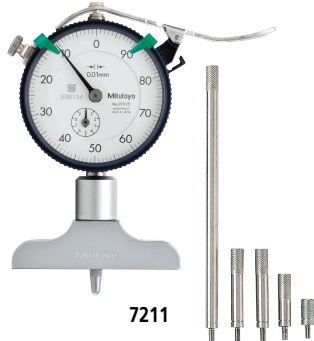


# Depth Gage

A standard measuring tool of industry

## Dial Depth Gage SERIES 7

- Optimal for hole, narrow groove and step measurement.



7211



7214



7222

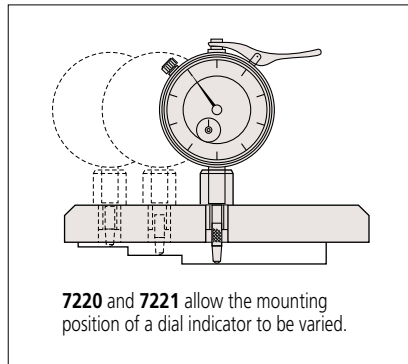


7224



7231

### Typical application



7220 and 7221 allow the mounting position of a dial indicator to be varied.

### Precautions

#### Note 1

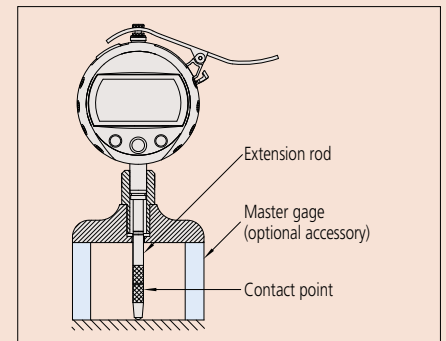
Caution should be exercised when exchanging a contact point of a Depth Gage (Dial/Digimatic Indicator):

- If a different size contact point is mounted, displacement of the contact point from the base contact surface will be changed and as a result, measurement range may not be maintained.
- A contact point cannot be mounted to a Depth Gage if its diameter is too large for the hole diameter of the base.
- Parallelism adjustment with the bottom face of the base is required when mounting a flat contact point such as the flat/needle or carbide-tipped contact point.

#### Note 2

Caution should be exercised when using an extension rod:

- If the total length of the extension rod exceeds 110 mm (4.5 in) use the instrument in a vertical position (contact point downward).
- Use a master gage (such as gauge blocks) to perform zero-setting when the extension rod is mounted. (Master gage is an optional accessory.)



#### Note 3

Caution should be exercised when indicators are used on a Depth Gage:

- When the indicator is exchanged and a longer extension rod is connected, the contact-point may deflect significantly with an adverse effect on measuring accuracy.
- Order No.543-400B/543-402B for Depth Gage has a measuring force less than 1.5 N.

## SPECIFICATIONS

### Metric

Order No.	Range (mm)	Graduation (mm)	Stroke (mm)	Accuracy (μm)	Measuring force (N)	Base				Contact point <sup>Note 1</sup>	Extension rod <sup>Note 2</sup>	Indicator <sup>Note 3</sup> (dial indicator)
						W (mm)	T (mm)	Flatness (μm)	Mounting position of a dial indicator			
7210	0 - 10	0.01	10	±15	1.4	40	16	5	1	Provided with a needle point (137413)	—	2902SB for Depth Gage
7211	0 - 200					63.5				Provided with a carbide-tipped ball point (21JAA224)	5 pcs. (10, 20, 30, 30, 100 mm)	
7212						101.6				Provided with a carbide-tipped ball point (21JAA225)	3 pcs. (30, 60, 90 mm)	
7213	0 - 210		30	±30	2.5	63.5	18	5	2	Provided with a carbide-tipped ball point (21JAA224)	5 pcs. (10, 20, 30, 30, 100 mm)	2952SB for Depth Gage
7214						101.6						
7220	0 - 200		10	±15	1.4	100	1	1	Provided with a needle point (137413)	—	2902SB for Depth Gage	
7221						150						
7222	0 - 10					ø16						
7223						ø25						
7224						ø40						
7231	0 - 200	5			63.5	16			Provided with a carbide-tipped ball point (21JAA224: 17 mm)	5 pcs. (10, 20, 30, 30, 100 mm) Interchangeable contact point (21JAA226: 22 mm)	1162T for Depth Gage (Back plunger type)	

### Inch

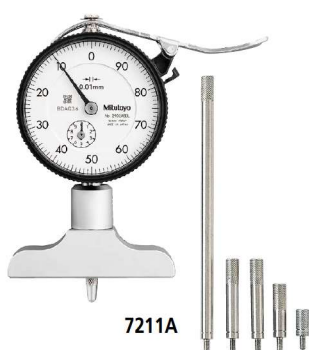
Order No.	Range (in)	Graduation (in)	Stroke (in)	Accuracy (in)	Measuring force (N)	Base				Contact point <sup>Note 1</sup>	Extension rod <sup>Note 2</sup>	Indicator <sup>Note 3</sup> (dial indicator)
						W (in)	T (in)	Flatness (in)	Mounting position of a dial indicator			
7217S	0 - 8	0.001	1	±0.002	2.5	2.5	0.63	0.0002	1	Carbide ball point (21JZA242)	3 pcs. (1 in, 2 in, 4 in)	2904SB for Depth Gage
7218S						4						
7237T			0.2		1.4	2.5						
7238T						4						
Provided with a carbide-tipped ball point (21JZA242: 0.7 in)											4 pcs. (0.5 in, 1 in, 2 in, 4 in) Interchangeable contact point (21JZA243: 0.9 in)	1168T for Depth Gage (Back plunger type)

# Depth Gage

A standard measuring tool of industry

## Dial Depth Gage SERIES 7

- Optimal for hole, narrow groove and step measurement.



7211A



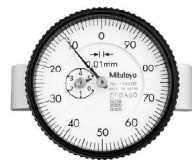
7214A



7222A



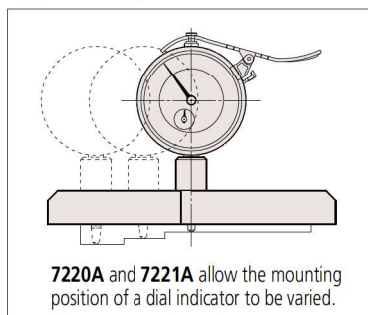
7224A



7231A



### Typical application



7220A and 7221A allow the mounting position of a dial indicator to be varied.

### Precautions

#### Note 1

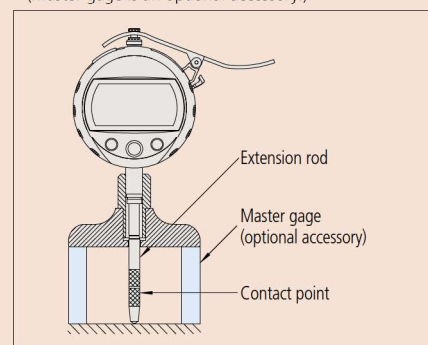
Caution should be exercised when exchanging a contact point of a Depth Gage (Dial/Digimatic Indicator):

- If a different size contact point is mounted, displacement of the contact point from the base contact surface will be changed and as a result, measurement range may not be maintained.
- A contact point cannot be mounted to a Depth Gage if its diameter is too large for the hole diameter of the base.
- Parallelism adjustment with the bottom face of the base is required when mounting a flat contact point such as the flat/needle or carbide-tipped contact point.

#### Note 2

Caution should be exercised when using an extension rod:

- If the total length of the extension rod exceeds 110 mm (4.5 in) use the instrument in a vertical position (contact point downward).
- Use a master gage (such as gauge blocks) to perform zero-setting when the extension rod is mounted. (Master gage is an optional accessory.)



#### Note 3

Caution should be exercised when indicators are used on a Depth Gage:

- When the indicator is exchanged and a longer extension rod is connected, the contact-point may deflect significantly with an adverse effect on measuring accuracy.
- Order No.543-400B/543-402B for Depth Gage has a measuring force less than 1.5 N.

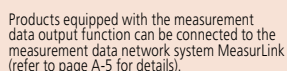
## SPECIFICATIONS

### Metric

Order No.	Range (mm)	Graduation (mm)	Stroke (mm)	Accuracy (μm)	Measuring force (N)	Base				Contact point <sup>Note 1</sup>	Extension rod <sup>Note 2</sup>	Indicator <sup>Note 3</sup> (dial indicator)
						W (mm)	T (mm)	Flatness (μm)	Mounting position of a dial indicator			
7210A	0 - 10	0.01	10	±15	1.4	40	16	5	1	Provided with a needle point (137413)	—	2902ABD for Depth Gage
7211A	0 - 200					63.5				Provided with a carbide-tipped ball point (21JAA224)	5 pcs. (10, 20, 30, 30, 100 mm)	2902ABDL for Depth Gage
7212A						101.6				Provided with a carbide-tipped ball point (21JAA225)	3 pcs. (30, 60, 90 mm)	2952ABD for Depth Gage
7213A	0 - 210		30	±30	2.5	63.5	18		2	Provided with a carbide-tipped ball point (21JAA224)	5 pcs. (10, 20, 30, 30, 100 mm)	2902ABDL for Depth Gage
7214A						101.6						
7220A	0 - 200		10	±15	1.4	100	1		1	Provided with a carbide-tipped ball point (21JAA224: 17 mm)	5 pcs. (10, 20, 30, 30, 100 mm) Interchangeable contact point (21JAA226: 22 mm)	1162AD for Depth Gage (Back plunger type)
7221A						150						
7222A	ø16											
7223A	ø25											
7224A	ø40											
7231A	0 - 200		5			63.5	16					

### Inch

Order No.	Range (in)	Graduation (in)	Stroke (in)	Accuracy (in)	Measuring force (N)	Base				Contact point <sup>Note 1</sup>	Extension rod <sup>Note 2</sup>	Indicator <sup>Note 3</sup> (dial indicator)
						W (in)	T (in)	Flatness (in)	Mounting position of a dial indicator			
7217A	0 - 8	0.001	1	±0.002	2.0	2.5	0.63	0.0002	1	Provided with a carbide-tipped ball point (21JZA242: 0.7 in)	3 pcs. (1 in, 2 in, 4 in)	2904ABD for Depth Gage
7218A					4							
7237A			0.2		1.4	2.5					Interchangeable contact point (21JZA243: 0.9 in)	1168AD for Depth Gage (Back plunger type)
7238A						4						

[illegible]

**MeasurLink®** **ENABLED**  
Data Management Software by Mitutoyo

- Easy-to-read dial effectively prevents misreading.
- Allows integration into statistical process control and measurement systems for models with measurement data output connector. (Refer to page A-3.)

A digital depth gauge system by Mitutoyo. It includes a base unit with a digital display showing '0.00 mm' and control buttons for 'MODE', 'SET', 'DATA', and 'ON/OFF'. A cable connects the base to a probe. To the left, five different probe tips are shown, ranging in size and shape, including a standard cylindrical probe and a specialized ball probe.

Unit: mm

Metric											
Order No.	Range (mm)	Resolution (mm)	Stroke (mm)	Accuracy*1 (µm)	Measuring force (N)	Base			Contact point*2	Extension rod*2	Indicator*2
547-211	0 - 200	0.01	12.7	±20	1.5	W (mm)	T (mm)	flatness (µm)	Provided with a carbide-tipped ball point (21JAA224)	5 pcs. (10, 20, 30, 30, 100 mm)	543-400B
547-212						63.5	16	5			
547-251		101.6		2							
547-252		0.001				±5					63.5
Inch / Metric											
Order No.	Range (in)	Resolution	Stroke (in)	Accuracy*1 (in)	Measuring force (N)	Base			Contact point*2	Extension rod*2	Indicator*2
547-217S	0 - 8	0.0005 in/0.01 mm	0.5	±0.001	1.5	W (in)	T (in)	flatness (in)	Provided with a carbide-tipped ball point (21JZA242)	4 pcs. (0.5 in, 1 in, 2 in, 4 in)	543-402B
547-218S						2.5	0.63	0.0002			
547-257S		4		0.00008							
547-258S		0.00005 in/0.001 mm				±0.0002					2.5

\*1 Excluding quantizing error of  $\pm 1$  count  
\*2 Refer to corresponding notes on page D-67.