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					
103-139-10	50 - 75					
103-140-10	75 - 100		0.01	±3		3
103-141-10	100 - 125					
103-142-10	125 - 150					
103-143-10	150 - 175			±4		4
103-144-10	175 - 200					
103-145-10	200 - 225					
103-146-10	225 - 250			±5		
103-147-10	250 - 275					
103-148-10	275 - 300					5
103-149	300 - 325	10 - 15		±6	1	
103-150	325 - 350					
103-151	350 - 375					
103-152	375 - 400			±7		6
103-153	400 - 425					
103-154	425 - 450					
103-155	450 - 475			±8		7
103-156	475 - 500					
103-157	500 - 525					
103-158	525 - 550			±9		
103-159	550 - 575					
103-160	575 - 600					8
103-161	600 - 625			±10		
103-162	625 - 650					
103-163	650 - 675					
103-164	675 - 700			±11		9
103-165	700 - 725					
103-166	725 - 750					
103-167	750 - 775			±12		10
103-168	775 - 800					
103-169	800 - 825					
103-170	825 - 850			±13		
103-171	850 - 875					
103-172	875 - 900					11
103-173	900 - 925			±14		
103-174	925 - 950					
103-175	950 - 975					
103-176	975 - 1000			±15		12

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					
103-255	50 - 75		0.001	±3		3
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 /JIS

Inch With ratchet stop

Code No.	Range (in)	Measuring force (N)	Graduation (in)	MPE*1 (in)	Flatness (in)	Parallelism (in)
103-177	0 - 1	5 - 10	0.001	±0.0001	0.000024	0.00008
103-131			0.0001			
103-178	1 - 2		0.001			
103-132			0.0001			
103-179	2 - 3		0.001			
103-180	3 - 4			±0.00015		0.00012
103-181	4 - 5					
103-182	5 - 6					
103-183	6 - 7			±0.0002		0.00016
103-184	7 - 8					
103-185	8 - 9					
103-186	9 - 10			±0.00025		
103-187	10 - 11					
103-188	11 - 12					0.0002
103-189	12 - 13	10 - 15		±0.0003	0.00004	
103-190	13 - 14					
103-191	14 - 15					
103-192	15 - 16			±0.00035		0.00024
103-193	16 - 17					
103-194	17 - 18					
103-195	18 - 19			±0.0004		0.00028
103-196	19 - 20					
103-197	20 - 21					
103-198	21 - 22			±0.00045		
103-199	22 - 23					
103-200	23 - 24			±0.0005		0.00032
103-201	24 - 25					
103-202	25 - 26					
103-203	26 - 27					
103-204	27 - 28			±0.00055		0.00036
103-205	28 - 29					
103-206	29 - 30					
103-207	30 - 31			±0.0006		0.0004
103-208	31 - 32					
103-209	32 - 33					
103-210	33 - 34			±0.00065		
103-211	34 - 35					
103-212	35 - 36			±0.0007		0.00044
103-213	36 - 37					
103-214	37 - 38					
103-215	38 - 39					
103-216	39 - 40			±0.00075		0.00048
103-259	0 - 1			±0.0001		0.00008
103-217	2 - 3					