)

Reading 0.02 mm
Leg Length 40 mm

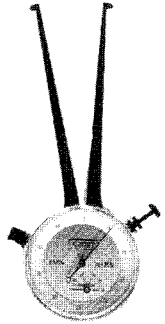
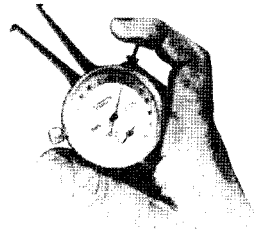


Photo Representative Only

Reading 0.001"
Leg Length 3 1/4"

Code No	Range
30/2001	0.375"-1.375"
30/2002	0.750"-1.750"
30/2003	1.125"-2.125"
30/2004	1.500"-2.500"
30/2005	1.875"-2.875"
30/2006	2.250"-3.250"
30/2007	2.875"-3.875"
30/2008	3.250"-4.250"
30/2009	3.625"-4.625"
30/2010	4.000"-5.000"

Code No	Range
30/1020	3-9 mm
30/1021	6-18 mm
30/1022	10-22 mm
30/1023	20-32 mm
30/1024	30-42 mm
30/1025	40-52 mm
30/1026	50-62 mm
30/1027	60-72 mm
30/1028	70-82 mm
30/1029	80-92 mm
30/1030	90-102 mm



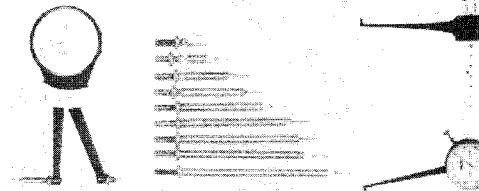
Reading 0.025mm
Leg length 80 mm

Code No	Range
30/1001	10-35 mm
30/1002	20-45 mm
30/1003	30-55 mm
30/1004	40-65 mm
30/1005	50-75 mm
30/1006	60-85 mm
30/1007	70-95 mm
30/1008	80-105 mm
30/1009	90-115 mm
30/1010	100-125 mm

Interchangeable Arm Type Calipers

Metric or inch
Length of arm 80 mm
Graduation 0.025 mm or 0.001"
Dial face - diameter 50 mm

Code No	Range mm	Code No	Range Inch
30/4031	60-150 mm	30/4041	2.3"-6"
30/4032	60-200 mm	30/4042	2.3"-8"
30/4033	60-250 mm	30/4043	2.3"-10"
30/4034	60-300 mm	30/4044	2.3"-12"
30/4035	60-350mm	30/4045	2.3"-14"
30/4036	60-400 mm	30/4046	2.3"-16"
30/4037	60-450 mm	30/4047	2.3"-18"
30/4038	60-500 mm	30/4048	2.3"-20"
30/4039	60-550 mm	30/4049	2.3"-22"
30/4040	60-600 mm	30/4050	2.3"-24"



Precision and continuity

Ever since its foundation in 1883 Kroeplin have been involved in development and production of handy reliable and precise gauges for the measurement of lengths and thicknesses, especially for the metalworking industry. Thus the quick test system was created, which was the basis for all further innovations and also for the electronic dial indicators.

Experience is the solid foundation for quality. Careful observation and analysis of the market, flexible realization of requirements, convincing measuring concepts - that is the philosophy that makes Kroeplin successful. Today like before, for more than 125 years.

Features

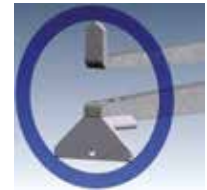
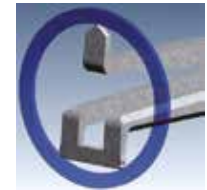
- Certificate of quality
- Reliable repeatability
- Scales are well arranged and easy to read
- Scale interval from 0,005mm up
- Tolerance marks easy to read
- All mechanical gauges are also available in "INCH"
- The electronic gauges can be switched over to "INCH"
- Measuring contacts are mainly made of carbide
- Electronic gauges with analog / digital display for better reading
- Mitutoyo interface
- USB interface
- Ergonomically designed
- Measuring programs and contacts for different applications
- Absolute and relative measurement
- Red / Green LED for tolerance measurement
- Special solutions possible
- Stand holding unit for serial measurement of small parts

New products

Instruments with 3-point contact for easier centering

Measuring contacts

- Easy handling
- High repeatability
- Measuring programs and contacts for different applications
- Suitable for workshop use
- IP 67
- Interface (Digimatic, USB, U-WAVE®)
- mm/inch switch
- Fast reading
- Accurate measurement
- Precise measuring results



Ergonomically designed with new IP classification

The gauges provide a digital / analog display for better reading. The quickest gauges includes custom designed test programs, measuring contacts, absolute- and relative measuring programs and red/green display for tolerance measurement.



The established and proven generation of Quicktests

Mechanical

- IP 65
- Optimized measuring force
- Accurate measurement
- Ergonomically designed



Electronic

- IP 67
- Optimized measuring force
- Digital display with analog bar
- Ergonomically designed
- Interfaces (USB, DIGIMATIC or U-WAVE) available on request



Internal Measurement Application range up to 60 mm

G102



G210



G330



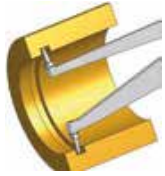
H105



H210



Measuring contacts



[5] Ball \varnothing 2 ,0 mm



[18] Ball \varnothing 5 ,0 mm



[19] Ball \varnothing 5 ,0 mm



[20] Hemisphere
SR 20 mm

Measuring Capacity

[Meb] Measuring range

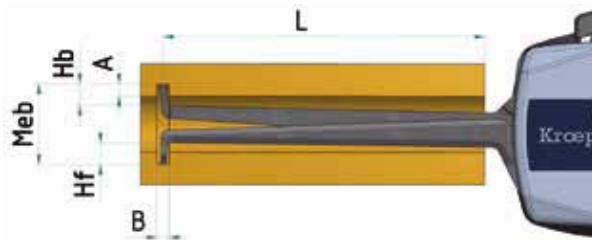
[A] Groove depth

[B] Groove width

[Hb] Measuring contact movable

[Hf] Measuring contact fixed

[L] Measuring depth



Internal Comparison Measurement

Application range from 50 mm to 430 mm

H4M180



H2M50



H2M90

External measurement
Application range up to 30 mm



POCO2K



C110



C220



C330

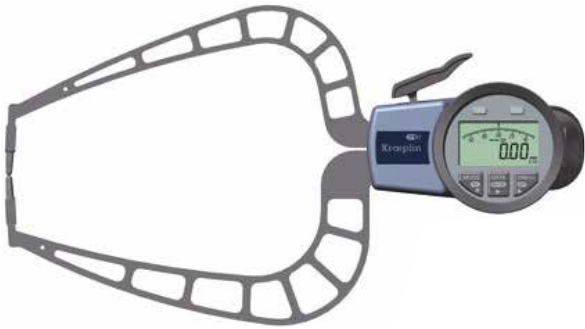


D110



D220

External measurement
Application range up to 200 mm

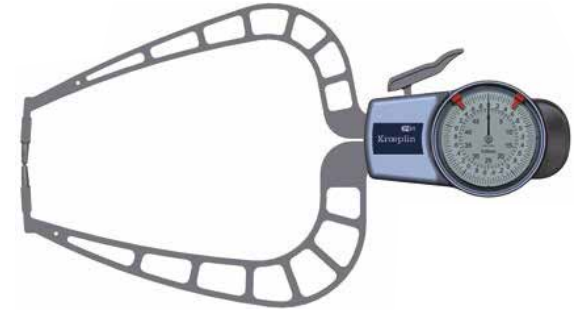


C450

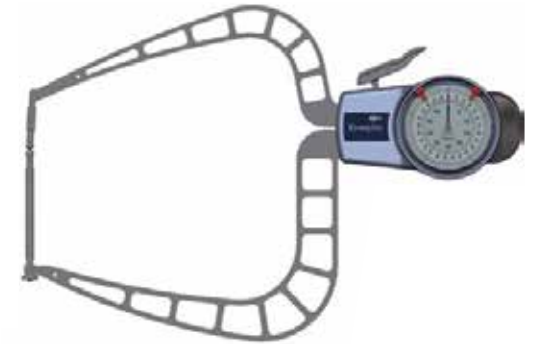


C8100

D450



D450F



OD60100BJ



Tube wall measurement Application range up to 100 mm



CIRIO



C3R30

D2R20



D4R50

POCO2R



Measurement of foamed material
and foils
Application range up to 100



C110T

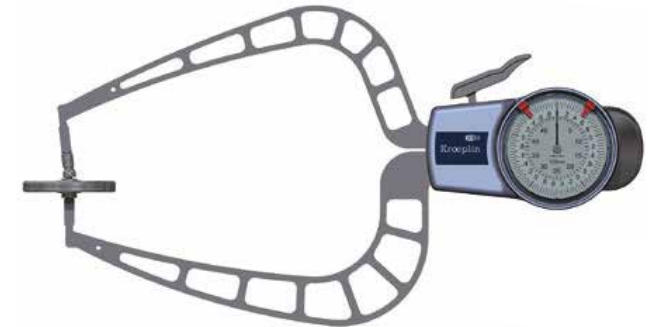


C330T

D220T



D450T



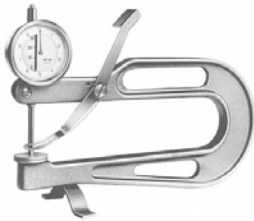
POC02T



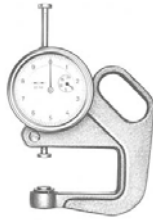
Thickness Gauges

By using aluminium frames, these deep throat instruments are light and easily handled. The measured result can be read directly on the dial of the gauge. The form of the feeler can be adapted depending on the material to be measured and must be ordered with the thickness gauge (see designs). The instrument can be easily set to zero by rotating the knurled bezel. A support device on the larger instruments from 200mm to 400mm (7 3/4" – 15 3/4") depth of jaw makes it possible to use them in a stationary position. All the instruments are supplied in solid cardboard boxes. (state type of feeler when ordering)

Contacts available:- A, B, C, D, E (See bottom of page)



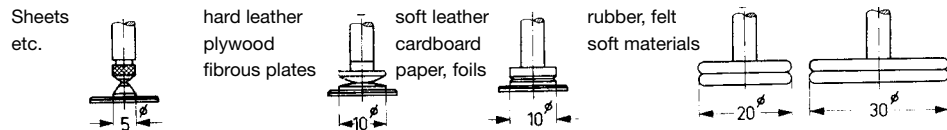
Code No.	Graduation	Range	Depth of jaws	Model
23/9000	0.1mm	30mm	200mm	K200
23/9005	0.1mm	30mm	300mm	K300
23/9010	0.1mm	30mm	400mm	K400
23/9020	0.01"	1.2"	7 3/4"	KZ200
23/9025	0.01"	1.2"	11 3/4"	KZ300
23/9015	0.01"	1.2"	15 3/4"	KZ400



Code No.	Graduation	Range	Depth of jaws	Shape of contact points
23/8025	0.1mm	10mm	50mm	Please state type required
23/8030	0.1mm	20mm	50mm	
23/8035	0.1mm	30mm	50mm	
23/8040	0.1mm	30mm	100mm	
23/8045	0.01mm	10mm	50mm	A
23/8050	0.01mm	10mm	100mm	B
23/8055	0.01mm	10mm	200mm	C
23/8060	0.01"	0.8"	2"	D
23/8065	0.01"	1.2"	2"	Or E
23/8070	0.01"	1.2"	4"	
23/8075	0.001"	0.4"	2"	
23/8080	0.001"	0.4"	4"	
23/8085	0.001"	0.4"	7 3/4"	



Form of feelers for Thickness Measuring Instruments



Dial Thickness Gauges

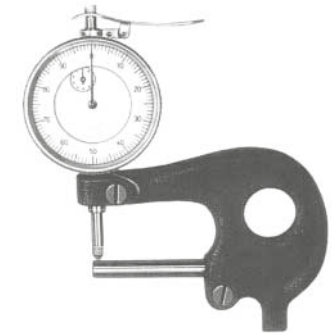
This can be used to measure wire and thread thickness, especially while they are in continuous motion. The gauge can be supplied without side disc for the measurement of paper, foil and sheet material.

Graduation	0.01mm	Measuring Range	5mm
Depth of jaw	50mm	Width of the rollers	8.7mm
Diameter of the rollers	8.4mm	Code No.	23/3001



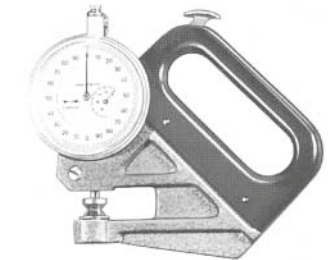
Used for accurate and fast measurement of the thickness of tube walls. The instrument is supplied with horizontally arranged, ground feeler pins of 6 and 8mm diameter.

Graduation	0.01mm
Measuring range	10mm
Depth of jaw	50mm
Code No	23/3010



Handy instrument to measure the thickness of thin foils. Isolation of the handle prevents transfer of heat from the hand to the sensitive mechanical parts of the dial gauge, bearings of which are made of sapphires. The measuring pressure is approximately 1.2N.

Graduation	0.001mm
Measuring range	1mm
One rotation of the pointer	0.2mm
Depth of jaw	30mm
Code No.	23/3005



Master Block Level

Stabilised cast iron.

SURFACES HARDENED on types no. 61R 140 – 200 – 300mm.

Bearing surfaces flat and vee.

EASE OF ADJUSTMENT OF 2 VIALS

Exceptional resistance to shock

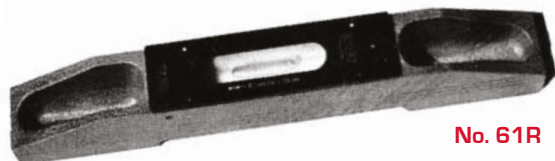
EASE OF REPLACEMENT OF 2 VIALS: Same type of vial is used on levels No. 61R and 67R all dimensions.

Maximum clarity of the bubbles.

Top plate with glass insulates against hand heat.

The type 100mm length has no cross vial.

Furnished in wooden box



No. 61R

Length mm	Sensitivity in mm/m			
	0.1	0.01	0.02	0.05
	Code No.	Code No.	Code No.	Code No.
100	59/0001	59/0002	59/0003	59/0004
200	59/0009	59/0010	59/0011	59/0012
300	59/0013	59/0014	59/0015	59/0016
500	59/0017	59/0018	59/0019	59/0020

Square Frame Level

2 flat bearing surfaces and 2 flat and vee ground within:

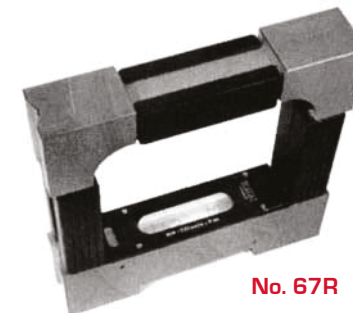
- 0.002mm (200 x 200mm)
- 0.003mm (300 x 300mm)

Stabilised cast iron.

EASE OF ADJUSTMENT OF 2 VIALS

EASE OF REPLACEMENT OF 2 VIALS

Insulating handles in sensitivities 0.02 - 0.01



No. 67R

Dimensions:	mm	200 x 200 x 45	300 x 300 x 48
	in	8 x 8	12 x 12
Weight:	kg	3,200	8,500

	Sensitivity		Seconds	
	mm/m	in/10 in		
200 x 200	300 x 300			
59/0021		0.1	0.001	20
59/0025	59/0030	0.05	0.0005	10
59/0024	59/0029	0.04	0.0004	8
59/0023	59/0028	0.02	0.0002	4
59/0022	59/0027	0.01	0.0001	2

Furnished in wooden box

Other types of levels available.

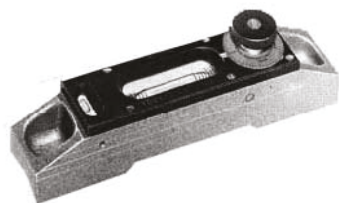
Block Level

Micrometer Block Set

Main vial: 1div.= 0.02mm/m or 0.0002"per 10" or 4 secs.
0.01mm/m or 0.0001"per 10" or 2 secs.

Dial: 1div.= 0.05mm or 0.0005" Per 10" or 10 seconds

Range of micrometer: +- 10mm/m.



Flat and vee bearing surfaces hardened

and ground within 0.002mm (0.0001 in).

Top plate with glass insulates against hand heat.

Length: mm	140	200	300
In	5.5	8	12
Weight: KG	1	1.35	2.25
	Code no.	Code no.	Code no.
SENSITIVITY			
0.0002"/	59/0039	59/0041	59/0043
0.02mm			
0.0001"/	59/0038	59/0040	59/0042
0.01mm			
Furnished in wooden box.			

Micrometer Block Level

Very high precision.

Dial: 1div.= 0.01mm/m or 0.0001"per 10" or 2 secs

Main vial; 1div.= 0.02mm/m or 0.0002 per 10" or 4 seconds.

Range of micrometer: +- 10mm/m



Code No. - 59/0036

Flat and vee bearing surfaces hardened and ground within 0.002mm (0.0001 in).
Dimensions: 40 x 200 mm
Weight: 2.10 kg

Code No.	59/0036
Furnished in wooden box	

Tubular Spirit Level With Flat Base

No. 100H



Sensitivity	3.2"	4"	6"	8"
0.0005" in 10" or 0.05mm/m	-	-	80/5140	80/5141
	-	80/5143	80/5144	80/5145
Or 0.10mm/m				
0.003" in 10" or 0.30mm/m	80/5146	80/5147	80/5148	80/5149



Screw On Level

	1mm/m	0.4	0.1	0.05	0.02
No100H50mm	-	59/0301	-	-	-
80mm	59/0302	59/0303	59/0304	59/0305	-
100mm	-	-	-	59/0306	59/0307

Precision Screw on Levels

Very durable construction, hardened base, vial protected by plastic screen. Four sensitivities available.

Weight: 190gms



Code No:	Sensitivity
59/0095	1mm/m or 0.01" in 10"
59/0096	0.4mm or 0.004" in 10"
59/0097	0.1mm/m or 0.001" in 10"
59/0098	0.05mm/m or 0.0005" in 10"

Small Screw On Levels

Nickel chromed body. Standard for fixing underneath plastic or glass surfaces.

Length 40mm Hole Pitch. 34mm



Code No. 59/0171

Square Micrometer Block Level

Same characteristics as no. 65

2 flat bearing surfaces and 2 flat vee ground within:

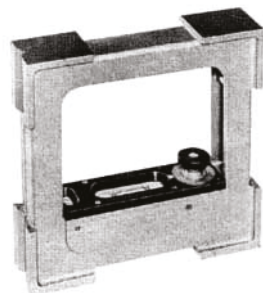
0.002mm (200x200)

0.003mm (300x200)

Dimensions:	mm	200x200x45	300x300x48
	in	8x8	12x12
Weight:	kg	3.250	8.500

Furnished in wooden box

Sensitivity	Code No.	
0.0002"/0.02mm	59/0046	59/0048
0.0001"/0.01mm	59/0045	59/0047

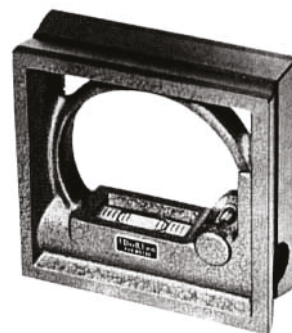


Square Block Level

0.1mm/m

Vials are not adjustable

mm	100x100	150x150
kg	1.100	2.400
Code	59/0050	59/0051



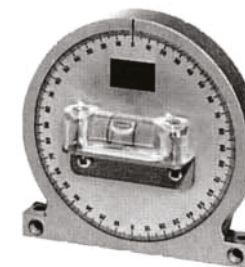
UNIVERSAL LEVELS

No.86

CODE 59/0086

Tilt Level

Dimensions: mm: 100 x 15 x 100



With fine setting device for measuring and checking all angles in degrees and minutes.

Vernier reading 10 minutes.

Length 6".

Vial sensitivity 0.3 mm/m

Code **Model**

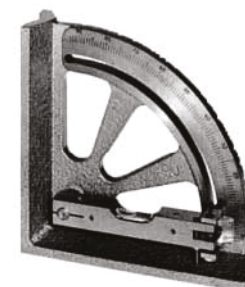
59/0100 90

59/0101 90m with magnetic faces

Dimensions: mm: 150 x 150 x 39

Weight: kg: 1.6

Furnished in wooden box.



CLINOMETER 83

360° CLINOMETER – DIRECT
READING TO 1 MINUTE CODE 59/0105

Description

The Clinometer 83 is an instrument for measuring angular deviation accurately. Due to its design, it is very compact and smaller than most Clinometers of the same accuracy.

The base is hardened and ground flat with a longitudinal prismatic vee. This allows for location on flat and cylindrical surfaces.

The circular scale, which can be observed through the viewing window, is marked 0.180.0 at one degree intervals and figured every 10 degrees. A spirit vial – setting the datum – is attached to the adjusting collar integral with the main scale. This scale is sub-divided by means of an external Micrometer. The drum is graduated in minutes and figured every five minutes.

Application

For setting and checking angles through 360°
Used in the following industries:

- Machine Tools
- General Engineering
- Shipbuilding
- Textile Machinery
- Structural – Bridges
- Mining, Aeronautical
- etc.

**Specification**

Glass Covered aperture: 1 div. = 1°
Micrometer drum: 1 div. = 1°
Vial: 1 div. = 0.3mm/m or 1°
Flat and vee bearing surfaces hardened and ground.
Coarse setting is made by rotating vial by hand after worm is disengaged by depressing micrometer drum.

Dimensions:	mm	150 x 30 x 124
Weight:	kg	1.600

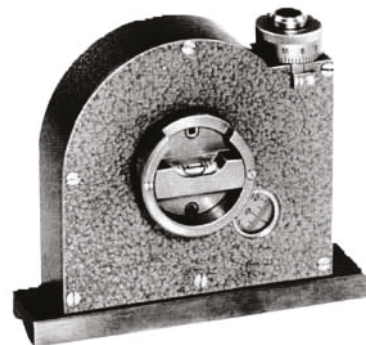
Same characteristics as n°83.
Level is replaced by a plane worktable.
A removable level is furnished for using as n°83.

OPTIONAL ACCESSORIES for n°83 and 83U
59/0106 : prismatic base 120 x 30mm
59/0107 : magnetic flat base 120 x 30mm
59/0108 : morse taper (No. to be supplied)
59/0109 : steep taper

Furnished in wooden box

Operation

For the initial setting, i.e. to the nearest degrees, depress the spring-loaded Micrometer Drum to disengage the drive to the main scale. Coarse setting is then made by rotating the spirit level by hand. Rearrange the drive and rotate the Micrometer Drum to obtain final setting.

**AUTOMATIC CLINOMETER**

No. 81 – AUTOMATIC
CODE 59/010

Pendulum in the form of a drum.

By means of 1/4 rotation knob, it is possible to hold the drum stationary for the purpose of reading.

All working parts enclosed in a dust tight case.

Flat plus vee bearing surfaces hardened and ground.
+- 180° - Vernier 1 minute.

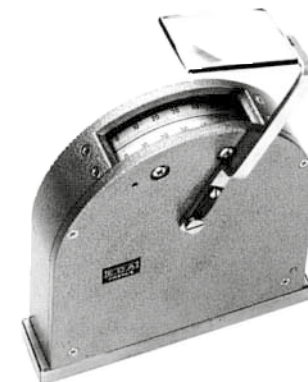
Maximum error between 2 readings:
2 minutes.

Dimensions: mm 150 x 30 x 156
Weight with box: kg 1.800

Optional accessories

Magnifier.

Magnetic base interchangeable with the normal base and type 83 clinometer.



**Digital Clinometer
Available on Request**

Spirit Levels

Right angled level

With two fixing holes for fitting to machines. Clear plastic protection of vial.

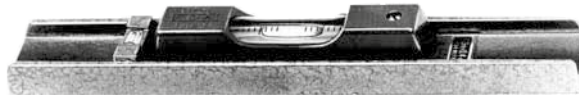
Dimensions 80 x 80mm
Weight 210gms

Code	Sensitivity
59/0131	0.4mm/m – 0.004" in 10"
59/0132	0.1mm/m – 0.001" in 10"
59/0133	0.05mm/m – 0.0005" in



Mechanics precision level

This model is ideal for use with machine installation and levelling of flat or cylindrical surfaces. A small transverse vial ensures easy and accurate measurements. The main vial is adjustable and protected damage.



Sensitivity	Length			
	150	200	250	300
1 mm/m – 0.01" in 10"	59/0068	59/0071	59/0074	59/0077
0.1 mm/m – 0.001" in 10"	59/0069	59/0072	-	-
0.05mm/m – 0.0005" in 10"	59/0070	59/0073	-	-

Cross Spirit Level

		Code
No 94	Ø 40mm – 1mm/m	59/0175
	Ø 80mm – 0.4mm/m	59/0176
	Ø 80mm – 0.1mm/m	59/0177



No, 94

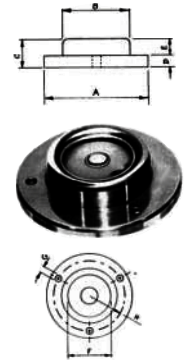
Spirit Levels

Circular Spirit Levels

For fixing onto machines etc.

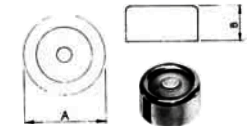
Sensitivity 20-30 minutes per 2 mm of bubble movement

Code No.	59/0135	59/0136	59/0137	59/0139	59/0141	59/0140
A	20	25	30	40	50	60
B	13.5	17	17	25	34	39
C	10	10	11	12	15	17
D	2	2.5	3.5	5	6	7
E	8	7.5	7.5	7	9	10
F	9	12	12	19	25	30
G	2	1.7	2.8	2.8	3.5	3.5
H	8.5	10.6	12	17	21.5	25



This type of level is also available having diameter 'A' 80mm or 100mm. Sensitivity 20-30 minutes per 2mm of bubble movement.

Code No.	59/0155	59/0156
A	16	18
B	10	10



Cross Spirit Level

With fixing holes to screw on machines etc.

Sensitivity	Lengths	
	3.2" (78mm)	6" (150mm)
0.0002" in 10 or 0.02mm/m		80/5205
0.0005" in 10" or 0.05mm/m in 10"		80/5206
0.001" in 10" or 0.10mm/m	80/5207	80/5208



Length 150mm, width 130mm, thickness 30mm
Length 78mm, width 65mm, thickness 17mm

No 92 Circular Clinometers

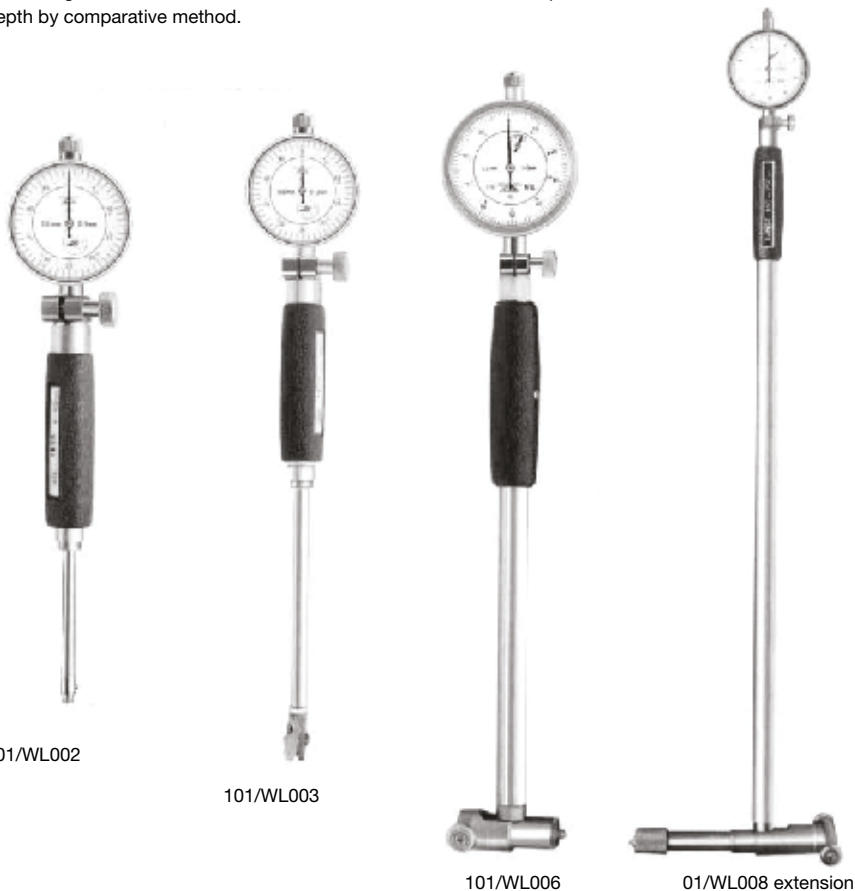
Ø mm	1 div.	Course Range	Code
60	30 min	2 degrees	59/0180
60	1 degree	4 degrees	59/0181
80	5 degrees	10 degrees	59/0182



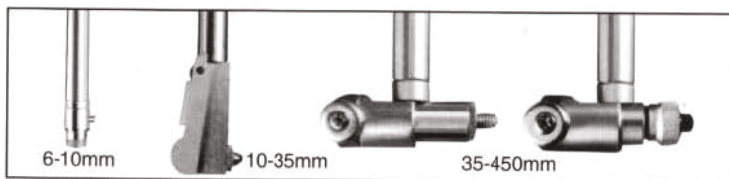
No, 92

Metric Dial Bore Gauges

Bore Gauges are used to measure internal hole dimensions and shape errors of different diameter and depth by comparative method.



MAIN BODY DETAILS



Metric Dial Bore Gauges



Specifications

Model	Range (mm)	Grad (mm)	Depth (mm)	Interchangeable anvil	Washers
101/WL002A	6-10	0.01	40	9	
101/WL003A	10-16	0.01	100	9	1
101/WL004C	18-35	0.01	125	7	2
101/WL004D	18-35	0.01	125	9	2
101/WL005A	35-50	0.01	150	4	4
101/WL005B	35-50	0.01	150	3	
101/WL005C	35-50	0.01	150	3	
101/WL006A	50-100	0.01	150	11	3
101/WL006A	50-160	0.01	150	12	3
101/WL006B	50-100	0.01	150	5	
101/WL006B	50-160	0.01	150	5	1
101/WL006C	50-100	0.01	150	5	1
101/WL007	100-250	0.01	400	5	
101/WL008A	160-250	0.01	400	5	
101/WL008B	150-250	0.01	400	5	5
101/WL008C	160-250	0.01	400	5	5
101/WL009A	250-450	0.01	400	5	1
101/WL009B	250-450	0.01	400	5	5

Inch Dual Bore Gauges

Inch Dual Bore Gauges



101/WL012



101/WL014



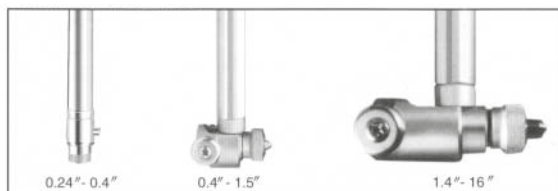
101/WL016



101/WL018 extension



MAIN BODY DETAILS



0.24" - 0.4"

0.4" - 1.5"

1.4" - 16"

Specifications

Model	Range (in)	Grad (in)	Depth (in)	Interchangeable anvil	Washers
101/WL012	0.24-0.4	0.0005	1.57	9	
101/WL013A	0.4-0.7	0.0005	4	9	1
101/WL014A	0.7-1.5	0.0005	5	10	2
101/WL015A	1.4-2.4	0.0005	6	6	3
101/WL016A	2-6	0.0005	6	11	3
101/WL017A	2-4	0.0005	6	11	3
101/WL018	6-10	0.0005	16	6	5
101/WL019	10-18	0.0005	16	6	5

Diatest

Durable, high accuracy. Dial Indicator with revolution counter and balanced dial. Range selected to span longest range probe. Choice of graduation values. See page ...?

Smooth working, split collet holder with insulated grip. When knurled knob is sem tight, Indicator can be easily positioned vertically and radially. Once fully tightened, holds securely.

Split ball probe, quickly interchangeable with any other. Screws securely to holder.

Precisely relieved section provides closely controlled flex under normal indicator gauging force. Split ball, hard chrome plated, automatically centres in bore, easily passes over annular interruptions. Smooth radius permits easy bore entry.



Split Ball type
.0185-1.620" (0.47-41.3mm)

Optional:
Blind hole probes available from .057" up. Solid carbide gauging surfaces available from .165" up Not available for blind hole (Type FB).

English and Metric models
Self-centering,
2-point gauging
Depths up to 60" (1500 mm)

Precision ground needle. Available in steel optionally in solid carbide for probes .057" (1.5mm) upwards.



Sturdy thread (enlarged view) is the same for every Diatest probe and holder. Everything fits. No adaptors required. Bottom relief and precisely square shoulder mean a positive secure fit everytime.



Each inner knife edge of split ball makes single point contact with accurately ground cone, transferring gauging motion through needle to Indicator.



Smallest split ball probe shown four times actual size checks bores as small as .0185" in diameter (0.47mm).



Blind hole contacts have sharp radiused edges, permitting checks close to bottom of hole:

Probe Nos.	Range	From Bottom
T-011 thru T-018	.057" - .169"	.012"
T-021 thru T-029	.165" - .394"	.020"
T-031 thru T-039	.380" - .830"	.039"
T-041 thru T-046	.822" - 1.135"	.047"
T-051 thru T-056	1.130" - 1.620"	.059"



Retraction knob can be easily added to any Diatest indicator. Normally furnished with all complete gauging sets, otherwise optional



Slim-line (T series) probes and extensions permit high accuracy, deep hole exploration of small bores from .0807" to .388" (2.05-9.85 mm). Ideal for small diameter glass and metal tubing. Extensions fit Diatest holders.

Complete DIATEST sets (Metric)

Code	Set No	Probes Inset	No.	Probe Ranges (mm)	Gauging Depths (mm)	Needles Inset	No.	Setting Rings		Holders Inset	Box	Dial Indicators
								Inset	Size (mm)			
63/2000	EM00	6	0X	0.47-0.53	1.5	1	N00-030	6	0.50	1	1	1
			00	0.52-0.58	1.8	N00-040	0.55					
			01	0.57-0.67	2.0		0.60					
			02	0.65-0.77	2.5		0.60					
			03	0.75-0.87	2.8		0.8					
04	0.85-0.97	3.0		0.9								
63/2005	EM0	5	05	0.95-1.15	11	1	N0-070	6	1.00 & 1.10	1	1	1
			06	1.07-1.25	11		1.10 & 1.20					
			07	1.17-1.35	11		1.20 & 1.30					
			08	1.27-1.45	11		1.30 & 1.40					
			09	1.37-1.55	11		1.40 & 1.50					
63/2100 63/2101	EM2 EM1/FB*	8	011	1.50-1.90	17	1	N1-100	8	1.75	1	1	1
			012	1.70-2.15	17	NFB1-100	2.00					
			013	2.05-2.45	17		2.25					
			014	2.30-2.75	22	N1-150	2.50					
			015	2.65-3.20	22	NFB1-150	3.00					
			016	3.05-3.50	22		3.25					
			017	3.35-3.85	22		3.50					
			018	3.80-4.30	22		4.00					
			019									
63/2200 63/2201	EM2 EM2/FB*	9	021	4.20-5.00	40	1	N2-270	9	4.50	1	1	1
			022	4.70-5.50	40	NFB2-270	5.00					
			023	5.30-6.20	40		5.75					
			024	6.00-6.80	40		6.50					
			025	6.60-7.50	40		7.00					
			026	7.30-8.15	40		7.75					
			027	8.00-8.80	40		8.50					
			028	8.50-9.40	50		9.00					
			029	9.15-10.00	50		9.50					
			030									
			031									
63/2300 63/2301	EM3 EM3/FB*	9	031	9.60-10.80	50	1	N3-310	9	10.00	1	1	1
			032	10.65-12.20	50	NFB3-310	11.50					
			033	12.05-13.50	50		13.00					
			034	13.30-14.80	50		14.00					
			035	14.55-16.00	50		15.00					
			036	15.80-17.30	50		16.50					
			037	17.05-18.55	50		18.00					
			038	18.30-19.80	50		19.00					
			039	19.60-21.00	50		20.00					
			040									
63/2400 63/2401	EM4 EM4/FB*	6	041	20.90-22.40	50	1	N3-310	6	21.50	1	1	1
			042	22.20-23.70	50	NFB3-310	23.00					
			043	23.50-25.00	50		24.00					
			044	24.80-26.30	50		25.50					
			045	26.10-27.60	50		27.00					
			046	27.40-28.90	50		28.00					
			047									
63/2500	EM5 EM5/FB*	6	051	28.80-31.00	50	1	N5-350	6	30.00	1	1	1
			052	30.85-33.05	50	NFB5-350	32.00					
			053	32.90-35.10	50		34.00					
			054	34.95-37.15	50		34.00					
			055	37.00-39.20	50		38.00					
			056	39.10-41.30	50		40.00					
			057									
			058									
			059									

Complete DIATEST sets (Imperial)

Code	Set No	Probes Inset	No.	Probe Ranges	Gauging Depths	Needles Inset	No.	Setting Rings		Holders Inset	Box	Dial Indicators									
								Inset	Size												
63/1001	E00	6	0x	.0185-.0210"	.059"	1	N00-030	6	.020"	1	1	1									
			00	.0205-.0228"	.071"				.022"												
			01	.0224-.0264"	.079"				.025"												
			02	.0256-0.300"	.099"				.028"												
			03	.0295-.0343"	.110"				.032"												
04	.0335-.0380"	.118"	.036"																		
63/1005	E0	5	05	.0375-.0450"	4"	1	N0-070	5	.040"	1	1	1									
			06	.043-.0490"	4"				.045"												
			07	.047-.0530"	4"				.050"												
			08	.051-.0570"	4"				.055"												
			09	.054-.0610"	4"				.060"												
63/1100 63/1101	E1 E1/FB*	8	011	.057-.075"	67"	1	N1-100 NFB1-100 N1-150 NFB1-150	8	.0625"	1	1	1									
			012	.067-.085"	67"				.0750"												
			013	.081-.096"	67"				.0875"												
			014	.091-.110"	87"				.1000"												
			015	.105-.126"	87"				.1150"												
			016	.120-.140"	87"				.1300"												
			017	.134-.155"	87"				.1450"												
			018	.149-.169"	87"				.1600"												
			63/1200 63/1201	E2 E2/FB*	9				021				.165-.200"	1.6"	1	N2-270 NFB2-310	9	.1800"	1	1	1
									022				.185-.220"	1.6"				.2000"			
023	.209-.244"	1.6"				.2250"															
024	.235-.270"	1.6"				.2500"															
025	.260-.295"	1.6"				.2750"															
026	.288-.323"	1.6"				.3000"															
027	.313-.347"	1.6"				.3250"															
028	.335-.370"	2.0"				.3500"															
029	.360-.394"	2.0"				.3750"															
63/1300 63/1301	E3 E3/FB*	9				031	.380-.425"	2"	1	N3-310 NFB3-310	9	.4000"	1	1				1			
						032	.420-.480"	2"				.4500"									
						033	.474-.531"	2"				.5000"									
			034	.524-.583"	2"	.5500"															
			035	.573-.634"	2"	.6000"															
			036	.622-.681"	2"	.6500"															
			037	.672-.730"	2"	.7000"															
			038	.721-.780"	2"	.7500"															
			039	.775-.830"	2"	.8000"															
			63/1400 63/1401	E4 E4/FB*	6	041	.822-.880"	2"				1			N3-310 NFB3-310	6	.8500"		1	1	1
						042	.872-.930"	2"									.9000"				
						043	.922-.980"	2"									.9500"				
044	.972-1.036"	2"				1.0000"															
045	1.022-1.080"	2"				1.0500"															
046	1.072-1.135"	2"				1.1000"															
63/1500 63/1501	E5 E5/FB*	6	051	1.130-1.220"	2"	1	N5-310 NFB5-350	6	1.1800"	1	1	1									
			052	1.210-1.300"	2"				1.2600"												
			053	1.290-1.380"	2"				1.3400"												
			054	1.370-1.460"	2"				1.4200"												
			055	1.450-1.540"	2"				1.5000"												
			056	1.530-1.620"	2"				1.5800"												

"T" Type - Small bore long reach measuring units and extensions



T measuring units and extension rods enable deep holes, smaller than 0-335" (8.5mm) diameter to be measured. T extensions are only available in one piece lengths in accordance with drawings and details below. The upper ends of the T extensions carry the standard male thread to suit the holders E103, E104 & E105. Special contact needles are required for T type measuring heads. Each EMT (EM1/T) set is supplied with two 2 1/2" (64mm) extensions and reach E2/T (EM2/T) set with one 2 1/2" (64mm) extension.

Heads 021/T to 029/T can be supplied in FB type for blind bores and required needles to suit. They are also available with carbide inserts on through bore versions.

Set No.	Measuring Head		Depth	Setting Ring	Contact Needle	
	No.	Range				
Inch E1/T	013/T	0.0807	In. 0.0940	In. 1.00	NT1-100	
	014/T	0.0920	0.1075	1.00		
	015/T	0.1071	0.1224	1.00	NT1-150	
	016/T	0.1220	0.1374	1.00		
	017/T	0.1370	0.1523	1.00		
	018/T	0.1519	0.1673	1.00		
E2/T	021/T	0.166	0.187	1.14	NT2-150	
	022/T	0.186	0.212	1.14		
	023/T	0.211	0.237	1.14		
	024/T	0.236	0.262	1.14		
	025/T	0.261	0.287	1.14		
	026/T	0.286	0.312	1.14		
	027/T	0.311	0.337	1.14		
	028/T	0.336	0.362	1.14		
	029/T	0.361	0.388	1.14		
	Metric	mm	mm	mm		mm
EM1/T	013/T	2.05	2.40	24	2.25	NT1-100
	014/T	2.34	2.73	24	2.50	
	015/T	2.72	3.11	24	3.00	NT1-150
	016/T	3.10	3.49	24	3.25	
	017/T	3.48	3.87	24	3.50	
	018/T	3.86	4.25	24	4.00	
EM2/T	021/T	4.22	4.75	29	4.50	NT2-150
	022/T	4.73	5.38	29	5.00	
	023/T	5.36	6.02	29	5.75	
	024/T	6.00	6.65	29	6.50	
	025/T	6.63	7.29	29	7.00	
	026/T	7.27	7.92	29	7.75	
	027/T	7.90	8.56	29	8.50	
	028/T	8.54	9.20	29	9.00	

DIMENSIONS OF 'T' TYPE DEPTH EXTENSIONS (as illustrated above)

Range	In	0.166-0.388	0.1071-0.1673	D.0807-0.1075
	Mm	4.22-9.85	2.72-4.25	2.05-2.73
Reference		021/T-029/T	015/T-018/T	013/T&014/T
		E2/T	E1/T	E1/T

Nominal lengths of extensions	Actual Lengths					
	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
64mm (2.5")	64	85	64	85	64	77
125mm (5")	125	146	125	146	125	146
250mm (10")	250	282	250	282	250	282
500mm (20")	500	532	500	532	500	532
750mm (30")	750	782	-	-	-	-
1,000mm (40")	1000	1032	-	-	-	-
1,500mm (60")	1500	1506	-	-	-	-

Combined sets



Imperial and metric

To give you bore gauging capability over a much wider range of hole sizes, Diatest makes available several Combined Sets.

They cost less than you would pay for the total of the individual sets involved because they eliminate, such as Holders, Dial Indicators, etc.

Complete combined set includes:

1. Probes, Needle and Setting Rings, as listed
2. Dial Indicator and Retraction knob.
3. Holder.
4. Fitted protective Case.

Set Number		System	Combines sets: (less duplicated items)	Range
Thru Hole	Blind hole			
E00/0	-	Imperial	E00 and E0	.0185-.0380 inches
E0/1	-	Imperial	E0 and E1	.0375-.1690 inches
E12	E12/FB	Imperial	E1 and E2	.0570-.3940 inches
E123	E123/FB	Imperial	E1, E2 and E3	.0570-.8300 inches
EM00/0	-	Metric	EM00 and EM0	0.47-1.55 mm
EM0/1	-	Metric	EM0 and EM1	0.95-4.30 mm
EM12	EM12F/B	Metric	EM1 and EM2	1.50-10.00 mm
EM123	EM123/FB	Metric	EM1, EM2 and EM3	1.50-21.00 mm

Super Sets

Combine both Split Ball and Large Bore type gauges, instantly interchangeable probes and accessory equipment to give you bore gauging capability over the popular middle range of hole sizes. This is the Diatest modular concept at its best.

Super Set Number		Overall Range	Split Ball Probes *	Large Bore Type Head **
Thru Hole	Blind Hole †			
E46/4	E46/4/FB	.822"-4.33"	As in E4 up to 1.036"	E60 to cover 1.032"-4.33"
E46/6	E46/6/FB	.822"-4.33"	As in E4 up to 1.135"	E60 to cover 1.032"-4.33"
EM46/4	EM46/4/FB	20.9-110mm	As in EM4 up to 26.3mm	EM60 to cover 26.3-110mm
EM46/6	EM46/6/FB	20.9-110mm	As in EM4 up to 28.9mm	EM60 to cover 26.3-110mm

* Includes necessary Needles and Setting Rings. Split ball probes available with carbide surfaces. To specify, add suffix C (e.g. E46/4C). Carbide needles supplied with carbide probes.

** Includes 4 fixed and 1 adjustable reference contact and 3 reference extensions.

† Blind hole applies to split ball probes only in these sets, large bore heads are not blind hole type.

Accessories

.....that multiply Diatest usefulness Depth extensions

Depth Extensions



Type	Use	Basic extension length	Material	Extension diameter	For bores	Other lengths available (see note)
1	Split ball primarily	2.5" 5"	Steel INVAR	.315" .315"	.355" up .355" up	10, 20, 30, 40 and 60
2	Large bore	9 1/2"	INVAR	.394"	.420" up	20, 30, 40 and 60"

Notes

- All type 1 and 2 Extensions can be used singly or in combination.
- All type 1 and 3 Extensions have spring loaded rods, except 2.5" length which is available with or without spring loading.
- When 2.5" length is used in combination, one length should be spring loaded.

Setting guide ring

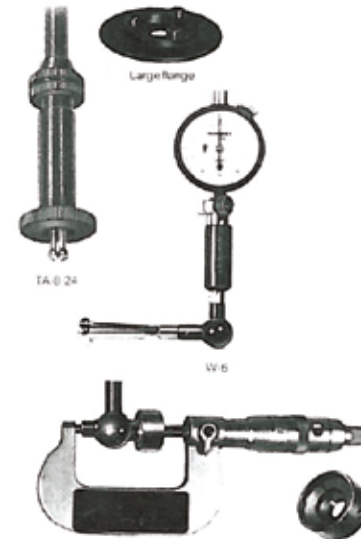
Turns any good micrometer into a reliable, economical setting device for large bore type Diatest gauges. Anvils clamps square to mic spindle, holds spring-loaded centralizer in place while gauge is rocked to find reversal point on indicator.

Available to fit mc having .235, .250, .255, .270, .300 or .312" and 6.00, 6.35, 6.50, 7.00, 7.50 and 8.00mm diameter spindle. Ring is not hardened, so can be machined larger for an intermediate size. Specify size when ordering.

THE SETTING GUIDE RING IS SUITABLE FOR E678 THROUGH BORE GAUGES ONLY.

Right angle attachment (E100)

Permits either split ball or large bore type Diatest gauges to inspect work at the machine where clearance between tool and workpiece is limited. Assembles to gauge quickly, works smoothly, adds only 1 1/16" to length of probe or gauge head. Blackened to protect against rust.



Depth adjuster (E1020)

Ideal for gauging bores at a depth to check shallow diameters, taper, clear interruptions, etc. Doubles as a reference stop and positioner for small precision piece parts. Knurled ring works against split collect for positive on any regular (.315" dia). Depth Extension Hardened steel with 24mm large than 0.8"/21mm the 45 or 60mm diameter large screw-on flange should be ordered.

Centre and Edge Finders



96/6340/00



96/6339/00



96/6335/00



96/6336/00



96/6337/00



96/6336/00

Group 1 Centre Finder

Determine centres with Pointed end and locate edges with other end.

- Available in 3/8" and 1/2" shanks
- Hardened and ground
- Supplied in a plastic case

Group 1 Combination Edge and Centre Finder

A precision tool for locating edges and determining Centres. One end has point for Centre finding and the other end has a 0.200" diameter for Shoulder and slot work.

- Available in 3/8" and 1/2" shanks
- Hardened and ground
- Supplied in a plastic case

Group 1 Edge Finders

Accurately locates the starting point for all types of machine work and jig boring etc.

- Available in imperial or metric shanks
- Hardened and ground
- Supplied in a plastic case

Centre Finders

Code No	Description
96/6339/00	3/8"
96/6340/00	1/2"

Com Edge and Ctr Finder

Code No	Description
96/6335/00	3/8" x 0.200"
96/6336/00	1/2" x 0.200"

Edge Finder

Code No	Description
96/6337/00	3/8" x 0.200"
96/6338/00	1/2" x 0.200"
96/6344/00	10 mm/3.75 mm x 10 mm
96/6345/00	10 mm x 10 mm



Group 1 Wiggler Set

The wiggler set has an offset indicator holder and new check design for holding attachments. The four attachments are readily interchangeable and adapt the tool to countless applications. They snap into the chuck and are clamped by a ball swivel joint which permits adjustments to an angular position or to true concentricity.

- Knurled collet nut
- Attachments for countless applications
- Includes plastic pouch

Wiggler Set

Code No	Description
25/0410/00	Complete with four attachments

Surface Roughness Scales

Composite Set No. 130 - Code No. 79/1300

This set was produced to meet the requirements of Planning Engine4ers, works Managers, Designers, Inspectors, Draughtsman etc. The thirty specimens cover, Turning, Horizontal Milling, Vertical Milling, Grinding, Lapping and Reaming and are provided in a wallet with instruction card.

Comparator Scales

Code No	Machining method	Colour	No of Specimens	Micro Inches CLA	Um Ra	N No's	
79/0115	Surface Grinding	Black	8	1-125	0.025-3.2	1-8	
79/0116	Cylindrical grinding	Black	8	1-125	0.025-3.2	1-8	
79/0117	Flat lapping	White	8	4	1-8	0.025-3.2	1-4
	Criss Cross Parallel			4	1-8	0.025-3.2	1-4
79/0118	Cylindrical lapping	White	8	4	1-8	0.025-3.2	1-4
	Super finishing			4	1-8	0.025-0.2	1-4
79/0119	Face turning (flat)	Yellow	8		16-2000	0.4-50.0	5-12
79/0120	Turning (Cyl)	Yellow	8		16-2000	0.4-50.0	5-12
79/0121	End Milling	Brown	8		16-2000	0.4-50.0	5-12
79/0122	Reaming	Red	8		16-125	0.4-3.2	5-8
	Drilling			4	63-500	1.6-12.5	7-10
79/0123	Horizontal Milling	Brown	7		32-2000	0.8-50.0	6-12
79/0125	Shaping or planing	Red	7		32-2000	0.8-50.0	6-12
79/0126	Linishing	Grey	6		4-125	0.1-3.2	3-8
79/0128	Vertical grinding	Black	6		8-250	0.2-6.3	4-9
79/0129A	Grit blasting Angular particles	Grey	6		16-500	0.4-12.5	5-10
79/0129B	Shot blasting Circular particles	Grey	6		16-500	0.4-12.5	5-10
79/0131	Spark erosion	Green	7		16-1000	0.4-25.0	5-11
79/0132	Hand scraping		3				
79/0133	Hand filling	DK Blue	5		16-250	0.4-6.3	5-9
79/0134	Casting	LT Green	7		32-2000	0.8-50.0	6-12
79/0135	Honing	White	6		2-63	0.5-1.6	2-7
79/0136	Polishing	White	5		0.5-8	0.0125-0.2	0.4
79/1006	Set of 6 scales (to be specified) in a wooden case						
79/1012	Set of 12 scales (to be specified) in a wooden case						
79/1018	Set of 18 scales (to be specified) in a wooden case						
79/1020	Set of 20 scales (to be specified) in a wooden case						



Roughness Scales to 150 8503 part 1 for GRIT and SHOT blasting. Each have four segments for identifying Fine, medium or Coarse grades.

Code No. 79/1350 GRIT BLASTING
Code No. 79/1355 SHOT BLASTING

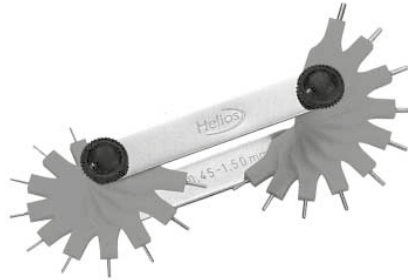
Hole and Nozzle Checking Gauges

Nozzle checking Gauges

For measuring and checking various kinds of nozzles.

- Steel pin with plastic housing
- Tolerance:-
 - 0.45 – 0.70 mm +/- 0.02 mm
 - 0.75 – 3.00 mm +/- 0.025 mm

Code No	Measuring Range mm	Number of pins	Weight (g)
302A	0.45 -1.5	20	70
302B	1.50 – 3.0	16	80



Precision Nozzle Checking Gauges

For measuring and checking various kinds of nozzles and small bore holes.

- Hardened and precision ground cylindrical precision measuring needle
- Housing handle and protection sleeve nickel-plated
- Direct reading: 0.1 mm

Code No	Measuring Range mm	Weight (g)
302D	0 – 3	30
302E	0 – 5	75



Hole Gauges

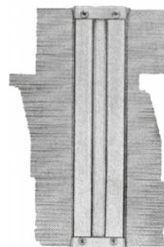
- Cylindrical design: hardened steel precision ground
- Flat design: flat steel, unhardened
- Reading: 0.1 mm

Cylindrical Design		
Code No	Measuring range mm	Weight (g)
324RG06	1-6	30
324RG15	4 -15	190
324RG30	15 - 30	880
324RG45	30-45	1760
Flat Design		
324F15	1 - 15	25

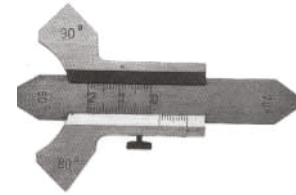


Radius and Profile Gauge - Code No. 12/90

This gauge is suited for the reproduction of any configuration, from the simple radius to complicated shapes of milling heads. The profile is pressed against the gauge until the deepest point is touched by the tracer pin. After removal of the profile, the gauge shows the exact negative of the original shape.



Weld Seam Gauges



Welding Gauge

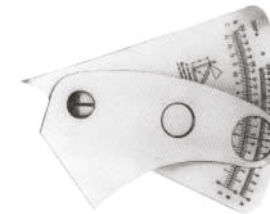
Suitable to inspect flat welded seams and corner for angles 60, 70, 80 and 90 degrees. Individually packed

Code No	Range	Reading
101/2642/102	20	0.1 mm

Welding Gauge type DBP

Stainless Steel
Individually packed

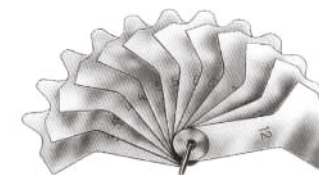
Code No
101/2643/201



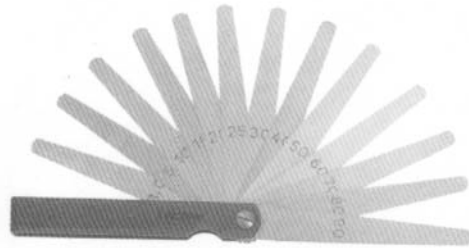
Welding Gauge

12 blades for welds from 3-12mm
Individually packed

Code No	Range	Number of blades
101/2640/187	3-12 mm	12



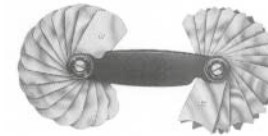
Feeler Gauges



Feeler Gauge Sets

Conical blades
Width 10 mm
Length 100 mm
Individually packed

Radius and Screw Pitch Gauges

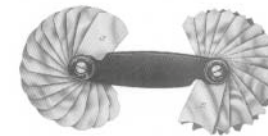


Radius gauge sets

Concave and convex
Lock nut
Individually packed

Code No.	Range mm	No of Blades	Weight
101/2616/166	1.0-7.0	17	85
101/2616/168	7.5-15.0	16	120
101/2616/170	15.5-25.0	15	115

Code No	Range mm	Number of blades
101/2608/101	0.03-0.10	8
101/2608/102	0.05-0.50	8
101/2608/103	0.05-1.00	13
101/2608/104	0.05-1.00	20
101/2608/105	0.05-2.00	21
101/2608/106	0.05-1.00	18
101/2608/107	0.10-2.00	20
101/2608/108	0.10-0.50	21
101/2608/109	0.03-1.00	32



Radius gauge sets

Concave and convex
Stainless Steel
Lock nut
Individually packed

Code No.	Range mm	No of Blades	Weight
101/2616/266	1.0-7.0	17	85
101/2616/268	7.5-15.0	16	120
101/2616/270	15.5-25.0	15	115

Measuring Eye Glasses

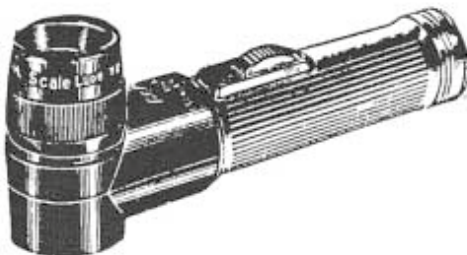
Measuring Eye Glass



Light Lupe



Lupe



Other types available.

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Verdict Gauge are able to provide the following products, please contact our sales team on **01233 631554**, for more information:

- Angle Blocks
- Box Angle Plates
- Calibrated Steel Balls
- Centering Microscopes
- Gauge Block Sets
- Hardness Testers
- Parallels
- Cast Iron Plates
- Granite Plates
- Sine Plates and Tables
- Straight Edges
- Granite Tables
- Sine Tables
- Cast Iron Surface Tables
- Thread Measuring Wires
- Vee Blocks
- Vices

Verdict Gauge also offer a full repair service.



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