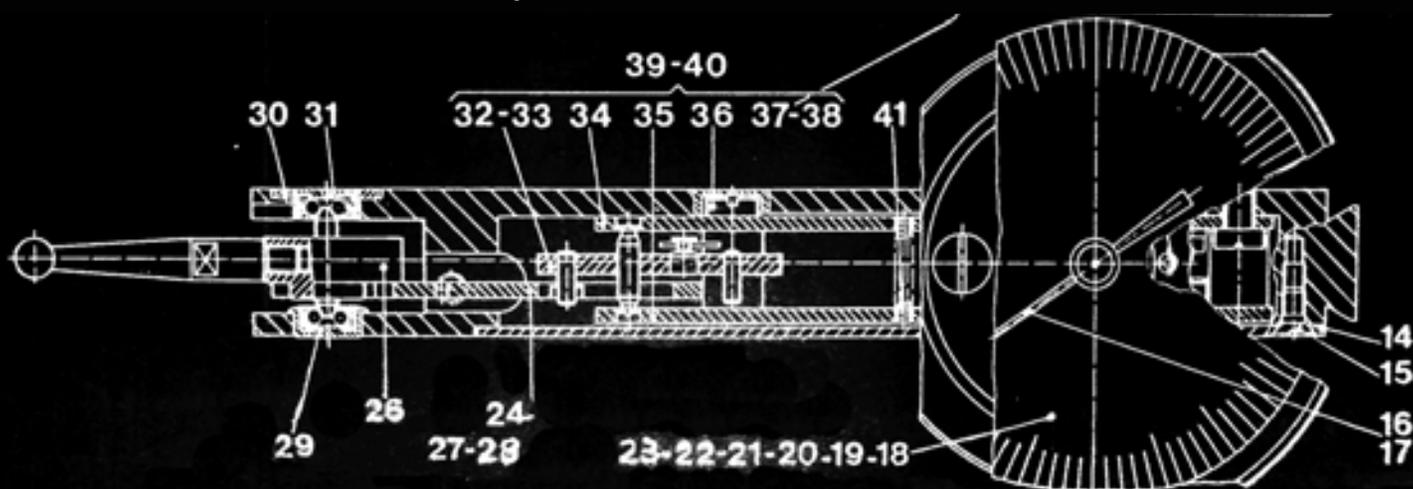


DIAL INDICATOR

-  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  (JCC ISO 17025 accredited lab) in Taiwan.
- The dial indicators are made with hardened aluminum alloy housing, precision gears, 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  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 mm	Measuring range mm	Wide-range forward accuracy	Neighboring error	Narrow-range Neighboring error	Repeatability	Backward error
0.01	0.5	5	5	3	3	3
	0.8	8				4
	1.0	10				
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 \varnothing 3.175mm, hardened stainless steel spindle \varnothing 5mm h6, stem diameter \varnothing 8mm 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

\varnothing 5mm 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)

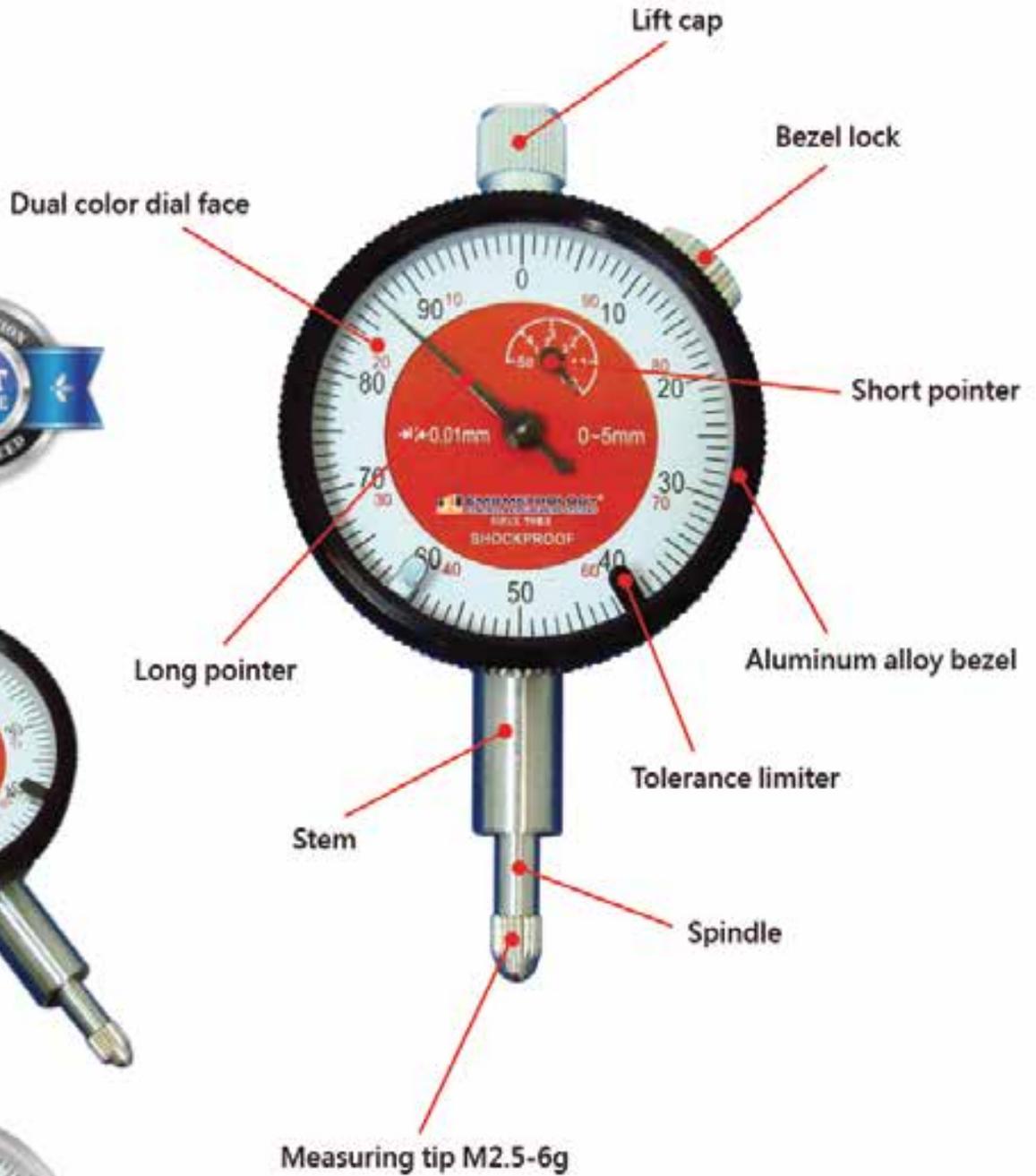
For measuring dimension of workpieces attached to machine table or setting gauge for measuring movement positions and distances.



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



Magnetic stand 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**

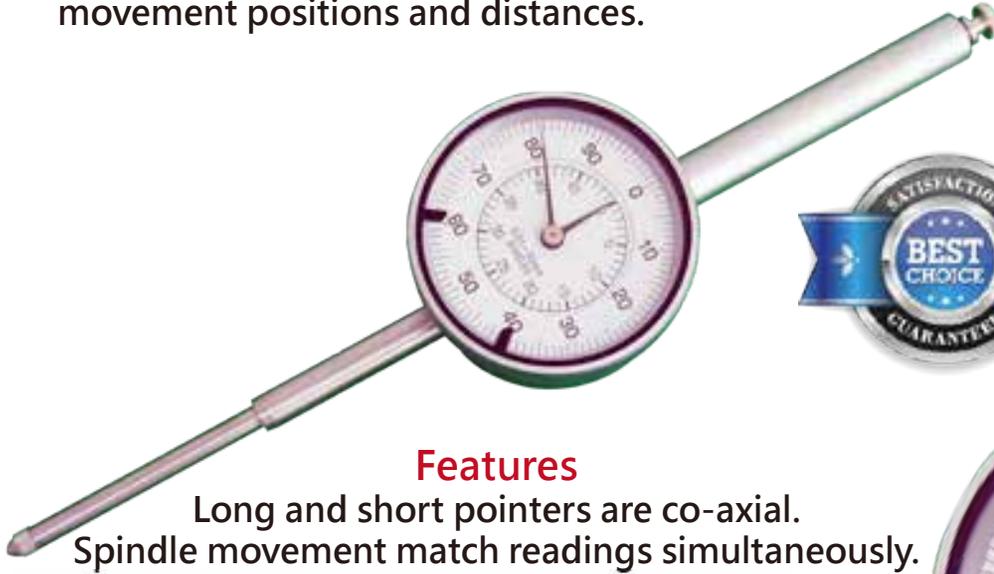


Model No.	Measuring Range	Accuracy	Remark
DG-9010HI	0-10mm	15um	Φ 55mm Aluminum body, shockproof, with hoist install.
DG-9025HI	0-25mm	20um	

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.



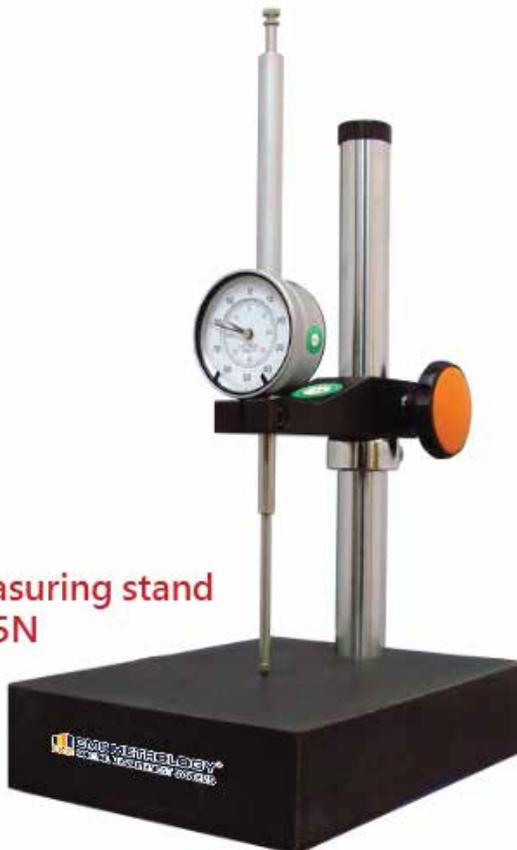
Features

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



DG-9050

Granite measuring stand GN-MS2015N



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	Φ 76mm Aluminum body, shockproof.
DG-9100L	0-100mm	40um	Φ 78mm Steel body, Jeweled bearing.

Graduation : 0.01mm

Granite measuring stand
GN-MS2015F



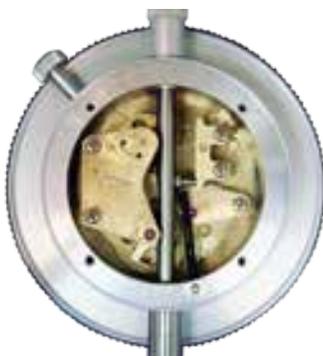
■ **Dial Gauge (Micro)**

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	
DG-9001HL	0-1mm	4um	Φ 76mm Aluminum body, Jeweled bearing, shockproof. 1 revolution : 0.2mm scale 0-100-0
DG-9003HL	0-3mm	8um	
DG-9005HL	0-5mm	12um	

Graduation : 0.001mm



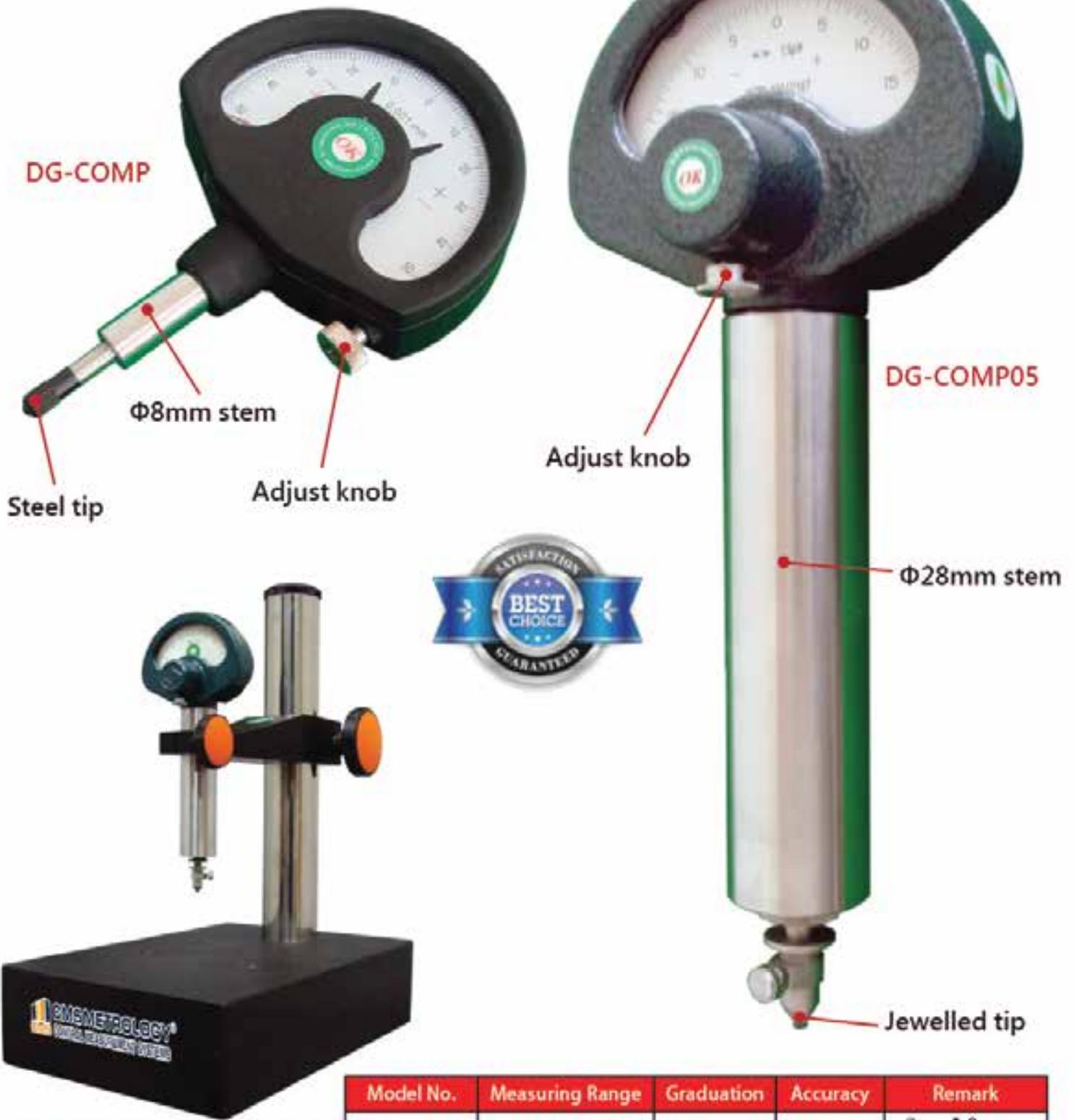
Features

- 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-COMP1	±0.03mm	0.001mm	1.5µm	Stem Φ 28mm · Jeweled bearing
DG-COMP05	±0.015mm	0.0005mm	1µm	
DG-COMP02	±0.006mm	0.0002mm	0.5µm	

■ 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.

Spindle hoist (optional)



ED-9010
ED-9025



Granite measuring stand
GN-MS2015N



ED-9050
ED-9100

Model No.	Measuring Range	Accuracy	Remark
ED-9010	0-10mm / 0.4"	20µm	Φ 56mm Aluminum body
ED-9025	0-25mm/ 1"	30µm	
ED-9050	0-50mm/ 2"	40µm	
ED-9100	0-100mm/ 4"	50µm	

Resolution : 0.01mm / 0.0005"

■ 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-9100
0-100/0.01mm

ED-9100H
0-100/0.001mm



■ Buttons Functions

in/mm
imperial/ metric conversion

ZERO/ON
on/off switch,
set zero at any position.

ABS/PRESET
absolute & increment value
conversion/to set display value.

ED-9050+Depth base DB-9000S

■ **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.



Buttons Functions

in/mm : imperial/ metric conversion

ZERO/ON : on/off switch, set zero at any position.

ABS : absolute & increment value conversion

Small bore gauge

Model No.	Measuring Range	Accuracy	Remark
ED-9005H	0-5mm	3um	Φ 40mm, Aluminum body

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.



■ Depth Base (Optional)

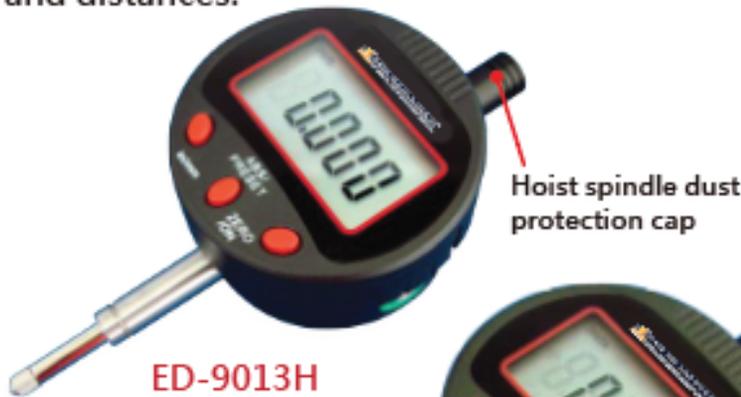


■ Digital Dial Gauge (Micro)

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.



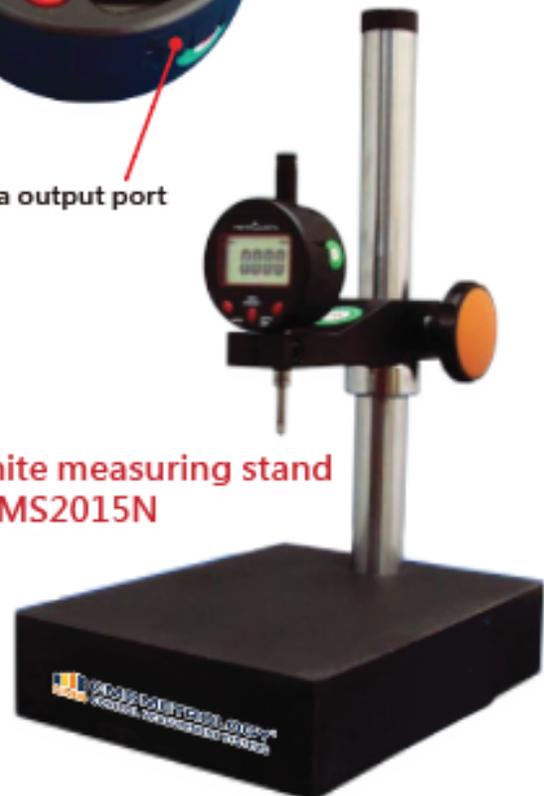
pull rod model No.
ED-PR25 (for 0-25mm)
ED-PR50 (for 0-50mm)
ED-PR100 (for 0-100mm)



Data output cable ED-USB
(optional accessories)



Granite measuring stand
GN-MS2015N



Model No.	Measuring Range	Accuracy
ED-9013H	0-12.7mm / 0.5"	5µm
ED-9025H	0-25mm / 1"	6µm
ED-9050H	0-50mm / 2"-	8µm
ED-9100H	0-100mm / 4"-	10µm

Resolution : 0.001mm / 0.00005"

■ 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



Model No.	Measuring Range	Resolution	Accuracy
ED-9013HA	0-13mm / 0.5"	0.001mm	4um
ED-9025HA	0-25mm / 1"		5um
ED-9050HA	0-50mm / 2"	0.00005"	6um

SPC cable (optional accessories DO-ABW)

■ 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

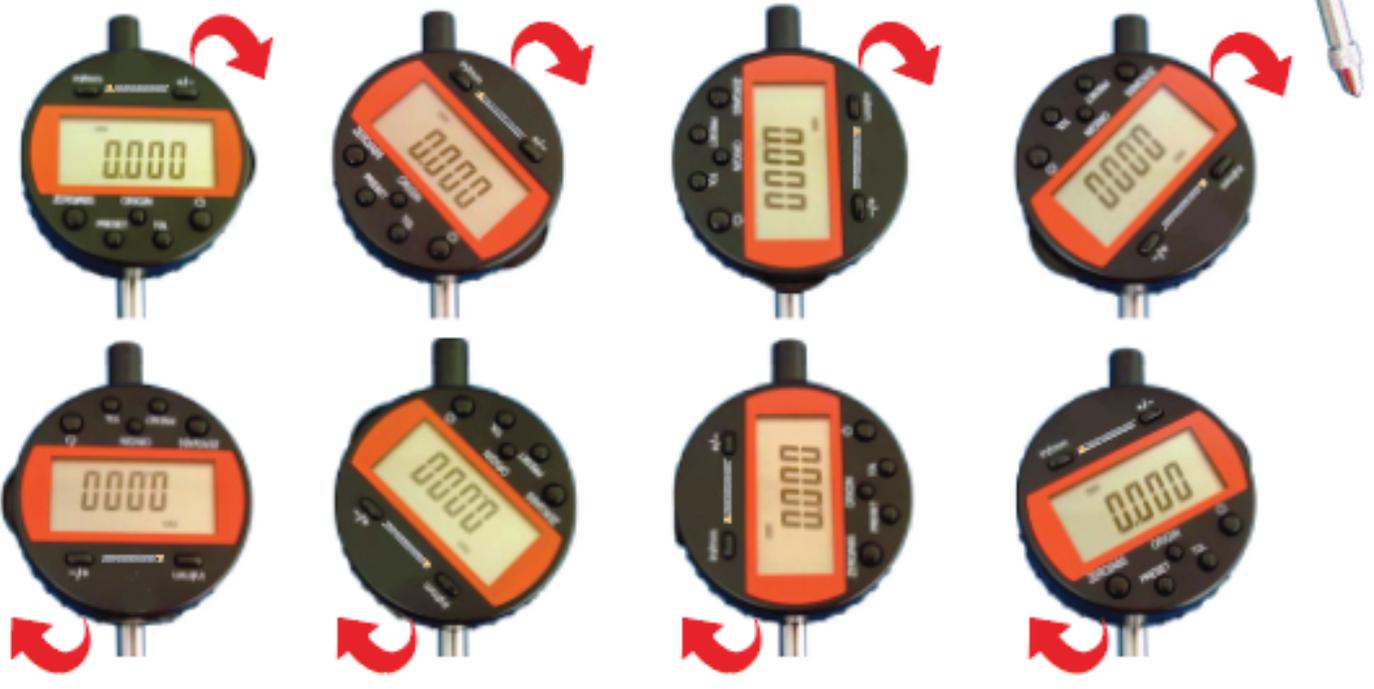


ED-9025HA



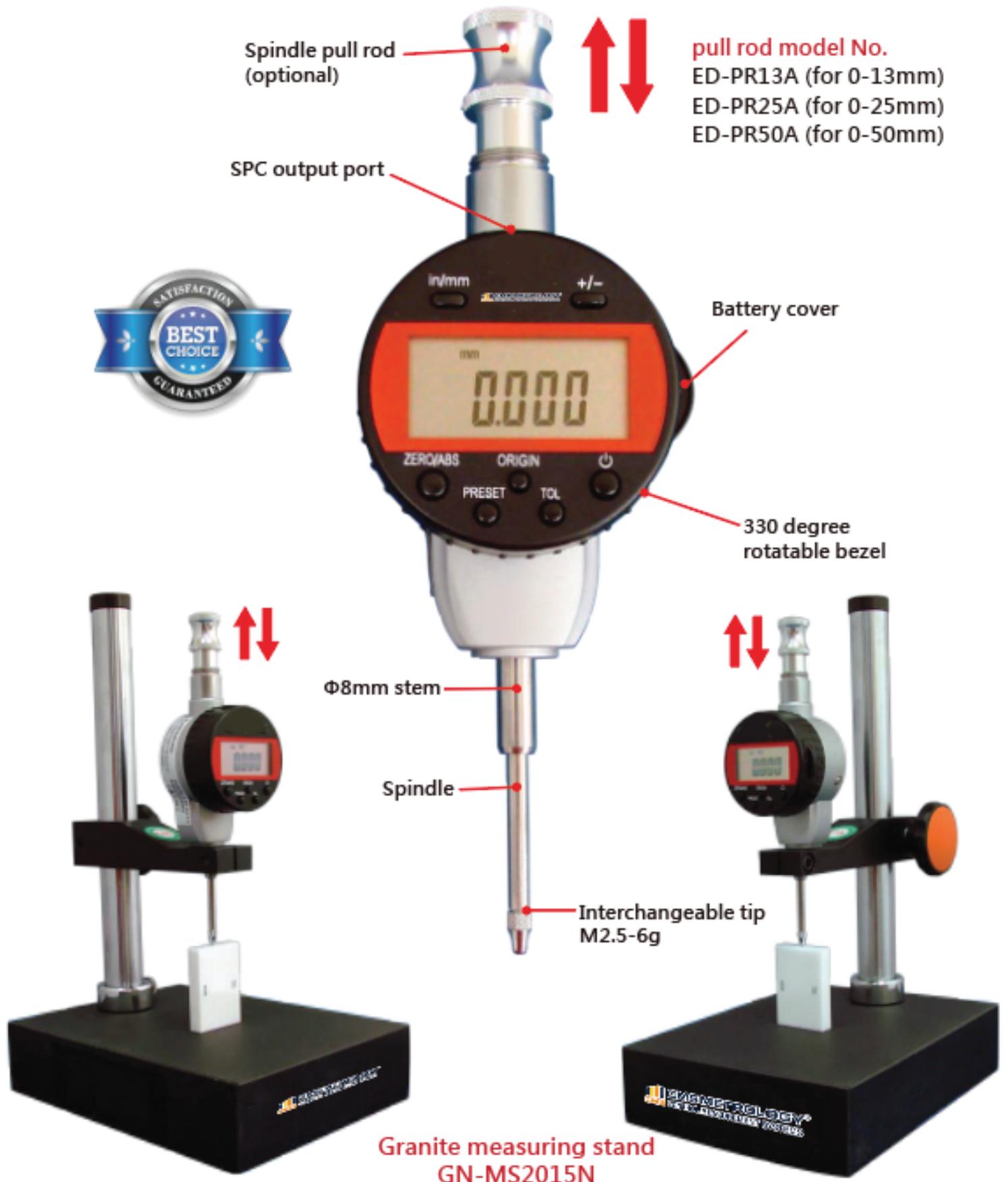
ED-9050HA

【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 Φ4mm	
DI-S27		R3*L27 Φ4mm	
DI-S37		R3*L37 Φ4mm	
DI-F5	Flat point	Φ5*L8mm	Ceramic
DI-F10		Φ10*L8mm	
DI-F10C		Φ10*L4mm	
DI-T0.3	Taper point	R0.3*L15mm	Hardened steel
DI-D1.5	Needle point	Φ1.5*L30mm	
DI-ER10	Extension rod	Φ5*L10mm	
DI-ER20		Φ5*L20mm	
DI-ER40		Φ5*L40mm	
DI-ER60		Φ5*L60mm	
DI-ER80		Φ5*L80mm	

Screw specifications : M2.5-6g

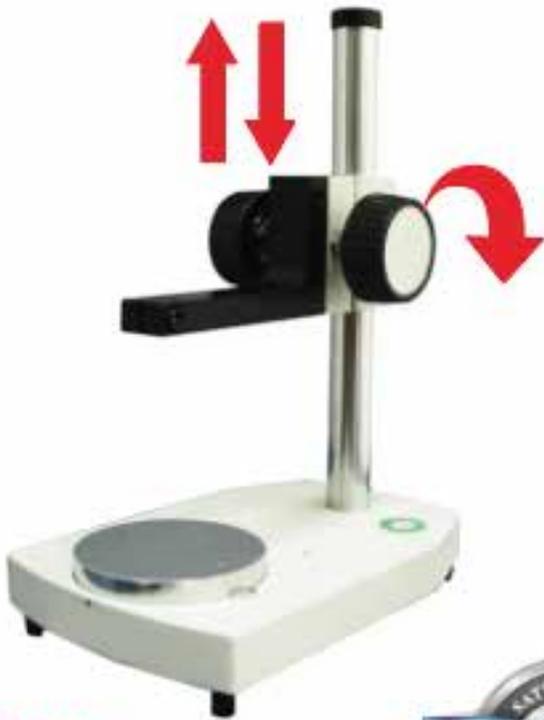
■ Contact Points

Screw specifications : M2.5-6g

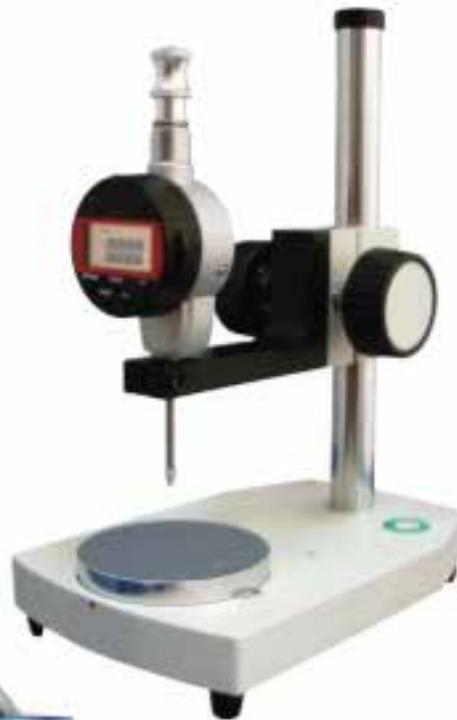
<p>M2/70</p>	<p>573/10</p>	<p>573/11</p>	<p>573/12</p>	<p>573/13</p>
<p>573/13-60</p>	<p>573/14</p>	<p>573/14 L</p>	<p>573/15</p>	<p>573/15 L</p>
<p>573/16</p>	<p>573/17</p>	<p>573/17 L</p>	<p>573/18</p>	<p>573/19</p>
<p>573/20 E</p>	<p>573/21</p>	<p>573/22</p>	<p>573/23</p>	<p>573/24 E</p>
<p>573/35 L</p>	<p>573/39 E</p>	<p>573/28 E</p>	<p>273/40</p>	

■ **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 $\Phi 25 \times L250 \text{mm}$
 Measuring stand: polished chrome steel
 Traveling : 40mm 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 : 40mm 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.



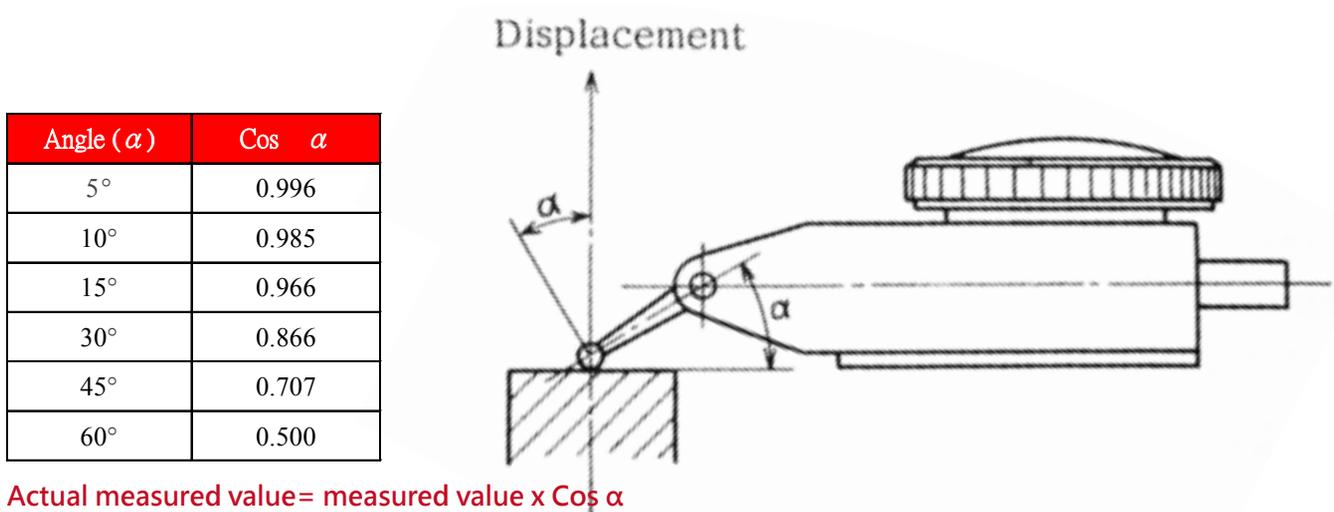
Calibration Report

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

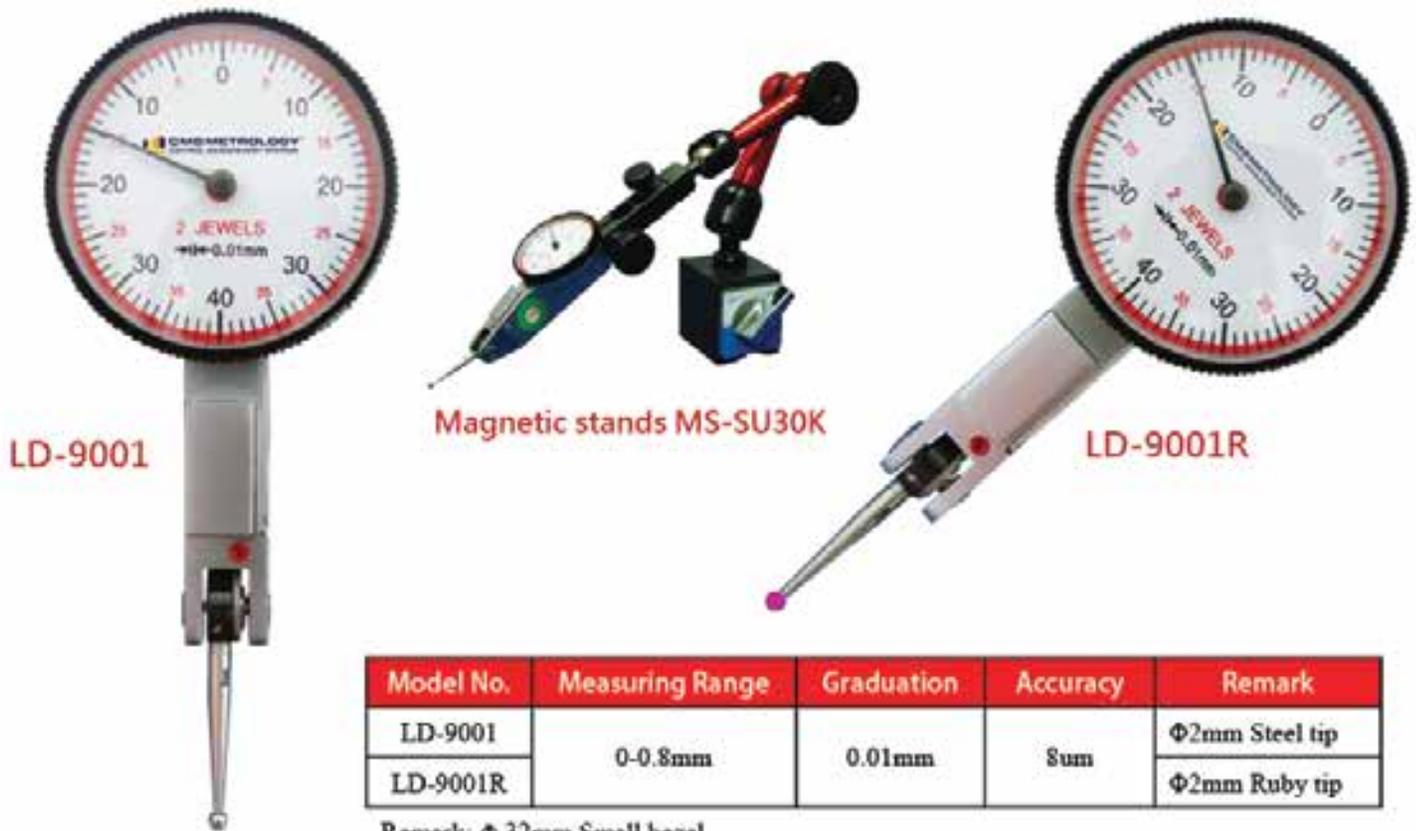
With the measuring insert lying parallel to the workpiece surface, these indicators give true reading. In another measuring position, the effective lever length changes so that the read value needs to be corrected.

【Correction Parameter Diagram】



■ Level Type Dial Indicator (Standard)

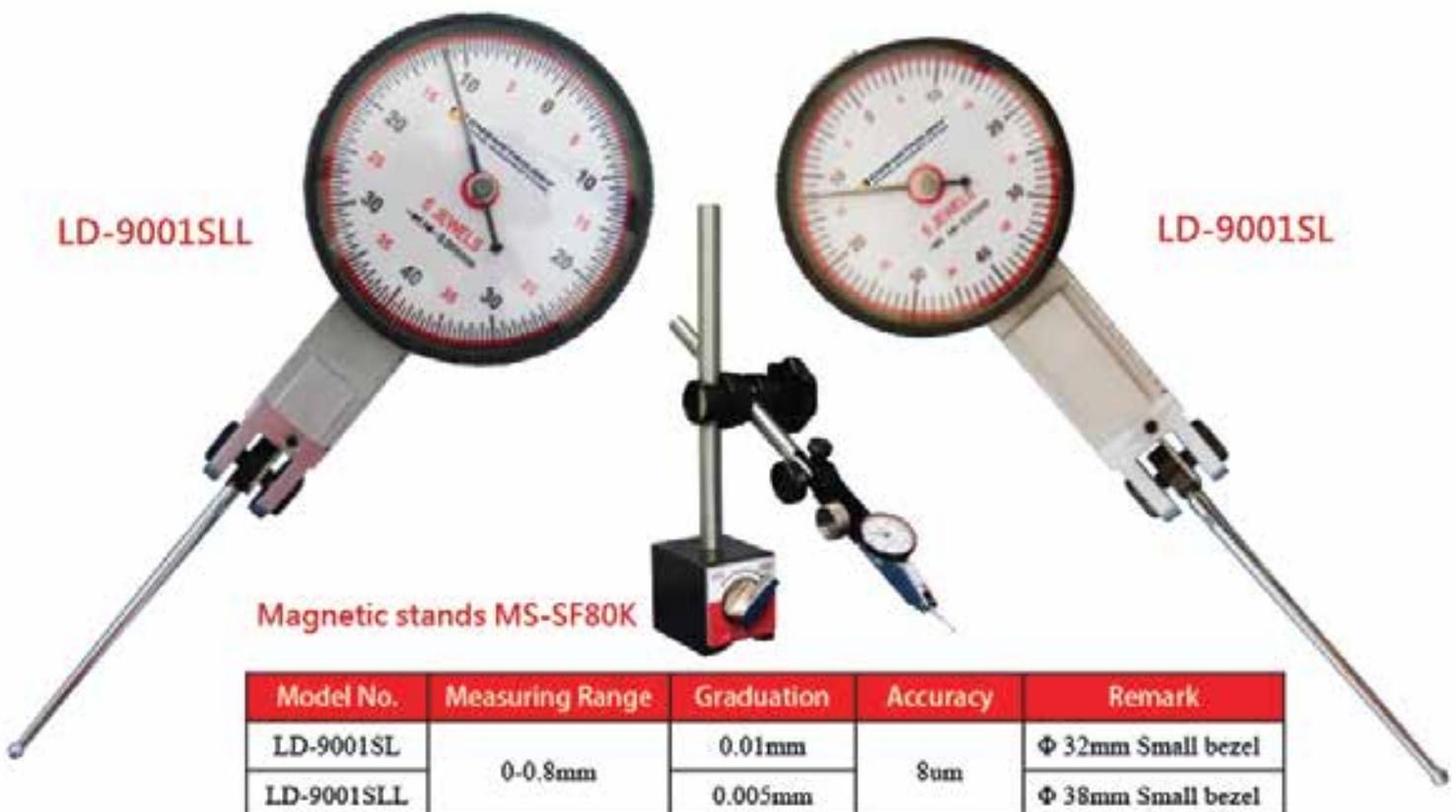
For measuring parallel, flatness, straightness, roundness, concentricity, runout of geometric tolerance and etc.



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

Remark: Φ 32mm Small bezel

■ Level Type Dial Indicator (Long Measuring Inserts)



Model No.	Measuring Range	Graduation	Accuracy	Remark
LD-9001SL	0-0.8mm	0.01mm	Sum	Φ 32mm Small bezel
LD-9001SLL		0.005mm		Φ 38mm Small bezel

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

■ 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-9004L

Model No.	Measuring Range	Graduation mm	Accuracy um	Remark
LD-9003	0-0.2mm	0.002	4	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
LD-9004L	0-0.14mm	0.001	3	Φ 38mm Large bezel Φ2mm Steel tip
LD-9004LR				Φ 38mm Large bezel Φ2mm Ruby tip

■ Level Type Dial Indicator (Vertical)

Suitable for inspecting centering of holes and measuring geometric tolerance.



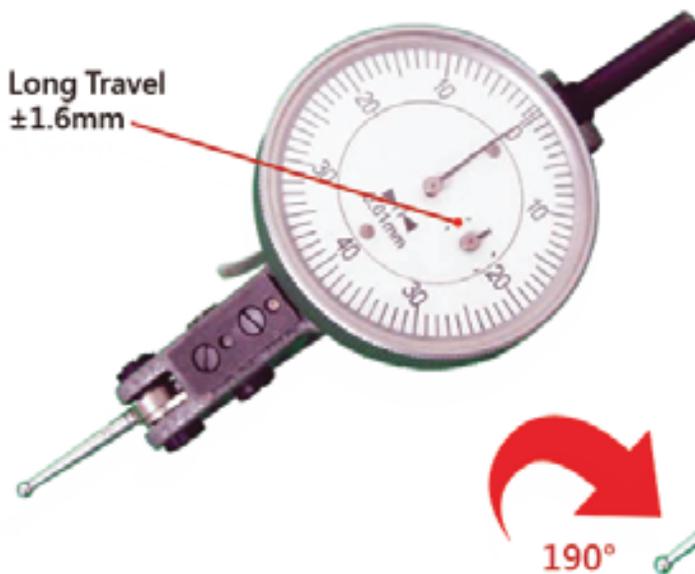
LD-9001V



Centering holder
LD-CS

Model No.	Measuring Range	Graduation	Accuracy	Remark
LD-9001V	0-0.8mm	0.01mm	8um	Φ 32mm Small bezel, Φ2mm Steel tip
LD-9001VL				Φ 38mm Large bezel, Φ2mm Steel tip
LD-9003V	0-0.2mm	0.002mm	4um	Φ 32mm Small bezel, Φ2mm Steel tip
LD-9003VL				Φ 38mm Large bezel, Φ2mm Steel tip

■ Level Type Dial Indicator (Long Travel)



Model No.	Measuring Range	Graduation	Accuracy	Remark
LD-9001LT	0±1.6mm	0.01mm	8um	Φ 38mm Large bezel, long travel.

■ 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 M2.0-6g	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		

■ 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



➤ **CMS 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.

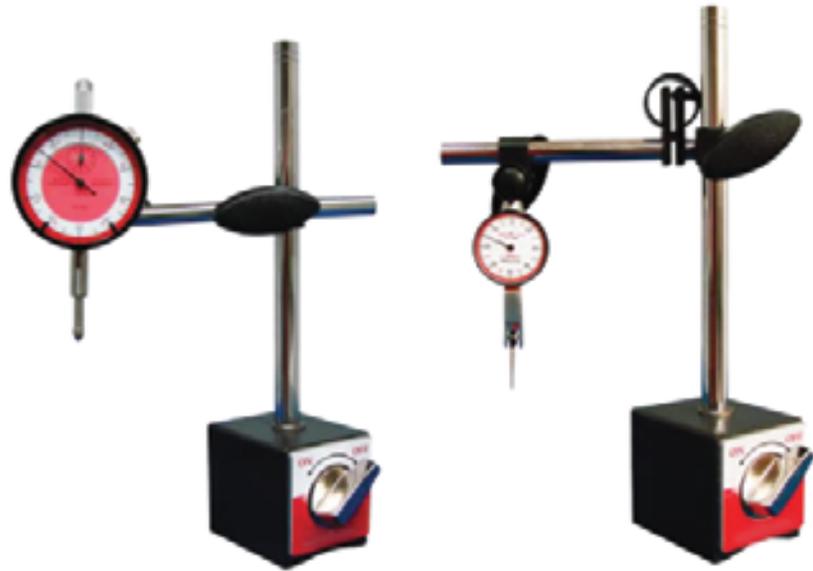
➤ All stands come with permanent magnet, V type base, and side magnetic traction. Powerful magnetic attraction can carry large loads.

➤ 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)**



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

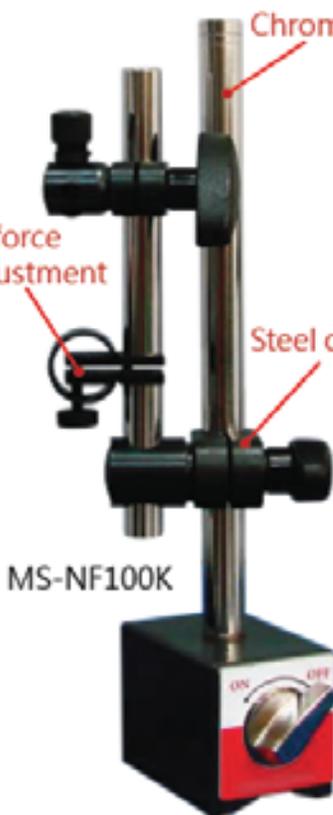
MS-N80K



MS-NF80K



MS-NF100K



MS-NF130K



Chrome steel rod

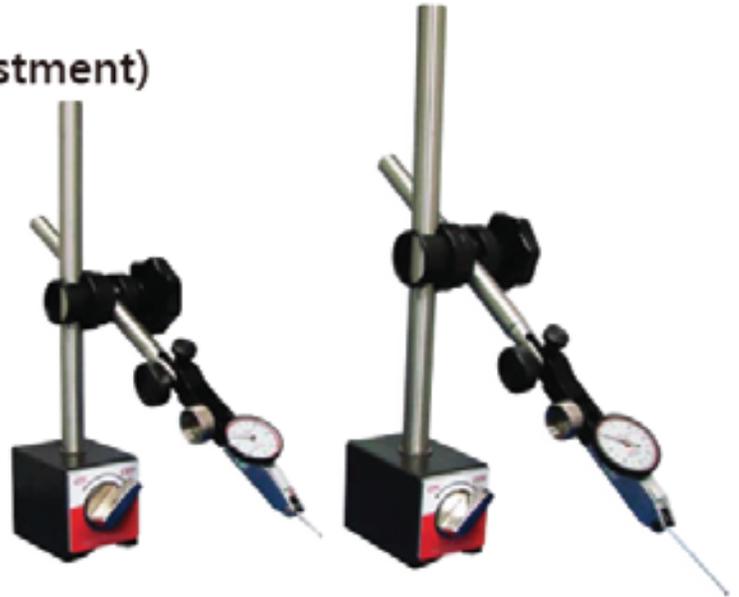
Strong-force fine-adjustment device

Steel clamp head

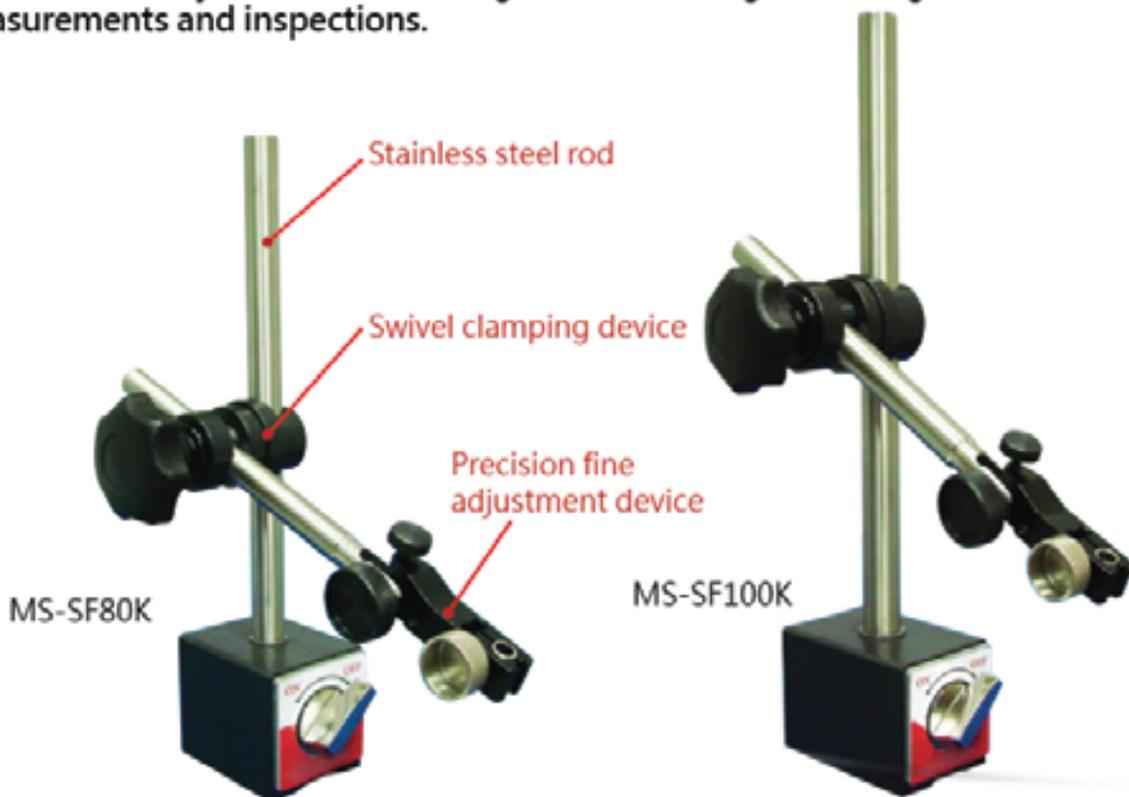
Model No.	Base (L x W x H)	Magnetic Power	Main rod (mm)		Vice rod (mm)		Weight (kg)
			Length	Dia.	Length	Dia.	
MS-N80K	60x50x55mm	80kg	176	12	165	10	1.5
MS-NF80K	60x50x55mm	80kg	176	12	150	10	1.5
MS-NF100K	73x50x55mm	100kg	225	16	165	14	2.3
MS-NF130K	117x50x55mm	130kg	355	20	210	14	3.7

*Mounting hole dia.: Φ6.5 & Φ8.0mm. (Except MS-N80K, other type with strong fine-adjustment device)

■ Magnetic Stands (Transfer & Precision Fine- adjustment)



- **CMS 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.



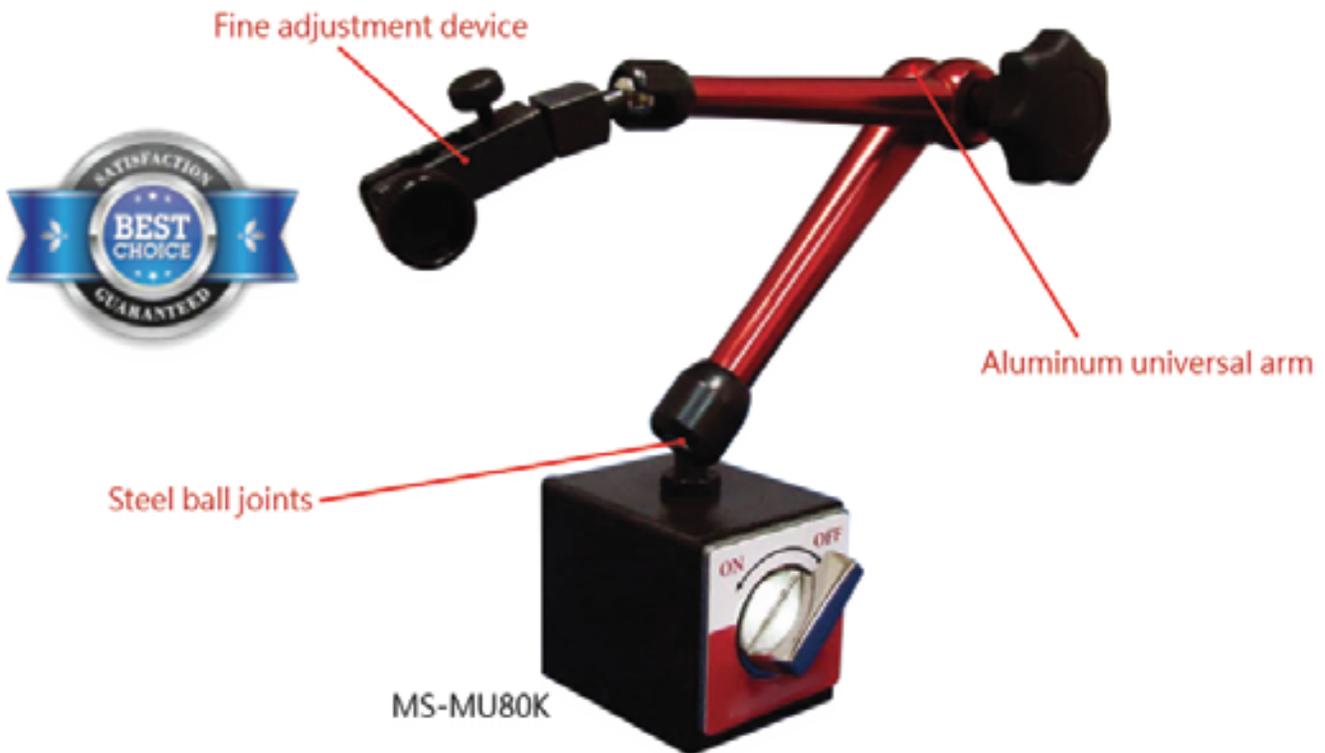
Model No.	Base (LxW xH)	Magnetic Power	Main Rod (mm)		Vice Rod (mm)		Weight (kg)
			Length	Dia.	Length	Dia.	
MS-SF80K	60x50x55	80kg	200	14	165	12	1.5
MS-SF100K	73x50x55	100kg	250	16	180	14	2.3

*Mounting hole dia.:Φ6.0 & Φ8.0mm

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



- **CMS METROLOGY** CONTROL MEASUREMENT SYSTEMS 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.

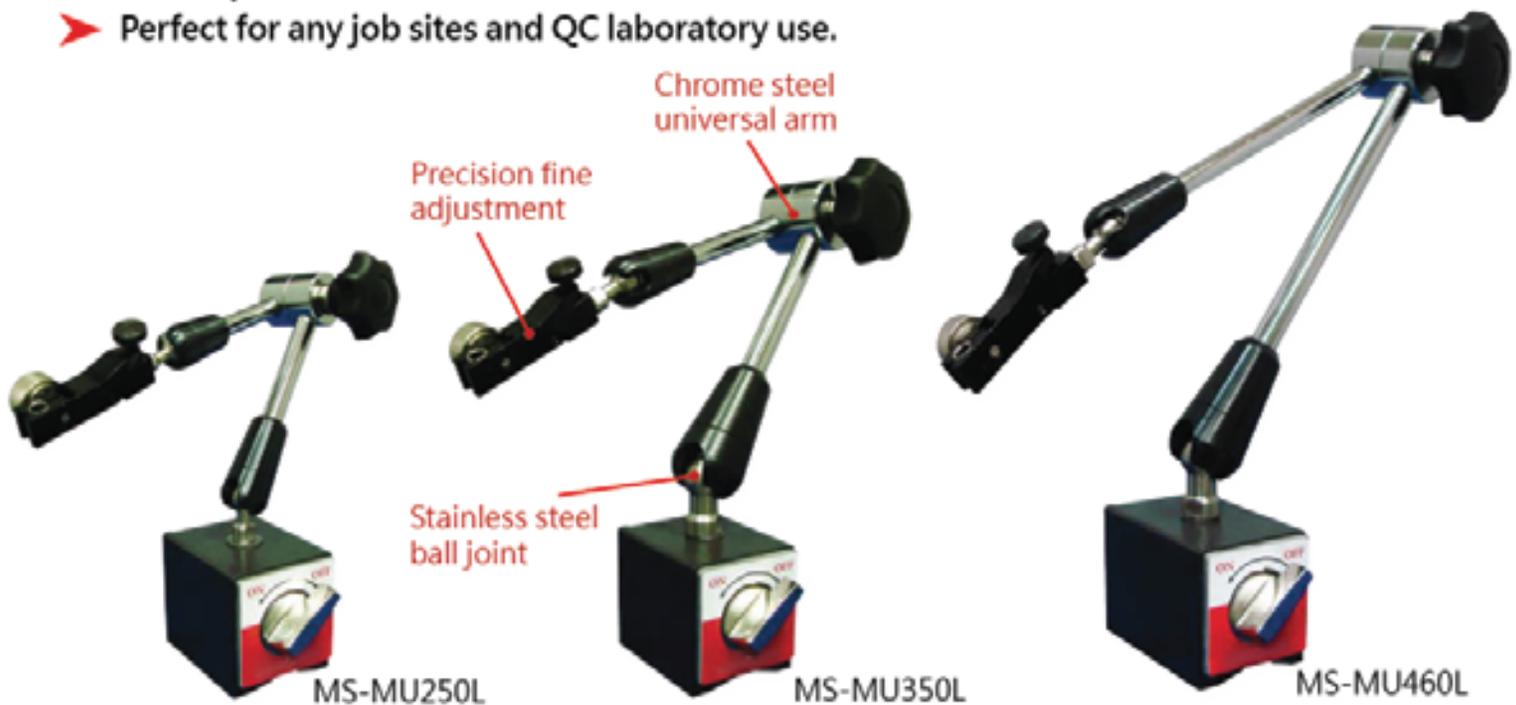


Model No.	Base (L x W x H)	Magnetic Power	Arm Length	Weight
MS-MU80K	60x50x55 mm	80kg	290mm	1.4kg
*Mounting hole dia.: Φ8.0mm				

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



- **CMS METROLOGY** CONTROL MEASUREMENT SYSTEMS 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.



MS-MU250L

MS-MU350L

MS-MU460L

Model No.	Base (L x W x H)	Magnetic Power	Arm Length	Weight
MS-MU250L	60x50x55 mm	80kg	255mm	1.4jg
MS-MU350L	60x55x55 mm	80kg	350mm	1.8kg
MS-MU460L	73x50x55 mm	100kg	460mm	2.1kg

*Mounting hole dia.: Φ 6.0 & Φ 8.0mm

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



- **CMS 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.



Universal aluminum arm

MS-HU345L



Unibody stainless steel lower ball joint



Hydraulic clamping lock



Unibody stainless steel upper ball joint



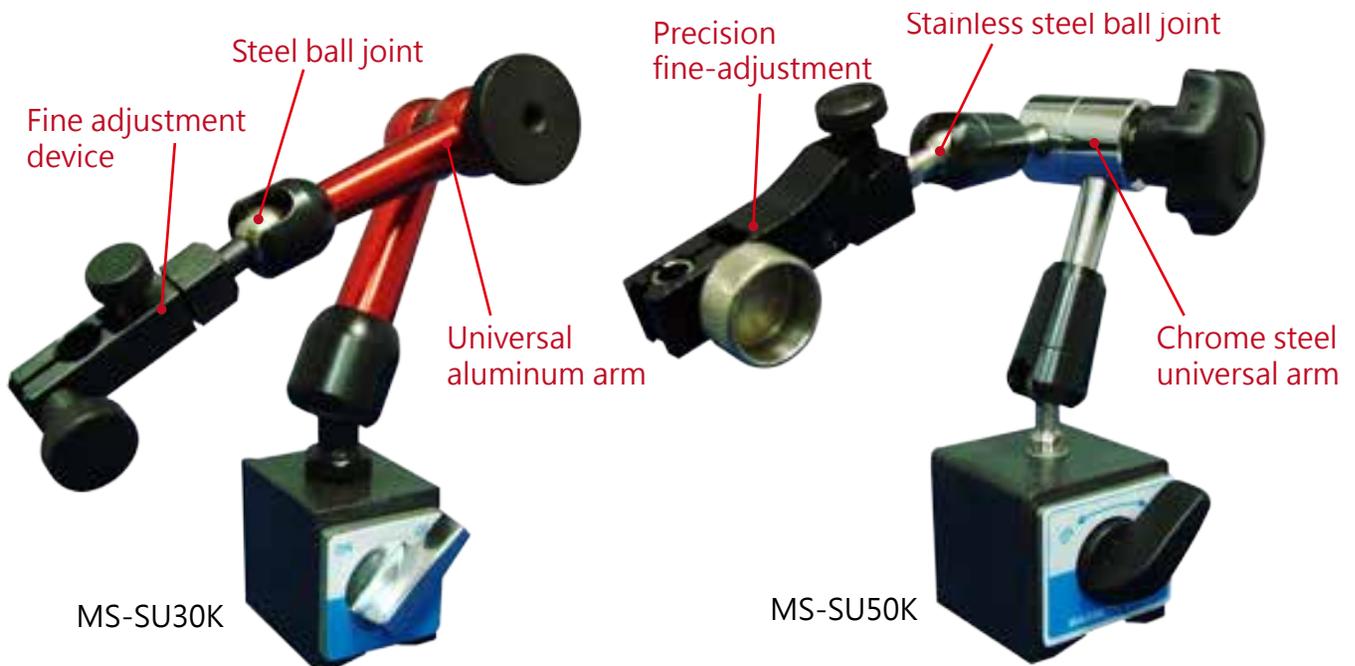
Precision fine-adjustment

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)



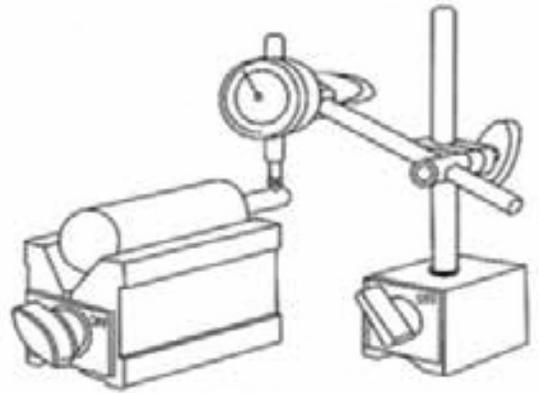
- **CMS METROLOGY** Mini Mechanical Universal magnetic stands.
- **MS-SU30K** Lightweight aluminum body, mechanical universal direction arm with position lock, stainless steel ball joints.
- **MS-SU50K** Polish chrome treated, mechanical universal direction arm with unibody stainless steel ball joints 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.: Φ 6.0 & Φ 8.0mm

■ **Magnetic Stand
(V-Block)**



- **CMS METROLOGY** CONTROL MEASUREMENT SYSTEMS **Magnetic V-Block Series stand.**
- **Application: For round and 45 degree square objects inspections.**

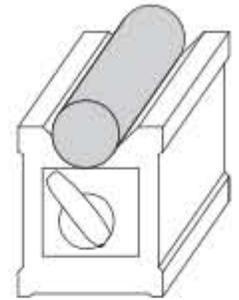
Top face



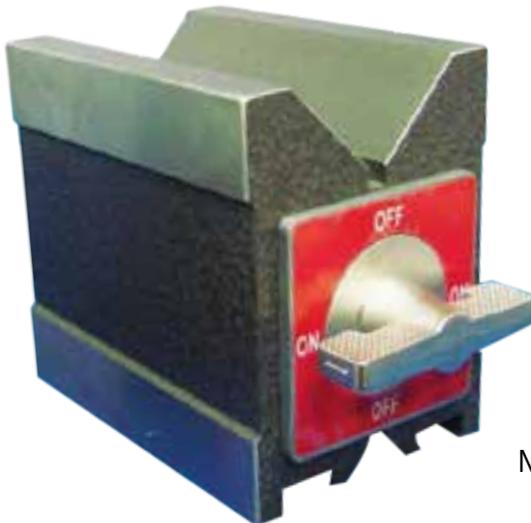
Bottom face



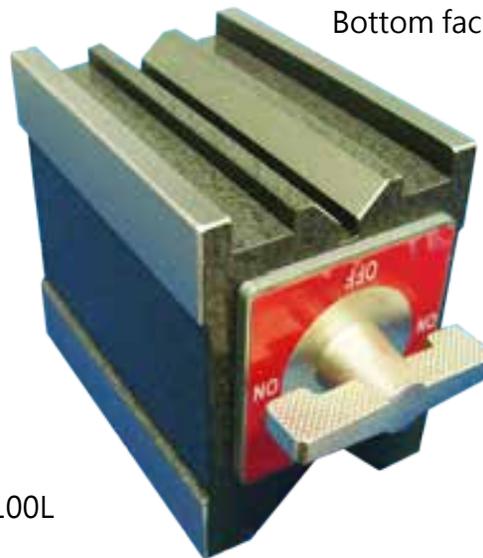
MV-70L



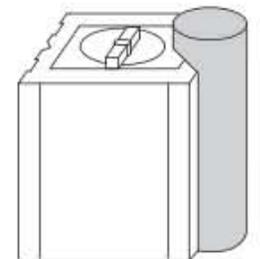
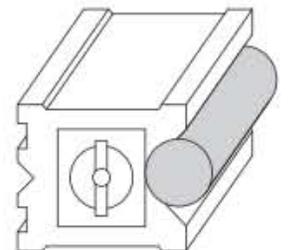
Top face



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.

■ Depth Gauge

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



Model No.	Measuring Range	Resolution	Accuracy	Remark
DD-9200	0-200mm	0.01mm	15um	With 0-10mm dial gage
DD-9200E	0-200mm / 8"	0.01mm / 0.0005"	15um	With 0-10mm digital dial gage
DD-9100EH	0-100mm / 4"	0.001mm / 0.0005"	5um	With 0-10mm digital dial gage

Remark: Above with base L80mm 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	Resolution	Accuracy	Remark
DS-9001	0-10mm	0.05mm	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

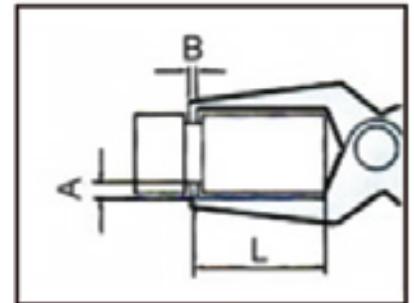
Graduation : 0.05mm

■ 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



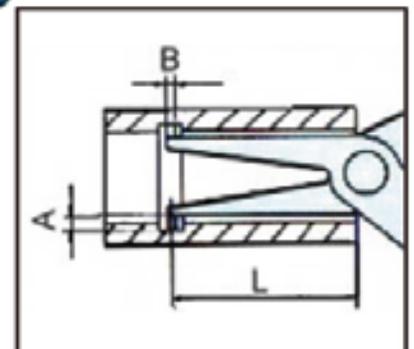
Graduation : 0.01mm

■ 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



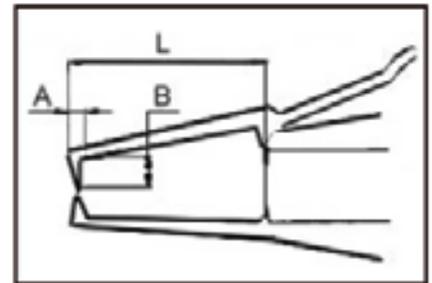
Graduation : 0.01mm

■ 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		



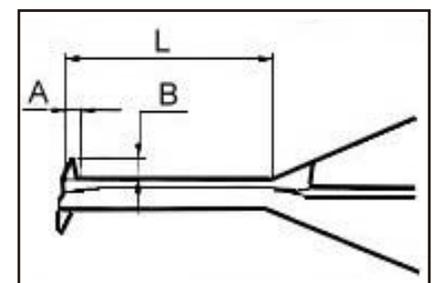
Resolution : 0.005mm / 0.0005"

■ 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 / 0.0005"

■ Small Bore Gauge (Split Ball Probes)

For comparison in measuring dimensions and form error of holes.



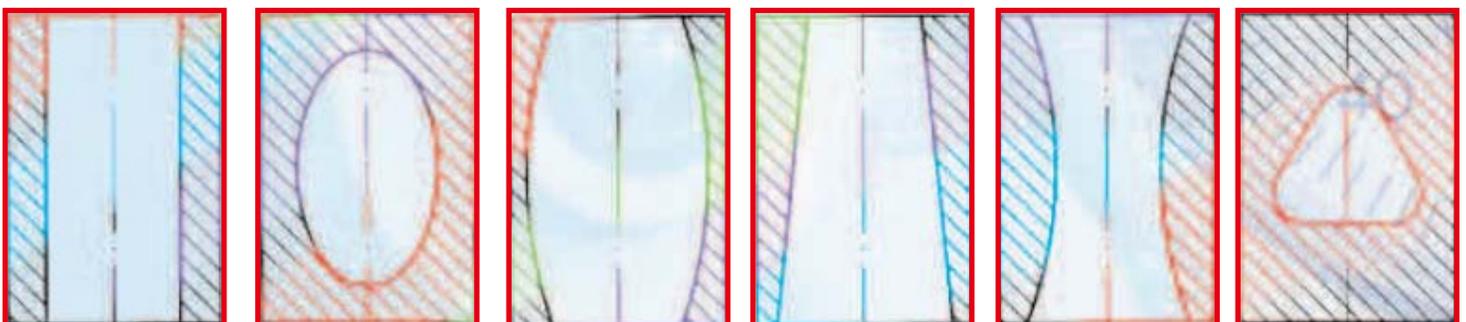
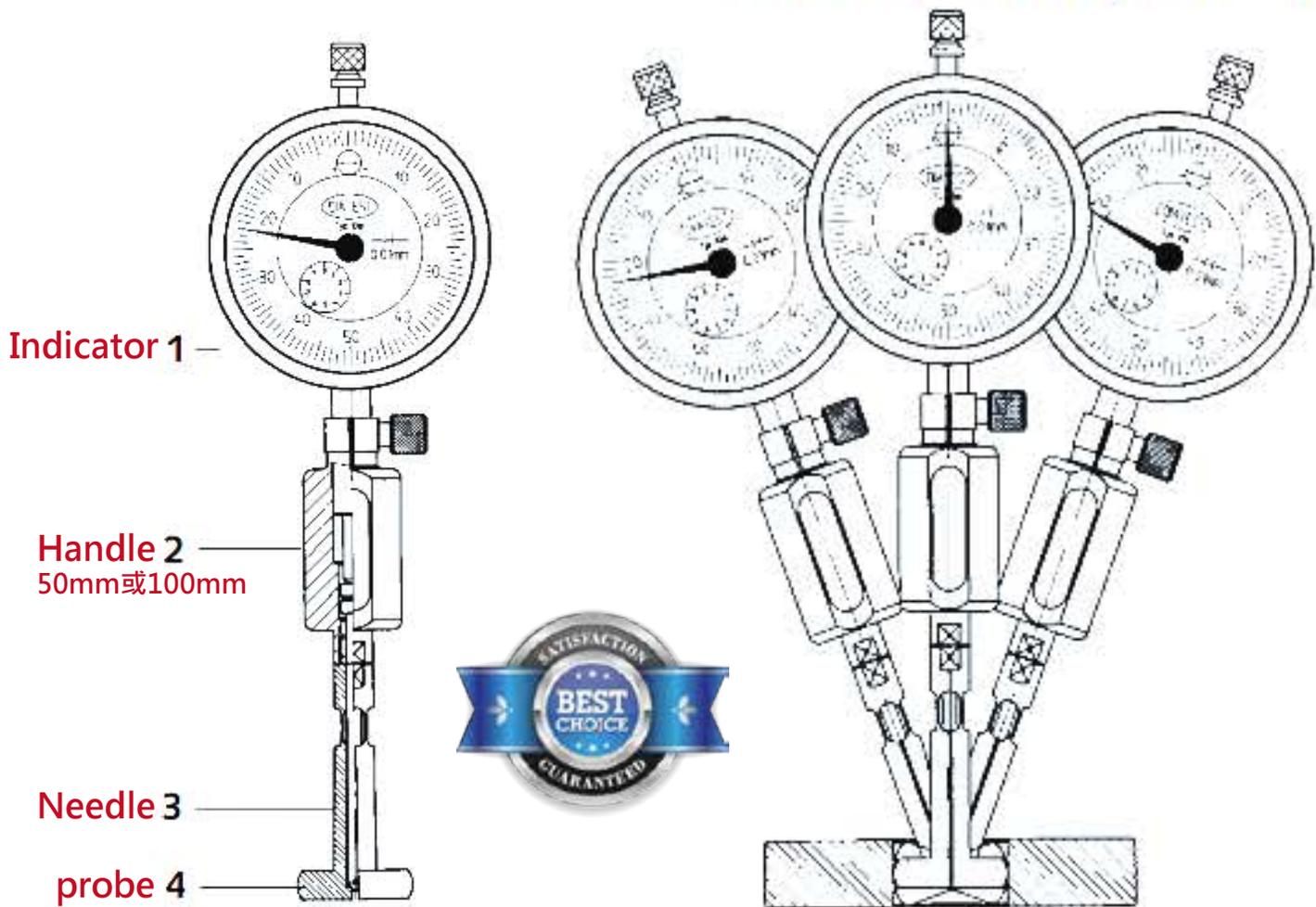
Technic Combination

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.

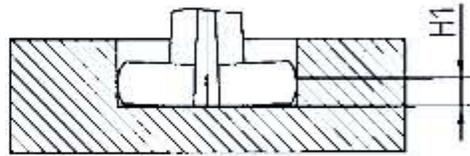
Technic Combination

Technical Specs

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

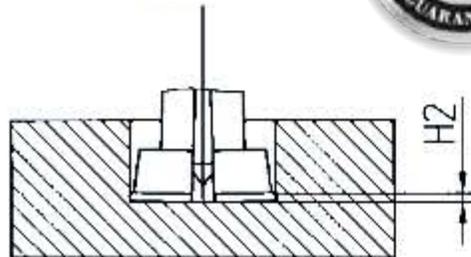
Travel error : 0.5~1.5mm Max 2% of the travel 1.75~40mm Max 1% of the travel

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



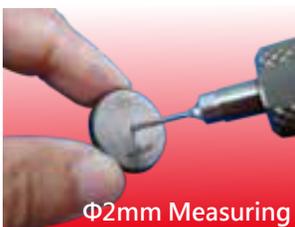
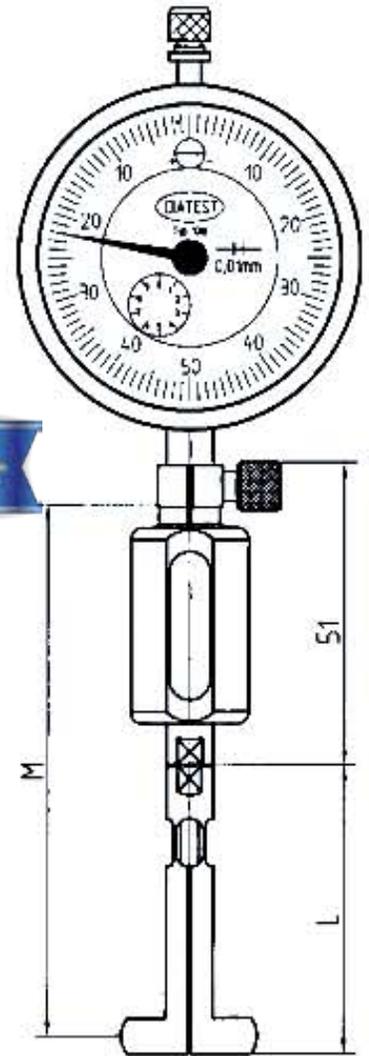
Standard-Tastkopf
Standard probe

- 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



■ Small Bore Gauge (Split Ball Probes)

For comparison in measuring dimensions and form error of holes.



Technic Combination

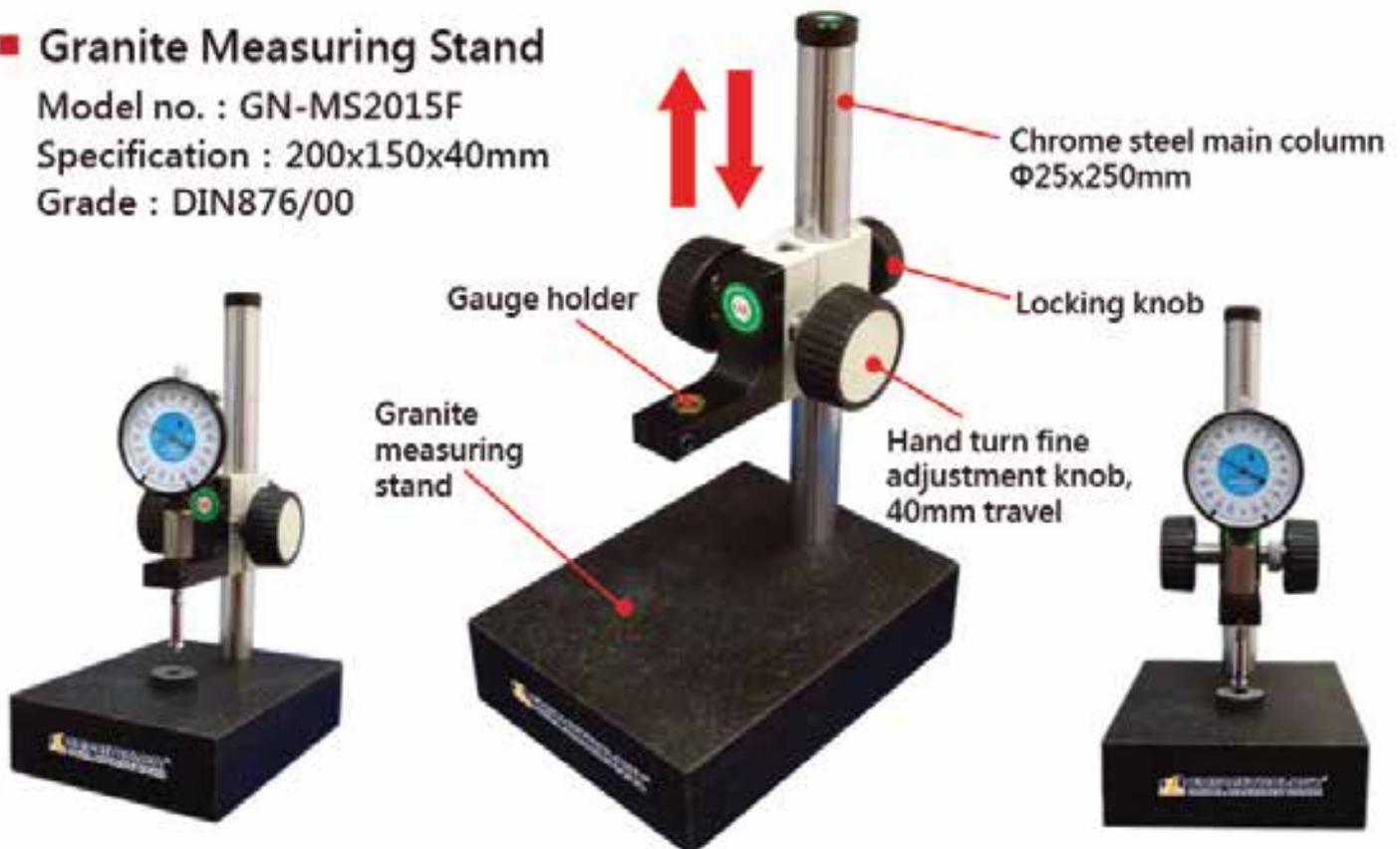


■ Granite Measuring Stand

Model no. : GN-MS2015F

Specification : 200x150x40mm

Grade : DIN876/00



■ 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		50
	BG-T9.5	9.20-9.80		RG-9.5		

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.

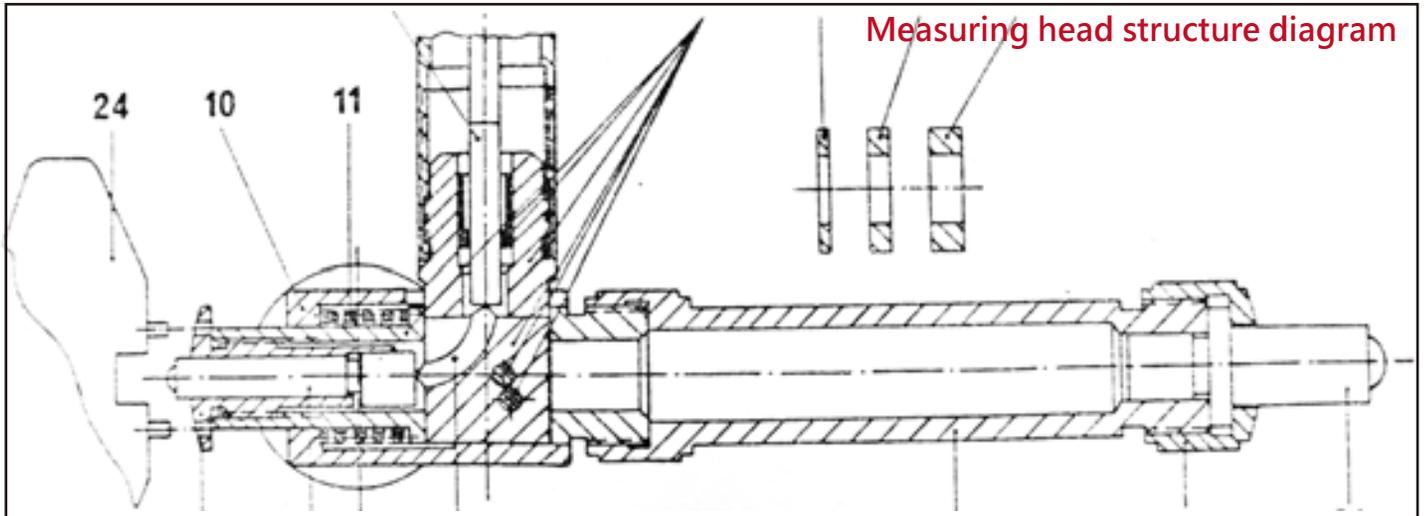
Can be purchased individually





■ **Bore Gauge**

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



■ **Specs.**

Repeatability : 0.002mm

Measuring accuracy : refer to JIS B7517 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	2	3	2	4	1	2	5 max (510)
160 to 250																	6 max (612)
250 to 400																	6 max (612)

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

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



■ **Bore Gauge (Insert Type)**

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

Remark: indicator optional



Standard indicator



6-10mm

Micro digital indicator



18-35mm

Standard digital indicator



50-100mm

Micro digital indicator



160-250mm



250-450mm

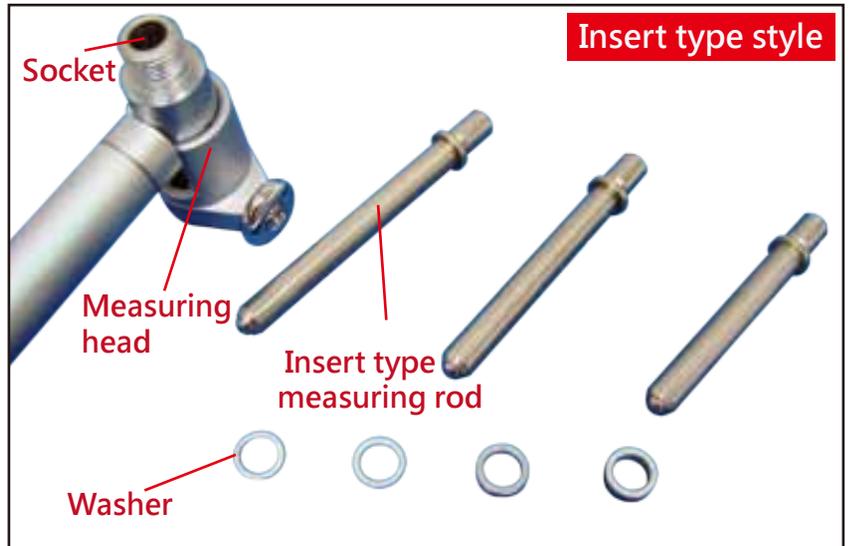
Micro indicator



■ 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

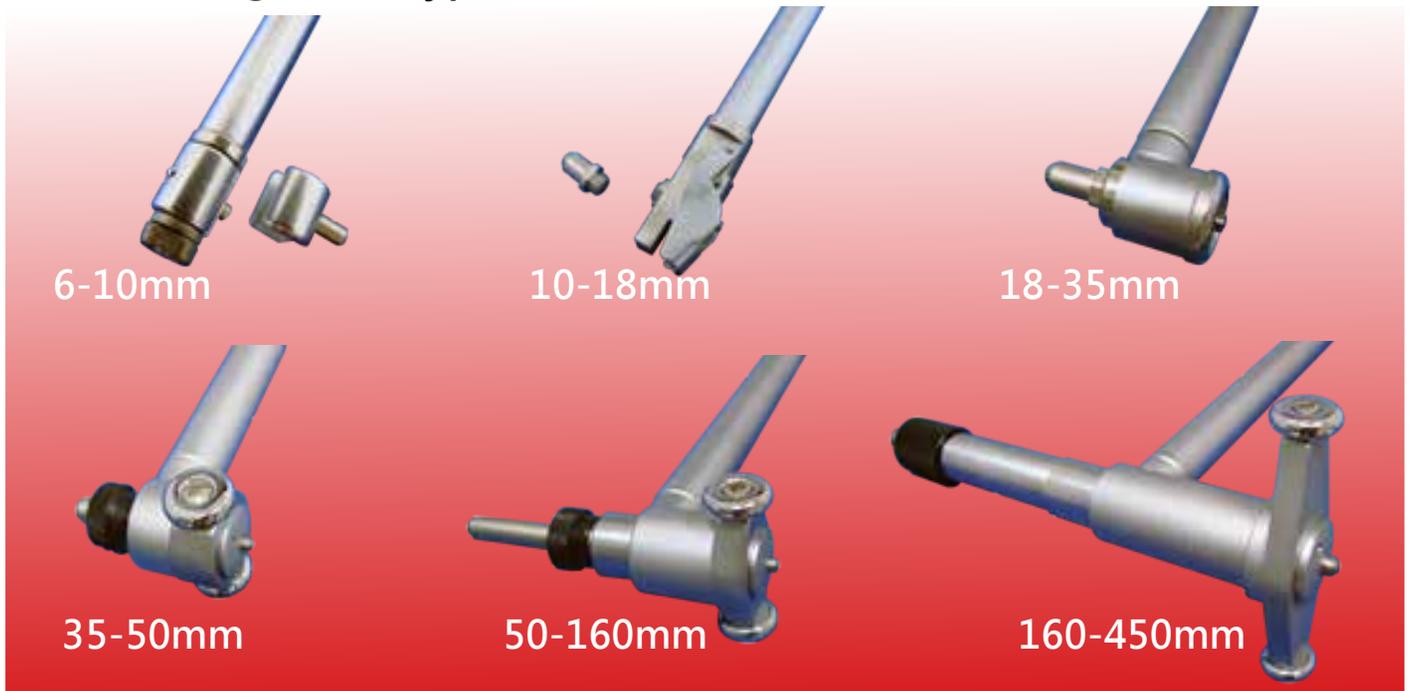


■ Extension Rods

For measuring range over 100mm



■ Measuring Head Type



■ **Bore Gauge (Thread Type)**

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

Remark: indicator optional

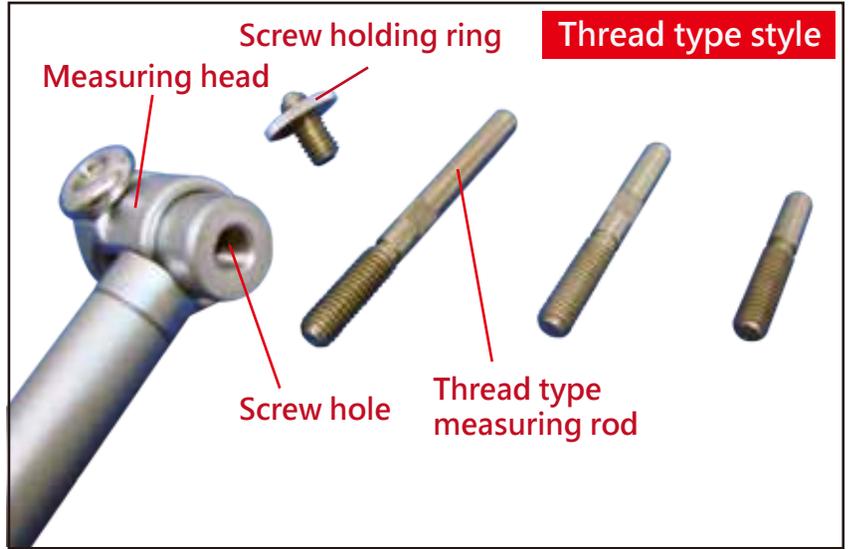


BG-9250S 250-450mm

■ **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

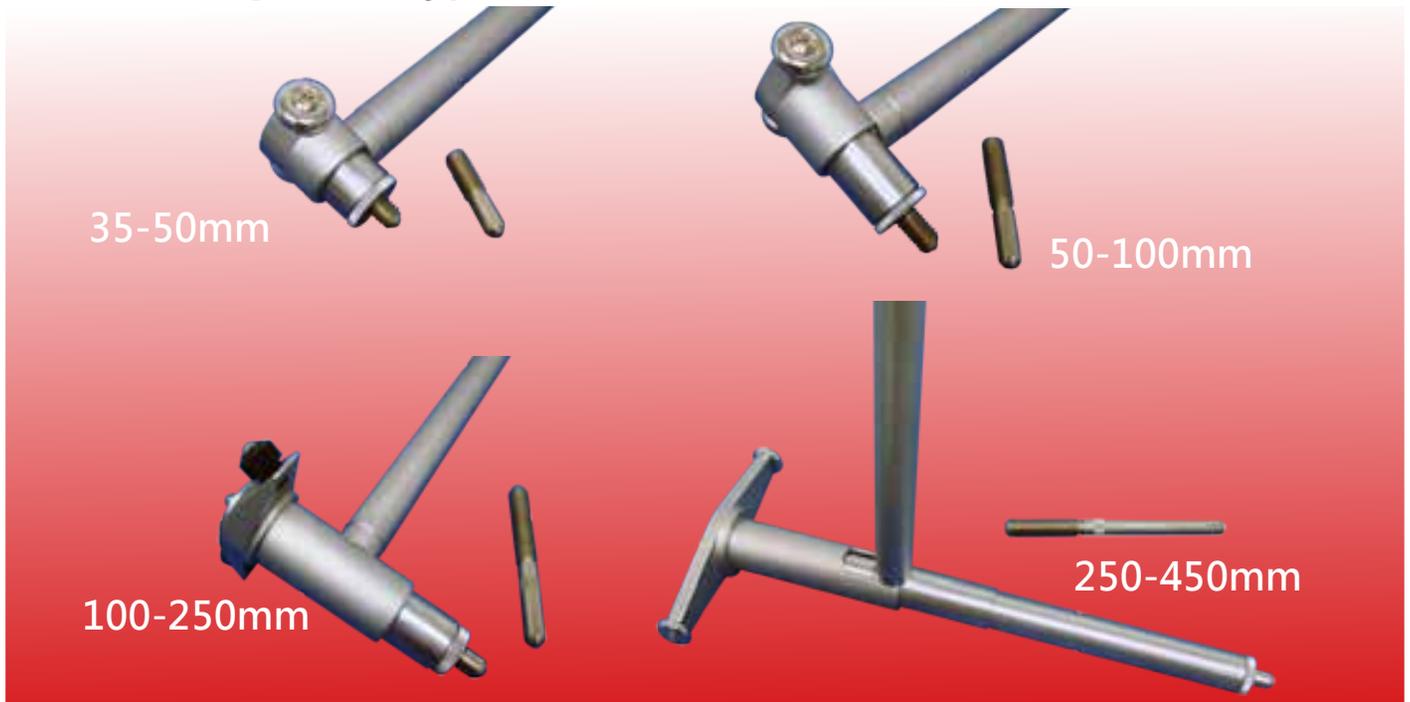


■ **Extension Rods**

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-9001



DT-9002



DT-9005H



DT-9003



DT-9004



DT-9025

Model No.	Measuring Range	Graduation	Accuracy	Remark
DT-9001	0-10mm	0.01mm	15um	Deep throat L: 10mm Mini type
DT-9002				Deep throat L: 26mm Light-weight type
DT-9003				Deep throat L: 30mm Shockproof type
DT-9004				Deep throat L: 120mm Jewel type
DT-9025	0-25mm		20um	Deep throat L: 30mm Jewel type
DT-9001H	0-1mm	0.001mm	4um	Deep throat L: 30mm
DT-9005H	0-5mm		12um	Jewel & Shockproof type

■ Dial Thickness Gauge (Special Type)



DT-9000TU



DT-9001GI



DT-9000RL



DT-9002GI

Model No.	Measuring Range	Graduation	Accuracy	Remark
DT-9000RL	0-10mm	0.01mm	15um	Deep throat L: 100mm Roller type
DT-9000TU				Deep throat L: 30mm Tube type
DT-9001GI				Deep throat L: 30mm Interchangeable anvil
DT-9002GI				Deep throat L: 62.5mm Interchangeable anvil

■ Digital Dial Thickness Gauge

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



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-9010HH			8um	Deep throat L: 30mm High 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)



ET-9000TU



ET-9001GI



ET-9000RL



ET-9002GI

Model No.	Measuring Range	Resolution	Accuracy	Remark
ET-9000RL	0-10mm/ 0.4"	0.01mm/0.0005"	20um	Deep throat L: 100mm Roller type
ET-9000TU				Deep throat L: 30mm Tube type
ET-9001GI				Deep throat L: 30mm Interchangeable anvil
ET-9002GI				Deep throat L: 62.5mm Interchangeable anvil

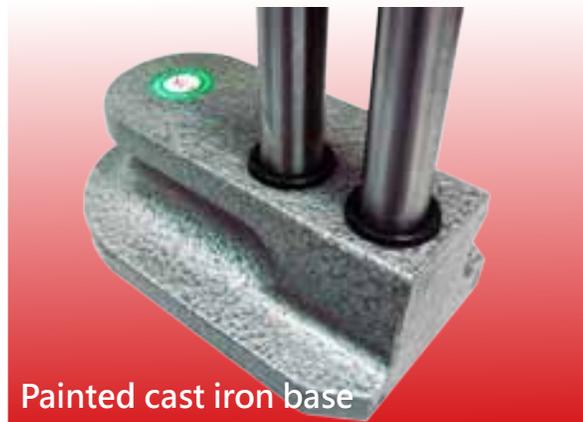
■ Dial Height Gauge (Single Column)



Model No.	Measuring Range	Graduation	Accuracy
DH-9150S	0-150mm	0.02mm	0.04mm
DH-9200S	0-200mm		0.06mm
DH-9300S	0-300mm		0.08mm

Material: Hardened stainless steel

■ Dial Height Gauge (Double Column)



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)

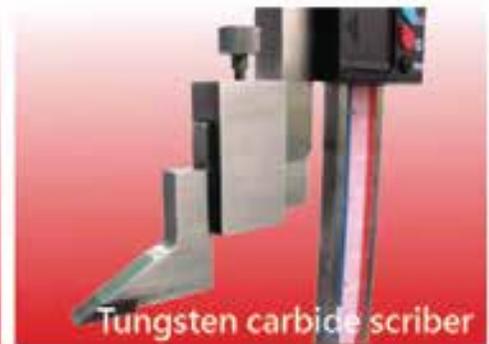
■ Digital Height Gauge (Single Column)



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.



■ 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



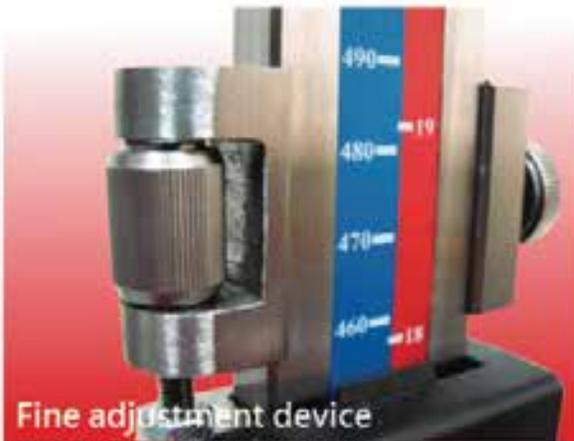
EH-9150SA



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: SPC data output cable (DO-ABW)

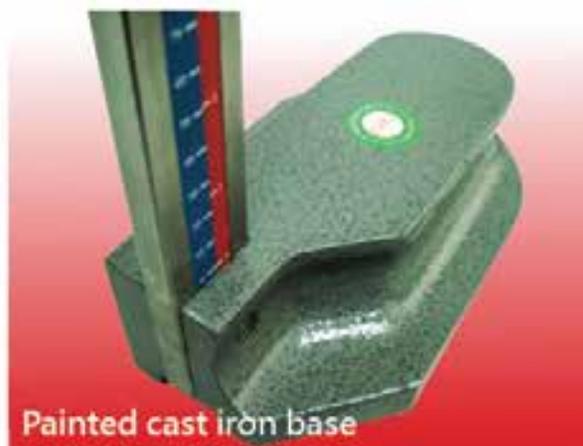
■ Digital Height Gauge (Single Column)



Fine adjustment device



Digital display



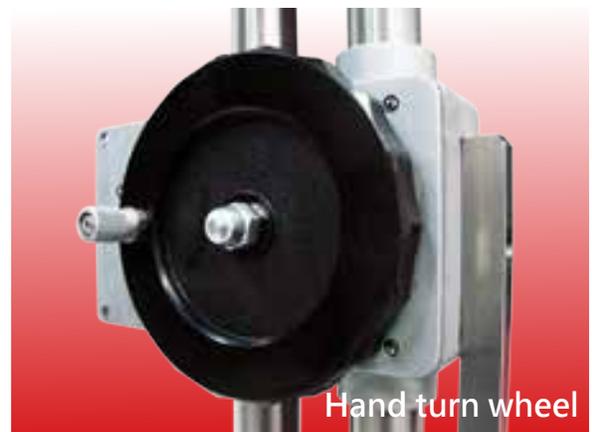
Painted cast iron base



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)

■ Digital Height Gauge (Double Columns)



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)

■ Height Gauge Accessories



HG-S Size : 76x6x8mm



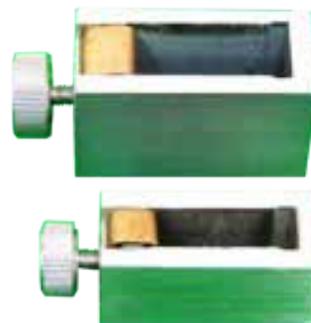
HG-D Size : 76x9x9mm

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.