

Bore Gages

Bore Gages
SERIES 511 — Short Leg Type

- This is a bore gage for measuring 18 to 160 mm inside diameter.
- With a short length below the grip, a lightweight and easy-to-handle body makes it easier to insert the gage in a narrow space or perform measurements on a table.
- Carbide-tipped contact point and anvil for durability and wear resistance.



511-761

Note: The dial indicator and the dial protection cover are optional.
Refer to page 08-52 for details.

SPECIFICATIONS

Metric							
Code No.	Range (mm)	Stroke of contact point (mm)	Accuracy* (μm)	Repeatability* (μm)	Adjacent error* (μm)	Measuring force (N)	Guide force (N)
511-761	18 - 35	1.2	2	0.5	1	4 or less	6 or less
511-762	35 - 60						
511-763	50 - 150	1.6	2	0.5	1	5 or less	10 or less
511-764	100 - 160						
511-771-20	18 - 35	1.2	2	0.5	1	4 or less	6 or less
511-772-20	35 - 60						
511-773-20	50 - 150	1.6	2	0.5	1	5 or less	10 or less
511-774-20	100 - 160						
511-766-20	18 - 35	1.2	2	0.5	1	4 or less	6 or less
511-767-20	35 - 60						
511-768-20	50 - 150	1.6	2	0.5	1	5 or less	10 or less
511-769-20	100 - 160						

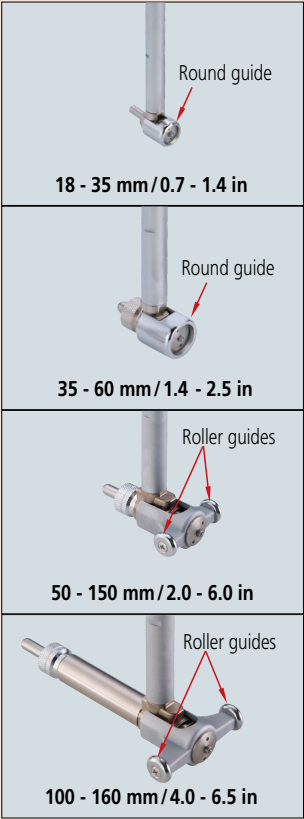
Code No.	Content of set							Probing depth (mm)
	Bore gage	Dial indicator	Dial protection cover	Anvil	Interchangeable Washer	Sub-Anvil	Spanner	
511-761	511-761	Not supplied	Not supplied	9 pcs.	2 pcs.	Not supplied	1 pc.	50
511-762	511-762			6 pcs.				
511-763	511-763			11 pcs.	4 pcs.	1 pc.	Not supplied	
511-764	511-764			13 pcs.		Not supplied		
511-771-20	511-761	2109AB-10 (Graduation: 0.001 mm)	21DZA000	9 pcs.	2 pcs.	Not supplied	1 pc.	50
511-772-20	511-762			6 pcs.				
511-773-20	511-763			11 pcs.	4 pcs.	1 pc.	Not supplied	
511-774-20	511-764			13 pcs.		Not supplied		
511-766-20	511-761	2046AB (Graduation: 0.01 mm)	21DZA000	9 pcs.	2 pcs.	Not supplied	1 pc.	50
511-767-20	511-762			6 pcs.				
511-768-20	511-763			11 pcs.	4 pcs.	1 pc.	Not supplied	
511-769-20	511-764			13 pcs.		Not supplied		

* Accuracy of the bore gage alone.
Note 1: A 50 mm sub-anvil is supplied with 511-763.
Note 2: It is not permissible to use a sub-anvil other than as supplied as a standard accessory, or widen a measuring range by using multiple sub-anvils. (The measurement accuracy in such cases is not guaranteed.)

Measurement example



Contact Points



The dial protection cover, recommended indicators
Refer to page 08-52.

SPECIFICATIONS

Inch										
Code No.	Range (in)	Stroke of contact point (in)	Accuracy* (in)	Repeatability* (in)	Adjacent error* (in)	Measuring force (N)	Guide force (N)			
511-781	0.7 - 1.4	0.047	0.00008	0.00002	0.00004	4 or less	6 or less			
511-782	1.4 - 2.5					5 or less	10 or less			
511-783	2.0 - 6.0									
511-784	4.0 - 6.5	0.063	0.00008	0.00002	0.00004	4 or less	6 or less			
511-791-20	0.7 - 1.4	0.047				5 or less	10 or less			
511-792-20	1.4 - 2.5									
511-793-20	2.0 - 6.0					4 or less	6 or less			
511-794-20	4.0 - 6.5	0.063	0.00008	0.00002	0.00004	4 or less	6 or less			
511-786-20	0.7 - 1.4	0.047				5 or less	10 or less			
511-787-20	1.4 - 2.5									
511-788-20	2.0 - 6.0					4 or less	6 or less			
511-789-20	4.0 - 6.5	0.063				5 or less	10 or less			

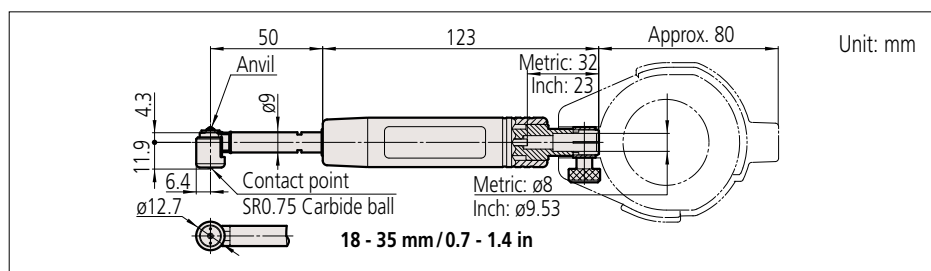
Code No.		Content of set						Probing depth (in)	
		Bore gage	Dial indicator	Dial protection cover	Anvil	Interchangeable Washer	Sub-Anvil		Spanner
511-781	511-781	Not supplied	Not supplied	9 pcs.	2 pcs.	Not supplied	1 pc.	2	
511-782	511-782			6 pcs.	4 pcs.		1 pc.		Not supplied
511-783	511-783			11 pcs.					
511-784	511-784			13 pcs.					
511-791-20	511-781	2923AB-10 (Graduation: 0.0001 in)	21DZA000	9 pcs.	2 pcs.	Not supplied	1 pc.	2	
511-792-20	511-782			6 pcs.	4 pcs.		1 pc.		Not supplied
511-793-20	511-783			11 pcs.					
511-794-20	511-784			13 pcs.					
511-786-20	511-781	2922AB (Graduation: 0.0005 in)	21DZA000	9 pcs.	2 pcs.	Not supplied	1 pc.	2	
511-787-20	511-782			6 pcs.	4 pcs.		1 pc.		Not supplied
511-788-20	511-783			11 pcs.					
511-789-20	511-784			13 pcs.					

* Accuracy of the bore gage alone.

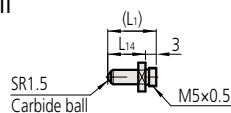
Note 1: A 2" sub-anvil is supplied with 511-783.

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

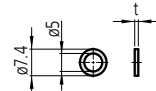
DIMENSIONS



Anvil

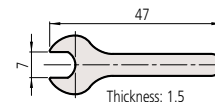


Interchangeable washer



t (mm)	Code No.
0.5	205623
1	205624

Spanner 102148



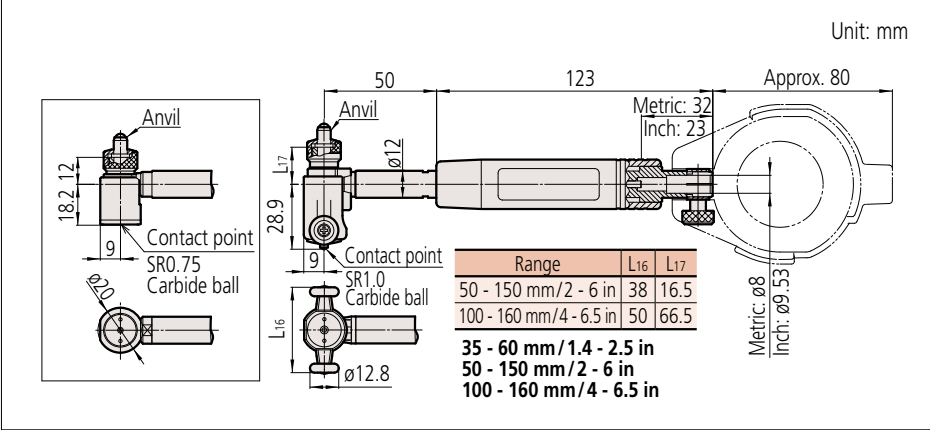
STANDARD ACCESSORIES

Bore gage (Main body)	Anvil				
	Marked No.	Code No.	Indication of measuring size	L1	L14
511-761 511-781	1	21DZA213A	18 mm/0.71 in	5.5 mm/0.22 in	2.5 mm/0.10 in
	2	21DZA213B	20 mm/0.79 in	7.5 mm/0.30 in	4.5 mm/0.18 in
	3	21DZA213C	22 mm/0.87 in	9.5 mm/0.37 in	6.5 mm/0.26 in
	4	21DZA213D	24 mm/0.94 in	11.5 mm/0.45 in	8.5 mm/0.33 in
	5	21DZA213E	26 mm/1.02 in	13.5 mm/0.53 in	10.5 mm/0.41 in
	6	21DZA213F	28 mm/1.10 in	15.5 mm/0.61 in	12.5 mm/0.49 in
	7	21DZA213G	30 mm/1.18 in	17.5 mm/0.69 in	14.5 mm/0.57 in
	8	21DZA213H	32 mm/1.26 in	19.5 mm/0.77 in	16.5 mm/0.65 in
	9	21DZA213J	34 mm/1.34 in	21.5 mm/0.85 in	18.5 mm/0.73 in

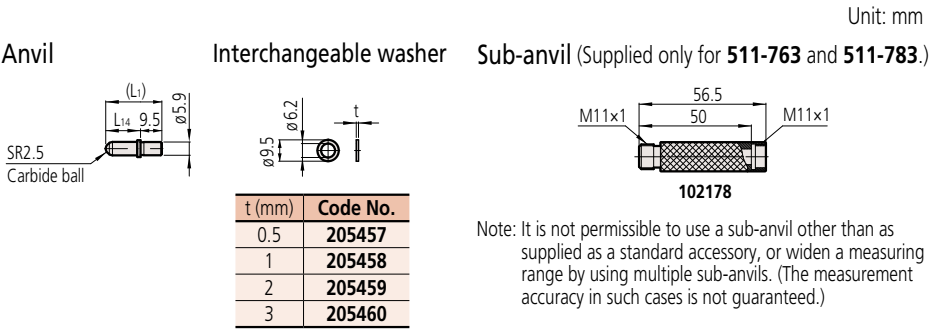
Bore Gages

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DIMENSIONS



Recommended Digimatic Indicators
Refer to page 08-38.



STANDARD ACCESSORIES

Bore gage (Main body)	Anvil				
	Marked No.	Code No.	Indication of measuring size	L1	L14
511-762 511-782	1	21DZA232A	35 mm / 1.38 in	15	5.5
	2	21DZA232B	40 mm / 1.57 in	20	10.5
	3	21DZA232C	45 mm / 1.77 in	25	15.5
	4	21DZA232D	50 mm / 1.97 in	30	20.5
	5	21DZA232E	55 mm / 2.17 in	35	25.5
	6	21DZA232F	60 mm / 2.36 in	40	30.5
511-763 511-783 () Using 50 mm / 2 in Sub-Anvil	1	21DZA232A	50 mm (100 mm) / 1.97 in (3.94 in)	15	5.5
	2	21DZA232B	55 mm (105 mm) / 2.17 in (4.13 in)	20	10.5
	3	21DZA232C	60 mm (110 mm) / 2.36 in (4.33 in)	25	15.5
	4	21DZA232D	65 mm (115 mm) / 2.55 in (4.53 in)	30	20.5
	5	21DZA232E	70 mm (120 mm) / 2.74 in (4.72 in)	35	25.5
	6	21DZA232F	75 mm (125 mm) / 2.93 in (4.92 in)	40	30.5
	7	21DZA232G	80 mm (130 mm) / 3.12 in (5.12 in)	45	35.5
	8	21DZA232H	85 mm (135 mm) / 3.31 in (5.31 in)	50	40.5
	9	21DZA232J	90 mm (140 mm) / 3.50 in (5.51 in)	55	45.5
	10	21DZA232L	95 mm (145 mm) / 3.69 in (5.71 in)	60	50.5
	11	21DZA232M	100 mm (150 mm) / 3.88 in (5.91 in)	65	55.5
511-764 511-784	1	21DZA232A	100 mm / 3.94 in	15	5.5
	2	21DZA232B	105 mm / 4.13 in	20	10.5
	3	21DZA232C	110 mm / 4.33 in	25	15.5
	4	21DZA232D	115 mm / 4.53 in	30	20.5
	5	21DZA232E	120 mm / 4.72 in	35	25.5
	6	21DZA232F	125 mm / 4.92 in	40	30.5
	7	21DZA232G	130 mm / 5.12 in	45	35.5
	8	21DZA232H	135 mm / 5.31 in	50	40.5
	9	21DZA232J	140 mm / 5.51 in	55	45.5
	10	21DZA232L	145 mm / 5.71 in	60	50.5
	11	21DZA232M	150 mm / 5.91 in	65	55.5
	12	21DZA232N	155 mm / 6.10 in	70	60.5
	13	21DZA232P	160 mm / 6.30 in	75	65.5