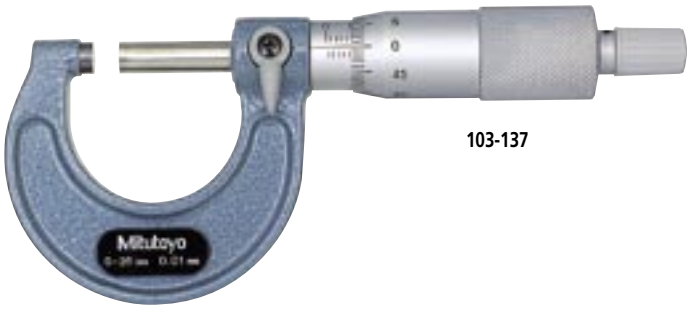
Outside Micrometers

SERIES 103

FEATURES

- Hammertone-green, baked-enamel-finished frame.
- Ratchet Stop or Friction Thimble for exact repetitive readings.
- With a standard except for 25mm model.



103-137

Mitutoyo guarantees the product quality. PROPRIETARY INSPECTION CERTIFICATE Mitutoyo guarantees the product quality.

(Refer to the page 9 for details.)

Technical Data

Accuracy: Refer to the list of specifications.
Graduation: 0.01mm, 0.001mm, .001" or .0001"
Flatness: 0.6µm for models up to 300mm
1µm for models over 300mm
Parallelism: (2+R/100)µm, R = max. range (mm)
*fraction rounded down
Measuring faces: Carbide tipped

SPECIFICATIONS

Metric With ratchet stop

Range	Order No.	Accuracy
0 - 25mm	**103-137**	±2µm
	103-129*	±2µm
25 - 50mm	**103-138**	±2µm
	103-130*	±2µm
50 - 75mm	**103-139-10**	±2µm
75 - 100mm	**103-140-10**	±3µm
100 - 125mm	**103-141-10**	±3µm
125 - 150mm	**103-142-10**	±3µm
150 - 175mm	**103-143-10**	±4µm
175 - 200mm	**103-144-10**	±4µm
200 - 225mm	**103-145-10**	±4µm
225 - 250mm	**103-146-10**	±5µm
250 - 275mm	**103-147-10**	±5µm
275 - 300mm	**103-148-10**	±5µm
300 - 325mm	**103-149**	±6µm
325 - 350mm	**103-150**	±6µm
350 - 375mm	**103-151**	±6µm
375 - 400mm	**103-152**	±7µm
400 - 425mm	**103-153**	±7µm
425 - 450mm	**103-154**	±7µm
450 - 475mm	**103-155**	±8µm
475 - 500mm	**103-156**	±8µm
(Models with a range up to 1000mm are available.)		

*0.001mm reading is obtained with vernier.

Inch With ratchet stop

Range	Order No.	Accuracy
0 - 1"	**103-177**	±.0001"
	103-131*	±.0001"
1" - 2"	**103-178**	±.0001"
	103-132*	±.0001"
2" - 3"	**103-179**	±.0001"
3" - 4"	**103-180**	±.00015"
4" - 5"	**103-181**	±.00015"
5" - 6"	**103-182**	±.00015"
6" - 7"	**103-183**	±.0002"
7" - 8"	**103-184**	±.0002"
8" - 9"	**103-185**	±.0002"
9" - 10"	**103-186**	±.00025"
10" - 11"	**103-187**	±.00025"
11" - 12"	**103-188**	±.00025"
12" - 13"	**103-189**	±.0003"
13" - 14"	**103-190**	±.0003"
14" - 15"	**103-191**	±.0003"
15" - 16"	**103-192**	±.00035"
16" - 17"	**103-193**	±.00035"
17" - 18"	**103-194**	±.00035"
18" - 19"	**103-195**	±.0004"
19" - 20"	**103-196**	±.0004"
(Models with a range up to 40" are available.)		

*.0001" reading is obtained with vernier.

Metric With friction thimble

Range	Order No.	Accuracy
0 - 25mm	**103-125**	±2µm
	103-133*	±2µm
25 - 50mm	**103-126**	±2µm

*0.001mm reading is obtained with vernier.

Inch With friction thimble

Range	Order No.	Accuracy
0 - 1"	**103-127**	±.0001"
	103-135	±.0001"
1" - 2"	**103-128**	±.0001"
	103-136	±.0001"

*.0001" reading is obtained with vernier.

Metric Micrometer set

Range	Order No.	Assortment of micrometers
0 - 75mm (3 pcs./set)	**103-927-10**	**103-137, 103-138, 103-139-10,** 2 micrometer standards
0 - 150mm (6 pcs./set)	**103-913-31**	**102-701*, 103-138, 103-139-10, 103-140-10, 103-141-10, 103-142-10,** 5 micrometer standards
150 - 300mm (6 pcs./set)	**103-915-10**	**103-143-10, 103-144-10, 103-145-10, 103-146-10, 103-147-10, 103-148-10,** 6 micrometer standards
0 - 300mm (12 pcs./set)	**103-914-31**	All micrometers of **103-913-31** and **103-915-10** in one set, 11 micrometer standards

*Ratchet thimble micrometer

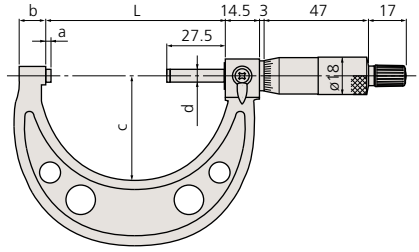
Inch Micrometer set

Range	Order No.	Assortment of micrometers
0 - 3" (3 pcs./set)	**103-929**	**103-177, 103-178, 103-179,** 2 micrometer standards
0 - 4" (4 pcs./set)	**103-930**	**103-177, 103-178, 103-179, 103-180,** 3 micrometer standards
0 - 6" (6 pcs./set)	**103-904-01**	**101-711*, 101-106, 103-179, 103-180, 103-181, 103-182,** 5 micrometer standards
6" - 12" (6 pcs./set)	**103-906**	**103-183, 103-184, 103-185, 103-186, 103-187, 103-188,** 6 micrometer standards
0 - 12" (12 pcs./set)	**103-905-01**	All micrometers of **103-904-01** and **103-906** in one set, 11 micrometer standards

*Ratchet thimble micrometer

DIMENSION AND MASS

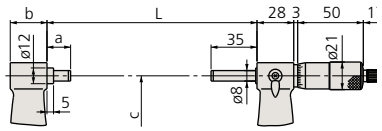
Models up to 300mm



Range	L	a	b	c	d
0 - 25mm	30.3	2.8	9	28	ø6.35
25 - 50mm	55.3	2.8	10	38	ø6.35
50 - 75mm	80.3	2.8	12	49	ø6.35
75 - 100mm	105.3	2.8	14	60	ø6.35
100 - 125mm	132.8	5.3	17	79	ø6.35
125 - 150mm	158.2	5.7	19	94	ø6.35
150 - 175mm	183.6	6.1	20	106	ø6.35
175 - 200mm	208.8	6.3	19	118	ø6.35
200 - 225mm	234.2	6.7	18	130	ø6.35

Models over 300mm

Unit: mm



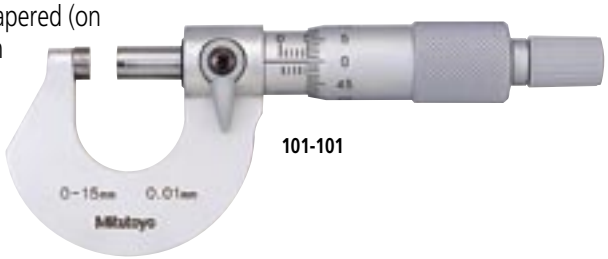
Range	L	a	b	c	d
225 - 250mm	258	5.5	18	143	ø6.35
250 - 275mm	284	6.5	18	156	ø6.35
275 - 300mm	309	6.5	18	169	ø6.35
300 - 325mm	353	18	28	187	ø8
325 - 350mm	378	18	28	199	ø8
350 - 375mm	403	18	28	212	ø8
375 - 400mm	428	18	28	224	ø8
400 - 425mm	453	18	28	236	ø8
425 - 450mm	478	18	28	248	ø8
450 - 475mm	503	18	28	261	ø8
475 - 500mm	528	18	28	273	ø8

Outside Micrometers

SERIES 101

FEATURES

- Satin-chrome-finished frame, tapered (on the anvil side) for hard-to-reach places.
- With a standard except for .5"/1" models.



101-101

SPECIFICATIONS

Metric With ratchet stop

Range	Order No.	Accuracy
0 - 15mm	**101-101**	±2µm
	101-227*	±2µm

*0.001mm reading is obtained with vernier.

Inch With ratchet stop

Range	Order No.	Accuracy
0 - 1"	**101-105**	±.0001"
	101-113*	±.0001"
1" - 2"	**101-106**	±.0001"
	101-114*	±.0001"
2" - 3"	**101-119***	±.0001"
3" - 4"	**101-120***	±.00015"

*.0001" reading is obtained with vernier.

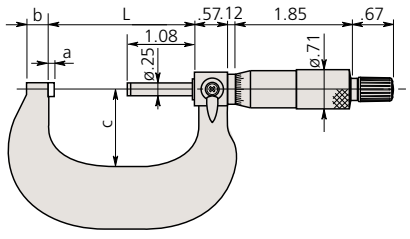
Inch With friction thimble

Range	Order No.	Accuracy
0 - 1"	**101-109**	±.0001"
	101-117*	±.0001"
1" - 2"	**101-110**	±.0001"
	101-118*	±.0001"

*.0001" reading is obtained with vernier.

DIMENSION

Unit: inch

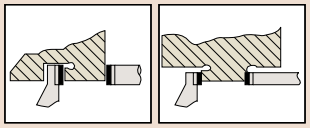


Range	L	a	b	c
0 - 1"	1.18	.10	.20	1.10
1 - 2"	2.16	.08	.31	1.28
2 - 3"	3.19	.11	.33	1.77
3 - 4"	4.19	.11	.33	2.28

Note: The shape of the thimble changes on the model with friction thimble.

Technical Data

Accuracy: Refer to the list of specifications.
Graduation: 0.01mm, 0.001mm, .001" or .0001"
Flatness: 0.6µm
Parallelism: 1.3µm (.00005") for models up to 15mm
.00008" for models up to 3"
.00012" for models over 3"
Measuring faces: Carbide tipped



Mitutoyo