

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					100
511-210	6 - 10	0.5	2 or less	—	511-209	2109SB-10 (Graduation: 0.001 mm)	21DZA000	9 pcs.	Not supplied	50
511-203	10 - 18.5	0.6		6 or less	511-201					100
511-211	6 - 10	0.5	2 or less	—	511-209	2046SB (Graduation: 0.01 mm)	21DZA000	9 pcs.	Not supplied	50
511-204	10 - 18.5	0.6		6 or less	511-201					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					4
511-212	0.24 - 0.4	0.020	2 or less	—	511-214	2923SB-10 (Graduation: 0.0001 in)	21DZA000	9 pcs.	Not supplied	2
511-206	0.4 - 0.74	0.024		6 or less	511-205					4
511-213	0.24 - 0.4	0.020	2 or less	—	511-214	2922SB (Graduation: 0.0005 in)	21DZA000	9 pcs.	Not supplied	2
511-207	0.4 - 0.74	0.024		6 or less	511-205					4

Contact Points



Technical Data

- Accuracy: Metric models: 5 μ m
Inch models: 0.0002 in
- Repeatability: Metric models: 2 μ m
Inch models: 0.00008 in
- Adjacent error: Metric models: 2 μ m
Inch models: 0.00008 in

Optional Accessories

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

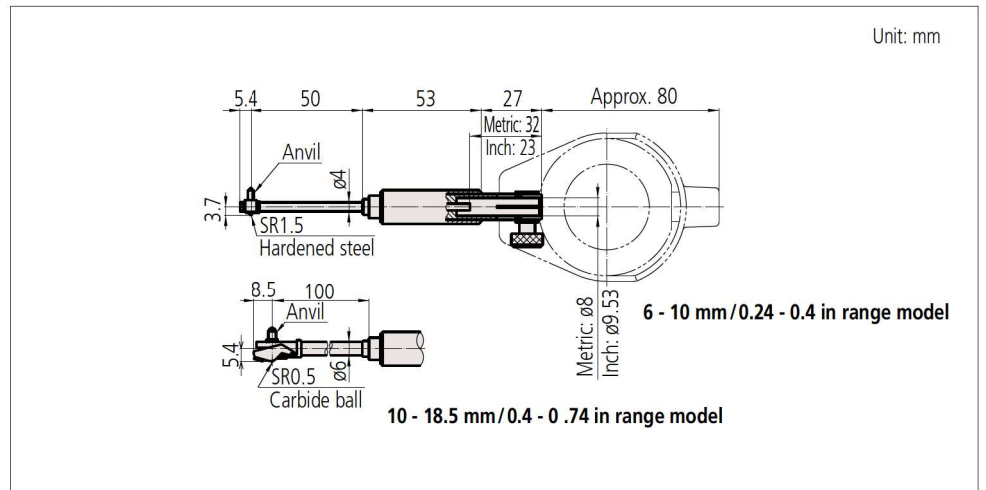
Recommended Digimatic Indicators (see Chapter F)

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

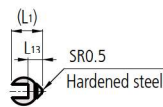
Recommended Digimatic Indicators (see Chapter F)

- Metric models: **543-310B (ID-C112GXB)**: 0.001 mm
 - Inch models: **543-312B (ID-C112GEXB)**: 0.001 mm/0.00005 in
- Note: Indicators equipped with rubber bellows, such as water-proof types, cannot be used.

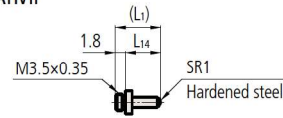
DIMENSIONS



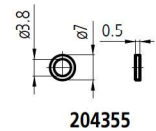
511-209/511-214
Anvil



511-201/511-205
Anvil



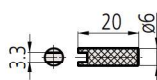
Interchangeable washer
(Supplied only with 511-201/511-205)



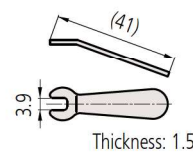
STANDARD ACCESSORIES

Bore gage (Main body)	Anvil					Interchangeable Washer	Spanner
	Marked No.	Order No.	Indication of measuring size	L ₁	L ₁₃	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 ₁	L ₁₄	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		

Spanner
206709



204354



Unit: mm