

Depth Gage

A standard measuring tool of industry

Depth Micrometer SERIES 329, 129 — Interchangeable Rod Type

- This type uses interchangeable rods to enable wide-range measurement.
- **Order Nos. 329-250-20, 329-251-10, 329-350-10 and 329-351-10** allow integration into statistical process control and measurement systems.
- Measuring rod diameter: $\varnothing 4\text{mm}$
- Measuring rod lock.
- Ratchet stop provides constant measuring force.



SPECIFICATIONS

Metric				
Order No.	Range	Resolution	Base	No. of rods
Digimatic (LCD)				
329-250-10	0 - 150mm	0.001mm	101.6 x 16mm	6
329-251-10	0 - 300mm			12

Metric				
Order No.	Range	Graduation	Base	No. of rods
Analog				
129-154	0 - 25mm	0.01mm	63.5 x 16mm	1
129-155			101.6 x 16mm	
129-109	0 - 50mm		63.5 x 16mm	2
129-113			101.6 x 16mm	
129-110	0 - 75mm		63.5 x 16mm	3
129-114			101.6 x 16mm	
129-111	0 - 100mm		63.5 x 16mm	4
129-115			101.6 x 16mm	
129-112	0 - 150mm		63.5 x 16mm	6
129-116			101.6 x 16mm	
129-152	0 - 300mm		63.5 x 16mm	12
129-153			101.6 x 16mm	

Inch/Metric				
Order No.	Range	Resolution	Base	No. of rods
Digimatic (LCD)				
329-350-10	0 - 6"	0.0005"/0.001mm	4" x .63"	6
329-351-10	0 - 12"	.0001"/0.001mm		12

Inch				
Order No.	Range	Graduation	Base	No. of rods
Analog				
129-129	0 - 2"	.001"	4" x .63"	2
129-126	0 - 3"		2.5" x .63"	3
129-130			4" x .63"	
129-127	0 - 4"		2.5" x .63"	4
129-131			4" x .63"	
129-128	0 - 6"		2.5" x .63"	6
129-132			4" x .63"	
129-149	0 - 12"		2.5" x .63"	12
129-150			4" x .63"	

Interchangeable rod (Optional Accessories) (Check and adjust the origin point before measurement)



Unit: mm

Range		0 - 25mm	25 - 50mm	50 - 75mm	75 - 100mm	100 - 125mm	125 - 150mm	150 - 175mm	175 - 200mm	200 - 225mm	225 - 250mm	250 - 275mm	275 - 300mm
Analog models	Order No.	983501	983503	983505	983507	983509	983511	983525	983527	983529	983531	983533	983535
	L	104mm	129mm	154mm	179mm	204mm	229mm	254mm	279mm	304mm	329mm	354mm	379mm
Digimatic models	Order No.	983505	983507	983509	983511	983525	983527	983529	983531	983533	983535	981781	981782
	L	154mm	179mm	204mm	229mm	254mm	279mm	304mm	329mm	354mm	379mm	404mm	429mm

Range		0 - 1"	1 - 2"	2 - 3"	3 - 4"	4 - 5"	5 - 6"	6 - 7"	7 - 8"	8 - 9"	9 - 10"	10 - 11"	11 - 12"
Analog models	Order No.	983502	983504	983506	983508	983510	983512	983526	983528	983530	983532	983534	983536
	L	104.3mm	129.7mm	155.1mm	180.5mm	205.9mm	231.3mm	256.7mm	282.1mm	307.5mm	332.9mm	358.3mm	383.7mm
Digimatic models	Order No.	983506	983508	983510	983512	983526	983528	983530	983532	983534	983536	981783	981784
	L	155.1mm	180.5mm	205.9mm	231.3mm	256.7mm	282.1mm	307.5mm	332.9mm	358.3mm	383.7mm	409.1mm	434.5mm

Technical Data

Accuracy:
 $\pm 3\mu\text{m}/\pm 0.00015"$ for micrometer head
(Excluding quantizing error)
 $\pm (2+R/75)\mu\text{m}$ for interchangeable rod,
R = Max. range (mm)
Fraction rounded up
 $\pm [0.0001 + 0.00005 (R/3)]"$
R = Max. measuring length (inch)
Fraction rounded up
Flatness of measuring rod face: $0.3\mu\text{m}$
Parallelism between reference face and measuring rod face:
 $(4+R/50)\mu\text{m}$, R = Max. measuring length (mm)
Fraction rounded up
 $[0.00016 + 0.00004 (R/2)]"$, R = Max. measuring length (inch)
Fraction rounded up
Battery*: SR44 (1 pc.), **938882**
Battery life*: Approx. 1.2 years under normal use
* Digital models



Optional accessories for 329-250-10, 329-251-10, and 329-350-10 and 329-351-10.

For details, refer to page A-21.

Connection cables

05CZA662: SPC cable with data button (1m)

05CZA663: SPC cable with data button (2m)

USB Input Tool Direct

06ADV380B: SPC cable for **USB-ITN-B** (2m)

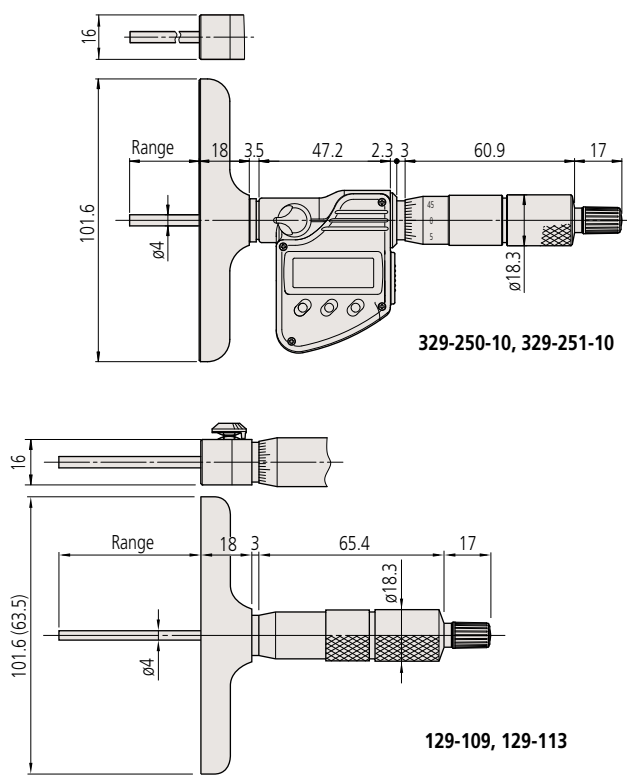
Connection cables for U-WAVE-T

02AZD790B: SPC cable for **U-WAVE** with data button (160mm)

02AZE140B: SPC cable for footswitch

DIMENSIONS

Unit: mm



D

Depth Gage

A standard measuring tool of industry

Depth Micrometer SERIES 128

- Measuring rod diameter: $\varnothing 4\text{mm}$
- Measuring rod lock is attached.
- *Measuring rod is attached on the rear side of the micrometer.
- Carbide-tipped measuring rod model is available.
- Ratchet stop provides constant measuring force.



SPECIFICATIONS

Metric			
Order No.	Range	Graduation	Base
128-101	0 - 25mm	0.01mm	63.5 x 16mm
128-103* ¹			
128-102			101.6 x 16mm
128-104* ¹			

*1 with carbide-tipped measuring rod

Inch			
Order No.	Range	Graduation	Base
128-105	0 - 1"	.001"	2.5" x .63"
128-106			4" x .63"

Technical Data

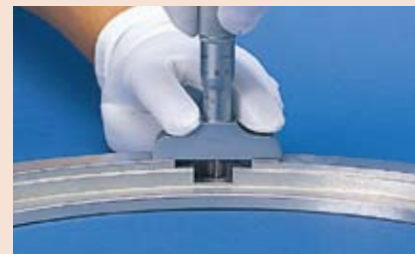
Accuracy: $\pm 3\mu\text{m}$ ($\pm .00015"$)

Flatness of reference face:

1.3 μm (.00005") for 63.5mm (2.5") length base,

2 μm (.00008") for 101.6mm (4") length base

Flatness of measuring spindle face: 0.3 μm



Depth Micro Checker SERIES 515

- The Depth Micro Checker is designed to check and help set the range-end points of a depth micrometer.

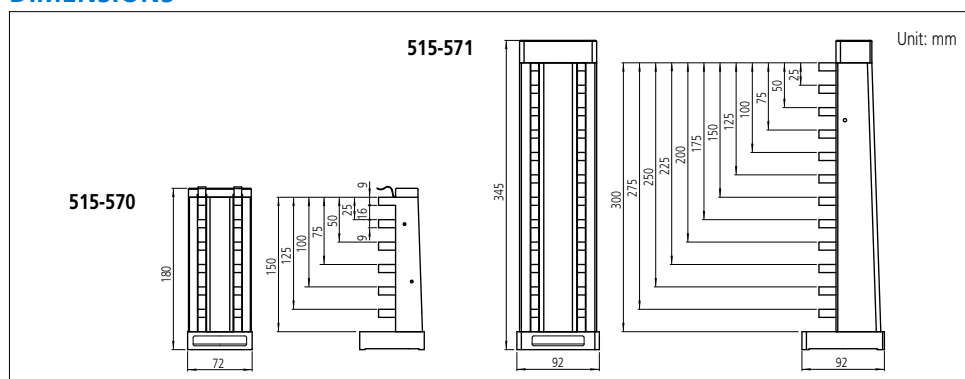


SPECIFICATIONS

Metric			
Order No.	Range	Block pitch accuracy	Anvil block accuracy
515-570	0 - 150mm	$\pm(1+L/150)\mu\text{m}$, L = Length to check (mm)	$\pm 0.5\mu\text{m}$
515-571	0 - 300mm		

Inch			
Order No.	Range	Block pitch accuracy	Anvil block accuracy
515-575	0 - 6"	$\pm(40+L/0.15)\mu\text{inch}$, L = Length to check (inch)	40 μinch

DIMENSIONS



An inspection certificate is attached as standard.
Refer to page IX for details.



A 25mm anvil block provides the reference surface for the depth micrometer rod

Optional accessories for IP67 coolant proof models

For details, refer to page A-21.

Connecting cables

05CZA624: SPC cable with data button (1m)

05CZA625: SPC cable with data button (2m)

USB Input Tool Direct

06ADCV380A: SPC cable for USB-ITN-B (2m)

Connecting cables for **U-WAVE-T**

02AZD790A: SPC cable for U-WAVE with data button (160mm)

02AZE140A: SPC cable for footswitch

Optional accessories for other than IP67 coolant proof models

For details, refer to page A-21.

959143: Data hold unit

Connecting cables for **IT/DP/MUX**

959149: SPC cable with data button (1m)

959150: SPC cable with data button (2m)

USB Input Tool Direct

06ADV380C: SPC cable for USB-ITN-C (2m)

Connecting cables for **U-WAVE-T**

02AZD790C: SPC cable for U-WAVE with data button (160mm)

02AZE140C: SPC cable for footswitch

ABSOLUTE Digimatic Depth Gage SERIES 571

- Coolant proof models achieve IP67 protection level.
- Enables stable depth measurement with a resolution of 0.01mm.
- ABSOLUTE Digital Caliper (Refer to page D-7 for ABSOLUTE function.)
- Sliding operation of models with the measuring ranges 150mm (6"), 200mm (8") and 300mm (12") is smooth and comfortable.
- Battery: SR44 (Part No. **938882**, 1 pc)
- Battery life: Approx. 20,000 hours [3 years (1 year: 300mm/12" models)] under normal use.
- Optional longer extension bases are available. (Except for models with measuring ranges of 600, 750, 1000mm)



571-201-20



571-251-10



SPECIFICATIONS

Metric					
Order No.	Range	Resolution	Accuracy*	Repeatability	Base (W x T)
571-201-20	0 - 150mm	0.01mm	±0.02mm	0.01mm	100 x 6mm
571-202-20	0 - 200mm		±0.03mm		
571-203-20	0 - 300mm		±0.02mm		
571-251-10**	0 - 150mm		±0.03mm		
571-252-10**	0 - 200mm	0.01mm	±0.05mm	0.01mm	100 x 6.3mm
571-253-10**	0 - 300mm		±0.06mm		
571-204-10	0 - 450mm		±0.07mm		
571-205-10	0 - 600mm		±0.07mm		
571-206-10	0 - 750mm	0.01mm	±0.07mm	0.01mm	250 x 10mm
571-207-10	0 - 1000mm		±0.07mm		

* Excluding quantizing error

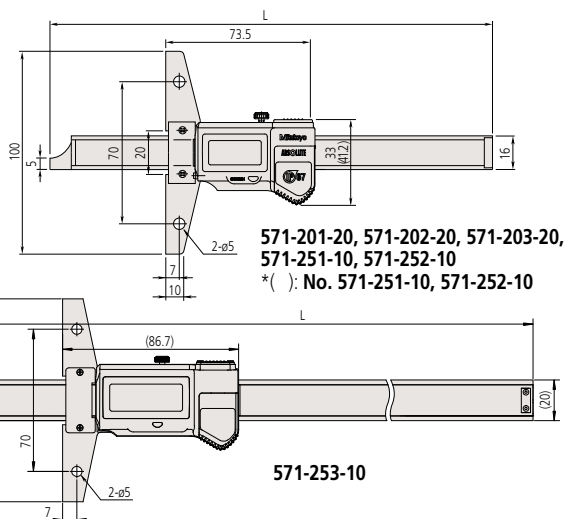
** IP67 Coolant Proof model

DIMENSIONS

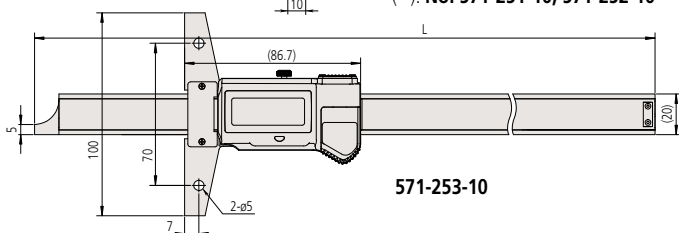
Inch/Metric				
Order No.	Range	Accuracy*	Repeatability	Base (W x T)
571-211-20	0 - 6"	±.001"/±0.02mm	0.005"/0.01mm	3.93" x .23"
571-212-20	0 - 8"	±.001"/±0.02mm		
571-213-10	0 - 12"	±.0015"/±0.03mm		
571-261-10**	0 - 6"	±.001"/±0.02mm		
571-262-10**	0 - 8"	±.001"/±0.02mm	0.005"/0.01mm	9.8" x .39"
571-263-10**	0 - 12"	±.0015"/±0.03mm		
571-214-10	0 - 18"	±.002"/±0.05mm		
571-215-10	0 - 24"	±.002"/±0.05mm		
571-216-10	0 - 30"	±.0025"/±0.06mm	0.005"/0.01mm	9.8" x .39"
571-217-10	0 - 40"	±.0025"/±0.07mm		

* Excluding quantizing error

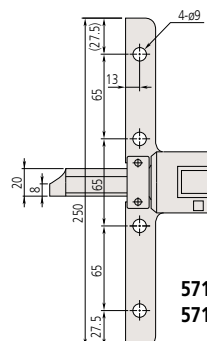
** IP67 Coolant Proof model



571-201-20, 571-202-20, 571-203-20,
571-251-10, 571-252-10
(): No. 571-251-10, 571-252-10



571-253-10



571-204-10, 571-205-10,
571-206-10, 571-207-10

Unit: mm

Range	L	Base thickness
0 - 150mm	237	6
0 - 200mm	287	6
0 - 300mm	403 (404)	6 (6.3)
0 - 450mm	635	10
0 - 600mm	785	10
0 - 750mm	935	10
0 - 1000mm	1200	10

(): Coolant Proof models

A standard measuring tool of industry

- Standard gage for depth measurement.
- Optional longer extension bases are available. (Except for models with measuring ranges of 600 and 1000mm)



Metric

Inch

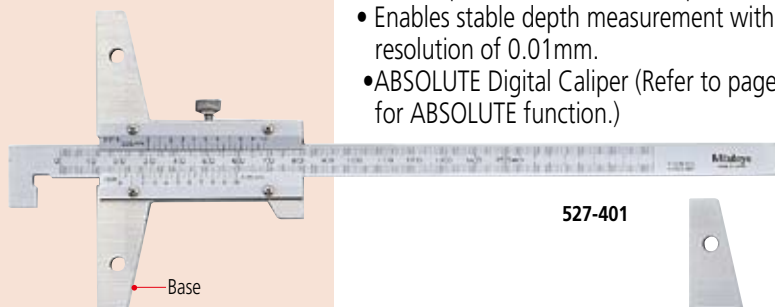
DIMENSIONS



Models with the measuring ranges of over 600mm have different configurations.

Depth Gage SERIES 527, 571 — Hook End Type

- The end of the main beam is hook-shaped to allow depth and thickness measurements of a projected portion or lip in a hole, in addition to standard depth measurement.
- Coolant proof models achieve IP67 protection level.
- Enables stable depth measurement with a resolution of 0.01mm.
- ABSOLUTE Digital Caliper (Refer to page D-8 for ABSOLUTE function.)
- Digital models display the compensation value by pressing the OFF switch to allow direct reading.
- Slider operation of the digital models is smooth and comfortable.
- Allows integration into statistical process control and measurement systems for models with measurement data output connector.
- Refer to page A-3.
- Battery: SR44 (Part No. **938882**, 1 pc.)
- Battery life: Approx. 3 years under normal use (for digital models)
- Optional longer extension bases are available.



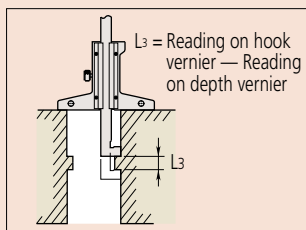
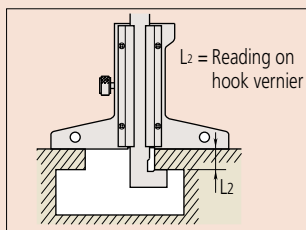
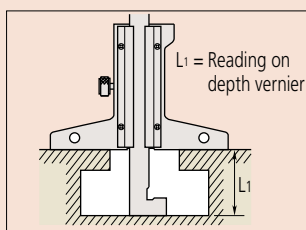
527-401



571-254-10



Applications



Optional accessories for digital models

For details, refer to page A-21.

Connection cables for coolant proof models

05CZA624: SPC cable with data button (1m)

05CZA625: SPC cable with data button (2m)

USB Input Tool Direct

06ADCV380A: SPC cable for USB-ITN-B (2m)

Connecting cables for U-WAVE-T

02AZD790A: SPC cable for U-WAVE with data button (160mm)

02AZE140A: SPC cable for footswitch

SPECIFICATIONS

Metric				
Order No.	Range: L1 (L2 and L3)	Resolution	Accuracy*	Base (W×T)
Digimatic (LCD)				
571-254-10**	10 - 160mm (0 - 150mm)	0.01mm	±0.03mm	100×6mm
571-255-10**	10 - 210mm (0 - 200mm)			
527-401	10 - 150mm (0 - 150mm)	0.05mm	±0.05mm	100×6.5mm
527-402	10 - 200mm (0 - 200mm)		±0.08mm	
527-403	10 - 300mm (0 - 300mm)			

* Excluding quantizing error

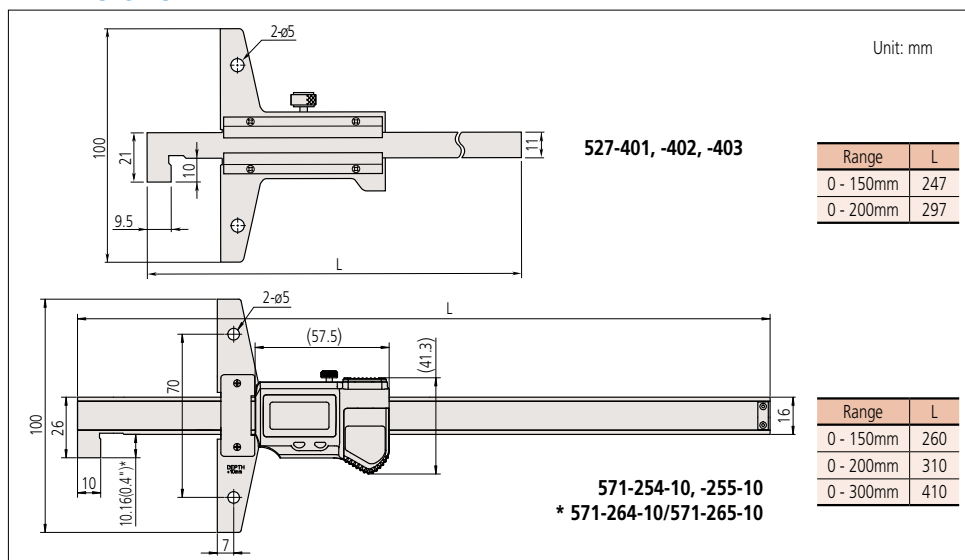
** IP67 Coolant Proof model

Inch/Metric				
Order No.	Range: L1 (L2 and L3)	Resolution	Accuracy*	Base (W×T)
Digimatic (LCD)				
571-264-10	.4" - 6.4" (0 - 6")	.0005" / 0.01mm	±0.0015" / ±0.03mm	100×6mm
571-265-10	.4" - 8.4" (0 - 8")			

* Excluding quantizing error

Metric				
Order No.	Range: L1 (L2 and L3)	Vernier reading	Accuracy	Base (WxT)
Analog				
527-411	10 - 150mm (0 - 150mm)	0.02mm	±0.03mm	100x6.5mm
527-412	10 - 200mm (0 - 200mm)		±0.04mm	
527-413	10 - 300mm (0 - 300mm)			

DIMENSIONS

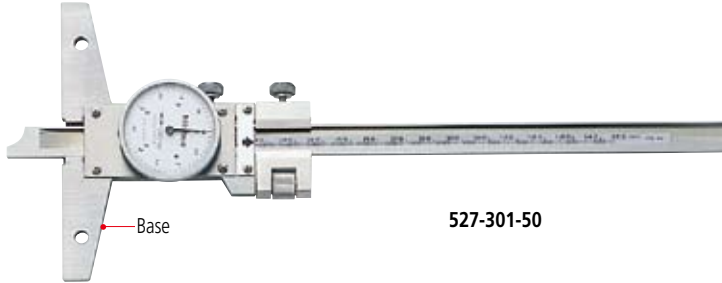


Depth Gage

A standard measuring tool of industry

Dial Depth Gage SERIES 527 — with Fine Adjustment

- Easy-to-read dial caliper with rack and pinion magnification mechanism.
- Optional longer extension bases are available.



527-301-50

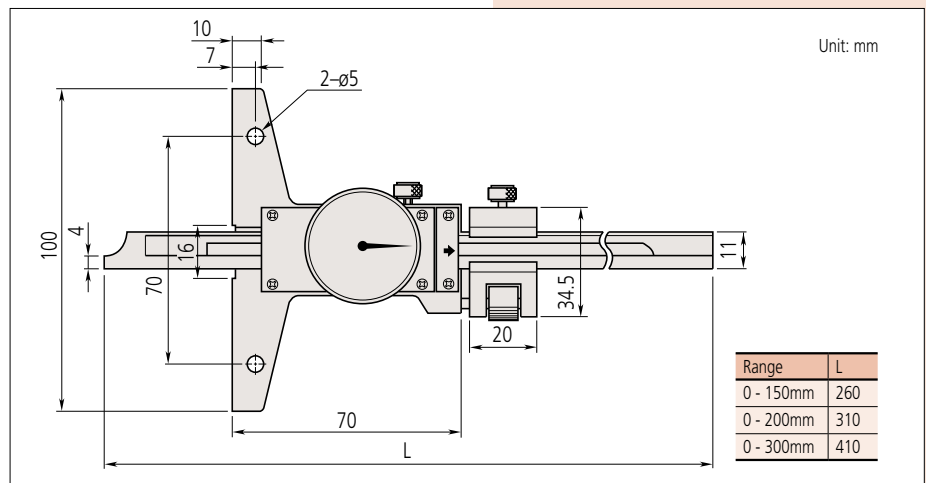


SPECIFICATIONS

Metric				
Order No.	Range	Dial reading	Accuracy	Base (WxT)
527-301-50	0 - 150mm	0.05mm	±0.05mm	100x6.5mm
527-302-50	0 - 200mm			
527-303-50	0 - 300mm		±0.08mm	

Inch				
Order No.	Range	Dial reading	Accuracy	Base (WxT)
527-311-50	0 - 6"	.001"	±.001"	100x6.5mm
527-312-50	0 - 8"		±.0015"	
527-313-50	0 - 12"			

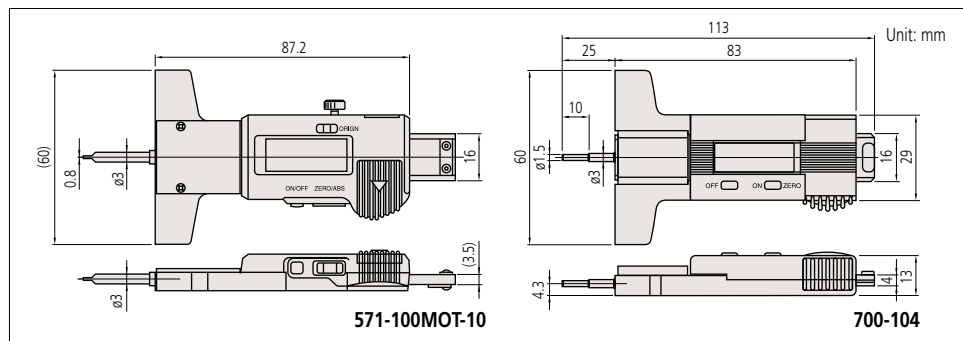
DIMENSIONS



Tire Tread Depth Gage SERIES 700 — with Fine Adjustment

- Specially designed to measure tire tread depth. Plastic construction for lightweight handling.
- Depth can be measured easily just by pressing the spring-loaded plunger into the tread.
- Resolution of 0.1mm makes misreading almost impossible.
- With zero-setting function.

DIMENSIONS



700-104



SPECIFICATIONS

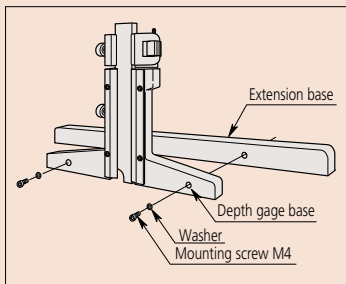
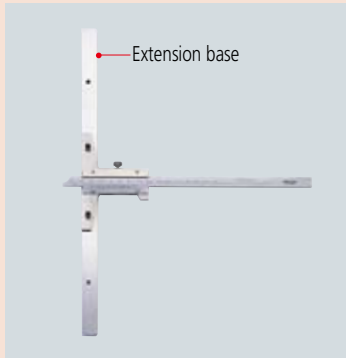
Metric						
Order No.	Range	Resolution	Accuracy*	Battery	Battery life	Maximum response speed
571-100MTO-10	0 - 25mm	0.1mm	±0.02mm	SR44 (1 pc.), 938882	Approx. 2 years under normal use	1600 mm/sec
700-104			±0.2mm			

* Excluding quantizing error

Inch/Metric						
Order No.	Range	Resolution	Accuracy*	Battery	Battery life	Maximum response speed
571-200MTO-10	0 - 1"	.001"/0.1mm	±.0005"	SR44 (1 pc.), 938882	Approx. 2 years under normal use	1600 mm/sec
700-105			±.008"			

* Excluding quantizing error

Example of attaching the extension base



Extension Bases Optional accessory for Depth Gage

- Attaches to the base (reference face) plate of a depth gage to extend its span.
- Refer to the illustrations at left for attachment details.
- These extension bases cannot be attached to 0 - 600mm, 0 - 1000mm, 0-24" and 0-40" range models.



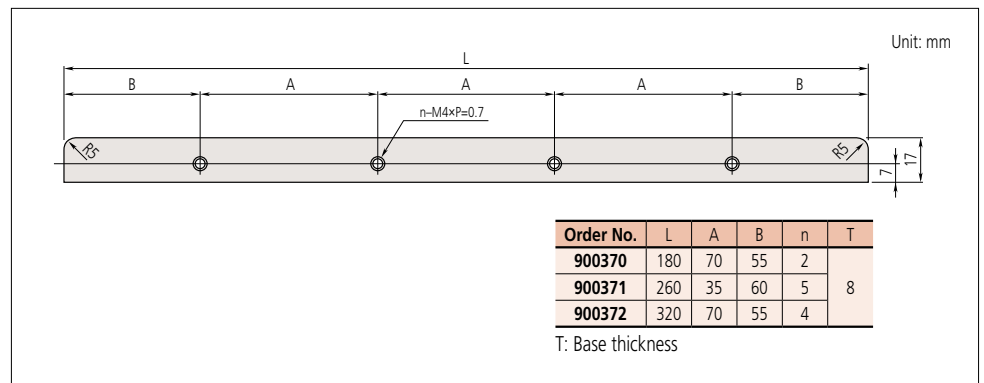
900372

SPECIFICATIONS

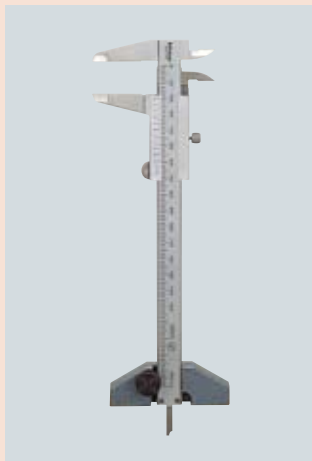
Metric		
Order No.	Size L	n
900370	180mm	2
900371	260mm	5
900372	320mm	4

Inch		
Order No.	Size L	n
900367	7"	2
900368	10"	5
900369	12"	4

DIMENSIONS

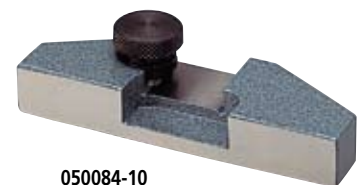


Example of attaching the extension base



Depth Gage Attachment Optional Accessory for Calipers

- Attaching this depth gage attachment to the depth measurement face of the caliper makes depth measurement accurate and secure.

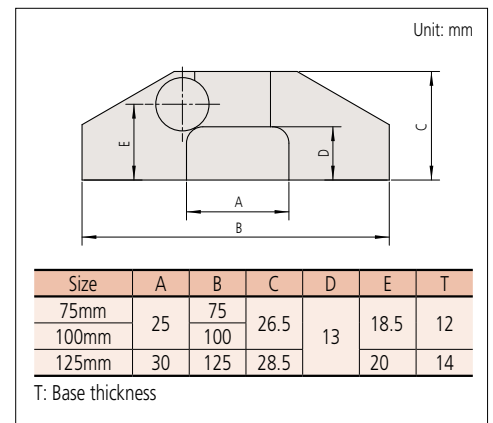


050084-10

SPECIFICATIONS

Metric		
Order No.	Size	Applicable measuring range of caliper
050083-10	75mm	100mm, 150mm, 200mm, 4", 6" and 8"
050084-10	100mm	100mm, 150mm, 200mm, 4", 6" and 8"
050085-10	125mm	300mm and 12"

DIMENSIONS

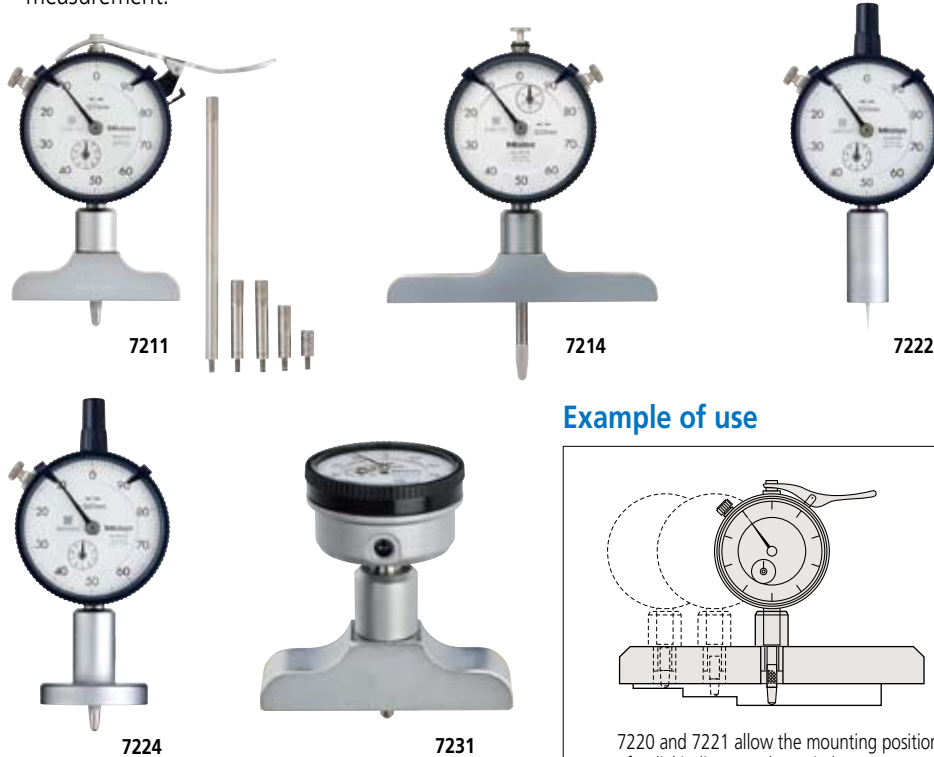


Depth Gage

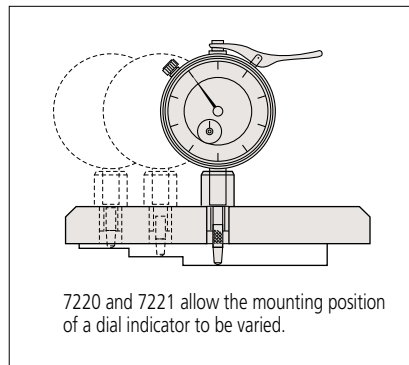
A standard measuring tool of industry

Dial Depth Gage SERIES 7

- Optimal for hole, narrow groove and step measurement.



Example of use



Caution should be used when exchanging the contact point of a depth gage (Dial/Digimatic Indicator)

The measurement range may not be maintained when mounting a differently sized contact point than the standard accessory. Zero-setting will not be possible if the contact-point diameter is too large for the plunger hole in the bottom face 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.

Metric													
Order No.	Range	Graduation	Accuracy	Stroke	Measuring force	Base				Contact point	Extension rod	Indicator (dial indicator)	
						W	T	Flatness	Mounting position of a dial indicator				
7210*	0 - 10mm	0.01mm	±15µm	10mm	1.4N	40mm	16mm	5µm	1	Provided with a needle point (No.137413)	—	2902SB	
7211	0 - 200mm					63.5mm				Provided with a carbide-tipped ball point (No.21JAA224)	5 pcs. (10, 20, 30, 30, 100mm)		
7212						101.6mm				Provided with a carbide-tipped ball point (No.21JAA225)	3 pcs. (30, 60, 90mm)		
7213	0 - 210mm		±30µm	30mm	2.5N	63.5mm	18mm	2	3	Provided with a carbide-tipped ball point (No.21JAA224)	5 pcs. (10, 20, 30, 30, 100mm)	2952SB	
7214						101.6mm				Provided with a carbide-tipped ball point (No.21JAA225)	3 pcs. (30, 60, 90mm)		
7220	0 - 200mm		±15µm	10mm	1.4N	100mm	18mm	5µm	1	1	Provided with a carbide-tipped ball point (No.21JAA224)	5 pcs. (10, 20, 30, 30, 100mm)	2902SB
7221						150mm					Provided with a carbide-tipped ball point (No.21JAA224)	5 pcs. (10, 20, 30, 30, 100mm)	
7222*	0 - 10mm					ø16mm	16mm	5µm	1	1	Provided with a needle point (No.137413)	—	
7223						ø25mm					Provided with a carbide-tipped ball point (No.21JAA224: 17mm)		
7224						ø40mm					Provided with a carbide-tipped ball point (No.21JAA226: 22mm)		
7231	0 - 200mm					5mm	63.5mm	16mm	63.5mm	16mm	5µm	1	

* with needle probe

Inch													
Order No.	Range	Graduation	Accuracy	Stroke	Measuring force	Base				Contact point	Extension rod	Indicator (dial indicator)	
						W	T	Flatness	Mounting position of a dial indicator				
7217S	0 - 8"	.0005"	±.002"	1"	2.5N	63.5mm	16mm	.0002"	1	Carbide ball point (No.21JZA242)	3 pcs. (1", 2", 4")	2904SB	
7218S						101.6mm							
7237				.2"	1.4N	63.5mm				Provided with a carbide-tipped ball point (No.21JZA242: 17.8mm) (No.21JZA243: 22.9mm)	4 pcs. (.5", 1", 2", 4")		
7238						101.6mm							

[illegible]

Metric

Inch/MetricD-70