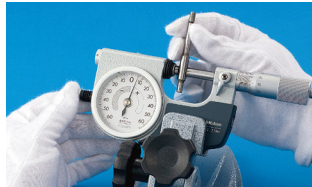
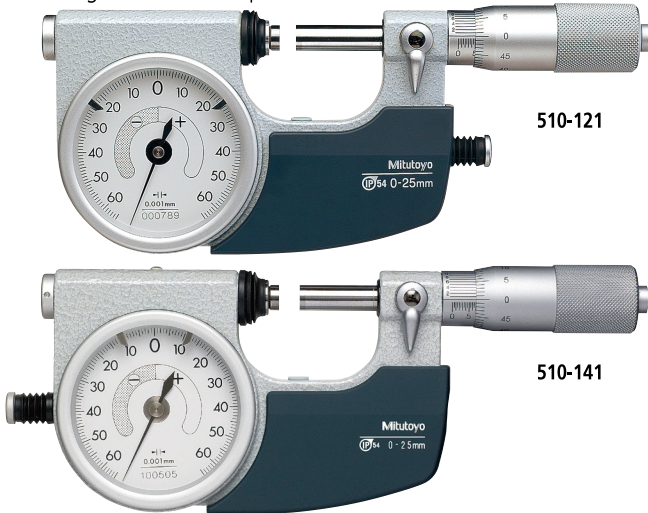


Micrometer

The origin of Mitutoyo's trustworthy brand of small tool instruments

Indicating Micrometers SERIES 510

- Suited to the measurement of low-volume manufactured parts.
- Easy to use when operating one-handed due to retractable anvil.
- In the 25 mm measuring range, the model lineup offers a choice of left or right positioning of the anvil-retraction button.
- Greatly improved accuracy: indication error and graduation of 1 μm .
- Water-proof to protection level IP54.
- Hard-coated crystal: enhanced oil and scratch resistance.
- Indicator scale is large and easy to read.
- The zero position and adjustable limit markers, for GO/ \pm NG testing, are easily set.
- Measuring faces: Carbide.

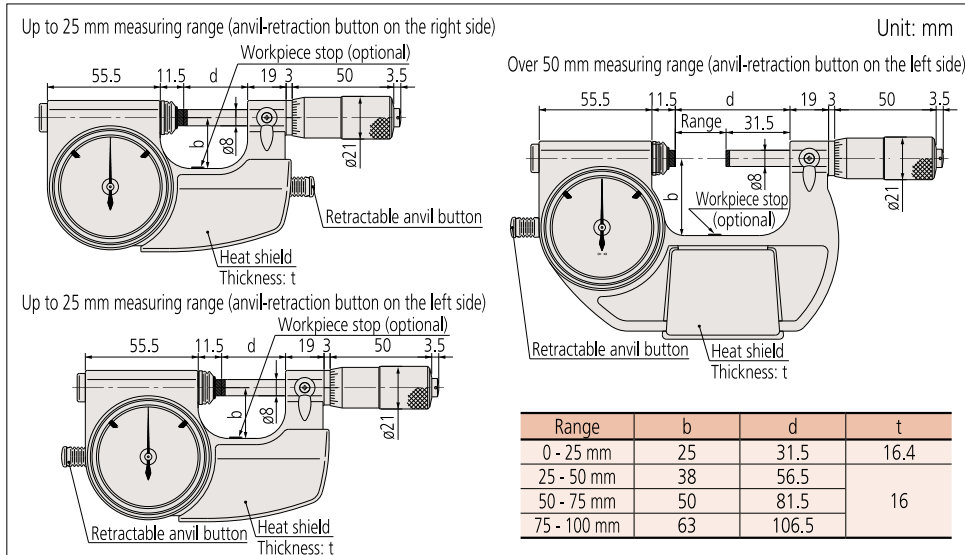


SPECIFICATIONS

Metric							
Order No.	Range	Indicating range	Graduation	Dial graduation	Measuring force	Anvil retraction button	Mass
510-121	0 - 25 mm	± 0.06 mm	0.001 mm	0.001 mm	5 - 10 N	Right side	520 g
510-141						Left side	530 g
510-122	25 - 50 mm					670 g	
510-123	50 - 75 mm					820 g	
510-124	75 - 100 mm	970 g					

Inch							
Order No.	Range	Indicating range	Graduation	Dial graduation	Measuring force	Anvil retraction button	Mass
510-131	0 - 1 in	± 0.0023 in	0.0001 in	0.00005 in	5 - 10 N	Right side	520 g
510-151						Left side	530 g
510-132	1 - 2 in					670 g	
510-133	2 - 3 in					820 g	
510-134	3 - 4 in	970 g					

DIMENSIONS



(Refer to page X for details.)

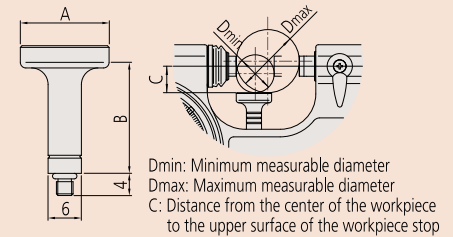
Technical Data

Flatness: 0.3 μm / 0.000012 in
 Parallelism: 0.6 μm / 0.000024 in for models up to 50 mm / 2 in
 1 μm / 0.00004 in for models over 50 mm / 2 in
 Accuracy: ± 2 μm / ± 0.0001 in
 Spindle feed error: 3 μm / 0.00015 in
 Dispersion of indication: 0.4 μm / 0.00002 in
 Dial indication accuracy: 1 μm / 0.00005 in
 Standard accessories: Reference bar, 1 pc (except for measuring range 0-25 mm (0-1 in) models)
 Spanner (200154), 1 pc

Workpiece Stop (optional)

Produces more stable measurement.
 Three types are available to suit workpieces of different sizes.

Range	Unit: mm	
	A	B
Workpiece stop A 04ZA124	$\phi 16$	23
Workpiece stop B 04ZA125	$\phi 14$	20.5
Workpiece stop C 04ZA126	$\phi 14$	15



Order No	Unit: mm		
	Dmin	Dmax	C
Workpiece stop A	N/A	N/A	N/A
Workpiece stop B	4	16	5.0
Workpiece stop C	15	25	10.5

510-122 and 510-132	Unit: mm		
	Dmin	Dmax	C
Workpiece stop A	25	37	15.5
Workpiece stop B	30	42	18.0
Workpiece stop C	41	50	23.5

510-123 and 510-133	Unit: mm		
	Dmin	Dmax	C
Workpiece stop A	50	61	27.5
Workpiece stop B	54	66	30.0
Workpiece stop C	65	75	35.5

510-124 and 510-134	Unit: mm		
	Dmin	Dmax	C
Workpiece stop A	75	87	40.5
Workpiece stop B	80	92	43.0
Workpiece stop C	91	100	48.2



(Refer to page X for details.)

Technical Data

Indicator

- Indicating range: ± 0.06 mm/ ± 0.0023 in
- Repeatability of indication: $0.4 \mu\text{m}/0.00002$ in
- Dial indication accuracy: $1 \mu\text{m}/0.00005$ in
- Flatness: $0.3 \mu\text{m}/0.000012$ in
- Parallelism: $0.6 \mu\text{m}/0.000024$ in for models up to 50 mm/2 in measuring range
- $1 \mu\text{m}/0.00004$ in for models over 50 mm/2 in measuring range



Dial Snap Meters SERIES 523

- Suited for the measurement of mass-produced parts.
- Designed for measurement using a stand: produces stable measurement.
- Greatly improved accuracy: indication error and graduation of $1 \mu\text{m}$.
- Water-proof to protection level IP54.
- Hard-coated crystal: enhanced oil and scratch resistance.
- Indicator scale is large and easy to read.
- Easily settable adjustable limit markers for GO/ \pm NG testing.
- Equipped with an elevating workpiece stop as standard.
- Measuring faces: Carbide.



523-121

SPECIFICATIONS

Metric				
Order No.	Range	Dial graduation	Measuring force	Mass
523-121	0 - 25 mm	0.001 mm	5 - 10 N	740 g
523-122	25 - 50 mm			840 g
523-123	50 - 75 mm			950 g
523-124	75 - 100 mm			1080 g
Inch				
Order No.	Range	Dial graduation	Measuring force	Mass
523-131	0 - 1 in	0.00005 in	5 - 10 N	740 g
523-132	1 - 2 in			840 g
523-133	2 - 3 in			950 g
523-134	3 - 4 in			1080 g

DIMENSIONS

Unit: mm

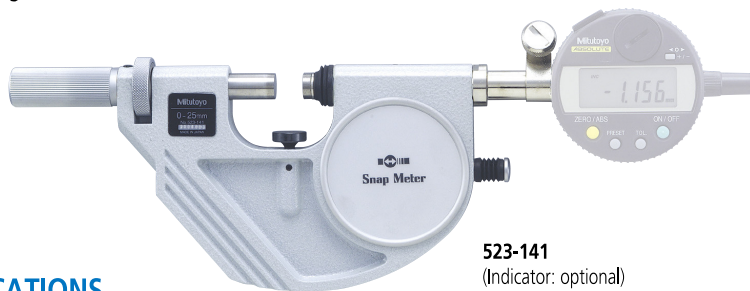
Range	b	d
0 - 25 mm	25	31
25 - 50 mm	35	56
50 - 75 mm	47	81
75 - 100 mm	60	106

Micrometer

The origin of Mitutoyo's trustworthy brand of small tool instruments

Snap Meters SERIES 523

- Suited for the measurement of mass-produced parts.
- Various types of indicator can be selected according to the measurement application.
- Measuring faces: Carbide.



523-141
(Indicator: optional)

SPECIFICATIONS

Metric

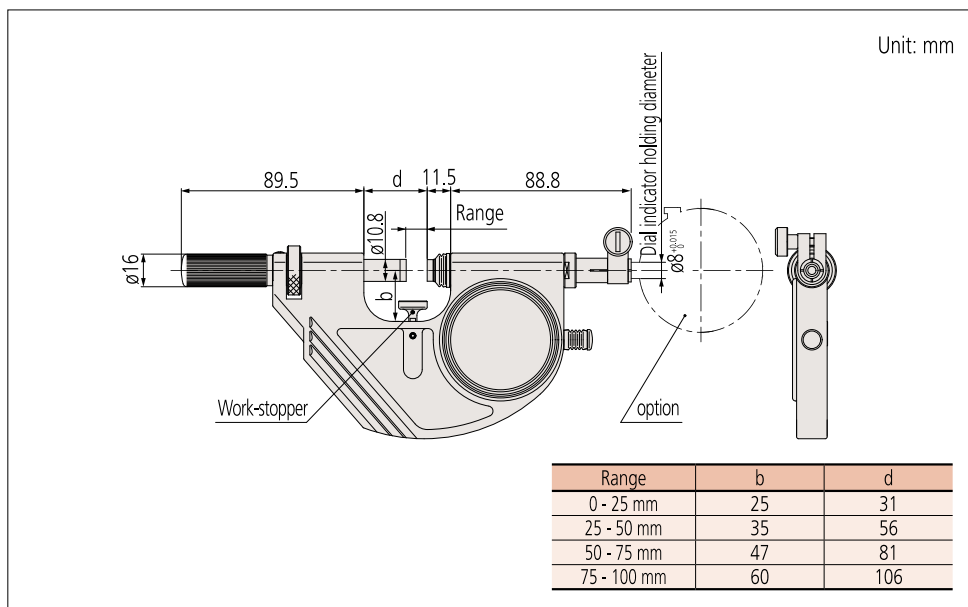
Order No.	Range	Anvil movement	Measuring force*	Mass
523-141	0 - 25 mm	2 mm	5 - 10 N	710 g
523-142	25 - 50 mm			810 g
523-143	50 - 75 mm			920 g
523-144	75 - 100 mm			1050 g

Inch

Order No.	Range	Anvil movement	Measuring force*	Mass
523-151	0 - 1 in	0.078 in	5 - 10 N	710 g
523-152	1 - 2 in			810 g
523-153	2 - 3 in			920 g
523-154	3 - 4 in			1050 g

* Measured at the position where the anvil is retracted by 1mm from the free position without installing the indicator.

DIMENSIONS



Accuracy

Flatness: 0.3 $\mu\text{m}/0.000012$ in
 Parallelism: 0.6 $\mu\text{m}/0.000024$ in for models up to 50 mm/2 in
 1 $\mu\text{m}/0.00004$ in for models over 50 mm/2 in
 Repeatability of indication: 0.4 $\mu\text{m}/0.00002$ in

Typical Indicators Used with Gage

ID-C (0.001 mm)/ **543-390B**
 LGF-L (0.001 mm)/ **542-181** & Counter **542-015**



ABS Digimatic Indicator



Linear Gage and counter