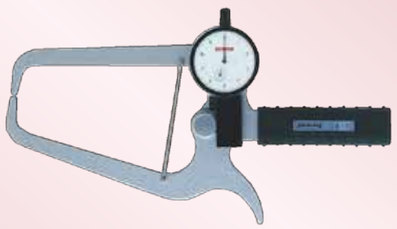
Caliper Gauges

New type
“P” Series
Page 1～2

Digital type
Page 1～2



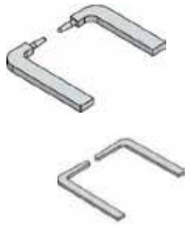
Standard type
“LA” Series
Page 3～6

Standard type
“LB” Series
Page 7～8

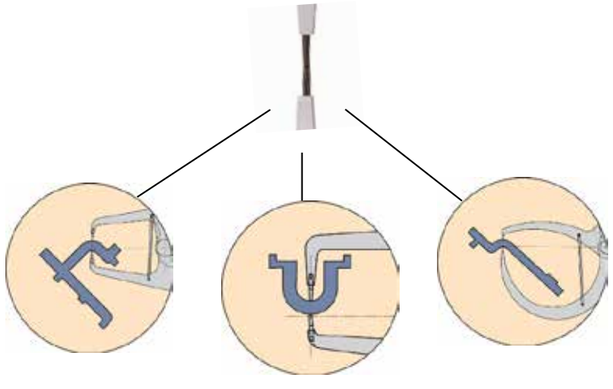
New Caliper Gauges are Smart & Convenient.

Upper and bottom tips are more radii contact points which makes easier to measure a thickness consecutively.
Tip of the contact points (SR1.25) can measure a curved surface which is a difficult place to measure.

New type



Conventional type



It is easy to read a value thanks to dial with the face upward.
Dial with the face upward makes the reading easy.

New type is much more durable.
New type's bearing axis which is the most important parts uses Dia. 27mm instead of Dia. 19mm current type uses and the thickness of New type frame is 4mm instead of current 3mm, which makes new type more durable.

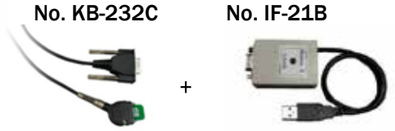
New Caliper Gauges are available in Digital type.

LA-17PD

Graduation: 0.01mm
Range: 0 ~ 25mm
Max opening: 40mm
Throat depth: 80mm

Data Communication

RS-232C Cable No. KB-232C + Input Adapter No. IF-21B



IF-21B with KB-232C can transfer a data to a spreadsheet such as EXCEL of your PC.

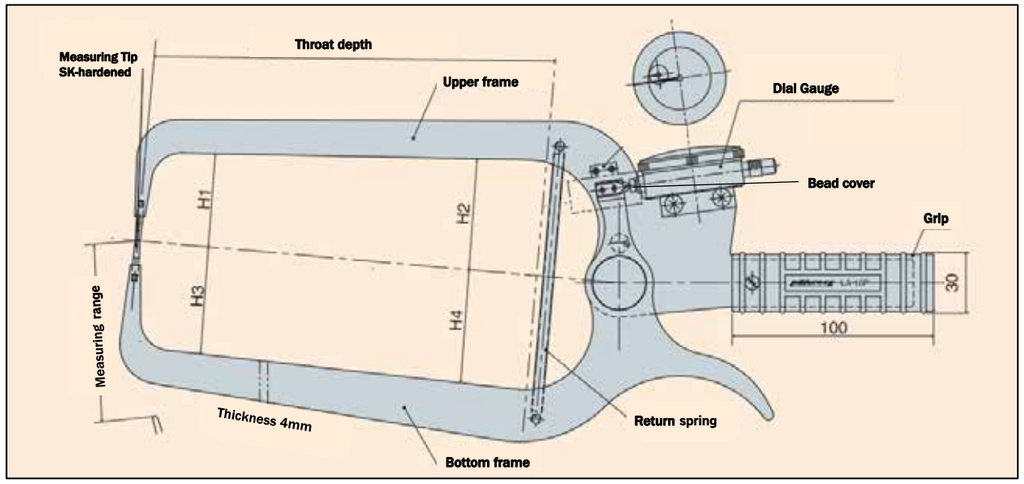
LA-16P
Graduation: 0.05mm
Range: 0 ~ 50mm
Max opening: 80mm
Throat depth: 200mm

LA-18P
Graduation: 0.01mm
Range: 0 ~ 30mm
Max opening: 60mm
Throat depth: 135mm

LA-19P
Graduation: 0.05mm
Range: 0 ~ 50mm
Max opening: 80mm
Throat depth: 130mm

LA-26P
Graduation: 0.05mm
Range: 0 ~ 50mm
Max opening: 80mm
Throat depth: 250mm

Name of Parts



■ Specifications

Model	Graduation (mm)	Range (mm)	Indication error (mm)	Max opening (mm)	Throat depth (mm)	Dimensions (mm)			
						H1	H2	H3	H4
LA-16P	0.05	0 - 50	±0.15	80	200	45	57	53	57
LA-17PD	0.01	0 - 25	±0.03	40	80	25	40	25	40
LA-18P	0.01	0 - 30	±0.03	60	135	39	47	15	22
LA-19P	0.05	0 - 50	±0.15	80	130	-	-	-	-
LA-26P	0.05	0 - 50	±0.15	80	250	37	48	54	45

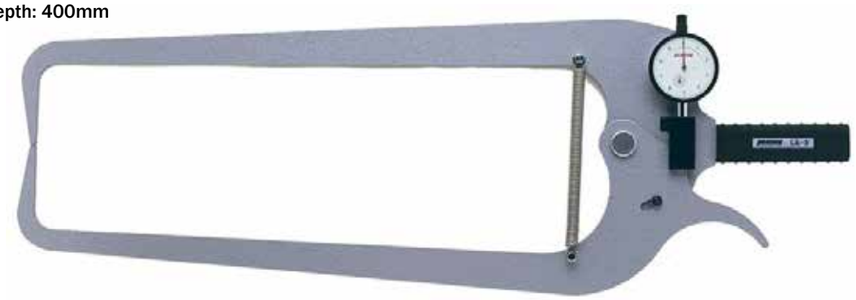
Standard Caliper Gauges

LA series (Outside measuring of ODs and thicknesses)

LA-1
Graduation: 0.1mm
Range: 0 ~ 80mm
Throat depth: 120mm

LA-2
Graduation: 0.1mm
Range: 0 ~ 80mm
Throat depth: 240mm

LA-3
Graduation: 0.1mm
Range: 0 ~ 80mm
Throat depth: 400mm

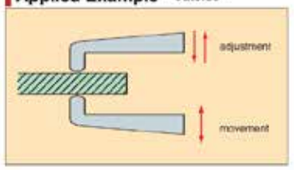


LA-4
Graduation: 0.05mm
Range: 0 ~ 50mm
Throat depth: 90mm

LA-5
Graduation: 0.05mm
Range: 0 ~ 50mm
Throat depth: 150mm

LA-7
Graduation: 0.01mm
Range: 0 ~ 60mm
Throat depth: 85mm

Applied Example – outside –



＊Adjustable frame
＊The LA-7 can measure range of 10mm
＊It allows measurement of comparative values in more than 10mm

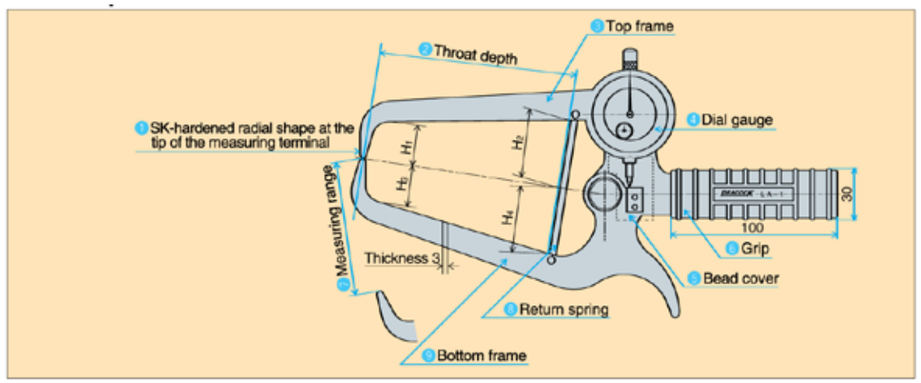
LA-8
Graduation: 0.1mm
Range: 0 ~ 80mm
Throat depth: 130mm

LA-9
Graduation: 0.1mm
Range: 0 ~ 30mm
Throat depth: 100mm

LA-10
Graduation: 0.01mm
Range: 0 ~ 20mm
Throat depth: 100mm

＊The tip of the bottom frame Φ10mm Flat Rocking Contact Point

● Name of Parts



■ Specifications

Model	Graduation (mm)	Range (mm)	Indication error (mm)	Throat depth (mm)	Dimensions (mm)			
					H1	H2	H3	H4
LA-1	0.1	0 - 80	±0.2	120	25	40	25	40
LA-2	0.1	0 - 80	±0.2	240	48	57	48	57
LA-3	0.1	0 - 80	±0.2	400	60	60	58	79
LA-4	0.05	0 - 50	±0.15	90	30	40	30	40
LA-5	0.05	0 - 50	±0.15	150	38	57	15	21
LA-7	0.01	0 - 60	±0.03	85	20	20	15	15
LA-8	0.1	0 - 80	±0.2	130	-	-	-	-
LA-9	0.1	0 - 30	±0.2	100	2	12	2	12
LA-10	0.01	0 - 20	±0.03	100	28	28	28	28

Remark: Throat Depth is chanegd by Measuring range.
Contact us more detailed information, if you need it.

LA-11
Graduation: 0.1mm
Range: 0 ~ 50mm
Throat depth: 125mm

LA-13
Graduation: 0.1mm
Range: 0 ~ 130mm
Throat depth: 235mm

LA-14
Graduation: 0.01mm
Range: 100 ~ 150mm
Throat depth: 70mm

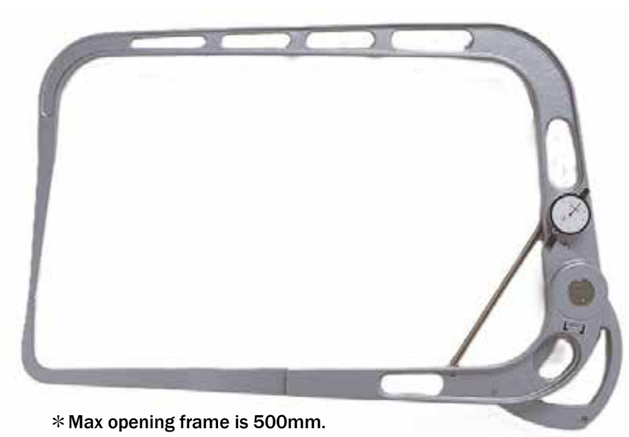
＊LA-14 is for comparative measurement.

LA-21
Graduation: 0.1mm
Range: 0 ~ 80mm
Throat depth: 220mm

LA-22
Graduation: 0.1mm
Range: 0 ~ 80mm
Throat depth: 250mm

LA-23
Graduation: 0.1mm
Range: 0 ~ 80mm
Throat depth: 300mm

LA-24
Graduation: 0.1mm
Range: 0 ~ 100mm
Throat depth: 600mm



＊Max opening frame is 500mm.

Example

LA-31
Graduation: 0.01mm
Range: 0 ~ 20mm
Throat depth: 125mm

■ **Specifications**

Model	Graduation (mm)	Range (mm)	Indication error (mm)	Throat depth (mm)	Dimensions (mm)			
					H1	H2	H3	H4
LA-11	0.1	0 - 50	±0.2	125	2	5.5	2	5.5
LA-13	0.1	0 - 130	±0.3	235	134	134	15	37
LA-14	0.01	100 - 150	±0.03	70	-	-	-	-
LA-21	0.1	0 - 80	±0.2	220	66	69	12	10
LA-22	0.1	0 - 80	±0.2	250	28	23	62	62
LA-23	0.1	0 - 80	±0.2	300	45	50	48	43
LA-24	0.1	0 - 100	±0.4	600	300	300	100	100
LA-31	0.01	0 - 20	±0.03	125	60	63	-	-

Remark: Throat Depth is chanegd by Measuring range.
Contact us more detailed information, if you need it.

Standard Caliper Gauges

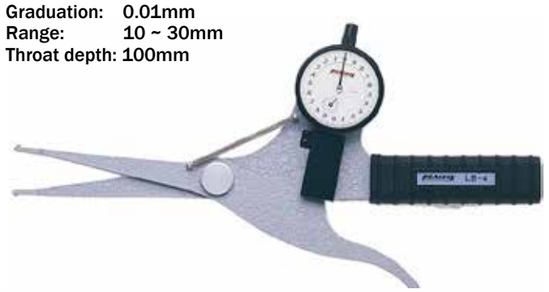
LB series (Inside measuring of ID and groove widths)

LB-1
Graduation: 0.1mm
Range: 10 ~ 90mm
Throat depth: 125mm

LB-2
Graduation: 0.1mm
Range: 10 ~ 90mm
Throat depth: 180mm

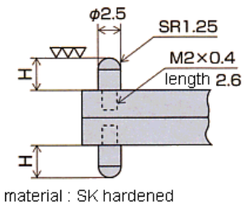
LB-3
Graduation: 0.01mm
Range: 10 ~ 30mm
Throat depth: 50mm

LB-4
Graduation: 0.01mm
Range: 10 ~ 30mm
Throat depth: 100mm



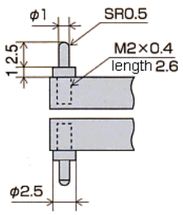
LB-5
Graduation: 0.01mm
Range: 20 ~ 40mm
Throat depth: 150mm

Dimensions for contact point
(LB-1, 2, 3, 4, 5, 6, 7 and LH-2)

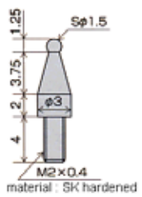


material : SK hardened

(LB-7S)



(LA-14, LB-14)



material : SK hardened

Hmm (height of contact point)
3, 4, 5, 6, 7, 8, 9, 10mm type are available as options.
Order pair as 1 set (2pcs).

LB-6
Graduation: 0.01mm
Range: 30 ~ 50mm
Throat depth: 80mm

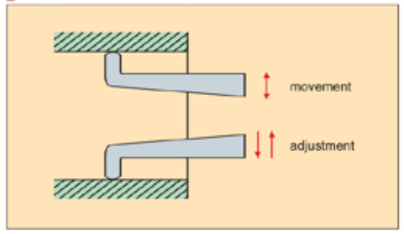
LB-7
Graduation: 0.01mm
Range: 10 ~ 70mm
Throat depth: 85mm
＊Adjustable frame

LB-7S
Graduation: 0.01mm
Range: 15 - 35mm
Throat depth: 50mm
＊Adjustable frame

LB-14
Graduation: 0.01mm
Range: 100 ~ 150mm
Throat depth: 70mm
＊Adjustable frame

LH-2
Graduation: 0.01mm
Range: 10 ~ 120mm
Throat depth: 50mm

Applied Example – inside –



■ Specifications

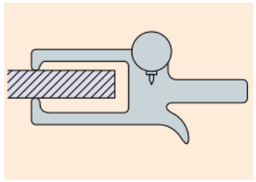
Model	Graduation (mm)	Range (mm)	Indication error (mm)	Throat depth (mm)	Height of Contact Point (mm)
LB-1	0.1	10 - 90	±0.2	125	2
LB-2	0.1	10 - 90	±0.2	180	2
LB-3	0.01	10 - 30	±0.03	50	2
LB-4	0.01	10 - 30	±0.03	100	2
LB-5	0.01	20 - 40	±0.03	150	4
LB-6	0.01	30 - 50	±0.03	80	4
LB-7	0.01	10 - 70	±0.03	85	2
LB-7S	0.01	15 - 35	±0.03	50	3.5
LB-14	0.01	100 - 150	±0.03	70	7
＊LH-2	0.01	10 - 120	±0.03	50	2

＊For LH-2, the range of accuracy is 10 to 20mm. In case of 20mm or more, check the tolerance with Master Gauge.
Remark: Throat Depth is chanegd by Measuring range.
Contact us more detailed information, if you need it.

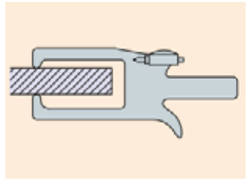
Caliper Gauges are quite useful for such measurement of O.D or I.D. thickness and diameter which appear so difficult to measure.

●Outside measuring (LA) type

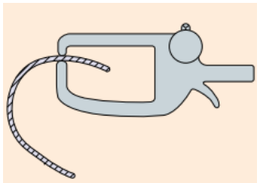
●Inside measuring (LB) type



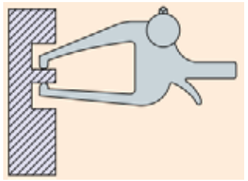
●Measuring thickness at the back end of a projecting workpiece.
LA-1~4
LA-21~23
LA-26P



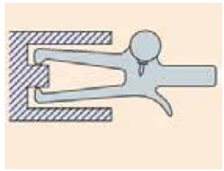
●Measuring thickness at the back end of a projecting workpiece.
●Dial upward type
LA-5 LA-16P
LA-17PD LA-18P
LA-19P LA-26P



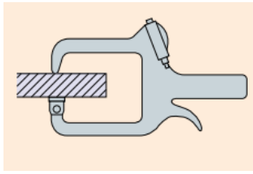
●Measuring thickness of a cup, hat or helmet.
LA type



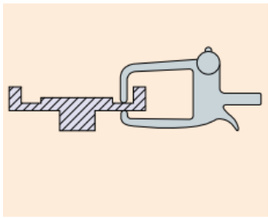
●Measuring thickness or OD in a narrow, confined place.
LA type



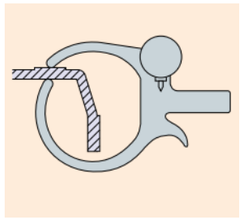
●Measuring center OD of a boss
LA-11



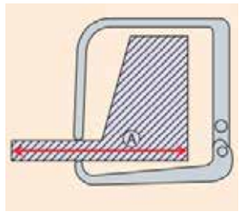
●Floating type: lower contact point has a flat 10mm diameter
LA-10



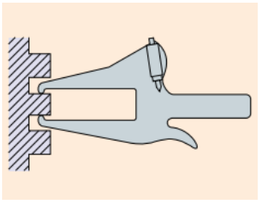
●Measuring thickness by hurdling a projecting area
LA type



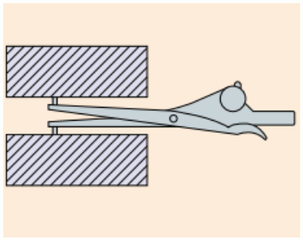
●Measuring thickness by hurdling a projecting area
LA-8
LA-19P



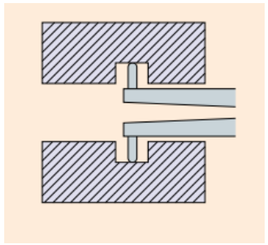
●Measuring thickness of a large workpiece or part.
A: workpiece sizes up to
Until 500mm (LA-24)
Until 190mm (LA-13)



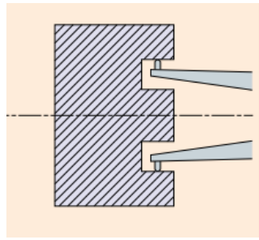
●Measuring thickness or OD in a narrow, confined place.
LA-9
LA-11



●Measuring ID or groove width
LB-1 ~ 6



●Measuring ID or an O-ring groove
LB-1 ~ 6



●Measuring ID by straddling the center boss
LB-7
LB-14

Customized Caliper Gauges

If you have any questions about Special designed Caliper Gauge, please specify the details what you need.

Please check as following:

1. Measurement
   - ☐ Outer diameter (⊡ Thickness of your object)
   - ☐ Inner diameter (⊡ Width of groove ⊡ Hole diameter ⊡ Others)

2. ☐ Analog type ☐ Digital type

3. Graduation
   ☐ 0.1mm ☐ 0.05mm ☐ 0.01mm

4. Form, Dimension, Measuring Portion of your object

5. Frame shape that suitable of your object.
   Please send us your drawing or sketch here under.

Request for Special Designed Cylinder Gauge

Date: _____

Name: _____

- Measurement for Internal Gear only.
- Measurement for Herical Gear is not acceptable as unstable.

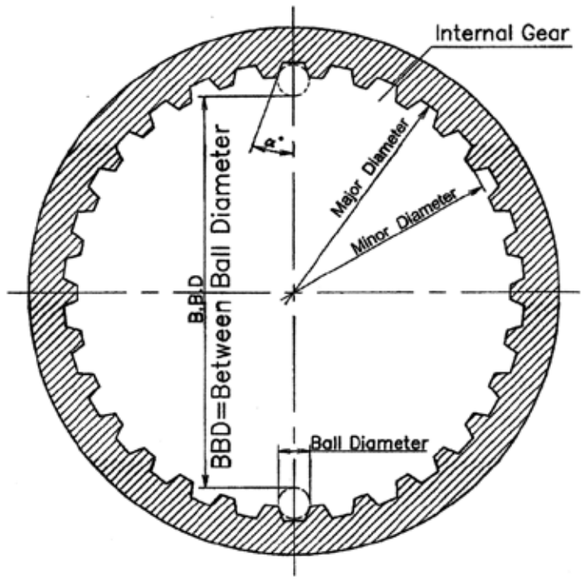
For your measurement, please check ☑

- ☐ Major Diameter
- ☐ Minor Diameter
- ☐ B.B.D=Between Ball Diameter or O.P.D= Over Pin Diameter

- Depth of measurement work–piece

_____ mm

Remark:



Specifications for BBD

B.B.D	Tolerance
Ball Diameter	Sϕ Ball Cut ☐ Yes (cut) ☐ No
Major Diameter	Tolerance
Minor Diameter	Tolerance
Pressure Angle	α° =
No.of Teeth	Z

Specifications for Major Diameter and Minor Diameter

B.B.D	Tolerance
Ball Diameter	Sϕ
Major Diameter	Tolerance
Minor Diameter	Tolerance
Pressure Angle	α° =
No.of Teeth	Z

※Conversion Table for Odd number tooth is unready.

In case ball cut is necessary, we can provide the Master.

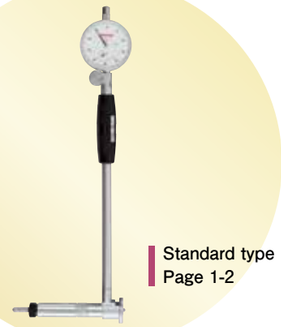
Master Production ☐ Yes ☐ No

Please enclose the Specification table with clear Tolerance for your measurement work–piece at the time of request.

OZAKI MFG. CO., LTD.

1-63-11, Tokiwadai, Itabashi-Ku,
Tokyo, 174-0071 Japan
TEL: 81-3-3966-1109
FAX: 81-3-3558-1868
E mail: peacock-tokyo@peacockozaki.jp

Cylinder Gauges



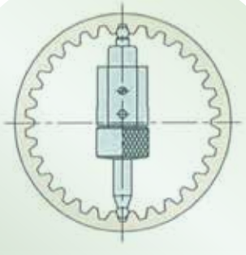
Standard type
Page 1-2

Short size
"S" series
Page 1-2

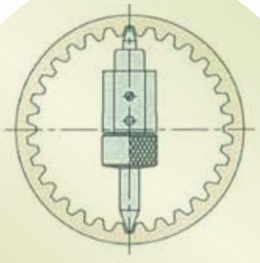
Blind Hole
"CG" series
Page 4

Small Hole
Page 6

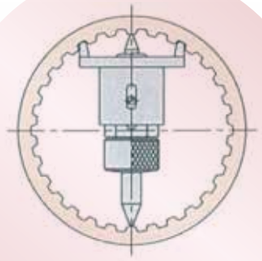
Special length below grip
Page 7



For Internal Gear
Over Pin Diameter
Page 8



For Internal Gear
Large Diameter
Page 9



For Internal Gear
Small Diameter
Page 10

Standard Cylinder Gauges (CC series)

The contact point is tungsten carbide ball.
The standard ball tipped at the replacement feeler is made of steel.
Suitable Dial Gauge is 57B or 17Z (Graduation 0.01mm) and 5F or 15Z (Graduation 0.001mm)
Dial Gauge is optional.

CC-1H
Range : 18 ~ 35mm

Head for CC-1H

CC-3CH
Range : 50 ~ 150mm

Head for

CC-4
Range : 100 ~ 160mm

CC-3H complete set
(Dial Gauge is optional)

Short Size Cylinder Gauges (S series)

This is a compact cylinder gauge with a length below grip of 50mm.
It is used when a standard item is too long to measure the object or a shorter length of below grip is required for conveniently.
Specifications are the same as standard model.

CC-1HS
Range : 18 ~ 35mm

CC-2HS
Range : 35 ~ 60mm

CC-3HS
Range : 50 ~ 100mm

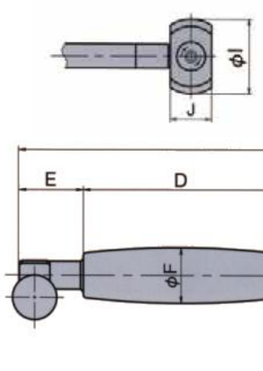
■ Specifications

Model	Range (mm)	Length below grip (mm)	Number of Feelers (mm)	Thickness of Washers (mm)	Adapter
CC-1H	18 ~ 35	150	Interval 2mm x 9pcs.	0.5, 1 each	
CC-1HS	18 ~ 35	50	Interval 2mm x 9pcs.	0.5, 1 each	
CC-2H	35 ~ 60	150	Interval 5mm x 6pcs.	1, 2, 3 each	
CC-2HS	35 ~ 60	50	Interval 5mm x 6pcs.	1, 2, 3 each	
CC-3H	50 ~ 100	150	Interval 5mm x 11pcs.	1, 2, 3 each	
CC-3HS	50 ~ 100	50	Interval 5mm x 11pcs.	1, 2, 3 each	
CC-3CH	50 ~ 150	150	Interval 5mm x 11pcs.	1, 2, 3 each	50mm x 1
CC-3CHS	50 ~ 150	50	Interval 5mm x 11pcs.	1, 2, 3 each	50mm x 1
CC-4	100 ~ 160	250	Interval 10mm x 7pcs.	1, 2, 3, 4 each	
CC-5	160 ~ 250	251.5	Interval 10mm x 10pcs.	1, 2, 3, 4 each	
CC-6	250 ~ 400	400	Interval 10mm x 16pcs.	1, 2, 3, 4 each	

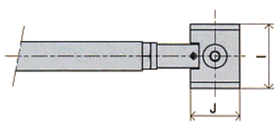
- Wide range accuracy · · · · · · · · 5μm
- Adjacent error · · · · · · · · · · · 2μm
- Repeated accuracy · · · · · · · · · 2μm
- Effective measuring range · · · · · 1.2mm

■ Outer Dimensions

CC-1H, CC-2H, CC3H, CC-3CH,
CC-1HS, CC-2HS, CC-3HS,



CC-4, CC-5, CC-6

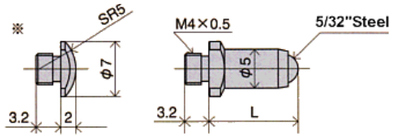


■ Dimensions

Model	A	B	C	D	E	F	G	H	I	J
CC-1H	248.75	150	5.75	70	23	20	10	18 ~ 35	13	11.5
CC-1HS	148.75	50	5.75	70	23	20	10	18 ~ 35	13	11.5
CC-2H	251.5	150	8.5	70	23	20	10	35 ~ 60	23	17.2
CC-2HS	151.5	50	8.5	70	23	20	10	35 ~ 60	23	17.2
CC-3H	251.6	150	8.6	70	23	20	10	50 ~ 100	31	17.2
CC-3HS	151.6	50	8.6	70	23	20	10	50 ~ 100	31	17.2
CC-3CH	251.6	150	8.6	70	23	20	10	50 ~ 150	31	17.2
CC-3CHS	151.6	50	8.6	70	23	20	10	50 ~ 150	31	17.2
CC-4	370	250	12	85	23	25	13	100 ~ 160	50	24
CC-5	391.5	251.5	14	100	26	25	16	160 ~ 250	70	28
CC-6	540	400	14	100	26	25	16	250 ~ 400	100	28

■ Dimensions for Feeler and Washers for Cylinder Gauges

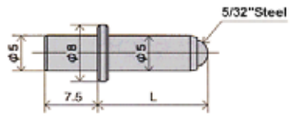
Feeler for CC-1H



※ Only 18mm is SR5

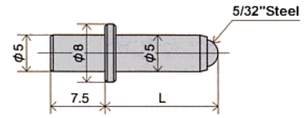
Model	Size (mm)	L (mm)
Feeler for CC-1H	* 18	2
	20	4
	22	6
	24	8
	26	10
	28	12
	30	14
	32	16
	34	18

Feeler for CC-2H



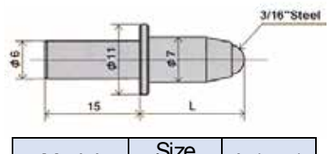
Model	Size (mm)	L (mm)
Feeler for CC-2H	35	5
	40	10
	45	15
	50	20
	55	25
	60	30

Feeler for CC-3H/3CH



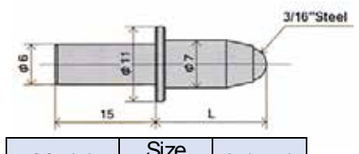
Model	Size (mm)	L (mm)
Feeler for CC-3H CC-3CH	50	5
	55	10
	60	15
	65	20
	70	25
	75	30
	80	35
	85	40
	90	45
	95	50
	100	55

Feeler for CC-4



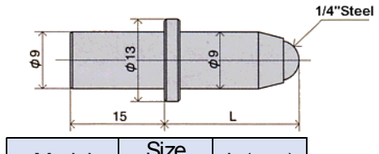
Model	Size (mm)	L (mm)
Feeler for CC-4	100	10
	110	20
	120	30
	130	40
	140	50
	150	60
	160	70

Feeler for CC-5



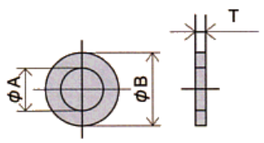
Model	Size (mm)	L (mm)
Feeler for CC-5	160	10
	170	20
	180	30
	190	40
	200	50
	210	60
	220	70
	230	80
	240	90
	250	100

Feeler for CC-6



Model	Size (mm)	L (mm)
Feeler for CC-6	250	10
	260	20
	270	30
	280	40
	290	50
	300	60
	310	70
	320	80
	330	90
	340	100
	350	110
	360	120
	370	130
	380	140
	390	150
	400	160

Washer for CC-1H ~ 6



Model	T (mm)	A (mm)	B (mm)
CC-1H	0.5, 1	4.1	7
CC-2H	1, 2, 3	5.1	8
CC-3H	1, 2, 3	5.1	8
CC-3CH	1, 2, 3	5.1	8
CC-4	1, 2, 3, 4	6,1	10
CC-5	1, 2, 3, 4	6.1	10
CC-6	1, 2, 3, 4	9.1	13

Cylinder Gauges (Blind Hole type, CG series)

CG type with modified guide plate is suitable for measurement of the diameter to the point as deep as "t" .
Suitable Dial Gauge is 57B or 17Z (Graduation 0.01mm) and 5F or 15Z (Graduation 0.001mm)
Dial Gauge is optional.

CG-1
Range : 18 ~ 35mm

Head for CG-1

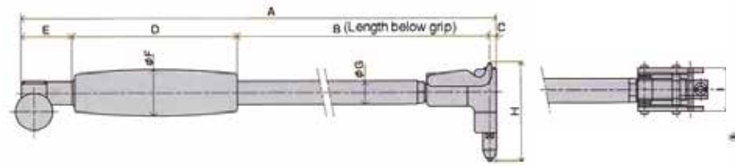
CG-3
Range : 50 ~ 100mm

Head for CG-3

CG-4
Range : 100 ~ 160mm

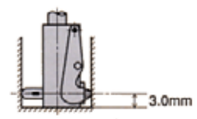
Head for CG-4

■ Outer Dimensions



Model	A	B	C	D	E	F	G	H	I
CG-1	246	150	3	70	23	20	10	18 ~ 35	13
CG-2	246	150	3	70	23	20	10	35 ~ 60	18
CG-3	246	150	3	70	23	20	10	50 ~ 100	20
CG-3C	246	150	3	70	23	20	10	50 ~ 150	20
CG-4	380.5	251.5	3	100	26	25	16	100 ~ 160	50
CG-5	380.5	251.5	3	100	26	25	16	160 ~ 250	70
CG-6	533	400	4.5	100	26	25	16	250 ~ 400	100

(Only CG-6 is 4.5mm)



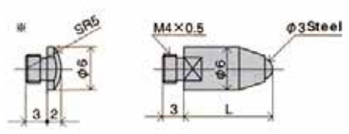
■ Specifications

Model	Range (mm)	Length below grip (mm)	Number of Feelers (mm)	Thickness of Washers (mm)	Adapter
CG-1	18 ~ 35	150	Interval 2mm x 9pcs.	0.5, 1 each	
CG-2	35 ~ 60	150	Interval 5mm x 6pcs.	0.5, 1, 2, 3 each	
CG-3	50 ~ 100	150	Interval 5mm x 11pcs.	0.5, 1, 2, 3 each	
CG-3C	50 ~ 100	150	Interval 5mm x 11pcs.	0.5, 1, 2, 3 each	50mm x 1
CG-4	100 ~ 160	251.5	Interval 10mm x 7pcs.	1, 2, 3, 4 each	
CG-5	160 ~ 250	251.5	Interval 10mm x 10pcs.	1, 2, 3, 4 each	
CG-6	250 ~ 400	400	Interval 10mm x 16pcs.	1, 2, 3, 4 each	

- Wide range accuracy · · · · · · · · 5μm
- Adjacent error · · · · · · · · · · · 2μm
- Repeated accuracy · · · · · · · · · 2μm
- Effective measuring range · · · · · 1.2mm

■ Dimensions for Feeler and Washers for Cylinder Gauges

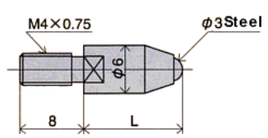
Feeler for CG-1



※Only 18mm is SR5

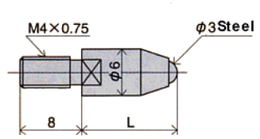
Model	Size (mm)	L (mm)
Feeler for CG-1	* 18	2
	20	4
	22	6
	24	8
	26	10
	28	12
	30	14
	32	16
	34	18

Feeler for CG-2



Model	Size (mm)	L (mm)
Feeler for CG-2	35	5
	40	10
	45	15
	50	20
	55	25
	60	30

Feeler for CG-3/3C

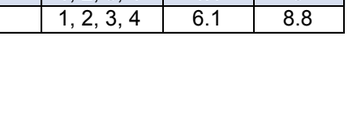


Model	Size (mm)	L (mm)
Feeler for CG-3 CG-3C	50	5
	55	10
	60	15
	65	20
	70	25
	75	30
	80	35
	85	40
	90	45
	95	50
	100	55

Feeler for CG-4

Model	Size (mm)	L (mm)
Feeler for CG-4	100	10
	110	20
	120	30
	130	40
	140	50
	150	60
	160	70

Feeler for CG-5

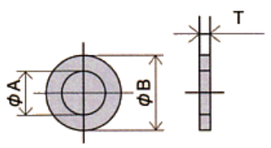


Model	Size (mm)	L (mm)
Feeler for CG-5	160	10
	170	20
	180	30
	190	40
	200	50
	210	60
	220	70
	230	80
	240	90
	250	100

Feeler for CG-6

Model	Size (mm)	L (mm)
Feeler for CG-6	250	10
	260	20
	270	30
	280	40
	290	50
	300	60
	310	70
	320	80
	330	90
	340	100
	350	110
	360	120
	370	130
	380	140
	390	150
	400	160

Washer for CG-1 ~ 6



Model	T (mm)	A (mm)	B (mm)
CG-1	0.5, 1	4.1	5
CG-2	1, 2, 3	4.1	6
CG-3	1, 2, 3	4.1	6
CG-3C	1, 2, 3	4.1	6
CG-4	1, 2, 3, 4	4.1	6
CG-5	1, 2, 3, 4	4.1	6
CG-6	1, 2, 3, 4	6.1	8.8

Cylinder Gauges (Small Hole type)

For Small Hole diameter from 6mm.
Suitable Dial Gauge is 57B or 17Z (Graduation 0.01mm) and 5F or 15Z (Graduation 0.001mm)
Dial Gauge is optional.

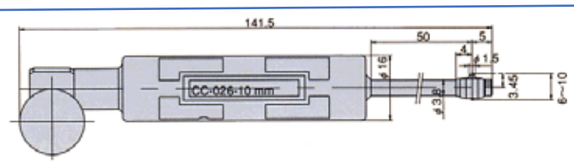
CC-02
Range : 6 ~ 10mm

CC-01
Range : 10 ~ 18mm

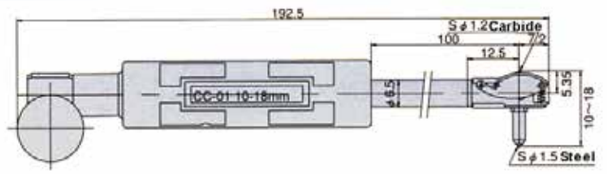
CG-01
Range : 10 ~ 18mm
●Blind Hole type

■ Outer Dimensions

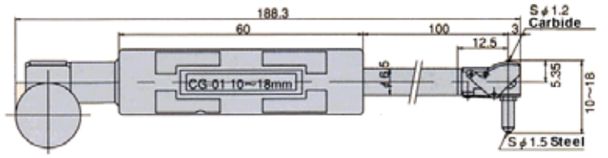
CC-02



CC-01



CG-01



■ Specifications

Model	Range (mm)	Length below grip (mm)	Number of Feelers (mm)	Thickness of Washers (mm)
CC-02	6 ~ 10	50	Interval 0.5mm x 9pcs.	-
CC-01	10 ~ 18	100	Interval 1mm x 9pcs.	0.5
CG-01	10 ~ 18	100	Interval 1mm x 9pcs.	0.5

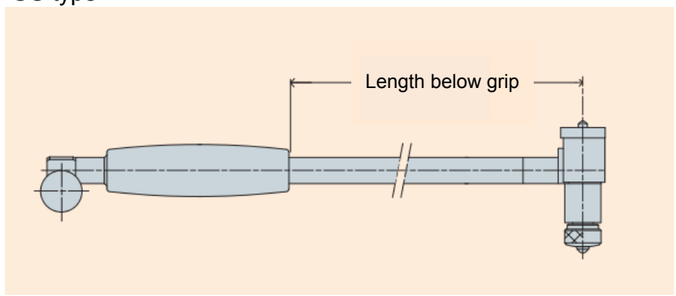
- Wide range accuracy · · · · · · · · 5μm
- Adjacent error · · · · · · · · · · · 2μm
- Repeated accuracy · · · · · · · · · 2μm
- Effective measuring range · · · · · 0.5mm

Special length below grip (Available on request)

For best fitted special length below grip.

CC-1H L300mm

CC type

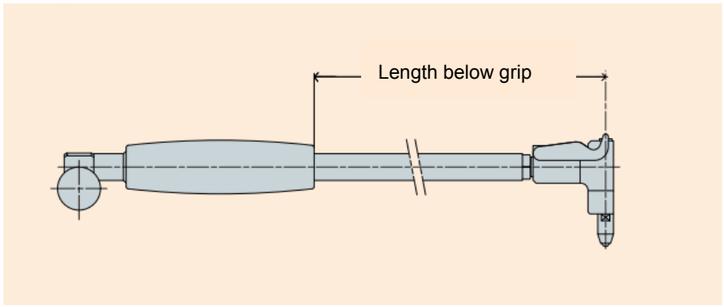


CC type List of special length below grip (L) (mm)

Model	Range	Length below grip								
CC-01	10 ~ 18	L50	L200	L300						
CC-1H	18 ~ 35	L100	L200	L300	L400	L500				
CC-2H	35 ~ 60	L100	L200	L300	L400	L500	L600	L700	L800	
CC-3H	50 ~ 100	L100	L200	L300	L400	L500	L600	L700	L800	
CC-3CH	50 ~ 150	L100	L200	L300	L400	L500	L600	L700	L800	
CC-4	100 ~ 160	L50	L100	L200	L300	L400	L500	L600	L700	L800
CC-5	160 ~ 250	L50	L100	L200	L300	L400	L500	L600	L700	L800
CC-6	250 ~ 400	L50	L100	L200	L300	L500	L600	L700	L800	

*Measuring range of CC-2H w/over L600 is from 40mm to 60mm.

CG type



CG type List of special length below grip (L) (mm)

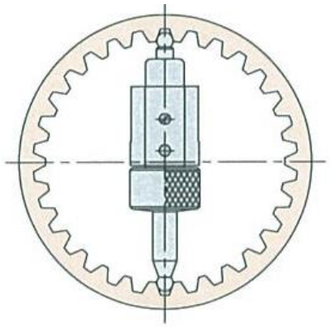
Model	Range	Length below grip								
CG-01	10 ~ 18	L50	L200	L300						
CG-1	18 ~ 35	L50	L100	L200	L300	L400	L500			
CG-2	35 ~ 60	L50	L100	L200	L300	L400	L500	L600	L700	L800
CG-3	50 ~ 100	L50	L100	L200	L300	L400	L500	L600	L700	L800
CG-3C	50 ~ 150	L50	L100	L200	L300	L400	L500	L600	L700	L800
CG-4	100 ~ 160	L50	L100	L200	L300	L400	L500	L600	L700	L800
CG-5	160 ~ 250	L50	L100	L200	L300	L400	L500	L600	L700	L800
CG-6	250 ~ 400	L50	L100	L200	L300	L500	L600	L700	L800	

Cylinder Gauges for Measuring Spline and Internal Gear

For OVER PIN Diameter

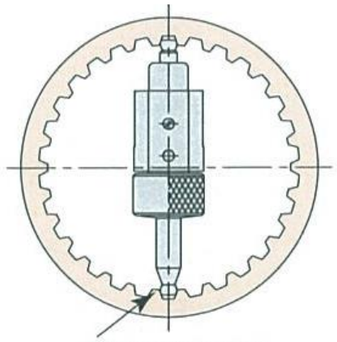
Please specify diameters of Over pin and Balls.

Even tooth



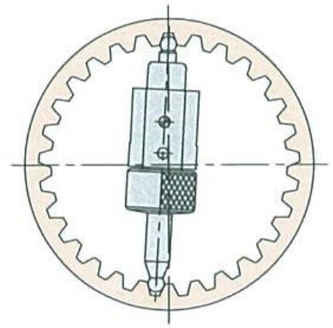
We cut both tips of the balls when interference with Large diameter.

Even tooth



Cut both tips of the balls.

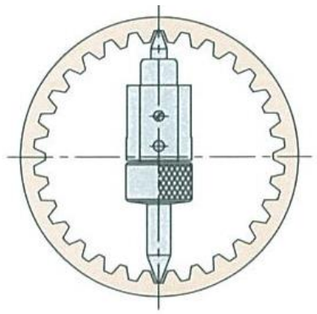
Odd tooth



For Large diameter

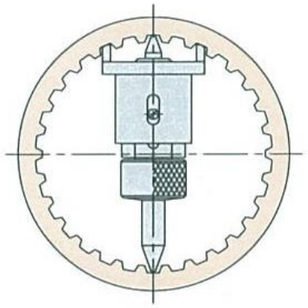
Please specify large diameter, width and height of face. (We design contact points that do not touch either gear surface.)

Even tooth



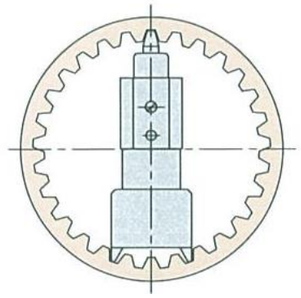
In case the root diameter is wide, we will add guide plate.

Even tooth



If the root of the face is not in the symmetry, the measurement points will across at any position. This is the reference of measurement by set a Master.

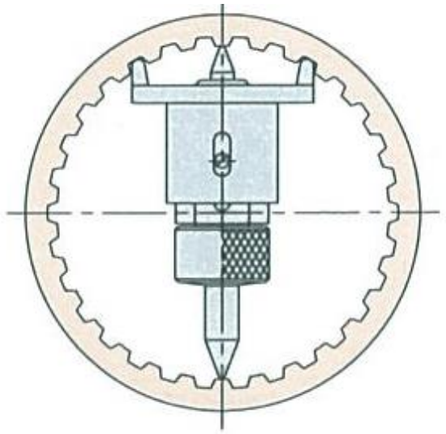
Odd tooth



For Small diameter

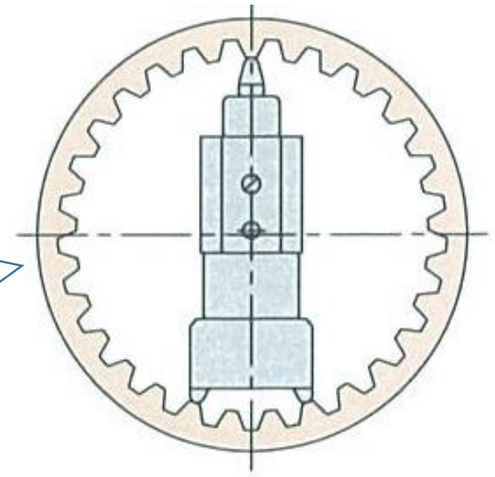
Please specify small diameter and height of face. (We design contact point guides on both sides of contact point.)

Even tooth



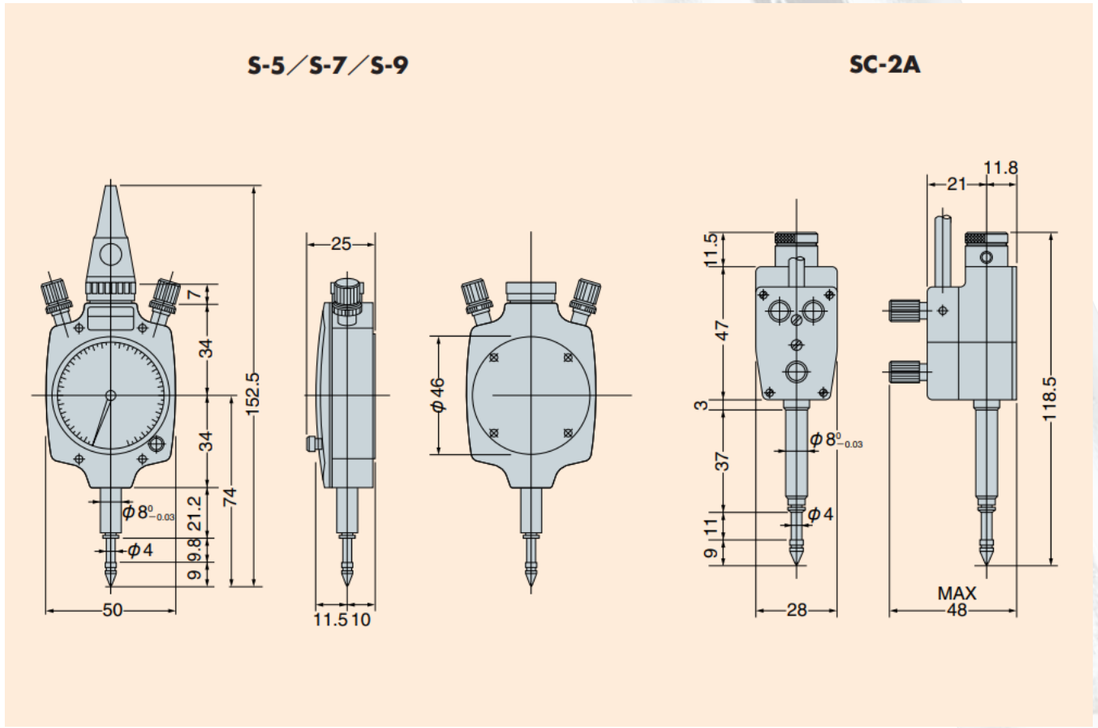
If the root of the face is not in the symmetry, the measurement points will across at any position. This is the reference of measurement by set a Master.

Odd tooth

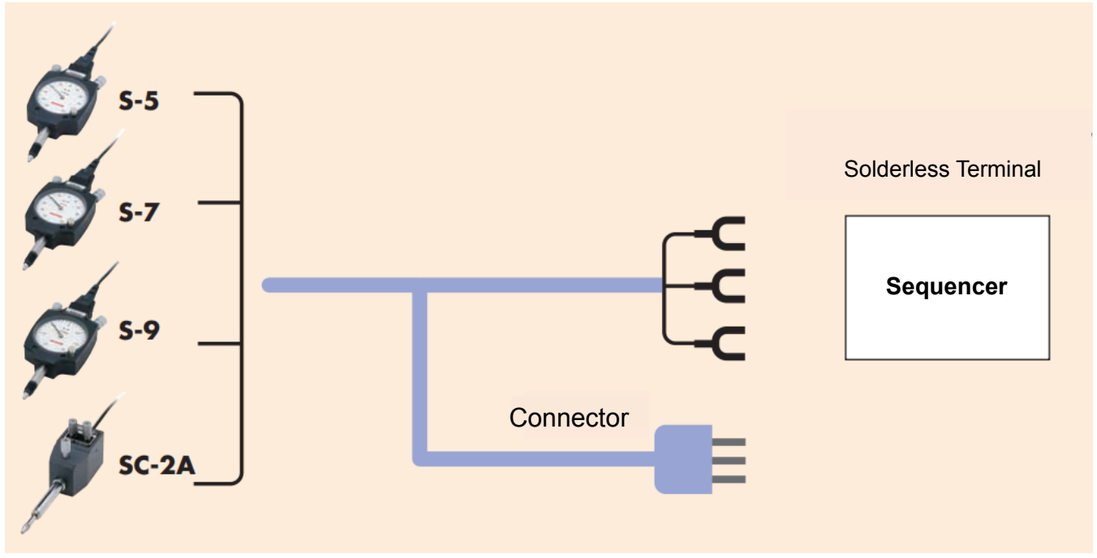


For inquiries:
We provide quotes based on submitted workpiece drawings or actual workpiece example. There is no minimum quantity required. Please specify what you want to measure, workpiece materials and tolerance. See next page.

■ Outer Dimension



■ Signal Gauge Connecting Diagram



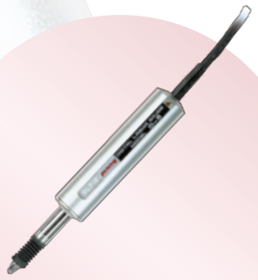
Digital Gauges
Signal Gauges

"DGN" Series
Page 1-2

Digital Thickness Gauge
Page 3～4

Digital Depth Gauge
Page 5

Digital Caliper Gauge
Page 5



Linear Gauge
Page 6～10

Digital Counter
Page11～12

Deep Hole Bore Gauge
EMCC Series
Page13

Signal Gauge /Signal Checker
Page 14～15

Digital Gauges (Cordless Type)

- The batteries in these digital gauges have a service life of approximately 3,000 hours under normal use.
- Digital display can be rotated (approx. 270°) to easily legible positions.
- Very compact and long 25mm stroke (DGN-255, DGN-257 and DGN-250B)
- RS-232C data output capability.

DGN-255
Resolution : 0.001mm
Range : 25mm

DGN-257
Resolution : 0.01mm
Range : 25mm

DGN-125
Resolution : 0.001mm
0.01 Switchable
Range : 12.5mm

DGN-125B
Resolution : 0.001mm
0.01 Switchable
Range : 12.5mm

NEW

DGN-250B
Resolution : 0.0001mm
0.001 Switchable
Range : 25mm

■ Specifications

Type	Simple type		Multifunction type		
Model No.	DGN-255	DGN-257	DGN-125	DGN-125B	NEW DGN-250B
Range	25mm	25mm	12.5mm		25mm
Resolution	0.001mm	0.01mm	0.001/0.01mm Switchable		0.0001/0.001mm
Indicator error (*excluidng quantized error)	0.003mm	0.01mm	0.003mm		2.2 μm
Display (mm)	6 digit 999.999 with (- symbol)	6 digit 9999.99 with (- symbol)	6 digit 999.999 with (- symbol)		6 digit 99.9999 with (- symbol)
Measuring force (upright position)	less than 1.2N		less than 1.0N		less than 1.2N
Mounting Method	Supported by Φ8mm Stem (Lug Back No. GB-1DX is optional)				
Contact Point	SR2.0mm with Steel ball M2.5 x 0.45 L=7mm No. X-14				
Operating Temperature	+5°C to + 40°C				
Common Specifications	●Battery	CR-2032			
	●Data Output	RS-232C (by cable KB-232C or KB-USB)			
	●Preset	Preset at a desired value			
	●Change Polarity	Plus and minus directions selectable			
	●Change Unit	mm/inch selectable			
	●Low Battery	Light up "B"			
	●Display rotatable	Max 270°			
	●Power Saving	Automatic Switch off			
for Multi type DGN-125 DGN-125B DGN-250B	★Minimum Value	Hold the Minimum Value (Min)			
	★Maximum Value	Hold the Maximum Value (Max)			
	★Measurement Value	0.001mm/0.01mm Selectable (DGN-125-DGN-125B) 0.0001mm/0.001mm Selectable (DGN-250B)			
	★Min + Max	Hold the Minimum Value + Maximum Value (Delta)			
	★Multiplication display	Calucurated display at set multiple (Mult)			
	★Judgement	LED display -NG OK +NG (Tol)			
Options	◆Spindle Pull-up	Lifting Lever (LL-205), Finger Lever (LL-D20), Release (RE-205)			
	◆Back with Lug	Mounting Vertical/Horizontal direction (GB-1DX) hole Φ6.5mm			
	◆Contact Point	All the replaceable Contact Point for Dial Gauges can be installed			
	◆Signal Cable	RS-232C Cable (KB-232C), USB Cable (KB-USB)			
	◆Input Adapter	A Data input to EXCEL (IF-21B + RS cable No. KB-232C)			
for only DGN-125B DGN-250B	★Wireless communications	Bluetooth4.0 type, Working distance is within 5m. System requirements windows 10 uploaded			

■ Optional accessories

Lifting Lever
LL-205

Release
RE-205L

Finger Lever
LL-D20

USB Cable
KB-USB

Foot Switch
SW-1

Lug Back
GB-1DX

■ Data Communication

Cable and Input Adapter (Option)

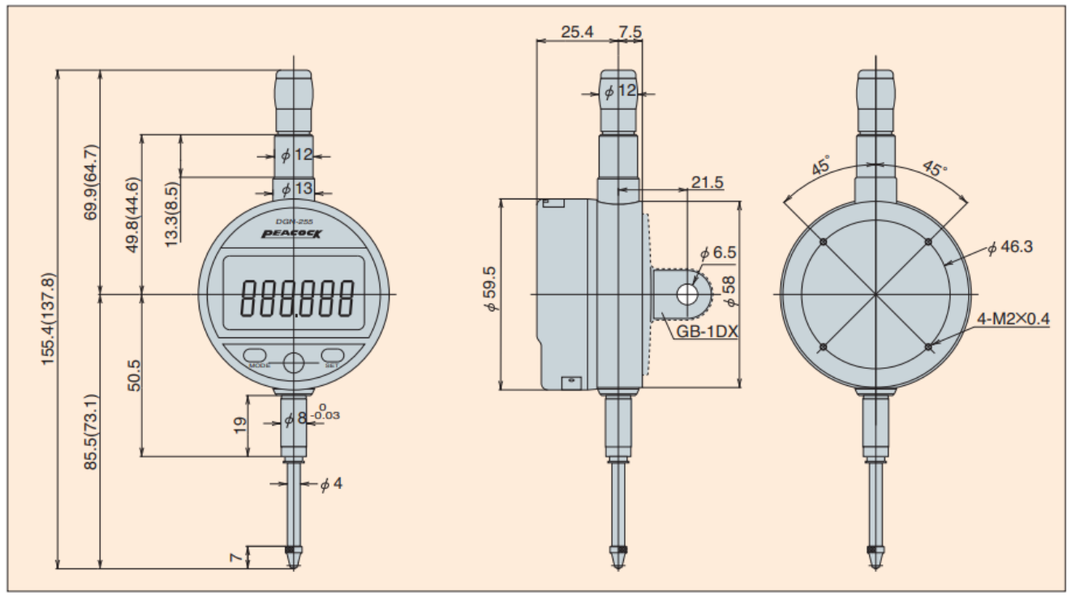
RS-232C Cable
KB-232C

+

Input Adapter
IF-21B

IF-21B with KB-232C can transfer a data to a spreadsheet such as EXCEL of your PC.

■ Dimensions

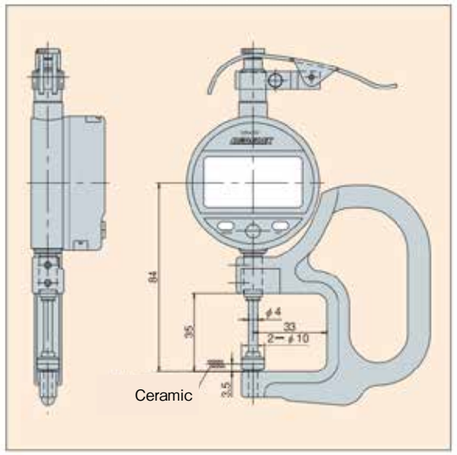


(Dashed line is for Optional Lug back and Dimensions of DGN-125 is shown in parentheses.)

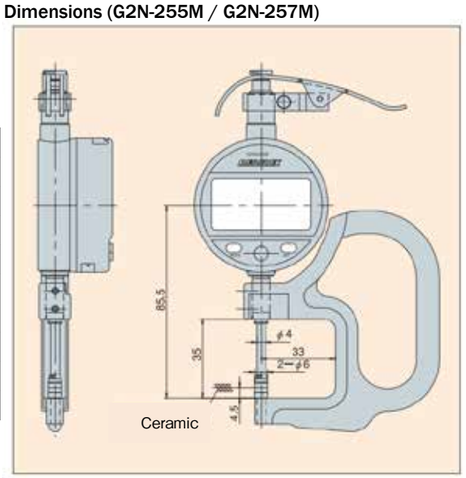
Digital Thickness Gauges

G2N-255
Resolution : 0.001mm
Range : 20mm

Dimensions (G2N-255 / G2N-257)



Dimensions (G2N-255M / G2N-257M)



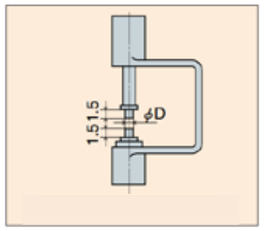
■ Specifications

Model	G2N-255	G2N-255M	G2N-257	G2N-257M
Digital Gauge	DGN-255	DGN-255	DGN-257	DGN-257
Contact Point / Anvil	Φ10mm	Φ6mm	Φ10mm	Φ6mm
Contact Point parallelism	less than 5μm		less than 10μm	
Resolution	0.001mm		0.01mm	
Accuracy (excluding quantized error)	±0.008mm		±0.02mm	
Measuring range	0 - 20mm			
Measuring force	less than 1.2N			
Measuring depth	33mm			

Digital Thickness Gauge (Special order)

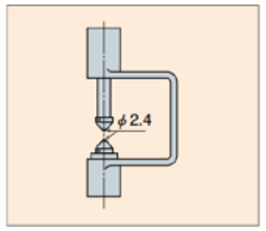
For different Applications, the shape of the contact point and anvil can be customized as following:

Both Contact Point and Anvil needle type

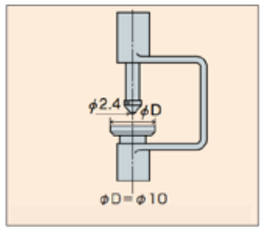


Please specify ΦD

Both Contact Point and Anvil ball type

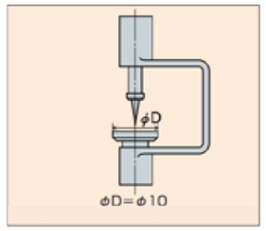


Ball type Contact Point and Flat type Anvil



D=10mm diameter
(Also Φ20, 25and 30mm can be customized.)

Needle type Contact Point and Flat type Anvil

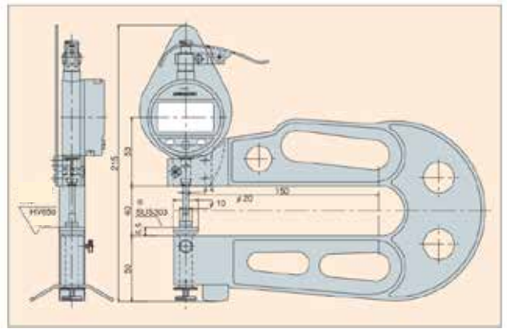


D=10mm diameter
(Also Φ20, 25and 30mm can be customized.)

Dial Thickness Gauges (Large type)

JAN-255
Resolution : 0.001mm
Range : 20mm

Dimensions (JAN-255 / JAN-257)



■ Specifications

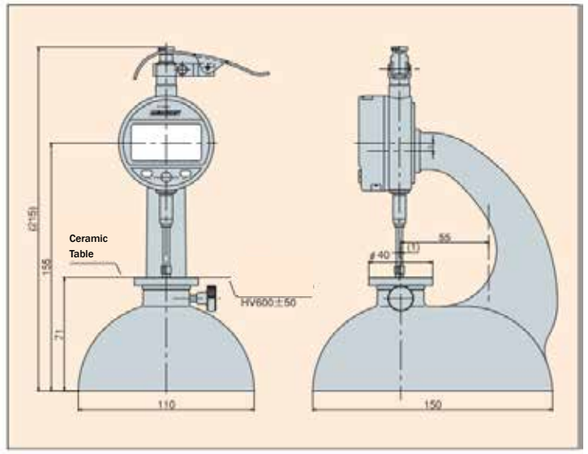
Model	JAN-255	JAN-257
Digital Gauge	DGN-255	DGN-257
Resolution	0.001mm	0.01mm
Accuracy (excluding quantized error)	±0.01mm	±0.02mm
Contact Point parallelism	less than 5μm	less than 10μm
Measuring range	0 - 20mm	
Measuring force	less than 1.2N	
Measuring depth	150mm	
Contact Point / Anvil	Φ10mm / Φ20mm	

Digital Upright Gauges

NEW

R1N-250B
Resolution : 0.0001mm
Range : 20mm

Dimensions (R1N-250B / R1N-255 / R1N-257)



■ Specifications

Model	NEW R1N-250B	R1N-255	R1N-257
Measuring Range	0 – 20mm		
Resolution	0.0001mm	0.001mm	0.01mm
Accuracy	±2.5μm	±4μm	±20μm
Digital Gauge	DGN-250B	DGN-255	DGN-257
Contact Point / Anvil	Φ5mm (SUS) / Φ40mm (Ceramic)		
Measuring Depth	55mm		
Data Transmission	Bluetooth or by cable	By cable only	
Option	Wireless : USB Bluetooth Receiver No. BT-4 Wired : USB Cable No. KB-USB Wired : RS232C Cable No. KB-232C		

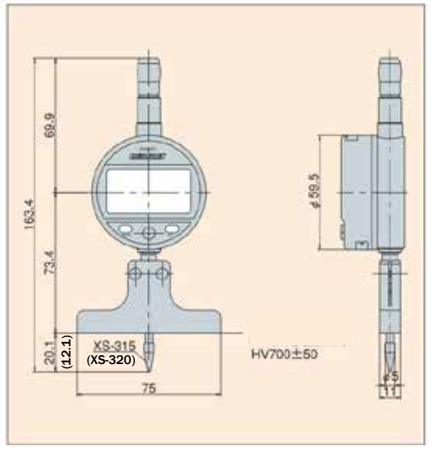
Digital Depth Gauges

NEW

Bluetooth

T2N-125WB
Resolution : 0.001mm
Range : 12mm

Dimensions (T2N-125WB / T2N-255W / T2N-257W)



(Dimensions of T2N-125WB is shown in parentheses.)

■ Specifications

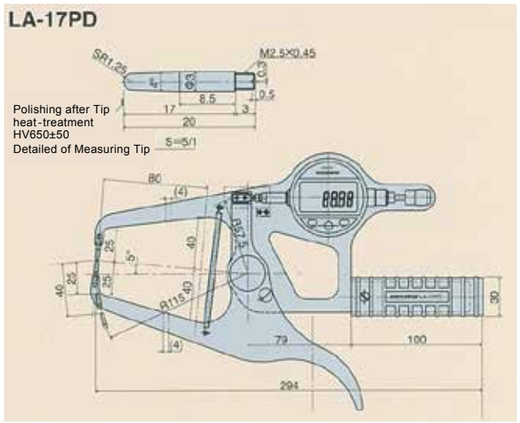
Model	NEW T2N-125WB	T2N-255W	T2N-257W
Measuring Range	12mm	20mm	
Resolution	0.001mm		0.01mm
Accuracy	±4μm		±20μm
Digital Gauge	DGN-125B	DGN-255	DGN-257
Contact Point	XS-320 (Spherical type)	XS-315 (Spherical type)	
Base (L x W)	75mm x 11mm (Flatness less than ±5μm)		
Data Transmission	Bluetooth or by cable	By cable only	
Option	Wireless : USB Bluetooth Receiver No. BT-4 Wired :USB Cable No. KB-USB Wired : RS232C Cable No. KB-232C		

Digital Caliper Gauge

NEW

LA-17PD
Graduation: 0.01mm
Range: 0 ~ 25mm
Max opening: 40mm
Throat depth: 80mm

Dimensions

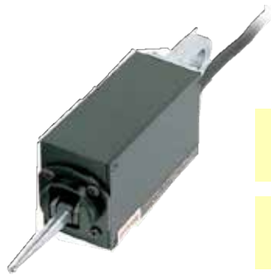


■ Specifications

Model	Graduation (mm)	Range (mm)	Indicator error (mm)	Max opening (mm)	Throat depth (mm)
LA-17PD	0.01	0 ~ 25	±0.03	40	80

Linear Gauge (Measurement range 0～2, 0～5mm)

- Lever type DL-2 and DL-2S are best suited for deviation measurement.
- Pencil type D-5 and D-5S are best suited for confined conditions.

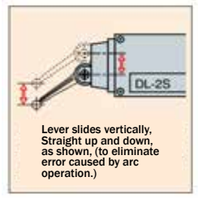


DL-2
Resolution : 0.01mm
Range : 0 ~ 2mm

DL-2S
Resolution : 0.001mm
Range : 0 ~ 2mm

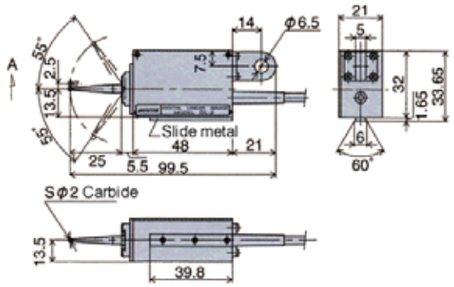
D-5
Resolution : 0.01mm
Range : 0 ~ 5mm

D-5S
Resolution : 0.001mm
Range : 0 ~ 5mm

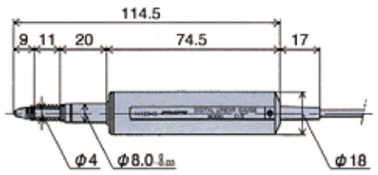


Lever slides vertically, Straight up and down, as shown, (to eliminate error caused by arc operation.)

Dimensions (DL-2 / DL-2S)



Dimensions (D-5 / D-5S)



■ Specifications

Model	DL-2	DL-2S	D-5	D-5S
Range	2mm		5mm	
Resolution	0.01mm	0.001mm	0.01mm	0.001mm
Accuracy (excluding quantized error)	0.01mm	0.003mm	0.005mm	0.002mm
Measuring force	Less than 0.6N		Less than 0.5N	
Mounting method	Φ6.5mm hole on lug or dovetail at bottom		Φ8mm stem	
Contact Point	S Φ2mm Carbide		S Φ2.4mm steel (X-2)	
Cable length	2m (Standard) Option Extention cables of 2, 3, 5 and 10m			
Operating temperature	0 ~ 40°C			
Output signal	90° phase difference, 20μm pitch (R03-PB8M Tajimi connector)			
Compatible counters	C-500 / C-700			
Options	—		● Up-side-down type, the measuring force changes when the gauge is inverted.	

Linear Gauge (Measurement range 0 ～ 10mm, 0～20mm)

- 10mm and 20mm measurement ranges are the easiest to use.
- Used in conjunction with digital counters, these gauges can be set up in places where dial gauges are now being use.
- Set the gauge by either stem or lug back.
- For lifting spindle, both lever and release types are available.

D-10
Resolution : 0.01mm
Range : 0 ~ 10mm

D-10S
Resolution : 0.001mm
Range : 0 ~ 10mm

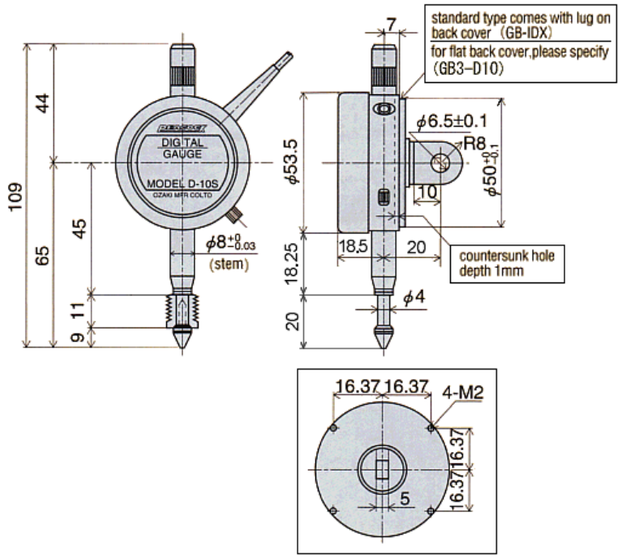
D-20
Resolution : 0.01mm
Range : 0 ~ 10mm

D-20S
Resolution : 0.001mm
Range : 0 ~ 10mm

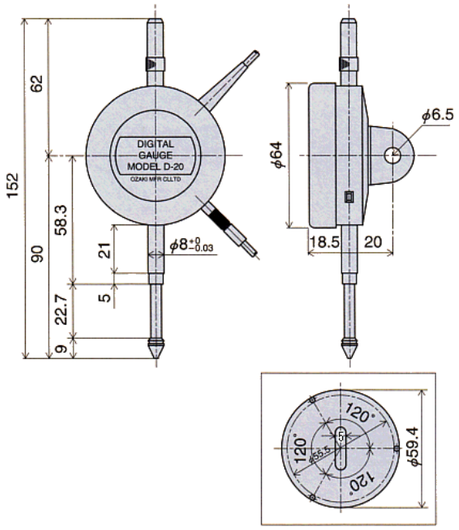
■ Specifications

Model	D-10	D-10S	D-20	D-20S
Range	10mm		20mm	
Resolution	0.01mm	0.001mm	0.01mm	0.001mm
Accuracy (excluding quantized error)	0.005mm	0.002mm	0.005mm	0.003mm
Measuring force	Less than 1.0N		Less than 1.5N	
Mounting method	Φ8mm stem or 6.5 hole on lug back			
Contact Point	M2.5 x 0.45 SΦ2.4mm steel (X-2)			
Cable length	2m			
Operating temperature	0 ~ 40°C			
Output signal	90° phase difference, 20μm pitch (R03-PB8M Tajimi connector)			
Compatible counters	C-500 / C-700			
Options	● Release (RE-4L) Lifting Lever (LL-1) ● Dust proof rubber (BG-10) ● Flat back (GB3-D10), Screws (S-110) ● Customer must specify if application is up-side-down as the measuring force changes when the gauge is inverted.		● Release (RE-4L) ● Flat back (GB3-D20) ● Customer must specify if application is up-side-down as the measuring force changes when the gauge is inverted.	

Dimensions (D-10 / D-10S)



Dimensions (D-20 / D-20S)



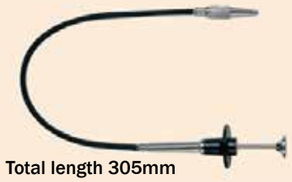
■ Optional accessories

Split collar (WB-1)

Dust proof rubber (BG-10)

For D-5, D-5S, D-10 and D-10S

Release (RE-4L)



Total length 305mm

Extension Cable

(2m、3m、5m、10m)

Extension cable with metal sheathing

(2m、3m)

Production on request

Linear Gauge (Measurement range 0～50mm, 0～100mm)

D-50
Resolution : 0.01mm
Range : 0 ~ 50mm

D-50S
Resolution : 0.001mm
Range : 0 ~ 50mm

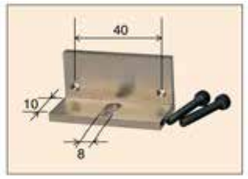
D-100
Resolution : 0.01mm
Range : 0 ~ 100mm

D-100S
Resolution : 0.001mm
Range : 0 ~ 100mm

Option

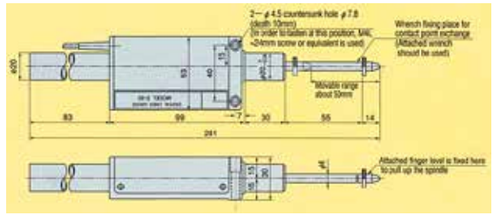
For High Temperature
Applications D-50HT (0.01mm only)
Can be used up to +65° temperature.
D-50S is not suited for high temperature.

Option

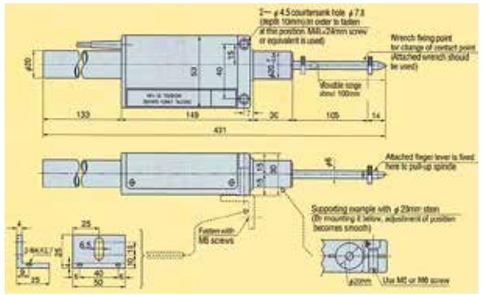


Level mounting clamp
GB-50

Dimensions (D-50 / D-50S)



Dimensions (D-100 / D-100S)



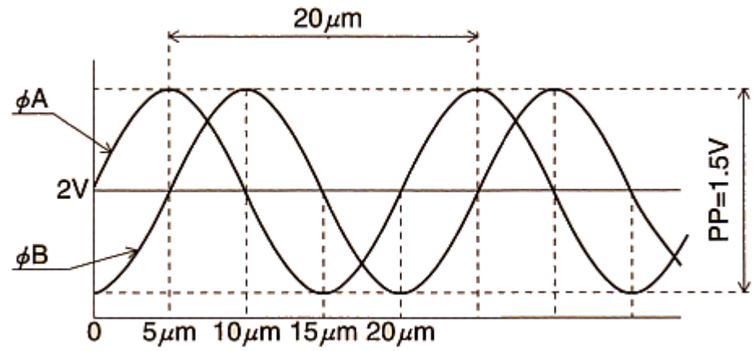
■ Specifications

Model	D-50	D-50S	D-100	D-100S
Range	50mm		100mm	
Resolution	0.01mm	0.001mm	0.01mm	0.001mm
Accuracy (excluding quantized error)	0.01mm	0.004mm	0.01mm	0.005mm
Measuring force	Less than 3.0N		Less than 3.5N	
Mounting method	Φ20mm stem or fastening by M4 screws at two positions			
Contact Point	M2.5 x 0.45 SΦ2.4mm steel (X-9)			
Cable length	2m			
Operating temperature	0 ~ 40°C			
Output signal	90° phase difference, 20μm pitch (R03-PB8M Tajima connector)			
Accessories	Finger lever for lifting spindle (LL-D50) …1pce			
Compatible counters	C-500 / C-700			
Features	● If Spindle return spring is removed, measuring force will be the spindle itself (Only when in upright position.) D-50, D-50S・・・1.0N (100gf) D-100, D-100S・・・1.1N (110gf) ● Recommended Gauge stand is PDS-2			
Option	● Level mounting clamp No. GB-50 ● Customer must specify if application is up-side-down. The measuring force changes when the gauge is inverted.			

Common Specifications of Linear Gauges

Items		Common specifications
Type of gauges	Output signal (A)	DL-2S, D-5S, D-10S, D-20S, D-50S, D-100S
	Output signal (B)	DL-2, D-5, D-10, D-20, D-50, D-100
Displacement transducer type		Glass linear scale (scale pitch 20μm) (D-10SS / D-10HS: pitch 8μm)
Power supply		±12V ±5% (consumed current 40mA)
Signal cable length		2m (2, 3, 5 and 10mm extension cables are available)
Output connector, Receiver connector		Gauge side (R03-PB8M) Counter side (R03-R8F) Tajimi connectors
Output signal (A) 1μm resolution		2 phase signal with 90° phase difference, 20μm pitch, sinusoidal wave-form
Output signal (B) 5μm/10μm resolution		2 phase signal with 90° phase difference, 20μm pitch, approximate sinusoidal wave-form
Operating temperature		0 ~ 40℃ (except for high temperature type)
Output Frequency		0 ~ 50Kz
Contact Point		M2.5 x 0.45 (All contact points for dial gauge can be used)

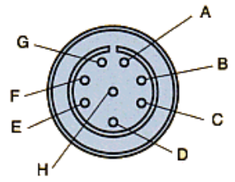
■ Output signal (A) wave-form (1μm resolution)



After multiplying 1μm pulse by 5 where 1μm = 1 generated pulse.

■ Signal Connector R03-PB8M (manufactured by Tajimi)

Pin arrangement



Pin No.	Signal	Wire Color
A	GND	black
B	φA	blue
C	+12V	red
D	φB	white
E	NC	unused
F	shielded wire (FG)	
G	NC	unused
H	NC	unused

Digital Counter

Equipped with large display functions and various measurement functions, our Digital Counters can be installed in a Control Panel or placed on a desk due to their compact designs.

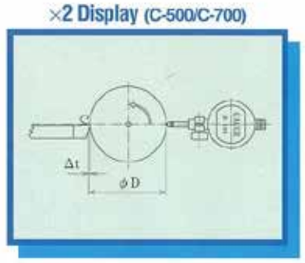
Simple type
C-500

Multi-type
C-700

1/2 Display (C-500/C-700)

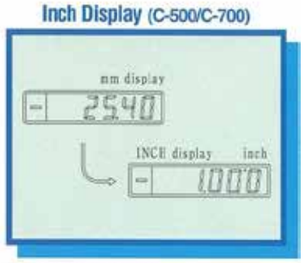
Displays the displacement after halving it.

×2 Display (C-500/C-700)



Displays the displacement after doubling it.

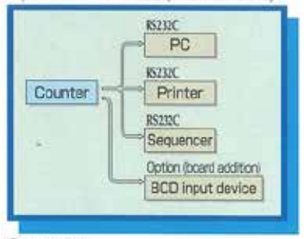
Inch Display (C-500/C-700)



Displays the displacement in terms of inches.

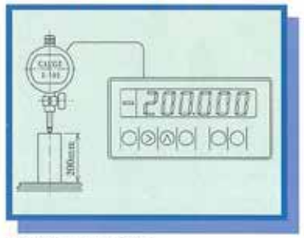
Data Output (C-500/C-700)

(Standard function of RS-232C, optional function of BCD)



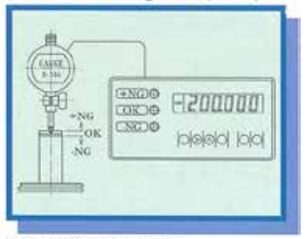
Outputs data

Presetting (C-700)



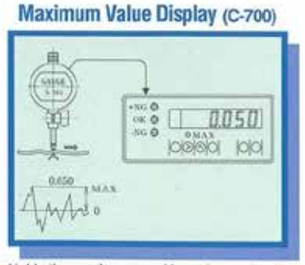
Displays preset values.

OK±NG Judgment (C-700)



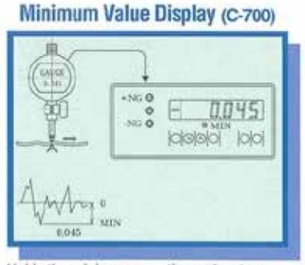
Outputs OK±NG judgment.

Maximum Value Display (C-700)



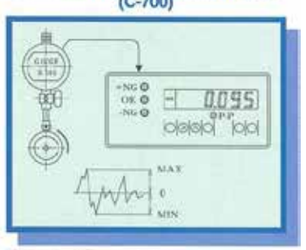
Holds the maximum positive value and makes OK±NG judgment.

Minimum Value Display (C-700)



Holds the minimum negative and makes OK±NG judgment.

Deflection Measurement Display (C-700)

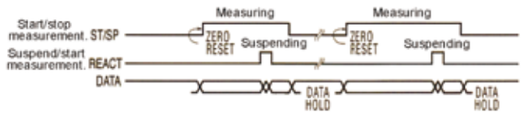


Holds the difference between the maximum and minimum values (deflection) and makes OK±NG judgment.

Specifications of Digital Counters

Model	Model No.**C-500**	Model No.**C-700**
Displayed digits *Selection of 10μm	−9999.99 ~ 00.00 ~ 9999.99	
*Selection of 1μm	−999.999 ~ 0.000 ~ 999.999	
Display	High-luminance LED display with 7 segments (red)	
Power supply voltage & power consumption	AC100V ~ AC240V・9VA or lower	
Operating temperature	0 ~ 40°C	
Compatible Linea Gauges		
Selection of 10μm display	DL-2, D-5, D-10, D-50 and D-100	
Selection of 1μm display	DL-2S, D-5S, D-10S, D-50S and D-100S	
Accessories	◆AC power cord (2m) : One cord ◆Metal fittings for panel installation: Two units (to be used for installation in panel and securing stand fittings) ◆Stand fittings: One unit (to be used when counter is used as desktop device)	
Terminal block functions (Rear panel)	◆Terminal block: Screwless terminal block ◆Usable electric cables: AWG22-28 ◆Length of peeled wire of cables: 8~9mm ◆Pin alignment *1 St/Sp — Controls "START" and "STOP" of MAX, MIN. P-P measurement mode. *2 Reat — Controls "SUSPEND" and 'START of P-P measurement mode. 3 Latch — Controls "LATCH" and "CANCEL of measured value. 4 Reset — External "RESET" "PRESET' (Function available only in Model No. C-700) 5 Alarm — Error signal output *6 -NG — Outputs -NG based on OK±NG judgment (red LED). *7 OK — Outputs OK based on OK±NG judgment (green LED). *8 +NG — Outputs +NG based on OK±NG judgment (orange LED). 9 GND — GND * marked numbers indicate functions available only in Model No.C-700 Max Display / Min Display / P-P Display: +NG (2) / -NG (1) / NG (2); OK / OK / OK; +NG (1) / -NG (2) / NG (1) (1): NG output in first stage (2): NG output in second stage	
Dip sw setting functions (Printed circuit board)	Dip (1) SW1 Select 1 μm or 10 μm SW2 Select direction of counting. SW3 Select activation or non activation of error output. SW4 Select activation or non activation of overflow. Dip (2) SW1 Settings by Manufacturer SW2 Select whether or not to include default values for OK±NG judgment. SW3 Select either 'orthogonal" or 'sine' for input waveform. SW4 Select either 400msec or 100msec for RESET time.	
Data output (RS-232C) D-Sub9P plug INCH screw	◆ Pin Alignment 1 NC --- 2 Rxd in ← 3 Txd → out 4 NC --- 5 SG --- 6 NC --- 7 RTS → out 8 CTS in ← 9 NC --- ◆Communication mode: Half-duplex asynchronous communication ◆Communication speed: 9600bps ◆Format: 7Bit ASCI ◆Parity: even number ◆Stop bit: 1Bit ◆RTS/CTS: Returned when not in use. ◆Reception command: Transmission request ASCII [T] [t] : Reset ASCII [R] [r] ◆Connection cables: Cross cables (not included)	
Options *BCD output board	◆CB-BCD Can not be used in combination with RS-232C output.	
Display functions	◆1/1 display: Displays the measured value as is. ◆1/2 display: Displays the measured value after halving it. ◆×2 display: Displays the measured value after doubling it. ◆INCH display: Displays the value after converting it into inches. Note: With 1 um display and x2 display, the lowest digit will be displayed as an even number.	
Presetting display function	◆Zero setting only	◆Can display preset values
Measurement mode function [MAX] [MIN] [P-P]	————	◆Current value dispiay ◆Maximum value(Max) ◆Minimum value(Min) ◆Deflection(P-P) RESET action is taken by ST of the ST/SP control terminal.
OK±NG judgment function (Refer to terminal output circuit)	————	◆Current value mode : +NG OK −NG ◆Maximum value mode : OK +NG (1) +NG (2) ◆Minimum value mode : OK −NG (1) −NG (2) ◆Deflection mode : OK NG (1) NG (2)
Dimensions & weight	♦ 144 (W) x 72 (H) x 160 (D) mm ♦ 950g	

Time Chart (C-700)

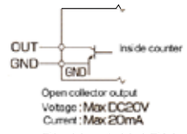


Control Terminal Input Circuit

Photo coupler : 5V(Max 5mA)
Response time : Approx. 100msec

Pin No. 1 ST/SP
Pin No. 2 REACT
Pin No. 3 LATCH
Pin No. 4 RESET

Terminal Output Circuit



Open collector output
Voltage : Max DC30V
Current : Max 20mA

Pin No. 1 ALARM
Pin No. 2 --NG
Pin No. 3 OK
Pin No. 4 +NG

Deep Hole Bore Gauge – EMCC Series

- The EMCC Series can easily measure the inside diameter of deep bore with high accuracy, which has been precision-machined.
- The EMCC Series advances a detector having an automatic alignment mechanism in line with the inside diameter.
- Measurement is possible up to the length of 10M by using an additional extension rod.

EMCC-3

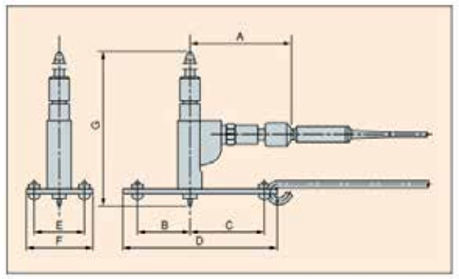
C-500

■ Specifications

Model		EMCC-2	EMCC-3	EMCC-4	EMCC-5	EMCC-6
Measuring range (ID)		40 ~ 60mm	50 ~ 100mm	100 ~ 160mm	160 ~ 250	250 ~ 400mm
Measuring depth		70mm ~ 10M	90mm ~ 10M	120mm ~ 10M	130mm ~ 10M	150mm ~ 10M
Number of feeler		Intervals 5mm x 6	Intervals 5mm x 11	Intervals 10mm x 7	Intervals 10mm x 10	Intervals 10mm x 16
Thickness of washers		1, 2, 3mm each		1, 2, 3,4mm each		
Contact Point		L = 33mm (flat type)		L = 44mm (flat type)		
Contact Point's travel		1.4mm				
Measuring force		Less than 2.0N				
Extension rods		EMCC-L (1 meter rod x 10 rods = 10 meters)				
Compatible linear gauge		● D-5B (0.01mm) ● D-5SB (0.001mm)				
Compatible counter		● C-500				
Operations		● Test completes only after receiving reference from a master and inserting the micrometer head through a workpiece. ● Automatic centering mehcanism requires no manual "shaking" to center up the micrometer head.				
Functions		● Workpiece has to be horizontally level (No test can be performed with the workpiece perpendicular).				
Dimensions (mm)	A	70	71	77	77	77
	B	20	30	40	45	50
	C	30	40	55	60	70
	D	62	82	115	125	140
	E	15	20	38	58	88
	F	22	30	50	70	100
	G MIN	35	50	100	160	250
	G MAX	60	100	160	250	400

※ To make up a complete working unit, it requires an EMCC 2 ~ 6, an EMCC-L (extension rod set), a linear gauge and a counter.

Dimensions



Gauge Sensor

Model	D-5B	D-5SB
Resolution	0.01mm	0.001mm
Accuracy	0.01mm	0.002mm
Cable length	10 meters	

Remarks : Specifications are according to D-5 & D-5S.

Signal Gauges / Signal Checker

0.001mm, 0.01mm and 0.05mm type

S-5
- With its high resolution of 0.001mm scale, it is most suitable for judgement of the values measured on finished parts with high accuracy.

S-5
Resolution : 0.001mm
Range : 0.1 (±0.05)mm

S-7
- With its resolution of 0.01 mm scale, it is generally used. Its pointer is in an anti-shock structure so as to give stable discriminating signals.

S-7
Resolution : 0.01mm
Range : 1.0 (±0.5)mm

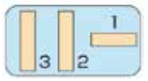
S-9
- With its most gross scale of 0.05mm, it is applicable to select grossly worked parts and as cast parts at the low-est costs.

S-9
Resolution : 0.05mm
Range : 3.0 (±1.5)mm

SC-2A
- Once its tolerance is set, a dial gauge is dismounted before using it so that its endurance is really improved. With its large tolerance setting range of 3mm, it is most suitable for judgement of the measured values in a wide tolerance range.

SC-2A
Range : 3mm

■ Specifications

Model	S-5	S-7	S-9	SC-2A
Spindle Movable Range	3mm	3mm	4mm	10mm
Graduation	0.001mm	0.01mm	0.05mm	*In SC-2A type, the minimum readable value depends on a dial gauge to be attached.
Tolerance Setting Range	0.1 (±0.05)mm	1.0 (±0.5)mm	3.0(±1.5)mm	3mm
Accuracy	±0.002mm	±0.005mm	±0.025mm	±0.005mm
Measuring Force	Less than 1.2N (120gf)			
Contact capacity	MAX DC24V 20mA			
Number of judgement stages	Three stages of --NG, OK and +NG			
Cord length	2m			
Contact point	X-2			
Stem diameter	Φ8 $^{0}_{-0.03}$mm			
Operating temperature	0 ~ 60°C			
Options	Code Length 5m, 10m / Back cover with Lug (GB-1A)			Code Length 5m, 10m
Dial Indicator for setting	–			Model 107F, 5F
Weight	180g			150g
Cable signal table	 S-5, S-7 & S-9 ①COM (blue) black -NG with ① and ② at ON ②-NG (red) +NG with ① and ③at ON ③+NG OK with ①, ②and ③at OFF			SC-2A ①COM (blue) black -NG with ①, ②and ③at OFF ②OK (red) OK with ① and ②at ON ③+NG (white) +NG with ①, ②and ③at ON
Caution	● When the current of 10 to 20 mA is used to drive a photocoupler, etc., the contact may be worn a little earlier. ● In SC-2A type, the COM terminal is body-grounded (If leak current is found in other devices, put a gauge into floating status before mounting it). ● In SC-2A type, a spindle can be set in a range from its free status to 3mm. Although it may be movable in excess of this limit, you cannot set it in such an excessive level in order to protect the spindle. ● In SC-2A type, when a dial gauge is dismounted after setting the tolerance, never forget to mount a dust protective cap.			

Gauge Testers

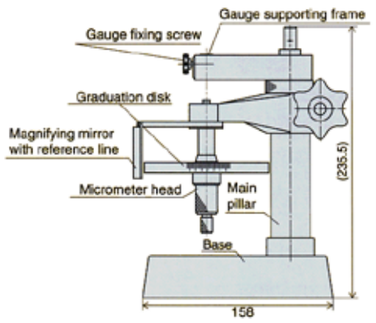
Dial Gauge Tester Model NB

- This is a calibration tester having a high precision micrometer with the minimum scale of 1μm. It can be used in order to calibrate dial gauges as well as other displacement gauges.
- The stanchion is vertically adjustable according to the type of gauges and reading is done while looking at the scale plate and the cursor line.

●Lever type dial gauge

●Back plunger type dial gauge

■ Component Names



■ Specifications

Model	Micrometer head		Forward Accuracy (μm)	Feed per revolution (mm)	Spindle tip	Gauge fixing dimension (mm)
	Graduation (mm)	Measurement Range (mm)				
NB	0.001 (1μm)	20	under ±1	0.5 / rev.	Carbide	Dia. 8mm & 10mm

Cylinder Gauge Tester Model CCT-2

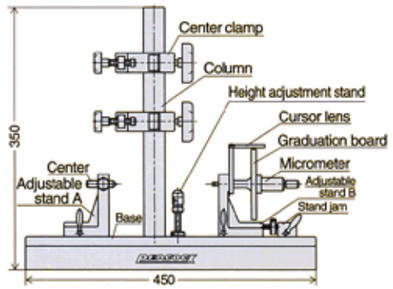
- This is a calibration tester used exclusively for cylinder gauges having a high precision micrometer with the minimum scale of 1 um.
- An outer cylinder is held erectly so that deflection may not affect the measurements and a center rod for pressing is provided on the moving bed in order to prevent from errors due to the difference of measuring force.

Cylinder gauges to be possibly inspected

- **All the cylinder gauges of JIS B 7515, JMAS 5009 Standards**
- **All the CC and CG models of "PEACOCK"**

Φ6 ~ 10mm	Φ18 ~ 35mm	Φ50 ~ 100mm	Φ160 ~ 250mm
Φ10 ~ 18mm	Φ35 ~ 60mm	Φ100 ~ 160mm	Φ250 ~ 400mm

■ **Component Names**



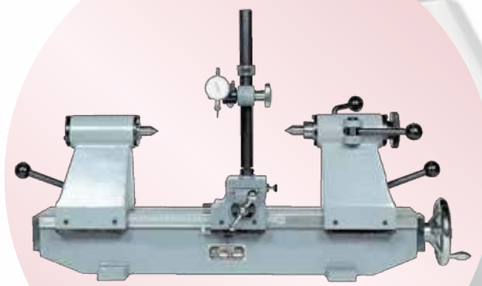
■ Specifications

Model	Micrometer head		Forward Accuracy (μm)	Feed per revolution (mm)	Spindle tip
	Graduation (mm)	Measurement Range (mm)			
CCT-2	0.001 (1μm)	20	under ±1	0.5 / rev.	Carbide

Dial Depth Gauges
Dial Inside Gauges
Bench Center, Stands
Gauge Testers

Dial Depth Gauge
"T" Series
Page 1~2

Dial Inside Gauge
"U" Series
Page 3



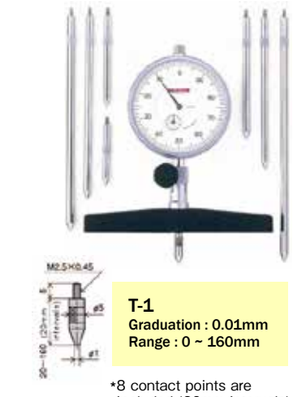
Bench Center
Page 4

Gauge Tester
Page 7

Stand
Page 5~6

Dial Depth Gauges

It measure a depth from top bottom of bottomed holes, a depth of narrow grooves, a value of step height of stepped surfaces and a depth of types engraved in matrices.
The dial gauge furnished offers a correct measured value since it can measure an object under measurement with a given measuring force.



T-1
Graduation : 0.01mm
Range : 0 ~ 160mm

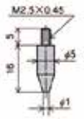
*8 contact points are included (20mm intervals).
*Replace the contact point in accordance with the measuring range.

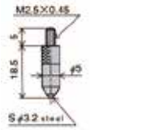
T-1W
Graduation : 0.01mm
Range : 0 ~ 220mm

*4 extension rods are included 20, 40, 60 and 80mm.
*Recombine the extension rods, in accordance with the measuring range.
*Two center-pointer type.

T-2
Graduation : 0.01mm
Range : 0 ~ 10mm

T-2W
Graduation : 0.01mm
Range : 0 ~ 20mm



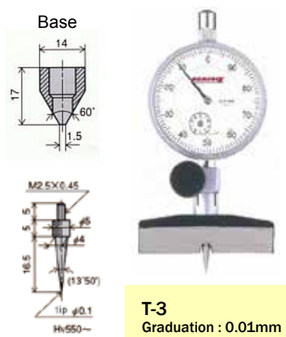


T-2B
Graduation : 0.01mm
Range : 0 ~ 5mm

*The dial face is at a right angle with the contact point, which facilitate easy reading from the upside.

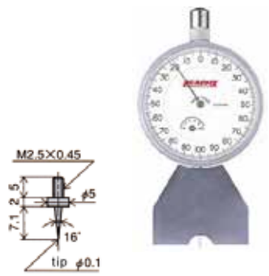
T-2C
Graduation : 0.01mm
Range : 0 ~ 10mm

*Needle Contact Point



T-3
Graduation : 0.01mm
Range : 0 ~ 10mm

*Needle Contact Point



T-4
Graduation : 0.001mm
Range : 0 ~ 1mm

*Needle Contact Point (XT-4)

T-6A
Graduation : 0.01mm
Range : 0 ~ 10mm

*Base Outer Φ25.0mm
*Needle Contact Point Φ2.0mm

T-6B
Graduation : 0.01mm
Range : 0 ~ 10mm

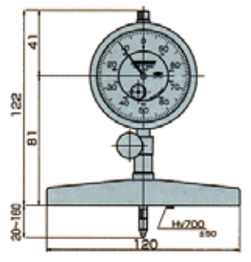
*Base Outer Φ25.0mm
*Needle Contact Point Φ1.0mm

■ Specifications

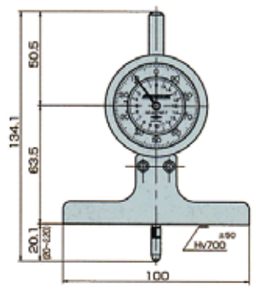
Model	Range (mm)	Accuracy (μm)	Dial Gauge				Base	
			Gauge installed	Graduation (mm)	Range (mm)	Measuring force less than (N)	Length (mm)	Width (mm)
T-1	0 ~ 160	±20	207F-T	0.01	20	2.0	120	14
T-1W	0 ~ 220	±20	207WF-T	0.01	20	2.0	100	11
T-2	0 ~ 10	±15	107F-T	0.01	10	1.4	60	14
T-2W	0 ~ 20	±20	207WF-T	0.01	20	2.0	75	11
T-2B	0 ~ 5	±20	196B-T	0.01	5	1.4	75	11
T-2C	0 ~ 10	±15	107F-T	0.01	10	1.4	75	11
T-3	0 ~ 10	±15	107F-T	0.01	10	1.4	60	as shown below
T-4	0 ~ 1	±5	*5F	0.001	1	1.5	40	10
T-6A	0 ~ 10	±15	107F-T	0.01	10	1.4	—	—
T-6B	0 ~ 10	±15	107F-T	0.01	10	1.4	—	—

*5F with Reversed Inner Dial

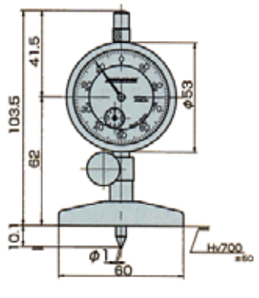
■ Dimensions



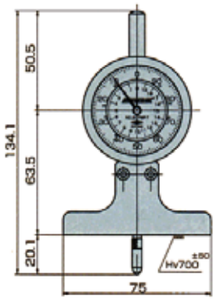
T-1



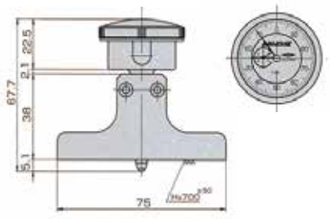
T-1W



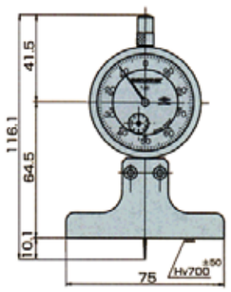
T-2



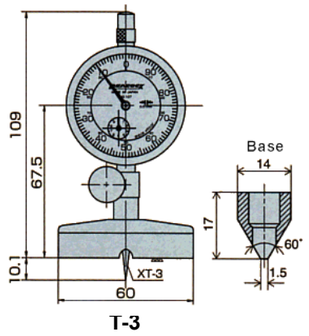
T-2W



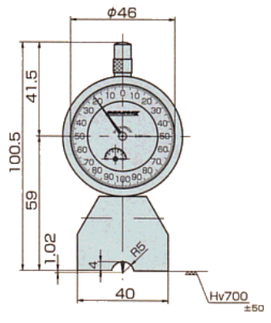
T-2B



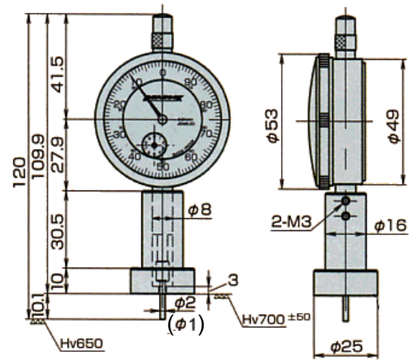
T-2C



T-3



T-4

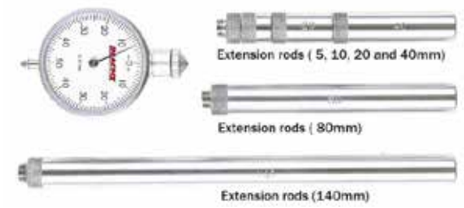


T-6A / T-6B
( ) is T-6B

Dial Inside Gauges

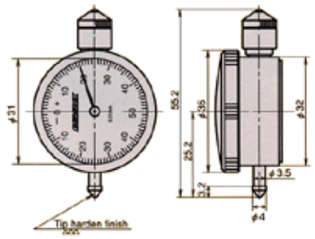
●Capable of continuously measuring comparatively large bores or inside wall surface with a given measuring force using flexibility of the dial gauge.

Without Magnetic Base



U-1
Graduation : 0.01mm
Range : 50 ~ 350mm
(Measuring range of dial gauge : 5mm)

■ Dimensions



With Magnetic Base

U2HA
Graduation : 0.01mm
Range : 66 ~ 88mm
(Measuring range of dial gauge : 4mm)

U2FA
Graduation : 0.01mm
Range : 92 ~ 110mm
(Measuring range of dial gauge : 5mm)

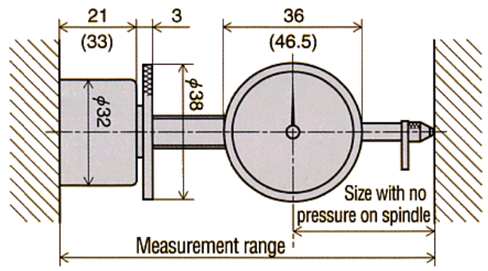
U2HB
Graduation : 0.01mm
Range : 80 ~ 92mm
(Measuring range of dial gauge : 4mm)

U2FB
Graduation : 0.01mm
Range : 110 ~ 120mm
(Measuring range of dial gauge : 5mm)

U3HA
Graduation : 0.01mm
Range : 66 ~ 80mm
(Measuring range of dial gauge : 4mm)

U3HB
Graduation : 0.01mm
Range : 80 ~ 92mm
(Measuring range of dial gauge : 4mm)

■ Dimensions ( ) are U2FA and U2FB

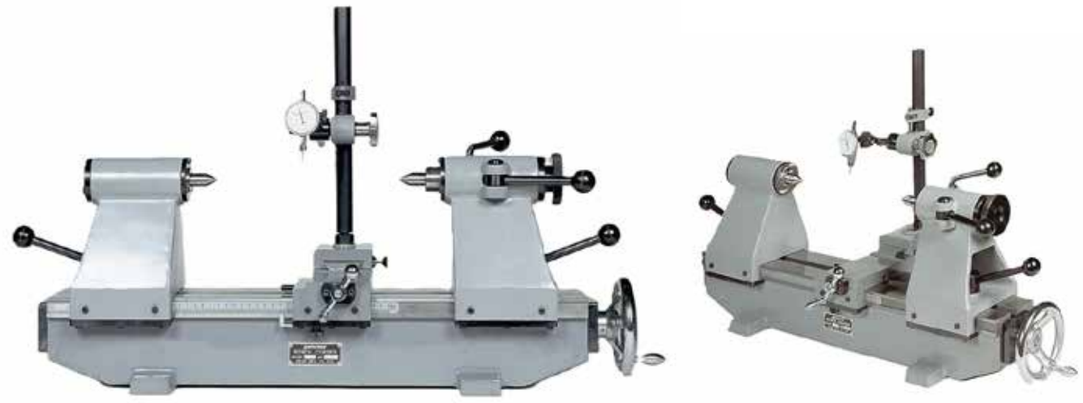


■ Specifications

Model	Gradation (mm)	Range (mm)	Reading	Accuracy MPE (μm)					Magnetic Power (kg)	Measuring force Less than (N)
				10 Scale	1/2 Rev.	1 Rev.	2 Rev.	Whole range		
U-1	0.01	50 ~ 350	0 – 50 - 0	9	—	±13	—	±20	—	2.0
U2HA	0.01	66 ~ 80	0 – 50 - 0	9	—	±13	—	±15	8 ~ 10kg	1.4
U2HB	0.01	80 ~ 92	0 – 50 - 0	9	—	±13	—	±15		1.4
U2FA	0.01	92 ~ 110	0 – 50 – 0	9	—	±13	—	±20		2.0
U2FB	0.01	110 ~ 120	0 – 50 - 0	9	—	±13	—	±20		2.0
U3HA	0.01	66 ~ 80	0 – 50 - 0	9	—	±13	—	±20		1.4
U3HB	0.01	80 ~ 92	0 – 50 - 0	9	—	±13	—	±20		1.4

Bench Center

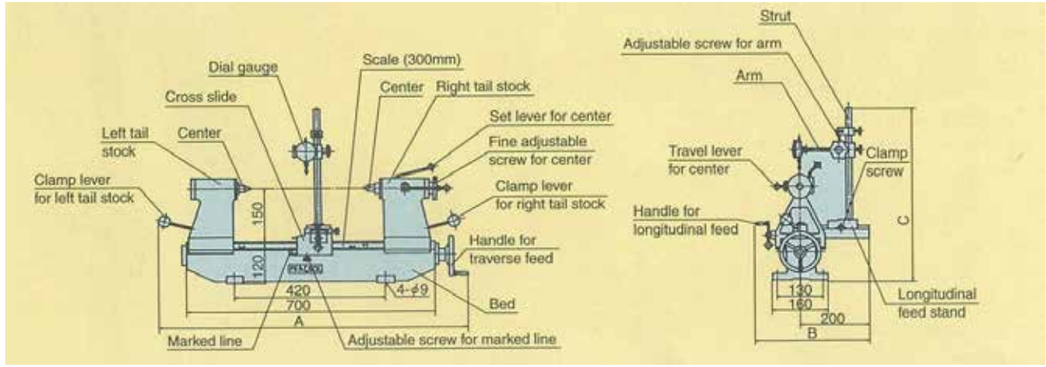
High-accuracy eccentricity tester used to measure eccentricity of articles over a wide range of rotary cutting tools, arbors, crankshafts, gears, piston heads or griding stones and to check circles for roundness.
(Dial Gauges are not furnished)



OA
Maximum Center distance : 300mm

Maximum work capacity dia. : 230mm

■ Dimensions



■ Specifications

Model	Center distance (mm)	Max. work capacity dia. (mm)	Use center	Overall dimensions			Approx. weight (kg)	Feed gear	
				(A) mm	(B) mm	(C) mm		Right and left	Back and forth
OA	300	230	MT No. 2	Approx. 875	Approx. 335	Approx. 500	51	Screw feed	Screw feed

Gauge Stand

SIS-6C and SIS-7 are economy-wise popular stands.
PDS-2 and PDS-2F can be installed with stem Φ20mm type gauges such as D-50 (S) and D-100 (S).

SIS-6C

SIS-7

PDS-2

PDS-2F

■Dimensions

■ Specifications

Model	Table surface	Table size	Effetive moving range	Allowable measuring depth	Stem installed
SIS-6C	Ceramic w/o grooves	Φ50mm	0 to approx. 100mm	Approx. 62.5mm	Φ8mm
SIS-7	Ground cast iron surface	74 x 74 cm	0 to approx. 100mm	Approx. 52mm	(※ Φ10mm)
PDS-2	Ceramic w/o grooves	100 x 100cm	0 to approx. 100mm	Approx. 60mm	Φ8mm
PDS-2F	Ceramic w/grooves	100 x 100cm	0 to approx. 100mm	Approx. 60mm	(※ Φ20mm)

(※) can be installed when split collar is removed.

Magnetic Stands

The stand using a powerful magnet features simple and stable holding at any place, easy handling, compactness and reasonable price.
Either lever dial indicator (held by Φ6mm stem) or standard dial gauge (held by lug back) is attachable to all types of these magnetic stands.
The dial gauges and indicators are not furnished.

NEW

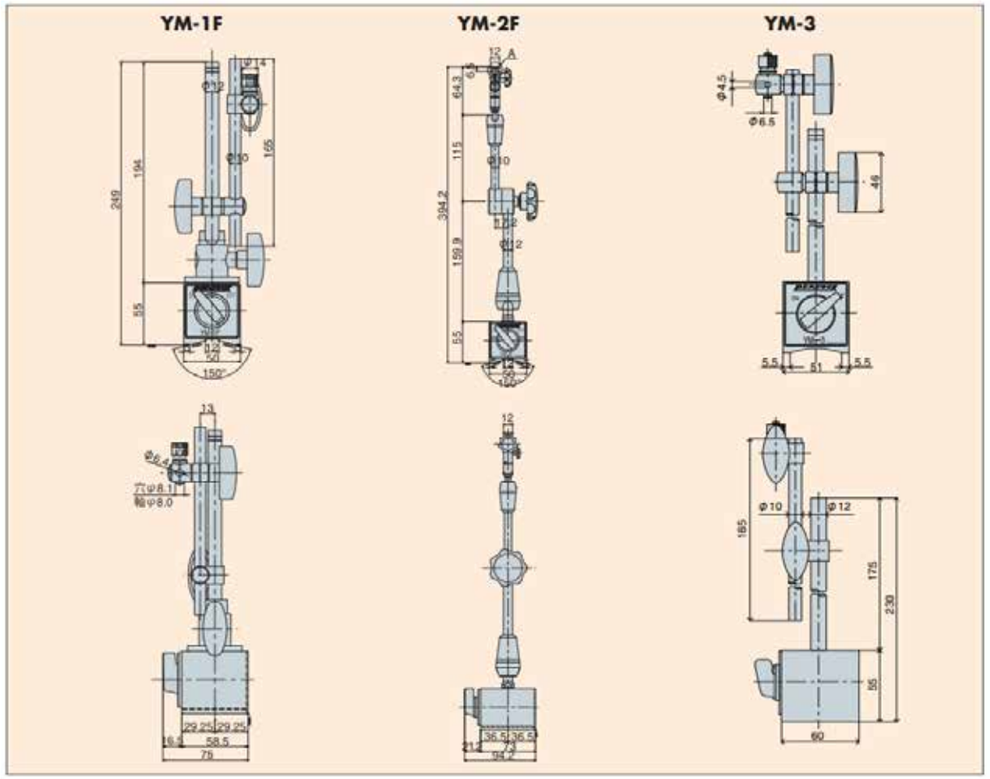
YM-1F
●Magnetic Power 80kgs

NEW

YM-2F
●Magnetic Power 100kgs
●with fine adjustment

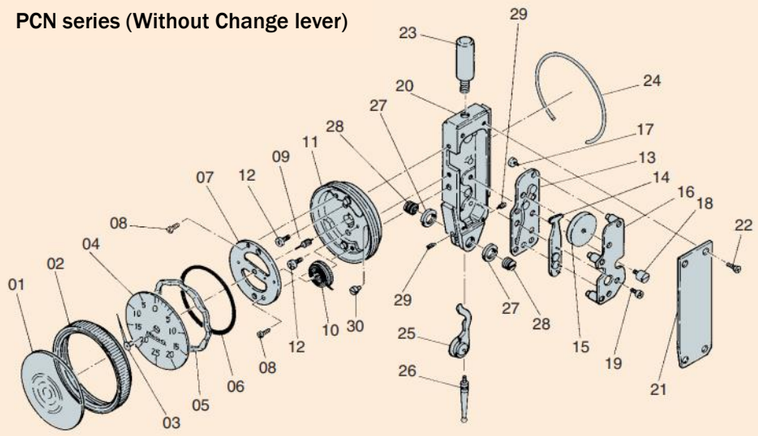
YM-3
●Magnetic Power 45kgs

■ Dimensions



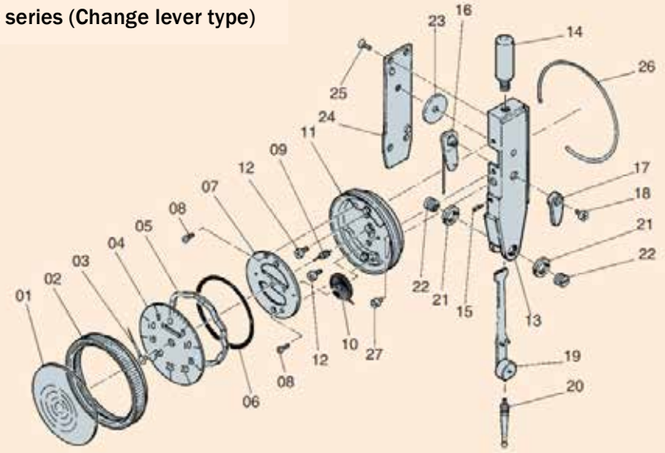
Parts Drawing

PCN series (Without Change lever)



1 Crystal	9 Pinion	17 *Screw for Metal Column	25 Lever with Bearing
2 Bezel	10 Idle Gear	18 *Stopper Screw	26 Contact Point
3 Pointer	11 *Base Metal	19 *Screw for Lower Plate	27 Nut for Pivot
4 Dial	12 *Screw for Base Metal	20 *Main Body	28 Pivot w/miniature Bearing
5 Plate Spring	13 *Lower Plate Assy	21 *Side Cover	29 Adjustment Screw
6 O-Ring	14 Sector Gear Assy	22 Screw for Side Cover	30 Hair Spring Column
7 Metal	15 Crown Gear	23 Stem	
8 Screw for Metal	16 *Upper Plate Assy	24 Wire Spring	

PC series (Change lever type)



1 Crystal	9 Pinion	17 Clutch Lever	25 Screw for Side Cover
2 Bezel	10 Idle Gear	18 Screw for Clutch Lever	26 Wire Spring
3 Pointer	11 *Base Metal	19 Sector Gear Assy	27 Hair Spring Column
4 Dial	12 *Screw for Base Metal	20 Contact Point	
5 Plate Spring	13 *Main Body	21 Nut for Pivot	
6 O-Ring	14 Stem	22 Pivot Assy w/Miniature Bearing	
7 Metal	15 *Stopper Screw	23 Crown Gear	
8 Screw for Metal	16 *Spring for Clutch lever Assy	24 *Side Cover	

*mark are not for sell

Pic Test Indicators

Standard type
Page 3～4

Large face
“D” Series
Page 5

Low measuring force
“E” Series
Page 5

Double face
“W” Series
Page 6

Non-electrifying
“U” Series
Page 6

One revolution
“Z” Series
Page 7

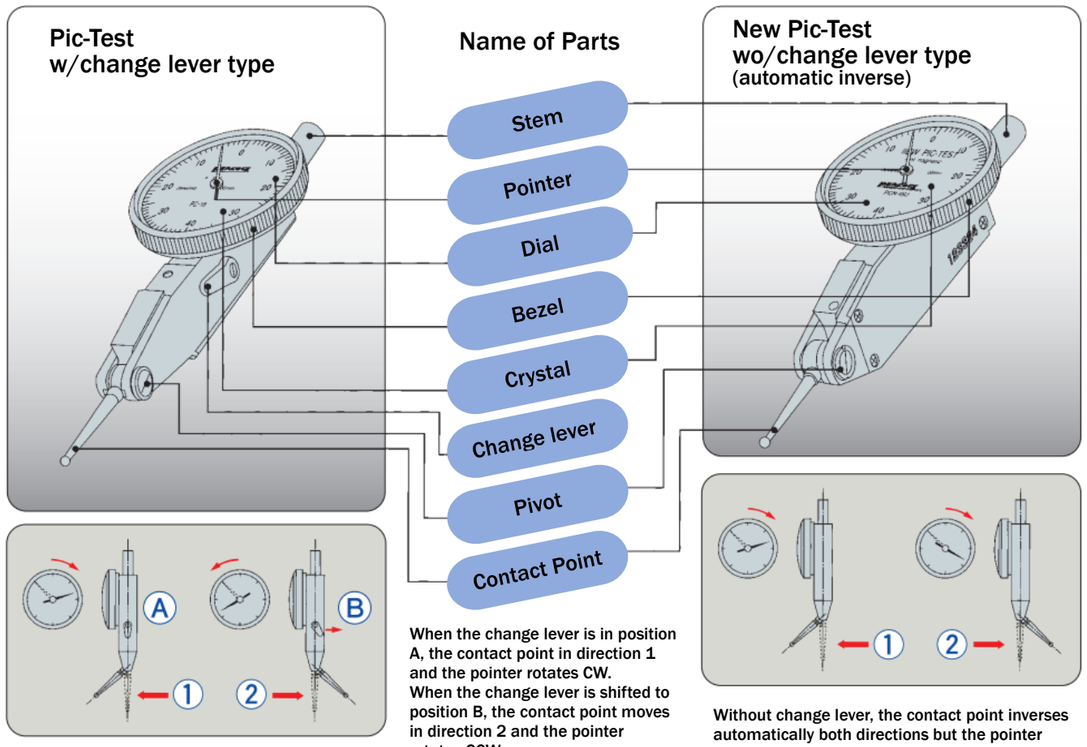
w/o Stem
“V” Series
Page 7

w/Ruby ball
“R” Series
Page 8

Accessories
Page 9～11

Quick Chart for “PEACOCK” Lever-Type Dial Indicators

Lever-type dial indicators are most suitable for alignment and TIR (Total Indicator Run-Out) testing. There are two types of lever-type dial indicators. Pivot bearings are used on all of Peacock’ s lever-type indicators, which assure exceptional precision over a long period of time.



When the change lever is in position A, the contact point in direction 1 and the pointer rotates CW.
When the change lever is shifted to position B, the contact point moves in direction 2 and the pointer rotates CCW.

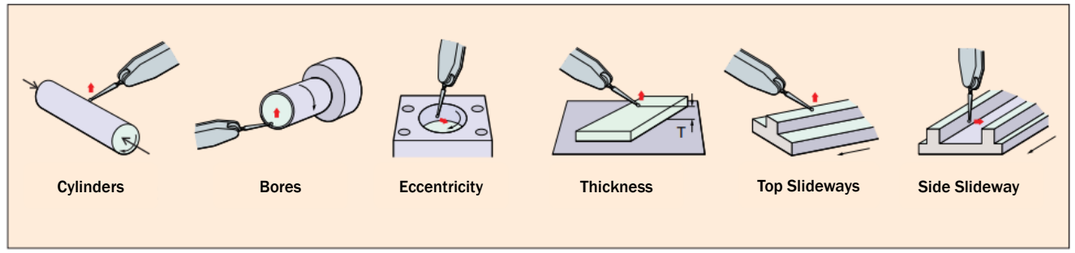
Without change lever, the contact point inverses automatically both directions but the pointer rotates always CW.

For particular requirements PC and PCN series are available.
Model Numbers ending with U, E, D, W, R, V and Z signify particular applications.

Example

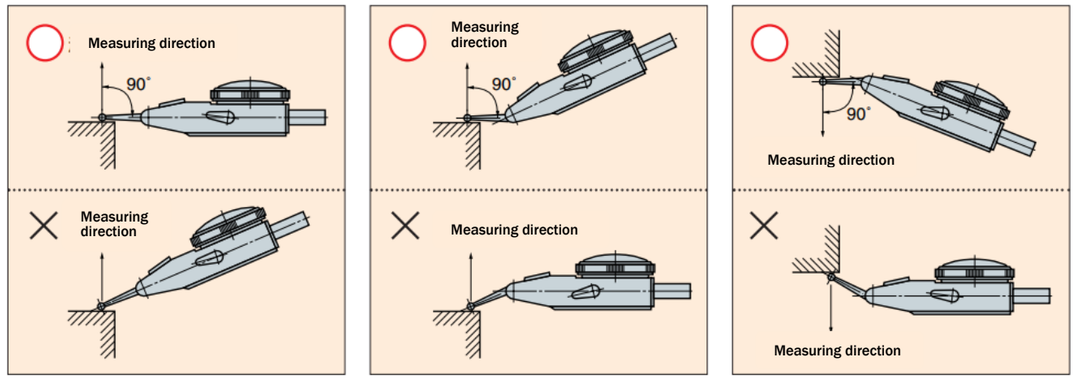
PCN-1AU (U type)	Anti-magnetic, non-electrifying	Anti-magnetic contact point and pointer allow valid measurement even in strong magnetic fields. Electric flow is block by ceramic stem.
PCN-1AE (E type)	Super low measuring force	Measuring force is lower than other lever-type indicators. Special indicators with high sensitivity for measurement soft, highly elastic materials.
PCN-1AD (D type)	Large dial face	Large dial face with large numbers allows easy reading of test results.
PC-1BW (W type)	Double dial face	Double sided dial faces allow easy reading from any direction.
PCN-1AR (R type)	Ruby ball Contact Point	With a Ruby ball, wear resistance has been improved. Also, Ruby ball is non electrifying and can be used safely with electrical discharge machine.
PCN-1AV (V type)	Without Fixed Stem	Hold by dovetail of the main body. Dovetail Stem Φ4, 6 and 8mm are available as an option.
PCN-1BZA (Z type)	Within One Revolution	Less than one rotation of the pointer for mis-reading. (A) downward and (B) upward are available for each application.

Applied Examples

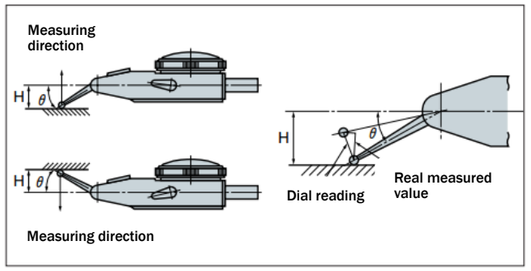


Precautions for Handling

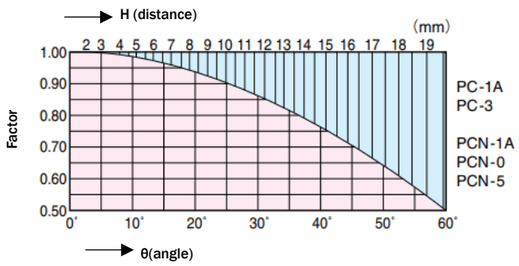
● Dial Indicators shall be used by being fixed to a rigid retainer to prevent the influence of flexure or the like. In measurement, the measuring direction shall be made perpendicular to the center line of the measuring probe.

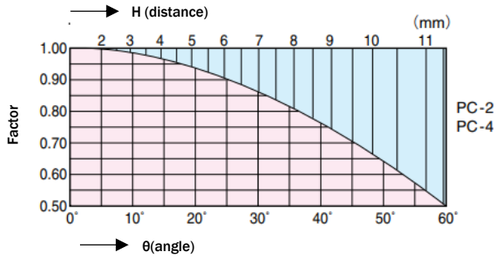


● In case they are not perpendicular, a correction by the following formula is necessary.
Due to various measuring direction, the contact point sometimes can not be angled perpendicular to the measuring device.
Examples the diagrams below, where the measuring prove is set at an non-perpendicular angles and the distance between the pivot of the contact point and the measuring device is signified by the letter H:
Displacement = quantity of pointer movement x COS θ



Example:
Using a PC-1A indicator, suppose the degree of angle is 30° and the Pic Test reading is 0.05mm. The factor for the PC-1A indicator from the graph is 0.87.
0.05mm x 0.87 = 0.0435 = 0.043mm





● When modification is not necessary.
If the measuring tolerance is 10% and the graph factor is above 0.9, modification by calculation is unnecessary.

Standard NEW PIC TEST / PIC TEST

Without change lever PCN series

- Without change lever (Automatic inverse type)
- Miniature Bearing used
- O-ring used

PCN-0
Graduation: 0.01mm
Range: 0.5mm
- Small dial face (Φ29mm)

PCN-1B
Graduation: 0.01mm
Range: 0.8mm

PCN-1L
Graduation: 0.01mm
Range: 1.0mm

PCN-2B
Graduation: 0.002mm
Range: 0.2mm

NEW

PCN-2L
Graduation: 0.002mm
Range: 0.28mm
- w/Long Contact Point L:19.86mm

PCN-S
Graduation: 0.001mm
Range: 0.14mm

Vertical type

PCN-5
Graduation: 0.01mm
Range: 0.5mm

Vertical type

NEW

PCN-6S
Graduation: 0.001mm
Range: 0.14mm

Change lever type PC series

- Miniature Bearing used
- O-ring used

PC-1A
Graduation: 0.01mm
Range: 0.5mm

PC-1B
Graduation: 0.01mm
Range: 0.8mm

PC-1L
Graduation: 0.01mm
Range: 1.0mm

PC-2
Graduation: 0.002mm
Range: 0.28mm

Parallel type

PC-3
Graduation: 0.01mm
Range: 0.5mm

Parallel type

PC-3L
Graduation: 0.01mm
Range: 1.0mm

Parallel type

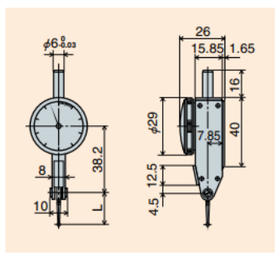
PC-4
Graduation: 0.002mm
Range: 0.28mm

■Specifications

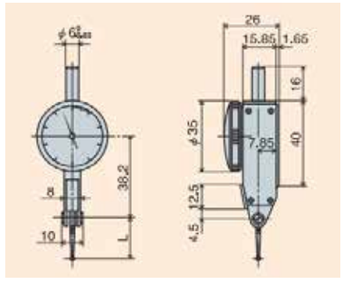
Model	Graduation (mm)	Range (mm)	Reading	Accuracy MPE (μm)					Measuring force Less than (N)	Contact Point
				10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability		
PCN-0	0.01	0.5	0-25-0	5	-	6	4	3	0.3	XN1A-2
PCN-1A	0.01	0.5	0-25-0	5	-	6	4	3	0.3	XN1A-2
PCN-1B	0.01	0.8	0-40-0	5	-	9	4	3	0.3	XN1B-2
PCN-1L	0.01	1.0	0-50-0	5	-	10	5	3	0.3	XN1L-2
PCN-2	0.002	0.28	0-140-0	2	-	4	3	1	0.3	XN2-2
PCN-2B	0.002	0.2	0-100-0	2	-	4	3	1	0.3	XN2B-2
NEW PCN-2L	0.002	0.28	0-140-0	2	-	4	3	1	0.3	XN2L-2
PCN-S	0.001	0.14	0-70-0	2	-	4	3	1	0.3	XNS-2
PCN-7A	0.01	1.5	0-25-0	5	10	16	5	3	0.3	XN1A-2
PCN-7C	0.002	0.6	0-100-0	2	5	7	4	1	0.3	XN2B-2
PCN-5	0.01	0.5	0-25-0	5	-	6	4	3	0.3	XN1A-2
PCN-6	0.002	0.28	0-140-0	2	-	4	3	1	0.3	XN2-2
PCN-6S	0.001	0.14	0-70-0	2	-	4	3	1	0.3	XNS-2

PC-1A	0.01	0.5	0-25-0	5	-	6	4	3	0.4	XP1A-2
PC-1B	0.01	0.8	0-40-0	5	-	9	4	3	0.4	XP1B-2
PC-1L	0.01	1.0	0-50-0	5	-	10	5	3	0.4	XP1L-2
PC-2	0.002	0.28	0-140-0	2	-	4	3	1	0.4	XP2-2
PC-3	0.01	0.5	0-25-0	5	-	6	4	3	0.4	XP1A-2
PC-3L	0.01	1.0	0-50-0	5	-	10	5	3	0.4	XP1L-2
PC-4	0.002	0.28	0-140-0	2	-	4	3	1	0.4	XP2-2

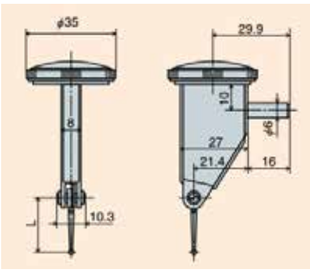
■Dimensions



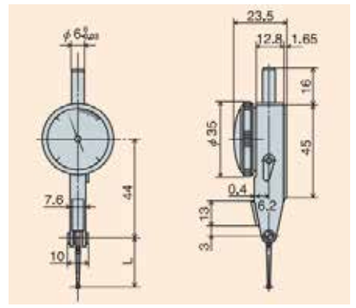
Model	L (mm)
PCN-1A, PCN-7A	21.3
PCN-1B	22.2
PCN-1L	42.8
PCN-2	17.94
PCN-2L	23.47
PCN-2B, PCN-7C	16.6
PCN-S	11.7



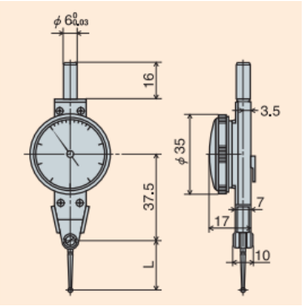
Model	L (mm)
PCN-0	21.3



Model	L (mm)
PCN-5	21.3
PCN-6	17.8
PCN-6S	11.7



Model	L (mm)
PC-1A	21.4
PC-1B	22.4
PC-1L	43.0



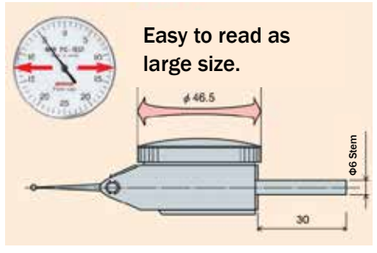
Large dial face D series

Easy reading thanks to large size dial face Φ46.5mm

PCN-1AD
Graduation: 0.01mm
Range: 0.5mm

PCN-1LD
Graduation: 0.01mm
Range: 1.0mm

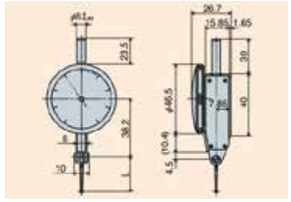
PCN-SD
Graduation: 0.001mm
Range: 0.2mm



■Specifications

Model	Graduation (mm)	Range (mm)	Reading	Accuracy MPE (μm)					Measuring force Less than (N)	Contact Point
				10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability		
PCN-1AD	0.01	0.5	0-25-0	5	-	6	4	3	0.3	XN1A-2
PCN-1LD	0.01	1.0	0-50-0	5	-	10	5	3	0.3	XN1L-2
PCN-2BD	0.002	0.2	0-100-0	2	-	4	3	1	0.3	XN2B-2
PCN-SD	0.001	0.2	0-100-0	2	-	4	3	1	0.3	XN2B-2

■Dimensions



Model	L (mm)
PCN-1AD	21.3
PCN-2BD, PCN-SD	16.6
PCN-1LD	42.8

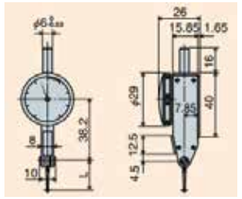
Super low measuring force E series

Suitable for flaw-free measure of an object under measurement and for measurement of plastic products.

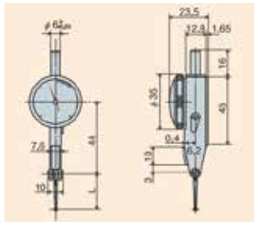
PCN-2E
Graduation: 0.002mm
Range: 0.28mm

PC-1LE
Graduation: 0.01mm
Range: 1.0mm

■Dimensions



Model	L (mm)
PCN-1AE	21.3
PCN-1BE	22.2
PCN-1LE	42.8
PCN-2E	17.94



Model	L (mm)
PC-1AE	21.4
PC-1BE	22.4
PC-1LE	43.0

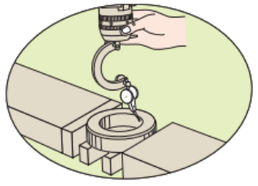
■Specifications

Model	Graduation (mm)	Range (mm)	Reading	Accuracy MPE (μm)					Measuring force Less than (N)	Contact Point
				10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability		
PCN-1AE	0.01	0.5	0-25-0	5	-	6	4	3	0.05	XN1A-2
PCN-1BE	0.01	0.8	0-40-0	5	-	9	4	3	0.05	XN1B-2
PCN-1LE	0.01	1.0	0-50-0	5	-	10	5	3	0.05	XN1L-2
PCN-2E	0.002	0.28	0-140-0	2	-	4	3	1	0.05	XN2-2
PC-1AE	0.01	0.5	0-25-0	5	-	6	4	3	0.1	XP1A-2
PC-1BE	0.01	0.8	0-40-0	5	-	9	4	3	0.1	XP1B-2
PC-1LE	0.01	1.0	0-50-0	5	-	10	5	3	0.1	XP1L-2

Double Dial type W series

PC-1BW
Graduation: 0.01mm
Range: 0.8mm

Alignment work

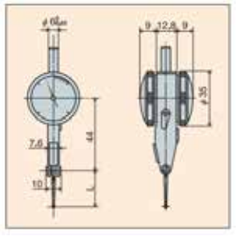


With Double Dial type, readings can be made easily even if gauge is turned 180 deg.

■Specifications

Model	Graduation (mm)	Range (mm)	Reading	Accuracy MPE (μm)					Measuring force Less than (N)	Contact Point
				10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability		
PC-1BW	0.01	0.8	0-40-0	5	-	9	4	3	0.4	XP1B-2
PC-1LW	0.01	1.0	0-50-0	5	-	10	6	4	0.8	XP1L-2

■Dimensions



Model	L (mm)
PC-1BW	22.4
PC-1LW	43.0

Non-electrifying & Complete Anti-magnetic U series

Electric flow is blocked at the ceramic stem and Ruby ball contact point, even of a magnetic stand is electrified. Thus, you can continue your work without any problem.

PCN-1BU
Graduation: 0.01mm
Range: 0.8mm

PCN-1LU
Graduation: 0.01mm
Range: 1.0mm

PCN-SU
Graduation: 0.001mm
Range: 0.14mm

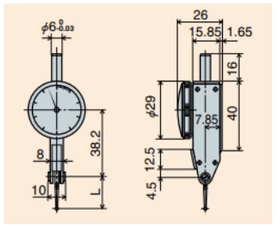
Vertical type

PCN-5U
Graduation: 0.01mm
Range: 0.5mm

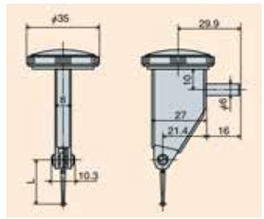
■Specifications

Model	Graduation (mm)	Range (mm)	Reading	Accuracy MPE (μm)					Measuring force Less than (N)	Contact Point
				10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability		
PCN-1AU	0.01	0.5	0-25-0	5	-	6	4	3	0.3	XN1A-2R
PCN-1BU	0.01	0.8	0-40-0	5	-	9	4	3	0.3	XN1B-2R
PCN-1LU	0.01	1.0	0-50-0	5	-	10	5	3	0.3	XN1L-2R
PCN-2U	0.002	0.28	0-140-0	2	-	4	3	1	0.3	XN2-2R
PCN-2BU	0.002	0.2	0-100-0	2	-	4	3	1	0.3	XN2B-2R
PCN-SU	0.001	0.14	0-70-0	2	-	4	3	1	0.3	XNS-2R
PCN-5U	0.01	0.5	0-25-0	5	-	6	4	3	0.3	XN1A-2R
PCN-6U	0.002	0.28	0-140-0	2	-	4	3	1	0.3	XN2-2R

■Dimensions



Model	L (mm)
PCN-1AU	21.3
PCN-1BU	22.2
PCN-1LU	42.8
PCN-2U	17.94
PCN-2BU	16.6
PCN-SU	11.7



Model	L (mm)
PCN-5U	21.3
PCN-6U	17.8

Special Type Test Indicators

One Revolution Z series

To prevent misreading

A type is downward and B type is Upward

PCN-1BZ (A)
Graduation: 0.01mm
Range: 0.6mm

PCN-1BZ (B)
Graduation: 0.01mm
Range: 0.6mm

PCN-2Z (A)
Graduation: 0.002mm
Range: 0.6mm

PCN-2Z (B)
Graduation: 0.002mm
Range: 0.2mm

■ Specifications

Model	Graduation (mm)	Range (mm)	Movable Range	Accuracy MPE (μm)					Measuring force Less than (N)	Contact Point
				10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability		
PCN-1BZ (A)	0.01	0.6	0.7	5	-	9	4	3	0.3	XN1B-2
PCN-1BZ (B)	0.01	0.6	0.7	5	-	9	4	3	0.3	XN1B-2
PCN-1LZ (A)	0.01	0.8	0.9	5	-	10	5	3	0.3	XN1L-2
PCN-1LZ (B)	0.01	0.8	0.9	5	-	10	5	3	0.3	XN1L-2
PCN-2Z (A)	0.002	0.2	0.24	2	-	4	3	1	0.3	XN2-2
PCN-2Z (B)	0.002	0.2	0.24	2	-	4	3	1	0.3	XN2-2

Without fixed Stem V series

Attach dovetail stem to where you like and our dovetail stems are optional.

PC-1LV
Graduation: 0.01mm
Range: 1.0mm

PC-2V
Graduation: 0.002mm
Range: 0.28mm

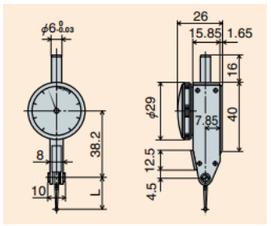
PCN-1BV
Graduation: 0.01mm
Range: 0.8mm

PCN-SV
Graduation: 0.001mm
Range: 0.14mm

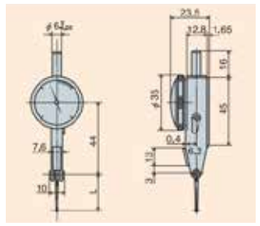
■ Specifications

Model	Graduation (mm)	Range (mm)	Reading	Accuracy MPE (μm)					Measuring force Less than (N)	Contact Point
				10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability		
PC-1AV	0.01	0.5	0-25-0	5	-	6	4	3	0.4	XP1A-2
PC-1BV	0.01	0.8	0-40-0	5	-	9	4	3	0.4	XP1B-2
PC-1LV	0.01	1.0	0-50-0	5	-	10	5	3	0.4	XP1L-2
PC-2V	0.002	0.28	0-140-0	2	-	4	3	1	0.4	XP2-2
PCN-1AV	0.01	0.5	0-25-0	5	-	6	4	3	0.3	XN1A-2
PCN-1BV	0.01	0.8	0-40-0	5	-	9	4	3	0.3	XN1B-2
PCN-1LV	0.01	1.0	0-50-0	5	-	10	5	3	0.3	XN1L-2
PCN-2V	0.002	0.28	0-140-0	2	-	4	3	1	0.3	XN2-2
PCN-2BV	0.002	0.2	0-100-0	2	-	4	3	1	0.3	XN2B-2
PCN-SV	0.001	0.14	0-70-0	2	-	4	3	1	0.3	XNS-2

■ Dimensions



Model	L (mm)
PCN-1AV	21.3
PCN-1BZ (A)(B), PCN-1BV	22.2
PCN-1LZ (A)(B), PCN-1LV	42.8
PCN-2Z (A)(B), PCN-2V	17.94
PCN-2BV	16.6
PCN-SV	11.7



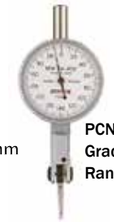
Model	L (mm)
PC-1AV	21.4
PC-1BV	22.4
PC-1LV	43.0
PC-2V	12.0

*V series is without stem.

Special Type Test Indicators

PIC TEST / NEW PIC TEST with Ruby ball Contact Point R series
(Contact Point ball dia. 2mm only)

PC-1BR
Graduation: 0.01mm
Range: 0.8mm



PCN-2R
Graduation: 0.002mm
Range: 0.28mm

PCN-1LR
Graduation: 0.01mm
Range: 1.0mm

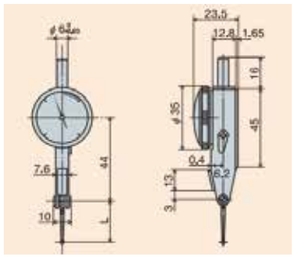
Vertical type

PCN-6R
Graduation: 0.002mm
Range: 0.28mm

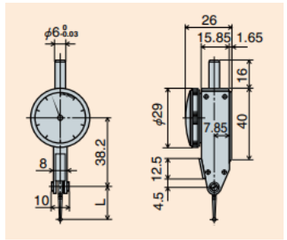
■ Specifications

Model	Graduation (mm)	Range (mm)	Reading	Accuracy MPE (μm)					Measuring force Less than (N)	Contact Point
				10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability		
PC-1AR	0.01	0.5	0-25-0	5	-	6	4	3	0.4	XP1A-2R
PC-1BR	0.01	0.8	0-40-0	5	-	9	4	3	0.4	XP1B-2R
PC-1LR	0.01	1.0	0-50-0	5	-	10	5	3	0.4	XP1L-2R
PC-2R	0.002	0.28	0-140-0	2	-	4	3	1	0.4	XP2-2R
PCN-1AR	0.01	0.5	0-25-0	5	-	6	4	3	0.3	XN1A-2R
PCN-1BR	0.01	0.8	0-40-0	5	-	9	4	3	0.3	XN1B-2R
PCN-1LR	0.01	1.0	0-50-0	5	-	10	5	3	0.3	XN1L-2R
PCN-2R	0.002	0.28	0-140-0	2	-	4	3	1	0.3	XN2-2R
PCN-2BR	0.002	0.2	0-100-0	2	-	4	3	1	0.3	XN2B-2R
PCN-SR	0.001	0.14	0-70-0	2	-	4	3	1	0.3	XNS-2R
PCN-5R	0.01	0.5	0-25-0	5	-	6	4	3	0.3	XN1A-2R
PCN-6R	0.002	0.28	0-140-0	2	-	4	3	1	0.3	XN2-2R

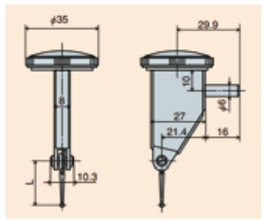
■ Dimensions



Model	L (mm)
PC-1AR	21.4
PC-1BR	22.4
PC-1LR	43.0
PC-2R	12.0



Model	L (mm)
PCN-1AR	21.3
PCN-1BR	22.2
PCN-1LR	42.8
PCN-2R	17.94
PCN-2BR	16.6
PCN-SR	11.7



Model	L (mm)
PCN-5R	21.3
PCN-6R	17.8

Right Angle Contact Point for PIC TEST

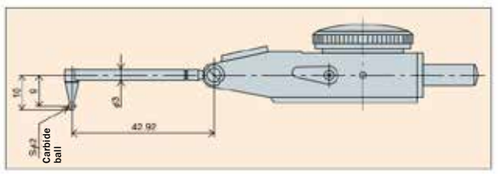
Contact Point Part No. XP1LX-2

Unique Contact Point not existing before!

A Contact Point end bent at a right has made it possible to make a measurement of an object that used to be impossible to measure! Set the Contact Point so that it is horizontal and perpendicular to work.

We also supply PC-1L w/Ct. Point XP1LX-2.

■ Dimensions

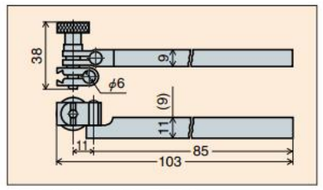


Accessories (Option)

●Replaceable Contact Point
(Carbide ball)

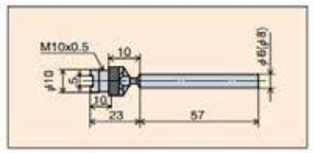
S Φ0.5mm
S Φ0.8mm
S Φ1mm
S Φ2mm (Standard)
S Φ3mm
S Φ2mm (Ruby ball)

●Pic Test Holder



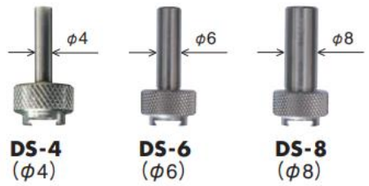
PTH-1, 2 ( ) is PTH-2

●Universal Holder

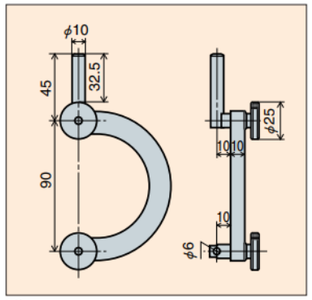


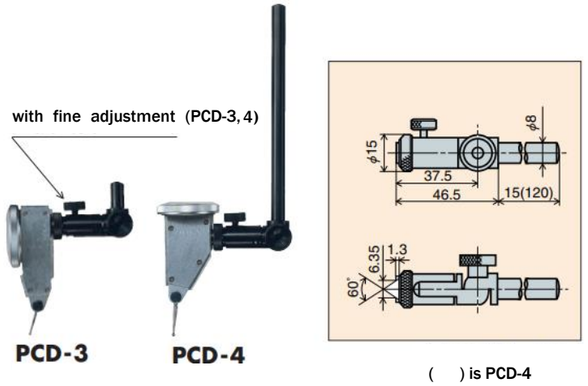
PTH-3, 4 ( ) is PTH-4

●Dovetail stem

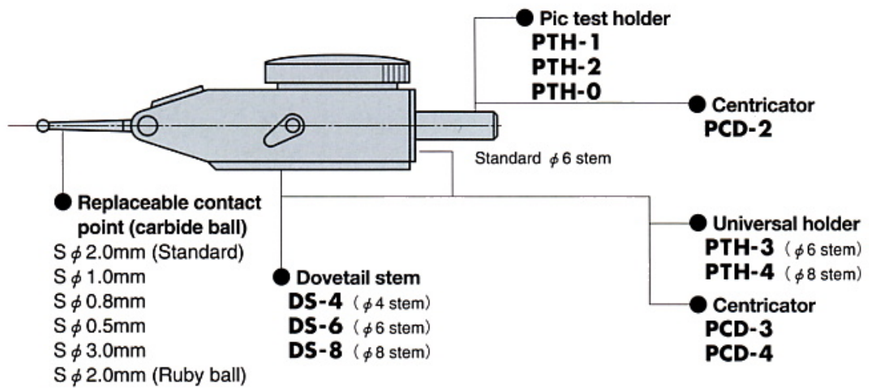


●Centricator (Pic Test Indicator is optional.)



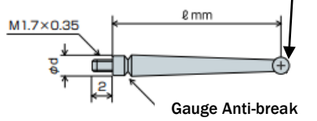


( ) is PCD-4



Replaceable Contact Point (M1.7 x0.35 0.35)

S Φ 2.0mm Carbide Contact Point
(S Φ 3.0mm, 1.0mm, 0.8mm, 0.5mm items. S Φ are stock 2.0mm
Ruby ball is also available.



Gauge Anti-break
Measuring Element

For Pic Test (Change lever type)

Part No.	L (mm)	Φball (mm)	Φd (mm)	Applicable Indicator
XP1A-2R (Ruby ball)	18.2	2	2.5	PC-1A PC-1AE PC-3 PC-1AV PC-1AR
XP1A-3	18.2	3	2.5	PC-1A PC-1AE PC-3 PC-1AV
XP1A-2	18.2	2	2.5	
XP1A-1	18.2	1	2.5	
XP1A-08	18.2	0.8	2.5	
XP1A-05	18.2	0.5	2.5	
XP1B-2R (Ruby ball)	19.24	2	2.5	PC-1B PC-1BE PC-1BW PC-1BV PC-1BR
XP1B-3	19.24	3	2.5	PC-1B PC-1BE PC-1BW PC-1BV
XP1B-2	19.24	2	2.5	
XP1B-1	19.24	1	2.5	
XP1B-08	19.24	0.8	2.5	
XP1B-05	19.24	0.5	2.5	
XP1L-2R (Ruby ball)	39.72	2	3.0	PC-1L PC-1LE PC-3L PC-1LV PC-1LR
XP1L-3	39.72	3	3.0	PC-1L PC-1LE PC-3L PC-1LV
XP1L-2	39.72	2	3.0	
XP1L-1	39.72	1	3.0	
XP1L-08	39.72	0.8	3.0	
XP1L-05	39.72	0.5	3.0	
XP2-2R (Ruby ball)	8.80	2	2.2	PC-2 PC-4 PC-2V PC-2R
XP2-3	8.80	3	2.2	PC-2 PC-4 PC-2V
XP2-2	8.80	2	2.2	
XP2-1	8.80	1	2.2	
XP2-08	8.80	0.8	2.2	
XP2-05	8.80	0.5	2.2	

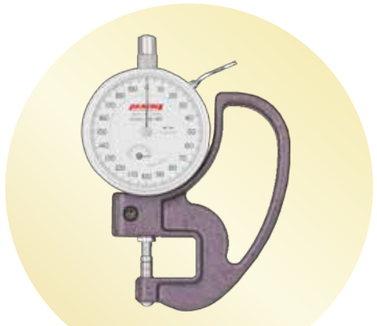
For New Pic Test (without Change lever type)

Part No.	L (mm)	Φball (mm)	Φd (mm)	Applicable Indicator
XN1A-2R (Ruby ball)	17.74	2	2.5	PCN-1A PCN-0 PCN-1AE PCN-1AD PCN-5 PCN-7A PCN-1AU PCN-5U PCN-1AR PCN-5R PCN-1AV
XN1A-3	17.74	3	2.5	PCN-1A PCN-0 PCN-1AE PCN-1AD PCN-5 PCN-7A PCN-1AV
XN1A-2	17.74	2	2.5	
XN1A-1	17.74	1	2.5	
XN1A-08	17.74	0.8	2.5	
XN1A-05	17.74	0.5	2.5	
XN1B-2R (Ruby ball)	18.63	2	2.5	PCN-1B PCN-1BE PCN-1BU PCN-1BZ (A)(B) PCN-1BR PCN-1BV
XN1B-3	18.63	3	2.5	PCN-1B PCN-1BE PCN-1BZ (A)(B) PCN-1BV
XN1B-2	18.63	2	2.5	
XN1B-1	18.63	1	2.5	
XN1B-08	18.63	0.8	2.5	
XN1B-05	18.63	0.5	2.5	
XN1L-2R (Ruby ball)	39.00	2	2.5	PCN-1L PCN-1LE PCN-1LD PCN-1LU PCN-1LZ (A)(B) PCN-1LR PCN-1LV
XN1L-3	39.00	3	2.5	PCN-1L PCN-1LE PCN-1LD PCN-1LZ (A)(B) PCN-1LV
XN1L-2	39.00	2	2.5	
XN1L-1	39.00	1	2.5	
XN1L-08	39.00	0.8	2.5	
XN1L-05	39.00	0.5	2.5	
XN2-2R (Ruby ball)	14.33	2	2.2	PCN-2 PCN-2E PCN-6 PCN-2U PCN-6U PCN-2Z(A)(B) PCN-2R PCN-6R PCN-2V
XN2-3	14.33	3	2.2	PCN-2 PCN-2E PCN-6 PCN-2Z(A)(B) PCN-2V
XN2-2	14.33	2	2.2	
XN2-1	14.33	1	2.2	
XN2-08	14.33	0.8	2.2	
XN2-05	14.33	0.5	2.2	
XN2B-2R (Ruby ball)	13.00	2	2.2	PCN-2B PCN-2BD PCN-7C PCN-SD PCN-2BU PCN-2BR PCN-2BV
XN2B-3	13.00	3	2.2	PCN-2B PCN-2BD PCN-7C PCN-SD PCN-2BV
XN2B-2	13.00	2	2.2	
XN2B-1	13.00	1	2.2	
XN2B-08	13.00	0.8	2.2	
XN2B-05	13.00	0.5	2.2	
XN2L-2R (Ruby ball)	19.86	2	2.2	PCN-2L
XN2L-3	19.86	3	2.2	
XN2L-2	19.86	2	2.2	
XN2L-1	19.86	1	2.2	
XN2L-08	19.86	0.8	2.2	
XN2L-05	19.86	0.5	2.2	
XNS-2R (Ruby ball)	8.13	2	2.2	PCN-S PCN-SU PCN-SR PCN-SV PCN-6S
XNS-3	8.13	3	2.2	PCN-S PCN-SV PCN-6S
XNS-2	8.13	2	2.2	
XNS-1	8.13	1	2.2	
XNS-08	8.13	0.8	2.2	
XNS-05	8.13	0.5	2.2	

FRAMECH SWISS

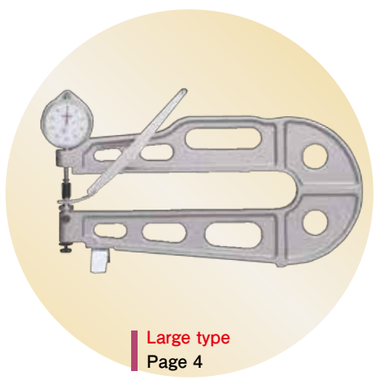
Dial Thickness Gauges

Standard type
Page 1-2



High precision type
0.001mm
Page 3

Roller type
Page 3

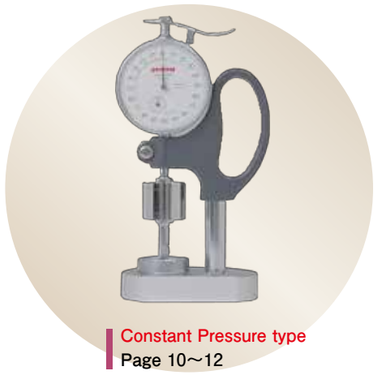


Large type
Page 4

Pipe Gauge
Page 5

Lens Gauge
Page 5

Stand type
Page 6



Constant Pressure type
Page 10～12

Digital type
Page 13～14

Dial Thickness Gauges

0.01mm type
These thickness gauges are especially handy for measuring thickness of small parts, metal, rubber, vinyl, paper, foil and other sheet material.

G
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ10mm flat contact point and anvil (Ceramic)

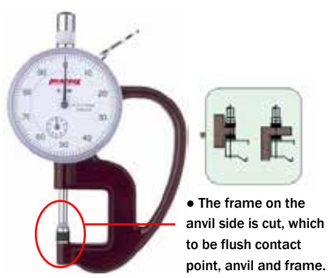
G-0.4N
Graduation: 0.01mm
Range: 0 ~ 10mm
- Measuring force initial pressure 0.4N

G-2.4N
Graduation: 0.01mm
Range: 0 ~ 10mm
- Measuring force final pressure 2.4N

G-20
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ20mm flat contact point and anvil (Metal)

G-30
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ30mm flat contact point and anvil (Metal)

G-1A
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ5mm flat contact point and anvil (Metal)



G-1M
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ6mm flat contact point and anvil (Ceramic)

- The frame on the anvil side is cut, which to be flush contact point, anvil and frame.

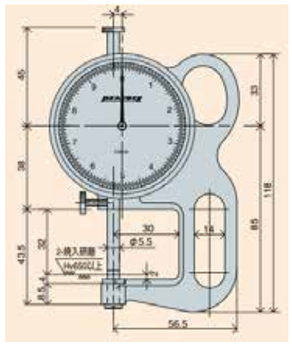
Paper Gauge

G-2
Graduation: 0.01mm
Range: 0 ~ 20mm
- Φ10mm flat contact point and anvil (Ceramic)

PG-10
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ10mm flat contact point and anvil (Metal)
- μm unit on the dial plate

Dial Swift Gauge

Q-1
Graduation: 0.05mm
Range: 0 ~ 25mm
- Φ5.5mm flat contact point and anvil (Metal)



The dial swift gauge is used for the same purpose as an ordinary micrometer to measure outside sizes.

H
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ10mm flat contact point and anvil (Ceramic)

H-0.4N
Graduation: 0.01mm
Range: 0 ~ 10mm
- Measuring force initial pressure 0.4N

H2.4N
Graduation: 0.01mm
Range: 0 ~ 10mm
- Measuring force final pressure 2.4N

H-20
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ20mm flat contact point and anvil (metal)

H-30
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ30mm flat contact point and anvil (metal)

H-1A
Graduation: 0.01mm
Range: 0 ~ 10mm
- Φ5mm flat contact point and anvil (Metal)

● Bottle Wall Thickness Gauge

H-2
Graduation: 0.01mm
Range: 0 ~ 10mm
- Ball type contact point and anvil

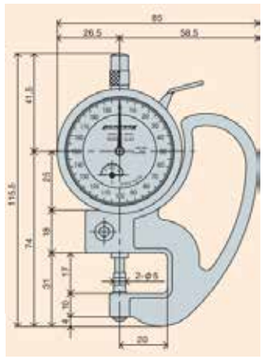
■ Specifications

Model	Graduation (mm)	Range (mm)	Throat depth (mm)	Accuracy (μm)	Contact Point		Measuring force less than (N)
					Dia (mm)	Parallelism (μm)	
G	0.01	0 - 10	20	±20	10	5	1.8
G-0.4N	0.01	0 - 10	20	±20	10	5	Initial pressure 0.4N
G-2.4N	0.01	0 - 10	20	±20	10	5	Final pressure 2.4N
G-MT	0.01	0 - 10	20	±20	10 (Metal)	5	1.8
G-1A	0.01	0 - 10	20	±20	5	5	1.8
G-1M	0.01	0 - 10	20	±20	6	5	1.8
G-2	0.01	0 - 20	33	±22	10	5	2.0
G-20	0.01	0 - 10	20	±20	20 (Metal)	15	1.8
G-30	0.01	0 - 10	20	±20	30 (Metal)	20	1.8
H	0.01	0 - 10	120	±20	10	5	1.8
H-0.4N	0.01	0 - 10	120	±20	10	5	Initial pressure 0.4N
H-2.4N	0.01	0 - 10	120	±20	10	5	Final pressure 2.4N
H-MT	0.01	0 - 10	120	±20	10 (Metal)	5	1.8
H-1A	0.01	0 - 10	120	±20	5	5	1.8
H-2	0.01	0 - 10	120	±20	Ball type	-	1.8
H-20	0.01	0 - 10	120	±20	20 (Metal)	15	1.8
H-30	0.01	0 - 10	120	±20	30 (Metal)	20	1.8
Q-1	0.05	0 - 25	30	±100	5.5	10	-

Dial Thickness Gauges

0.001mm type

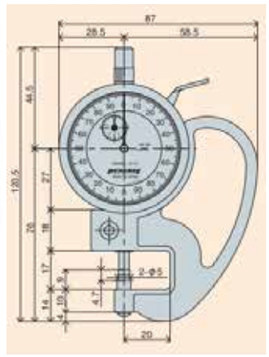
Dimensions



G-6C

Graduation: 0.001mm
Range: 0 ~ 1mm
- Φ5mm flat contact point and anvil (Metal)

Dimensions



G-7C

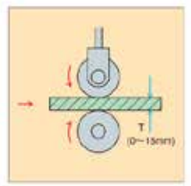
Graduation: 0.001mm
Range: 0 ~ 5mm
- Φ5mm flat contact point and anvil (Metal)

■ Specifications

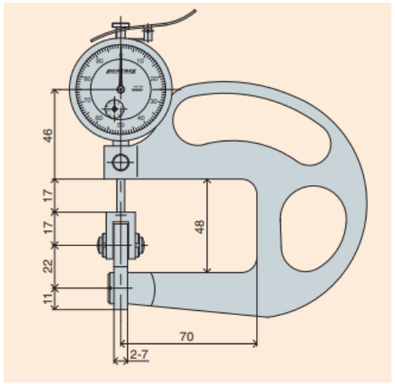
Model	Graduation (mm)	Range (mm)	Throat depth (mm)	Accuracy (μm)	Contact Point		Measuring force less than (N)
					Dia (mm)	Parallelism (μm)	
G-6C	0.001	0 - 1	20	±5	5	3	1.8
G-7C	0.001	0 - 5	20	±10	5	3	1.8

Dial Thickness Gauge Roller type

Special gauges for measuring of horizontally sliding a gauge with an object to be in inspected laid since the contact point and anvil are made with the roller.
Convenient to continuously measuring thickness of thin objects, paper rubber and film etc.



Dimensions



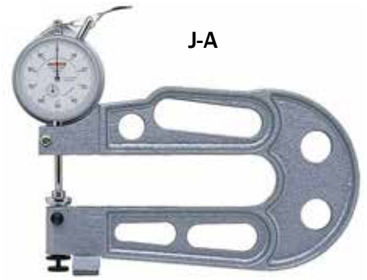
■ Specifications

Model	Graduation (mm)	Range (mm)	Throat depth (mm)	Accuracy (μm)	Roller Contact Point			Measuring force less than (N)
					OD (mm)	Width (mm)	Parallelism (μm)	
HR-1	0.01	0 - 15	70	±22	22	7	10	2.0

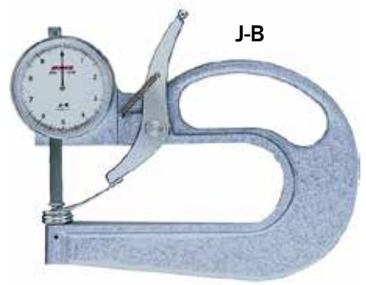
Dial Thickness Gauges (Large type)

These large thickness gauges having extended throat depth to measure at the center of wide sheets,

J-A



J-B



■ Specifications

Model	Graduation (mm)	Range (mm)	Throat depth (mm)	Accuracy (μm)	Contact Point		Measuring force less than (N)
					Dia (mm)	Parallelism (μm)	
J-A	0.01	0 - 20	150	±22	10	5	2.0
J-B	0.05	0 - 35	140	±100	20	25	3.0

Dial Sheet Gauges

The sheet gauges can measure wide sheets since the throat depth having 300mm and 500mm.

K-1

Graduation: 0.01mm
Range: 0 ~ 20mm
- Φ10mm flat contact point and Φ20mm anvil (Metal)

K-2

Graduation: 0.05mm
Range: 0 ~ 35mm
- Φ20mm flat contact point and anvil (Metal)

K-3

Graduation: 0.01mm
Range: 0 ~ 20mm
- Φ10mm flat contact point and Φ20mm anvil (Metal)

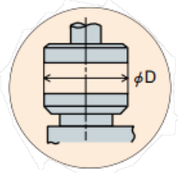
K-4

Graduation: 0.05mm
Range: 0 ~ 50mm
- Φ25mm flat contact point and anvil (Metal)

■ Specifications

Model	Graduation (mm)	Range (mm)	Throat depth (mm)	Accuracy (μm)	Contact Point		Measuring force less than (N)
					Dia (mm)	Parallelism (μm)	
K-1	0.01	0 - 20	300	±22	10	10	2.0
K-2	0.05	0 - 35	300	±100	20	25	3.0
K-3	0.01	0 - 20	500	±22	10	10	3.0
K-4	0.05	0 - 50	500	±100	25	25	3.0

Custom order available



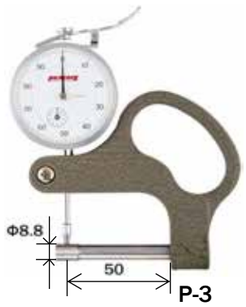
For J-A, J-B and K series, optional Φ20, 30, 40 and 50mm Contact Point and Anvil can be customized.
Please specify material for Contact Point and Anvil, Metal (SK) or Aluminum (AL).

Dial Pipe Gauges

Special thickness gauges for measuring wall thickness of pipes.

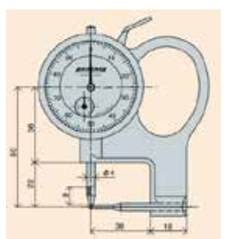
P-1
Graduation: 0.01mm
Range: 0 ~ 10mm

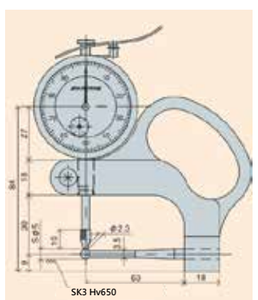
P-2
Graduation: 0.01mm
Range: 0 ~ 15mm

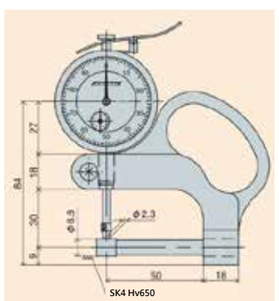


P-3
Graduation: 0.01mm
Range: 0 ~ 15mm

Dimensions







■ Specifications

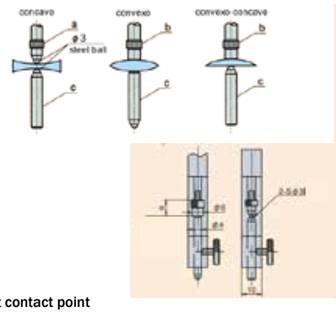
Model	Graduation (mm)	Range (mm)	Accuracy (μm)	Pipe size measurable (mm)			Measuring force less than (N)
				Minimum bore D	Maximum wall thickness T	Depth L	
P-1	0.01	0 - 10	±20	2.5	10	10	1.8
P-2	0.01	0 - 15	±22	5.1	15	50	1.8
P-3	0.01	0 - 15	±22	9	15	50	1.8

Dial Lens Gauge

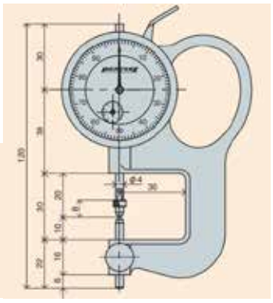
The dial lens gauge can measure convex, concave, convexo-concave and any other lenses in the same gauge by replacing the two contact points and the anvil.

Replaceable Flat contact point
(Standard accessory)

Applied examples



Dimensions



■ Specifications

Model	Graduation (mm)	Range (mm)	Accuracy (μm)	Throat depth (mm)	Maximum lens diameter measurable	Maximum lens thickness measurable	Measuring force less than (N)
GL	0.01	10	±20	30	Φ59mm	※20mm	1.8

※ Anvil side is adjustable

Dial Upright Gauges

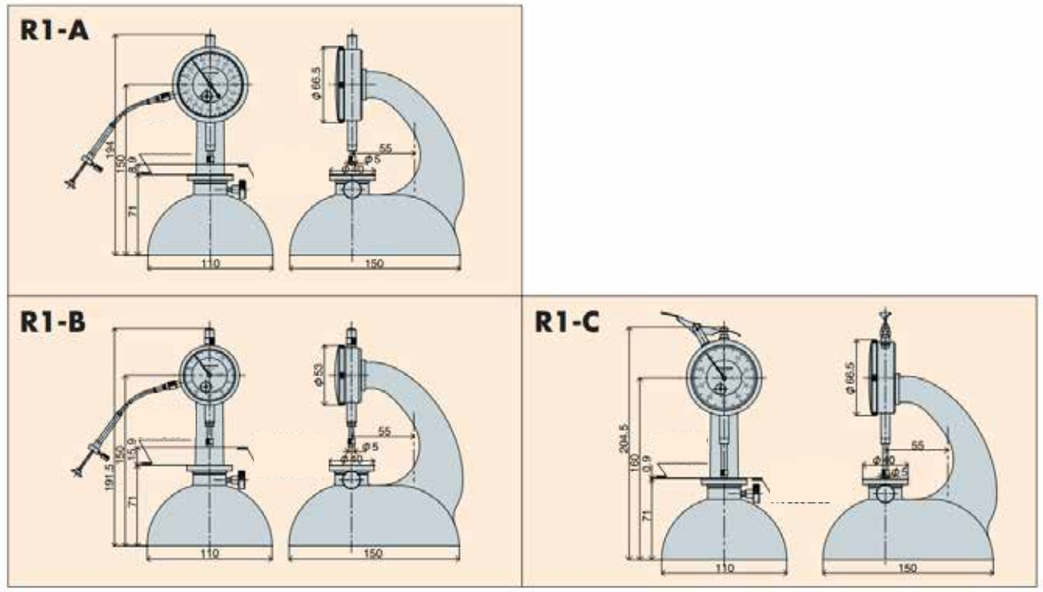
Best suited for measuring precision parts and testing materials like rubber, leather, fabric and plastic etc. Rubber, leather, urethan and film can be easily measured by this system.
●The table of R1 series are adjustable up and down by the nut installed side way.
●The dial gauge is affixed to the body.

R1-A
Graduation: 0.001mm
Range: 2mm
Effective measuring range: 10mm

R1-B
Graduation: 0.01mm
Range: 10mm
Effective measuring range: 25mm

R1-C
Graduation: 0.01mm
Range: 20mm
Effective measuring range: 20mm

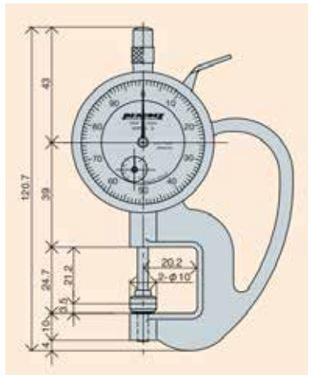
Dimensions



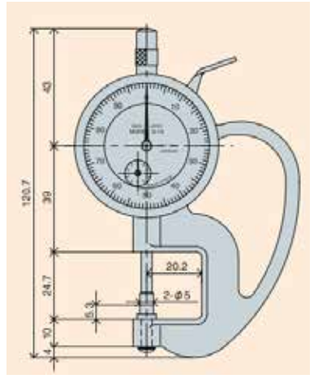
■ Specifications

Model	Dial Indicator (standard attachements)			Indication error (μm)	Table diameter (mm)	Contact Point Dia (mm)	Measuring force less than (N)	Measuring depth (mm)
	Gauge installed	Graduation (mm)	Range (mm)					
R1-A	25F-RE	0.001	2	±7	40	5	1.5	55
R1-B	107F-RE	0.01	10	±15	40	5	1.4	55
R1-C	207F-PL	0.01	20	±22	40	5	2.0	55

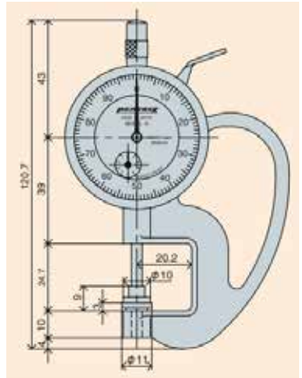
Dimensions



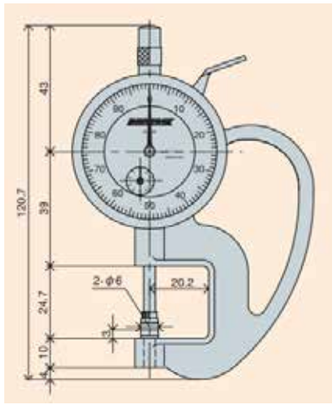
G/G-0.4N/G-2.4N



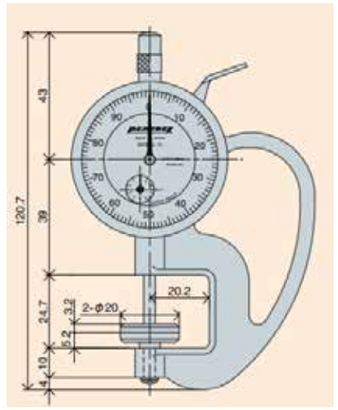
G-1A



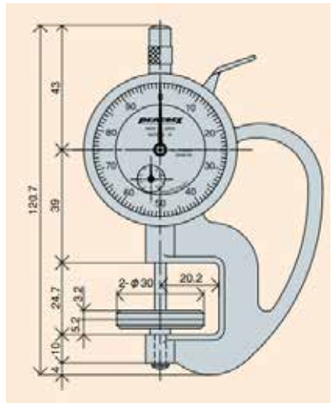
G-MT



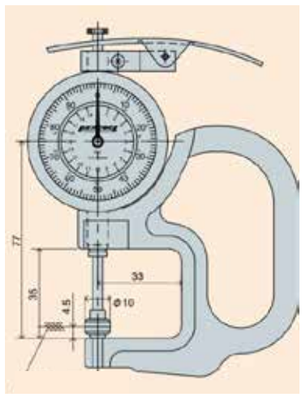
G-1M



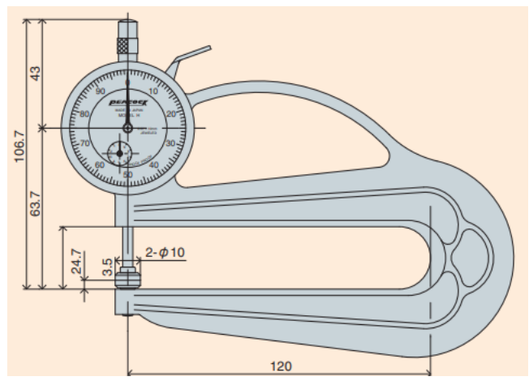
G-20



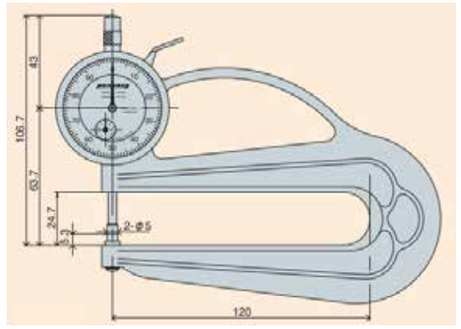
G-30



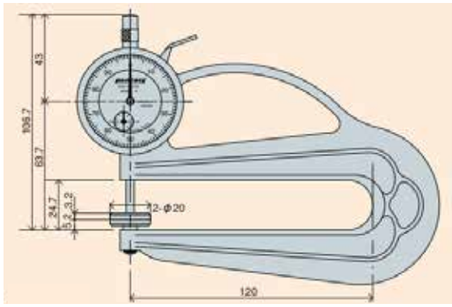
G-2



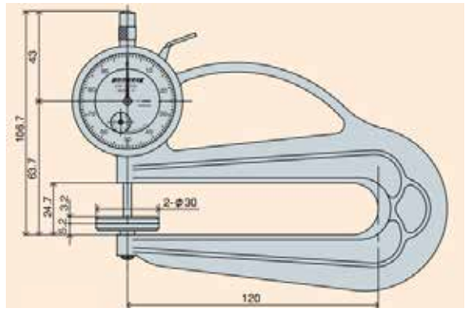
H/H-0.4N/H-2.4N



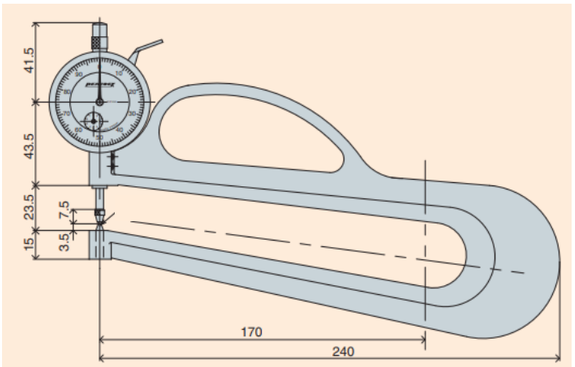
H-1A



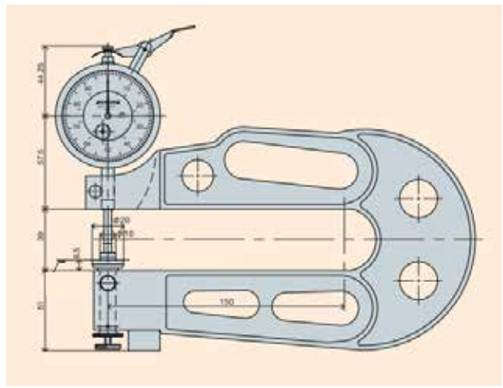
H-20



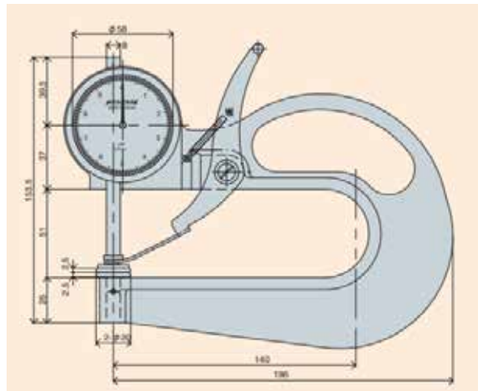
H-30



H-2



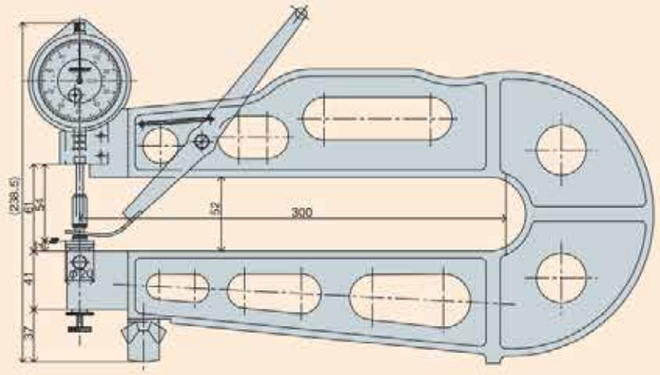
J-A



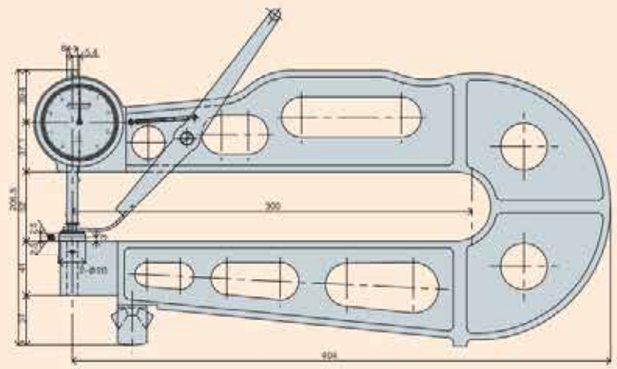
J-B

Dimensions

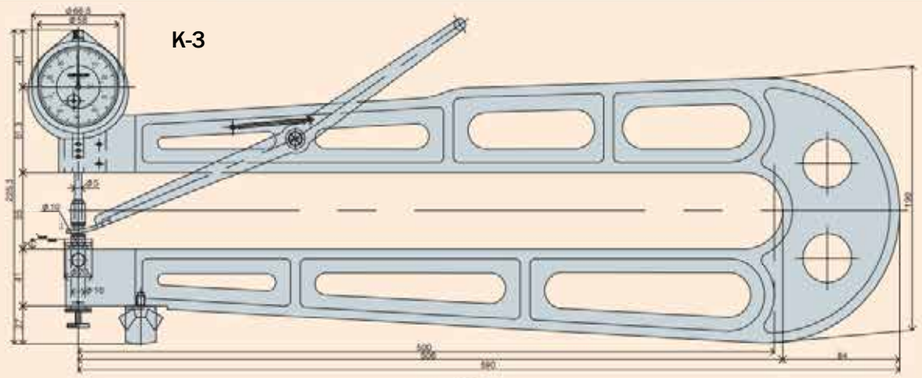
K-1



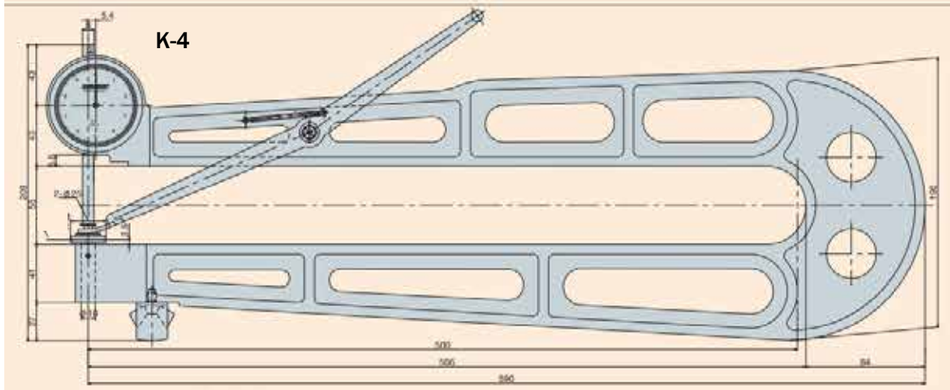
K-2



K-3



K-4



Constant Pressure Thickness Gauges

- Constant Pressure Thickness Gauges can be made to comply with JIS by attaching exact weights that create the specific pressures needed to measure different material.
- Three types (FFG, FFA & FFD series) are available to meet your measurement.

■ JIS Standard

Measuring material	JIS No.	Applied Model		
		Handy type	Stand type	Digital type
Shrink package film	Z1709	FFG-1	FFA-1	FFD-1
Polyethylene package film	Z1702	FFG-1	FFA-1	FFD-1
Ethylene film	K6783	FFG-1	FFA-1	FFD-1
Polyvinyl chloride film	K6732	FFG-2	FFA-2	FFD-2
Leather	K6550	-	FFA-3	FFD-3
Artificial leather	K6505	-	FFA-3	FFD-3
Sheet rubber	K6328	FFG-4	FFA-4	FFD-4
Vulcanized rubber / Thermoplastic rubber (Hardness 35IRHD less)	K6250A	FFG-5	FFA-5	-
Vulcanized rubber / Thermoplastic rubber (Hardness 35IRHD less)	K6250A	FFG-6	FFA-6	FFD-6
Vulcanized rubber / Thermoplastic rubber (Hardness 35IRHD more)	K6250A	FFG-7	FFA-7	FFD-7
Vulcanized rubber / Thermoplastic rubber (Hardness 35IRHD more)	K6250A	FFG-8	FFA-8	FFD-8
Urethane form	K6402	FFG-9	FFA-9	-
Common fabric (basic / fuzzy material)	L1096	-	FFA-10	FFD-10
Adhesive interlined cloth(common weave / common knit / non-woven)	L1086	-	FFA-10	FFD-10
Common fabric (basic / fuzzy material)	L1096	FFG-11	FFA-11	-
Adhesive interlined cloth(common weave / common knit / non-woven)	L1086	FFG-11	FFA-11	-
Stockinet (common knit)	L1018	FFG-11	FFA-11	-
Unwoven / interlined cloth (Old standard)	L1085	FFG-12	FFA-12	-
Adhesive interlined cloth (non-woven)	L1086	FFG-12	FFA-12	-
Tensile properties of plastics	K7113	-	FFA-13	FFD-13

Compact Handy type FFG series

■ Specifications

Model	Graduation (mm)	Range (mm)	Indication error (μm)	Throat depth (mm)	Contact Point Dia. (Φmm)	Anvil Dia. (Φmm)	Measuring force N (gf)	Parallelism (μm)
FFG-1	0.001	2	±10	24mm	5	30	1.25±0.15 (125±15)	5
FFG-2	0.001	2	±10	24mm	5	30	less than 0.8 (less than 80)	5
FFG-4	0.01	10	±22	24mm	10	30	less than 0.8 (less than 80)	7
FFG-5	0.01	7	±22	24mm	5 (19.625mm^2)	30	0.2±0.04 (20±4)	5
FFG-6	0.01	10	±22	24mm	8 (50.24mm^2)	30	0.51±0.1 (51±10)	7
FFG-7	0.01	10	±22	24mm	5 (19.625mm^2)	30	0.44±0.1 (44±10)	5
FFG-8	0.01	10	±22	24mm	8 (50.24mm^2)	30	1.13±0.26 (113±26)	7
FFG-9	0.01	10	±22	24mm	35.7 (10cm^2)	40	less than 0.37 (less than 37)	25
FFG-11	0.01	10	±22	24mm	25.2 (5cm^2)	30	less than 0.35 (less than 35)	20
FFG-12	0.01	10	±22	24mm	16 (2cm^2)	30	less than 0.4 (less than 40)	15

Dimensions

Stand type FFA series

■ Specifications

Model	Graduation (mm)	Range (mm)	Indication error (μm)	Throat depth (mm)	Contact Point Dia. (Φmm)	Anvil Dia. (Φmm)	Measuring force N (gf)	Parallelism (μm)
FFA-1	0.001	2	±8	55	5	40	1.25±0.15 (125±15)	5
FFA-2	0.001	2	±8	55	5	40	less than 0.8 (less than 80)	5
FFA-3	0.01	10	±20	55	10	50	3.93±0.1 (393±10)	10
FFA-4	0.01	10	±20	55	10	50	less than 0.8 (less than 80)	7
FFA-5	0.01	7	±20	55	5 (19.625mm^2)	50	0.2±0.04 (20±4)	5
FFA-6	0.01	10	±20	55	8 (50.24mm^2)	50	0.51±0.1 (51±10)	7
FFA-7	0.01	10	±20	55	5 (19.625mm^2)	50	0.44±0.1 (44±10)	5
FFA-8	0.01	10	±20	55	8 (50.24mm^2)	50	1.13±0.26 (113±26)	7
FFA-9	0.01	10	±20	55	35.7 (10cm^2)	50	less than 0.37 (less than 37)	25
FFA-10	0.01	10	±20	55	11.3 (1cm^2)	50	less than 2.4 (less than 240)	10
FFA-11	0.01	10	±20	55	25.2 (5cm^2)	50	less than 0.35 (less than 35)	20
FFA-12	0.01	10	±20	55	16 (2cm^2)	50	less than 0.4 (less than 40)	15
FFA-13	0.01	10	±20	55	10 (78.5cm^2)	50	less than 1.57 (less than 157)	7

■ Digital type FFD series

Option
Input Adapter No. IF-21 for PC

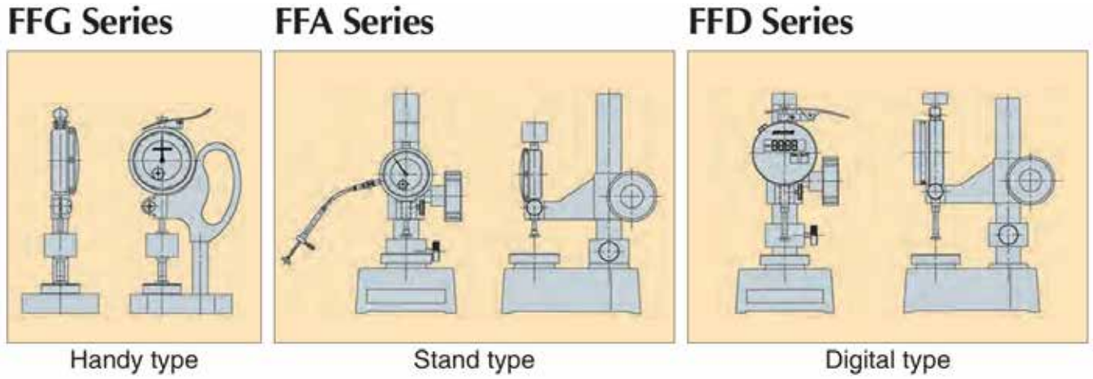
IF-21 can transfer a data to a spreadsheet such as EXCEL of your PC.

■ Specifications

Model	Graduation (mm)	Range (mm)	Indication error (μm)	Throat depth (mm)	Contact Point Dia. (Φmm)	Anvil Dia. (Φmm)	Measuring force N (gf)	Parallelism (μm)
FFD-1	0.001	20	±4	55	5	40	1.25±0.15 (125±15)	5
FFD-2	0.001	20	±4	55	5	40	less than 0.8 (less than 80)	5
FFD-3	0.01	20	±20	55	10	50	3.93±0.1 (393±10)	10
FFD-4	0.01	20	±20	55	10	50	less than 0.8 (less than 80)	10
FFD-6	0.01	20	±20	55	8 (50.24mm^2)	50	0.51±0.1 (51±10)	10
FFD-7	0.01	20	±20	55	5 (19.625mm^2)	50	0.44±0.1 (44±10)	10
FFD-8	0.01	20	±20	55	8 (50.24mm^2)	50	1.13±0.26 (113±26)	10
FFD-10	0.01	20	±20	55	11.3(1cm^2)	50	less than 2.4 (less than 240)	10
FFD-13	0.01	20	±20	55	10 (78.5mm^2)	50	less than 1.57 (less than 157)	10

FFD series has AC Adapter cord 2M and the Data ouput is RS-232C.

Constant Pressure Special Order Available



Please specify what you want to measure as following:

1. Type of Constant Pressure Thickness Gauge
   Please check ☑
   ☐FFG Handy type
   ☐FFA Stand type
   ☐FFD Digital type

2. Material of measurement work-piece:

3. JIS number or its equivalent standard:

4. Resolution: 0.01mm or 0.001mm:

5. Measuring force:

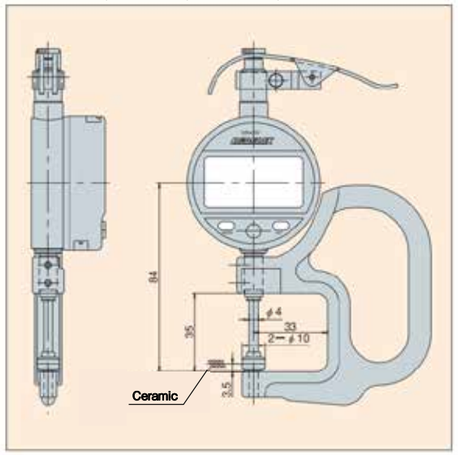
6. Diameter of Contact Point & Anvil:
   (ex. Φ5mm or Φ10mm)

7. Other requirement:

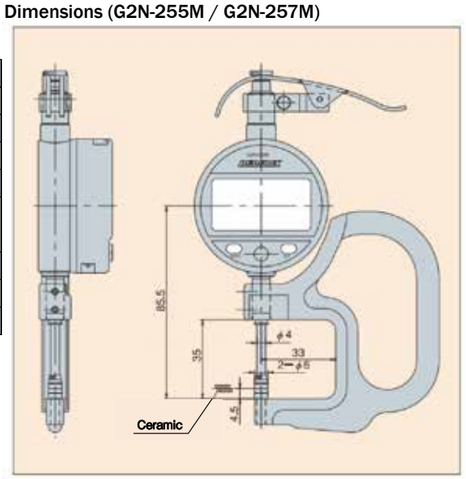
Digital Thickness Gauges

G2N-255
Resolution : 0.001mm
Range : 20mm

Dimensions (G2N-255 / G2N-257)



Dimensions (G2N-255M / G2N-257M)



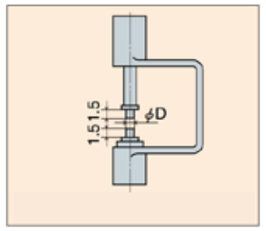
■ **Specifications**

Model	G2N-255	G2N-255M	G2N-257	G2N-257M
Digital Gauge	DGN-255	DGN-255	DGN-257	DGN-257
Contact Point / Anvil	Φ10mm	Φ6mm	Φ10mm	Φ6mm
Contact Point parallelism	less than 5μm		less than 10μm	
Resolution	0.001mm		0.01mm	
Accuracy (excluding quantized error)	±0.008mm		±0.02mm	
Measuring range	0 - 20mm			
Measuring force	less than 1.2N			
Measuring depth	33mm			

Digital Thickness Gauge (Special order)

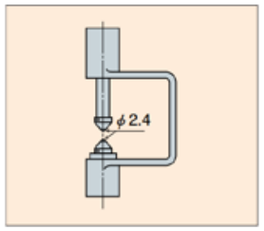
For different Applications, the shape of the contact point and anvil can be customize as following:

Both Contact Point and Anvil needle type

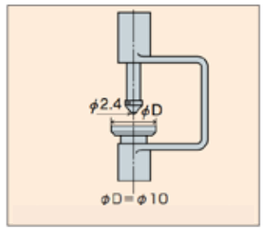


Please specify ΦD

Both Contact Point and Anvil ball type

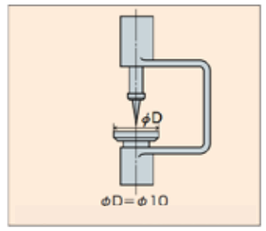


Ball type Contact Point and Flat type Anvil



D = 10mm diameter
(Also Φ20, 25 and 30mm can be customized.)

Needle type Contact Point and Flat type Anvil

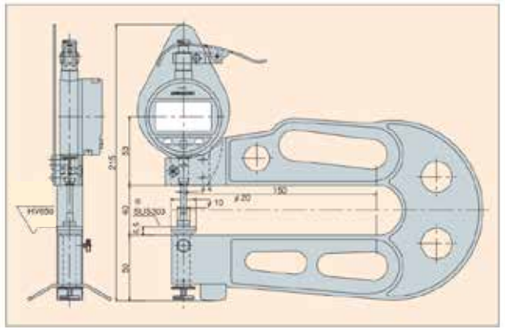


D = 10mm diameter
(Also Φ20, 25 and 30mm can be customized.)

Digital Thickness Gauges (Large type)

JAN-255
Resolution : 0.001mm
Range : 20mm

Dimensions (JAN-255 / JAN-257)



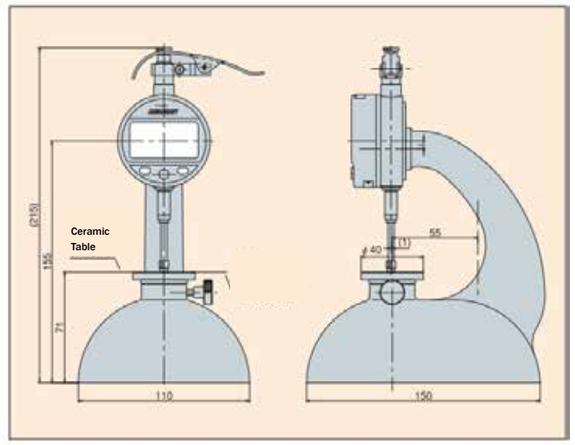
■ **Specifications**

Model	JAN-255	JAN-257
Digital Gauge	DGN-255	DGN-257
Resolution	0.001mm	0.01mm
Accuracy (excluding quantized error)	±0.01mm	±0.02mm
Contact Point parallelism	less than 5μm	less than 10μm
Measuring range	0 - 20mm	
Measuring force	less than 1.2N	
Measuring depth	150mm	
Contact Point / Anvil	Φ10mm / Φ20mm	

Digital Upright Gauges

R1N-250B
Resolution : 0.0001mm
Range : 20mm

Dimensions (R1N-250B / R1N-255 / R1N-257)



■ **Specifications**

Model	NEW R1N-250B	R1N-255	R1N-257
Measuring Range	0 – 20mm		
Resolution	0.0001mm	0.001mm	0.01mm
Accuracy (excluding quantized error)	±2.5μm	±4μm	±20μm
Digital Gauge	DGN-250B	DGN-255	DGN-257
Contact Point / Anvil	Φ5mm (SUS) / Φ40mm (Ceramic)		
Measuring Depth	55mm		
Data Transmission	Bluetooth or by cable	By cable only	
Option	Wireless : USB Bluetooth Receiver No. BT-4 Wired : USB Cable No. KB-USB Wired : RS232C Cable No. KB-232C		