

Inside Micrometers

For easy and accurate measurement of inside size and diameter

Tubular Inside Micrometers SERIES 137, 337 — Extension Rod Type

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

- Wide range of inside measurements possible by combining extension rods and anvils with the micrometer head.
- Two types of measuring faces are available; with or without carbide tip. (Order No. 337-101/301/302/102/303/304 only available with carbide tip)
- The sleeve is rotated to adjust the reference point adjustment when setting to a length standard.
- An inside length standard is required for accurately setting the micrometer.
- Order No. 337-101/301/302/102/303/304 features:
 - IP65 (water-proof) protection level that enables use in the presence of cutting fluid.
 - A large-character LCD display.
 - Storage of 2 preset values for use when setting to an inside length standard.
 - A function lock that prevents accidental changing of the reference setting during measurement.



SPECIFICATIONS

Metric						
Order No.	Range (mm)	Resolution (mm)	Micrometer head stroke (mm)	Qty	Extension rods Size (mm)	Display unit (mm)
Digimatic (LCD)						
337-101	200 - 225	0.001	25	—	—	200 - 225
337-301	200 - 1000			6	25, 50, 100 (2 pcs.), 200, 300	
337-302	200 - 1500			7	25, 50, 100, 200, 300 (3 pcs.)	

Metric						
Order No.	Range (mm)	Graduation (mm)	Micrometer head stroke (mm)	Qty	Extension rods Size (mm)	Main unit (mm)
Analog						
137-201	50 - 150	0.01	13	3	13, 25, 50	50 - 63
137-202	50 - 300			5	13, 25, 50 (2 pcs.), 100	
137-203	50 - 500			6	13, 25, 50 (2 pcs.), 100, 200	
137-204	50 - 1000			8	13, 25, 50 (2 pcs.), 100, 200 (2 pcs.), 300	
137-205	50 - 1500			10	13, 25, 50 (2 pcs.), 100, 200 (3 pcs.), 300 (2 pcs.)	
Analog (With carbide measuring face)						
137-206	50 - 150	0.01	13	3	13, 25, 50	50 - 63
137-207	50 - 300			5	13, 25, 50 (2 pcs.), 100	
137-208	50 - 500			6	13, 25, 50 (2 pcs.), 100, 200	
137-209	50 - 1000			8	13, 25, 50 (2 pcs.), 100, 200 (2 pcs.), 300	
137-210	50 - 1500			10	13, 25, 50 (2 pcs.), 100, 200 (3 pcs.), 300 (2 pcs.)	

Inch / Metric						
Order No.	Range (in)	Resolution	Micrometer head stroke (in)	Qty	Extension rods Size (in)	Display unit (in)
Digimatic (LCD)						
337-102	8 - 9	0.0001 in/ 0.001 mm	1	—	—	8 - 9
337-303	8 - 40			6	1, 2, 4 (2 pcs.), 8, 12	
337-304	8 - 60			7	1, 2, 4, 8, 12 (3 pcs.)	

Inch						
Order No.	Range (in)	Graduation (in)	Micrometer head stroke (in)	Extension rods		Main unit (in)
				Qty	Size (in)	
Analog						
137-211	2 - 6	0.001	0.5	3	0.5, 1, 2	2 - 2.5
137-212	2 - 12			5	0.5, 1, 2 (2 pcs.), 4	
137-213	2 - 20			6	0.5, 1, 2 (2 pcs.), 4, 8	
137-214	2 - 40			8	0.5, 1, 2 (2 pcs.), 4, 8 (2 pcs.), 12	
137-215	2 - 60			10	0.5, 1, 2 (2 pcs.), 4, 8 (3 pcs.), 12 (2 pcs.)	
Analog (With carbide measuring face)						
137-216	2 - 6	0.001	0.5	3	0.5, 1, 2	2 - 2.5
137-217	2 - 12			5	0.5, 1, 2 (2 pcs.), 4	
137-218	2 - 20			6	0.5, 1, 2 (2 pcs.), 4, 8	
137-219	2 - 40			8	0.5, 1, 2 (2 pcs.), 4, 8 (2 pcs.), 12	
137-220	2 - 60			10	0.5, 1, 2 (2 pcs.), 4, 8 (3 pcs.), 12 (2 pcs.)	

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

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).

IP 65

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

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

- Spindle feed error 3 μm/0.00015 in

Note: "Spindle feed error" refers to the difference between the maximum and minimum indication error values within the measuring range of the micrometer head



Functions

(for 337-101/301/302/102/303/304)

- Zero-setting
- Origin restoration
- Data hold
- 2-point Preset
- Function lock
- Automatic power ON/OFF
- Error alarm
- Data output

Technical Data

- Battery and Scale Type (for 337-101/301/302/102/303/304) SR44 (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 1.2 years under normal use
- Scale type: Electromagnetic induction-type rotary encoder

Optional Accessories

Refer to page A-27 for details.

- Connecting cables with **IT/DP/MUX**, etc.
1 m: **05CZA662**
2 m: **05CZA663**
- **USB** Input Tool Direct (2 m): **06AFM380B**
- Connecting cables for **U-WAVE-T**
For standard (160 mm): **02AZD790B**
For foot switch: **02AZE140B**

Technical Data

- Spindle feed error 3 μm /0.00015 in
- Note: "Spindle feed error" refers to the difference between the maximum and minimum indication error values within the specification range of the micrometer head

Tubular Inside Micrometers SERIES 137 — Extension Rod Type (main unit)

- Micrometer head for Extension Rod Type inside micrometer.
- The sleeve is rotated to adjust the reference point adjustment when setting to a length standard.
- Optional Setting Rings and Gauge Block Accessory Sets are available as reference gages for datum adjustment. (Refer to pages C-47 and E-17 to E-20 for details)



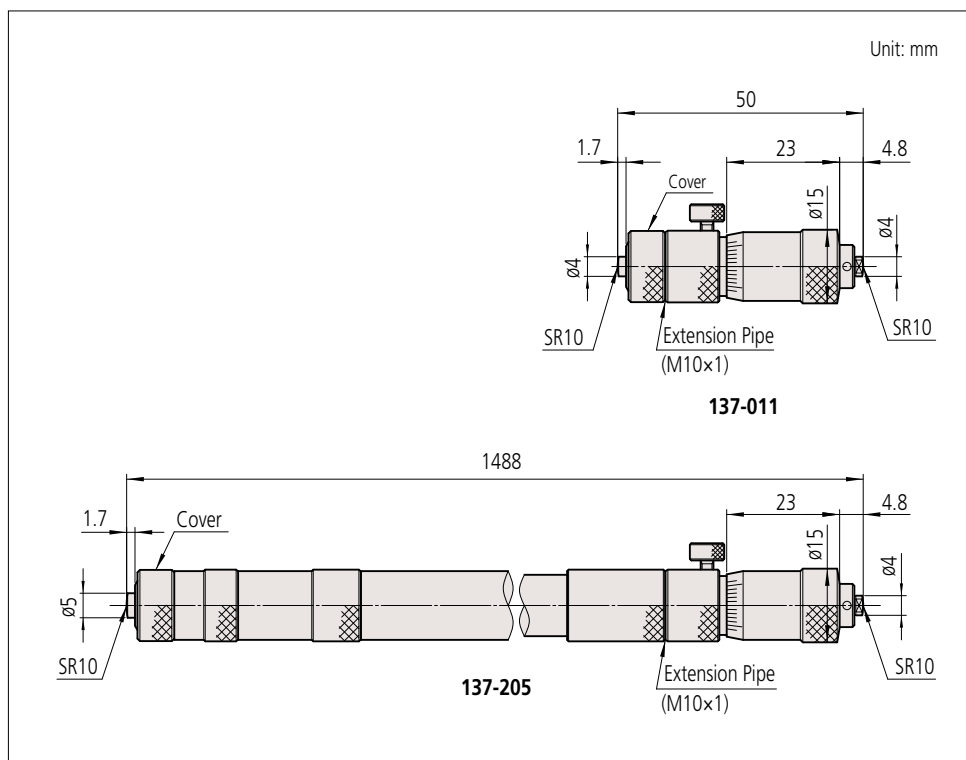
137-011

SPECIFICATIONS

Metric			
Order No.	Range (mm)	Graduation (mm)	Micrometer head stroke (mm)
137-011	50 - 63	0.01	13
Carbide-tipped 137-013			

Inch			
Order No.	Range (in)	Graduation (in)	Micrometer head stroke (in)
137-012	2 - 2.5	0.001	0.5
Carbide-tipped 137-014			

DIMENSIONS



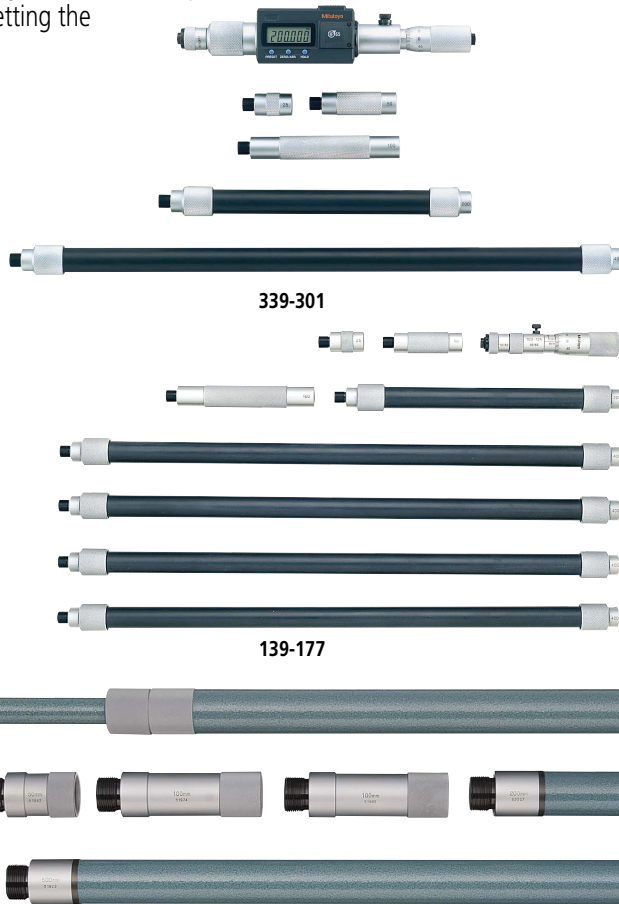
Inside Micrometers

For easy and accurate measurement of inside size and diameter

Tubular Inside Micrometers SERIES 139, 339, 140 — Extension Pipe Type

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

- Wide range of inside measurements possible by combining Extension Pipes and anvils with the micrometer head.
- Carbide measuring faces.
- The sleeve is rotated to adjust the reference point adjustment when setting to a length standard.
- An inside length standard is required for accurately setting the micrometer.
- Order No. 339-101/301/302/102/303/304 features:
 - IP65 (water-proof) protection level that enables use in the presence of cutting fluid.
 - A large-character LCD display.
 - Storage of 2 preset values for use when setting to an inside length standard.
 - A function lock that prevents accidental changing of the reference setting during measurement.



MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

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).

IP 65

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



IP Codes

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

- Spindle feed error 3 $\mu\text{m}/0.00015$ in (139, 339 Series)
6 $\mu\text{m}/0.0003$ in (140 Series)

Note: "Spindle feed error" refers to the difference between the maximum and minimum indication error values within the measuring range of the micrometer head



Functions (for 339-101/301/302/102/303/304)

Zero-setting
Origin restoration
Data hold
Function lock
Automatic power ON/OFF
2-point Preset
Error alarm
Data output

Technical Data

- Battery and Scale Type
(for 339-101/301/302/102/303/304)
SR44 (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 1.2 years under normal use
- Scale type: Electromagnetic induction-type rotary encoder

Optional Accessories

Refer to page A-27 for details.

- Connecting cables with **IT/DP/MUX**, etc.
1 m: **05CZA662**
2 m: **05CZA663**
- **USB Input Tool Direct** (2 m): **06AFM380B**
- Connecting cables for **U-WAVE-T**
For standard (160 mm): **02AZD790B**
For foot switch: **02AZE140B**

SPECIFICATIONS

140-158

Metric						
Order No.	Range (mm)	Resolution (mm)	Micrometer head stroke (mm)	Extension pipes		Display unit (mm)
				Qty	Size (mm)	
Digimatic (LCD)						
339-101	200 - 225	0.001	25	—	—	200 - 225
339-301	200 - 1000			5	25, 50, 100, 200, 400	
339-302	200 - 2000			8	25, 50, 100, 200 (2 pcs.), 400 (3 pcs.)	
Metric						
Order No.	Range (mm)	Graduation (mm)	Micrometer head stroke (mm)	Extension pipes		Main unit (mm)
				Qty	Size (mm)	
Analog						
139-173	100 - 500	0.01	25	4	25, 50, 100, 200	100 - 125
139-174	100 - 900			5	25, 50, 100, 200, 400	
139-175	100 - 1300			6	25, 50, 100, 200, 400 (2 pcs.)	
139-176	100 - 1700			7	25, 50, 100, 200, 400 (3 pcs.)	
139-177	100 - 2100			8	25, 50, 100, 200, 400 (4 pcs.)	
140-157	1000 - 2000		50	5	50, 100 (2 pcs.), 200, 500	1000 - 1050
140-158	1000 - 3000			6	50, 100 (2 pcs.), 200, 500, 1000	
140-159	1000 - 4000			7	50, 100 (2 pcs.), 200, 500, 1000 (2 pcs.)	
140-160	1000 - 5000			8	50, 100 (2 pcs.), 200, 500, 1000 (3 pcs.)	

Inch / Metric						
Order No.	Range (in)	Resolution	Micrometer head stroke (in)	Extension pipes		Display unit (in)
				Qty	Size (in)	
Digimatic (LCD)						
339-102	8 - 9	0.0001 in/ 0.001 mm	1		—	8 - 9
339-303	8 - 40			5	1, 2, 4, 8, 16	
339-304	8 - 80			8	1, 2, 4, 8 (2 pcs.), 16 (3 pcs.)	
Inch						
Order No.	Range (in)	Graduation (in)	Micrometer head stroke (in)	Extension pipes		Main unit (in)
				Qty	Size (in)	
Analog						
139-178	4 - 20	0.001	1	4	1, 2, 4, 8	4 - 5
139-179	4 - 36			5	1, 2, 4, 8, 16	
139-180	4 - 52			6	1, 2, 4, 8, 16 (2 pcs.)	
139-181	4 - 68			7	1, 2, 4, 8, 16 (3 pcs.)	
139-182	4 - 84			8	1, 2, 4, 8, 16 (4 pcs.)	
140-161	40 - 80		2	5	2, 4 (2 pcs.), 8, 20	40 - 42
140-162	40 - 120			6	2, 4 (2 pcs.), 8, 20, 40	
140-163	40 - 160			7	2, 4 (2 pcs.), 8, 20, 40 (2 pcs.)	
140-164	40 - 200			8	2, 4 (2 pcs.), 8, 20, 40 (3 pcs.)	

Mitutoyo

C-21

Mitutoyo reserves the right to change any or all aspects of any product specification, including prices, designs and service content, without notice.

Technical Data

- Spindle feed error 3 $\mu\text{m}/0.00015$ in
- Note: "Spindle feed error" refers to the difference between the maximum and minimum indication error values within the specification range of the micrometer head

-

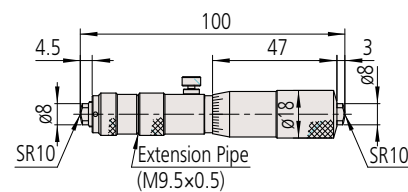
139-001

Metric			
Order No.	Range (mm)	Graduation (mm)	Micrometer head stroke (mm)
139-001	100 - 125	0.01	25

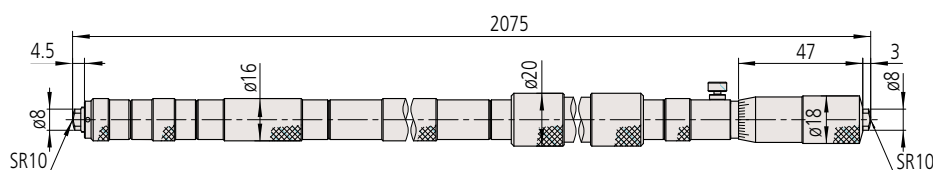
Inch			
Order No.	Range (in)	Graduation (in)	Micrometer head stroke (in)
139-002	4 - 5	0.001	1

DIMENSIONS

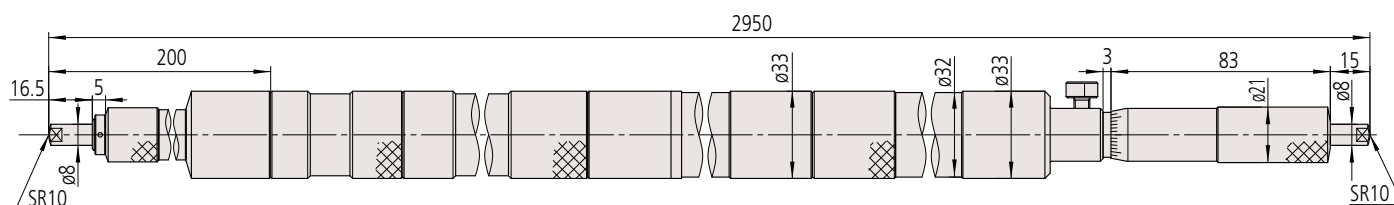
Unit: mm



139-001



139-177



140-158