



Measurement example



103-913-40

- Range: 0 - 150 mm (6 pcs./set)
- Models included: **103-137, 103-138, 103-139, 103-140, 103-141, 103-142,** 5 micrometer standards



103-914-40

- Range: 0 - 300 mm (12 pcs./set)
- Models included: **103-137, 103-138, 103-139, 103-140, 103-141, 103-142, 103-143, 103-144, 103-145, 103-146, 103-147, 103-148** 11 micrometer standards



103-915

- Range: 150 - 300 mm (6 pcs./set)
- Models included: **103-143, 103-144, 103-145, 103-146, 103-147, 103-148,** 6 micrometer standards

103-927-10

- Range: 0 - 75 mm (3 pcs./set)
- Models included: **103-137, 103-138, 103-139-10**

103-913-50

- Range: 50 - 150 mm (6 pcs./set)
- Models included: **103-137, 103-138, 103-139-10, 103-140-10, 103-141-10, 103-142-10**

103-914-50

- Range: 50 - 300 mm (12 pcs./set)
- Models included: **103-137, 103-138, 103-139-10, 103-140-10, 103-141-10, 103-142-10, 103-143-10, 103-144-10, 103-145-10, 103-146-10, 103-147-10, 103-148-10**

103-915-10

- Range: 150 - 300 mm (6 pcs./set)
- Models included: **103-143-10, 103-144-10, 103-145-10, 103-146-10, 103-147-10, 103-148-10**

Outside Micrometers SERIES 103

- This is a simple, classic analog micrometer that represents the roots of our company's foundation.

- Measuring faces: Carbide tipped
- Equipped with Ratchet Stop for constant measuring force.



Metric	With ratchet stop					
Code No.	Range (mm)	Measuring force (N)	Graduation (mm)	MPE*1 (μm)	Flatness (μm)	Parallelism (μm)
103-129	0 - 25	5 - 10	0.001	±2	0.6	2
103-130	25 - 50					0.01
103-139-10	50 - 75		±4	4		
103-140-10	75 - 100			±5		
103-141-10	100 - 125		±6			
103-142-10	125 - 150			±7		
103-143-10	150 - 175		±8			
103-144-10	175 - 200			±9		
103-145-10	200 - 225		±10			
103-146-10	225 - 250			±11		11
103-147-10	250 - 275	±12	12			
103-148-10	275 - 300		10 - 15	0.01	±6	1
103-149	300 - 325	±7				
103-150	325 - 350			±8	7	
103-151	350 - 375	±9			8	
103-152	375 - 400			±10	9	
103-153	400 - 425	±11			10	
103-154	425 - 450			±12	11	
103-155	450 - 475	±13			12	
103-156	475 - 500			±14	13	
103-157	500 - 525	±15			14	
103-158	525 - 550		±16	15		
103-159	550 - 575	±17		16		
103-160	575 - 600		±18	17		
103-161	600 - 625	±19		18		
103-162	625 - 650		±20	19		
103-163	650 - 675	±21		20		
103-164	675 - 700		±22	21		
103-165	700 - 725	±23		22		
103-166	725 - 750		±24	23		
103-167	750 - 775	±25		24		
103-168	775 - 800		±26	25		
103-169	800 - 825	±27		26		
103-170	825 - 850		±28	27		
103-171	850 - 875	±29		28		
103-172	875 - 900		±30	29		
103-173	900 - 925	±31		30		
103-174	925 - 950		±32	31		
103-175	950 - 975	±33		32		
103-176	975 - 1000		±34	33		
		±35		34		
			±36	35		
		±37		36		
			±38	37		
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			±48	47		
		±49		48		
			±50	49		
		±51		50		
			±52	51		
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		±103		102		
			±104	103		
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			±106	105		
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			±138	137		
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		±359		358		
			±360	359		
		±361				

Metric	With ratchet stop					
Code No.	Range (mm)	Measuring force (N)	Graduation (mm)	MPE*1 *2 (μm)	Flatness (μm)	Parallelism (μm)
103-137	0 - 25	5 - 10	0.01	±2	0.6	2
103-138	25 - 50		0.001			±3
103-255	50 - 75					
103-256	75 - 100					
103-257	100 - 125					
103-258	125 - 150					

- Standard accessories: Setting standard, 1 pc. (except for measuring range 0 to 25 mm (0 to 1 in) models), Spanner (**301336**), 1 pc. (for maximum measuring range up to 300 mm (12 in)), Spanner (**200154**), 1 pc. (for maximum measuring range 325 mm (13 in) or over)

*1 MPE: Maximum permissible error of the indication measured by contacting the full measuring face with the object to be measured. J_{MPE} is a term specified by JIS B 7502: 2016 which has been prepared based on ISO 3611: 2010 with some modifications of the technical contents. The measurement method has not been changed from JIS B 7502: 1994. For details refer to page 13-10.

*2 Maximum permissible error of the indication measured by contacting the full measuring face with the object to be measured. J_{MPE} is a term specified by JIS B 7502: 2016 which has been prepared based on ISO 3611: 2010 with some modifications of the technical contents. The measurement method has not been changed from JIS B 7502: 1994. For details refer to page 13-10.