



Precision Measuring Instruments

Catalog No.5002



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02-214-0101

DEPTH GAUGES



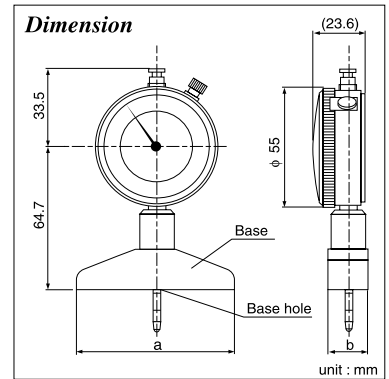
This is an exclusive instrument which measures steps and depth of workpiece by hand. These depth gauges are direct reading instruments referencing from their hardened and ground bases.

Setting "0" by sticking bottom face of base to measuring basics (zero point) and rotating Bezel. (Bezel is fixed by clamp at that time) Then, it reads with short hand and pointer how contact point is salient from that position. Analog and Digital models are available and they correspond to usage of shape of contact point and basic size. There are such standard models of stroke of 10mm, 20mm, 30mm, and it can comparatively measure depth of 220mm to 240mm by connecting extension rods.

Dial Depth Gauge

- Dial Depth Gauge can be used to measure depth and steps of workpiece and coating thickness.
- 5-240mm Range (with the supplied extension rods) are available for wide application.
- Lifting lever can be mounted (option).

Measuring Range : 10mm



Dimension Table

Model	Base foam a x b	Base hole diameter
DM-210	75 x 16	φ 2.5
DM-211	75 x 16	φ 2.5
DM-213	75 x 16	φ 5.2
DM-214	100 x 16	φ 5.2

unit : mm



DM-214
Graduation 0.01mm
Measuring Range 220mm
Indication Range 10mm
with 5-Extension rods

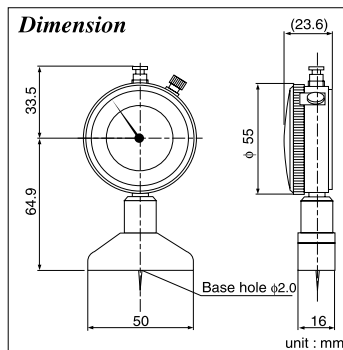
Specifications ※ Measuring range : () value is a range by using 5pcs extension rods.

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape) (mm)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-210	0.01	10	12	Needle	ZS-523	1.4 or less	270
DM-211	0.01	10	12	φ 2 Flat	ZS-530	1.4 or less	270
DM-213	0.01	10	12	φ 3.2 Ball	ZS-034	2.5 or less	270
DM-214	0.01	10(220)	12	φ 3.2 Ball	ZS-034	2.5 or less	335

Measuring Range : 5mm



DM-250
Graduation 0.01mm
Measuring Range 5mm



Specifications

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-250	0.01	5	10	Needle	ZS-518	1.4 or less	230



DEPTH GAUGES



DM-251
Exclusive instrument to measure depth of V-groove of print circuit board.
Graduation 0.01mm
Measuring Range 5mm



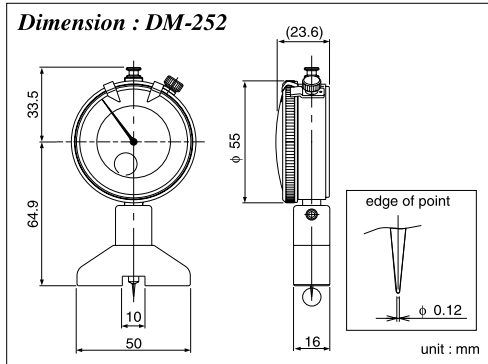
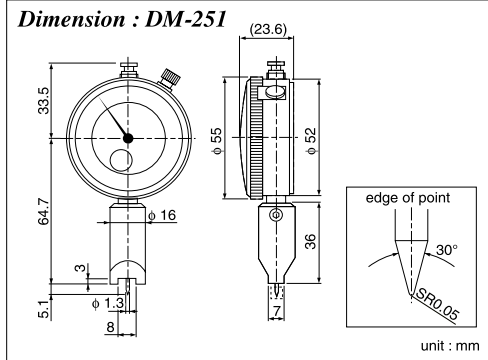
DM-252
Convex-concave surface can be measured.
Graduation 0.01mm
Measuring Range
Concave 5mm
Convex 4mm



V-Grooved depth measurement of Print circuit board by using DM-251.

Specifications

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-251	0.01	5	10	Special Needle	ZS-106	1.4 or less	165
DM-252	0.01	Concave 5, Convex 4	10	Needle	ZS-595	1.4 or less	230



Measuring Range : 20mm



DM-220
Graduation 0.01mm
Measuring Range 20mm



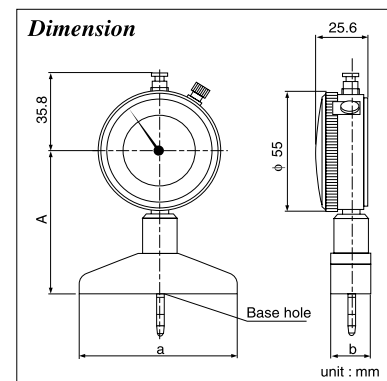
DM-221
Graduation 0.01mm
Measuring Range 20mm



DM-223
Graduation 0.01mm
Measuring Range 20mm



DM-224
Graduation 0.01mm
Measuring Range 230mm
with 5-Extension rods
Indication Range 20mm



Dimension Table

Model	A	Base foam a x b	Base hole diameter
DM-220	84.7	75 x 16	ϕ 2.5
DM-221	84.7	75 x 16	ϕ 2.5
DM-223	64.7	75 x 16	ϕ 5.2
DM-224	64.7	100 x 16	ϕ 5.2

unit : mm

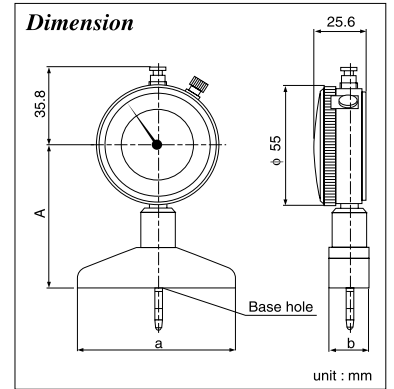
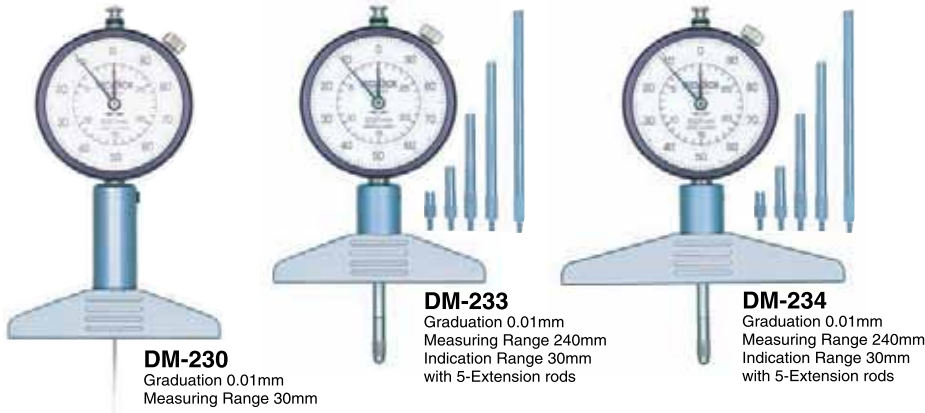
Specifications

×Measuring range : () value is a range by using 5pcs extension rods.

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape) (mm)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-220	0.01	20	15	Needle	ZS-543	2.2 or less	300
DM-221	0.01	20	15	ϕ 2 Flat	ZS-541	2.2 or less	300
DM-223	0.01	20	15	ϕ 3.2 Ball	ZS-034	2.2 or less	275
DM-224	0.01	20(230)	15	ϕ 3.2 Ball	ZS-034	2.5 or less	340



Measuring Range : 30mm



Specifications ※Measuring range : () value is a range by using 5pcs extension rods.

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape) (mm)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-230	0.01	30	35	Needle	ZS-543	2.5 or less	315
DM-233	0.01	30(240)	35	φ 3.2 Ball	ZS-034	2.5 or less	315
DM-234	0.01	30(240)	35	φ 3.2 Ball	ZS-034	2.5 or less	355

Dimension Table

Model	A	Base foam a × b	Base hole diameter
DM-230	84.7	75 × 16	φ 2.5
DM-233	64.7	75 × 16	φ 5.2
DM-234	64.7	100 × 16	φ 5.2

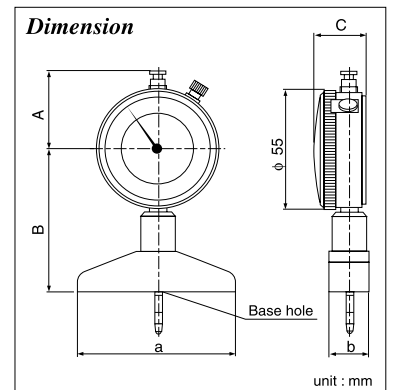
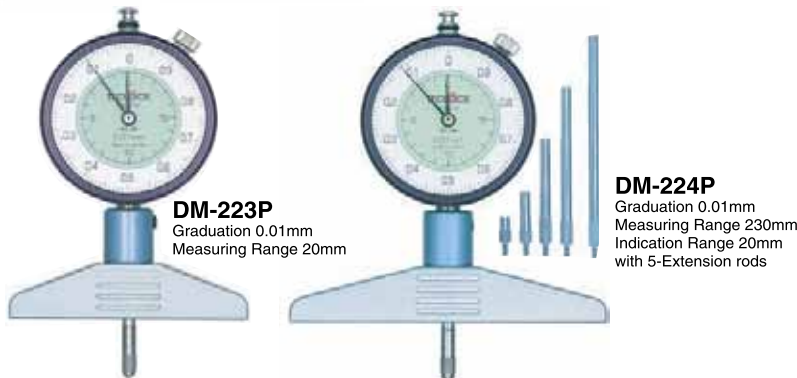
P Series (0.1mm type)

This is direct reading specification of which graduation are 0.1~0.9 mm.

1~10mm can be read by short hand and figure below decimal can be read by pointer. It prevents misreading.



exp. 3.18mm of direct reading.



Specifications ※Measuring range : () value is a range by using 5pcs extension rods.

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape) (mm)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-210P	0.01	10	12	Needle	ZS-523	1.4 or less	270
DM-250P	0.01	5	10	Needle	ZS-518	1.4 or less	230
DM-223P	0.01	20	15	φ 3.2 Ball	ZS-034	2.2 or less	275
DM-224P	0.01	20(230)	15	φ 3.2 Ball	ZS-034	2.5 or less	340

Dimension Table

Model	A	B	C	Base foam a × b	Base hole diameter
DM-210P	33.5	64.7	23.6	75 × 16	φ 2.5
DM-250P	33.5	64.9	23.6	50 × 16	φ 2.0
DM-223P	35.8	64.7	25.6	75 × 16	φ 5.2
DM-224P	35.8	64.7	25.6	100 × 16	φ 5.2

unit : mm



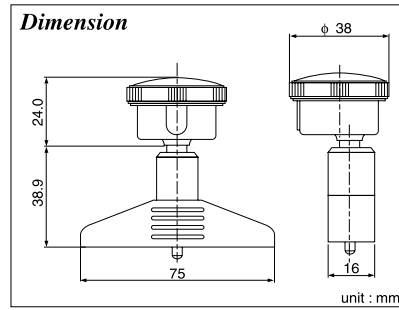
DEPTH GAUGES

Dial Depth Gauges (Special)

Back plunger type



DM-273
Graduation 0.01mm
Measuring Range 5mm



Specifications

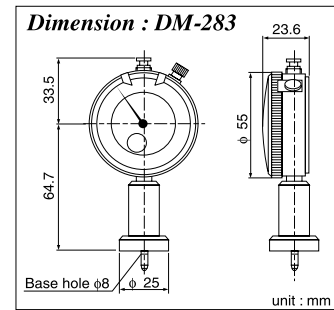
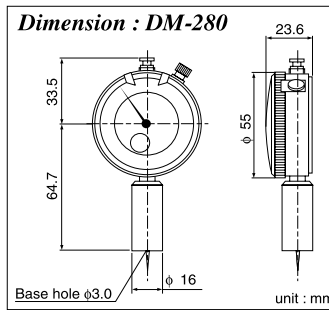
Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-273	0.01	5	± 20	φ 3.2 Ball	ZS-105	1.4 or less	300

Round Base type



DM-280
Graduation 0.01mm
Measuring Range 10mm

DM-283
Graduation 0.01mm
Measuring Range 10mm

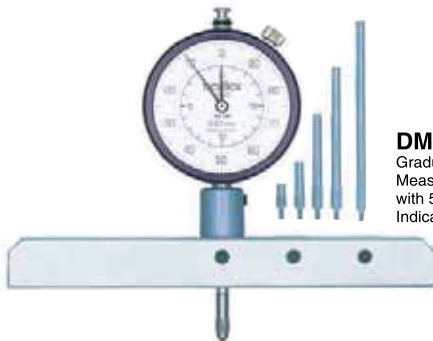


Specifications

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-280	0.01	10	12	Needle	ZS-523	1.4 or less	175
DM-283	0.01	10	12	φ 3.2 Ball	ZS-034	1.4 or less	185

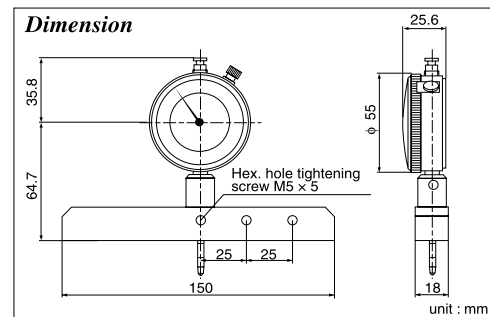
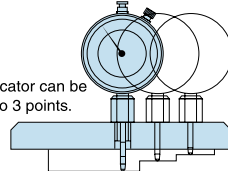
Gauge Slide type

Steps measurement can be easily made by moving the gauge to 3 mounting holes.



DM-293
Graduation 0.01mm
Measuring Range 230mm
with 5-Extension rods
Indication Range 20mm

Dial indicator can be moved to 3 points.



Specifications

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-293	0.01	20(230)	15	φ 3.2 Ball	ZS-034	2.5 or less	340

Coating thickness Gauges

- Exclusive instrument to measure coating thickness of paint, coating materials and sealing materials.
- Handy type and operation is easy.

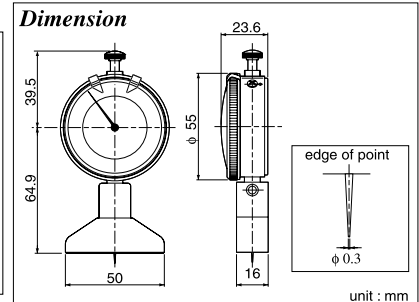
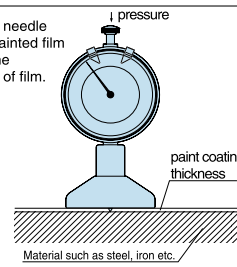


DM-264
Graduation 0.01mm
Measuring Range 5mm

Thickness measurement of painted film waterproof stuff (measuring by pressurization)



When top point is pressurized, needle contact point penetrates into painted film and stops at basic material. The penetrating length is thickness of film.



Specifications

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (or shape)	Standard Contact Point	Measuring Force (N)	Weight (g)
DM-264	0.01	5	10	Needle	ZS-518	1.4 or less	230



Conventional Digital Depth Gauges

- Digital Exclusive instrument to measure depth and steps of workpiece.
- Low cost and conventional model of which preset function is deleted from standard digital depth gauges.
- Operation is equal to standard digital depth gauges, but it can not measure by installing extension rods. In case that measuring range is over 10mm, please use standard digital depth gauges.
- Printing out of measured data and statistics arithmetic operation can be implemented by connecting it to optional Digital mini-printer SD-763P

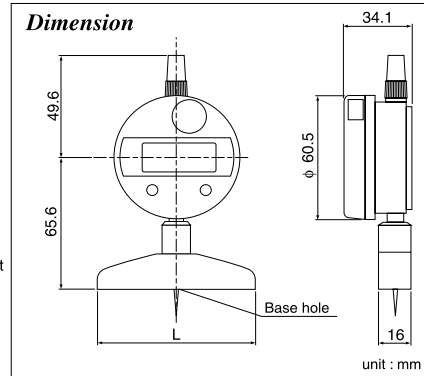
0.01mm Conventional Digital Depth Gauge



DMD-210S
Needle contact points
Resolution 0.01mm
Measuring Range 10mm



DMD-213S
φ 3.2Steel Ball Contact Point
Resolution 0.01mm
Measuring Range 10mm



Dimension Table

Model	Base hole diameter	L
DMD-210S	φ 2.5	75
DMD-211S	φ 2.5	75
DMD-213S	φ 5.2	75
DMD-250S	φ 2.0	50
DMD-252S	φ 8.0	50
DMD-2100S	φ 2.5	75
DMD-2110S	φ 2.5	75
DMD-2130S	φ 5.2	75
DMD-2500S	φ 2.0	50
DMD-2520S	φ 8.0	50

unit : mm

0.001mm Conventional Digital Depth Gauge



DMD-2520S
For measuring print circuit board
Resolution 0.001mm
Measuring Range Concave 5mm
Convex 4mm

Specifications

Model	Resolution (mm)	Measuring Range (mm)	Accuracy* (μm)	Contact point form (or shape) (mm)	Standard Contact Point	Measuring Force (N)	Weight (g)
DMD-210S	0.01	10	20	Needle	ZS-523	2.0 or less	270
DMD-211S	0.01	10	20	φ 2 flat	ZS-530	2.0 or less	270
DMD-213S	0.01	10	20	φ 3.2 Steel Ball	ZS-034	2.0 or less	270
DMD-250S	0.01	5	20	Needle	ZS-518	2.0 or less	205
DMD-252S	0.01	Concave 5, Convex 4	20	Needle	ZS-595	2.0 or less	200
DMD-2100S	0.001	10	3	Needle	ZS-523	2.0 or less	300
DMD-2110S	0.001	10	3	φ 2 flat	ZS-530	2.0 or less	300
DMD-2130S	0.001	10	3	φ 3.2 Steel Ball	ZS-034	2.0 or less	300
DMD-2500S	0.001	5	3	Needle	ZS-518	2.0 or less	235
DMD-2520S	0.001	Concave 5, Convex 4	3	Needle	ZS-595	2.0 or less	230

*The quantizing error function is not included.

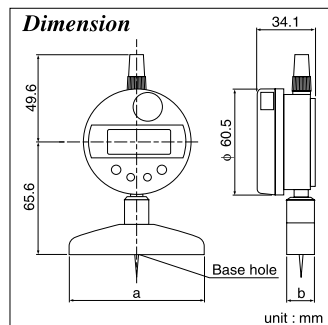
Standard Digital Depth Gauges

- Digital Depth Gauge can be used for direct measuring depth and steps of workpiece.
- Printing out of measured data and statistics arithmetic operation can be implemented by connecting it to optional Digital mini-printer SD-763P
- Extension rods can be used by Preset function. (excepting DMD-210, DMD-211 and DMD-2100).

0.01mm Standard Digital Depth Gauge



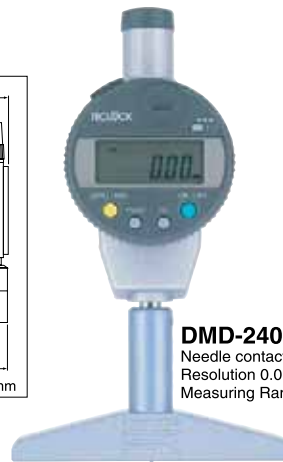
DMD-211
Resolution 0.01mm
Measuring Range 12mm



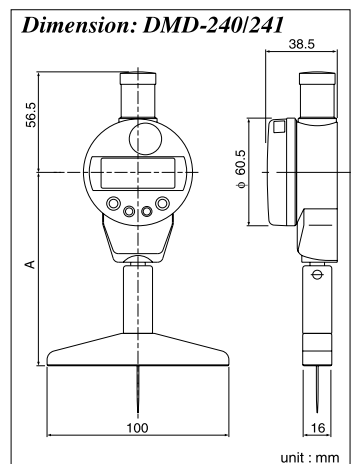
Dimension Table

Model	Base foam a	Base hole diameter
DMD-210	75 × 16	φ 2.5
DMD-211	75 × 16	φ 2.5
DMD-213	75 × 16	φ 5.2
DMD-214	75 × 16	φ 5.2
DMD-215	100 × 16	φ 5.2

unit : mm



DMD-240
Needle contact points
Resolution 0.01mm
Measuring Range 25.4mm



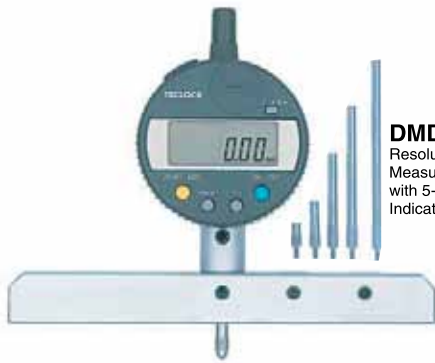
Dimension Table

Model	A
DMD-240	108.7
DMD-241	88.7

unit : mm

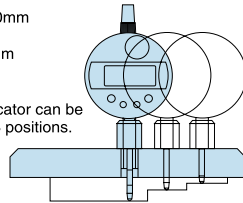


DEPTH GAUGES

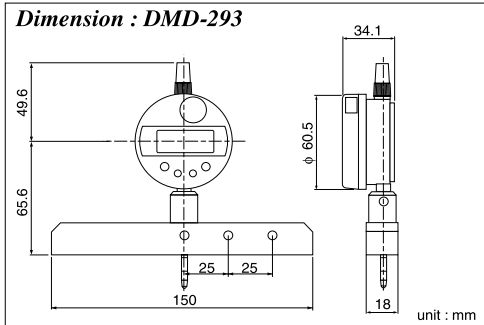


DMD-293
Resolution 0.01mm
Measuring Range 220mm
with 5-Extension rods
Indication Range 12mm

Digital indicator can be moved to 3 positions.



Dimension : DMD-293

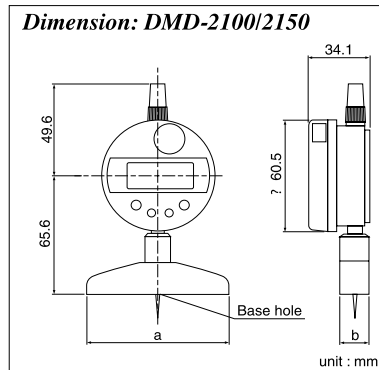


0.001mm Standard Digital Depth Gauge

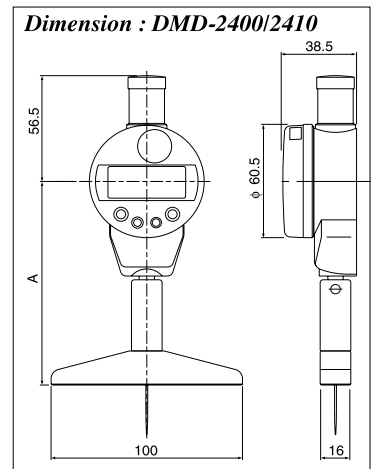


DMD-2150
Resolution 0.001mm
Measuring Range 220mm
with 5-Extension rods
Indication Range 12mm

Dimension: DMD-2100/2150



Dimension : DMD-2400/2410



Dimension Table

Model	Base foam a x b	Base hole diameter
DMD-2100	75 x 16	φ 2.5
DMD-2150	100 x 16	φ 5.2

unit : mm

Dimension Table

Model	A
DMD-2400	108.7
DMD-2410	88.7

unit : mm

Specifications ※ Measuring range : () value is a range by using 5pcs extension rods.

Model	Resolution (mm)	Measuring Range (mm)	Accuracy* (μm)	Contact point form (or shape) (mm)	Standard Contact Point	Measuring Force (N)	Weight (g)
DMD-210	0.01	12	20	Needle	ZS-523	1.0 or less	310
DMD-211	0.01	12	20	φ 2 flat	ZS-530	1.0 or less	310
DMD-213	0.01	12	20	φ 3.2 Steel Ball	ZS-034	1.0 or less	310
DMD-214	0.01	12(220)	20	φ 3.2 Steel Ball	ZS-034	2.3 or less	335
DMD-215	0.01	12(220)	20	φ 3.2 Steel Ball	ZS-034	2.3 or less	375
DMD-240	0.01	25.4	30	Needle	ZS-113	1.6 or less	390
DMD-241	0.01	25.4	30	φ 3.2 Steel Ball	ZS-600	1.6 or less	370
DMD-293	0.01	12(220)	20	φ 3.2 Steel Ball	ZS-034	2.3 or less	545
DMD-2100	0.001	12	3	Needle	ZS-523	1.0 or less	310
DMD-2150	0.001	12(220)	3	φ 3.2 Steel Ball	ZS-034	2.3 or less	375
DMD-2400	0.001	25.4	3	Needle	ZS-113	1.6 or less	390
DMD-2410	0.001	25.4	3	φ 3.2 Steel Ball	ZS-600	1.6 or less	370

*The quantizing error function is not included.