



Widely used in Manufacturing plants

DIAL GAUGES

TANDARD DIAL GAUGES (0.01mm, 0.005mm, 0.001mm)

NE REVOLUTION DIAL GAUGES (0.01mm, 0.005mm, 0.001mm)

INIATURE DIAL GAUGES (0.01mm, 0.005mm, 0.001mm)

BACK PLUNGER DIAL GAUGES (0.01mm)

ONG TRAVEL DIAL GAUGES (0.1mm, 0.05mm, 0.01mm)

Distribuito da:

FRAMECH GMBH framechsuisse@gmail.com +41 76 6286440 Via Laveggio 3, 6855 Stabio (CH)

Standard Dial Gauges (0.001mm, 0.005mm, 0.01mm)

- •The stem, made of SK quench hardened with strength, is malfunction-free due to fastening.
- •The shock-proof mechanism prevents gears from damage due to shocks arisen by abruptly pushing up the spindle.
- •The turning section of the outer frame sealed by the O-ring and the back inside sealed by the packing are water-proof and dust-proof in construction.
- •The back is increased in strength by four screws, and the lug can be turned 90 degrees in the installation way.

0.001mm Type





Specifications

◆ Lug back

(unit: µm) Measuring Indication error Graduation Range Retrace Model Reading force less (mm) error 1/10 revolution 1/2 revolution One revolution than (N) 5B-HG 0.001 0-100-0 1.6 2.8 3.2 1.6 0.5 1.5 5-DX 0.001 0-100-0 2 3.5 4 5 2 0.5 1.5 5B 0.001 0-100-0 2 3.5 4 5 2 0.5 1.5 5F 0.001 0-100-0 2 3.5 4 5 2 0.5 1.5 5-SWF 0.001 0-100-0 2 3.5 0.5 1.5 25 0.001 ±0-100-100 5 2 0.5 1.5 25F-RE *2 0.001 ±0-100-100 5 0.5 1.5 **25S** 0.001 2 0-100-0 2 5 2 0.5 1.5 55 0.001 5 0-100-0 3.5 6 10 3 1.5 55-DX **%**3 0.001 5 0-100-0 3.5 5 6 10 3 1.5 0.005 5 0-25-50 10 12 3 3 1.5

 \times 1 Large dial face ϕ 66.5mm

0.01mm Type





Graduation: 0.01mm Graduation: 0.01mm Range : 10mm ♦ Indication error 12 μm ◆ Lug back

- ◆ Retrace error 2.5 µm
- ◆ Includes accuracy certification









Graduation: 0.01mm Range

- ◆ Spindle lifting lever
- ◆ Lug back





Graduation: 0.01mm

Graduation: 0.01mm

· 1mm

Range

◆ Balanced dial

◆ Lug back

Range

◆ Oil-proof type

◆ Contact point

◆ Flat crystal









Graduation: 0.01mm Range

- ◆ Two center pointers (The hand is long enough to facilitate
- ◆ Lug back



Graduation: 0.01mm Range : 10mm ◆ Reversed dial

◆ Flat back











Graduation: 0.01mm

Range

◆ Lug back

◆ Durable type

(Spindle ϕ 5mm)





◆ Flat back



57B Graduation: 0.01mm Range : 5mm

◆ Balanced dial

Specifications

Model	Graduation	Range	Reading		Indication	on error		Retrace	Repeatability	Measuring force less
Wiodoi	(mm)	(mm)	ricaanig	1/10 revolution	1/2 revolution	One revolution	Whole measuring range	error	riopodidomity	than (N)
107-HG	0.01	10	±0-50-100	4	7	8	12	2.5	3	1.4
107-DX	0.01	10	±0-50-100	5	9	10	15	3	3	1.4
107	0.01	10	±0-50-100	5	9	10	15	3	3	1.4
107F	0.01	10	±0-50-100	5	9	10	15	3	3	1.4
107-SWA	0.01	10	±0-50-100	5	9	10	15	3	3	1.4
107-BL *1	0.01	10	±0-50-100	5	9	10	15	3	3	1.4
107F-RE * 2	0.01	10	±0-50-100	5	9	10	15	3	3	1.4
107-LL	0.01	10	±0-50-100	5	9	10	15	3	3	1.4
107W	0.01	10	±0-50-100	5	9	10	15	3	3	1.4
107F-T	0.01	10	±100-50-0	5	9	10	15	3	3	1.4
107-E *3	0.01	10	±0-50-100	5	9	10	15	3	3	initial pressure 0.4
17	0.01	1	0-50-0	5	8	8	8	3	3	1.4
57-SWA * 4	0.01	5	±0-50-100	5	9	10	12	3	3	1.4
57	0.01	5	±0-50-100	5	9	10	12	3	3	1.4
57F	0.01	5	±0-50-100	5	9	10	12	3	3	1.4
57B	0.01	5	0-50-0	5	9	10	12	3	3	1.4

※ 1 With Spindle pull-up back lever

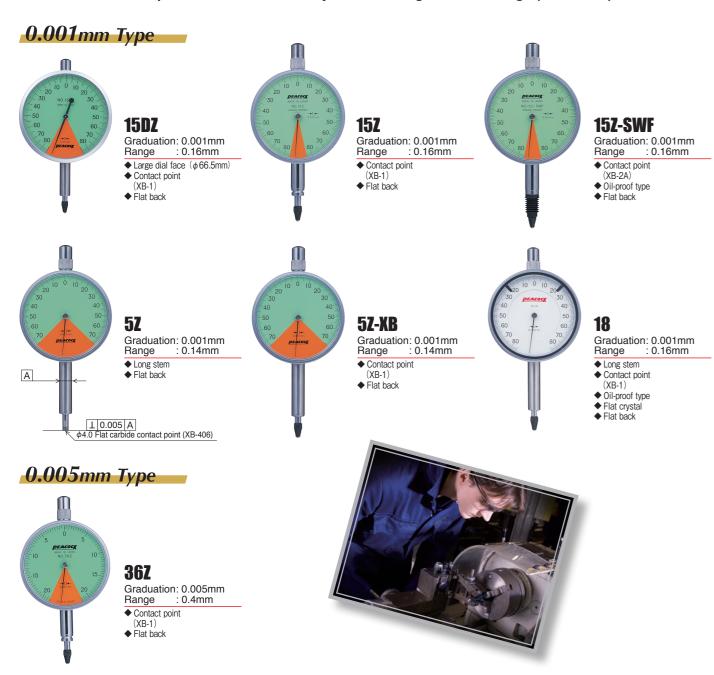
※ 2 Equipped spindle pull-up release (RE-1) 280mm long

※ 3 Low-measuring force
※ 4 Oil-proof type, Flat Crystal, Contact Point (X-2)

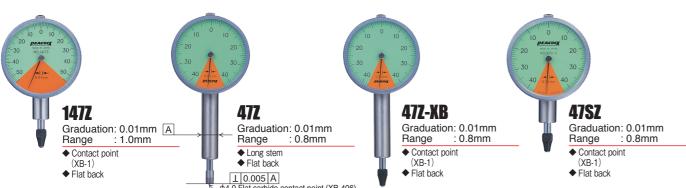
One Revolution Dial Gauges (0.001mm, 0.005mm, 0.01mm)

•These are high-accuracy dial gauges with the pointer giving less than a full turn that can resist rigorous continuous measurement. The long stem is made of stainless steel, is high in strength and is malfunction-free due to fastening.

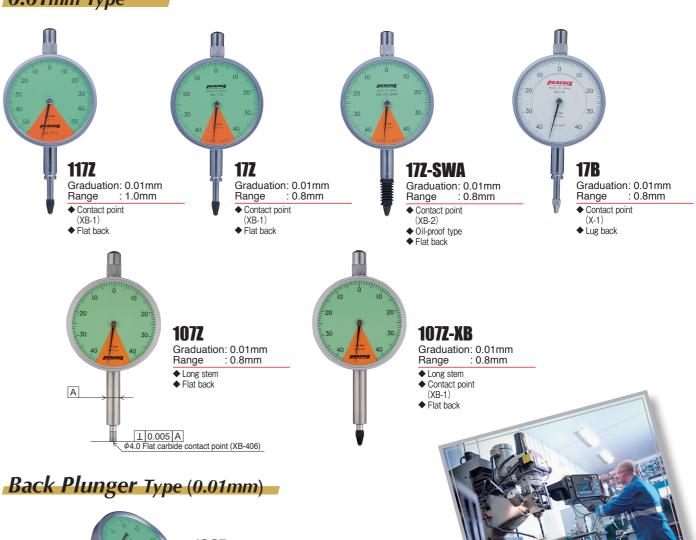
The dial faces except No.18 and 17B are easy to read with green and orange (dead zone)



Miniature Type (Small dial face \$\phi36mm)



0.01mm Type





196Z

Graduation: 0.01mm

- ◆ Stem φ8mm
- ◆ Pointer giving less than one
- revolution
- ◆ Contact point

Specifications

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Model	Graduation (mm)	Range (mm)	Reading	Indication error 1/10 revolution 1/2 revolution One revolution Whole measuring range				Retrace error	Repeatability	Measuring force less than (N)
15 Z	0.001	0.16(3.0)	80-0-80	2	_	_	5	2	0.5	1.5
15Z-SWF	0.001	0.16(3.0)	80-0-80	2	_	_	5	2	0.5	1.5
5Z-XB	0.001	0.14(3.0)	70-0-70	2	_	_	5	2	0.5	1.5
5 Z	0.001	0.14(3.0)	70-0-70	2	_	_	5	2	0.5	1.5
18	0.001	0.16(3.0)	80-0-80	2	_	_	5	2	0.5	1.5
17Z	0.01	0.8 (7.0)	40-0-40	5	_	_	8	3	3	1.4
17Z-SWA	0.01	0.8 (7.0)	40-0-40	5	_	_	8	3	3	1.4
107Z-XB	0.01	0.8 (7.0)	40-0-40	5	_	_	8	3	3	1.4
107Z	0.01	0.8 (7.0)	40-0-40	5	_	_	8	3	3	1.4
17B	0.01	0.8 (10.0)	40-0-40	5	_	_	8	3	3	1.4
15DZ	0.001	0.16(3.0)	80-0-80	2	_	_	5	2	0.5	1.5
117Z	0.01	1.0 (7.0)	50-0-50	5	_	_	8	3	3	1.4
47Z	0.01	0.8 (4.0)	40-0-40	8	_	_	15	4	3	1.4
47Z-XB	0.01	0.8 (4.0)	40-0-40	8	_	_	15	4	3	1.4
47SZ	0.01	0.8 (4.0)	40-0-40	8	_	_	15	4	3	1.4
196Z	0.01	0.8 (4.0)	40-0-40	8	_	_	15	4	3	1.4
147Z	0.01	1.0 (4.0)	50-0-50	8	_	_	15	4	3	1.4
36Z	0.005	0.4(3.0)	20-0-20	5	_	_	12	3	3	1.4

Note-All Dial Indicatiors (except for 196Z) listed above have flat back as standard. Note-Lug back Model No.: 47ZL, 47Z-XBL, 47SZL, 147ZL, 36ZL.

Miniature Dial Gauges (0.001mm, 0.005mm, 0.01mm)

 These compact size dial gauges are equipped with small dial faces. They are especially useful for measuring jigs, in restricted areas.













Dial dia. φ 40.8mm

◆ Lug back

◆ Contact point

Graduation: 0.01mm Range : 4mm ◆ Contact point

Graduation: 0.01mm Range ◆ Contact point ◆ Flat back

Dial dia. φ36m

Graduation: 0.01mm ◆ Contact point

◆ Lug back Dial dia. φ39mm

Specifications

◆ Contact point ◆ Flat back

Dial dia. φ 40.8mm

7 0										(unit: μm
Model	Graduation	Range	Reading		Indication	on error		Retrace	Repeatability	Measuring force less
Model	(mm)	(mm)	rieading	1/10 revolution	1/2 revolution	One revolution	Whole measuring range	error	repeatability	than (N)
5S	0.001	1	±0-100-100	5	6	7	10	4	2	1.5
47	0.01	4	0-50-0	8	12	14	18	4	3	1.4
47F	0.01	4	0-50-0	8	12	14	18	4	3	1.4
57S	0.01	5	±0-50-100	8	12	14	18	4	3	1.4
36A	0.005	3	±0-25-50	6	9	10	12	3.5	3	1.4
36B *1	0.01	3	0-25-50	8	11	12	16	4	3	1.4
,	· · - · - ·								•	•

◆ Lug back

Dial dia. φ36mm

※ 1 Contact point (X-107), Lug Back, Dial dia. φ40.8mm

Back Plunger Dial Gauges (0.01mm)

- •The back plunger dial gauge is characterized with easy handling since the spindle having the contact point moves in the direction perpendicular to the dial face and the gauge is more compact.
- •The dial gauge of this type is convenient for use in achieving a parallelism of the table of the machine tool, with measuring jigs, in restricted areas and on locations where scale reading is difficult.







Graduation: 0.01mm Stem φ6mm

◆ Contact point



196B Graduation: 0.01mm

 Stem
 δ8mm Contact point



196B-T Graduation: 0.01mm Range

 Reversed dia Contact point



Graduation: 0.01mm

 Stem
 δ8mm ◆ Pointer giving less than one

revolution Contact point

(X-112) (unit: um

Specifications

Stem φ6.35mm

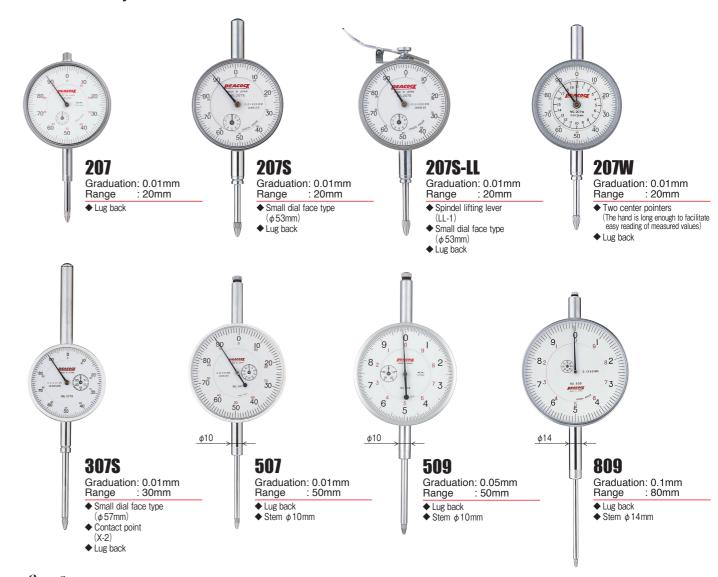
Contact point

	(and pan)									
Model	Graduation	Range	Reading		Indication	on error		Retrace	Repeatability	Measuring force less
Model	(mm)	(mm)		1/10 revolution	1/2 revolution	One revolution	Whole measuring range	error	переатаршту	than (N)
196A	0.01	5	0-50-100	8	12	14	18	4	3	1.4
196A-6	0.01	5	0-50-100	8	12	14	18	4	3	1.4
196Z	0.01	8.0	40-0-40	8	_	_	15	4	3	1.4
196B	0.01	5	0-50-100	8	12	14	18	4	3	1.4
196B-T	0.01	5	100-50-0	8	12	14	18	4	3	1.4

※ Dial dia. φ 38mm (All Back Plunger type Dial Gauges)

Long Travel Dial Gauges (0.01mm, 0.05mm, 0.1mm)

- •The stem, made of SK quench hardened with strength, is malfunction-free due to fastening.
- •The shock-proof mechanism prevents gears from damage due to shocks arisen by abruptly pushing up the spindle.
- •The turning section of the outer frame sealed by the O-ring and the back inside sealed by the packing are water-proof and dust-proof in construction.
- •The back is increased in strength by four screws, and the lug can be turned 90 degrees in the installation way.



Specifications

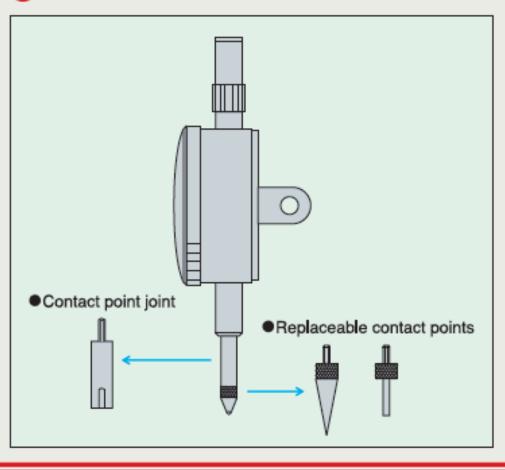
(unit: µm)

Model	Graduation	Range	Dooding		Indication	on error		Retrace	Donostobility	Measuring
Model	(mm)	(mm)	Reading	1/10 revolution	1/2 revolution	One revolution	Whole measuring range	error	Repeatability	force less than (N)
207	0.01	20	±0-50-100	8	10	15	25	5	4	2.0
207F-PL * 1	0.01	20	±0-50-100	8	10	15	25	5	4	2.0
207F-T * 2	0.01	20	±100-50-0	8	10	15	25	5	4	2.0
207S-LL	0.01	20	±0-50-100	8	10	15	25	5	4	2.0
207S	0.01	20	±0-50-100	8	10	15	25	5	4	2.0
207W	0.01	20	±0-50-100	8	10	15	25	5	4	2.0
207WF-T * 3	0.01	20	±100-50-0	8	10	15	25	5	4	2.0
307S	0.01	30	±0-50-100	10	12	15	30	7	5	2.2
307 * 4	0.01	30	±0-50-100	10	12	15	30	7	5	2.2
507	0.01	50	±0-50-100	10	12	15	40	8	5	2.5
509	0.05	50	±0-5-10	30	60	100	100	10	20	2.5
809	0.1	80	±0-5-10	50	_	_	100	_	35	2.5

¾ 1 With Pump type spindle lifting level

Example

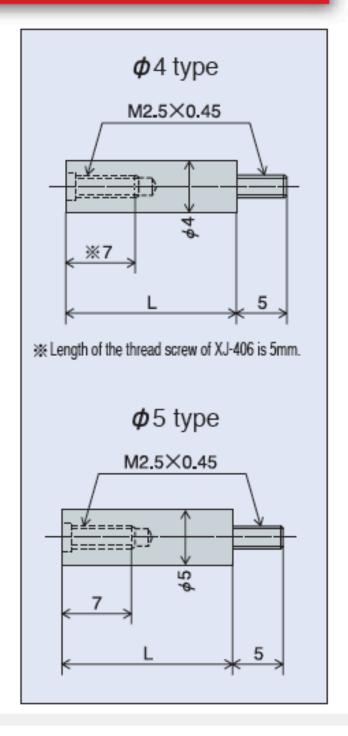
- Ball Contact Point
- Offset Contact Point
- Spherical Contact Point
- Flat Contact Point
- Taper Contact Point
- Plain Contact Point
- Button type Contact Point
- Knife-edge Contact Point
- Carbide Contact Point
- Needle type Contact Point
- Roller Contact Point
- Ocontact Point Joint etc.



Contact Point Joint

To extend the contact point, simply add the contact point joint.

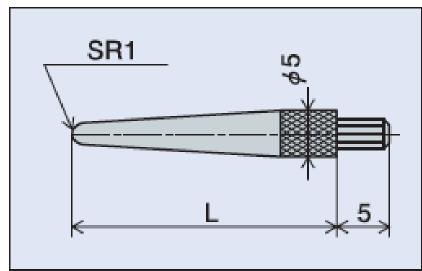
L (mm)	φ4 type	φ5 type
6	XJ-406	
10	XJ-410	XJ-510
15	XJ-415	
20	XJ-420	XJ-520
25	XJ-425	
30	XJ-430	XJ-530
35	XJ-435	
40	XJ-440	XJ-540
45	XJ-445	
50	XJ-450	XJ-550
55	XJ-455	
60	XJ-460	XJ-560
65	XJ-465	
70	XJ-470	
75	XJ-475	
80	XJ-480	
90	XJ-490	
100	XJ-400	



Taper Contact Point

XS-3 series



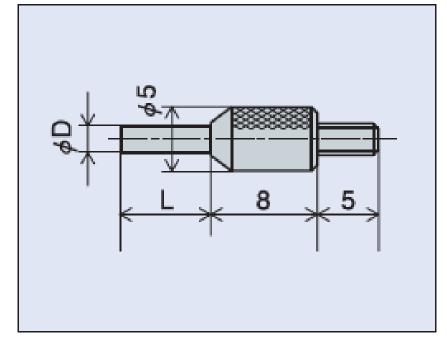


Part No.	L(mm)	Material
XS-3	25	SKS 3
XS-310	10	SKS 3
XS-315	15	SKS 3
XS-320	20	SKS 3
XS-330	30	SKS 3

Needle Type Contact Point

XB-801

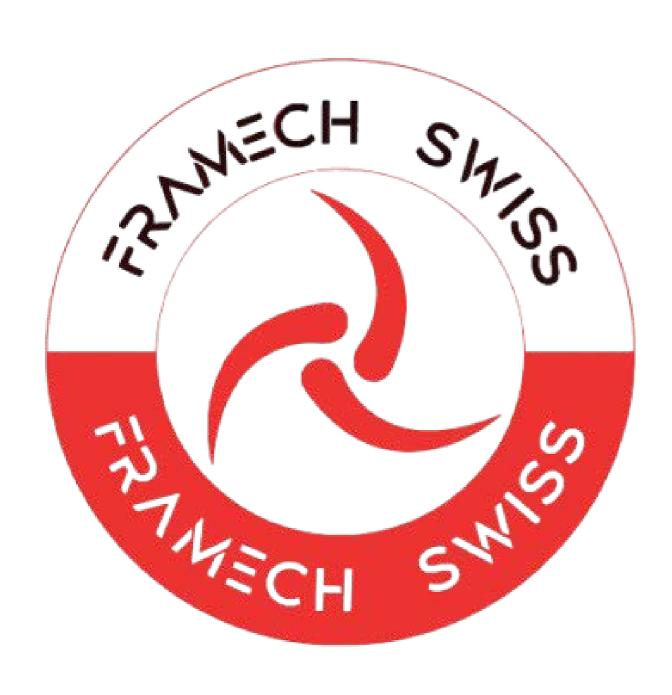




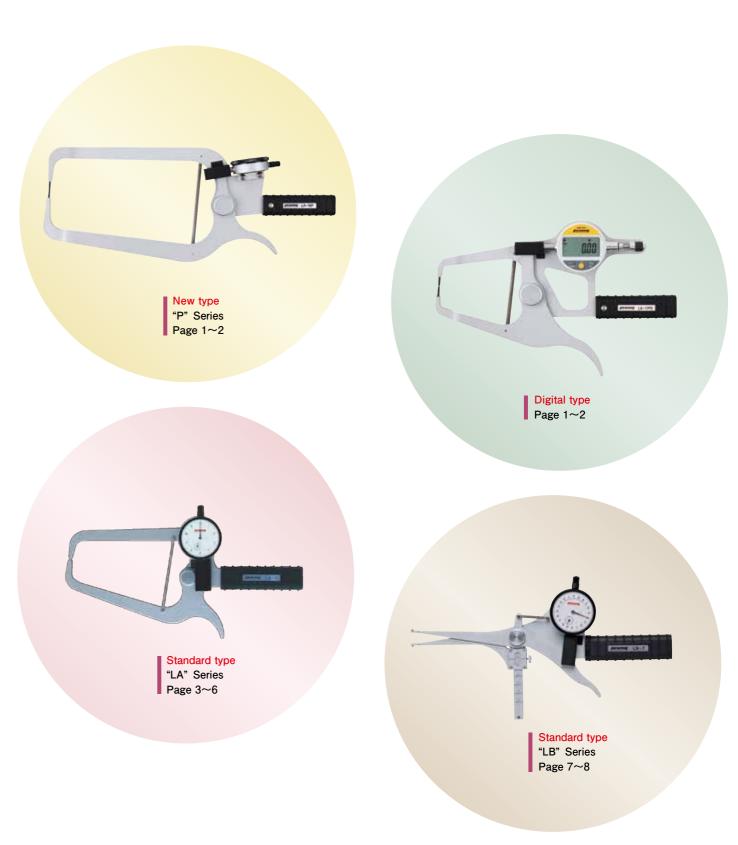
Part No.	ϕ D(mm)	L(mm)	Material
XB-800	1	2	Carbide
XB-801	1.5	12	Carbide
XB-802	2	7	Carbide
XB-803	2	12	Carbide
XB-804	1	20	Carbide
XB-805	1.5	20	Carbide
XB-806	2	20	Carbide
XB-807	1	40	Carbide
XB-80	1.5	40	Carbide
XB-809	2	40	Carbide

Part No.	ϕ D(mm)	L(mm)	Material
XS-800	1	2	SKS 3
XS-801	1.5	12	SKS 3
XS-802	2	7	SKS 3
XS-803	2	12	SKS 3
XS-804	1	20	SKH
XS-805	1.5	20	SKH
XS-806	2	20	SKH
XS-807	1	40	SKH
XS-808	1.5	40	SKH
XS-809	2	40	SKH

Caliper Gauges



Distribuito da: FRAMECH GMBH framechsuisse@gmail.com +41 76 6286440 Via Laveggio 3, 6855 Stabio (CH)



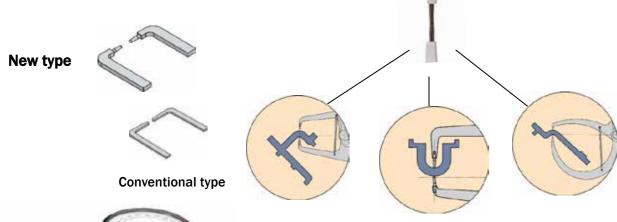
Made in Japan



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.



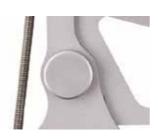


It is easy to read a value thanks to dial with the face upward.

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.





Caliper Gauges are available in Digital type.



Data Communication

RS-232C Cable Input Adapter
No. KB-232C 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



LA-19P

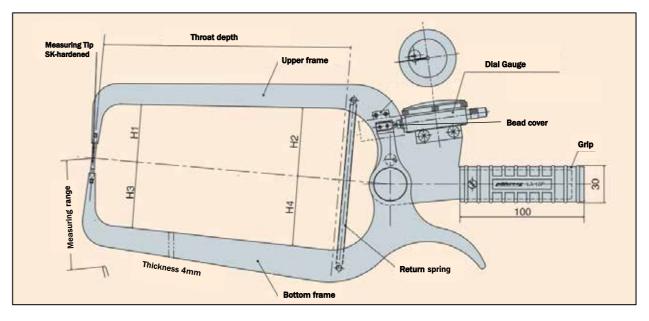
Graduation: 0.05mm Range: 0 ~ 50mm Max opening: 80mm Throat depth: 130mm

LA-26P

Graduation: 0.05mm Range: 0 ~ 50mm Max opening: 80mm Throat depth: 250mm



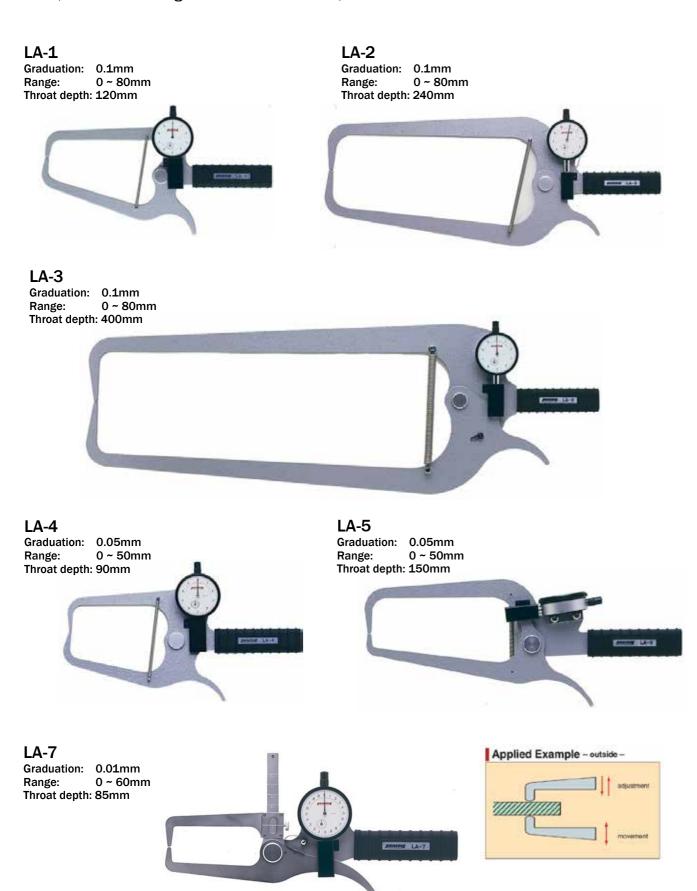
Name of Parts



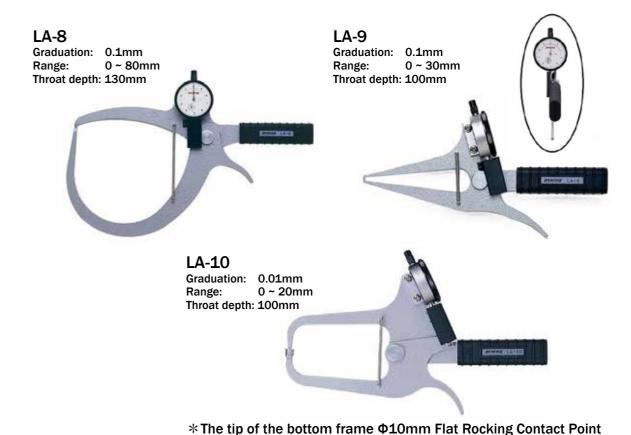
■ Specifications

Model	Graduation	Range	Indication	Max opening	Throat depth	Dimensions (mm)			
	(mm)	(mm)	error (mm)	(mm)	(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

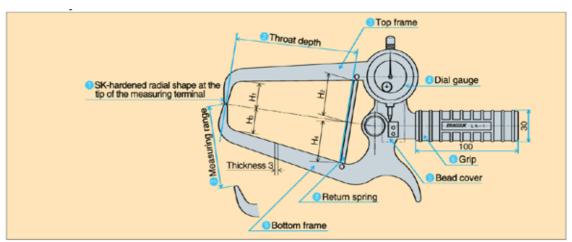
LA series (Outside measuring of ODs and thicknesses)



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



Name of Parts



Specifications

Model Graduation		Range	Indication	Dimensions (mm)				
	(mm)	(mm)	error (mm)	error (mm) (mm)		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 ~ 50mr Throat depth: 125mm 0 ~ 50mm



LA-13

LA-21

Graduation: 0.1mm
Range: 0 ~ 80mm
Throat depth: 220mm

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-22

Graduation: 0.1mm
Range: 0 ~ 80mm
Throat depth: 250mm



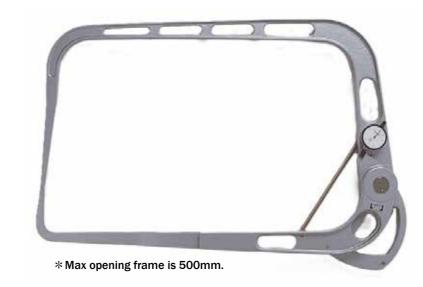
LA-23

Graduation: 0.1mm Range: 0 ~ 80mm Throat depth: 300mm



LA-24

Graduation: 0.1mm Range: 0 ~ 100mm Throat depth: 600mm



Example



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



■ Specifications

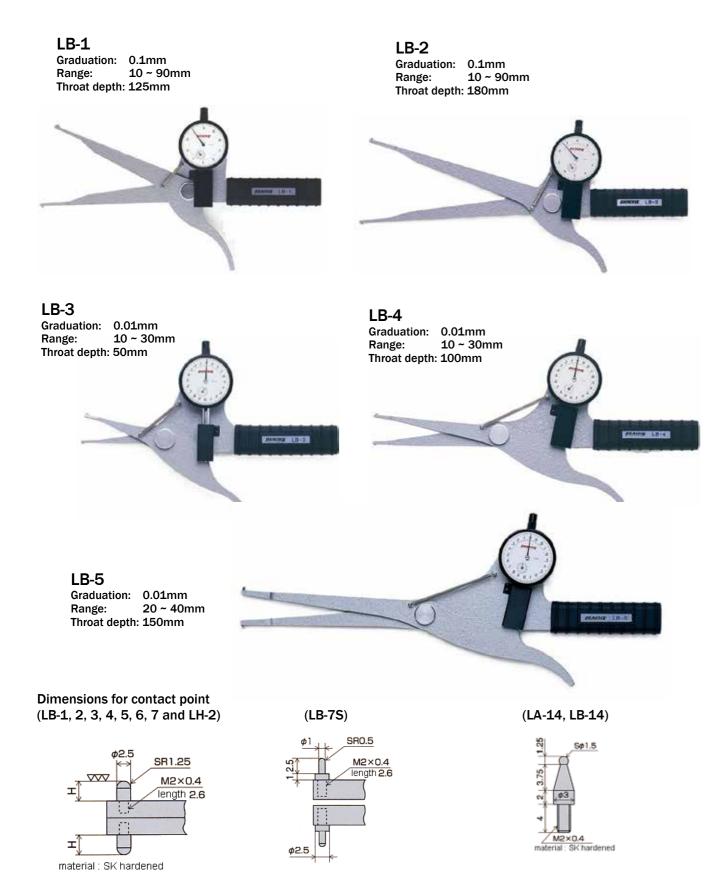
Model	Graduation	Range	Indication	Throat depth		Dimensi	ons (mm)	
	(mm)	(mm)	error (mm)	(mm)	H1	H2	Н3	H4
LA-11	0.1	0 - 50	±0.2	125	2	5.5	2	5.5
LA-13	0.1	0 - 130	±0.3	235	134	134	15	37
LA-14	0.01	100 - 150	±0.03	70	-	-	-	-
LA-21	0.1	0 - 80	±0.2	220	66	69	12	10
LA-22	0.1	0 - 80	±0.2	250	28	23	62	62
LA-23	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.

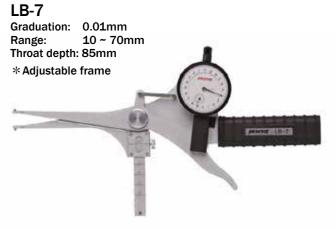
Standard Caliper Gauges

LB series (Inside measuring of ID and groove widths)



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



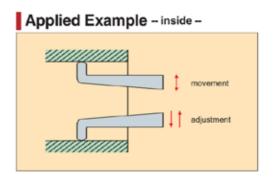






LH-2
Graduation: 0.01mm
Range: 10 ~ 120mm
Throat depth: 50mm





■ Specifications

Model	Graduation	Range	Indication	Throat depth	Height of Contact Point		
	(mm)	(mm)	error (mm)	(mm)	(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.

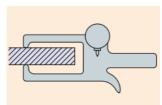
Caliper Gauges are quite useful for such measurement of O.D or I.D. thickness and diameter which appear so difficult to measure.

•Outside measuring (LA) type



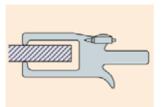
•Inside measuring (LB) type





 Measuring thickness at the back end of a projecting workpiece.

LA-1~4 LA-21~23 LA-26P

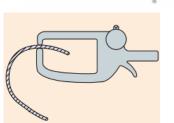


 Measuring thickness at the back end of a projecting workpiece.

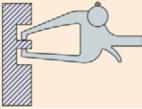
LA-26P

•Dial upward type LA-5 LA-16P LA-17PD LA-18P

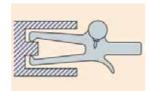
LA-19P



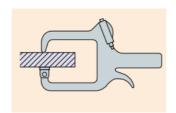
●Measuring thickness of a cup, hat or helmet. LA type



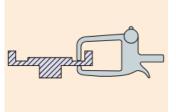
 Measuring thickness or OD in a narrow, confined place.
 LA type



Measuring center OD of a bossLA-11



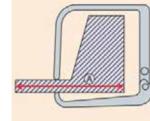
•Floating type: lower contact point has a flat 10mm diameter LA-10



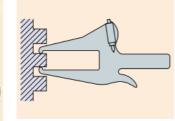
 Measuring thickness by hurdling a projecting area LA type



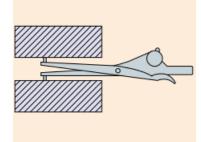
 Measuring thickness by hurdling a projecting area LA-8
 LA-19P



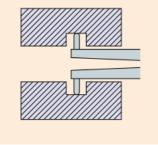
 Measuring thickness of a large workpiece or part.
 A: workpiece sizes up to Until 500mm (LA-24)
 Until 190mm (LA-13)



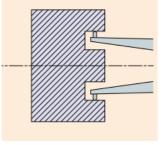
Measuring thickness or OD in a narrow, confined place.
 LA-9
 LA-11



●Measuring ID or groove width LB-1 ~ 6



Measuring ID or an O-ring grooveLB-1 ~ 6



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

Customized Caliper Gauges

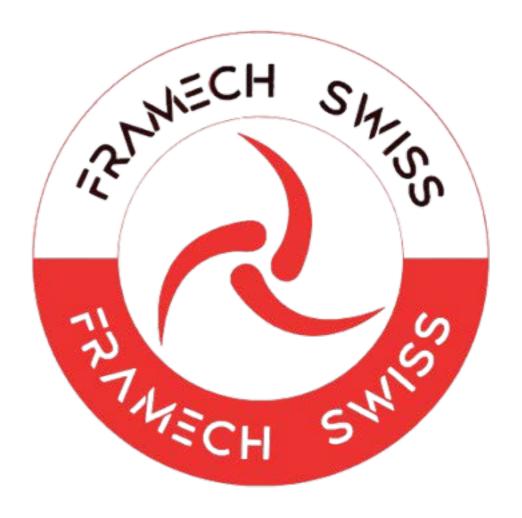
If you have any questions about Special designed Caliper Gauge, please specify the details what you need.

Please check as following:

- Measurement
 □ Outer diameter (□ Thickness of your object)
 □ Inner diameter (□ Width of groove □ Hole diameter □ Others)
 □ Analog type □ Digital type
 Graduation
- 4. Form, Dimension, Measuring Portion of your object

□ 0.1mm □ 0.05mm □ 0.01mm

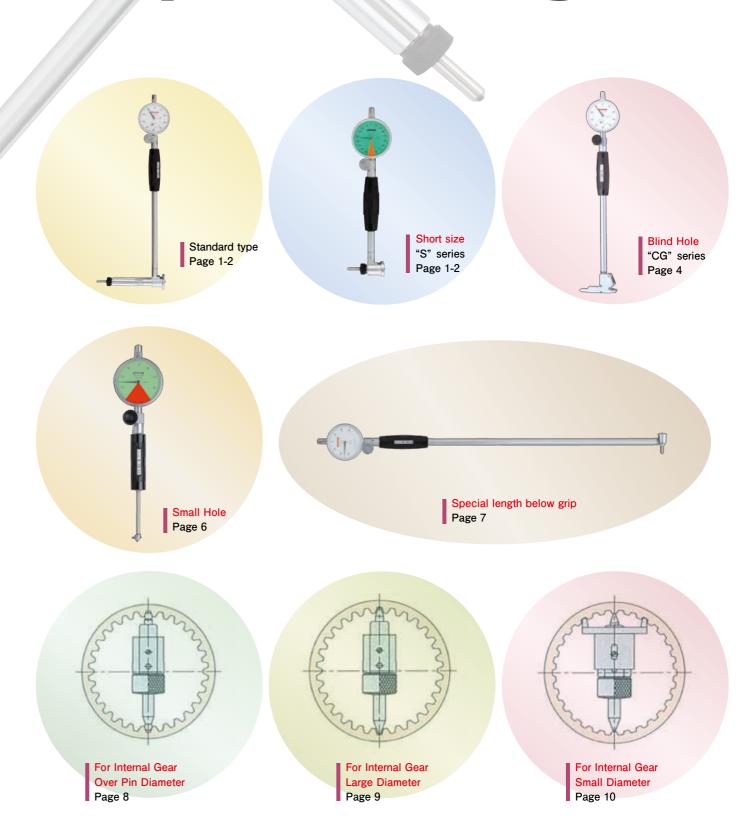
Frame shape that suitable of your object.
 Please send us your drawing or sketch here under.



Request for Special Designed Cylinder Gauge

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Cylinder Gauges



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 177 (Graduation 0.01mm) and 5F or 157 (Graduation 0.01mm).

Suitable Dial Gauge is 57B or 17Z (Graduation 0.01mm) and 5F or 15Z (Graduation 0.001mm) 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.



Specifications

Model	Range Length below			Thickness of	Adapter
	(mm)	(mm)	(mm)	Washers (mm)	, 100 p 10.
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	

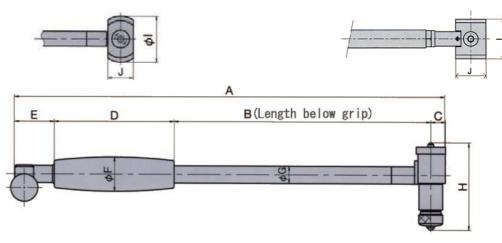
■ Repeated accuracy · · · · · · · · · 2µm

● 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

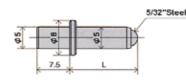
Model	Α	В	С	D	E	F	G	Н	I	J
CC-1H	248.75	150	5.75	70	23	20	10	18 ~ 35	13	11.5
CC-1HS	148.75	50	5.75	70	23	20	10	18 ~ 35	13	11.5
CC-2H	251.5	150	8.5	70	23	20	10	35 ~ 60	23	17.2
CC-2HS	151.5	50	8.5	70	23	20	10	35 ~ 60	23	17.2
CC-3H	251.6	150	8.6	70	23	20	10	50 ~ 100	31	17.2
CC-3HS	151.6	50	8.6	70	23	20	10	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

* 586 M4×0.5 5/32"S

Feeler for CC-2H



		5/32"Ste
φ ₂	88	65
-	7.5	L
	*	7

Size

(mm)

50

55

60

80

85

90

95

100

L (mm)

5

10

15 20

25

30

35

40

45

50

55

Feeler for CC-3H/3CH

Only 18mm is SR5

Feeler for CC-4

Model

Feeler

for CC-4

Model	Size (mm)	L (mm)
	* 18	2
	20	4
	22	6
Feeler	24	8
for CC-1H	26	10
101 00 111	28	12
	30	14
	32	16
	34	18

Size

(mm) 100

110

120

130

140 150

160

L (mm)

10

20 30

40

50

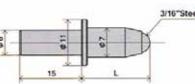
60

70

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

Feeler for CC-3H CC-3CH

Feeler for CC-5



	71	100	
	Model	Size (mm)	L (mm)
		160	10
	Feeler for CC-5	170	20
		180	30
		190	40
		200	50
		210	60
		220	70
		230	80
		240	90

250

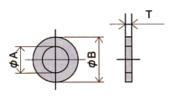
100

on the state of th

Feeler for CC-6

Model	(mm)	L (mm)
	250	10
	260	20
	270	30
	280	40
	290	50
	300	60
Feeler	310	70
	320	80
for CC-6	330	90
101 00 0	340	100
	350	110
	360	120
	370	130
	380	140
	390	150
	400	160

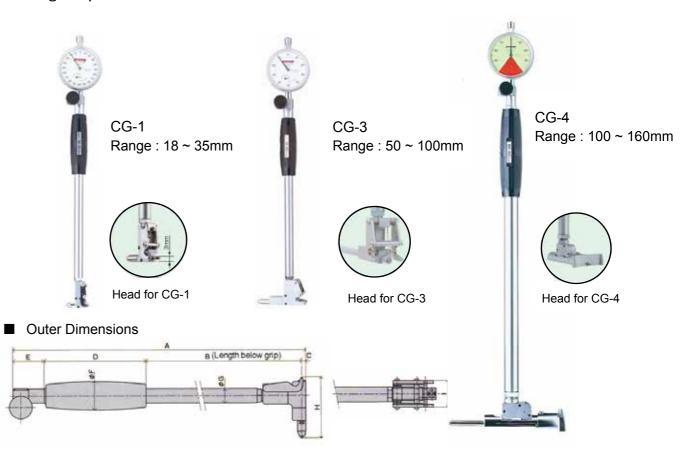
Washer for CC-1H ~ 6



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

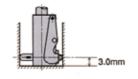
Cylinder Gauges (Blind Hole type, CG series)

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.



Model	Α	В	С	D	Е	F	G	Н	- 1
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)



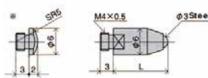
Specifications

- Production of the control of the c								
Model	Range	Length below grip	Number of Feelers	Thickness of	Adapter			
Model	(mm) (mm)		(mm)	Washers (mm)	Auaptei			
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

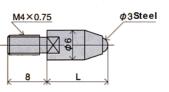
Feeler for CG-1



#Only 18mm is SR5

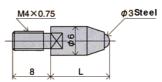
Model	Size (mm)	L (mm)
	* 18	2
Feeler for CG-1	20	4
	22	6
	24	8
	26	10
	28	12
	30	14
	32	16
	34	18

Feeler for CG-2



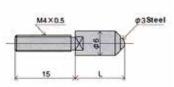
Model	Size (mm)	L (mm)
	35	5
Feeler	40	10
	45	15
for CG-2	50	20
	55	25
	60	30

Feeler for CG-3/3C



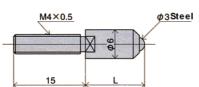
Model	Size (mm)	L (mm)
	50	5
	55	10
	60	15
Feeler	65	20
for CG-3	70	25
CG-3C	75	30
	80	35
	85	40
	90	45
	95	50
	100	55

Feeler for CG-4



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

Feeler for CG-5



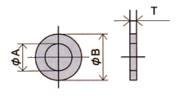
Model	Size (mm)	L (mm)
	160	10
	170	20
	180	30
Feeler	190	40
for CG-5	200	50
	210	60
	220	70
	230	80
	240	90
	250	100

Feeler for CG-6



Model	Size (mm)	L (mm)
	250	10
	260	20
	270	30
	280	40
	290	50
	300	60
	310	70
Feeler	320	80
for CG-6	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

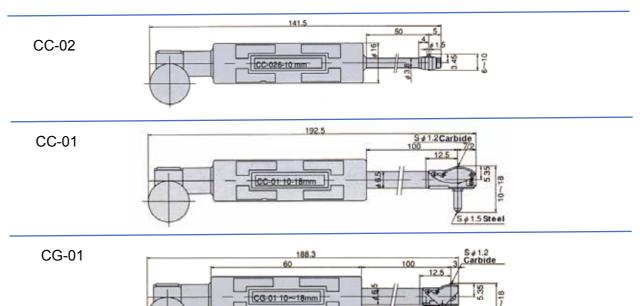
Cylinder Gauges (Small Hole type)

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.



Outer Dimensions



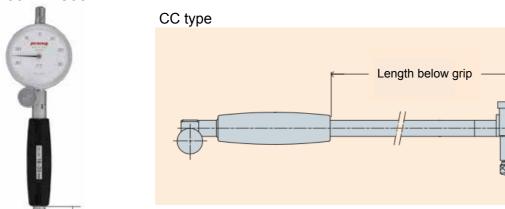
■ Specifications

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

For best fitted special length below grip.

CC-1H L300mm



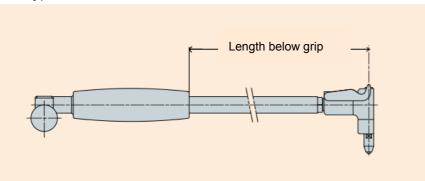


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- 1	mr	

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



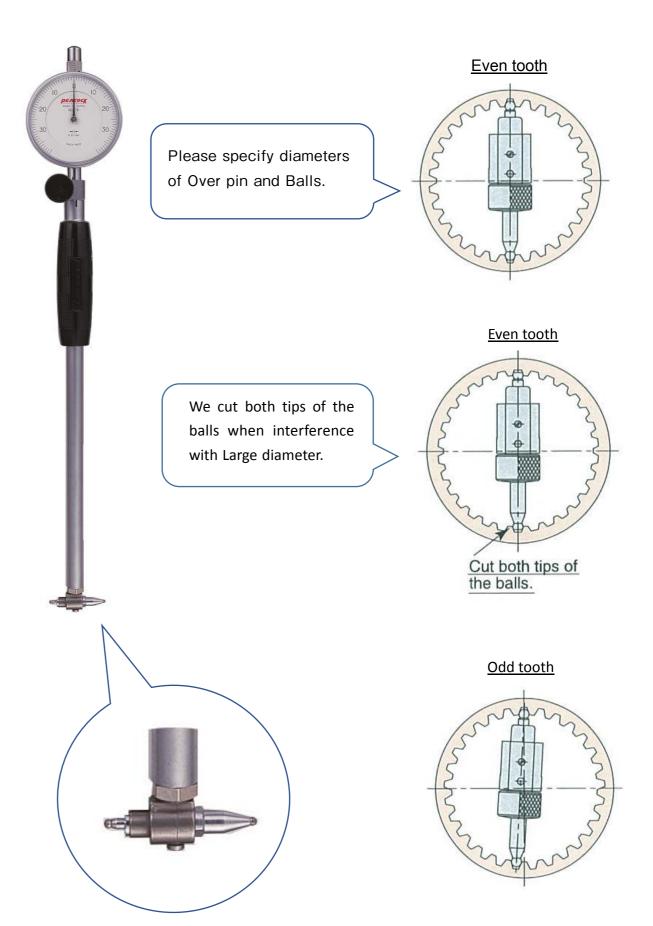
CG type List of special length below grip (L)

(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

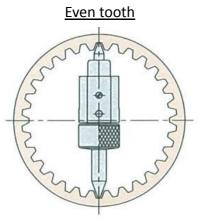
For OVER PIN Diameter



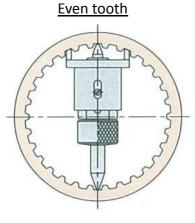
For Large diameter



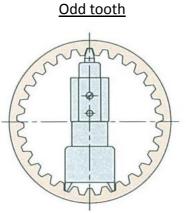
Please specify large diameter, width and height of face.
(We design contact points that do not touch either gear surface.)



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



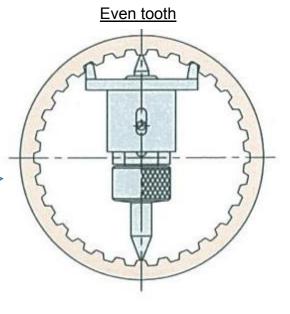
If the root of the face is not in the symmetry, the measurement points will across at any position. This is the reference of measurement by set a Master.



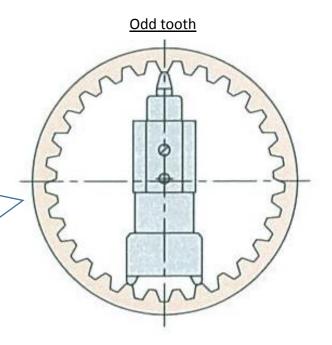


For Small diameter

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



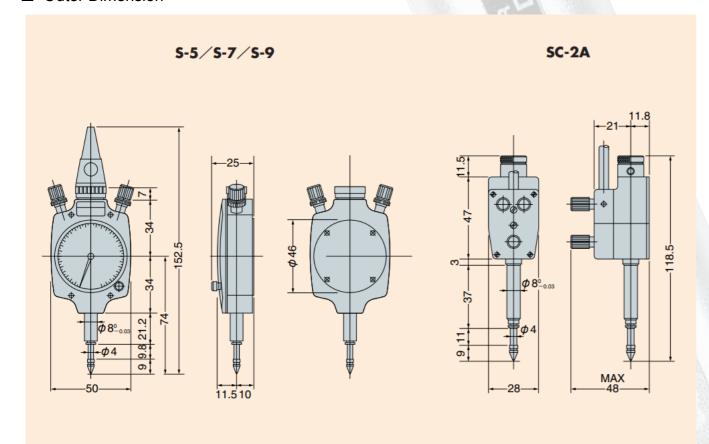
If the root of the face is not in the symmetry, the measurement points will across at any position. This is the reference of measurement by set a Master.



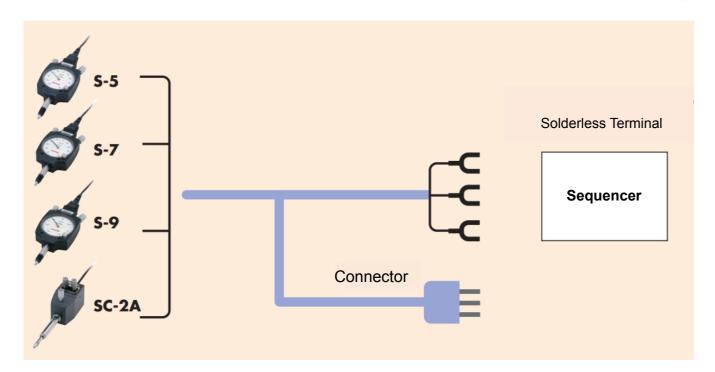
For inquiries:

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



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.



Specifications

Туре	Simp	e type	Multifunction type			
Model No.	DGN-255	DGN-257	DGN-125	DGN-125B	DGN-250B	
Range	25mm	25mm	12.5	5mm	25mm	
Resolution	0.001mm	0.01mm	0.001/0.01m	m Switchable	0.0001/0.001mm	
Indicator error (*excluidng quantized error)	0.003mm	0.01mm	0.00	3mm	2.2 μ m	
Display (mm)	6 digit 999.999 with (- symbol)	6 digit 9999.99 with (- symbol)		999.999 symbol)	6 digit 99.9999 with (- symbol)	
Measuring force	loss th	an 1.2N	loss th	an 1.0N	less than 1.2N	
(upright position)	1635 (11	ali I.ZIN	less ui	all 1.0IN	less than 1.2N	
Mounting Method		Supported by Φ8mm S	tem (Lug Back No	. GB-1DX is option	nal)	
Contact Point		SR2.0mm with Stee	l ball M2.5 x 0.45 l	L=7mm No. X-14		
Operating Temperature			+5°C to + 40°C			
	●Battery	CR-2032				
	● Data Output	RS-232C (by cable KB-	232C or KB-USB)			
	● Preset	Preset at a desired value				
Common Specifications	● 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				
	★ Minimum Value	Hold the Minimum Value	e (Min)			
for Multi type	★ Maximum Value	Hold the Maximum Valu	ie (Max)			
DGN-125	★ Measurement Value	0.001mm/0.01mm Selectable (DGN-125-DGN-125B)				
DGN-125B		0.0001mm/0.001mm Se	electable (DGN-25	0B)		
DGN-250B	★Min + Max	Hold the Minimum Value	e + Maximum Valu	ue (Delta)		
	★ Multiplication display	Calucurated display at s	set multiple (Mult)			
	★ Judgement	LED display -NG OK +N	IG (Tol)			
	♦Spindle Pull-up	Lifting Lever (LL-205), F	inger Lever (LL-D	20), Release (RE-	-205)	
	♦Back with Lug	Mounting Vertical/Horizo	ontal direction (GE	3-1DX) hole Ф6.5n	nm	
Options	♦Contact Point	All the replaceable Cont	tact Point for Dial	Gauges can be ins	stalled	
	♦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



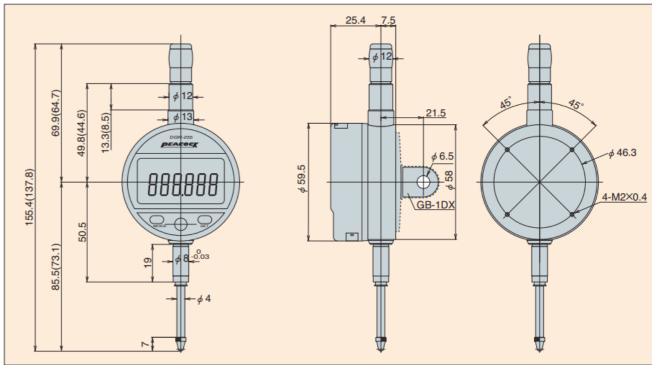
■ Data Communication





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

Dimensions

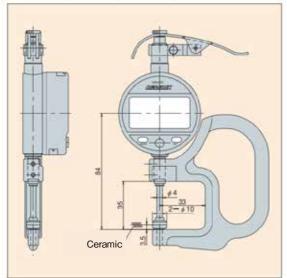


(Dashed line is for Optional Lug back and Dimensions of DGN-125 is shown in parentheses.)

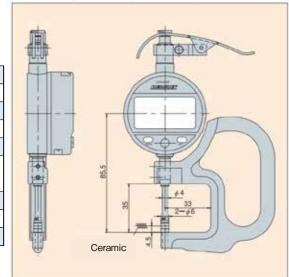
Digital Thickness Gauges

G2N-255

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	Ф10mm	Φ6mm	Ф10mm	Ф6тт
Contact Point parallelism	less than 5µm		less tha	an 10µm
Resolution	0.001mm		0.01mm	
Accuracy (excluding quantized error)	±0.008mm		±0.0	2mm
Measuring range	0 - 20mm			
Measuring force	less than 1.2N			
Measuring depth	33mm			

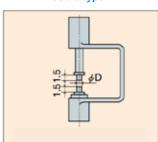
Digital Thickness Gauge (Special order)

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

Resolution : 0.001mm

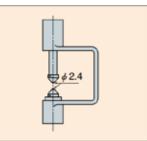
Range: 20mm

Both Contact Point and Anvil needle type

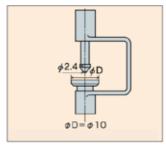


Please specify ΦD

Both Contact Point and Anvil ball type

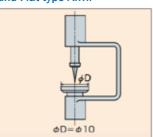


d Ball type Contact Point and Flat type Anvil



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

Needle type Contact Point and Flat type Anvil

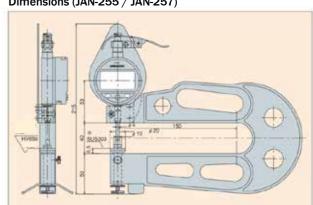


D=10mm diameter (Also Φ20, 25and 30mm can be customized.)

Dial Thickness Gauges (Large type)



Dimensions (JAN-255 / JAN-257)



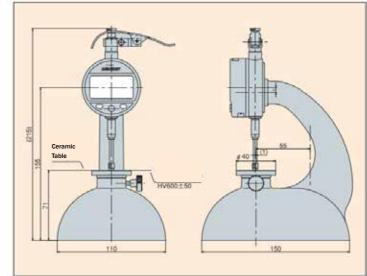
Specifications

Model	JAN-255	JAN-257
Digital Gauge	DGN-255	DGN-257
Resolution	0.001mm	0.01mm
Accuracy	±0.01mm	±0.02mm
(excluding quantized error)	10.01111111	10.0211111
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	Ф10mm / Ф20mm	

Digital Upright Gauges



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



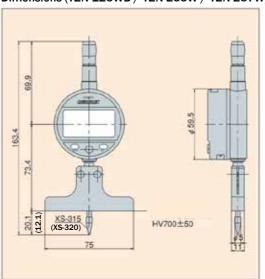
Specifications

- opcomoduono			
Model	R1N-250B R1N-255 R1N		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		
	Wireless : USB Bluetooth Receiver No. BT-4		
Option	Wired : USB Cable No. KB-USB		
	Wired : RS232C Cable I	No. KB-232C	

Digital Depth Gauges

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

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



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

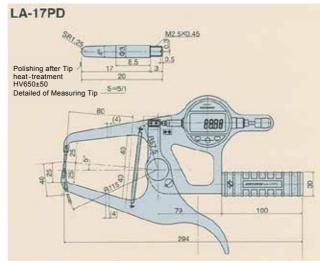
Specifications

Model	T2N-125WB	T2N-255W	T2N-257W
Measuring Range	12mm	201	mm
Resolution	0.001	lmm	0.01mm
Accuracy	±4µ	ım	±20µm
Digital Gauge	DGN-125B	DGN-255	DGN-257
Contact Point	XS-320 XS-315 (Spherical type) (Spherical type)		
Base (L x W)	75mm x 11mm (Flatness less than ±5µm)		
Data Transmission	Bluetooth or by cable By cable only		ble only
Option	Wireless: USB Bluetooth Receiver No. BT-4 Wired: USB Cable No. KB-USB Wired: RS232C Cable No. KB-232C		

Digital Caliper Gauge



Dimensions



■ Specifications

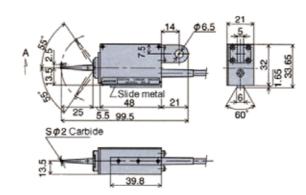
Model	Graduation	Range	Indicator error	Max opening	Throat depth
Model	(mm)	(mm)	(mm)	(mm)	(mm)
LA-17PD	0.01	0 ~ 25	±0.03	40	80

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

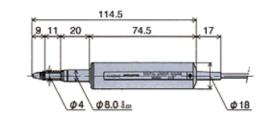
- Lever type DL-2 and DL-2S are best suited for deviation measurement.
- Pencil type D-5 and D-5S are best suited for confined conditions.



Dimensions (DL-2 / DL-2S)



Dimensions (D-5 / D-5S)



Specifications

Model	DL-2	DL-2S	D-5	D-5S
Range	2n	nm	5n	nm
Resolution	0.01mm	0.001mm	0.01mm	0.001mm
Accuracy (excluding quantized error)	0.01mm	0.003mm	0.005mm	0.002mm
Measuring force	Less th	an 0.6N	Less than 0.5N	
Mounting method	Φ6.5mm hole on lug or dovetail at bottom		Ф8mm stem	
Contact Point	S Ф2mm Carbide		S Φ2.4mm steel (X-2)	
Cable length	2m (Stand	dard) Option Extent	tion cables of 2, 3, 5	and 10m
Operating temperature	0 ~ 40°C			
Output signal	90° phase difference, 20µm pitch (R03-PB8M Tajimi connector)			ni connector)
Compatible counters	C-500 / C-700			
Options	_	-	 Up-side-down type, force changes when 	the measuring the gauge is inverted.

Linear Gauge (Measurement range $0 \sim 10$ mm, $0 \sim 20$ mm)

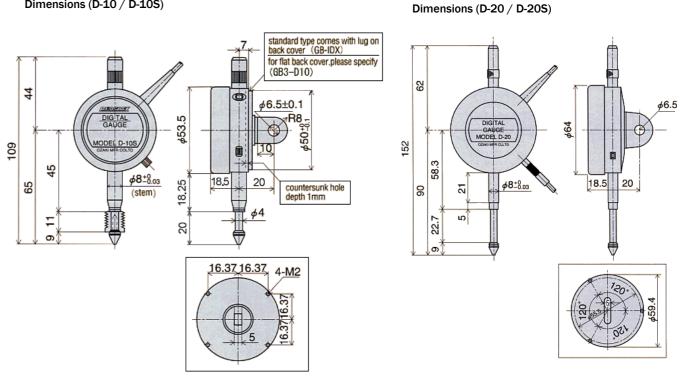
- 10mm and 20mm measurement ranges are the easiest to use.
- Used in conjunction with digital counters, these gauges can be set up in places where dial gauges are now being use.
- Set the gauge by either stem or lug back.
- For lifting spindle, both lever and release types are available.



Specifications

Model	D-10	D-10S	D-20	D-20S
Range	10r	nm	20r	nm
Resolution	0.01mm	0.001mm	0.01mm	0.001mm
Accuracy (excluding quantized error)	0.005mm	0.002mm	0.005mm	0.003mm
Measuring force	Less that	an 1.0N	Less that	an 1.5N
Mounting method		Ф8mm 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)			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 		 Release (RE-4L) Flat back (GB3-D20 Customer must spe is up-side-down as force changes who inverted. 	cify if application the measuring
	inverted.	in the gauge is	inverted.	

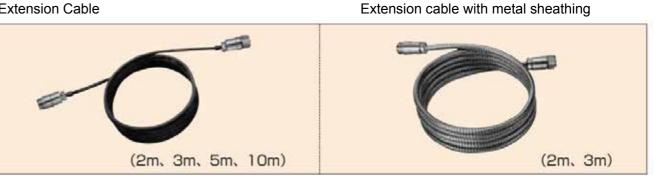
Dimensions (D-10 / D-10S)



Optional accessories



Extension Cable



Production on request

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

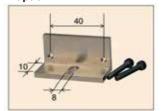


Option



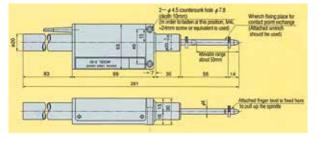
For High Temperature
Applications D-50HT (0.01mm only)
Can be used up to +65° temperature.
D-50S is not suited for high temperature.

Option

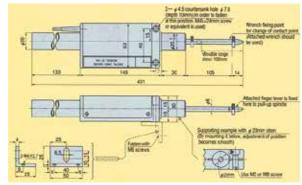


Level mounting clamp GB-50

Dimensions (D-50 / D-50S)



Dimensions (D-100 / D-100S)



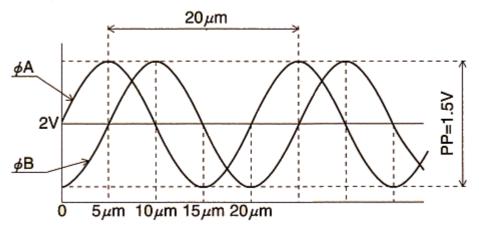
Specifications

Model	D-50	D-50S	D-100	D-100S
Range	50r	mm	100	mm
Resolution	0.01mm	0.001mm	0.01mm	0.001mm
Accuracy(excluding quantized error)	0.01mm	0.004mm	0.01mm	0.005mm
Measuring force	Less th	an 3.0N	Less th	an 3.5N
Mounting method	Ф20m	m stem or fastening	by M4 screws at two	positions
Contact Point		M2.5 x 0.45 SФ	2.4mm 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	Output signal (A)	DL-2S, D-5S, D-10S, D-20S, D-50S, D-100S		
gauges	Output signal (B)	DL-2, D-5, D-10, D-20, D-50, D-100		
Displacemen	t transducer type	Glass linear scale (scale pitch 20µm) (D-10SS / D-10HS: pitch 8µm)		
Power supply	1	±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		$0 \sim 40^{\circ}$ C (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 $1\mu m$ pulse by 5 where $1\mu m$ = 1 generated pulse.

■ Signal Connector R03-PB8M (manufactured by Tajimi)

G A B C C

Pin arrangement

Pin No.	Signal	Wire Color
Α	GND	black
В	φA	blue
С	+12V	red
D	φB	white
E	NC	unused
F	shielded	wire (FG)
G	NC	unused
Н	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.

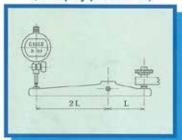


BBDB

Simple type C-500

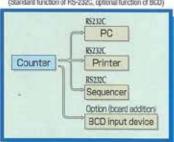
Multi-type C-700

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



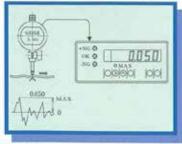
Displays the displacement after halving it.

Data Output (C-500/C-700) (Standard function of RS-232C, optional function of BCD)



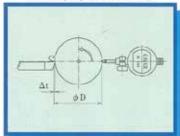
Outputs data

Maximum Value Display (C-700)



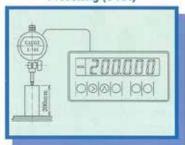
Holds the maximum positive value and makes $\mathsf{OK} \! \pm \! \mathsf{NG}$ judgment.

×2 Display (C-500/C-700)



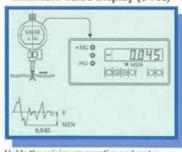
Displays the displacement after doubling it.

Presetting (C-700)



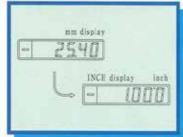
Displays preset values.

Minimum Value Display (C-700)



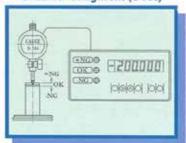
Holds the minimum negative and makes OK±NG judgment.

Inch Display (C-500/C-700)



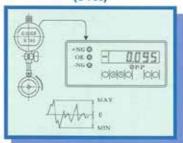
Displays the displacement in terms of inches.

OK±NG Judgment (C-700)



Outputs OK±NG judgment.

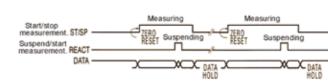
Deflection Measurement Display (C-700)

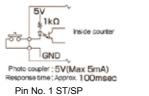


Holds the difference between the maximum and minimum values (deflection) and makes OK±NG judgment.

Specifications of Digital Counters

Model	Model No.C-500	Model No.C-700
Displayed digits *Selection of 10µm	-9999.99 ~ C	00.00 ~ 9999.99
*Selection of 1µm	-999.999 ~ C	1.000 ~ 999.999
Display	-	splay with 7 segments (red)
Power supply voltage & power consumption		40V • 9VA or lower
Operating temperature	0 ~	40°C
Compatible Linea Gauges		
Selection of 10µm display		0, D-50 and D-100
Selection of 1µm display	* *	0S, D-50S and D-100S
	♦AC power cord (2m) : One cord	
Accessories	♦ Metal fittings for panel installation: Two units (to be used for install	· · · · · · · · · · · · · · · · · · ·
	♦ Stand fittings: One unit (to be used when counter is used as deskt	op device)
	◆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 me	easurement mode.
	*2 Reat Controls "SUSPEND" and 'START of P-P measurem	
	3 Latch Controls "LATCH" and "CANCEL of measured value	
Terminal block functions (Rear panel)	4 Reset External "RESET" "PRESET' (Function available onl	y in Model No. C-700)
	5 Alarm Error signal output	Max Display Min Display P-P Display
	*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 (green EEB	, , , , , , , , , , , , , , , , , , ,
		(1): NG output in first stage
	9 GND GND	(2): NG output in second stage
	* marked numbers indicate functions available only in Model No.C-70	0
	<u>Dip (1)</u>	
	SW1 Select 1 \(\mu \text{m} \) or 10 \(\mu \text{m} \)	
Dip sw setting functions	SW2 Select direction of counting.	
(Printed circuit board)	SW3 Select activation or non activation of error output. SW: SW4 Select activation or non activation of overflow. SW:	
	SW4 Select activation or non activation of overflow.	Select either 400msec or 100msec for RESET time.
	♦ Pin Alignment	
Data output (RS-232C)	1 NC ♦Communication mode: Half-duplex asy	nchronous communication
D-Sub9P plug INCH screw	2 Rxd in ← ◆Communication speed: 9600bps	
	3 Txd → out ♦Format: 7Bit ASCI	
	4 NC ♦ Parity: even number 5 SG ♦ Stop bit: 1Bit	
	5 SG Stop bit: 1Bit 6 NC RTS/CTS: Returned when not in use.	
	7 RTS → out ♦ Reception command: Transmission rec	THEST ASCILITIES
	8 CTS in ← : Reset ASCII [R]	
	9 NC Connection cables: Cross cables (not in	
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 disp	layed as an even number.
Presetting display function	♦Zero setting only	♦Can display preset values
Management and 6		A Comment coulons diseases.
Measurement mode function		Current value dispiay AMaximum value (Max) RESE action is taken by
[MAX] [MIN] [P-P]		ST of the ST/SP control
		♦ Minimum value(Min) terminal. ♦ Deflection(P-P)
		\ , , -
		♦Current value mode : +NG OK —NG
OK±NG judgment function		♦ Maximum value mode : OK +NG (1) +NG (2)
(Refer to terminal output circuit)		♦ 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 Termina	I Input Circuit Terminal Output Circuit





Pin No. 2 REACT Pin No. 3 LATCH Pin No. 4 RESET Open collector output
Votage: Max CCCOV
Currert: 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
- Measurement is possible up to the length of 10M by using an additional extension rod.







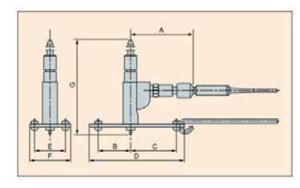
EMCC-3

Specifications

Model		EMCC-2	EMCC-3	EMCC-4	EMCC-5	EMCC-6				
Measuring range	e (ID)	40 ~ 60mm	50 ~ 100mm	100 ~ 160mm	160 ~ 250	250 ~ 400mm				
Measuring deptl	h	70mm ~ 10M	90mm ~ 10M	120mm ~ 10M	130mm ~ 10M	150mm ~ 10M				
Number of feele	r	Intervals 5mm x 6	Intervals 5mm x 11	Intervals 10mm x 7	Intervals 10mm x 7 Intervals 10mm x 10 Intervals 10mm x					
Thickness of wa	shers	1, 2, 3n	nm 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 lines	ar gauge	● D-5B (0.01mm) ● D-5SB (0.001mm)								
Compatible cou	nter	● C-500								
Operations		● Test completes only after receiving reference from a master and inserting the micrometer head through a workpiece.								
Operations		• 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).								
	Α	70	71	77	77	77				
	В	20	30	40	45	50				
	С	30	40	55	60	70				
Dimensions	D	62	82	115	125	140				
(mm) 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 m	eters		

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.

 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.

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

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











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

Resolution: 0.01mm Range: 1.0 (±0.5)mm

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

Range: 3mm

Specifications

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 (120g	ıf)					
Contact capacity			MAX DC24V 20mA	\					
Number of judgement stages		Thr	ee stages ofNG, OK	and +NG					
Cord length			2m						
Contact point			X-2						
Stem diameter		Ф8	0 -0.03mm						
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	3 2	- , ,	with $\textcircled{1}$ and $\textcircled{2}$ at ON with $\textcircled{1}$ and $\textcircled{3}$ at ON with $\textcircled{1}$, $\textcircled{2}$ and $\textcircled{3}$ at OFF	SC-2A 1 COM (blue) black -NG with 1, 2 and 3 at OFF 2 OK (red) OK with 1 and 2 at ON 3 +NG (white) +NG with 1, 2 and 3 at 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. 								

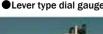
13 14

Gauge Testers

Dial Gauge Tester Model NB

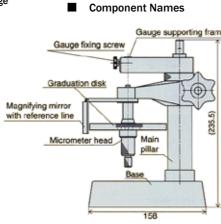
- This is a calibration tester having a high precision micrometer with the minimum scale of 1µm. It can be used in order to calibrate dial gauges as well as other displacement gauges.
- The stanchion is vertically adjustable according to the type of gauges and reading is done while looking at the scale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











Specifications

Model	Micro	meter head	Forward Acouragy	Feed per revolution		Gauge fixing
	Our desetter ()	Measurement Range	Forward Accuracy	reed per revolution	Spindle tip	dimension
	Graduation (mm)	(mm)	(µm)	(mm)		(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.

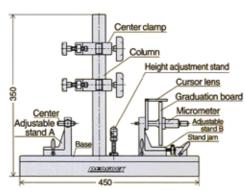


Cylinder gauges to be possibly inspected

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

Φ6 ~ 10mm			Ф160 ~ 250mm
Ф10 ~ 18mm	Ф35 ~ 60mm	Ф100 ~ 160mm	Ф250 ~ 400mm

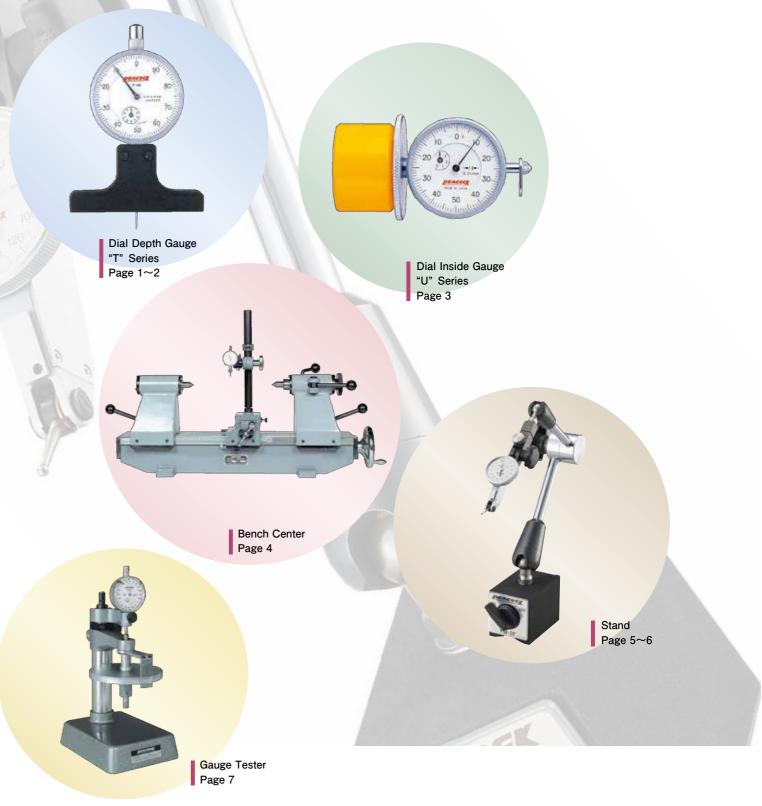
■ Component Names



Specifications

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

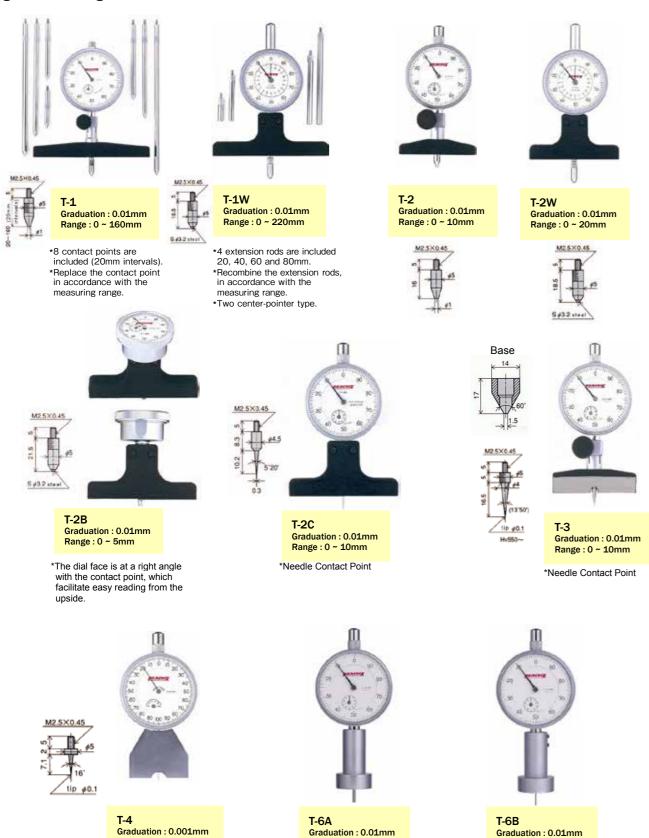
Dial Depth Gauges Dial Inside Gauges Bench Center, Stands Gauge Testers



Dial Depth 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.



Range : 0 ~ 10mm

*Base Outer Φ25.0mm

*Needle Contact Point Φ2.0mm

Range : 0 ~ 10mm

*Base Outer Φ25.0mm

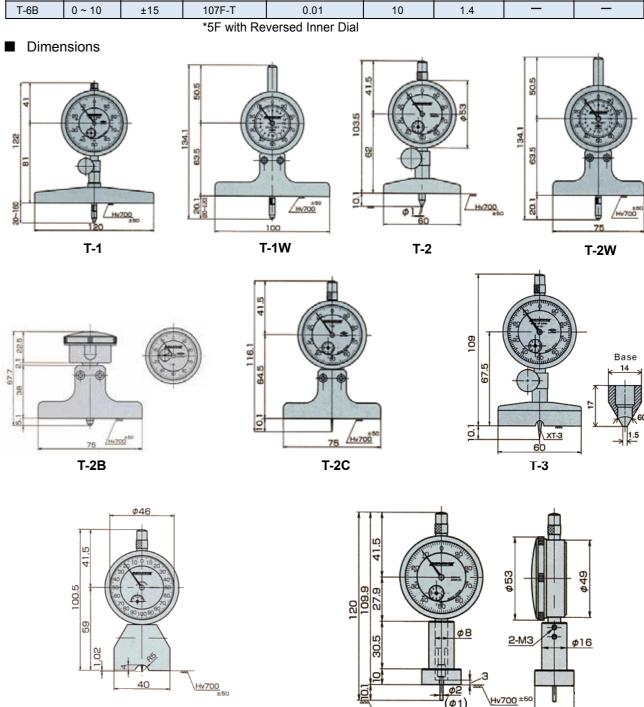
*Needle Contact Point Φ1.0mm

Range: 0 ~ 1mm

*Needle Contact Point (XT-4)

Specifications

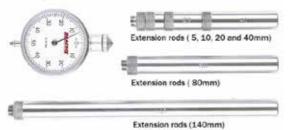
	Range	Accuracy		Dial Gauge	9		Base		
Model	(mm)	(µm)	Gauge installed	Graduation (mm)	Range (mm)	Measuring force less than (N)	Length (mm)	Width (mm)	
T-1	0 ~ 160	±20	207F-T	0.01	20	2.0	120	14	
T-1W	0 ~ 220	±20	207WF-T	0.01	20	2.0	100	11	
T-2	0 ~ 10	±15	107F-T	0.01	10	1.4	60	14	
T-2W	0 ~ 20	±20	207WF-T	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	_	_	



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



Graduation : 0.01mm

Range: 50 ~ 350mm (Measuring range of dial gauge : 5mm)

With Magnetic Base

U-1



U2HA

 $\textbf{Graduation: 0.01} \\ \textbf{mm}$ Range : 66 ~ 88mm

(Measuring range of dial gauge : 4mm)

U2HB

Graduation: 0.01mm Range : 80 ~ 92mm

(Measuring range of dial gauge : 4mm)



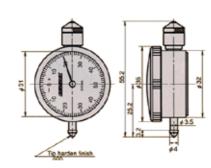
Graduation: 0.01mm Range : 66 ~ 80mm (Measuring range of dial gauge : 4mm)

U3HB

Graduation: 0.01mm Range : 80 ~ 92mm

(Measuring range of dial gauge : 4mm)

■ Dimensions





U2FA

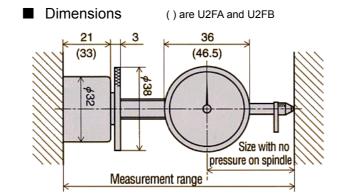
Graduation : 0.01mm

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

U2FB

Graduation : 0.01mm Range : 110 ~ 120mm

(Measuring range of dial gauge : 5mm)



Specifications

Model	Gradation	Range	Reading		Acci	uracy MPE	(µm)		Magnetic Power	Measuring force
	(mm)	(mm)		10 Scale	1/2 Rev.	1 Rev.	2 Rev.	Whole	(kg)	Less than (N)
								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		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	8 ~ 10kg	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

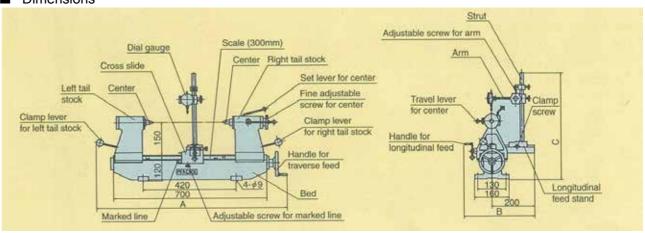
Bench Center

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)



Maximum Center distance : 300mm Maximum work capacity dia.: 230mm

Dimensions



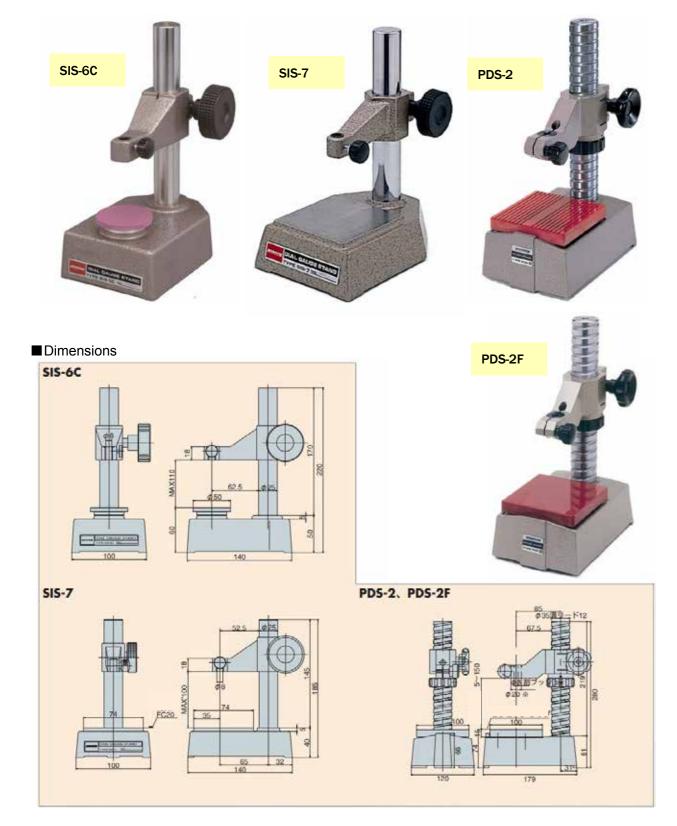
Specifications

	Model	Center	Max. work	Use center	0	verall dimensi	ons	Approx. weight	Feed	l gear
		distance (mm)	capacity dia. (mm)		(A) mm	(B) mm	(C) mm	(kg)	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 Φ 20mm type gauges such as D-50 (S) and D-100 (S).



Specifications

Model	Table surface	Table size	Effetive moving range	Allowable measuring depth	Stem installed
SIS-6C	Ceramic w/o grooves	Ф50mm	0 to approx. 100mm	Approx. 62.5mm	Ф8mm
SIS-7	Ground cast iron surface	74 x 74 cm	0 to approx. 100mm	Approx. 52mm	(※ Ф10mm)
PDS-2	Ceramic w/o grooves	100 x 100cm	0 to approx. 100mm	Approx. 60mm	Ф8mm
PDS-2F Ceramic w/grooves		100 x 100cm	0 to approx. 100mm	Approx. 60mm	(% Ф20mm)

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

Magnetic Stands

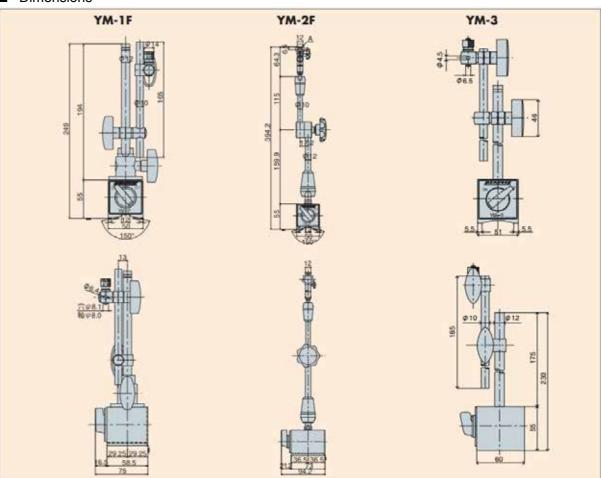
The stand using a powerful magnet features simple and stable holding at any place, easy handling, compactness and reasonable price.

Either lever dial indicator (held by Φ 6mm 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.



Dimensions



PCN series (Without Change lever)

- 1 Crystal 2 Bezel
- 10 Idle Gear
- 3 Pointer
- 4 Dial
- 5 Plate Spring 6 O-Ring
- 7 Metal
- 8 Screw for Metal
- 9 Pinion
- 11 *Base Metal
- 12 *Screw for Base Metal 13 *Lower Plate Assy
- 14 Sector Gear Assy 15 Crown Gear
 - 16 *Upper Plate Assy
- 17 *Screw for Metal Column 25 Lever with Bearing
- 18 *Stopper Screw
- 20 *Main Body
- 21 *Side Cover
- 23 Stem
- 19 *Screw for Lower Plate

26 Contact Point

27 Nut for Pivot

29 Adjustment Screw

30 Hair Spring Column

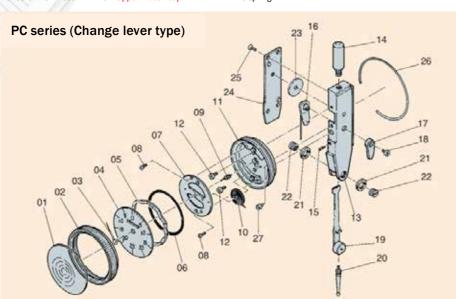
28 Pivot w/miniature Bearing

25 Screw for Side Cover

27 Hair Spring Column

26 Wire Spring

- 22 Screw for Side Cover
- 24 Wire Spring



- 1 Crystal
- 9 Pinion 10 Idle Gear

11 *Base Metal

12 *Screw for Base Metal

- 2 Bezel 3 Pointer
- 4 Dial
- 5 Plate Spring 6 O-Ring
- 13 *Main Body 14 Stem
- 7 Metal 15 *Stopper Screw 8 Screw for Metal 16 *Spring for Clutch lever Assy 24 *Side Cover
- *mark are not for sell

- 17 Clutch Lever
- 18 Screw for Clutch Lever
- 19 Sector Gear Assy
- 20 Contact Point 21 Nut for Pivot
- 22 Pivot Assy w/Miniature Bearing
- 23 Crown Gear

Pic Test Indicators

Low measuring force "E" Series

One revolution "Z" Series Page 7

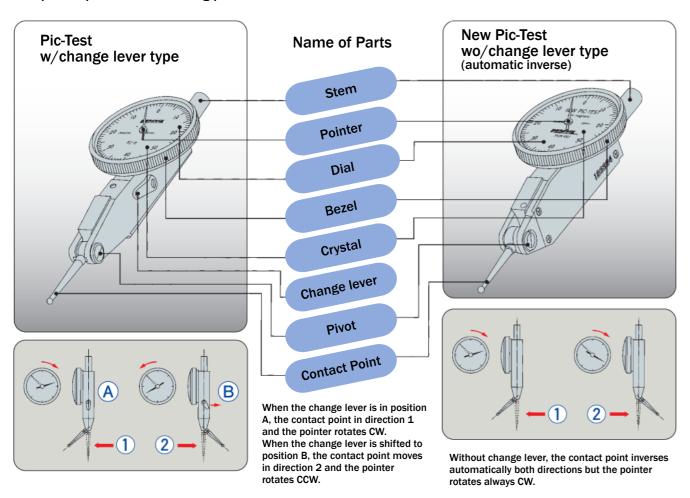
Accessories Page 9~11

Page 5

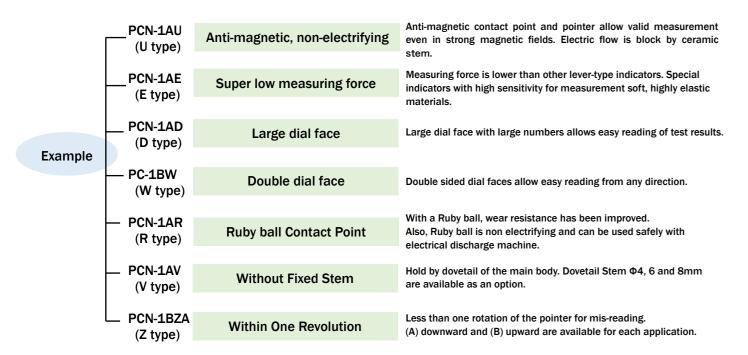


Quick Chart for "PEACOCK" Lever-Type Dial Indicators

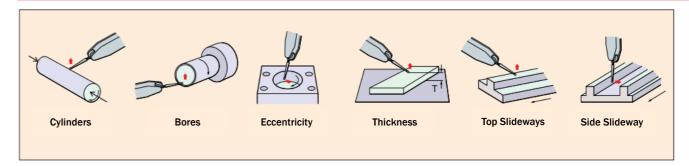
Lever-type dial indicators are most suitable for alignment and TIR (Total Indicator Run-Out) testing. There are two types of lever-type dial indicators. Pivot bearings are used on all of Peacock's lever-type indicators, which assure exceptional precision over a long period of time.



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

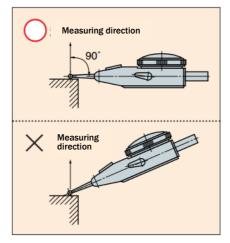


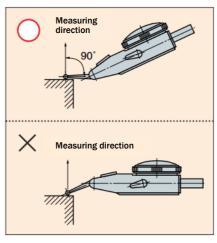
Applied Examples

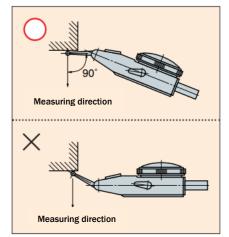


Precautions for Handling

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.

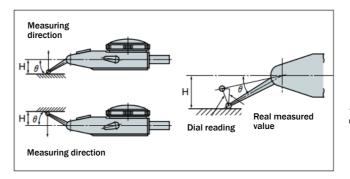


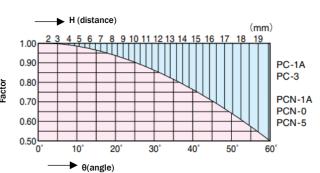




In case they are not perpendicular, a correction by the following formula is necessary.
 Due to various measuring direction, the contact point sometimes can not be angled perpendicular to the measuring device.

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 $x \cos \theta$





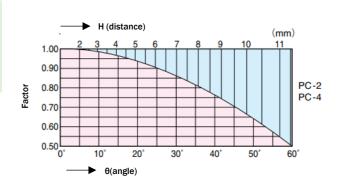
Example:

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 ●0-ring used PCN-2B PCN-1L Graduation: 0.01mm Graduation: 0.002mm Graduation: 0.01mm Graduation: 0.01mm Range: 0.5mm Range: 0.2mm Range: 0.8mm Range: 1.0mm ●Small dial face (Ф29mm) Vertical type Vertical type PCN-2L PCN-5 Graduation: 0.002mm Graduation: 0.001mm Graduation: 0.01mm Graduation: 0.001mm Range: 0.28mm Range: 0.14mm Range: 0.5mm Range: 0.14mm ●w/Long Contact Point

Change lever type **PC** series

- ●Miniature Bearing used

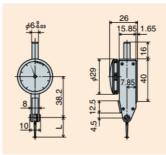


■ Specifications

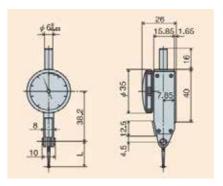
	= Opco	IICations									
1	Model	Graduation	Range	Reading			Accuracy MPE	(µm)		Measuring force	Contact
		(mm)	(mm)	,	10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability	Less than (N)	Point
	PCN-0	0.01	0.5	0-25-0	5	ı	6	4	3	0.3	XN1A-2
	PCN-1A	0.01	0.5	0-25-0	5	1	6	4	3	0.3	XN1A-2
	PCN-1B	0.01	0.8	0-40-0	5	ı	9	4	3	0.3	XN1B-2
	PCN-1L	0.01	1.0	0-50-0	5		10	5	3	0.3	XN1L-2
ſ	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
W	PCN-2L	0.002	0.28	0-140-0	2		4	3	1	0.3	XN2L-2
1	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
ſ	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	1	9	4	3	0.4	XP1B-2
PC-1L	0.01	1.0	0-50-0	5	1	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

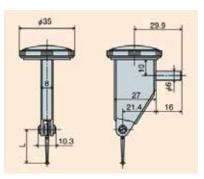
■ Dimensions



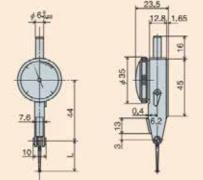
Model	L (mm)
PCN-1A, PCN-7A	21.3
PCN-1B	22.2
PCN-1L	42.8
PCN-2	17.94
PCN-2L	23.47
PCN-2B, PCN-7C	16.6
PCN-S	11.7



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

φ 60 as 3.5

Special Type Test Indicators

Large dial face **D** series

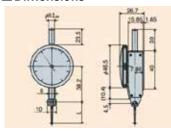
Easy reading thanks to large size dial face Φ46.5mm



■ Specifications

Model	Graduation	Range	Reading			Measuring force	Contact			
	(mm)	(mm)		10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability	Less than (N)	Point
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

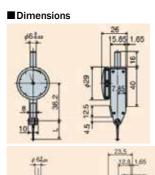


Model	L (mm)
PCN-1AD	21.3
PCN-2BD, PCN-SD	16.6
PCN-1LD	42.8

Super low measuring force **E** series

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





<u></u>	- 1
7.0 = 3 10.1	22.5 32.4 1.65 29 0.4 6.3

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	Range	Reading			Measuring force	Contact			
	(mm)	(mm)	•	10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability	Less than (N)	Point
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

Special Type Test Indicators

Double Dial type W series



Alignment work

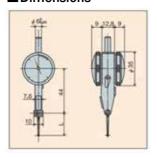


With Double Dial type, readings can be made easily even if gauge is turned 180 deg.

■Specifications

Model	Graduation	Range	Range Reading Accuracy MPE (µm)				Measuring force	Contact		
	(mm)	(mm)		10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability	Less than (N)	Point
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

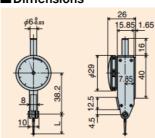
Electric flow is blocked at the ceramic stem and Ruby ball contact point, even of a magnetic stand is electrified. Thus, you can continue your work without any problem.



■Specifications

Model	Graduation	Range	Reading	Accuracy MPE (µm)					Measuring force	Contact
	(mm)	(mm)		10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability	Less than (N)	Point
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

A35	739
8	27 27 21.4 16
10.3	

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



■ Specifications

Model	Graduation	Range	Movable		Accuracy MPE (μm)					Contact
	(mm)	(mm)	Range	10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability	Less than (N)	Point
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

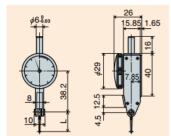
Attach dovetail stem to where you like and our dovetail stems are optional.



■ Specifications

Model	Graduation	Range	Reading Accuracy MPE (µm)				Measuring force	Contact		
	(mm)	(mm)		10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability	Less than (N)	Point
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

Special Type Test Indicators

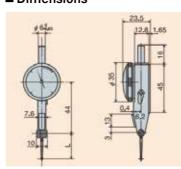
PIC TEST / NEW PIC TEST with Ruby ball Contact Point R series



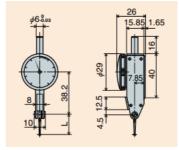
■ Specifications

Model	Graduation	Range	Reading			Accuracy MPE	(µm)		Measuring force	Contact
	(mm)	(mm)		10 Scale	1 Rev.	Wide range	Hysteresis	Repeatability	Less than (N)	Point
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

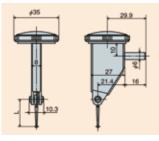
■ Dimensions



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

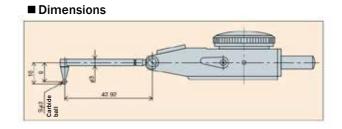
Contact Point Part No. XP1LX-2

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.



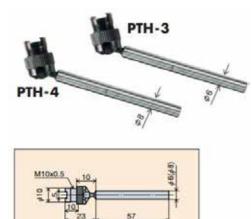
We also supply PC-1L w/Ct. Point XP1LX-2.

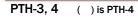


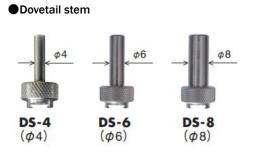
^{*}V series is without stem.

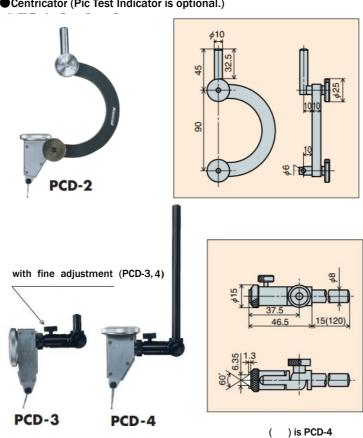
Accessories (Option)

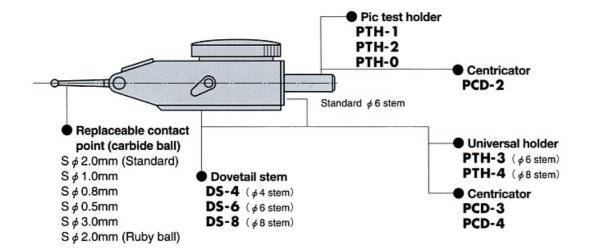






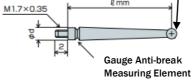






Replaceable Contact Point (M1.7 x0.35 0.35)

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.



For Pic Test (Change lever type)

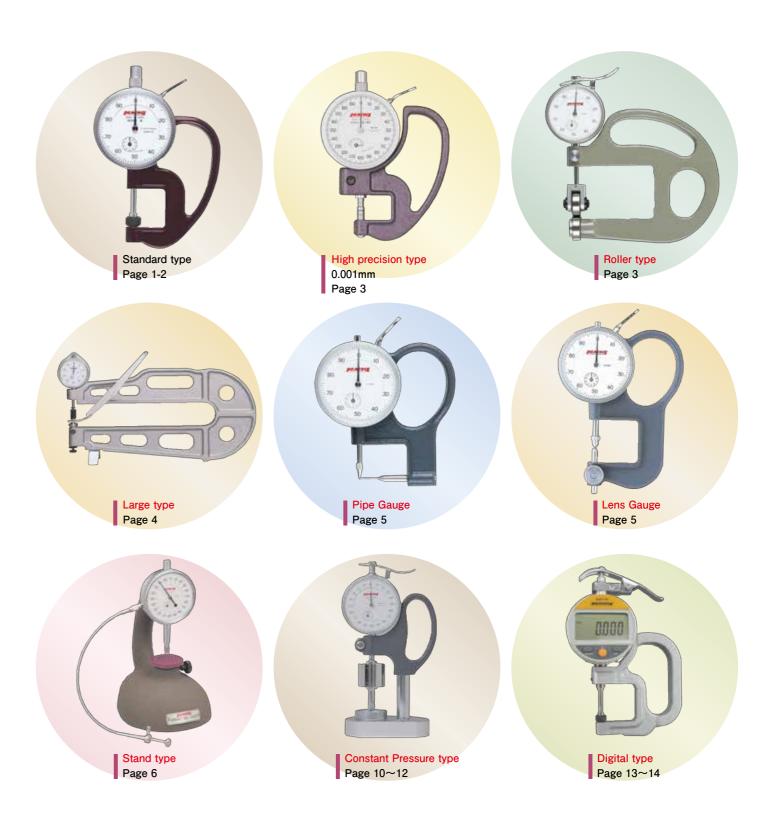
Part No.	L (mm)	Фball (mm)	Φd (mm)	Applicable Indicator			
XP1A-2R (Ruby ball)	18.2	2	2.5	PC-1A PC-1AE PC-3 PC-1AV PC-1AR			
XP1A-3	18.2	3	2.5				
XP1A-2	18.2	2	2.5				
XP1A-1	18.2	1	2.5	PC-1A PC-1AE PC-3 PC-1AV			
XP1A-08	18.2	0.8	2.5				
XP1A-05	18.2	0.5	2.5				
XP1B-2R (Ruby ball)	19.24	2	2.5	PC-1B PC-1BE PC-1BW PC-1BV PC-1BR			
XP1B-3	19.24	3	2.5				
XP1B-2	19.24	2	2.5				
XP1B-1	19.24	1	2.5	PC-1B PC-1BE PC-1BW PC-1BV			
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				
XP1L-2	39.72	2	3.0				
XP1L-1	39.72	1	3.0	PC-1L PC-1LE PC-3L PC-1LV			
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				
XP2-2	8.80	2	2.2				
XP2-1	8.80	1	2.2	PC-2 PC-4 PC-2V			
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)	Фball (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					
XN1A-2	17.74	2	2.5					
XN1A-1	17.74	1	2.5	PCN-1A PCN-0 PCN-1AE PCN-1AD PCN-5 PCN-7A PCN-1AV				
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					
XN1B-2	18.63	2	2.5					
XN1B-1	18.63	1	2.5	PCN-1B PCN-1BE PCN-1BZ (A)(B) PCN-1BV				
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					
XN1L-2	39.00	2	2.5					
XN1L-1	39.00	1	2.5	PCN-1L PCN-1LE PCN-1LD PCN-1LZ (A)(B) PCN-1LV				
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					
XN2-2	14.33	2	2.2					
XN2-1	14.33	1	2.2	PCN-2 PCN-2E PCN-6 PCN-2Z(A)(B) PCN-2V				
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					
XN2B-2	13.00	2	2.2					
XN2B-1	13.00	1	2.2	PCN-2B PCN-2BD PCN-7C PCN-SD PCN-2BV				
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					
XN2L-3	19.86	3	2.2					
XN2L-2	19.86	2	2.2	PCN-2L				
XN2L-1	19.86	1	2.2	1 011 21				
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					
XNS-2	8.13	2	2.2					
XNS-1	8.13	1	2.2	PCN-S PCN-SV PCN-6S				
XNS-08	8.13	0.8	2.2					
XNS-05	8.13	0.5	2.2					

WECH SMISS

Dial Thickness Gauges



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.



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



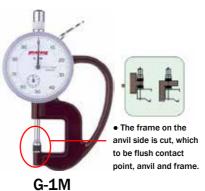
G-20 Graduation: 0.01mm 0 ~ 10mm • Φ20mm flat contact point and anvil (Metal)



Graduation: 0.01mm Range: 0 ~ 10mm • Φ30mm flat contact point



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



Graduation: 0.01mm 0 ~ 10mm Φ6mm flat contact point and anvil (Ceramic)



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

Paper Gauge

and anvil (Metal)

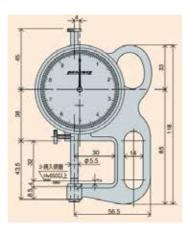


PG-10 Graduation: 0.01mm 0 ~ 10mm Range: • Φ10mm flat contact point and anvil (Metal)

• µm unit on the dial plate



Q-1 Graduation: 0.05mm 0 ~ 25mm Range: 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.



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



pressure 0.4N



Graduation: 0.01mm Range: 0 ~ 10mm Measuring force final



H-20

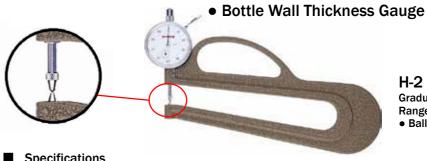
Graduation: 0.01mm Range: 0 ~ 10mm • Φ20mm flat contact point and anvil (metal)



Graduation: 0.01mm Range: • Φ30mm flat contact point and anvil (metal)



Graduation: 0.01mm Range: • Φ5mm flat contact point and anvil (Metal)



H-2

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

■ Specifications

Model	Graduation	Range	Throat depth	Accuracy	Con	tact Point	Measuring force
Wodel	(mm)	(mm)	(mm)	(µm)	Dia (mm)	Parallelism (µm)	less than (N)
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
Н	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

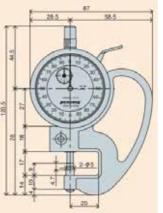
G-6C

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

Dimensions



Dimensions



G-7C

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

Specifications

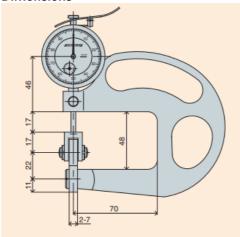
Model	Graduation	Range	Throat depth	Accuracy	Cor	tact Point	Measuring force
Model	(mm)	(mm)	(mm)	(µm)	Dia (mm)	Parallelism (µm)	less than (N)
G-6C	0.001	0 - 1	20	±5	5	3	1.8
G-7C	0.001	0 - 5	20	±10	5	3	1.8

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

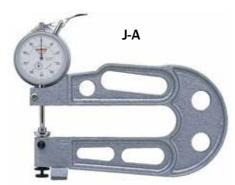


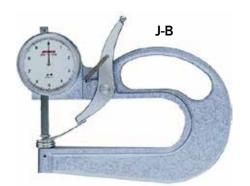
Specifications

_ оросииса								
Model	Graduation	uation Range Thro		Accuracy		Roller Contac	t Point	Measuring force
Model	(mm)	(mm)	(mm)	(µm)	OD (mm)	Width (mm)	Parallelism (µm)	less than (N)
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,





■ Specifications

Model	Graduation	Graduation Range		Throat depth Accuracy		ntact Point	Measuring force
iviouei	(mm)	(mm)	(mm)	(µm)	Dia (mm)	Parallelism (µm)	less than (N)
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.



Graduation: 0.01mm Range: 0 ~ 20mm

• Φ10mm flat contact point and Φ 20mm anvil (Metal)



K-2

Graduation: 0.05mm 0 ~ 35mm Φ20mm flat contact point

and anvil (Metal)



K-3

Graduation: 0.01mm 0 ~ 20mm

• Φ10mm flat contact point and Φ20mm anvil (Metal)



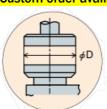
Range: 0 ~ 50mm

• Φ25mm flat contact point and anvil (Metal)

Specifications

Model	Graduation	Range	Throat depth	Accuracy	Cor	tact Point	Measuring force	
Model	(mm)	(mm)	(mm)	(µm)	Dia (mm)	Parallelism (µm)	less than (N)	
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



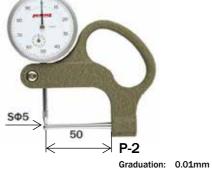
For J-A, J-B and K series, optional $\Phi 20$, 30, 40 and 50mm Contact Point and Anvil can be customized.

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.







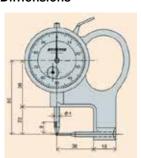
P-1 Graduation: 0.01mm

0 ~ 10mm Range:

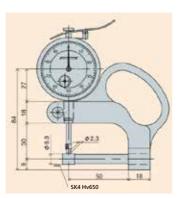
Range:

Graduation: 0.01mm 0 ~ 15mm Range:

Dimensions





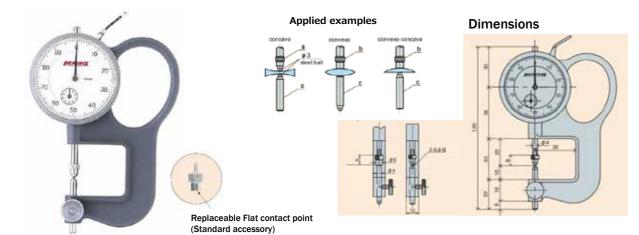


■ Specifications

Model	Graduation	Range	Accuracy	Pipe	n)	Measuring force	
Model	(mm)	(mm)	(mm) (µm)		Maximum wall thickness T	Depth L	less than (N)
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.



■ 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	Ф59mm	※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.





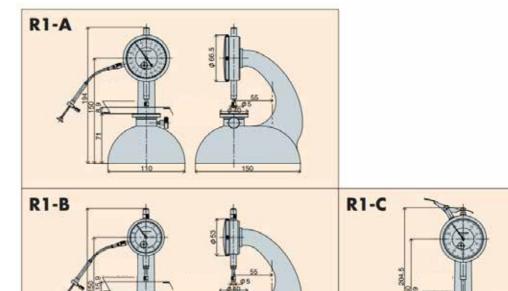


R1-B **1**0mm Effective measuring range: 25mm



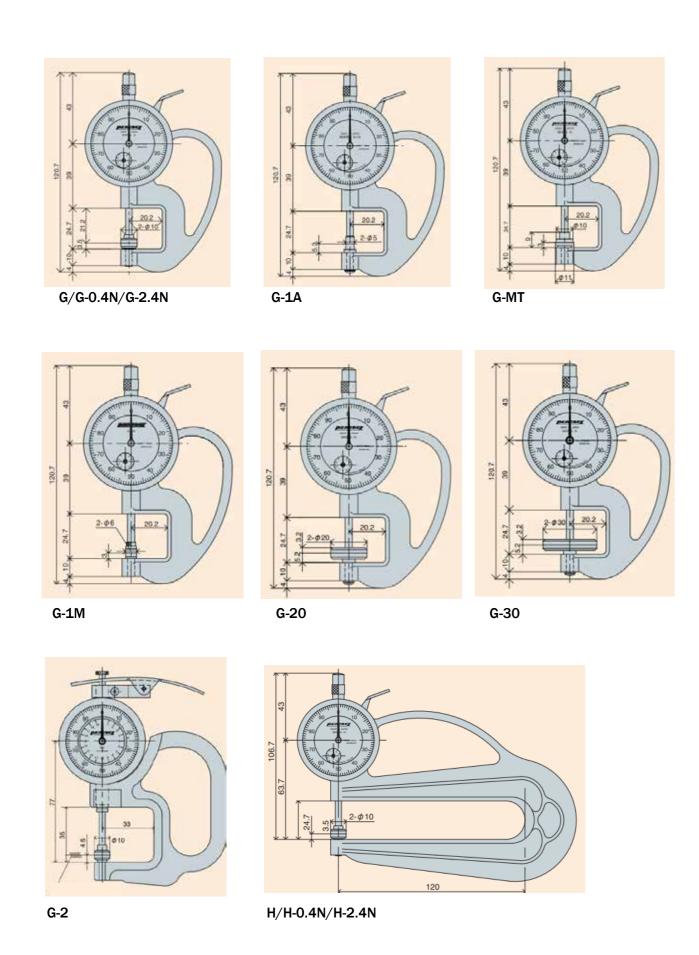
R1-C Effective measuring range: 20mm

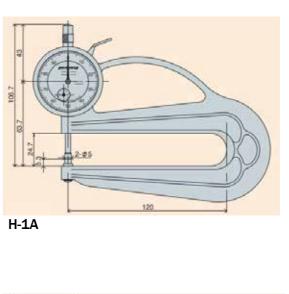
Dimensions

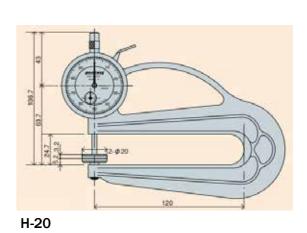


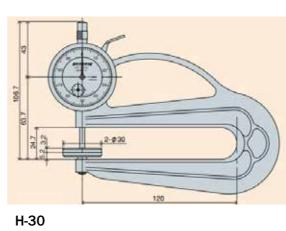
■ Specifications

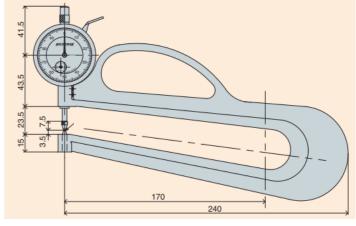
•								
Model	Dial Indicate	or (standard attac	hements)	Indication	Table diameter	Contact Point	Measuring force	Measuring depth
Model	Gauge installed Graduation (mm) Range (mm)		error (µm)	(mm)	Dia (mm)	less than (N)	(mm)	
R1-A	25F-RE	0.001	2	±7	40	5	1.5	55
R1-B	107F-RE	0.01	10	±15	40	5	1.4	55
R1-C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

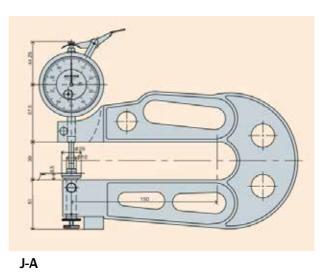


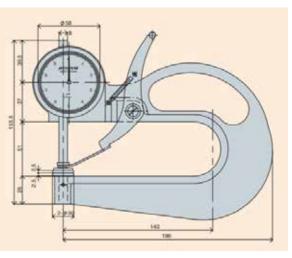






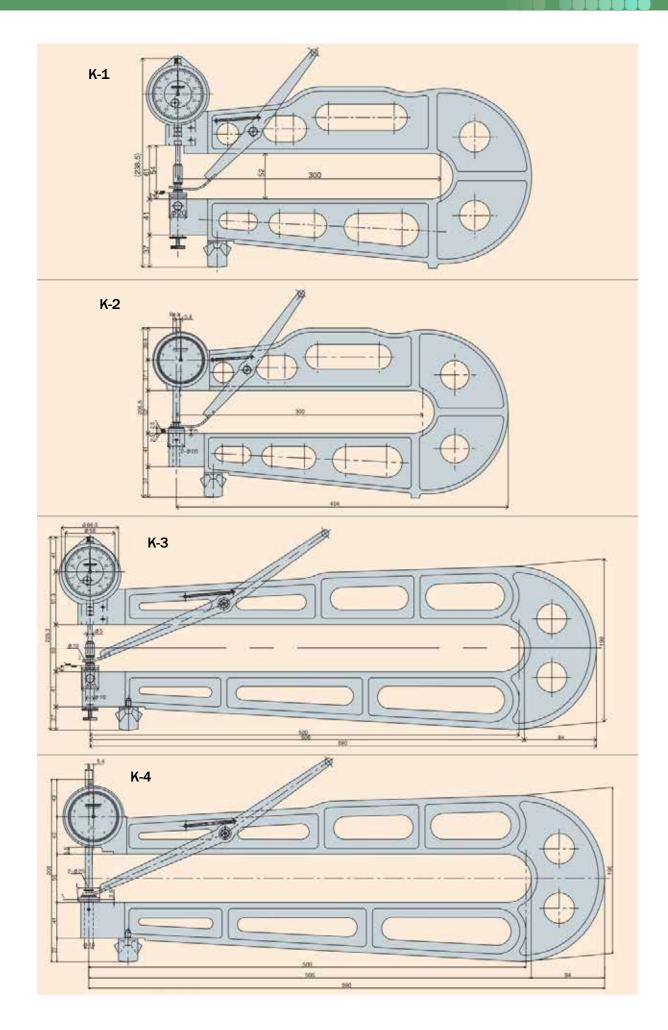






J-B

H-2



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 Mode	el
Measuring material	313 140.	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	Range	Indication	Throat	Contact Point	Anvil Dia.	Measuring force	Parallelism
iviodei	(mm)	(mm)	error (µm)	depth (mm)	Dia. (Φmm)	(Фmm)	N (gf)	(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 (50.24mm²)	30	0.51±0.1 (51±10)	7
FFG-7	0.01	10	±22	24mm	5 (19.625mm²)	30	0.44±0.1 (44±10)	5
FFG-8	0.01	10	±22	24mm	8 (50.24mm²)	30	1.13±0.26 (113±26)	7
FFG-9	0.01	10	±22	24mm	35.7 (10cm²)	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 (2cm²)	30	less than 0.4 (less than 40)	15

Stand type FFA series





Specifications

Model	Graduation (mm)	Range (mm)	Indication error (µm)	Throat depth (mm)	Contact Point Dia. (Фmm)	Anvil Dia. (Фmm)	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 (19.625mm²)	50	0.2±0.04 (20±4)	5
FFA-6	0.01	10	±20	55	8 (50.24mm²)	50	0.51±0.1 (51±10)	7
FFA-7	0.01	10	±20	55	5 (19.625mm²)	50	0.44±0.1 (44±10)	5
FFA-8	0.01	10	±20	55	8 (50.24mm²)	50	1.13±0.26 (113±26)	7
FFA-9	0.01	10	±20	55	35.7 (10cm²)	50	less than 0.37 (less than 37)	25
FFA-10	0.01	10	±20	55	11.3 (1cm²)	50	less than 2.4 (less than 240)	10
FFA-11	0.01	10	±20	55	25.2 (5cm²)	50	less than 0.35 (less than 35)	20
FFA-12	0.01	10	±20	55	16 (2cm²)	50	less than 0.4 (less than 40)	15
FFA-13	0.01	10	±20	55	10 (78.5cm²)	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

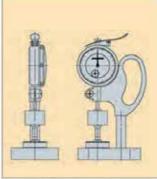
Model	Graduation	Range	Indication	Throat	Contact Point	Anvil Dia.	Measuring force	Parallelism
Wiodei	(mm)	(mm)	error (µm)	depth (mm)	Dia. (Φmm)	(Фmm)	N (gf)	(µm)
FFD-1	0.001	20	±4	55	5	40	1.25±0.15 (125±15)	5
FFD-2	0.001	20	±4	55	5	40	less than 0.8 (less than 80)	5
FFD-3	0.01	20	±20	55	10	50	3.93±0.1 (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 (50.24mm²)	50	0.51±0.1 (51±10)	10
FFD-7	0.01	20	±20	55	5 (19.625mm²)	50	0.44±0.1 (44±10)	10
FFD-8	0.01	20	±20	55	8 (50.24mm²)	50	1.13±0.26 (113±26)	10
FFD-10	0.01	20	±20	55	11.3(1cm²)	50	less than 2.4 (less than 240)	10
FFD-13	0.01	20	±20	55	10 (78.5mm²)	50	less than 1.57 (less than 157)	10

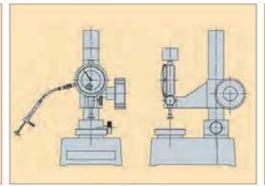
FFD series has AC Adapter cord 2M and the Data ouput is RS-232C.

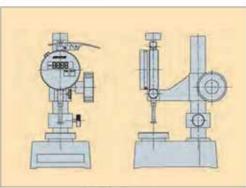
FFG Series

FFA Series

FFD Series







Handy type

Stand type

Digital type

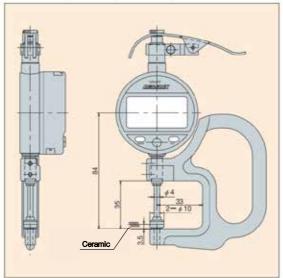
12

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:

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Dimensions (G2N-255 / G2N-257)



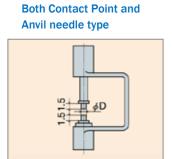
G2N-255 Resolution: 0.001mm Dimensions (G2N-255M / G2N-257M) Range: 20mm

Specifications

Model	G2N-255	G2N-255M	G2N-257	G2N-257M	
Digital Gauge	DGN-255	DGN-255	DGN-257	DGN-257	
Contact Point / Anvil	Ф10mm	Ф6тт	Ф10mm	Ф6mm	
Contact Point parallelism	less than 5µm		less than 10µm		
Resolution	0.001mm		0.01mm		
Accuracy (excluding quantized error)	±0.00	±0.008mm		±0.02mm	
Measuring range	0 - 20mm				
Measuring force	less than 1.2N				
Measuring depth	33mm				

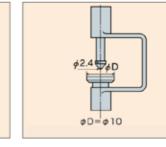
Digital Thickness Gauge (Special order)

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



Please specify ФD

Both Contact Point and Anvil ball type

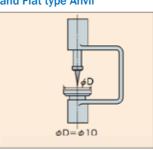


Ball type Contact Point and

Flat type Anvil

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

Needle type Contact Point and Flat type Anvil

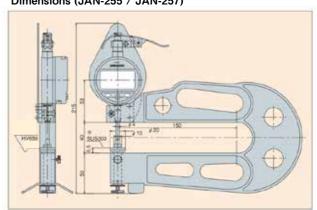


D = 10mm diameter (Also Φ 20, 25 and 30mm can be customized.)

Digital Thickness Gauges (Large type)



Dimensions (JAN-255 / JAN-257)



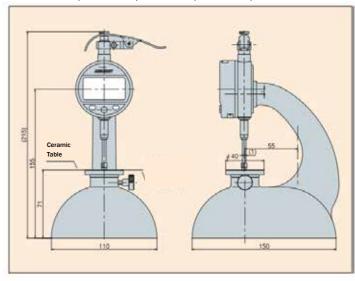
■ Specifications

JAN-255	JAN-257		
DGN-255	DGN-257		
0.001mm	0.01mm		
±0.01mm	±0.02mm		
less than 5µm	less than 10µm		
0 - 20mm			
less than 1.2N			
150mm			
Ф10mm / Ф20mm			
	DGN-255 0.001mm ±0.01mm less than 5µm 0 - 2 less tha		

Digital Upright Gauges



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



■ Specifications

Model	R1N-250B	R1N-255	R1N-257		
Measuring Range	0 – 20mm				
Resolution	0.0001mm	0.001mm	0.01mm		
Accuracy (excluding quantized error)	±2.5 μ m	±4μm	$\pm 20\mu\mathrm{m}$		
Digital Gauge	DGN-250B	DGN-255	DGN-257		
Contact Point / Anvil	Ф5mm (S	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				

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