

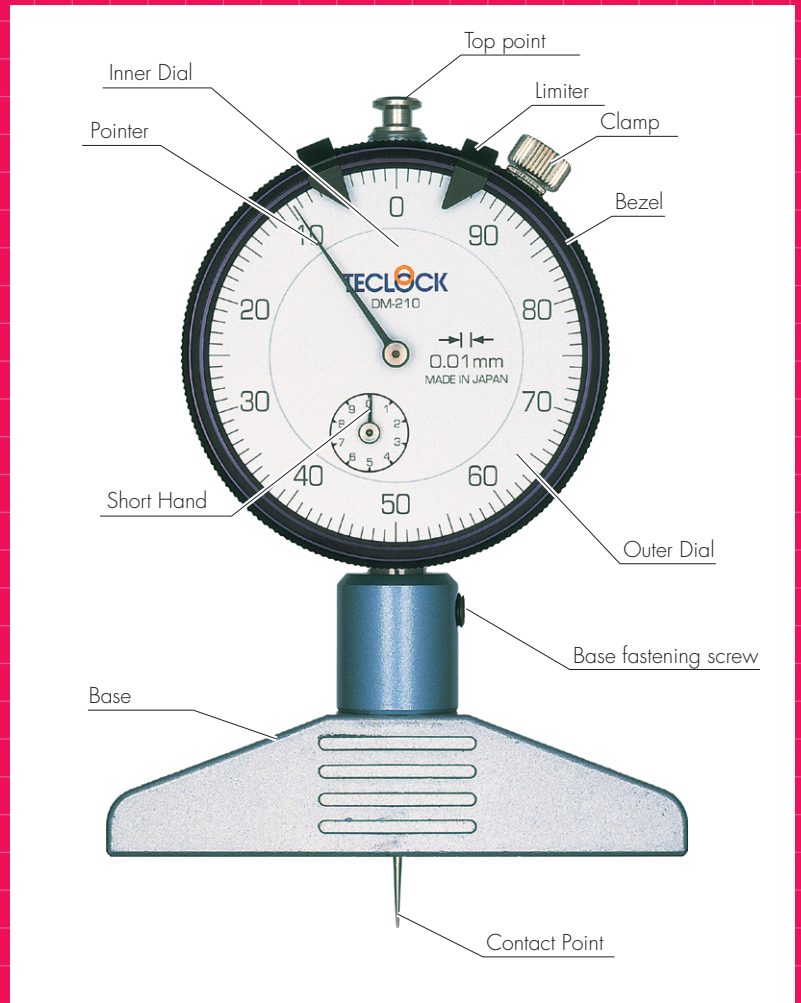


# 4 Depth Gauge

This is an exclusive instrument which measures steps and depth of work piece by hand. Setting "0" by sticking bottom face 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 and 30mm and it can comparatively measure depth of 220mm to 240mm by connecting extension rods.



Measuring depth of concavity of work of which center is bored. The photo shows 2.03mm.

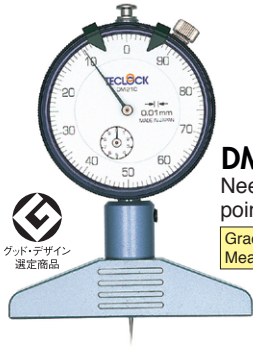




## Dial Depth Gauges

- Dial Depth Gauge can be used to measure depth and steps of work piece and coating thickness.
- 5-240mm range (with the supplied extension rods) are available for wide application.
- Special order is applicable for contact point and base.
- Low measuring force type is also available, which seldom hurts work piece.
- Lifting lever (Option) can be mounted.

### Measuring Range:10mm

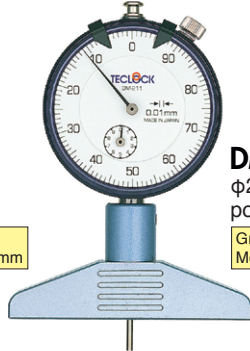


**DM-210**  
Needle contact point

Graduation 0.01mm  
Measuring Range 10mm

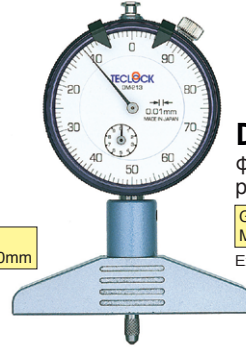


グッド・デザイン  
選定商品



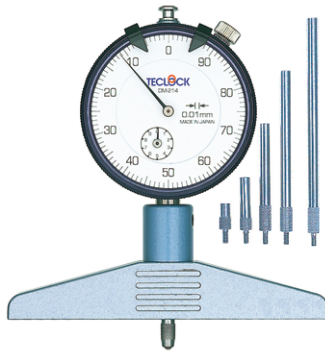
**DM-211**  
φ2 flat contact point

Graduation 0.01mm  
Measuring Range 10mm



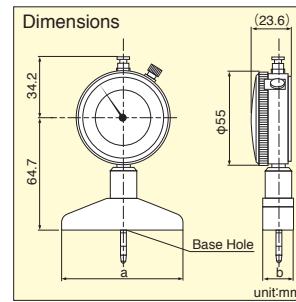
**DM-213**  
φ2 ball contact point

Graduation 0.01mm  
Measuring Range 10mm  
Extension rods options



**DM-214**  
Possible depth measurement of up to 220mm

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



Dimensions Table

Model	Base form axb	Base hole diameter
DM-210	75x16	2.5
DM-211	75x16	2.5
DM-213	75x16	5.2
DM-214	100x16	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 (mm)	Standard contact point	Measuring Force (N)	Weight (g)
DM-210	0.01	10	±12	Needle	ZS-523	1.4以下	270
DM-211	0.01	10	±12	φ2 Flat	ZS-530	1.4以下	270
DM-213	0.01	10	±12	φ3.2 Ball	ZS-034	1.4以下	270
DM-214	0.01	10(220)	±12	φ3.2 Ball	ZS-034	2.5以下	335

### Measuring Range:5mm

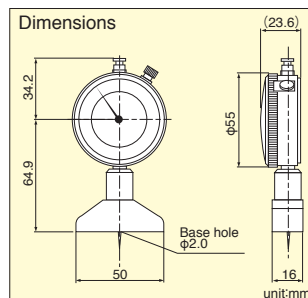


**DM-250**  
Small type

Graduation 0.01mm  
Measuring Range 5mm



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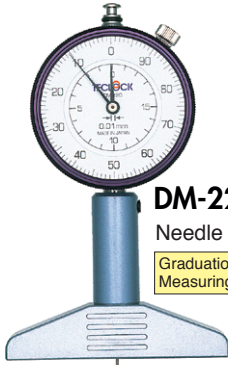


### Specifications

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



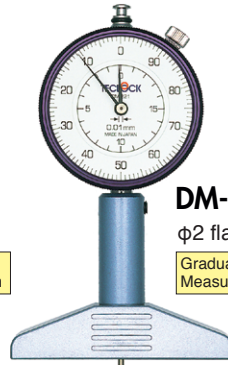
Measuring Range:20mm / 30mm



**DM-220 / 230**

Needle contact point

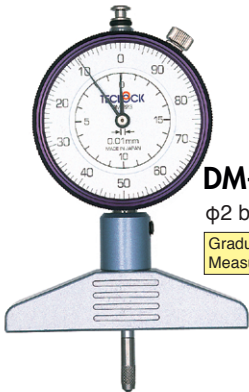
Graduation 0.01mm  
Measuring Range 20mm/30mm



**DM-221**

φ2 flat contact point

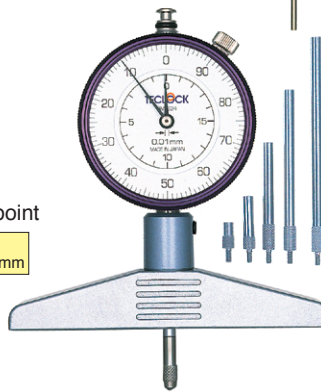
Graduation 0.01mm  
Measuring Range 20mm



**DM-223**

φ2 ball contact point

Graduation 0.01mm  
Measuring Range 20mm

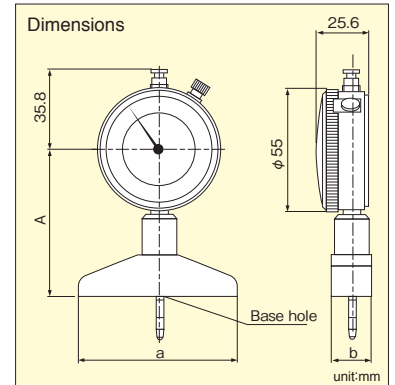


**DM-224/233/234**

Possible depth measurement  
of up to 230mm (DM-224) /  
240mm (DM-233/234)

Graduation 0.01mm  
Measuring Range 230mm/240mm  
Indication Range 20mm/30mm

with 5-Extension rods



Dimensions Table

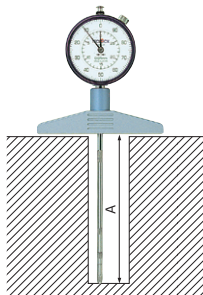
Model	A	Base form a×b	Base hole diameter
DM-220	84.7	75×16	2.5
DM-221	84.7	75×16	2.5
DM-223	64.7	75×16	5.2
DM-224	64.7	100×16	5.2
DM-230	84.7	75×16	2.5
DM-233	64.7	75×16	5.2
DM-234	64.7	100×16	5.2

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 (mm)	Standard contact point	Measuring Force (N)	Weight (g)
DM-220	0.01	20	±15	Needle	ZS-543	2.2以下	300
DM-221	0.01	20	±15	φ2 Flat	ZS-541	2.2以下	300
DM-223	0.01	20	±15	φ3.2 Ball	ZS-034	2.2以下	275
DM-224	0.01	20 (230)	±15	φ3.2 Ball	ZS-034	2.5以下	340
DM-230	0.01	30	±35	Needle	ZS-543	2.5以下	315
DM-233	0.01	30 (240)	±35	φ3.2 Ball	ZS-034	2.5以下	315
DM-234	0.01	30 (240)	±35	φ3.2 Ball	ZS-034	2.5以下	355



Depth Gauge with extension rods

When all of 5 extension rods of depth gauge with extension rods are connected, it can measure the dimension of deep concavity part of bottom. (Standard dimension set up with master gauge is necessary).

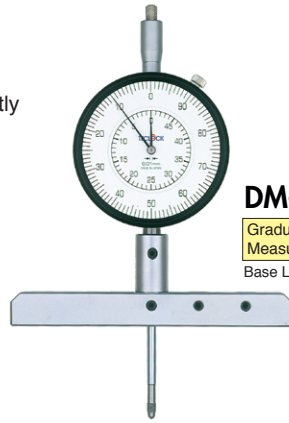
A dimension : Measuring range 10mm Depth Gauge : up to maximum 220mm  
Measuring range 20mm Depth Gauge : up to maximum 230mm  
Measuring range 30mm Depth Gauge : up to maximum 240mm



# Depth Gauge

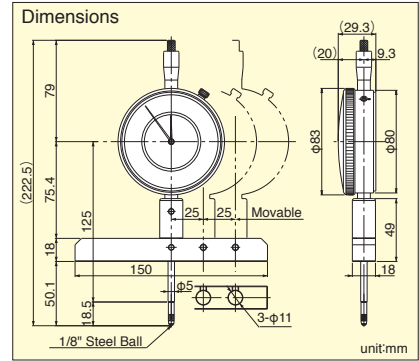
## Measuring Range:50mm

- A large sized depth gauge measurable 0-50mm (actual dimension) depth directly without any extension rod.
- The dial part is a type movable by inserting it into one of 3 holes.



### DM-295

Graduation 0.01mm  
Measuring Range 50mm  
Base Length 150mm



#### Specifications

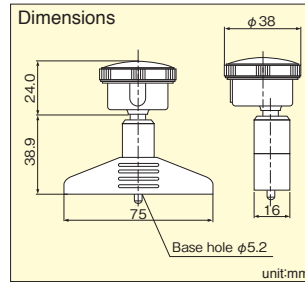
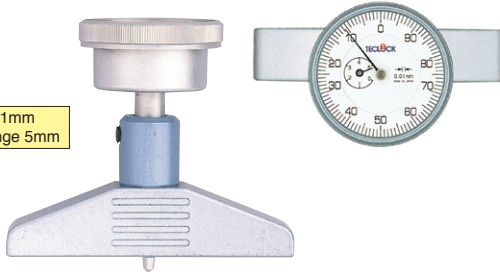
Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (mm)	Standard contact point	Measuring Force (N)	Weight (g)
DM-295	0.01	50	±50	φ3.2 Ball	ZS-116	2.5以下	750

## Dial Depth Gauges (Special)

### Back plunger type

### DM-273

Graduation 0.01mm  
Measuring Range 5mm



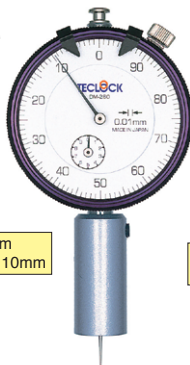
#### Specifications

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (mm)	Standard contact point	Measuring Force (N)	Weight (g)
DM-273	0.01	5	±10	φ3.2 Ball	ZS-105	1.4 or less	210

### Round Base type

### DM-280

Graduation 0.01mm  
Measuring Range 10mm  
Base form φ16mm

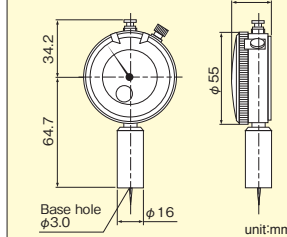


### DM-283

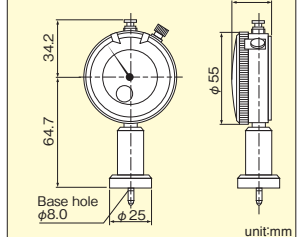
Graduation 0.01mm  
Measuring Range 10mm  
Base form φ25mm



#### Dimensions:DM-280



#### Dimensions:DM-283



#### Specifications

Model	Graduation (mm)	Measuring Range (mm)	Accuracy (μm)	Contact point form (mm)	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	φ3.2 Ball	ZS-034	1.4 or less	185



## Printed circuit board for measurement



### DM-251

Exclusive instrument to measure depth of V-groove of print circuit board.

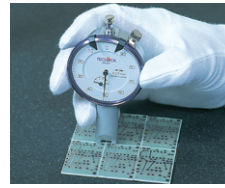
Graduation 0.01mm  
Measuring Range 5mm



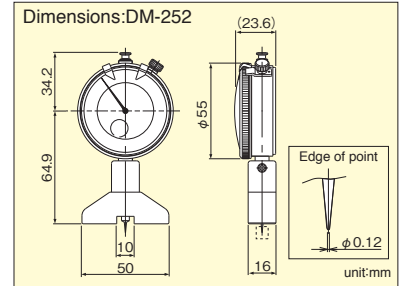
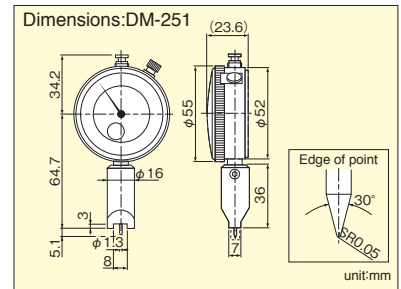
### DM-252

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 ( $\mu\text{m}$ )	Contact point form (mm)	Standard contact point	Measuring Force (N)	Weight (g)
DM-251	0.01	5	$\pm 10$	Special Needle	ZS-106	1.4 or less	165
DM-252	0.01	Concave 5mm Convex 4mm	$\pm 10$	Needle	ZS-595	1.4 or less	230

## Coating Thickness Gauges

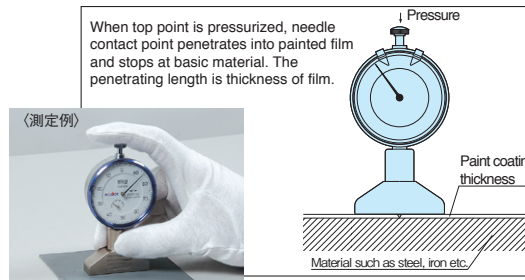
- Exclusive instrument to measure coating thickness of paint, coating materials and sealing materials.
- Handy type and operation is easy.



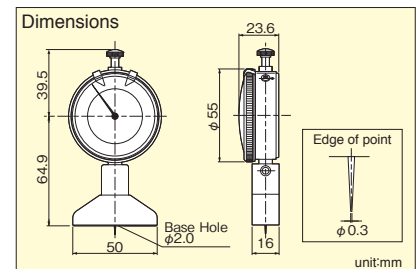
### DM-264

Small-based handy type

Graduation 0.01mm  
Measuring Range 5mm



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



### Specifications

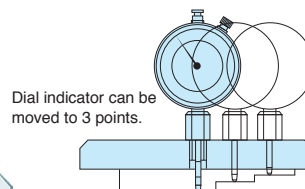
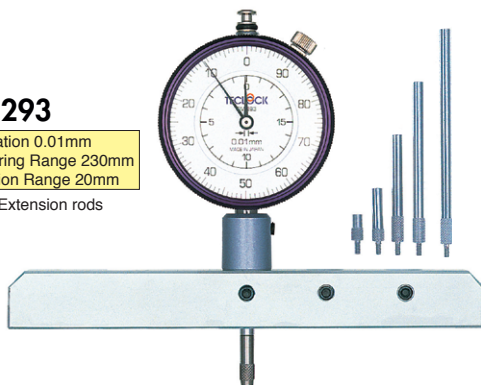
Model	Graduation (mm)	Measuring Range (mm)	Accuracy ( $\mu\text{m}$ )	Contact point form (mm)	Standard contact point	Measuring Force (N)	Weight (g)
DM-264	0.01	5	$\pm 10$	Needle	ZS-518	1.4 or less	230

## Gauge Slide type

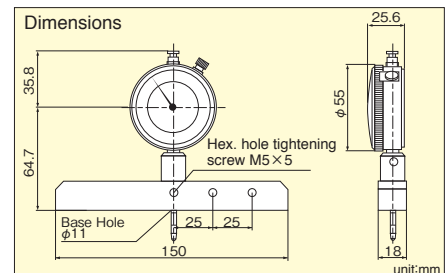
- Steps measurement can be easily made by moving the gauge to 3 mounting holes.

### DM-293

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



Dial indicator can be moved to 3 points.



### Specifications

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

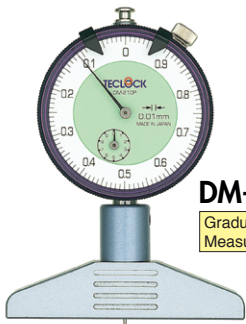
Model	Graduation (mm)	Measuring Range (mm)	Accuracy ( $\mu\text{m}$ )	Contact point form (mm)	Standard contact point	Measuring Force (N)	Weight (g)
DM-293	0.01	20 (230)	$\pm 15$	$\phi 3.2$ Ball	ZS-034	2.5 or less	510



# Depth Gauge

## P Series (0.1mm type)

- This is direct reading specification of which graduation are 0.1-0.9mm.
- 1-10mm can be read by short hand and figure below can be read by pointer. It prevents misreading



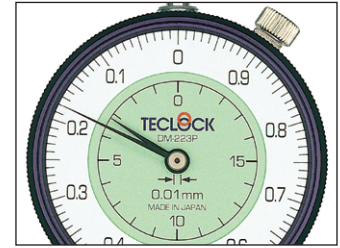
**DM-210P**

Graduation 0.01mm  
Measuring Range 10mm

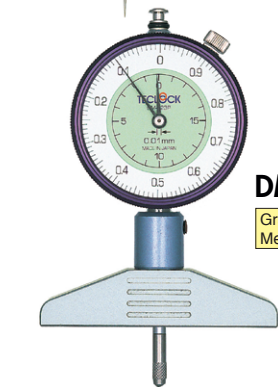


**DM-250P**

Graduation 0.01mm  
Measuring Range 5mm

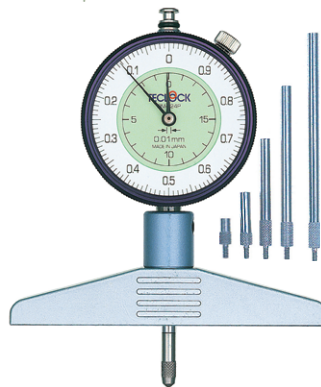


exp. 3.18mm of direct reading.



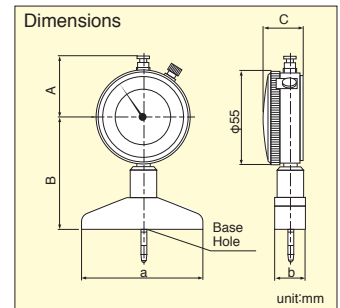
**DM-223P**

Graduation 0.01mm  
Measuring Range 20mm



**DM-224P**

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



Dimension table

Model	A	B	C	Base form axb	Base hole diameter
DM-210P	34.2	64.7	23.6	75×16	2.5
DM-250P	34.2	64.9	23.6	50×16	2.0
DM-223P	35.8	64.7	25.6	75×16	5.2
DM-224P	35.8	64.7	25.6	100×16	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 (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	φ3.2 Ball	ZS-034	2.2 or less	275
DM-224P	0.01	20 (230)	±15	φ3.2 Ball	ZS-034	2.5 or less	340



## 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 shown on page 42.

### 0.01mm Conventional Digital Depth Gauges



**DMD-210S2**  
Needle contact points  
Resolution 0.01mm  
Measuring Range 10mm



**DMD-211S2**  
φ2 flat Needle Contact Point  
Resolution 0.01mm  
Measuring Range 10mm



**DMD-213S2**  
φ3.2Steel Ball Contact Point  
Resolution 0.01mm  
Measuring Range 10mm



**DMD-250S2**  
Needle contact points  
Resolution 0.01mm  
Measuring Range 5mm



**DMD-252S2**  
φ3.2Steel Ball Contact Point  
Resolution 0.01mm  
Measuring Range Concave 5mm  
Convex4mm

### 0.001mm Conventional Digital Depth Gauges



**DMD-2100S2**  
Needle contact points  
Resolution 0.001mm  
Measuring Range 10mm



**DMD-2110S2**  
φ2 flat Needle Contact Point  
Resolution 0.001mm  
Measuring Range 10mm



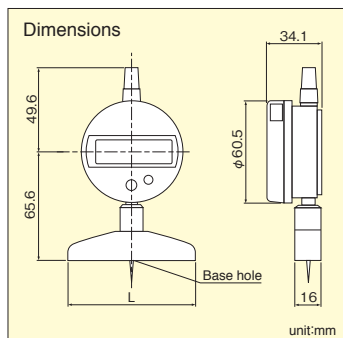
**DMD-2130S2**  
φ3.2Steel Ball Contact Point  
Resolution 0.001mm  
Measuring Range 10mm



**DMD-2500S2**  
Needle contact points  
Resolution 0.001mm  
Measuring Range 5mm



**DMD-2520S2**  
φ3.2Steel Ball Contact Point  
Resolution 0.001mm  
Measuring Range Concave 5mm  
Convex4mm



Dimension table

Model	Base hole diameter	L
DMD-210S2	φ2.5	75
DMD-211S2	φ2.5	75
DMD-213S2	φ5.2	75
DMD-250S2	φ2.0	50
DMD-252S2	φ8.0	50
DMD-2100S2	φ2.5	75
DMD-2110S2	φ2.5	75
DMD-2130S2	φ5.2	75
DMD-2500S2	φ2.0	50
DMD-2520S2	φ8.0	50

Specifications

Model	Resolution (mm)	Measuring Range (mm)	Accuracy* (μm)	Contact point form (or shape) (mm)	Standard Contact Point	Measuring Force (N)	Weight (g)
DMD-210S2	0.01	10	±20	Needle	ZS-523	2.0 or less	270
DMD-211S2	0.01	10	±20	φ2 flat	ZS-530	2.0 or less	270
DMD-213S2	0.01	10	±20	φ3.2 Steel Ball	ZS-034	2.0 or less	270
DMD-250S2	0.01	5	±20	Needle	ZS-518	2.0 or less	205
DMD-252S2	0.01	Concave 5, Convex 4	±20	Needle	ZS-595	2.0 or less	200
DMD-2100S2	0.001	10	±5	Needle	ZS-523	2.0 or less	300
DMD-2110S2	0.001	10	±5	φ2 flat	ZS-530	2.0 or less	300
DMD-2130S2	0.001	10	±5	φ3.2 Steel Ball	ZS-034	2.0 or less	300
DMD-2500S2	0.001	5	±5	Needle	ZS-518	2.0 or less	235
DMD-2520S2	0.001	Concave 5, Convex 4	±5	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 shown on page 42.
- Extension rods can be used by Preset function. (excepting DMD-210J, DMD-211J and DMD-2100J).

### 0.01mm Standard Digital Depth Gauges



#### DMD-210J

Needle contact points

Resolution 0.01mm  
Measuring Range 12mm

#### DMD-211J

φ2 flat Needle Contact Point

Resolution 0.01mm  
Measuring Range 12mm

#### DMD-213J

φ3.2Steel Ball Contact Point

Resolution 0.01mm  
Measuring Range 12mm

#### DMD-214J

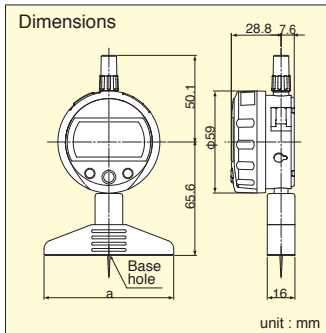
φ3.2Steel Ball Contact Point

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

#### DMD-215J

φ3.2Steel Ball Contact Point

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



#### Dimension Table

Model	Base form a×b	Base hole diameter
DMD-210J	75×16	φ2.5
DMD-211J	75×16	φ2.5
DMD-213J	75×16	φ5.2
DMD-214J	75×16	φ5.2
DMD-215J	100×16	φ5.2

unit : mm



#### DMD-240J

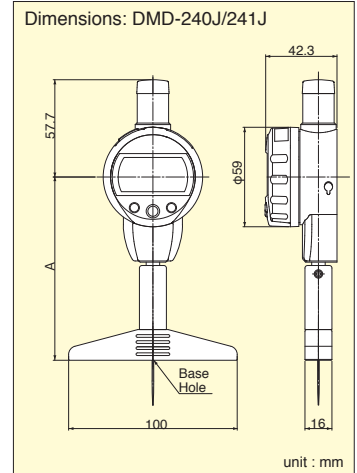
Needle contact points

Resolution 0.01mm  
Measuring Range 25.4mm

#### DMD-241J

φ3.2Steel Ball Contact Point

Resolution 0.01mm  
Measuring Range 25.4mm



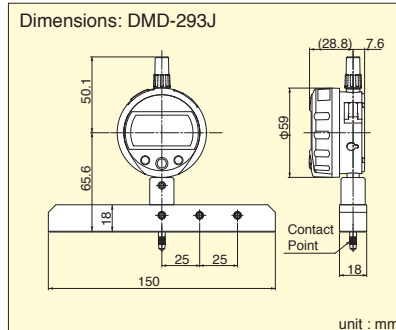
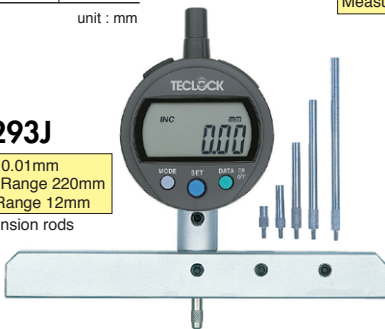
#### Dimension Table

Model	A
DMD-240J	108.7
DMD-241J	88.7

unit : mm

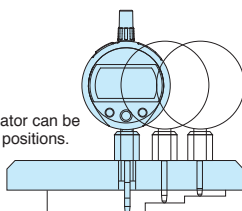
#### DMD-293J

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



unit : mm

Digital indicator can be moved to 3 positions.



#### 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-210J	0.01	12	±20	Needle	ZS-523	1.0 or less	310
DMD-211J	0.01	12	±20	φ2 flat	ZS-530	1.0 or less	310
DMD-213J	0.01	12	±20	φ3.2 Steel Ball	ZS-034	1.0 or less	310
DMD-214J	0.01	12(220)※	±20	φ3.2 Steel Ball	ZS-034	2.3 or less	335
DMD-215J	0.01	12(220)※	±20	φ3.2 Steel Ball	ZS-034	2.3 or less	375
DMD-240J	0.01	25.4	±20	Needle	ZS-113	1.6 or less	390
DMD-241J	0.01	25.4	±20	φ3.2 Steel Ball	ZS-600	1.6 or less	370
DMD-293J	0.01	12(220)※	±20	φ3.2 Steel Ball	ZS-034	2.3 or less	545

\*The quantizing error function is not included.





0.001mm Standard Digital Depth Gauges



**DMD-2100J**  
Needle contact points  
Resolution 0.001mm  
Measuring Range 12mm



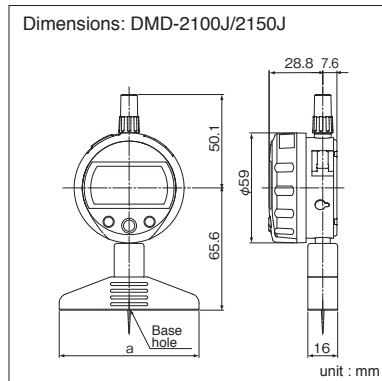
**DMD-2150J**  
φ3.2Steel Ball Contact Point  
Resolution 0.001mm  
Measuring Range 220mm  
Indication Range 12mm  
with 5-Extension rods



**DMD-2400J**  
Needle contact points  
Resolution 0.001mm  
Measuring Range 25.4mm



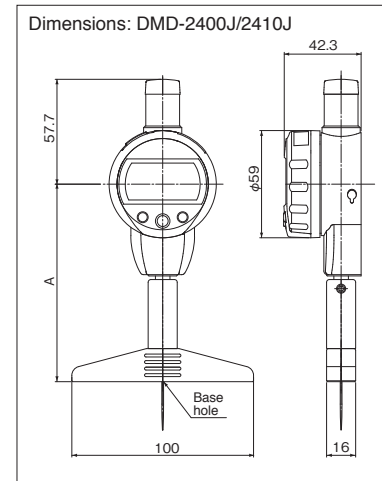
**DMD-2410J**  
φ3.2Steel Ball Contact Point  
Resolution 0.001mm  
Measuring Range 25.4mm



Dimension Table

Model	Base foam a×b	Base hole diameter
DMD-2100J	75×16	φ2.5
DMD-2150J	100×16	φ5.2

unit : mm



Dimension Table

Model	A
DMD-2400J	108.7
DMD-2410J	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-2100J	0.001	12	±5	Needle	ZS-523	1.0 or less	310
DMD-2150J	0.001	12(220)※	±5	φ3.2 Steel Ball	ZS-034	2.3 or less	375
DMD-2400J	0.001	25.4	±5	Needle	ZS-113	1.6 or less	390
DMD-2410J	0.001	25.4	±5	φ3.2 Steel Ball	ZS-600	1.6 or less	370

\*The quantizing error function is not included.



# Parts & Accessories

## Contact Point

**ZS-523**

Standard fitment  
DM-210 DM-210P  
DM-280 DMD-210J  
DMD-2100J DMD-210S2  
DMD-2100S2

**ZS-518**

Standard fitment  
DM-250 DM-250P  
DM-264 DMD-250S2  
DMD-2500S2

**ZS-543**

Standard fitment DM-220 DM-230

**ZS-541**

Standard fitment DM-221

**ZS-105**

Standard fitment  
DM-273

**ZS-034**

Standard fitment  
DM-213 DM-214 DM-223  
DM-223P DM-224 DM-224P  
DM-233 DM-234 DM-283  
DM-293 DMD-213J DMD-214J  
DMD-215J DMD-293J  
DMD-2150J DMD-213S2  
DMD-2130S2

**ZS-530**

Standard fitment  
DM-211 DMD-211J DMD-211S2

**ZS-595**

Standard fitment  
DM-252 DMD-252J  
DMD-252S2 DMD-2520S2

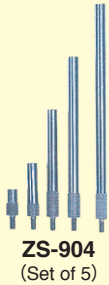
**ZS-600**

Standard fitment DMD-241J DMD-2410J

**ZS-113**

Standard fitment DMD-240J DMD-2400J

## Extension Rods



**ZS-663,664,665,666,670**

Code No.	L
ZS-670	10
ZS-663	20
ZS-664	40
ZS-665	60
ZS-666	80

Unit:mm

Standard fitment DM-214 DM-224 DM-224P  
DM-233 DM-234 DM-293 DMD-214J  
DMD-215J DMD-293J

# Depth Gauge by Contact point list

Model	Base hole diameter	Standard contact point	Can be mounted contact point	Model	Base hole diameter	Standard contact point	Can be mounted contact point	Model	Base hole diameter	Standard contact point	Can be mounted contact point											
DM-210	φ2.5	ZS-523	ZS-527 ZS-528 ZS-530	DM-213	φ5.2	ZS-034	ZS-527 ZS-528 ZS-530 ZS-523 ZS-594	DM-251	φ5.2	ZS-106	なし											
DM-210P				DM-214				DM-252	φ8.0	ZS-595	なし											
DMD-210S2				DM-223				DMD-252S2														
DMD-210J				DM-224				DMD-2520S2														
DMD-2100S2				DM-233				DM-273	φ5.2	ZS-105	なし											
DMD-2100J				DM-234				DM-280	φ3.0	ZS-523	ZS-527 ZS-528 ZS-530											
DM-211	DM-223P	DM-283	φ8.0	ZS-034								ZS-527 ZS-528 ZS-530 ZS-523										
DMD-211J	DM-224P												DM-264	φ2.0	ZS-518	-						
DMD-211S2	DM-293																φ2.5	ZS-113	-			
DMD-2110S2	DMD-213S2																			φ5.2	ZS-600	-
	DMD-213J																					
	DMD-2130S2																					
	DMD-214J																					
	DMD-215J																					
	DMD-2150J																					
	DMD-293J																					
	DM-250																					
	DM-250P																					
	DMD-250S2																					
	DMD-2500S2																					