

# Bore Gages for Blind Holes

New model measures blind-hole diameter with high accuracy and high durability.

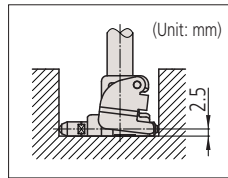


SMALL TOOL INSTRUMENTS AND DATA MANAGEMENT

# Bore Gages for Blind Holes

## FEATURES

- Capable of ID (inside diameter) measurement close to the bottom of a hole.
- Pendulum guide structure improves sliding.
- Carbide contact faces for durability.
- Grip is large and hollow to reduce effect of body heat on high-accuracy measurements.
- Extension rods (optional) can be attached for measuring deep holes.



- A Bore Gage Checker and a range of Setting Rings are available to aid in accurately setting the gage before making a measurement.
- Alternate indicators may be used in place of those recommended\*.

\* Some indicators and protection covers cannot be used with these bore gages. Contact a Mitutoyo sales office if considering the use of Dial or Digimatic indicators other than the recommended models.



511-426



511-427

## SPECIFICATIONS

Order No.	511-415	511-425	511-435	511-416	511-426	511-436	511-417	511-427	511-437
Measuring range	15-35mm			35-60mm			50-150mm		
Indicators (low/high resolution)	—	2046SB	2109SB-10	—	2046SB	2109SB-10	—	2046SB	2109SB-10
Accuracy	Wide-range accuracy			4μm					
	Repeatability			1μm					
	Adjacent error			1μm					
Effective stroke of contact rod				1.2mm					
No. of anvils	11			6			11		
No. of replacement washers	1			4			4		

Order No.	511-418	511-428	511-438	511-419	511-429	511-439	511-420	511-430	511-440
Measuring range	.6"-1.4"			1.4"-2.4"			2"-6"		
Indicators (low/high resolution)	—	2922SB	2923SB-10	—	2922SB	2923SB-10	—	2922SB	2923SB-10
Accuracy	Wide-range accuracy			.00016"					
	Repeatability			.00004"					
	Adjacent error			.00004"					
Effective stroke of contact rod				.047"					
No. of anvils	11			6			11		
No. of replacement washers	1			4			4		

Notes: 1) A 10mm (.4") sub-anvil is supplied with **511-415/425/435/418/428/438** and a 50mm (2") sub-anvil is supplied with **511-417/427/437/420/430/440**.

2) It is not permissible to use a sub-anvil other than the standard accessory, or widen a measuring range by using multiple sub-anvils. (The measurement accuracy in such cases is not guaranteed.)

### Recommended dial indicators

Metric : **2046SB** (0.01mm)  
models **2972TB** (0.01mm - One revolution type)  
**2109SB-10** (0.001mm)  
**2900SB-10** (0.001mm - One-revolution type)

Inch : **2922SB** (.0005")  
models **2977TB** (.0005" - One-revolution type)  
**2923SB-10** (.0001")  
**2910SB-10** (.0001" - One-revolution type)

### Recommended digimatic indicators

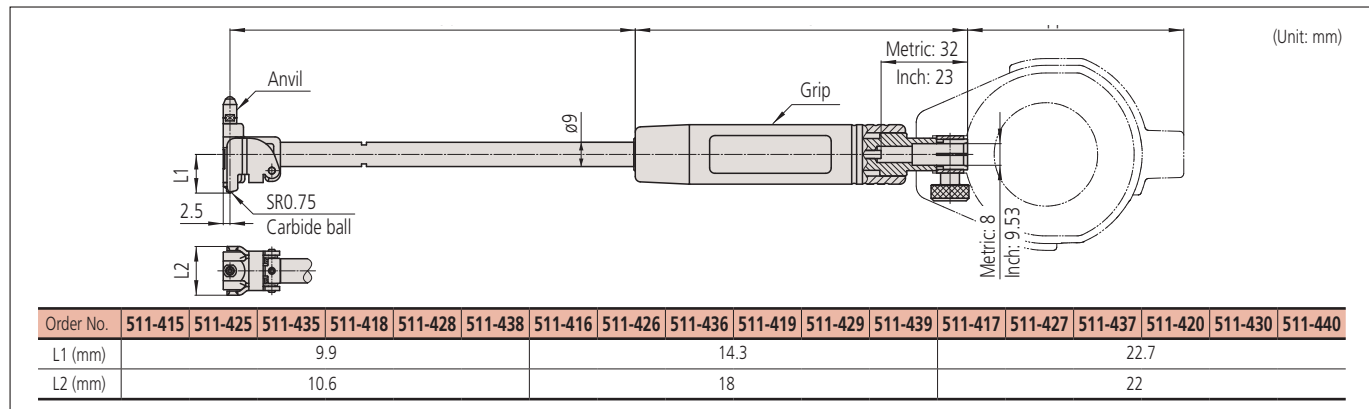
Metric models: **543-310B** (0.001mm)  
Inch models: **543-312B** (0.001mm/.00005")  
Note: Indicators equipped with rubber bellows, such as waterproof types, cannot be used.

## For Bore Gage Applications



543-310B

## DIMENSIONS



# Mitutoyo

**Note:** All information regarding our products, and in particular the illustrations, drawings, dimensional and performance data contained in this printed matter as well as other technical data are to be regarded as approximate average values. We therefore reserve the right to make changes to the corresponding designs. The stated standards, similar technical regulations, descriptions and illustrations of the products were valid at the time of printing. In addition, the latest applicable version of our General Trading Conditions will apply. Only quotations submitted by ourselves may be regarded as definitive. Specifications are subject to change without notice.

Mitutoyo products are subject to US Export Administration Regulations (EAR). Re-export or relocation of our products may require prior approval by an appropriate governing authority.

### Trademarks and Registrations

Designations used by companies to distinguish their products are often claimed as trademarks. In all instances where Mitutoyo America Corporation is aware of a claim, the product names appear in initial capital or all capital letters. The appropriate company should be contacted for more complete trademark

Coordinate Measuring Machines

Vision Measuring Systems

Form Measurement

Optical Measuring

Sensor Systems

Test Equipment  
and Seismometers

Digital Scale and DRO Systems

Small Tool Instruments  
and Data Management