

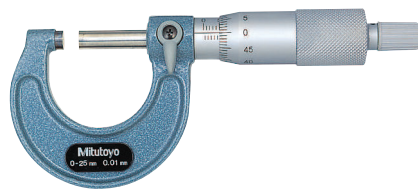
# Analog Outside Micrometers Metric

## Series 103

Lightweight workshop design with baked-enamel-finished frame.

- Equipped with Ratchet Stop for constant measuring force.

Only for 0-25 and 25-50 mm



103-137



103-139-10

### Metric

Graduation 0,001 mm is obtained with vernier on sleeve

No.	Range [mm]	Max. Permissible Error J MPE	Flatness	Parallelism	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	d [mm]	Mass [g]
103-129	0-25	±2 μm	0,6 μm	2 μm	5-10	30,3	2,8	9	28	6,35	175
103-130	25-50	±2 μm	0,6 μm	2 μm	5-10	55,3	2,8	10	38	6,35	215

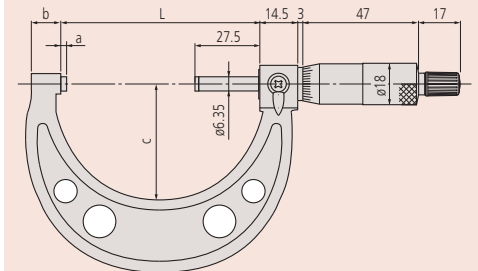
### Metric

Graduation 0,01 mm

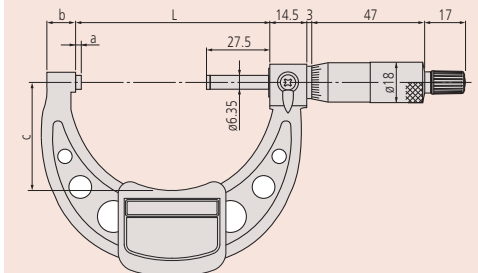
No.	Range [mm]	Max. Permissible Error J MPE	Flatness	Parallelism	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	d [mm]	Mass [g]
103-137	0-25	±2 μm	0,6 μm	2 μm	5-10	30,3	2,8	9	28	6,35	175
103-138	25-50	±2 μm	0,6 μm	2 μm	5-10	55,3	2,8	10	38	6,35	215
103-139-10	50-75	±2 μm	0,6 μm	2 μm	5-10	80,3	2,8	12	46	6,35	315
103-140-10	75-100	±3 μm	0,6 μm	3 μm	5-10	105,3	2,8	14	57	6,35	375
103-141-10	100-125	±3 μm	0,6 μm	3 μm	5-10	132,8	5,3	17	76	6,35	515
103-142-10	125-150	±3 μm	0,6 μm	3 μm	5-10	158,2	5,7	19	90	6,35	665
103-143-10	150-175	±4 μm	0,6 μm	3 μm	5-10	183,6	6,1	20	102	6,35	720
103-144-10	175-200	±4 μm	0,6 μm	4 μm	5-10	208,8	6,3	19	115	6,35	920
103-145-10	200-225	±4 μm	0,6 μm	4 μm	5-10	234,2	6,7	18	127	6,35	1080
103-146-10	225-250	±5 μm	0,6 μm	4 μm	5-10	258	5,5	18	139	6,35	1255
103-147-10	250-275	±5 μm	0,6 μm	4 μm	5-10	284	6,5	18	152	6,35	1405
103-148-10	275-300	±5 μm	0,6 μm	5 μm	5-10	309	6,5	18	166	6,35	1565
103-149	300-325	±6 μm	1 μm	5 μm	10-15	353	18	28	187	8	1985
103-150	325-350	±6 μm	1 μm	5 μm	10-15	378	18	28	199	8	2155
103-151	350-375	±6 μm	1 μm	5 μm	10-15	403	18	28	212	8	2305
103-152	375-400	±7 μm	1 μm	6 μm	10-15	428	18	28	224	8	2455
103-153	400-425	±7 μm	1 μm	6 μm	10-15	453	18	28	236	8	2715
103-154	425-450	±7 μm	1 μm	6 μm	10-15	478	18	28	248	8	2965
103-155	450-475	±8 μm	1 μm	6 μm	10-15	503	18	28	261	8	3215
103-156	475-500	±8 μm	1 μm	7 μm	10-15	528	18	28	273	8	3450
103-157	500-525	±9 μm	1 μm	7 μm	10-15	575	40	28	307	8	4060
103-158	525-550	±9 μm	1 μm	7 μm	10-15	575	15	28	307	8	4080
103-159	550-575	±9 μm	1 μm	7 μm	10-15	625	40	28	332	8	4500
103-160	575-600	±9 μm	1 μm	8 μm	10-15	625	15	28	332	8	4525
103-161	600-625	±9 μm	1 μm	8 μm	10-15	675	40	28	355	8	4915
103-162	625-650	±9 μm	1 μm	8 μm	10-15	675	15	28	355	8	4930
103-163	650-675	±9 μm	1 μm	8 μm	10-15	725	40	28	382	8	5200
103-164	675-700	±9 μm	1 μm	9 μm	10-15	725	15	28	382	8	5215
103-165	700-725	±9 μm	1 μm	9 μm	10-15	775	40	28	405	8	5835
103-166	725-750	±9 μm	1 μm	9 μm	10-15	775	15	28	405	8	5860
103-167	750-775	±9 μm	1 μm	9 μm	10-15	825	40	28	430	8	6385
103-168	775-800	±9 μm	1 μm	10 μm	10-15	825	15	28	430	8	6410
103-169	800-825	±9 μm	1 μm	10 μm	10-15	875	40	28	455	8	6925
103-170	825-850	±9 μm	1 μm	10 μm	10-15	875	15	28	455	8	6940
103-171	850-875	±9 μm	1 μm	10 μm	10-15	925	40	28	480	8	7565
103-172	875-900	±9 μm	1 μm	11 μm	10-15	925	15	28	480	8	7590
103-173	900-925	±9 μm	1 μm	11 μm	10-15	975	40	28	505	8	8215
103-174	925-950	±9 μm	1 μm	11 μm	10-15	975	15	28	505	8	8240
103-175	950-975	±9 μm	1 μm	11 μm	10-15	1025	40	28	530	8	8860
103-176	975-1000	±9 μm	1 μm	12 μm	10-15	1025	15	28	530	8	8880

## Specifications

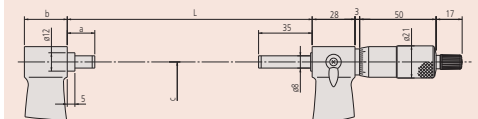
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm (21 mm models >300 mm)
Delivered	Including box, key, setting standard (from 25 mm upward), certificate of inspection (0-50 mm range)



Models up to 50 mm



Models 50 mm to 300 mm with insulating plate



Models over 300 mm