

# Bore Gages

For easy and accurate measurement of inside diameters

## Bore Gages SERIES 511 — for Small Holes

- These gages are designed to measure the diameters of very small holes.
- The indicator (dial indicator, Digimatic indicator) and dial protection cover are optional. Select an indicator from the recommended dial indicators and Digimatic indicators. Please contact us for advice when using an indicator other than the recommended indicators.
- Setting Rings are available to aid in accurately setting a gage before making a measurement. (For details, refer to page C-47)



511-201

Note: The dial indicator and protection cover are optional.

## SPECIFICATIONS

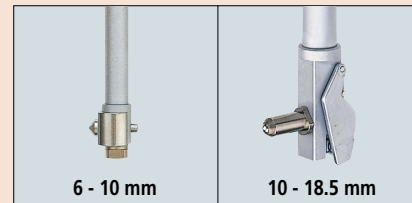
### Metric

Order No.	Range (mm)	Stroke of contact point (mm)	Measuring force (N)	Guide force (N)	Content of set					Probing depth (mm)
					Bore gage	Dial indicator	Dial protection cover	Anvil	Interchangeable Washer	
511-209	6 - 10	0.5	2 or less	—	511-209	Not supplied	Not supplied	9 pcs.	Not supplied	50
511-201	10 - 18.5	0.6		6 or less	511-201				1 pc.	100
511-210-20	6 - 10	0.5	2 or less	—	511-209	2109AB-10 (Graduation: 0.001 mm)	21DZA000	9 pcs.	Not supplied	50
511-203-20	10 - 18.5	0.6		6 or less	511-201				1 pc.	100
511-211-20	6 - 10	0.5	2 or less	—	511-209	2046AB (Graduation: 0.01 mm)	21DZA000	9 pcs.	Not supplied	50
511-204-20	10 - 18.5	0.6		6 or less	511-201				1 pc.	100

### Inch

Order No.	Range (in)	Stroke of contact point (in)	Measuring force (N)	Guide force (N)	Content of set					Probing depth (in)
					Bore gage	Dial indicator	Dial protection cover	Anvil	Interchangeable Washer	
511-214	0.24 - 0.4	0.020	2 or less	—	511-214	Not supplied	Not supplied	9 pcs.	Not supplied	2
511-205	0.4 - 0.74	0.024		6 or less	511-205				1 pc.	4
511-212-20	0.24 - 0.4	0.020	2 or less	—	511-214	2923AB-10 (Graduation: 0.0001 in)	21DZA000	9 pcs.	Not supplied	2
511-206-20	0.4 - 0.74	0.024		6 or less	511-205				1 pc.	4
511-213-20	0.24 - 0.4	0.020	2 or less	—	511-214	2922AB (Graduation: 0.0005 in)	21DZA000	9 pcs.	Not supplied	2
511-207-20	0.4 - 0.74	0.024		6 or less	511-205				1 pc.	4

## Contact Points



## Technical Data

- Accuracy: Metric models: 5  $\mu$ m  
Inch models: 0.0002 in
- Repeatability: Metric models: 2  $\mu$ m  
Inch models: 0.00008 in
- Adjacent error: Metric models: 2  $\mu$ m  
Inch models: 0.00008 in

## Optional Accessories

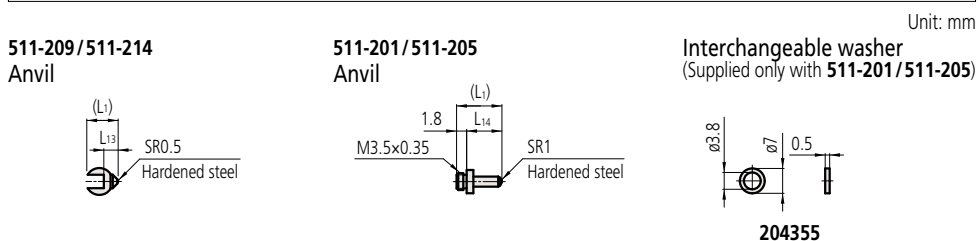
- Dial indicator (See Chapter F)
- Dial protection cover: 21DZA000 (See page C-45)

## Recommended Digimatic Indicators (see Chapter F)

- Metric models: 2046AB (0.01 mm)  
2972AB (0.01 mm - One-revolution type)  
2109AB-10 (0.001 mm)  
2900AB-10 (0.001 mm - One-revolution type)
- Inch models: 2922AB (0.0005 in)  
2977AB (0.0005 in - One-revolution type)  
2923AB-10 (0.0001 in)  
2910AB-10 (0.0001 in - One-revolution type)

## Recommended Digimatic Indicators (see Chapter F)

- Metric models: 543-310B (ID-C112GXB: 0.001 mm)
  - Inch models: 543-312B (ID-C112GEXB: 0.001 mm/0.0005 in)
- Note: Indicators equipped with rubber bellows, such as water-proof types, cannot be used.



Bore gage (Main body)	Anvil					Interchangeable Washer	Spanner
	Marked No.	Order No.	Indication of measuring size	L <sub>1</sub>	L <sub>13</sub>	Order No.	Order No.
511-209 511-214	1	952168	6.0 mm/0.24 in	4.7	1.2	Not supplied	206709
	2	952169	6.5 mm/0.26 in	5.3	1.7		
	3	952170	7.0 mm/0.28 in	5.8	2.2		
	4	952414	7.5 mm/0.30 in	6.3	2.7		
	5	952415	8.0 mm/0.32 in	6.8	3.2		
	6	952416	8.5 mm/0.34 in	7.3	3.7		
	7	952417	9.0 mm/0.36 in	7.8	4.2		
	8	952418	9.5 mm/0.38 in	8.3	4.7		
	9	952419	10.0 mm/0.40 in	8.8	5.2		

Bore gage (Main body)	Anvil					Interchangeable Washer	Spanner
	Marked No.	Order No.	Indication of measuring size	L <sub>1</sub>	L <sub>14</sub>	Order No.	Order No.
511-201 511-205	1	204356	10 mm/0.40 in	3.8	2	204355	204354
	2	204357	11 mm/0.44 in	4.8	3		
	3	204358	12 mm/0.48 in	5.8	4		
	4	204359	13 mm/0.52 in	6.8	5		
	5	204360	14 mm/0.56 in	7.8	6		
	6	204361	15 mm/0.60 in	8.8	7		
	7	204362	16 mm/0.64 in	9.8	8		
	8	204363	17 mm/0.68 in	10.8	9		
	9	204364	18 mm/0.72 in	11.8	10		