

Bore Gages SERIES 511 — with Micrometer Head

Measurement example



The dial protection cover, recommended indicators

Refer to page C-50.

- This series includes models for measuring $\varnothing 60$ to 800 mm inside diameters.
- The micrometer head is used for dimensional setting. The dimension can be easily changed without replacing the anvil and washer.
- The contact point has a carbide ball tip that is highly durable and abrasion-resistant.
- The grip minimizes the variation of indicator values affected by heat transfer from the operator's hand.



Note: The dial indicator and the dial protection cover are optional.

511-803

SPECIFICATIONS

Metric							
Order No.	Range (mm)	Stroke of contact point (mm)	Accuracy* (μm)	Repeatability* (μm)	Adjacent error* (μm)	Measuring force (N)	Guide force (N)
511-803	60 - 100	1.6	2	0.5	1	5 or less	10 or less
511-804	100 - 160					6 or less	15 or less
511-805	150 - 250						
511-806	250 - 400						
511-807	400 - 600						
511-808	600 - 800	1.6	2	0.5	1	5 or less	10 or less
511-823-20	60 - 100					6 or less	15 or less
511-824-20	100 - 160						
511-825-20	150 - 250						
511-826-20	250 - 400						
511-827-20	400 - 600	1.6	2	0.5	1	5 or less	10 or less
511-828-20	600 - 800					6 or less	15 or less
511-813-20	60 - 100						
511-814-20	100 - 160						
511-815-20	150 - 250						
511-816-20	250 - 400	6 or less	15 or less				
511-817-20	400 - 600						
511-818-20	600 - 800			20 or less			

Order No.	Bore gage	Dial indicator	Content of set				Probing depth (mm)
			Dial protection cover	Micrometer head	Sub-Anvil	Spanner	
511-803	511-803	Not supplied	Not supplied	1 pc.	2 pcs.	3 pcs.	150
511-804	511-804				3 pcs.	2 pcs.	
511-805	511-805				4 pcs.		
511-806	511-806				3 pcs.		250
511-807	511-807				2 pcs.		
511-808	511-808	2 pcs.					
511-823-20	511-803	2109AB-10 (Graduation: 0.001 mm)	21DZA000	1 pc.	2 pcs.	3 pcs.	150
511-824-20	511-804				3 pcs.	2 pcs.	
511-825-20	511-805				4 pcs.		
511-826-20	511-806				3 pcs.		250
511-827-20	511-807				2 pcs.		
511-828-20	511-808	2 pcs.					
511-813-20	511-803	2046AB (Graduation: 0.01 mm)	21DZA000	1 pc.	2 pcs.	3 pcs.	150
511-814-20	511-804				3 pcs.	2 pcs.	
511-815-20	511-805				4 pcs.		
511-816-20	511-806				3 pcs.		250
511-817-20	511-807				2 pcs.		
511-818-20	511-808	2 pcs.					

* Accuracy of the bore gage alone.

Note 1: Storage boxes for 511-807/808 models are made of wood. The boxes of other models are made of plastic.

Note 2: It is not permissible to expand measuring range using sub-anvils other than as supplied as standard accessories. (The measurement accuracy in such cases is not guaranteed.)

Bore Gages

Bore Gages SERIES 511 — with Micrometer Head

SPECIFICATIONS

Inch							
Order No.	Range (in)	Stroke of contact point (in)	Accuracy* (in)	Repeatability* (in)	Adjacent error* (in)	Measuring force (N)	Guide force (N)
511-833	2.4 - 4.0	0.063	0.00008	0.00002	0.00004	5 or less	10 or less
511-834	4.0 - 6.4						
511-835	6.0 - 10.0						
511-836	10.0 - 16.0						
511-837	16.0 - 24.0						
511-838	24.0 - 32.0	0.063	0.00008	0.00002	0.00004	5 or less	10 or less
511-853-20	2.4 - 4.0						
511-854-20	4.0 - 6.4						
511-855-20	6.0 - 10.0						
511-856-20	10.0 - 16.0						
511-857-20	16.0 - 24.0	0.063	0.00008	0.00002	0.00004	5 or less	10 or less
511-843-20	2.4 - 4.0						
511-844-20	4.0 - 6.4						
511-845-20	6.0 - 10.0						
511-846-20	10.0 - 16.0						
511-847-20	16.0 - 24.0	0.063	0.00008	0.00002	0.00004	5 or less	10 or less
511-848-20	24.0 - 32.0						

Recommended Digimatic Indicators

Refer to page C-36.

Order No.	Content of set						Probing depth (in)
	Bore gage	Dial indicator	Dial protection cover	Micrometer head	Sub-Anvil	Spanner	
511-833	511-833	Not supplied	Not supplied	1 pc.	2 pcs.	3 pcs.	6
511-834	511-834				3 pcs.	2 pcs.	
511-835	511-835				4 pcs.		
511-836	511-836				3 pcs.		
511-837	511-837				2 pcs.	10	
511-838	511-838	2 pcs.					
511-853-20	511-833	2923AB-10 (Graduation: 0.0001 in)	21DZA000	1 pc.	2 pcs.	3 pcs.	4
511-854-20	511-834				3 pcs.		
511-855-20	511-835				4 pcs.		
511-856-20	511-836				3 pcs.	2 pcs.	
511-857-20	511-837				2 pcs.		
511-858-20	511-838	2 pcs.	10				
511-843-20	511-833	2922AB (Graduation: 0.0005 in)		21DZA000	1 pc.	2 pcs.	3 pcs.
511-844-20	511-834		3 pcs.				
511-845-20	511-835		4 pcs.			2 pcs.	
511-846-20	511-836		3 pcs.				
511-847-20	511-837		2 pcs.			10	
511-848-20	511-838	2 pcs.					

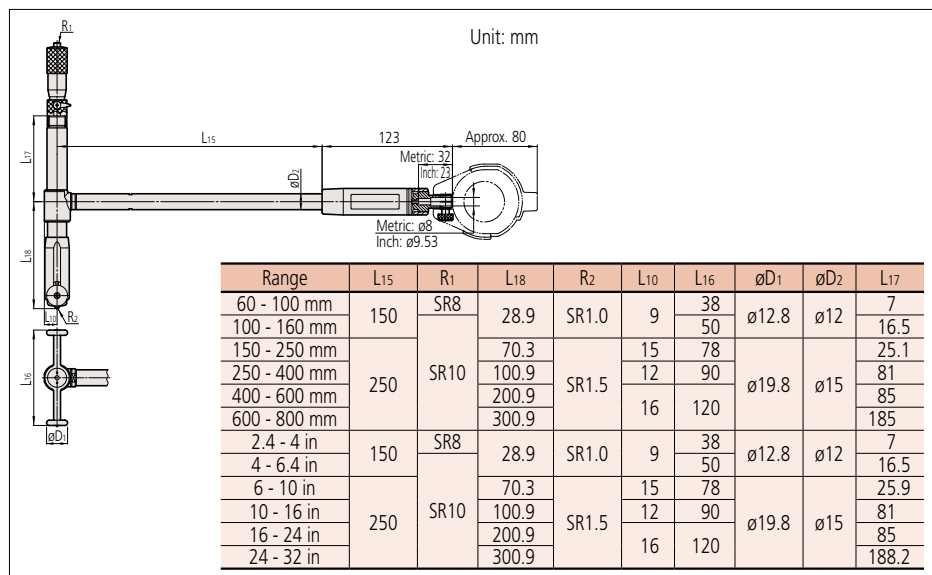
* Accuracy of the bore gage alone.

Note 1: Storage boxes for 511-837/838 models are made of wood. The boxes of other models are made of plastic.

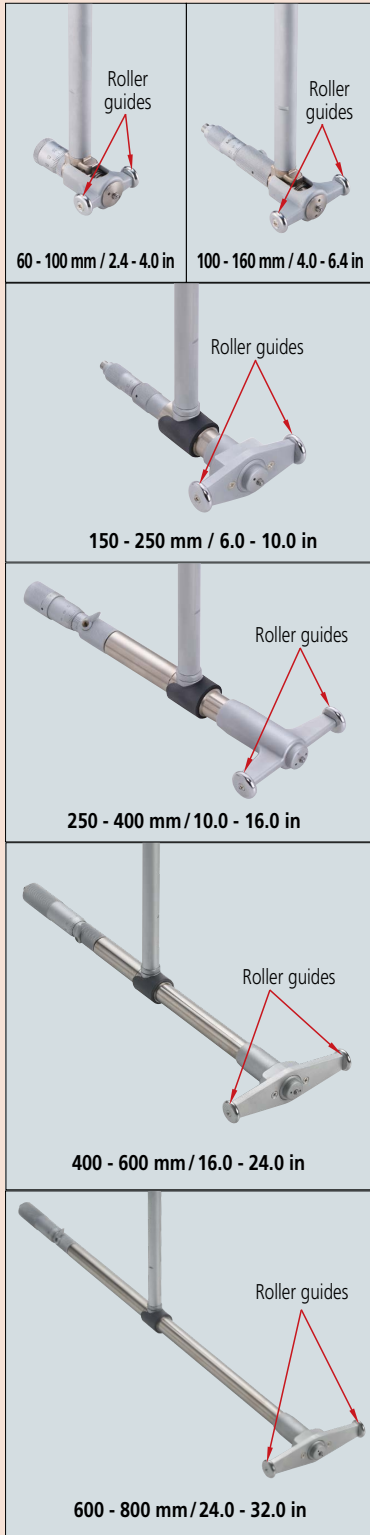
Note 2: It is not permissible to expand measuring range using sub-anvils other than as supplied as standard accessories.

(The measurement accuracy in such cases is not guaranteed.)

DIMENSIONS

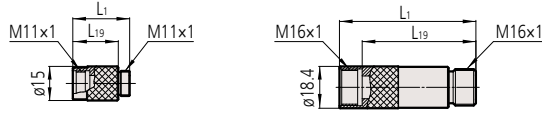


Contact Points



Sub-anvil

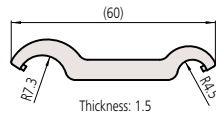
Unit: mm



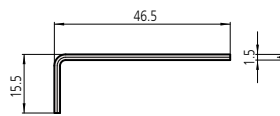
Note: It is not permissible to use a sub-anvil other than as supplied as a standard accessory, or widen a measuring range by using multiple sub-anvils. (The measurement accuracy in such cases is not guaranteed.)

Spanner

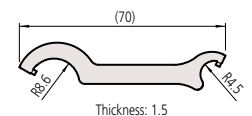
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200154



STANDARD ACCESSORIES

Metric								
Bore gage (Main body)	Micrometer head			Sub-Anvil				Spanner
	Order No.	Stroke (mm)	Screw size	Marked No. (mm)	Order No.	L ₁ (mm)	L ₁₉ (mm)	Order No.
511-803	21DZA267	10	M11×1	10	208892	15	10	301336 (2 pcs.) 202863 (1 pc.)
				20	208894	25	20	
511-804	21DZA268	13	M11×1	10	208892	15	10	301336 (2 pcs.)
				20	208894 (2 pcs.)	25	20	
511-805	21DZA268	13	M11×1	10	208892	15	10	301336 (2 pcs.)
				20	208894 (2 pcs.)	25	20	
				50	21DAA492	55	50	
511-806	953118	25	M16×1	25	208926	35	25	200154 (2 pcs.)
				50	208928 (2 pcs.)	60	50	
511-807	953120	50	M16×1	50	208928	60	50	200154 (2 pcs.)
				100	208932	110	100	
511-808	953120	50	M16×1	50	208928	60	50	200154 (2 pcs.)
				100	208932	110	100	

Inch								
Bore gage (Main body)	Micrometer head			Sub-Anvil				Spanner
	Order No.	Stroke (in)	Screw size	Marked No. (in)	Order No.	L ₁ (in)	L ₁₉ (in)	Order No.
511-833	21DZA272	0.4	M11×1	0.4	208893	0.6	0.4	301336 (2 pcs.) 202863 (1 pc.)
				0.8	208895	1.0	0.8	
511-834	21DZA273	0.5	M11×1	0.4	208893	0.6	0.4	301336 (2 pcs.)
				0.8	208895 (2 pcs.)	1.0	0.8	
511-835	21DZA273	0.5	M11×1	0.4	208893	0.6	0.4	301336 (2 pcs.)
				0.8	208895 (2 pcs.)	1.0	0.8	
				2	21DAA493	2.2	2	
511-836	21DZA275	1.0	M16×1	1	208927	1.4	1	200154 (2 pcs.)
				2	208929 (2 pcs.)	2.4	2	
511-837	902313	2.0	M16×1	2	208929	2.4	2	200154 (2 pcs.)
				4	208933	4.4	4	
511-838	902313	2.0	M16×1	2	208929	2.4	2	200154 (2 pcs.)
				4	208933	4.4	4	