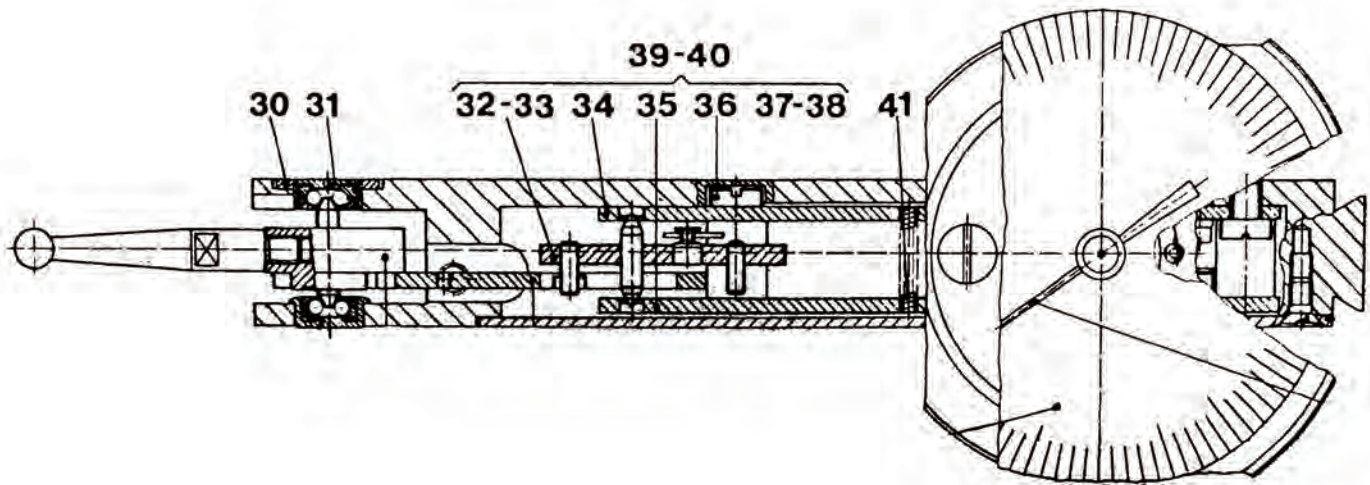


DIAL INDICATOR

- **METROLOGY**® dial indicator series with new innovative design in structural quality, functionality, and test accuracy, a total upgrade to satisfy your upmost demand.
- The brand new dial indicator series is design and assemble in Taiwan. Key components manufactured with Swiss technique, housing OEM by China, complete quality assurance performed by Jingstone Calibration Center (JCC ISO 17025 accredited lab) in Taiwan.
- The dial indicators are made with hardened aluminum alloy housing, precision gearings, fine-polished spindles, and Swiss type movements module. Along with jewelled bearings and shock protection to ensure overall accuracy.
- Measuring accuracy is according to the international standards of Germany DIN 878, DIN 2270, EN ISO 463, and Japan JIS B7503&B7533. All final calibration is done by ISO certified Jingstone Calibration Center. Calibration report is included.



Swiss precision technique



Dial indicator max permissible error JIS B7503

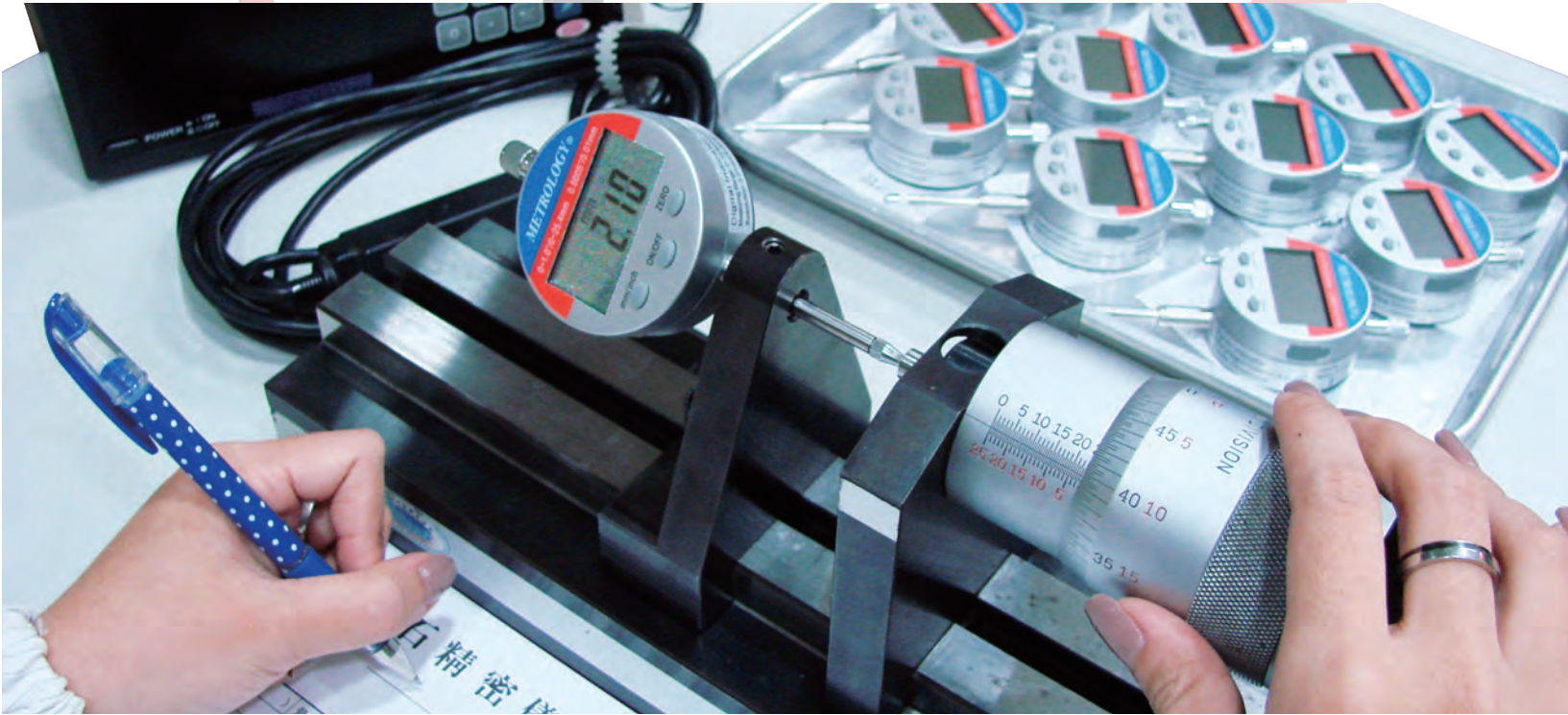
Unit: μm

Scale interval		0.01mm	0.002mm		0.001mm		
Measuring range		10mm max.	2mm max.	Over 2 mm and less than 10mm	1mm max	Over 1 mm and less than 2mm	Over 2 mm and less than 5mm
Retrace error		5	3	4	3	3	4
Repeatability		5	0.5	1	0.5	0.5	1
Indication error	1/10 revolution	8	4	5	2.5	4	5
	1/2 revolution	± 9	± 5	± 6	± 3	± 5	± 6
	One revolutions	± 10	± 6	± 7	± 4	± 6	± 7
	Two revolutions	± 15	± 6	± 8	± 4	± 6	± 8
	Whole measuring range	± 15	± 7	± 12	± 5	± 7	± 10

Dial test indicator max permissible error JIS B7533

Unit: μm

Scale interval	Measuring range	Wide-range forward	Neighboring error	Narrow-range	Repeatability	Backward error
mm	mm	accuracy		Neighboring error		
0.01	0.5	5	5	3	3	3
	0.8	8				
	1.0	10				4
0.002	0.2	3	2	1	1	2
	0.28					



Dial Gauges



■ Features

- Swiss style precision gear module design, accurate display, hardened aluminum alloy housing, assuring durability and reliability.
- Standard steel test tip Ø 3.175mm, hardened stainless steel spindle Ø5mm h6, stem diameter Ø8mm h6, thread M2.5-6g, for all brands of metric models.
- Shock protection structural design between spindles and stems; preventing shock waves from traveling to bearings and gears, hence insure durability.
- Gear module movement bearings are made with ruby, which is wear resistant, durable, anti-corrosive, and non-magnetic. Improve measuring repeatability.

■ Standard Components

1. Bezel locking knob

For locking bezel positions to avoid adjustment error and for convenient zero setting.

2. Tolerance Limiter

Setting tolerance limits for fast test result readings.

3. Dual color bezels

Both positive and negative measuring, dual color design for easy reading.

4. Lifting cap

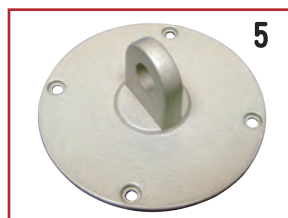
Lift the plunger to prevent touching the spindle which causes error with temperature.

5. Indicator back lug

Ø5mm lug, for attaching to mechanical assembly or magnetic bases.

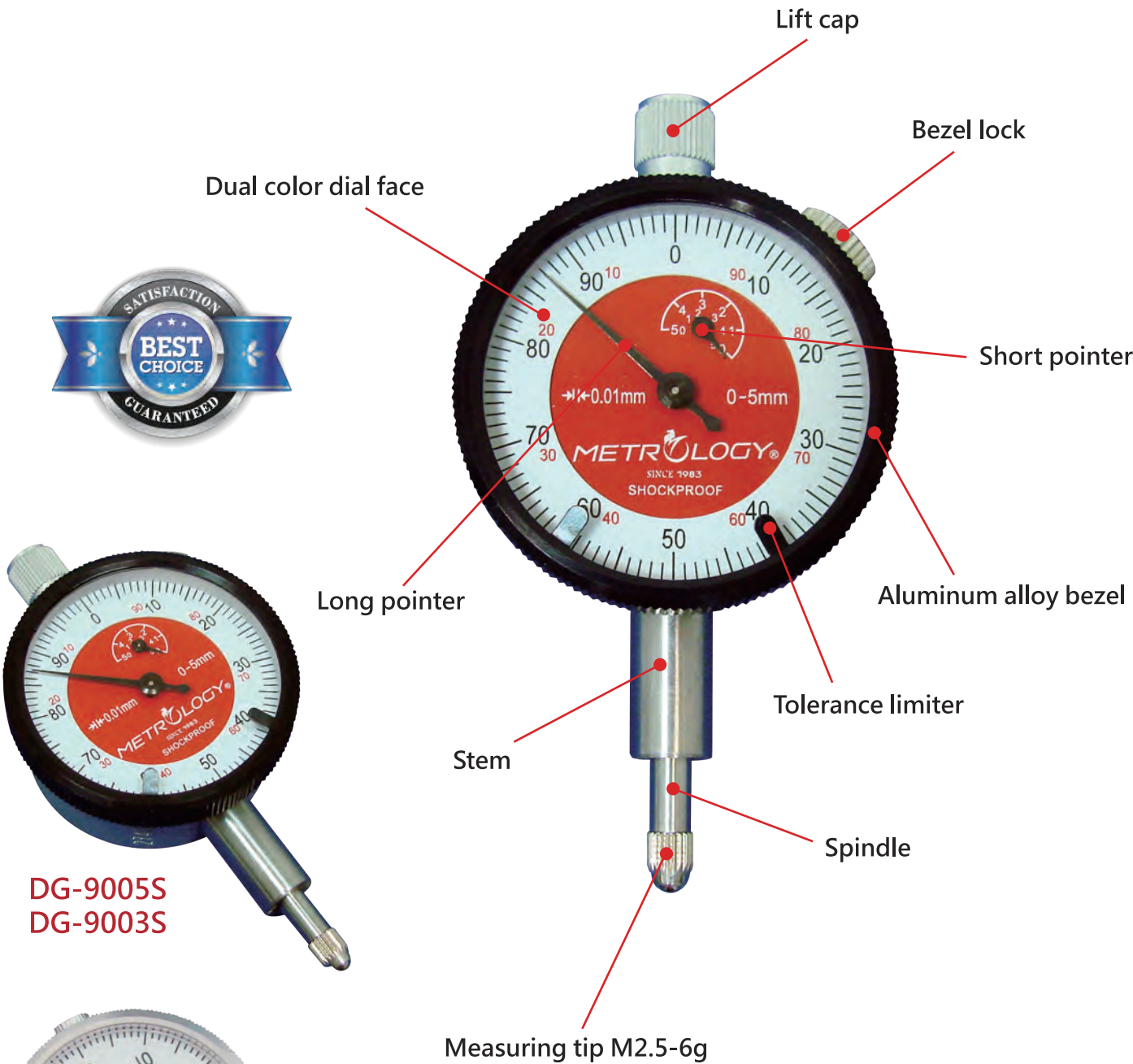
6. Calibration report

All indicators pass the accuracy test according to German DIN, ISO and Japan JIS international standards. JCC certificate included.



■ Dial Gauge (Small Bezel)

For measuring dimension of workpieces attached to machine table or setting gauge for measuring movement positions and distances.



DG-9005S
DG-9003S



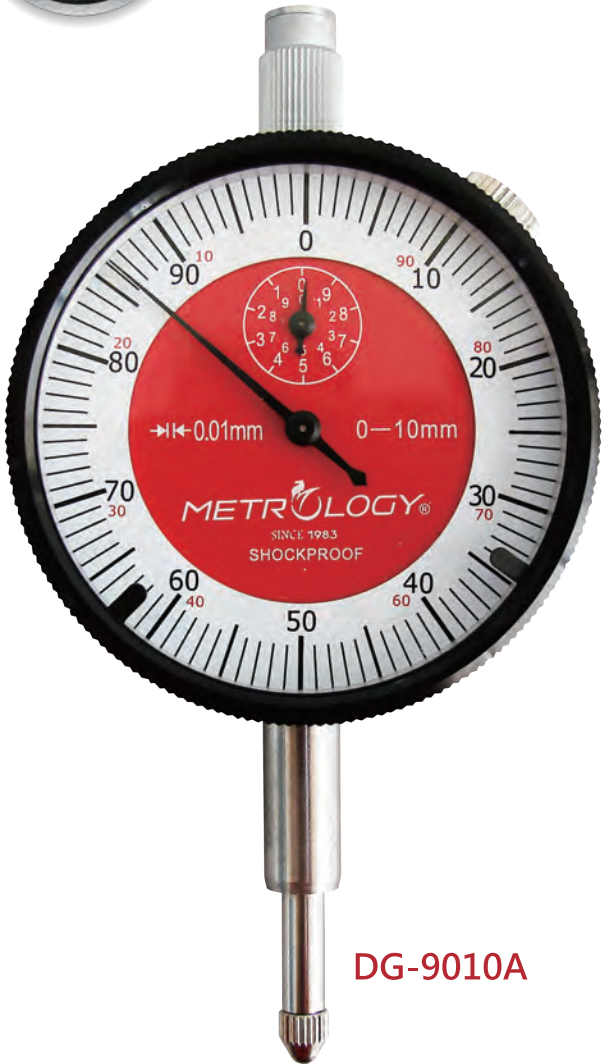
DG-9004S

Model No.	Measuring Range	Accuracy	Remark
DG-9003S	0-3mm	10um	Φ 40mm
DG-9004S	0-4mm	12um	Φ 36mm
DG-9005S	0-5mm	12um	Φ 40mm

Remark: Aluminum body, shockproof.
Graduation : 0.01mm

■ Dial Gauge (Standard)

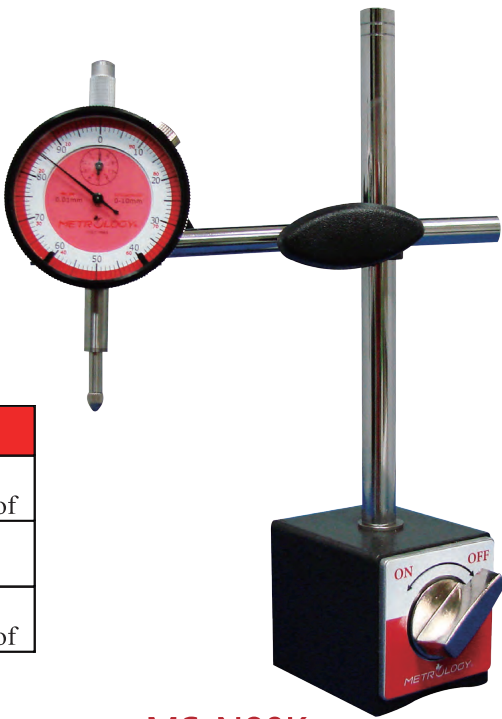
For measuring depth, thickness, height, length, and steps.



DG-9010A



DG-9010R



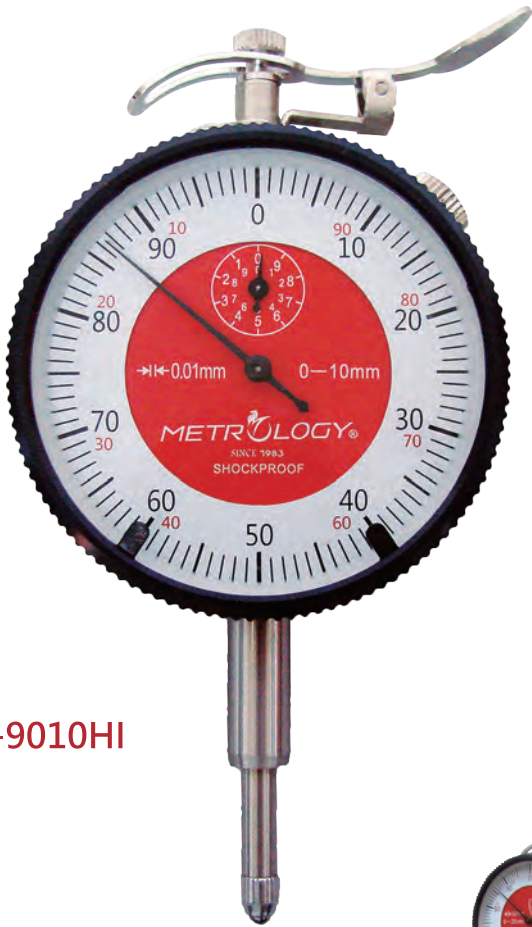
MS-N80K

Model No.	Measuring Range	Accuracy	Remark
DG-9010A	0-10mm	15um	Φ 55mm Aluminum body, shockproof
DG-9010R	0-10mm	15um	Φ 58mm Steel body, Jeweled bearing
DG-9020A	0-20mm	20um	Φ 60mm Aluminum body, shockproof

Graduation : 0.01mm

■ Dial Gauge (Hoist Type)

Suitable for pairing up with mechanical device and measuring stands to measure depth, thickness, height, steps, and length.



DG-9010HI



DG-9025HI

Granite measuring stand
GN-MS2015N

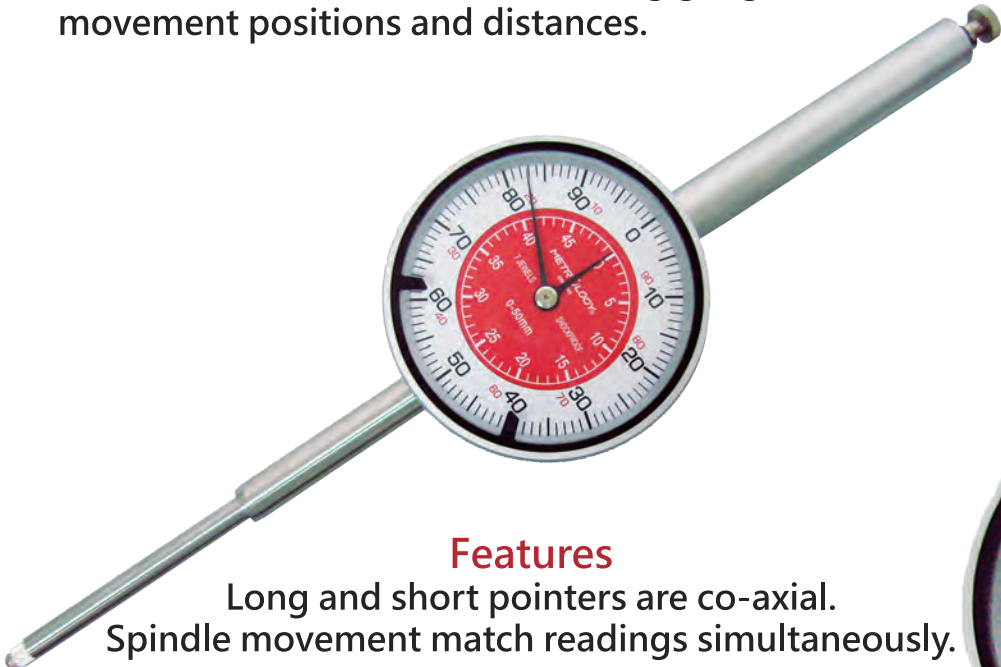


Model No.	Measuring Range	Accuracy	Remark
DG-9010HI	0-10mm	15um	Φ 60mm Aluminum body, shockproof, with hoist install.
DG-9025HI	0-25mm	20um	

Graduation : 0.01mm

■ Dial Gauge (Long Travel)

Suitable for pairing up with measuring stands to measure depth, thickness, height, steps, and length. Attached to machine table or setting gauge for measuring movement positions and distances.



Features

Long and short pointers are co-axial.
Spindle movement match readings simultaneously.



Granite measuring stand
GN-MS2015N



DG-9050

Model No.	Measuring Range	Accuracy	Remark
DG-9030	0-30mm	20um	Φ 58mm Steel body, Jeweled bearing.
DG-9050	0-50mm	25um	
DG-9080	0-80mm	30um	

Graduation : 0.01mm

■ Dial Gauge (Long Travel & Large Bezel)

Suitable for pairing up with measuring stands to measure depth, thickness, height, steps, and length.

Attached to machine table or setting gauge for measuring movement positions and distances.



DG-9030L



DG-9050L

Model No.	Measuring Range	Accuracy	Remark
DG-9030L	0-30mm	20um	Φ 76mm Aluminum body, shockproof.
DG-9050L	0-50mm	25um	
DG-9100L	0-100mm	40um	Φ 78mm Steel body, Jeweled bearing.

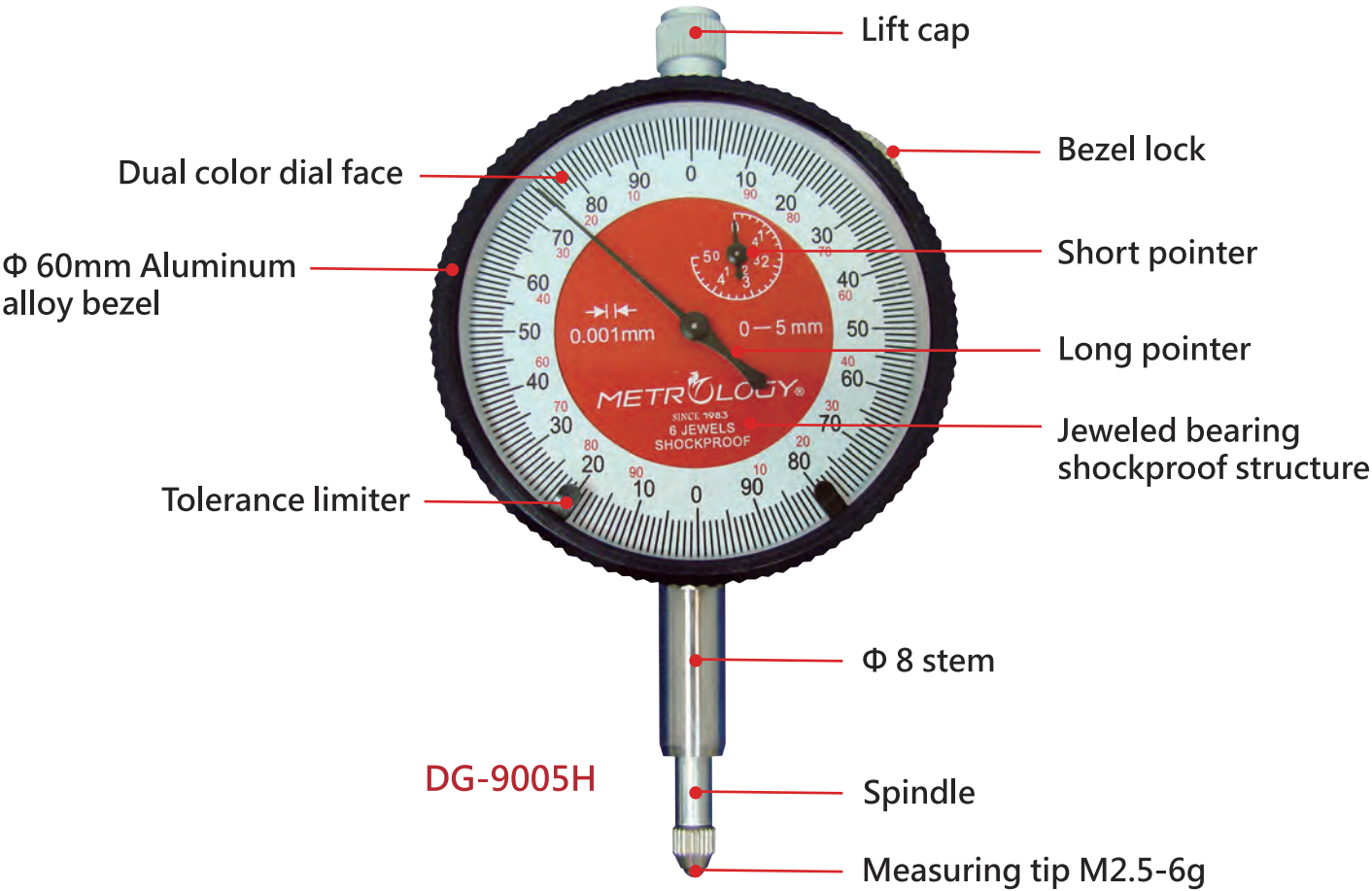
Graduation : 0.01mm

Granite measuring stand
GN-MS2015F



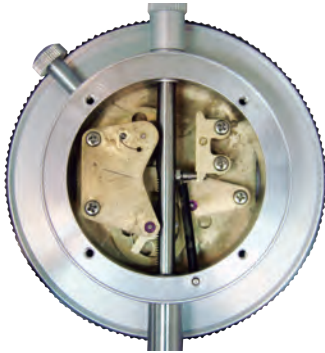
■ Dial Gauge (Micro)

For measuring depth, thickness, height, geometric error, and high precision comparison measurement.



Model No.	Measuring Range	Accuracy	Remark
DG-9001H	0-1mm	4um	Φ 60mm Aluminum body, Jeweled bearing, shockproof. 1 revolution : 0.2mm scale : 0-100-0
DG-9003H	0-3mm	8um	
DG-9005H	0-5mm	12um	

Graduation : 0.001mm



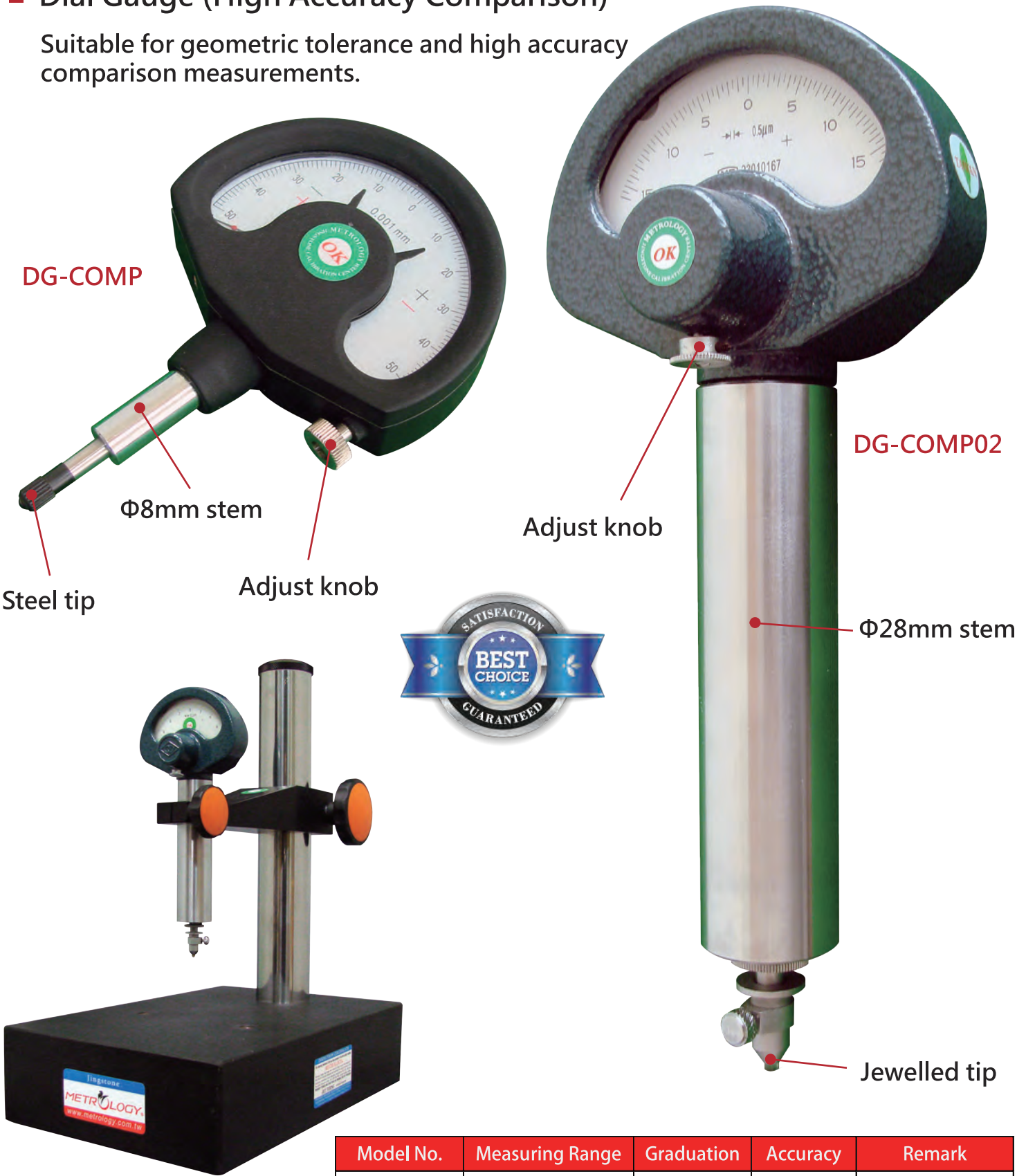
Features

- Spindle and stem are precision made with minimum backlash.
- Movements and bearings are made with ruby material, assuring precise transmission.
- Shock protection design prevents vibration traveling through spindle.



■ Dial Gauge (High Accuracy Comparison)

Suitable for geometric tolerance and high accuracy comparison measurements.



Granite measuring stand
GN-MS3020H

Model No.	Measuring Range	Graduation	Accuracy	Remark
DG-COMP	±0.05mm	0.001mm	2µm	Stem Φ 8mm 、 Jeweled bearing
DG-COMP02	±0.006mm	0.0002mm	0.5µm	Stem Φ 28mm 、 Jeweled bearing

■ Digital Dial Gauge (Standard)

Suitable for pairing up with measuring stands to measure depth, thickness, height, steps, and length.
Attached to machine table or setting gauge for measuring movement positions and distances.



ED-9010



Granite measuring stand
GN-MS2015N

Model No.	Measuring Range	Accuracy	Remark
ED-9010	0-12.7mm / 0.5"	20um	Φ 56mm Aluminum body
ED-9025	0-25mm/ 1"	30um	

Resolution : 0.01mm / 0.0005"

■ Digital Dial Gauge (Micro & Small Bezel)

Attached to machine table or setting gauge for measuring movement positions and distances.
Attached to small bore gauge or cylinder gauge for direct and indirect measurement of holes.



Rotatable

ED-9007H



Rotatable

ED-9007HW

Waterproof Cover



Buttons Functions
mm/inch : imperial/ metric conversion
TOL : limit tolerance setting
M : display hold
ABS : absolute& increment value conversion
ON/O : on/off switch/zero setting



Application of Small bore gauge

Model No.	Measuring Range	Accuracy	Remark
ED-9007H	0-6.5mm	3um	Φ 40mm Aluminum body
ED-9007HW			Φ 40mm Aluminum body Waterproof

Resolution : 0.001mm / 0.00005"

■ Digital Dial Gauge (Normal Micro)

Attached to machine table or setting gauge for measuring movement positions and distances.
Attached to small bore gauge or cylinder gauge for direct and indirect measurement of holes.

Buttons Functions

- in/mm : imperial/ metric conversion
- ZERO : set zero at any position.
- ON/OFF : on/off switch



Model No.	Measuring Range	Accuracy	Remark
ED-9013HN	0-12.7mm / 0.5"	12um	Φ56 mm, Aluminum body

Resolution : 0.001mm / 0.00005"

■ Digital Dial Gauge (Micro)

Suitable for pairing up with measuring stands to measure depth, thickness, height, steps, and length.
Attached to machine table or setting gauge for measuring movement positions and distances.
Attached to small bore gauge or cylinder gauge for direct and indirect measurement of holes.

Buttons Functions

- ZERO/ABS : set zero at any position
/absolute& increment value conversion
- ON/OFF/PRE : on/off switch/to set display value
- mm/inch : imperial/ metric conversion
- TOL : limit tolerance setting
- M : display hold



ED-9013HW

Waterproof Cover

Model No.	Measuring Range	Accuracy	Remark
ED-9013H	0-12.7mm / 0.5"	5um	Φ 56mm, Aluminum body
ED-9013HW			Φ 56mm, Aluminum body Waterproof

Resolution : 0.001mm / 0.00005"



■ Digital Dial Gauge

Suitable for pairing up with measuring stands to measure depth, thickness, height, steps, and length. Attached to machine table or setting gauge for measuring movement positions and distances.



ED-9012H

Buttons Functions
ON/OFF : on/off switch
PRESET : to set display value
in/mm : imperial/ metric conversion
ORIGIN : absolute zero



Optional accessories :
data output cable (DO-B+C04)



Optional accessories :
Bluetooth data transmission device (DO-W2-RS)

■ Digital Dial Gauge (Horizontal)

Model No.	Measuring Range	Resolution	Accuracy
ED-9013HH	0-12.7mm / 0.5"	0.001mm	4um
ED-9030HH	0-30mm / 1.2"	0.00005"	5um



■ Digital Dial Gauge

Suitable for pairing up with measuring stands to measure depth, thickness, height, steps, and length. Attached to machine table or setting gauge for measuring movement positions and distances.



ED-9012H

pull rod model No.
ED-PR12 (for 0-12.7mm)
ED-PR25 (for 0-25mm)
ED-PR50 (for 0-50mm)
ED-PR100 (for 0-100mm)



ED-9025H

■ Depth Base(optional)



DB-9000L

101.5x17mm

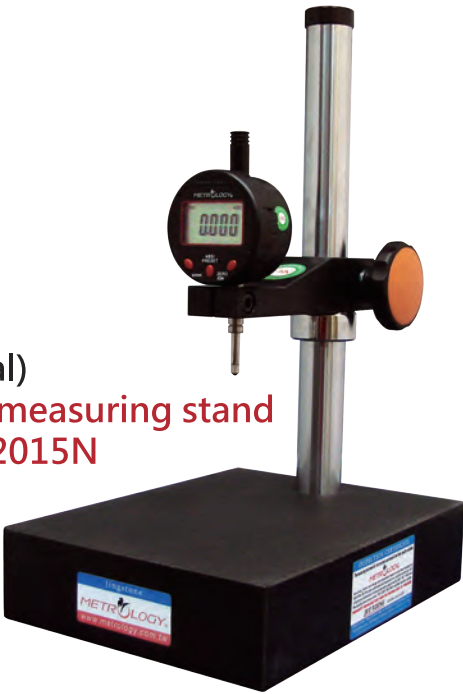


DB-9000S

63x17mm

Model No.	Measuring Range	Resolution	Accuracy
ED-9012N	0-12.7mm / 0.5"	0.01mm 0.0005"	10um
ED-9025N	0-25mm / 1"		10um
ED-9050N	0-50mm / 2"		15um
ED-9100N	0-100mm / 4"		20um
ED-9012H	0-12.7mm / 0.5"	0.001mm 0.00005"	5um
ED-9025H	0-25mm / 1"		5um
ED-9050H	0-50mm / 2"		6um
ED-9100H	0-100mm / 4"		10um

(optional)
**Granite measuring stand
GN-MS2015N**



■ Digital Dial Gauge (ABS/Rotatable /Micro)

- Large LCD display can be turned 330 degrees.
- Easy to read and operate reducing vision errors.
- Absolute sensor measuring system, for fast and reliable measurement, no need to repeatedly reset zeros.
- SPC data output port.
Measuring data can be exported to Excel via USB.



■ Buttons Functions

in/mm : Imperial/ metric conversion

+/- : Digital display direction key

ZERO/ABS : Set zero at any position/
Absolute& increment value conversion

ORIGIN : Absolute zero

PRESET : To set display value

TOL : Limit setting key

⏻ : Turn on/off Key

ABS
SPC Plus



Optional accessories :
Bluetooth data
transmission device
(DO-W2-RS)



Optional accessories : data output cable (DO-B+C04)

Model No.	Measuring Range	Resolution	Accuracy
ED-9013HA	0-12.7mm / 0.5"	0.001mm	4um
ED-9025HA	0-25mm / 1"		5um
ED-9050HA	0-50mm / 2"	0.00005"	6um

■ Digital Dial Gauge (ABS/Rotatable /Micro)

Suitable for pairing up with measuring stands to measure depth, thickness, height, steps, and length.
Attached to machine table or setting gauge for measuring movement positions and distances.



ED-9013HA



ED-9025HA



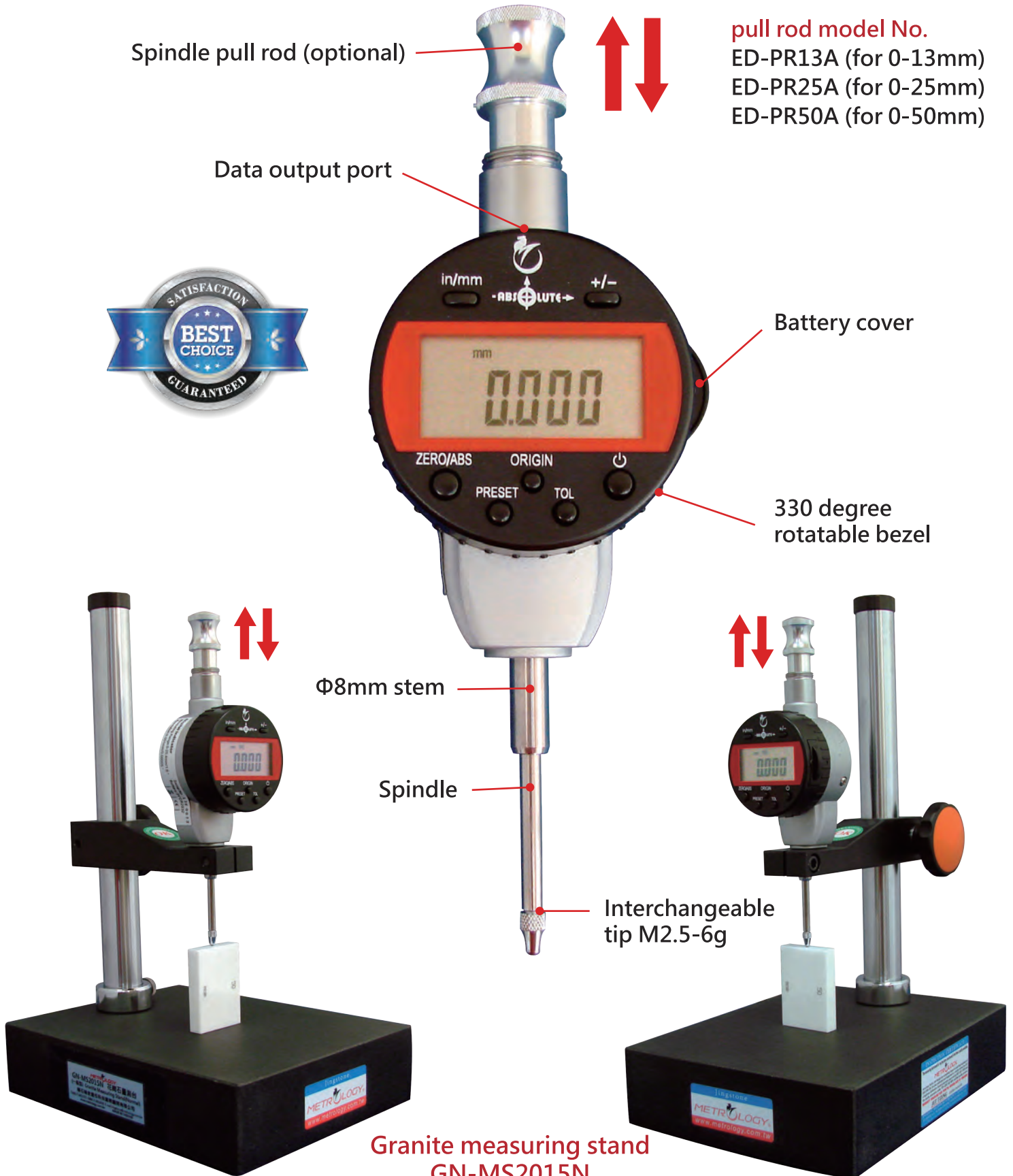
ED-9050HA

【 330 Degree Rotatable Diagram 】



■ Digital Dial Gauge (ABS/Rotatable /Micro)

Pair with varies type of granite measuring stand for measuring depth, thickness, height, steps, and length.



■ Contact Points

For all brands of metric models dial gauges.



Model No.	Type	Specification	Material
DI-B3	Ball point	Φ3*L6mm	Hardened steel
DI-S17	Spherical point	R3*L17 Φ4.5mm	
DI-S27		R3*L27 Φ4.5mm	
DI-S37		R3*L37 Φ4.5mm	
DI-F5	Flat point	Φ5*L8mm	
DI-F10		Φ10*L8mm	
DI-F10C		Φ10*L4mm	Ceramic
DI-T0.3	Taper point	R0.3*L15mm	Hardened steel
DI-D1.5	Needle point	Φ1.5*L30mm	
DI-ER10	Extension rod	Φ4.5*L10mm	
DI-ER20		Φ4.5*L20mm	
DI-ER40		Φ4.5*L40mm	
DI-ER60		Φ4.5*L60mm	
DI-ER80		Φ4.5*L80mm	

Screw specifications : M2.5-6g

■ Contact Points

Screw specifications : M2.5-6g

M2/70	573/10	573/11	573/12	573/13

573/13-60	573/14	573/14 L	573/15	573/15 L

573/16	573/17	573/17 L	573/18	573/19

573/20 E	573/21	573/22	573/23	573/24 E

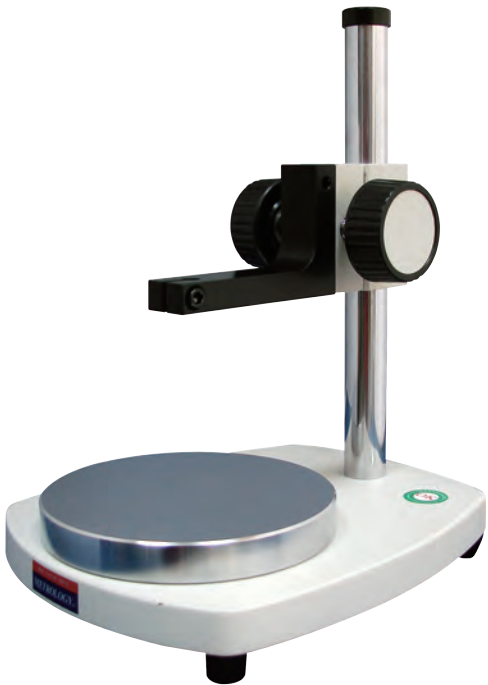
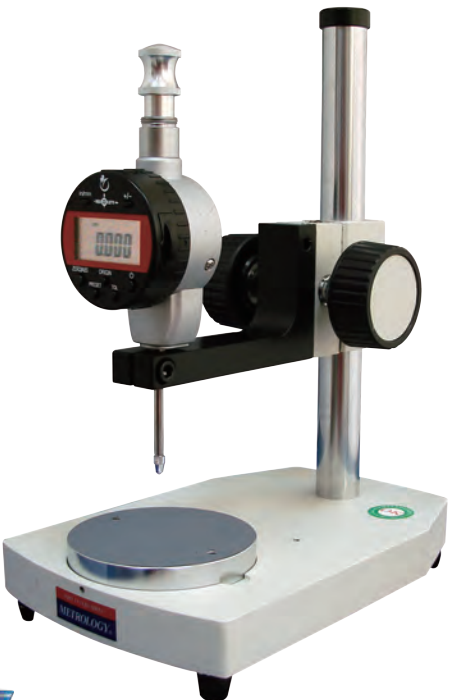
573/35 L	573/39 E	573/28 E	573/40

■ Measuring Stand (Chrome Steel)

Can be fitted with varies indicators, for direct and indirect measuring of height, depth, thickness, step, flatness, parallels, and roundness, and etc.



MS-S90



MS-S150



Model No.	Specification	Flatness
MS-S90	Φ90mm	2um
MS-S150	Φ150mm	4um

Main column: chrome steel Φ25xL250mm
Measuring stand: polished chrome steel
Traveling : 50mm hand-turn wheel

■ Measuring Stand (Chrome Steel)

Can be fitted with varies indicators, for direct and indirect measuring of height, depth, thickness, step, flatness, parallels, and roundness, and etc.



MS-S1510

MS-S2015

Model No.	Specification	Flatness
MS-S1510	150x100mm	3um
MS-S2015	200x150mm	5um

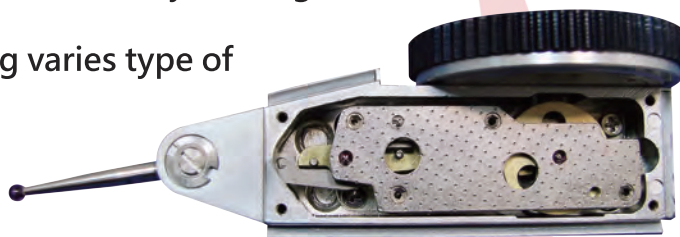
Main column: chrome steel $\Phi 25 \times L250 \text{mm}$
Measuring stand: polished chrome steel
Traveling : 50mm hand-turn wheel

Level-Type Dial Indicator



■ Feature

- Swiss style precision gear module design, precision display, aluminum or steel housing, ensuring reliability and durability.
- Produced and calibrated according to German DIN 2270 and JIS B7533 standards.
- Magnetic proof pointer design. Readings are not affected under normal magnetic fields.
- Measuring contact points of 240 degrees variable directions.
- Internal movement is made of ruby bearings.
- Dual color bezel with contrast graduation scale for easy readings.
- With 3 position dovetail guides for clamping varies type of device and magnetic tools.
- With $\Phi 8\text{mm}$ $\Phi 4\text{mm}$ dovetail grip.



Calibration Report

All measuring accuracy is according to German DIN 2270, ISO and Japan JIS B7533 international standards. JCC calibration report is included.

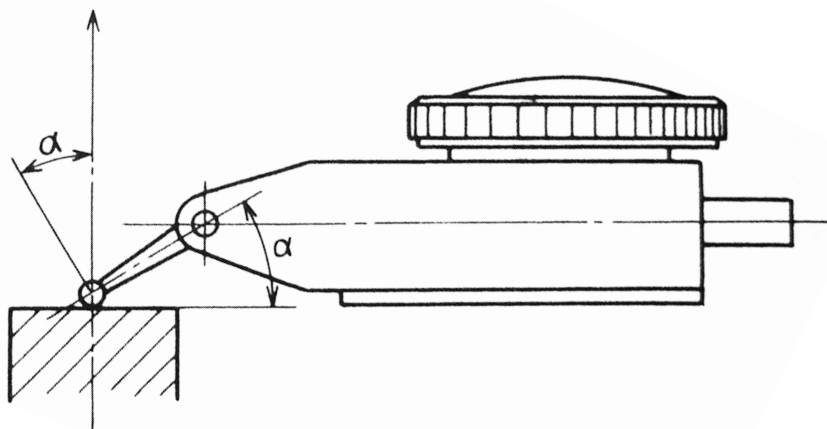
Note on the use of Level-type Dial Indicator

With the measuring insert lying parallel to the workpiece surface, these indicators give true reading. In another measuring position, the effective lever length changes so that the read value needs to be corrected.

【Correction Parameter Diagram】

Angle (α)	Cos α
5°	0.996
10°	0.985
15°	0.966
30°	0.866
45°	0.707
60°	0.500

Displacement



Actual measured value = measured value x Cos α

■ Level Type Dial Indicator (Standard)

For measuring parallel, flatness, straightness, roundness, concentricity, runout of geometric tolerance and etc.



LD-9001



Magnetic stands MS-SU30K



LD-9001R

Model No.	Measuring Range	Graduation	Accuracy	Remark
LD-9001	0-0.8mm	0.01mm	8um	Φ2mm Steel tip
LD-9001R				Φ2mm Ruby tip

Remark: Φ 32mm Small bezel

■ Level Type Dial Indicator (Long Measuring Inserts)



LD-9001SLL



LD-9001SL

Magnetic stands MS-SF80K



Model No.	Measuring Range	Graduation	Accuracy	Remark
LD-9001SL	0-0.8mm	0.01mm	8um	Φ 30mm Small bezel
LD-9001SLL		0.005mm		Φ 37.5mm Large bezel

Remark: Φ2mm L:44mm Super long steel tip, Interchangeable ruby tip, Model no.: LD-1SLR2(optional)

■ Level Type Dial Indicator (Micro)

For measuring parallel, flatness, straightness, roundness, concentricity, runout of geometric tolerance and etc.



LD-9002L



LD-9002LR

Model No.	Measuring Range	Graduation	Accuracy	Remark
LD-9002L	0-0.8mm	0.005mm	8um	Φ2mm Steel tip
LD-9002LR				Φ2mm Ruby tip

Remark: Φ 38mm Large bezel

■ Level Type Dial Indicator (Micro)



LD-9003L



LD-9003

Model No.	Measuring Range	Graduation	Accuracy	Remark
LD-9003	0-0.2mm	0.002mm	4 um	Φ 32mm Small bezel Φ2mm Steel tip
LD-9003R				Φ 32mm Small bezel Φ2mm Ruby tip
LD-9003L				Φ 38mm Large bezel Φ2mm Steel tip
LD-9003LR				Φ 38mm Large bezel Φ2mm Ruby tip

■ Level Type Dial Indicator (Vertical)

Suitable for inspecting centering of holes and measuring geometric tolerance.



LD-9003V

Model No.	Measuring Range	Graduation	Accuracy	Remark
LD-9003V	0-0.2mm	0.002mm	4um	Φ 32mm Small bezel, Φ2mm Steel tip
LD-9003VL				Φ 38mm Large bezel, Φ2mm Steel tip



Centering holder
LD-CS

■ Measuring Inserts (For Level-Type Dial Indicators)



Model No.	Specification	Material	Remark
LD-12S2	Φ2*L18mm M1.8-6g	Steel	For LD-9001 & LD-9002 Series
LD-12R2		Ruby	
LD-3S2	Φ2*L12mm M1.6-6g	Steel	For LD-9003
LD-3R2		Ruby	
LD-4S2	Φ2*L10mm M2.0-6g	Steel	For LD-9004
LD-4R2		Ruby	
LD-1LS2	Φ2*L26mm M2.0-6g	Steel	For LD-9001L Series
LD-1LR2		Ruby	
LD-1SLS2	Φ2*L44mm M1.6-6g	Steel	For LD-9001SL Series
LD-1SLR2		Ruby	
LD-1LTS2	Φ2*L17mm M1.4-6g	Steel	For LD-9001LT
LD-MS4	Φ4*L13mm	Steel	For LD series Mounting shanks with dovetail grip
LD-MS6	Φ6*L13mm		
LD-MS8	Φ8*L13mm		

*Can be installed on various brands level-type dial indicators according to screw specifications

■ Level-Type Dial Indicator Accessories



Product	Model No.	Specification
Swivel holder	LD-A1	Φ6mm, Φ8mm Double fixing clamp with Dovetail grip
Cylindrical shank holder	LD-C1	Φ8mm Round Stem Overall length : 100mm
Rectangular shank holder	LD-C2	9*9mm Rectangular stem Overall length : 100mm

Remark: suitable for various brands of lever-type dial indicator.

■ Level-Type Dial Indicator Accessories



Product	Model No.	Specification
Centering holder	LD-CS	Φ8mm mounting rod, Φ4mm dovetail clamp and C-type swivel clamp
Universal clamp	LD-UC	Φ4 ,Φ6mm swivel clamping points dovetail Φ8, Φ10mm universal stem. Overall length : 140mm

Remark: suitable for various brands of lever-type dial indicator.



MAGNETIC TOOL

- **METROLOGY.** All new magnetic tools, original design and developed from Taiwan. Easy to fit on CNC machine, milling machines, grinding machine, and machine center for precision inspection.
- The MAGNETIC TOOL & stands are mainly used for pairing with all kinds of indicators to perform varies measurements.
- All stands come with permanent magnet, V type base, and side magnetic traction. Powerful magnetic attraction can carry large loads.
- High rigidity steel clamp head, stabilize rod, arm, plastic handle, strong locking force, and high stability.
- Our MAGNETIC TOOL. come in wide range of designs that meet all types of customer needs. Exceptional and trusted quality.




■ Magnetic Stands (Standard)

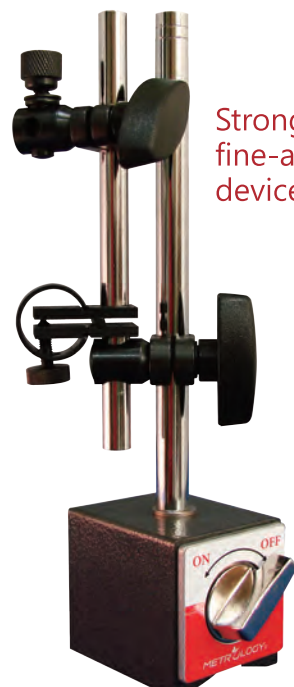


- METROLOGY® Standard series magnetic stands.
- Steel clamp head, hardened plastic handles and chrome stabilizing rod. Simple structure, easy to operate.

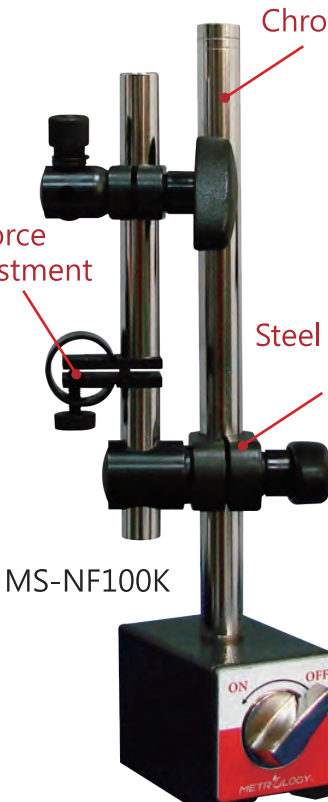
MS-N80K




MS-NF80K



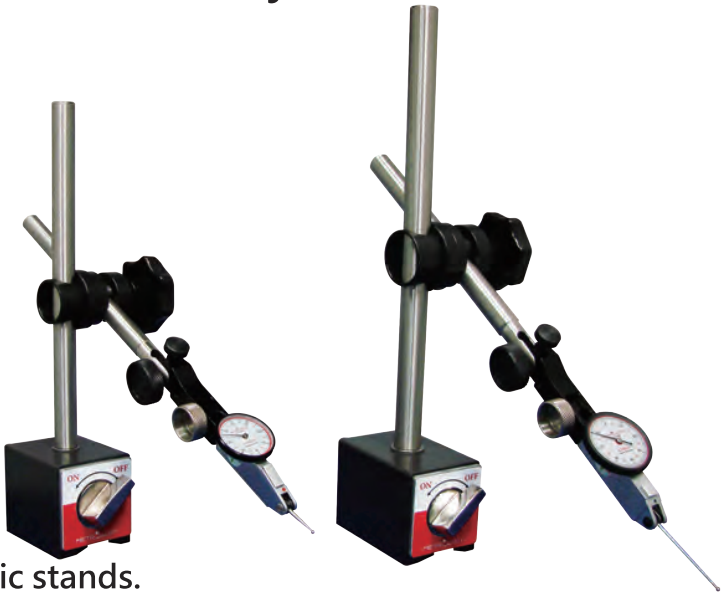
MS-NF100K



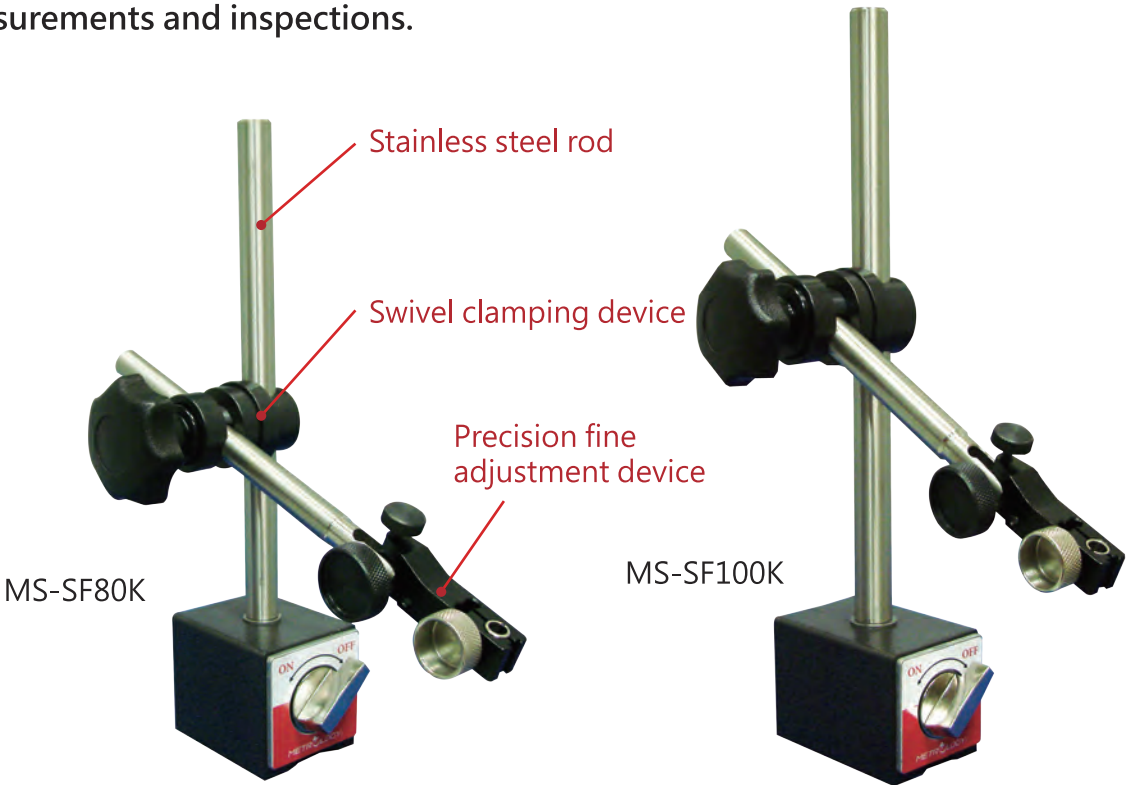
MS-NF130K



■ Magnetic Stands (Transfer & Precision Fine- adjustment)



- **METROLOGY®** Transfer series magnetic stands.
- Hardened steel swivel clamping and polished stainless steel rod, for stable locking positions.
- Magnetic base can be attached to smooth surface for measuring comparisons.
- Precision fine-adjustment and strong structural design ensuring accurate measurements and inspections.

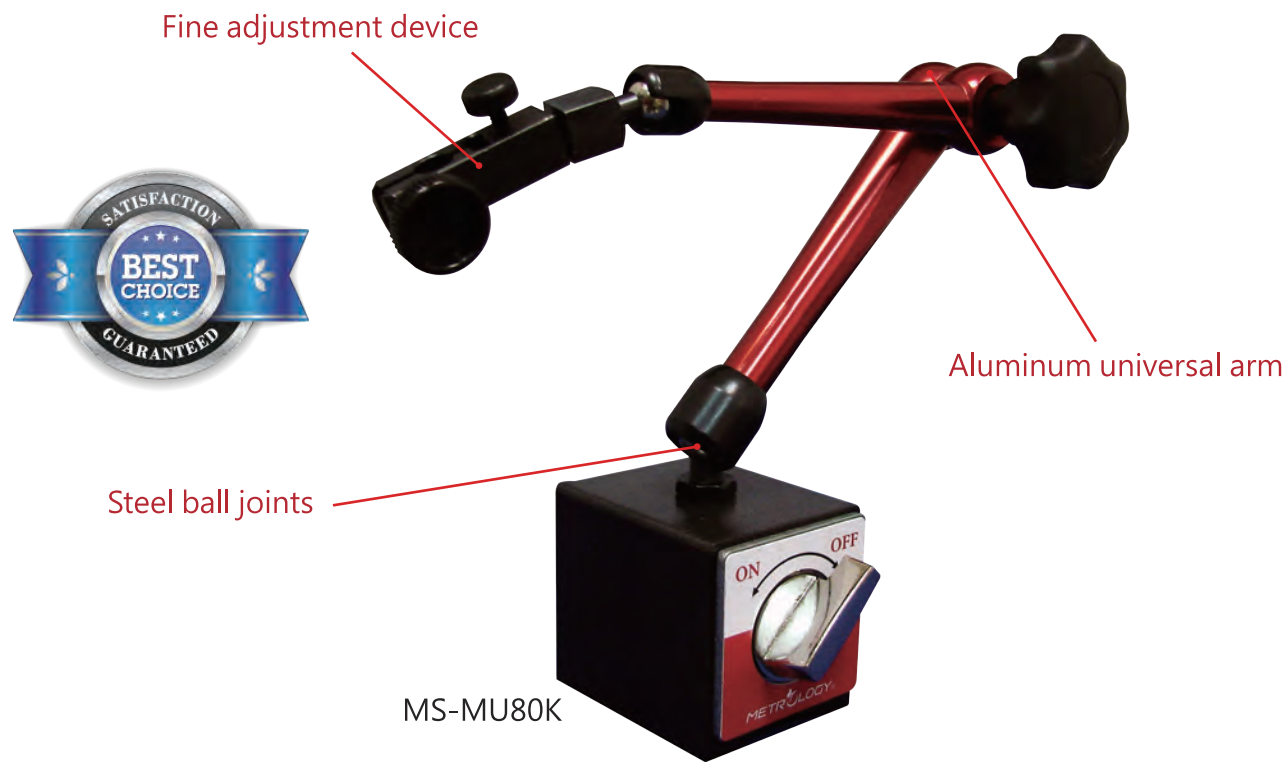


Model No.	Base (L x W x H)	Magnetic Power	Main Rod (mm)		Vice Rod (mm)		Weight (kg)
			Length	Dia.	Length	Dia.	
MS-SF80K	60x50x55	80kg	200	14	165	12	1.5
MS-SF100K	73x50x55	100kg	250	16	180	14	2.3
*Mounting hole dia.:Φ6.0 & Φ8.0mm							

■ Magnetic Stand (Mechanical Universal & Fine-Adjustment)



- **METROLOGY®** Mechanical universal magnetic stands.
- Lightweight aluminum body, mechanical universal direction arm with position lock, stainless steel ball joints.
- Simple structural design, easy to operate, excellent position locking.

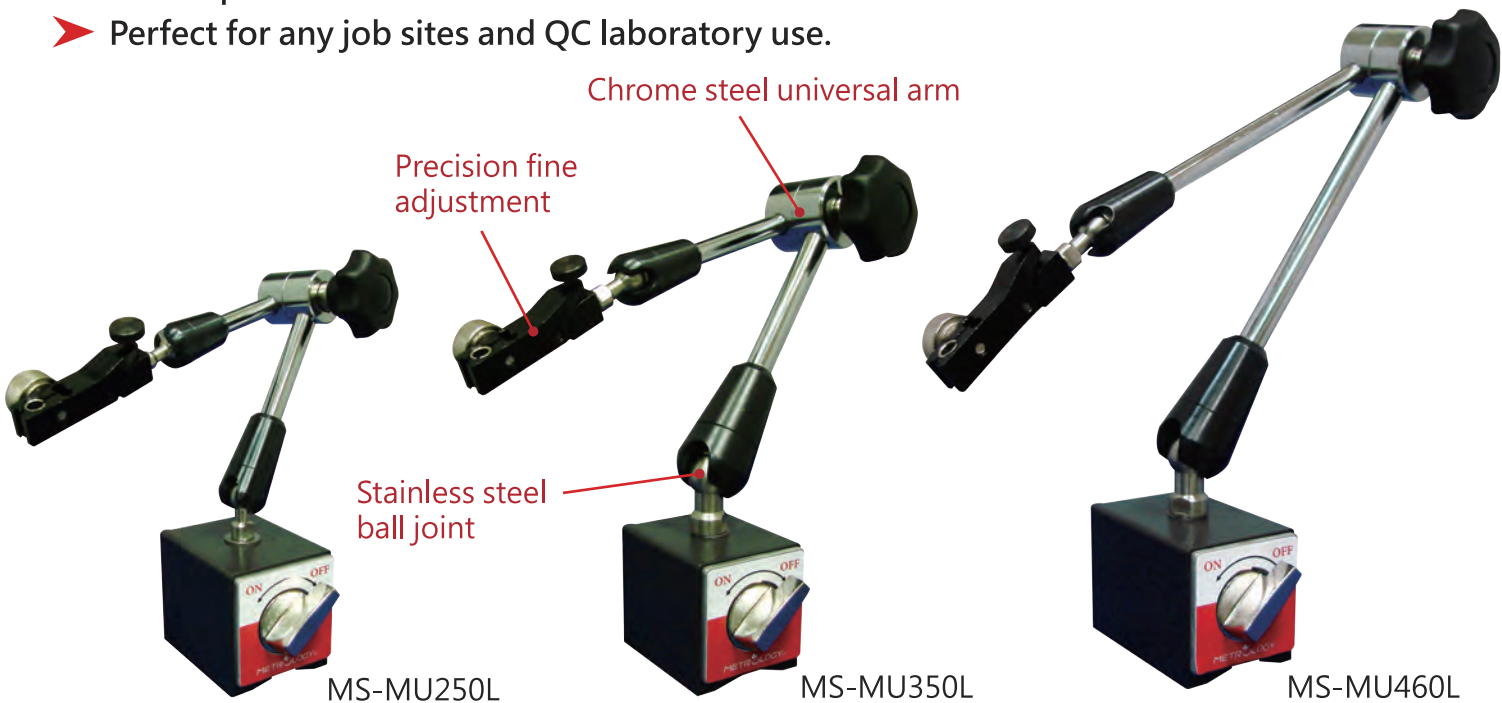


Model No.	Base (L x W x H)	Magnetic Power	Arm Length	Weight
MS-MU80K	60x50x55 mm	80kg	290mm	1.4kg
*Mounting hole dia.: Φ8.0mm				

■ Magnetic Stand (Mechanical Universal & Precision Fine-Adjustment)

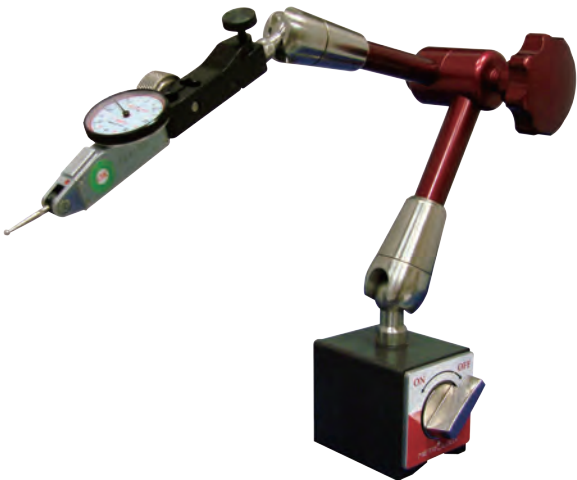


- **METROLOGY** Mechanical Universal Plus series magnetic stands.
- Polish chrome treated, mechanical universal direction arm with unibody stainless steel ball joints and body.
- Precision fine-adjustment and strong structural design ensuring accurate measurements and inspections.
- Perfect for any job sites and QC laboratory use.



Model No.	Base (L x W x H)	Magnetic Power	Arm Length	Weight
MS-MU250L	60x50x55 mm	80kg	255mm	1.4kg
MS-MU350L	60x50x55 mm	80kg	350mm	1.8kg
MS-MU460L	73x50x55 mm	100kg	460mm	2.1kg
*Mounting hole dia.: Φ6.0 & Φ8.0mm				

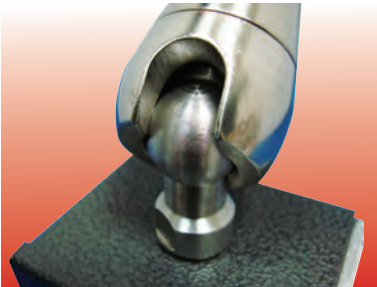
■ Magnetic Stand (Hydraulic Universal & Precision Fine-Adjustment)



- **METROLOGY®** Hydraulic Universal magnetic stands.
- Lightweight aluminum body, hydraulic structure, universal direction arm with position lock, stainless steel unibody ball joints.
- Strong precision structure, fine adjustment, universal hydraulic arm.
- Perfect for any job sites and QC laboratory use.



MS-HU345L



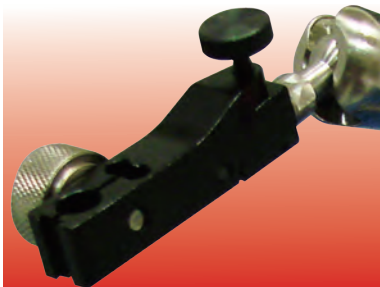
Unibody stainless steel lower ball joint



Hydraulic clamping lock



Unibody stainless steel upper ball joint



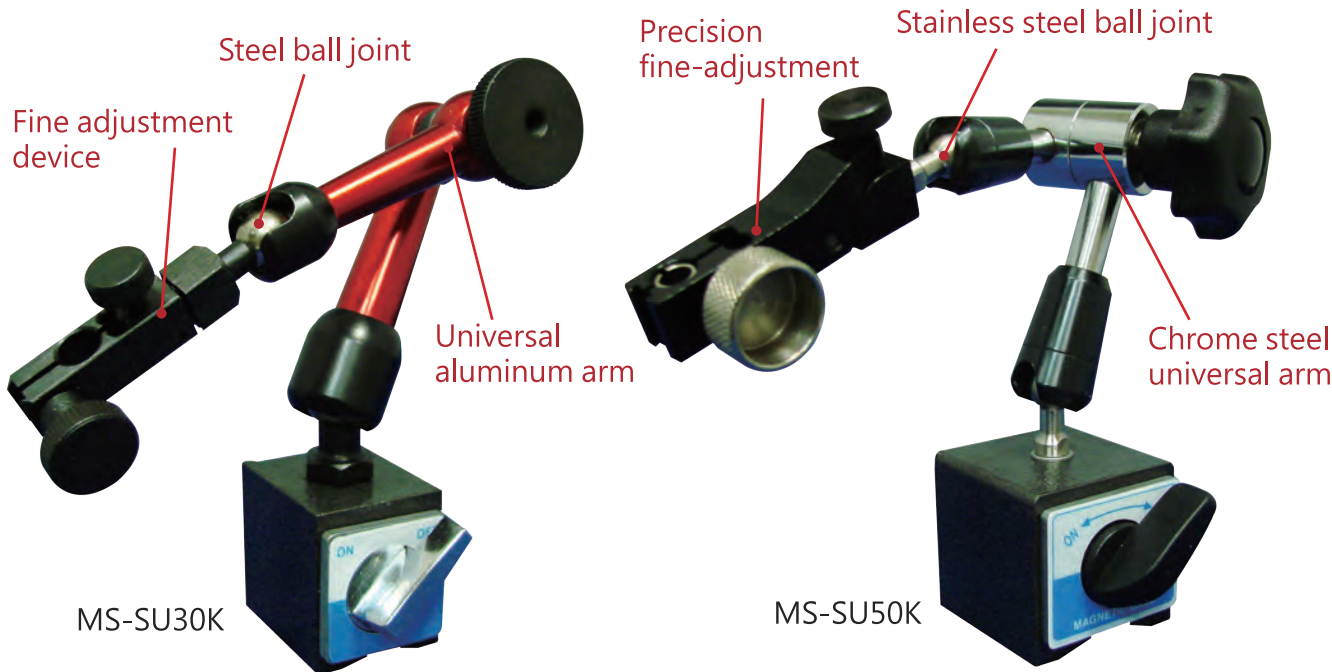
Precision fine-adjustment

Model No.	Base (L x W x H)	Magnetic Power	Arm Length	Weight
MS-HU345L	60x50x55 mm	80kg	345mm	1.7kg
*Mounting hole dia.: Φ6.0 & Φ8.0mm. Attached extension rod for expending the length of arm.				

■ Magnetic Stand (Mini Mechanical Universal)



- **METROLOGY®** Mini Mechanical Universal magnetic stands.
- **MS-SU30K** Lightweight aluminum body, mechanical universal direction arm with position lock, stainless steel ball joints.
- **MS-SU50K** Polish chrome treated, mechanical universal direction arm with unibody stainless steel ball joints and body.
- Unique structural design, easy to operate, and portable.
- Suitable for inspection in confine spaces.



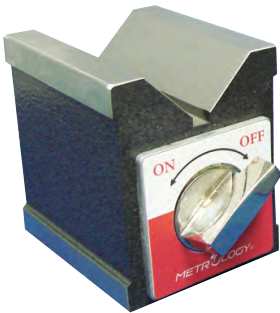
Model No.	Base (L x W x H)	Magnetic Power	Arm Length	Weight
MS-SU30K	35x30x35 mm	30kg	180mm	0.4kg
MS-SU50K	40x40x40 mm	50kg	187mm	0.7kg
*Mounting hole dia.: Φ6.0 & Φ8.0mm				



■ Magnetic Stand (V-Block)

- METROLOGY® Magnetic V-Block Series stand.
- Application: For round and 45 degree square objects inspections.

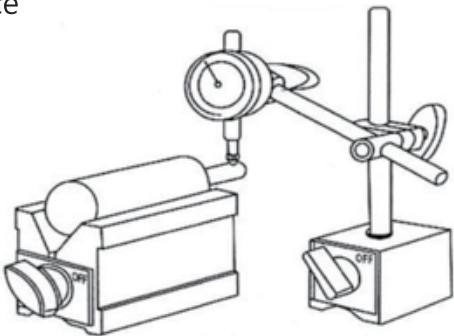
Top face



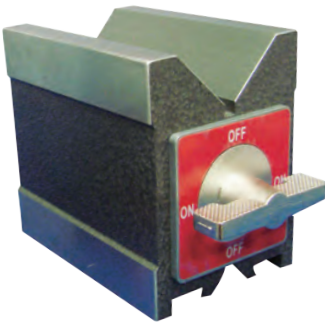
Bottom face



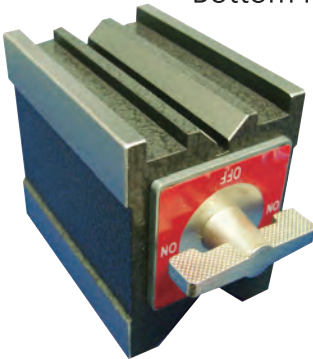
MV-70L



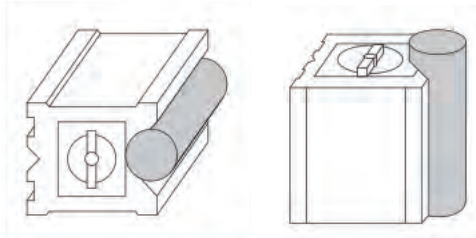
Top face



Bottom face



MV-100L



Model No.	Base (L x W x H)	Magnetic Power	V-width	Weight
MV-70L	70x60x72 mm	60kg	36mm	1.6kg
MV-100L	100x70x95mm	70kg	46mm	4.0kg

Remark: parallelism & squareness of V-groove with datum plane: 0.01mm.

■ Magnetic Base



Model No.	MS-30K	MS-50K	MS-80K	MS-100K	MS-130K	MS-160K
Power(kg)	30	50	80	100	130	160
Size(mm)	30*35*35	40*40*40	60*50*55	73*50*55	117*50*55	120*50*55
Screw	M5	M5	M8	M8	M10	M8

■ Depth Gauge

For measuring depth, thickness, height, and step With base and interchangeable measuring rod



DD-9200



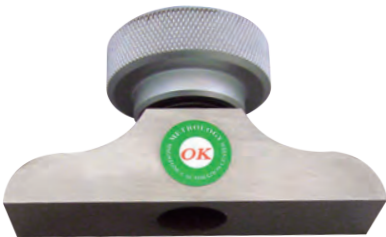
DD-9200E

Model No.	Measuring Range	Resolution	Accuracy	Remark
DD-9200	0-200mm	0.01mm	15um	With 0-10mm ED-9010 dial gage
DD-9200E	0-200mm / 8"	0.001mm / 0.00005"	15um	With 0-10mm ED-9013HN digital dial gage
DD-9200EH	0-200mm / 8"	0.001mm / 0.00005"	5um	With 0-10mm ED-9013H digital dial gage

Remark: Above with base L75mm x T14.5mm & interchangeable measuring rod.

■ Dial Gauge Depth Base

Suitable for any dial gauges with Ø8mm stems



DB-9000S



DB-9000L

Model No.	Measuring Face	Hole Dia.
DB-9000S	63*17mm	Φ 8mm
DB-9000L	101.5*17mm	



ED-9050+DB-9000S

■ Dial Snap Gauge

For measuring thickness, external dimension, and outside diameter.



DS-9001



DS-9002



DS-9003



DS-9004

Model No.	Measuring Range	Accuracy	Remark
DS-9001	0-10mm	0.1mm	L: 35mm Radius anvil
DS-9002			L: 35mm Flat anvil
DS-9003			L: 35mm Tube type anvil
DS-9004			L: 60mm Tube type anvil

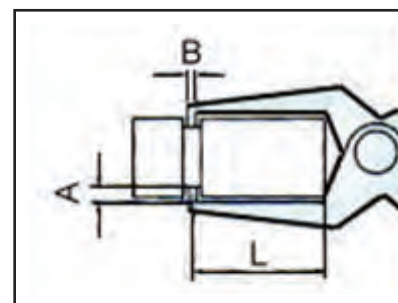
Graduation : 0.05mm

■ Outside Dial Caliper Gauge

For measuring thickness, outside diameter, outside groove diameter.



Model No.	Measuring Range	Accuracy	Dimension (mm)
OC-9000	0-20mm	30um	A: 6 B: Φ 3 L: 60
OC-9020	20-40mm		A: 6 B: Φ 3 L: 60
OC-9040	40-60mm		A: 6 B: Φ 3 L: 55
OC-9060	60-80mm		A: 6 B: Φ 3 L: 55
OC-9080	80-100mm		A: 6 B: Φ 3 L: 55



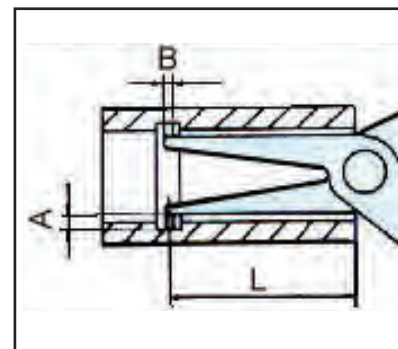
Graduation : 0.01mm

■ Inside Dial Caliper Gauge

For measuring width, inside diameter, inside groove diameter.



Model No.	Measuring Range	Accuracy	Dimension (mm)
IC-9015	15-35mm	30um	A: 3 B: Φ 3 L:50
IC-9035	35-55mm		A: 6 B: Φ 3 L:80
IC-9055	55-75mm		A: 8 B: Φ 3 L:90
IC-9075	75-95mm		A: 8 B: Φ 3 L:100
IC-9095	95-115mm		A: 10 B: Φ 3.2 L:150
IC-9115	115-135mm		A: 10 B: Φ 3.2 L:150



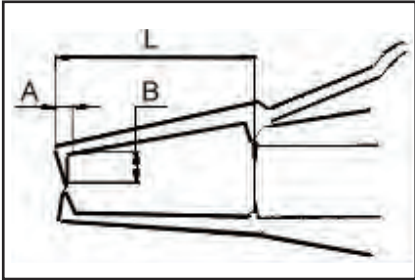
Graduation : 0.01mm

■ Digital Outside Caliper Gauge

For measuring thickness, outside diameter, outside groove diameter.



Model No.	Measuring Range	Accuracy	Dimension (mm)
OC-9000E	0-20mm	±30um	A:6.5 B:25 L:80 R:0.75
OC-9010E	10-30mm		
OC-9020E	20-40mm		
OC-9030E	30-50mm		
OC-9040E	40-60mm		



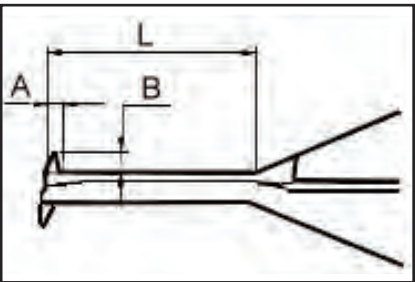
Resolution : 0.005mm / 0.0002"

■ Digital Inside Caliper Gauge

For measuring width, inside diameter, inside groove diameter.



Model No.	Measuring Range	Accuracy	Dimension (mm)
IC-9005E	5-25mm	±30um	A:1 B:1.5 L:35 R:0.3
IC-9010E	10-30mm		A:2 B:3.5 L:50 R:0.5
IC-9020E	20-40mm		A:3 B:6.5 L:80 R:0.5
IC-9030E	30-50mm		A:3 B:8.5 L:80 R:0.5
IC-9040E	40-60mm		A:3 B:8.5 L:80 R:0.5



Resolution : 0.005mm / 0.0002"

■ Small Bore Gauge (Split Ball Probes)

For comparison in measuring dimensions and form error of holes.



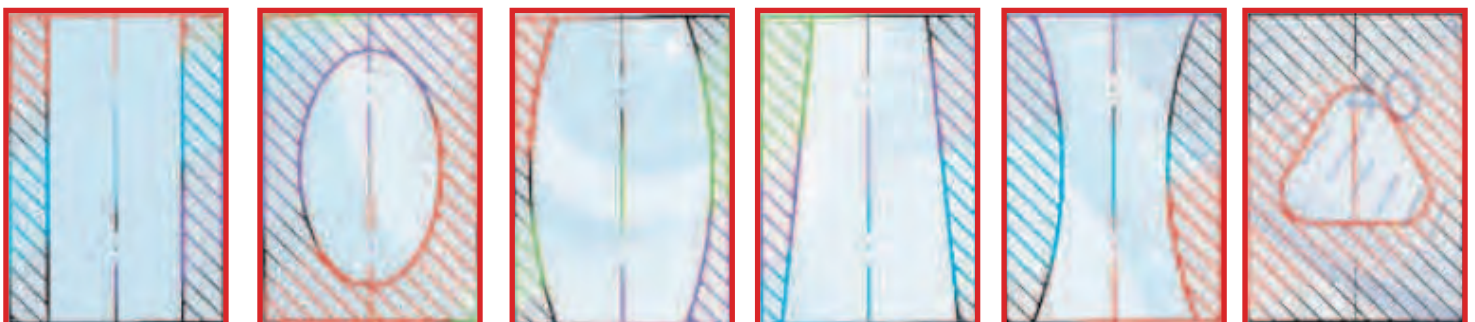
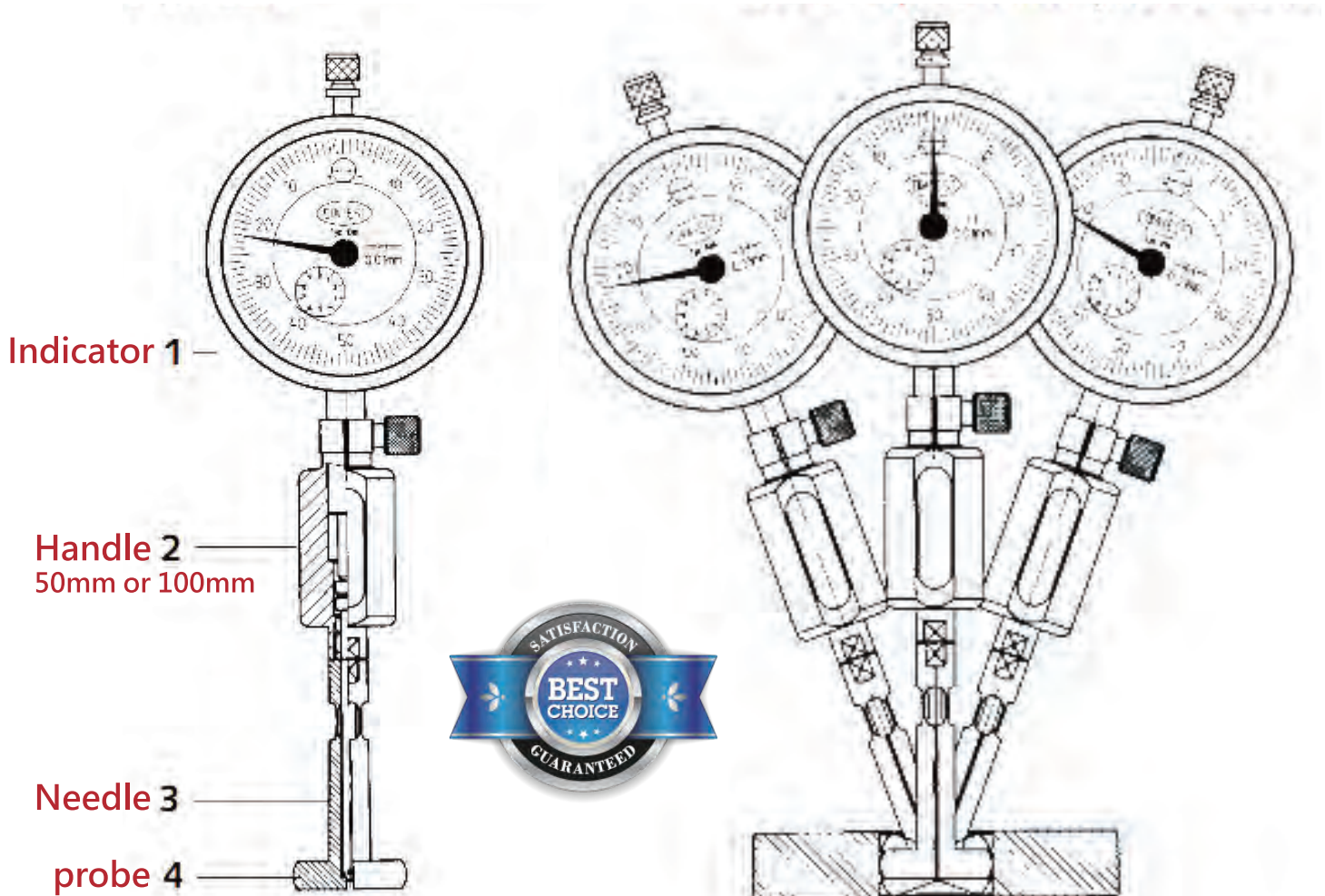
Technic Combination

Technical Specs

Repeatability : 0.001mm(by hand) 0.0005mm(by measuring stand)

Travel error : 0.5~1.5mm Max 2% of the travel 1.75~40mm Max 1% of the travel

Material : hardened steel needle hardness 62-64HRC / chrome harden steel probe hardness HV1000



■ Small Bore Gauge (Split Ball Probes)

For comparison in measuring dimensions and form error of holes.



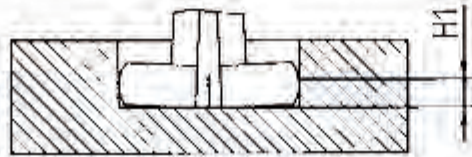
Technic Combination

Technical Specs

Repeatability : 0.001mm(by hand) 0.0005mm(by measuring stand)

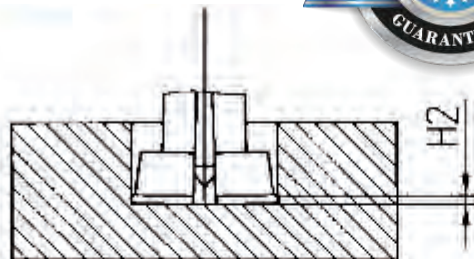
Travel error : 0.5~1.5mm Max 2% of the travel 1.75~40mm Max 1% of the travel

Material : hardened steel needle hardness 62-64HRC / chrome hardened steel probe hardness HV1000



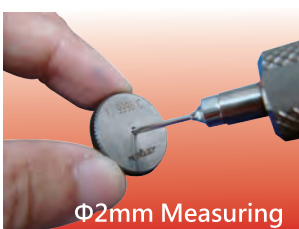
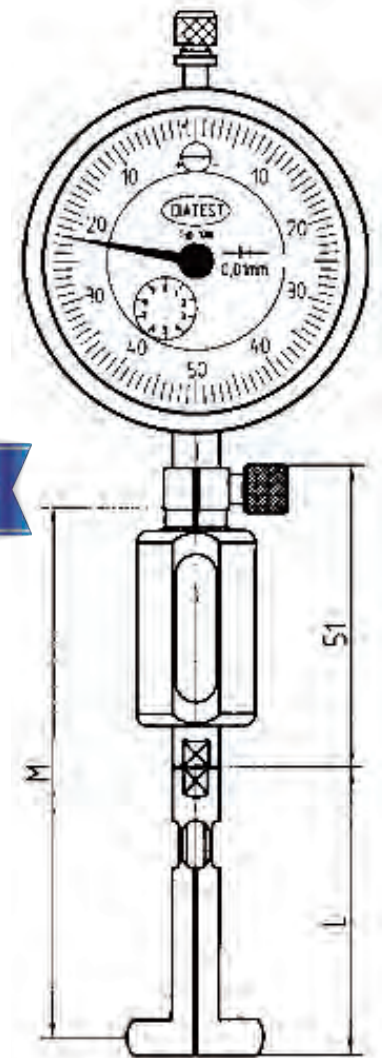
Standard-Tastkopf
Standard probe

- BG-M00 : 0.25-0.33mm
- BG-M0 : 0.6mm
- BG-M1 : 0.9-1.2mm
- BG-M2 : 2.0mm
- BG-M3 : 3.3mm
- BG-M4 : 3.6mm
- BG-M5 : 4.0mm

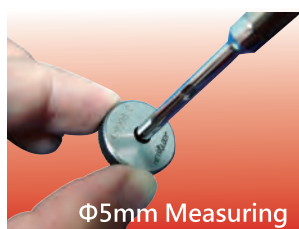


Sackloch-Tastkopf
Blind bore probe

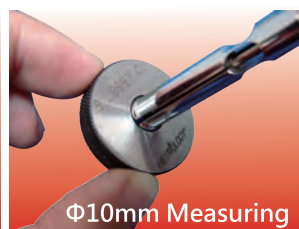
- BG-M1 : 0.3mm
- BG-M2 : 0.5mm
- BG-M3 : 1.0mm
- BG-M4 : 1.2mm
- BG-M5 : 1.5mm



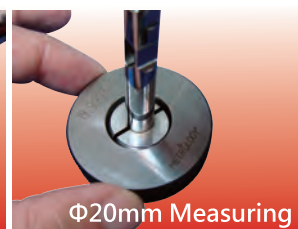
Φ2mm Measuring



Φ5mm Measuring



Φ10mm Measuring



Φ20mm Measuring



Φ30mm Measuring

■ Small Bore Gauge (Split Ball Probes)

For comparison in measuring dimensions and form error of holes.



Technic Combination

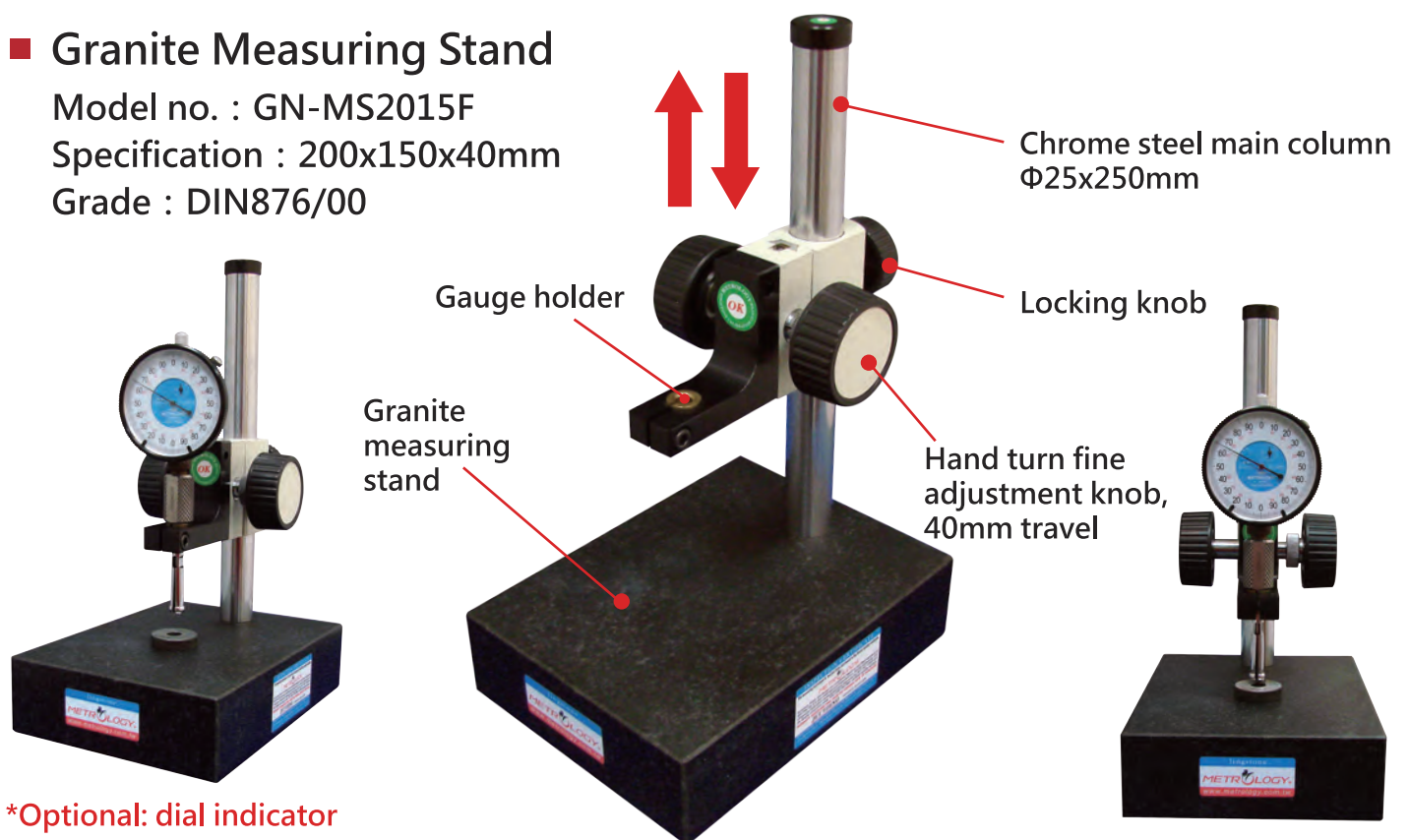


■ Granite Measuring Stand

Model no. : GN-MS2015F

Specification : 200x150x40mm

Grade : DIN876/00



*Optional: dial indicator



■ Small Bore Gauge (Split Ball Probes)

For comparison in measuring dimensions and form error of holes.

Technic Combination

Model No. (set)	Model No. (probe)	Measuring Range (mm)	Model No. (Needle)	Model No. (Ring gauge / mm)	Probe Length (mm)	Measuring Depth (mm)
BG-M00	BG-T0.50	0.47-0.53	BG-N00-030	RG-0.50	19.5	1.5
	BG-T0.55	0.52-0.58		RG-0.55		1.8
	BG-T0.60	0.57-0.67	BG-N00-040	RG-0.60		2.0
	BG-T0.70	0.65-0.77		RG-0.70		2.5
	BG-T0.80	0.75-0.87		RG-0.80		2.8
	BG-T0.90	0.85-0.97		RG-0.90		3.0
BG-M0	BG-T1.0	0.95-1.15	BG-N0-070	RG-1.0	19.5	11
	BG-T1.1	1.07-1.25		RG-1.1		
	BG-T1.2	1.17-1.35		RG-1.2		
	BG-T1.3	1.27-1.45		RG-1.3		
	BG-T1.4	1.37-1.55		RG-1.4		
BG-M1	BG-T1.75	1.50-1.90	BG-N1-100	RG-1.75	25.3	17
	BG-T2.00	1.80-2.20		RG-2.00		
	BG-T2.25	2.05-2.45		RG-2.25		
	BG-T2.50	2.30-2.70	BG-N1-150	RG-2.50	30.6	22
	BG-T2.75	2.55-2.95		RG-2.75		
	BG-T3.00	2.80-3.20		RG-3.00		
	BG-T3.25	3.05-3.45		RG-3.25		
	BG-T3.50	3.30-3.70		RG-3.50		
	BG-T3.75	3.55-3.95		RG-3.75		
BG-M2	BG-T4.0	3.70-4.30	BG-N2-270	RG-4.0	47.3	40
	BG-T4.5	4.20-4.80		RG-4.5		
	BG-T5.0	4.70-5.30		RG-5.0		
	BG-T5.5	5.20-5.80		RG-5.5		
	BG-T6.0	5.70-6.30		RG-6.0		
	BG-T6.5	6.20-6.80		RG-6.5		
	BG-T7.0	6.70-7.30		RG-7.0		
	BG-T7.5	7.20-7.80		RG-7.5		
	BG-T8.0	7.70-8.30		RG-8.0		
	BG-T8.5	8.20-8.80		RG-8.5		
	BG-T9.0	8.70-9.30		RG-9.0		
	BG-T9.5	9.20-9.80		RG-9.5		
						50

Full set with probe, needle, ring gauge, handle, and wooden case.
Can be purchased individually



■ Small Bore Gauge (Split Ball Probes)

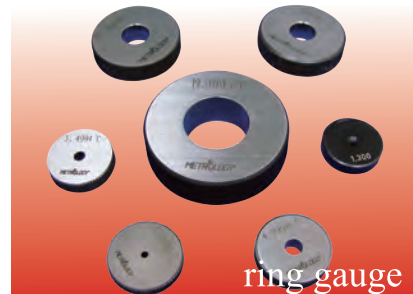
For comparison in measuring dimensions and form error of holes.

Technic Combination

Model No. (set)	Model No. (probe)	Measuring Range (mm)	Model No. (Needle)	Model No. (Ring gauge / mm)	Probe Length (mm)	Measuring Depth (mm)
BG-M3	BG-T10	9.40-10.60	BG-N3-310	RG-10	48.5	50
	BG-T11	10.40-11.60		RG-11		
	BG-T12	11.40-12.60		RG-12		
	BG-T13	12.40-13.60		RG-13		
	BG-T14	13.40-14.60		RG-14		
	BG-T15	14.40-15.60		RG-15		90
	BG-T16	15.40-16.60		RG-16		
	BG-T17	16.40-17.60		RG-17		
	BG-T18	17.40-18.60		RG-18		
	BG-T19	18.40-19.60		RG-19		
	BG-T20	19.40-20.60		RG-20		
BG-M4	BG-T21	20.40-21.60	BG-N3-310	RG-21	48.5	90
	BG-T22	21.40-22.60		RG-22		
	BG-T23	22.40-23.60		RG-23		
	BG-T24	23.40-24.60		RG-24		
	BG-T25	24.40-25.60		RG-25		
	BG-T26	25.40-26.60		RG-26		
	BG-T27	26.40-27.60		RG-27		
	BG-T28	27.40-28.60		RG-28		
	BG-T29	28.40-29.60		RG-29		
	BG-T30	29.40-30.60		RG-30		
BG-M5	BG-T30/5	28.90-31.10	BG-N5-350	RG-30	48.5	100
	BG-T32	30.90-33.10		RG-32		
	BG-T34	32.90-35.10		RG-34		
	BG-T36	34.90-37.10		RG-36		
	BG-T38	36.90-39.10		RG-38		
	BG-T40	38.90-41.10		RG-40		

Full set with probe, needle, ring gauge, handle, and wooden case.
Can be purchased individually

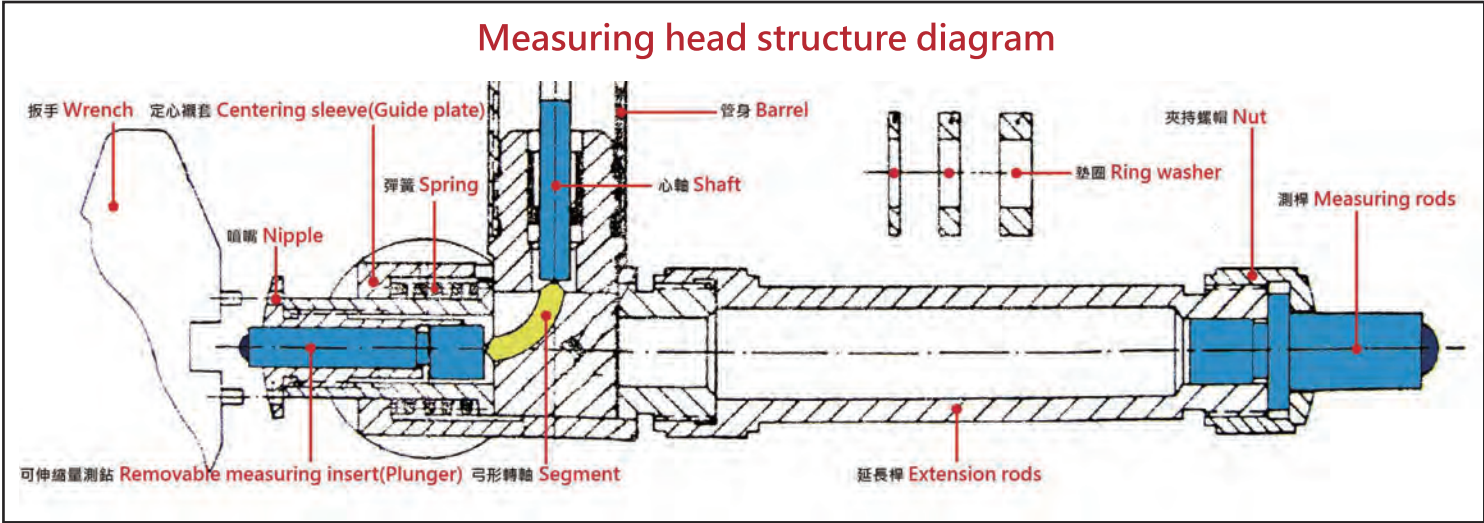
*Optional: dial indicator





■ Bore Gauge

For measuring bore diameter, roundness, shape and form error.



Specs. Repeatability : 0.002mm Measuring accuracy : refer to JIS B7515 standards

Performance of Cylinder Gauge Unit: um

Measuring range (mm)	Permissible value for wide range accuracy		Permissible value for adjacent error		Permissible value for repeated accuracy		Permissible value for error due to rotation of plunger		Permissible value for error due to guide plate		Measuring force N(gf)
	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B	
18 to 35	5	10	2	4	2	3	2	4	1	2	4 max (408)
35 to 60											5 max (510)
50 to 100											6 max (612)
100 to 160									2	3	
160 to 250											
250 to 400											

Remark : The values in this table are referred to 20℃ temperature

- Standard kit with bore gauge handle, measuring head, full set measuring rod.
(Indicator optional)



Precautions for use

1. Bore gauge is a measuring tool for comparative measurement, the measuring range should not be too large, the best way is to use the upper and lower limits within a circle of the indicator, otherwise the excessive measuring range will cause the cumulative error of spindle and indicator.
2. The pairing of the bore gauge and indicator is more important, and the instrument error values that are not in the same direction will cause the cumulative error of the two.

■ Bore Gauge (Insert Type)

For measuring bore diameter, roundness, shape and form error.

Remark: indicator optional
Please choose the matching indicator according to the product tolerance requirements and scale performance.



Standard digital indicator

Micro digital indicator

Micro indicator

Micro digital indicator

Standard indicator



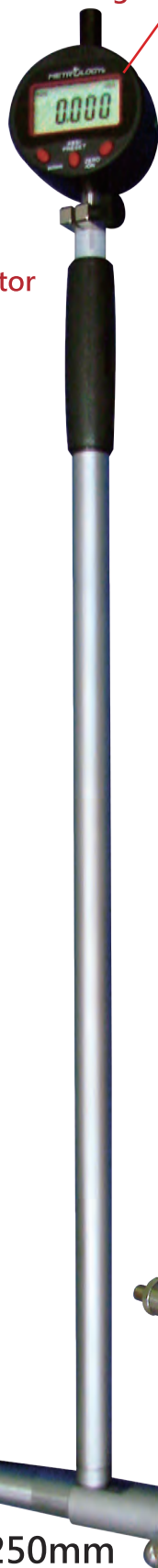
6-10mm



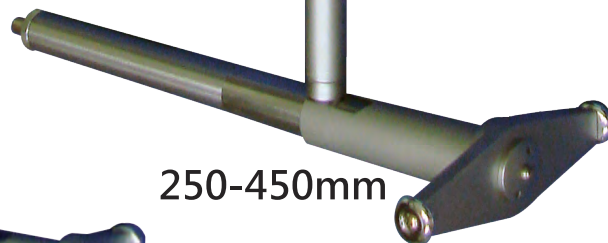
18-35mm



50-100mm



160-250mm

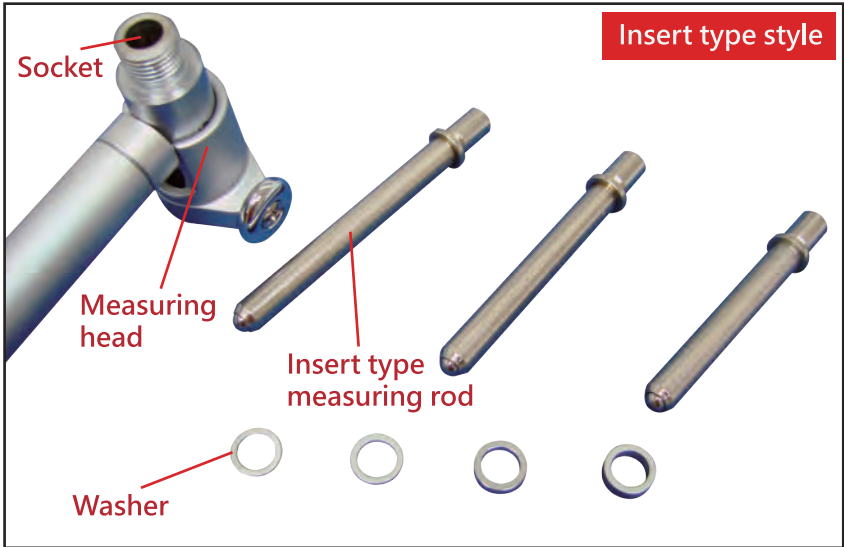


250-450mm

■ Bore Gauge (Insert Type)

For measuring bore diameter, roundness, shape and form error.

Model No.	Measuring Range	Measuring Depth
BG-9001N	6-10mm	40mm
BG-9002N	10-18mm	100mm
BG-9003N	18-35mm	125mm
BG-9004N	35-50mm	150mm
BG-9005N	50-100mm	150mm
BG-9006N	50-160mm	150mm
BG-9007N	160-250mm	400mm
BG-9008N	250-450mm	400mm
BG-9009N	250-600mm	400mm
BG-9010N	400-800mm	400mm

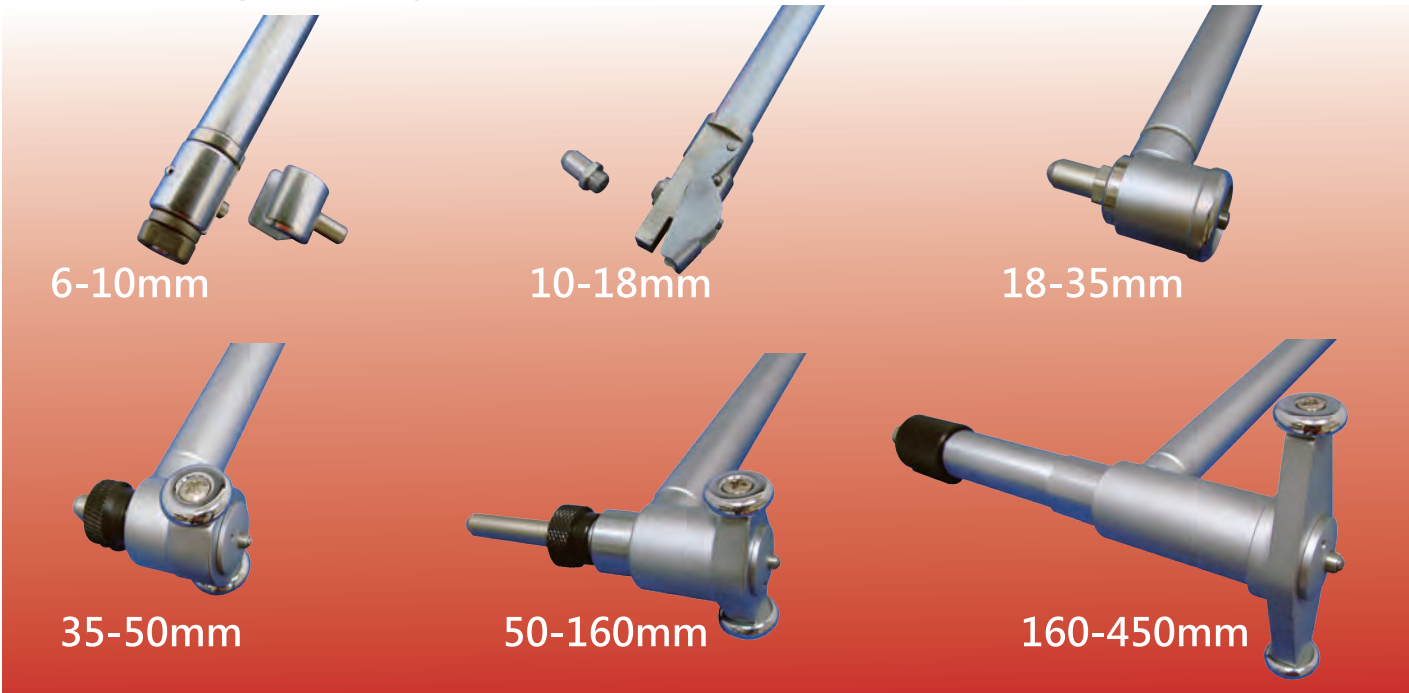


■ Extension Rods

For measuring range over 100mm



■ Measuring Head Type



■ Bore Gauge (Thread Type)

For measuring bore diameter, roundness, shape and form error.

Remark: indicator optional
Please choose the matching indicator according to the product tolerance requirements and scale performance.

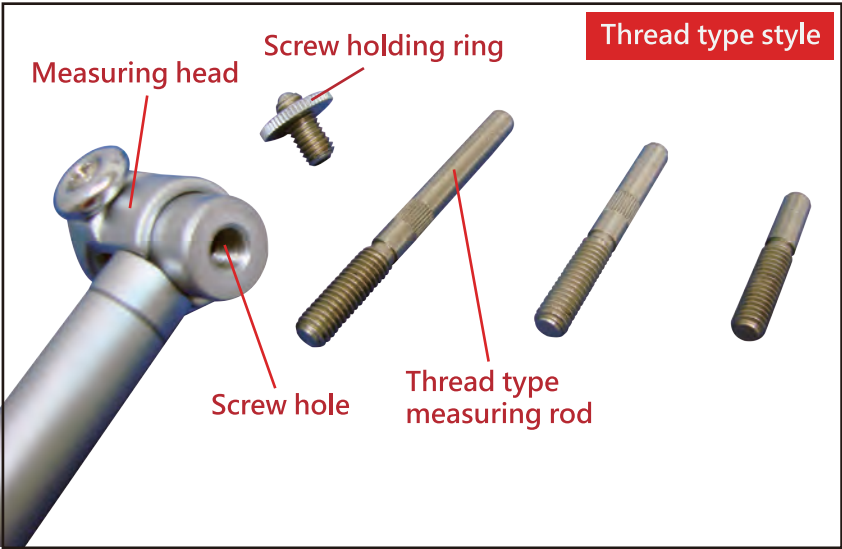


BG-9250S 250-450mm

■ Bore Gauge (Thread Type)

For measuring bore diameter, roundness, shape and form error.

Model No.	Measuring Range	Measuring Depth
BG-9035S	35-50mm	150mm
BG-9050S	50-100mm	150mm
BG-9100S	100-250mm	200mm
BG-9250S	250-450mm	400mm

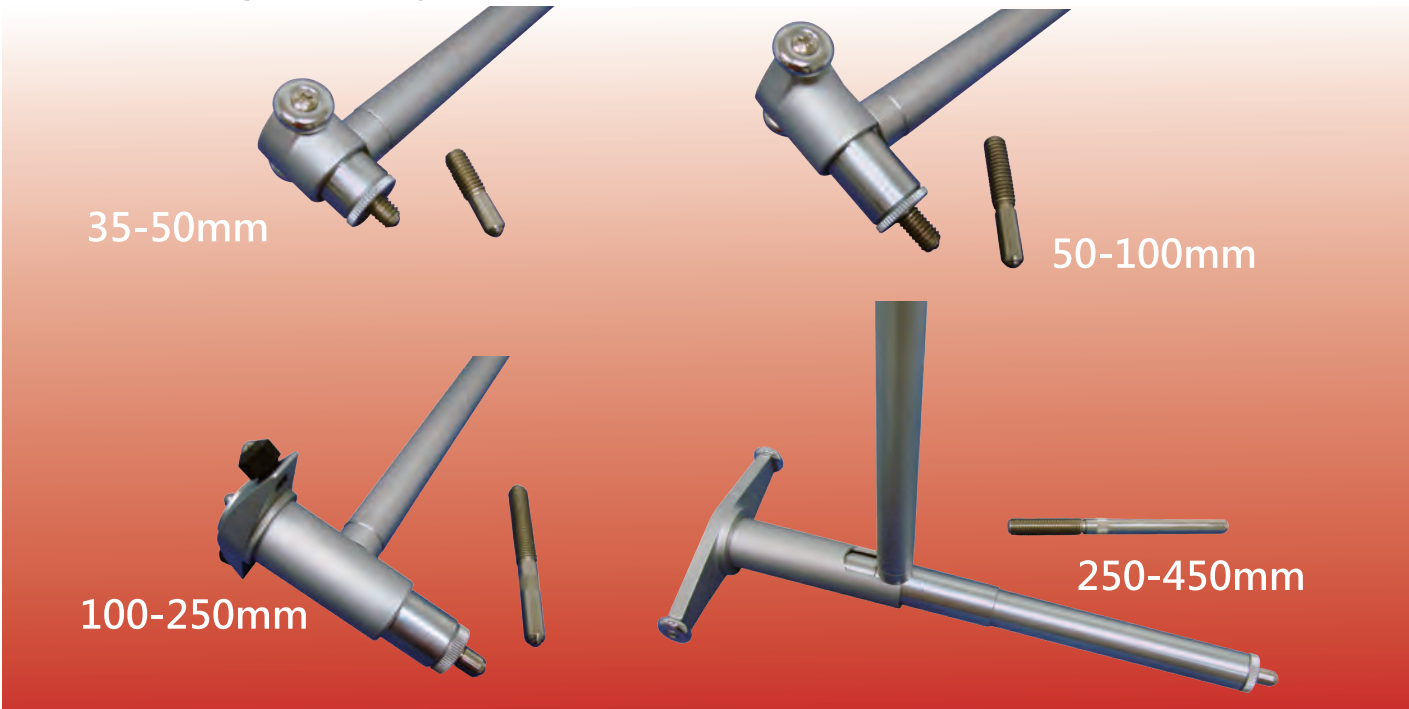


■ Extension Rods

For measuring range over 100mm



■ Measuring Head Type



■ Dial Thickness Gauge

- For measuring thickness of varies objects such as leather, paper, plastic sheets, metal sheets, metal plates, and etc.



DT-9003



DT-9000TU



DT-9004

Model No.	Measuring Range	Graduation	Accuracy	Remark
DT-9003	0-10mm	0.01mm	20um	Deep throat L: 30mm Shockproof type
DT-9004				Deep throat L: 120mm Jewel type
DT-9000TU				Deep throat L: 30mm Tube type

■ Dial Thickness Gauge

- For measuring thickness of varies objects such as leather, paper, plastic sheets, metal sheets, metal plates, and etc.



DT-9001H



DT-9001GI



DT-9025



DT-9002GI

Model No.	Measuring Range	Graduation	Accuracy	Remark
DT-9001GI	0-10 mm	0.01 mm	20 um	Deep L: 30mm Interchangeable anvil
DT-9002GI				Deep L: 62.5mm Interchangeable anvil
DT-9025	0-25 mm	0.001 mm	30 um	Deep L:30mm Jewel type
DT-9001H	0-1 mm		4 um	Deep L:30mm Jewel & shockproof

■ Digital Dial Thickness Gauge

- For measuring thickness of varies objects such as leather, paper, plastic sheets, metal sheets, metal plates, and etc.



ET-9010HN



ET-9010H



ET-9010HL

Model No.	Measuring Range	Resolution	Accuracy	Remark
ET-9010	0-10mm/ 0.4"	0.01mm/0.0005"	20um	Deep throat L: 30mm
ET-9010L			20um	Deep throat L:120mm
ET-9010HN		0.001mm/0.00005"	15um	Deep throat L: 30mm Normal accuracy
ET-9010H			5um	Deep throat L: 30mm High accuracy
ET-9010HL			5um	Deep throat L: 120mm High accuracy

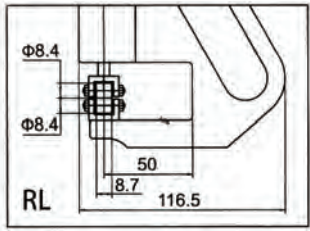
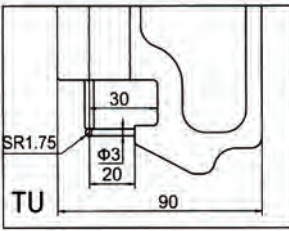
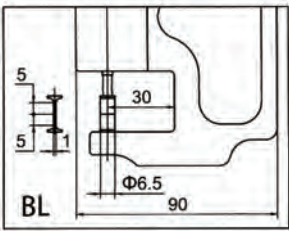
■ Digital Dial Thickness Gauge (Special Type)

- For measuring thickness of varies objects such as leather, paper, plastic sheets, metal sheets, metal plates, and etc.
- According to the characteristics and requirements of the measured object, select the appropriate thickness gauge form and measuring anvil to measure.

ET-9001GI



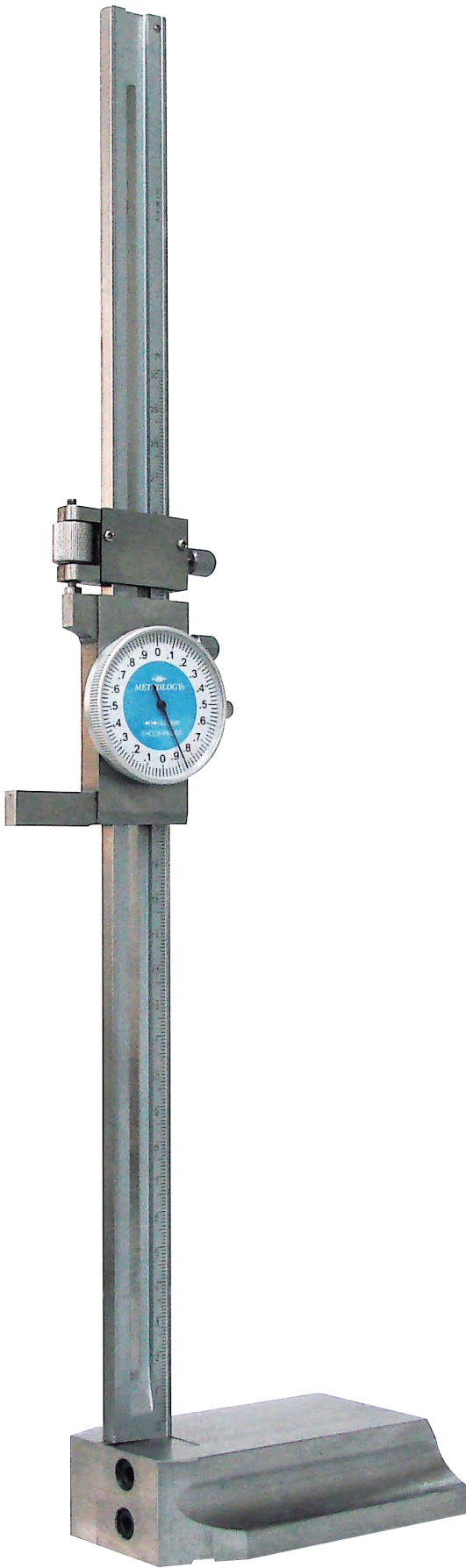
ET-9002GI



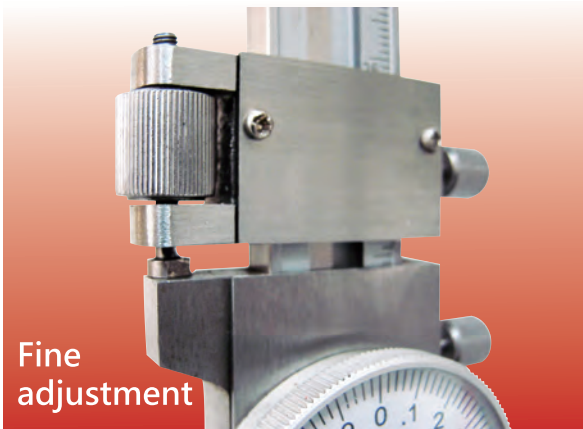
ET-9000BL

Model No.	Measuring Range	Resolution	Accuracy	Remark
ET-9001GI	0-10mm/0.4"	0.01mm/0.0005"	20 um	Deep throat L: 30mm Interchangeable anvil
ET-9002GI				Deep throat L: 62.5mm Interchangeable anvil
ET-9000BL		0.005mm/0.0002"		Deep throat L: 30mm Blade type
ET-9000TU				Deep throat L: 30mm Tube type
ET-9000RL				Deep throat L: 120mm Roller type

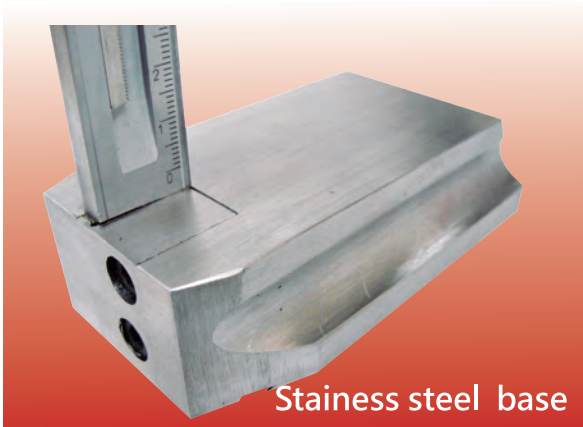
■ Dial Height Gauge (Single Column)



Indicator



Fine adjustment



Stainless steel base

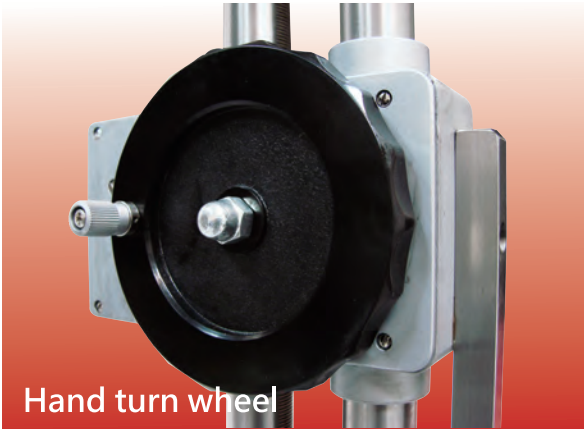
Model No.	Measuring Range	Graduation	Accuracy
DH-9150S	0-150mm	0.02mm	0.04mm
DH-9200S	0-200mm		0.06mm

Material: Hardened stainless steel With tungsten steel scribe

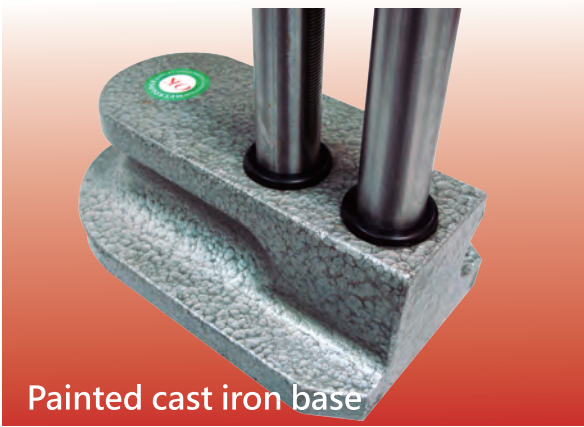
■ Dial Height Gauge (Double Column)



Mechanical digits indicator



Hand turn wheel



Painted cast iron base

Model No.	Measuring Range	Graduation	Accuracy
DH-9300D	0-300mm	0.01mm	0.10mm
DH-9450D	0-450mm		0.14mm
DH-9600D	0-600mm		0.18mm

Material: Hardened stainless steel (Except base)
With tungsten steel scribe

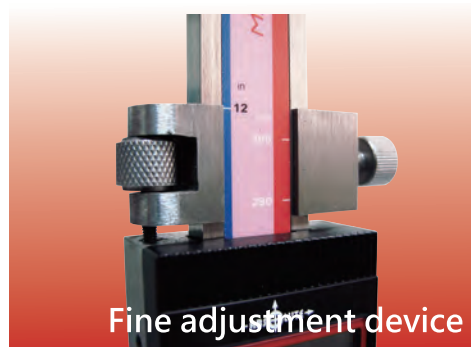
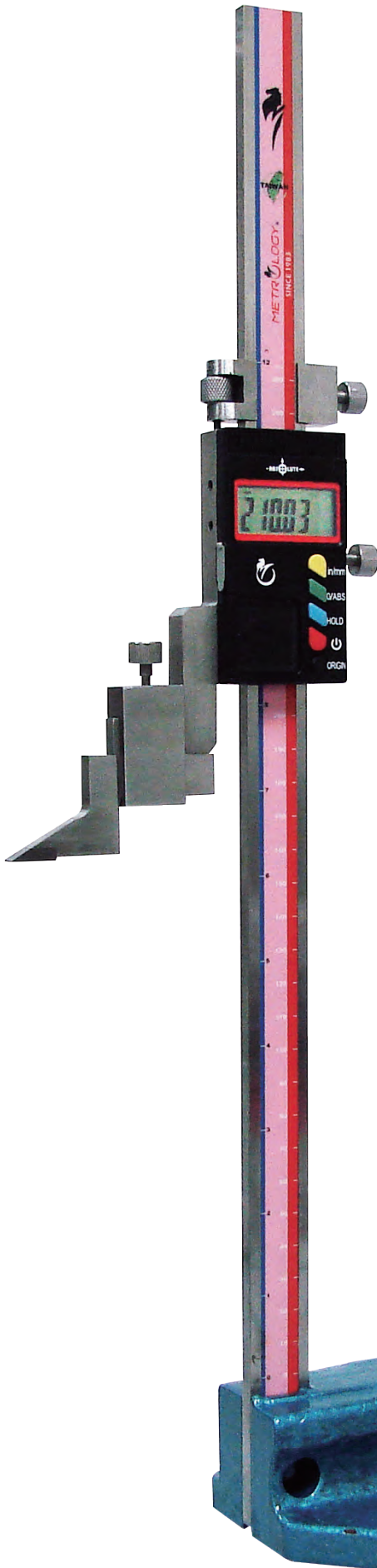
■ Digital Height Gauge (Single Column)



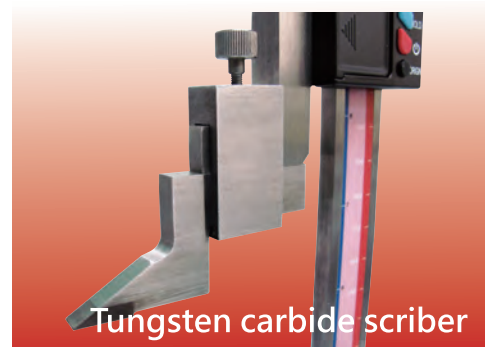
Absolute

Metrology absolute series digital height gage features absolute sensor measuring system, for fast and reliable measurement, no need to repeatedly reset zeros, even after power down or replacing battery, the original data stays the same, also no induction speed limit.

SPC port allows data import through USB. No software required, data can be transfer directly to Excel.



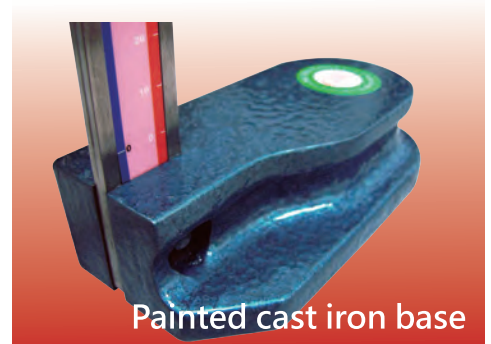
Fine adjustment device



Tungsten carbide scriber



Digital display



Painted cast iron base

■ Button Functions

in/mm : Imperial/ metric conversion

0 /ABS : Set zero at any position/

Absolute& increment value conversion

ORIGIN : Absolute zero

HOLD : Memory display value

⏻ : Turn on/off Key

■ Digital Height Gauge (Single Column)

ABS

SPC^{Plus}



EH-9300SA



EH-9200SA



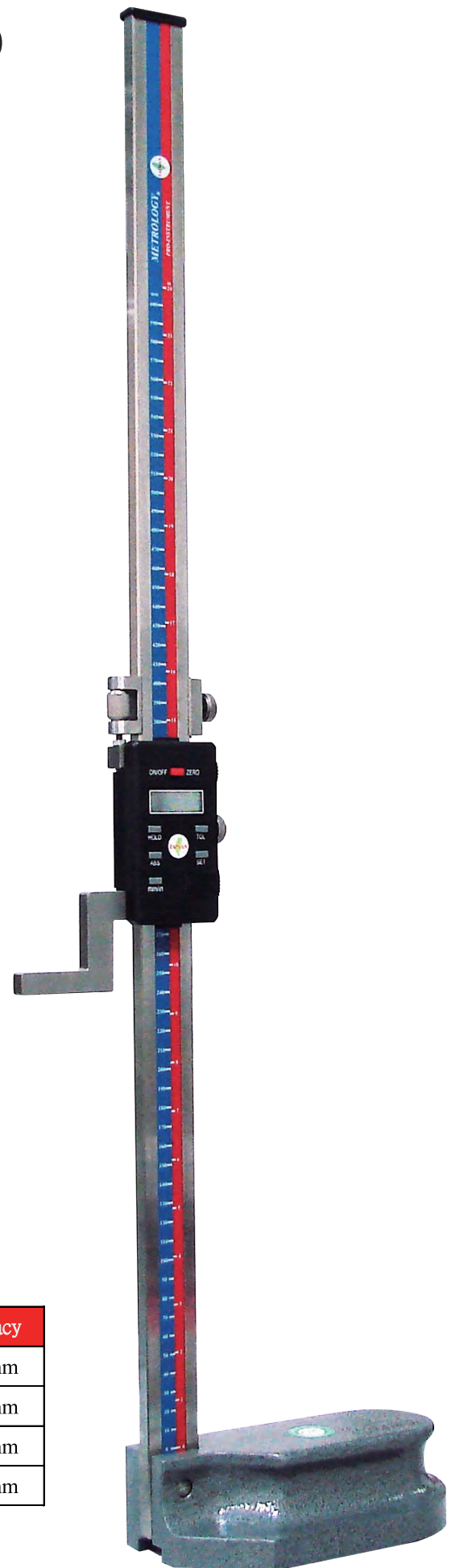
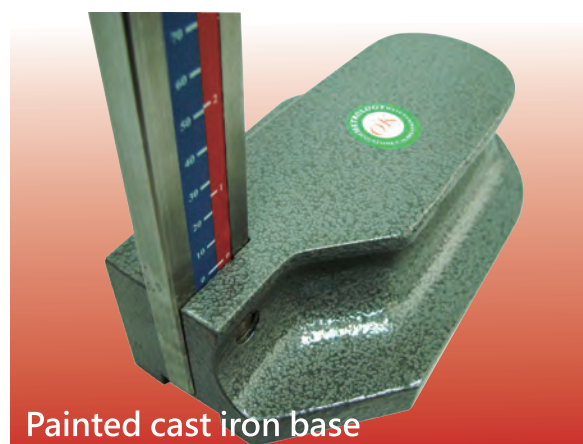
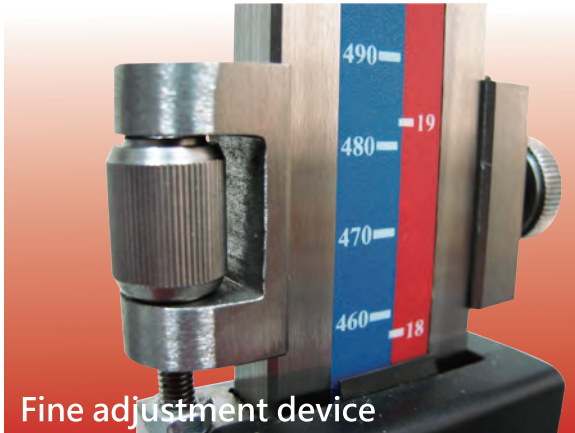
EH-9150SA



Model No.	Measuring Range	Resolution	Accuracy
EH-9150SA	0-150mm / 6"	0.01mm / 0.0005"	0.04mm
EH-9200SA	0-200mm / 8"		0.06mm
EH-9300SA	0-300mm / 12"		0.08mm

Optional accessories: Data output cable (DO-B+C01)
With tungsten steel scribe

■ Digital Height Gauge (Single Column)



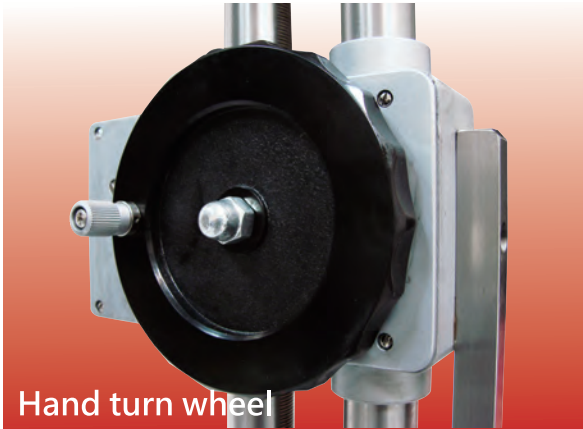
Model No.	Measuring Range	Resolution	Accuracy
EH-9500S	0-500mm / 20"	0.01mm / 0.0005"	0.10mm
EH-9600S	0-600mm / 24"		0.12mm
EH-9800S	0-800mm / 32"		0.14mm
EH-91000S	0-1000mm / 40"		0.16mm

Material: Hardened stainless steel (Except base)
With tungsten steel scribe

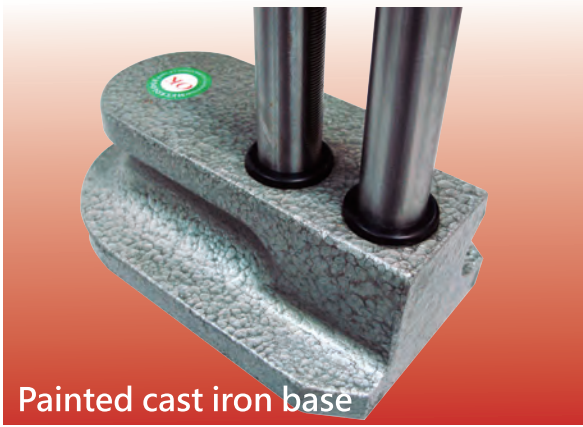
■ Digital Height Gauge (Double Columns)



Digital display



Hand turn wheel



Painted cast iron base

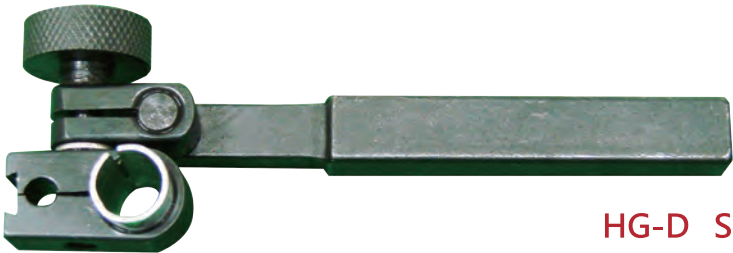
Model No.	Measuring Range	Resolution	Accuracy
EH-9300D	0-300mm / 12"	0.01mm / 0.0005"	0.10mm
EH-9450D	0-450mm / 18"		0.14mm
EH-9600D	0-600mm / 24"		0.18mm

Material: Hardened stainless steel (Except base)
With tungsten steel scribe

■ Height Gauge Accessories



HG-S Size : 76x6x8mm



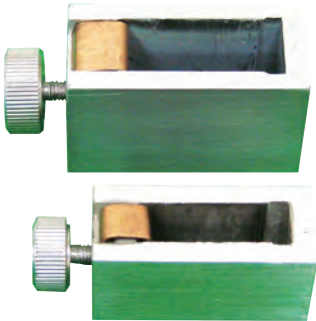
HG-D Size : 76x9x9mm

Product	Model No.	Remark
Rectangular Clamp	HG-S	For ≤ 300 mm Single column height gauge
	HG-D	For double column & > 300 mm Single column height gauge (with $\Phi 4, \Phi 8$ dovetail clamp)

HG-DS



HG-SH



HG-DE



HG-ES



Product	Model No.	Remark
Tungsten Steel Scriber	HG-DS	40x6x8mm , For ≤ 300 mm Single column dial height gauge
	HG-ES	76x6x8mm , For ≤ 300 mm Single column digital height gauge
	HG-DE	80x9x9mm , For > 300 mm Single column height gauge & ≥ 300 mm double column height gauge
Scriber Holder	HG-SH	Brand, Model No., Type of Height gauge instructed by customer.