

Examples of Applications

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Q Do you have any gauge that is not influenced by magnetic field?
I would like to use a gauge by mounting it on an electric discharge machine.

A Stainless steel Contact Point with phosphor bronze pointer are immune to magnetic influences. Ceramic Stem does not conduct electricity.

Anti-magnetic/Non-electrifying type U-Series (light blue dial face)



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

Q It is hard for me to read small scale and numerals which strains the eyes.
Do you have one with an easy-to-read scale?

A With an enlarge dial face of 1.3 x the standard New Pic Test, easier and faster reading is assured with the larger scale intervals.

Enlarged-dial face type D-Series (Dial face diameter 46.5mm)



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

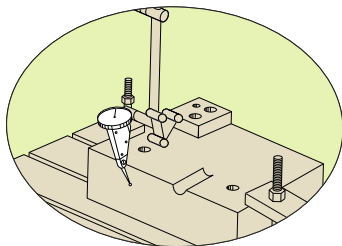
Specifications

Model	Graduation (mm)	Range (mm)
PCN-1AU	0.01	0.5
PCN-1BU	0.01	0.8
PCN-1LU	0.01	1.0
PCN-2U	0.002	0.28
PCN-2BU	0.002	0.2
PCN-SU	0.001	0.14
PCN-5U	0.01	0.5
PCN-6U	0.002	0.28

Specifications

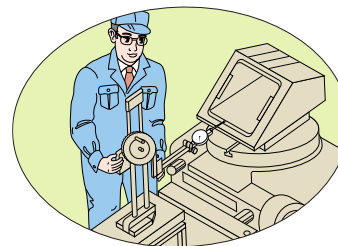
Model	Graduation (mm)	Range (mm)
PCN-1AD	0.01	0.5
PCN-1LD	0.01	1.0
PCN-2BD	0.002	0.2
PCN-SD	0.001	0.2

Electric discharge machining



Ceramic stem is supported by a magnetic stand.
Electric current is isolated by the ceramic stem.
It is thus possible to measure the work piece without electrifying it.

Easy to read



An enlarge dial face with bigger scale intervals enables easy reading by user of all ages.

Q I would like to measure soft work pieces like plastic products, so I need a gauge with low measuring force. Do you have a gauge with ultra-high sensitivity?

A Lowest measuring force is achieved by this type of New Pic Test & Pic Test. With measuring force of 0.1N and lower and also 0.05N and lesser as compared to the standard 0.4N, sensitivity is greatly increased.

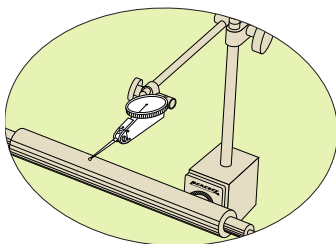
Low measuring force type E-Series (green dial face)



Specifications

Model	Graduation (mm)	Range (mm)	Measuring force less than(N)
PCN-1AE	0.01	0.5	0.05
PCN-1BE	0.01	0.8	0.05
PCN-1LE	0.01	1.0	0.05
PCN-2E	0.002	0.28	0.1
PC-1AE	0.01	0.5	0.1
PC-1BE	0.01	0.8	0.1
PC-1LE	0.01	1.0	0.1

Measuring of deviation on rubber roller



With extra low measuring force, work piece can be measured without deforming it.

Q During alignment of gauges with needs for turning the gauge around to the back, reading is made difficult and inefficiency results. Do you have a solution to this?

A Special dual face type with 2 faces directly opposite each other makes reading of measured value possible even when gauges need to be turned around.

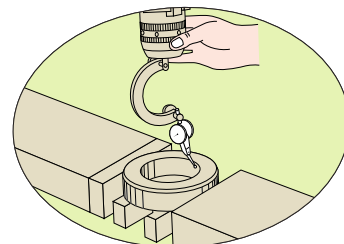
Dual face type W-Series



Specifications

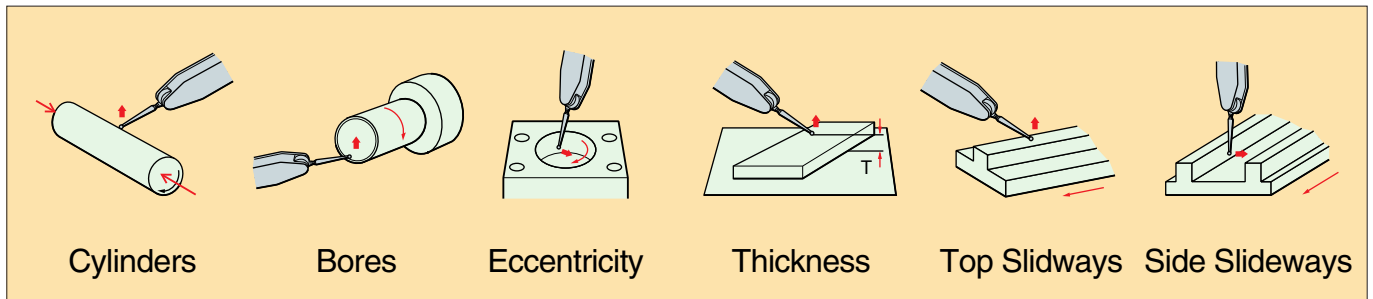
Model	Graduation (mm)	Range (mm)
PC-1BW	0.01	0.8

Alignment work



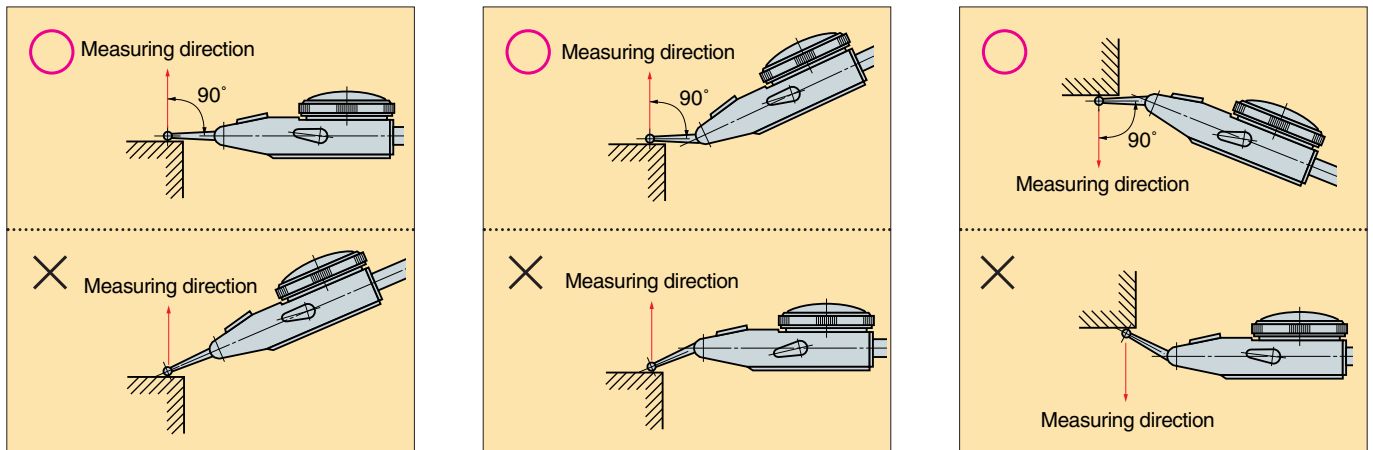
With Dual dial type, readings can be made easily even if gauges is turned 180 deg.

Applied Examples



Precautions for Handling

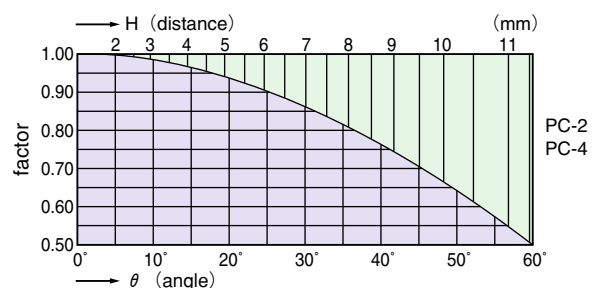
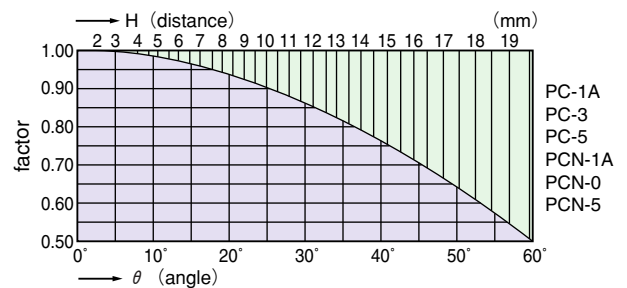
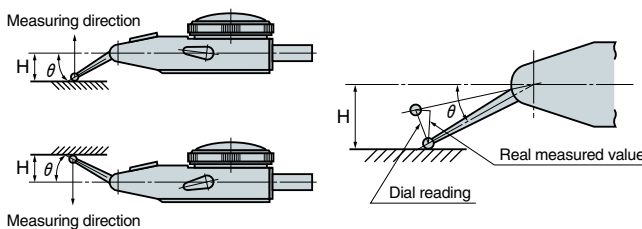
- Dial gauges shall be used by being fixed to a rigid retainer to prevent the influence of flexure or the like. In measurement, the measuring direction shall be made perpendicular to the center line of the measuring probe.



- 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 probe is set at a non-perpendicular angles and the distance between the pivot of the contact point and the measuring device is signified by the letter H:

Displacement = quantity of pointer movement x COS θ



Example:

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

$$0.05\text{mm} \times 0.87 = 0.0435 = 0.043\text{mm}$$

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