

Micrometer

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

Disk Micrometers SERIES 323, 223, 123

MeasurLink¹ ENABLED
Data Management Software by Mitutoyo

- Measures "root tangent length" of spur gears and helical gears.
- Determination of the root tangent length: refer to "Quick Guide to Precision Measuring Instruments" on page B-72.

- Equipped with Ratchet Stop for constant measuring force.
- Supplied with a setting standard (except for 0 to 25 mm/0 to 1 in measuring range).



123-101



323-250-30



123-103

SPECIFICATIONS

Metric					
Order No.	Range (mm)	Resolution (mm)	Maximum permissible error J _{MPE} (μm)	Anvil dia. (mm)	Measurable module
Digimatic (LCD)					
323-250-30	0 - 25	0.001	±4	ø20	0.5 - 6
323-251-30	25 - 50				
323-252-30	50 - 75		±6		
323-253-30	75 - 100				

Metric					
Order No.	Range (mm)	Graduation (mm)	Maximum permissible error J _{MPE} (μm)	Anvil dia. (mm)	Measurable module
Mechanical counter model					
223-101	0 - 25	0.01	±4	ø20	0.5 - 6
223-102	25 - 50				
Analog					
123-101	0 - 25	0.01	±4	ø20	0.5 - 6
123-113*					
123-102	25 - 50				
123-114*					
123-103	50 - 75		±6		
123-115*					
123-104	75 - 100				
123-116*					
123-105	100 - 125		±7	ø30	0.7 - 11
123-106	125 - 150				
123-107	150 - 175				
123-108	175 - 200				
123-109	200 - 225	±8			
123-110	225 - 250				
123-111	250 - 275		±9		
123-112	275 - 300				

* The measuring disks have carbide tips.

Note 1: For functional details of **series 323**, refer to page B-8.

Optional connecting cable is available only for water-proof type (Digimatic model).

Note 2: Root tangent length measurement is not available for some types of gears.

Inch / Metric					
Order No.	Range (in)	Resolution	Maximum permissible error J_{MPE} (in)	Anvil dia. (in)	Measurable module
Digimatic (LCD)					
323-350-30	0 - 1	0.00005 in/ 0.001 mm	±0.0002	0.787	0.5 - 6
323-351-30	1 - 2				
323-352-30	2 - 3		±0.0003		
323-353-30	3 - 4				

Inch					
Order No.	Range (in)	Graduation (in)	Maximum permissible error J_{MPE} (in)	Anvil dia. (in)	Measurable module
Mechanical counter model					
223-125	0 - 1	0.001	±0.0002	0.787	0.5 - 6
Analog					
123-125	0 - 1	0.001	±0.0002	0.787	0.5 - 6
123-126	1 - 2				
123-127	2 - 3		±0.0003		
123-128	3 - 4				

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Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).



These marks indicate that a product has successfully passed IP65-level testing, which is carried out by the independent German certification organization TÜV Rheinland.



IP Codes (series 323)

Level 6: Dust-proof.

No ingress of dust allowed.

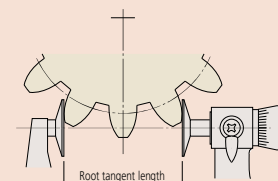
Level 5: Protected against water jets.

Water projected in jets against the enclosure from any direction shall have no harmful effects.

Technical Data

- Flatness:
 - Measuring range 0 to 100: 1 μm
 - Measuring range 100 to 300: 1.6 μm
- Parallelism:
 - Measuring range 0 to 50: 4 μm
 - Measuring range 50 to 100: 6 μm
 - Measuring range 100 to 150: 7 μm
 - Measuring range 150 to 225: 8 μm
 - Measuring range 225 to 300: 9 μm

Root Tangent Length of Gear (En)



Technical Data

- Battery for **series 323**
SR44 (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 2.4 years under normal use (for **series 323**)
- Length standard: Electromagnetic rotary sensor (for **series 323**)
- Standard accessories: Reference bar, 1 pc. (except for measuring range 0 to 25 mm (0 to 1 in) models)
Spanner (**301336**), 1 pc.

Optional Accessories for Series 323

- Connecting cables
 - 1 m: **05CZA662**
 - 2 m: **05CZA663**
- USB Input Tool Direct
USB-ITN-B (2 m): **06AFM380B**
- U-WAVE-T** dedicated connection cable
160 mm: **02AZD790B**
For foot switch: **02AZE140B**
Refer to page A-27 for details.

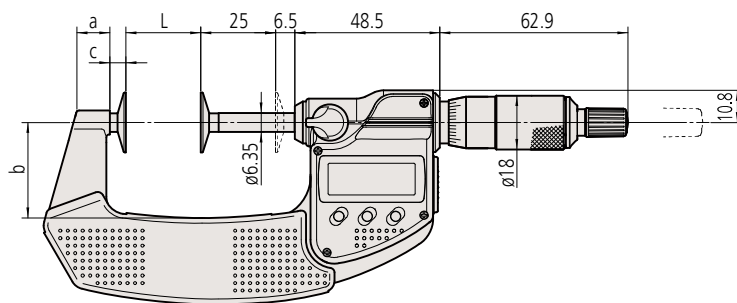
Wireless Data Output **U-WAVE fit**

- U-WAVE-TM 264-622** (IP67 type)
264-623 (Buzzer type)
- U-WAVE-TMB** Transmitter
Mitutoyo Bluetooth® U-WAVE
264-626 (IP type)
264-627 (Buzzer type)
Refer to page A-16 for details.
- Connecting unit for **U-WAVE-TM/TMB**
02AZF310 (IP67/buzzer type common specification)
Refer to pages A-16 and A-18 for details.

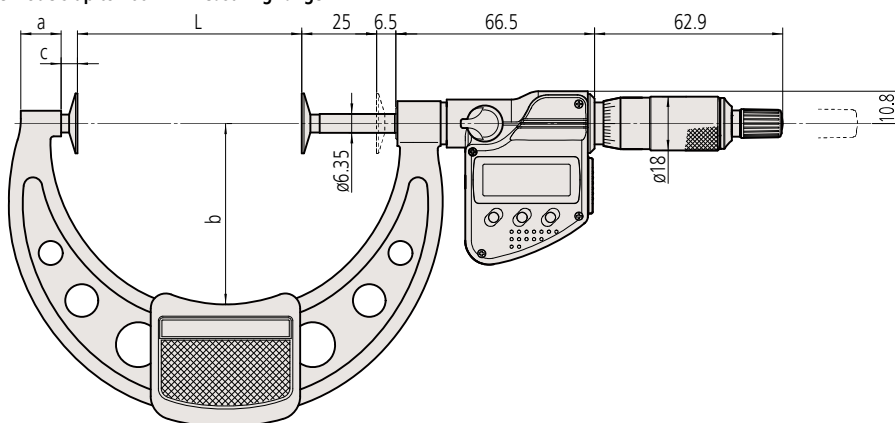
DIMENSIONS

Digimatic models up to 75 mm measuring range

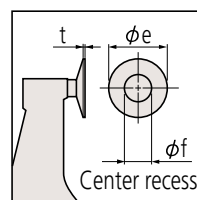
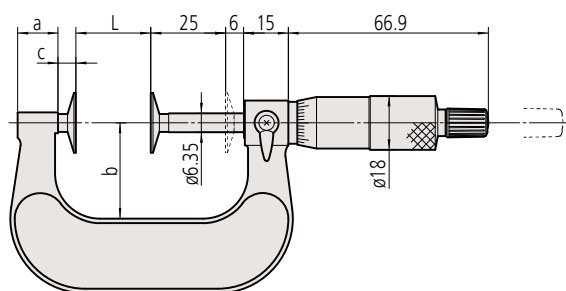
Unit: mm



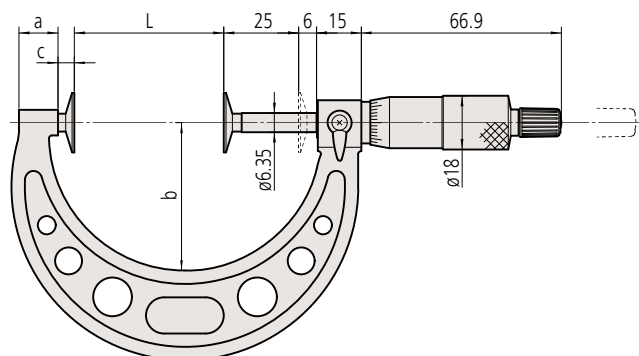
Digimatic models up to 100 mm measuring range



Analog models up to 50 mm measuring range



Analog over 50 mm measuring range



Range (mm)	L	a	b	c	e	f	t
Digimatic (LCD)							
0 - 25	0	9.2	25	4.5	20	8	0.7
25 - 50	25	11	31	5.4			
50 - 75	50	12.2	50	5.5			
75 - 100	75	14	60				
Analog							
0 - 25	0	13.8	25	5.7	20	8 (9.8)	0.7 (0.7)
25 - 50	25		32				
50 - 75	50	12	49	5.5			
75 - 100	75	14	63				
100 - 125	100	12	79	6	30	12	1
125 - 150	125	14.5	94				
150 - 175	150	15.2	106				
175 - 200	175	14.5	118				
200 - 225	200	13.5	130				
225 - 250	225		143				
250 - 275	250	14.5	156				
275 - 300	275		169				

Note: Data in () applies to those with carbide-faced disks.