

10 Other Precision Measuring Instrument



Push Pull Gauge



Crankshaft Deflection Gauge



Small Bench Center



Crankshaft Deflection Gauge with magnet

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Dial Tension Gauge

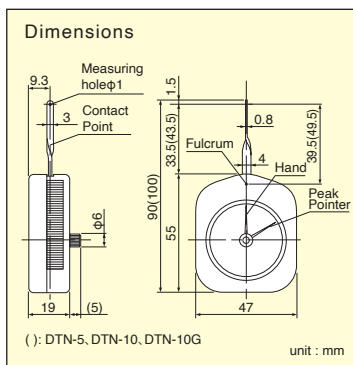
- These are mechanical tension gauges displaying in Newton, which can measure precise and moment force like tensile force or compression force.
- Miniature bearing is adopted to contact point bearing, and it can obtain stable indication accuracy.
- It can be used for the wide range of usage for contact force such as micro-switch, relay, valve, and measuring force of dial indicator, and spring force of precise spring, and pressing force of key-board.
- There are 2 types of standard type which sustains momentary highest value, and peak pointer type .



Standard Type
DTN-50

Peak Pointer Type
DTN-100G

Both direction is applicable



Specifications

Type	Model	Graduation	Measuring Range	Dial Reading	Weight	Suggested List Price
Standard Type	DTN-5	2mN(0.2gf)	6mN(0.6gf)~50mN(5gf)	6-50-6	55	14,080 JPY
	DTN-10	5mN(0.5gf)	10mN(1gf)~100mN(10gf)	10-100-10	55	10,560 JPY
	DTN-30	10mN(1gf)	30mN(3gf)~300mN(30gf)	30-300-30	55	9,570 JPY
	DTN-50	0.02N(2gf)	0.06N(6gf)~0.5N(50gf)	0.06-0.5-0.06	55	9,570 JPY
	DTN-100	0.05N(5gf)	0.1N(10gf)~1N(100gf)	0.1-1-0.1	55	9,570 JPY
	DTN-150	0.05N(5gf)	0.15N(15gf)~1.5N(150gf)	0.15-1.5-0.15	55	9,570 JPY
Peak Pointer	DTN-300	0.1N(10gf)	0.3N(30gf)~3N(300gf)	0.3-3-0.3	55	9,570 JPY
	DTN-500	0.2N(20gf)	0.6N(60gf)~5N(500gf)	0.6-5-0.6	55	14,080 JPY



Measuring Pressing force of a key

Type	Model	Graduation	Measuring Range	Dial Reading	Weight	Suggested List Price
Peak Pointer	DTN-10G	5mN(0.5gf)	10mN(1gf)~100mN(10gf)	10-100-10	58	13,090 JPY
	DTN-30G	10mN(1gf)	30mN(3gf)~300mN(30gf)	30-300-30	58	12,430 JPY
	DTN-50G	0.02N(2gf)	0.06N(6gf)~0.5N(50gf)	0.06-0.5-0.06	58	12,430 JPY
	DTN-100G	0.05N(5gf)	0.1N(10gf)~1N(100gf)	0.1-1-0.1	58	12,430 JPY
	DTN-150G	0.05N(5gf)	0.15N(15gf)~1.5N(150gf)	0.15-1.5-0.15	58	12,430 JPY
	DTN-300G	0.1N(10gf)	0.3N(30gf)~3N(300gf)	0.3-3-0.3	58	12,430 JPY
	DTN-500G	0.2N(20gf)	0.6N(60gf)~5N(500gf)	0.6-5-0.6	58	16,720 JPY

*) Indication Error ± 0.5 graduation, Hysteresis ± 0.2 graduation.

*) () value is approximate reference one.

Push Pull Gauge

- It is a multi-purpose dynamometer to use the Y head or L hooks.



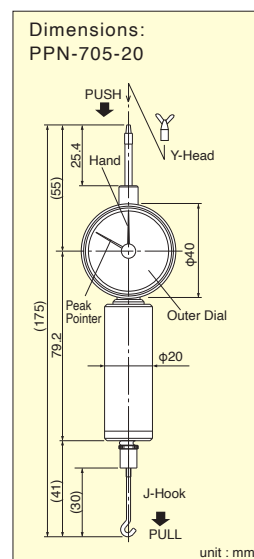
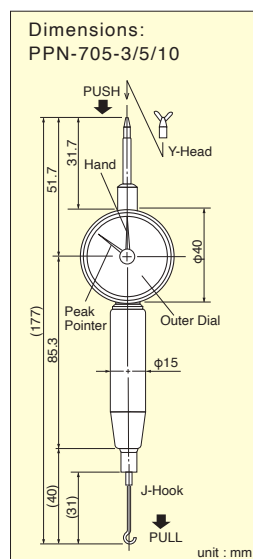
PPN-705-3
Peak Pointer Type

PPN-705-5
Peak Pointer Type

PPN-705-10
Peak Pointer Type

PPN-705-20
Peak Pointer Type

L-Hook
Supplied as
standard accessory



Specifications

Model	Graduation(N)	Measuring Range(N)	Dial Reading	Weight(g)	Suggested List Price
PPN-705-3	0.05	0.35(35gf)~3(300gf)	0.35-1.5-3	100	28,600 JPY
PPN-705-5	0.05	0.4(40gf)~5(500gf)	0.4-2.5-5	100	28,600 JPY
PPN-705-10	0.1	0.5(50gf)~10(1,000gf)	0.5-5.0-10	100	28,600 JPY
PPN-705-20	0.2	0.6(60gf)~20(2,000gf)	0.6-10-20	120	30,250 JPY

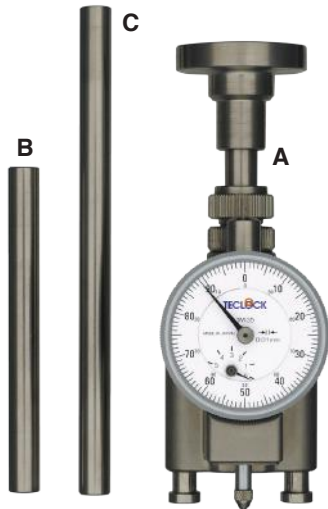
*) Indication Error ± 1 graduation.

*) () value is approximate reference one.

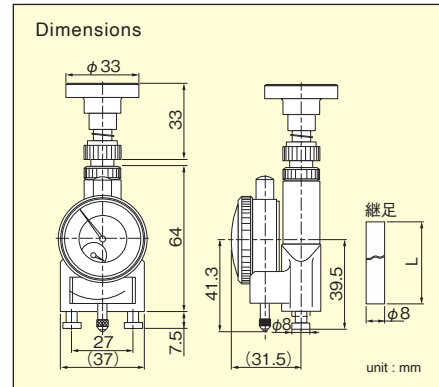


Crankshaft Deflection Gauge

- Exclusive instrument to measure deflections of engine crank of automobiles and ships etc.



CSDG-A



Dimensions Table
(Extension Rods)

NO.	L	Measuring Range
A	35	100~145mm
B	80	145~190mm
C	120	185~230mm

unit : mm

Specifications

Model	Graduation(mm)	Measuring Range(mm)	Indicator Error(μm)	Weight(g)	Suggested List Price
CSDG-A	0.01	100~230	±15	260	30,250 JPY

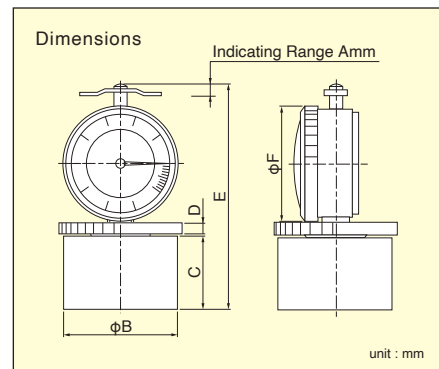
Crankshaft Deflection Gauge with magnet

- Small type which can be fixed to measuring position by magnet.



TM-104YS

TM-106YS



Dimensions Table

Model	A	B	C	D	E	F
TM-104YS	4	35	22	4.5	68.5	35
TM-106YS	5	32	32	7	102.3	47

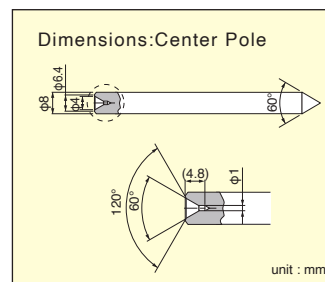
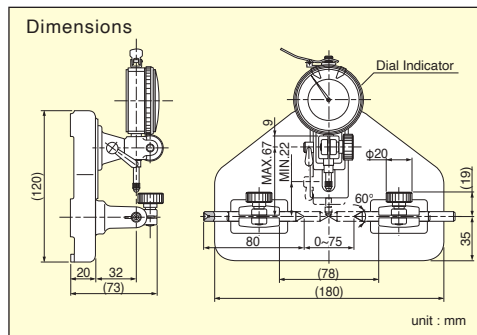
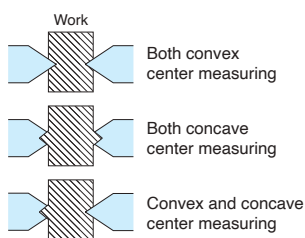
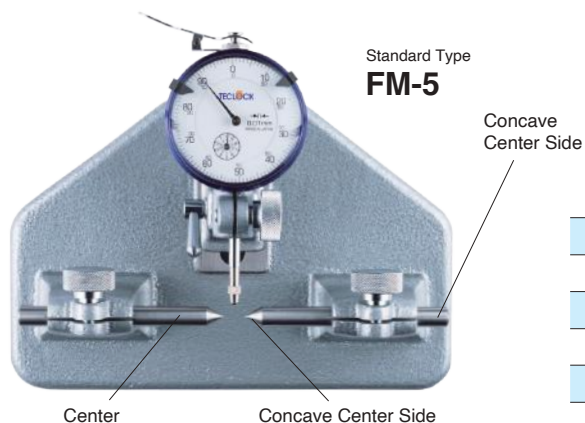
unit : mm

Specifications

Model	Graduation(mm)	Measuring Range(mm)	Indicating Range of Dial Indicator(mm)	Dial Gauge Error(μm)	Holding Power(N)	Weight(g)	Suggested List Price
TM-104YS	0.01	65~82	4	±15	100	240	22,990 JPY
TM-106YS	0.01	99~113	5	±15	100	340	24,200 JPY

Small Bench Center

- Suitable to measure eccentricity volume (swing) of various precision shafts, round manufactured work piece, precision gears and pinions.
- Convex and concave of center can be easily changed according to shape of work piece. Center can be shifted.
- Standard type (graduation 0.01mm) and precision type (graduation 0.001mm) are available.



Specifications

Model	Graduation (mm)	Measuring Range (mm)	Dial indicator Error (μm)	Measuring Force (N)	Applicable Dimension		Weight (kg)	Suggested List Price
					Diameter	Width		
FM-5 Standard Type	0.01	10	±15	1.4 or less	Up to φ60mm	Up to 60mm	2	60,940 JPY
FM-5 High Precision Type	0.001	1	±5	1.5 or less	Up to φ60mm	Up to 60mm	2	69,080 JPY

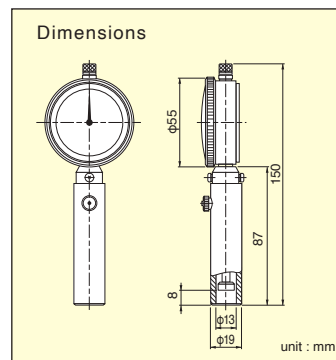
Flow Meter

- This is a dial indicator and jig set for the suction (expansion/ contraction) measuring.



Specifications

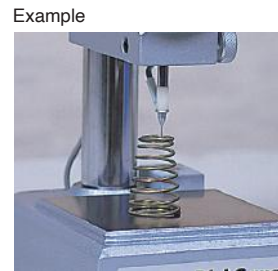
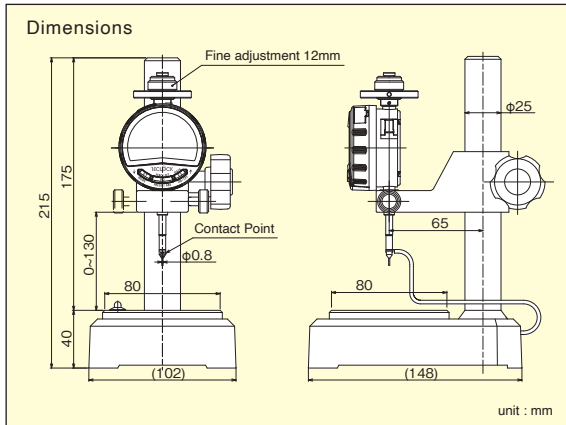
Model	Graduation (mm)	Measuring Range (mm)	Gauge Error	Dial Reading	Short Hand	Weight	Suggested List Price
716	0.1	25	±60μm	0-5-10	non	260g	17,710 JPY



Sensor Gauge Digital Type



- Springs and pressed parts which are used for precision equipments, computer terminal and home electric goods can be measured just before their shapes are changed due to measuring force.
- If detecting contact between sensor (contact point) and work piece by energizing, it simultaneously sounds (buzzer) when LED lamp is lighting.. Then read the value which is detected.
- Micro-motion is adjusted by 12mm with upper knob.
- Work piece of maximum 150mm can be measured by using block gauge.
- As detection is implemented by energizing, work piece which is not energized can not be measured.



Measuring height of coil spring



SD-465A2

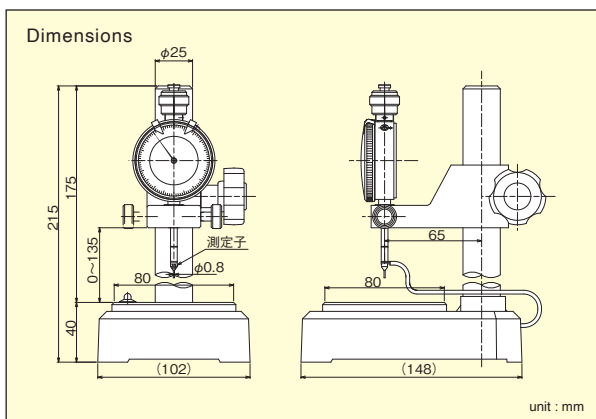
Specifications

Model	Display	Resolution (mm)	Indicating Range(mm)	Measuring Range(mm)	Gauge Error (μm)	Specimen Table Size(mm)	Power Supply	Weight (kg)	Suggested List Price
SD-465A2	Digital	0.001	12	Max. 150	±3	W80xD80	DC3V (AA size batteryx2) *	3.4	191,180 JPY

* CR2032 battery for digital indicator.

Sensor Gauge Dial Type

- Micro-motion is adjusted by 10mm with upper knob.



SD-101A

Specifications

Model	Display	Resolution (mm)	Indicating Range(mm)	Measuring Range(mm)	Gauge Error (μm)	Specimen Table Size(mm)	Power Supply	Weight (kg)	Suggested List Price
SD-101A	Dial (Analog)	0.01	10	Max. 150	±15	W80xD80	DC3V (AA size batteryx2)	3.4	118,580 JPY

- Specification of minimum display 0.01mm digital type, that of dial type of its graduation 0.001mm and type without stand can be produced with treatment of special order. Please contact our branch nearby for detail.

