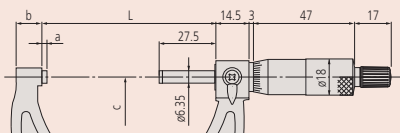
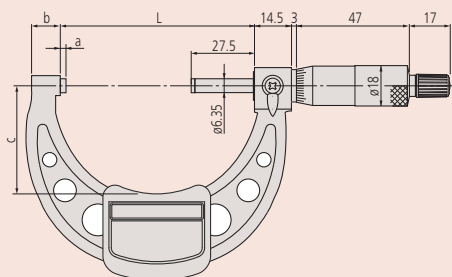


Specifications

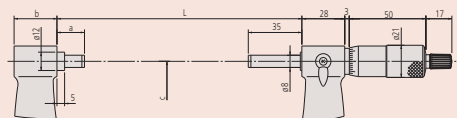
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish $\varnothing 18$ mm (21 mm models >300 mm)
Delivered	Including box, key, setting standard (from 25 mm upward), certificate of inspection (0-50 mm range)



Models up to 50 mm



Models 50 mm to 300 mm with insulating plate



Models over 300 mm

Analog Outside Micrometers Metric

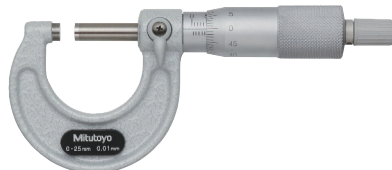
Series 103

Lightweight workshop design with baked-enamel-finished frame.

- Equipped with Ratchet Stop for constant measuring force.



Only for 0-25, 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 E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
103-129	0-25	$\pm 2 \mu\text{m}$	$2 \mu\text{m}$	Class 2	5-10	30,3	2,8	9	28	175
103-130	25-50	$\pm 2 \mu\text{m}$	$2 \mu\text{m}$	Class 2	5-10	55,3	2,8	10	38	215

Metric

Graduation 0.01 mm

No.	Range [mm]	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
103-137	0-25	$\pm 2 \mu\text{m}$	$2 \mu\text{m}$	Class 2	5-10	30,3	2,8	9	28	175
103-138	25-50	$\pm 2 \mu\text{m}$	$2 \mu\text{m}$	Class 2	5-10	55,3	2,8	10	38	215
103-139-10	50-75	$\pm 2 \mu\text{m}$	$2 \mu\text{m}$	Class 1	5-10	80,3	2,8	12	46	315
103-140-10	75-100	$\pm 3 \mu\text{m}$	$3 \mu\text{m}$	Class 2	5-10	105,3	2,8	14	57	375
103-141-10	100-125	$\pm 3 \mu\text{m}$	$3 \mu\text{m}$	Class 2	5-10	132,8	5,3	17	76	515
103-142-10	125-150	$\pm 3 \mu\text{m}$	$3 \mu\text{m}$	Class 2	5-10	158,2	5,7	19	90	665
103-143-10	150-175	$\pm 4 \mu\text{m}$	$3 \mu\text{m}$	Class 2	5-10	183,6	6,1	20	102	720
103-144-10	175-200	$\pm 4 \mu\text{m}$	$4 \mu\text{m}$	Class 2	5-10	208,8	6,3	19	115	920
103-145-10	200-225	$\pm 4 \mu\text{m}$	$4 \mu\text{m}$	Class 2	5-10	234,2	6,7	18	127	1080
103-146-10	225-250	$\pm 5 \mu\text{m}$	$4 \mu\text{m}$	Class 2	5-10	258	5,5	18	139	1255
103-147-10	250-275	$\pm 5 \mu\text{m}$	$4 \mu\text{m}$	Class 2	5-10	284	6,5	18	152	1405
103-148-10	275-300	$\pm 5 \mu\text{m}$	$5 \mu\text{m}$	Class 2	5-10	309	6,5	18	166	1565
103-149	300-325	$\pm 6 \mu\text{m}$	$5 \mu\text{m}$	Class 2	10-15	353	18	28	187	1985
103-150	325-350	$\pm 6 \mu\text{m}$	$5 \mu\text{m}$	Class 2	10-15	378	18	28	199	2155
103-151	350-375	$\pm 6 \mu\text{m}$	$5 \mu\text{m}$	Class 2	10-15	403	18	28	212	2305
103-152	375-400	$\pm 7 \mu\text{m}$	$6 \mu\text{m}$	Class 2	10-15	428	18	28	224	2455
103-153	400-425	$\pm 7 \mu\text{m}$	$6 \mu\text{m}$	Class 2	10-15	453	18	28	236	2715
103-154	425-450	$\pm 7 \mu\text{m}$	$6 \mu\text{m}$	Class 2	10-15	478	18	28	248	2965
103-155	450-475	$\pm 8 \mu\text{m}$	$6 \mu\text{m}$	Class 2	10-15	503	18	28	261	3215
103-156	475-500	$\pm 8 \mu\text{m}$	$7 \mu\text{m}$	Class 2	10-15	528	18	28	273	3450