Micrometers and Micrometer Heads

Digimatic Micrometers and Mechanical Micrometers
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Mitutoyo

High Accuracy Digital Micrometers

Series 293

ABSOLUTE®

This Micrometer enables 0,1 µm resolution measurements and is ideal for customers who need to make highly accurate measurements with a hand-held tool.
The Absolute High-Accuracy Micrometer offers the following benefits:

- It delivers higher accuracy without sacrificing operability, by using Mitutoyo's innovative 0,1 µm resolution ABS (absolute) rotary sensor and high accuracy screw machining technology which reduces the length measurement error to just 0,5 µm.
- This Outside Micrometer complies with accuracy class 0 according to EN ISO 3611:2023
- Its highly rigid frame and high-performance constant-force mechanism (7-9 N) enable more stable measurement.

293-100-20

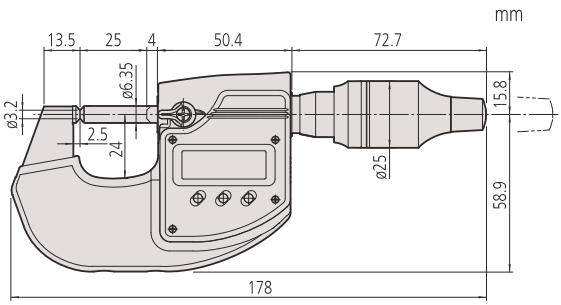
Functions	Series 293
Data output	●
ON/OFF	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●
PRESET	●
Resolution switching	●

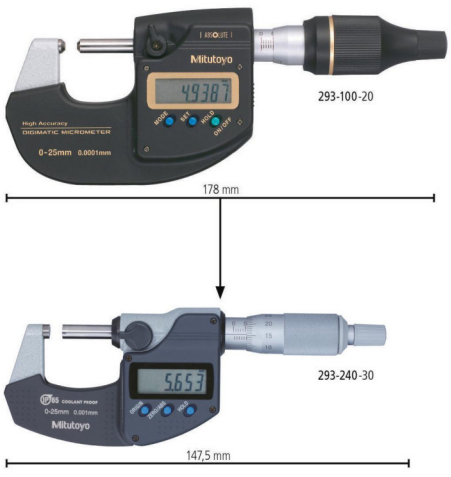
Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish, Ø 3,2 mm
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 lithium battery CR-2032
Battery life	Approx. 2 years
Delivered	Including box, key, driver, 1 battery, heat insulating cover, cleaning paper, certificate of inspection

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force [N]	Mass [g]
293-100-20	0–25	0,1 µm / 0,5 µm	±0,5 µm	0,6 µm	Class 0	7-9	400





Comparative sizes:
High Accuracy-Micrometer with a highly rigid frame and a common Micrometer with a standard frame

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Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD790B	Connection Cable B for U-WAVE, with Data Button for IP Micrometer Type

Consumable spares

No.	Description
05SAA217D	Lithium battery CR-2032, 1 pcs.

0,1 µm digital step

Digimatic Micrometers QuantuMike IP65

Series 293

QuantuMike

Dust- and Water-Protected

TÜVRheinland CERTIFIED

www.tuv.com ID 1111264795

Mitutoyo guarantees the product quality – PROPRIETARY INSPECTION CERTIFICATE

Only for 0-25, 25-50 mm

IP65

This is an IP65 micrometer offering movement four times as fast as a standard micrometer.
It presents you with the following benefits:

- Faster measurement is achieved by using a coarser thread which feeds the spindle by 2 mm per thimble rotation.
- Bidirectional communication e.g. to perform parameter setting from a PC (Digimatic S 1 data output) is possible.
- Ratched thimble mechanism and a small design ensures easy single-handed or stand operation.
- Equipped with a calibration schedule warning function.
- GO/±NG judgement is performed by setting the upper and lower tolerance limits.
- Approach speed warning function for reliable measurements.
- Extraordinary battery life of 2 years (4000 h).
- Outstanding accuracy refer to EN ISO 3611 E_{MPE} ±1 µm (0-25, 25-50 mm model).
- Excellent resistance against water and dust (IP65 protection level) enables this micrometer to be used in machining situations that include splashing coolant fluid.
- A function lock protects the display against unauthorized use.
- Visibility is improved by enlarging the display unit.

Functions	Series 293
Data output	●
ON/OFF	●
ORIGIN (until 100 mm)	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●
PRESET	●
GO/±NG judgement	●
Calculation function (with formula)	●
Customizing keys	●
Calibration warning function	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6.35 mm, spindle pitch 2 mm
Power supply	1 battery CR2032
Battery life	Approx. 2 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward) certificate of inspection (0-50 mm range)

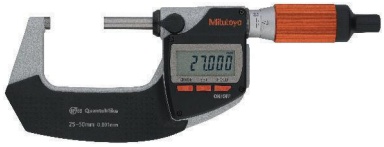
Optional accessories

No.	Description
06AGL111	Digimatic Cable with Data Button IP Type, 1 m, Digimatic/ Digimatic 2/ Digimatic S1 Interface
06AGL121	Digimatic Cable with Data Button IP Type, 2 m, Digimatic/ Digimatic 2/ Digimatic S1 Interface
06AGQ001A	USB Input Tool Direct (Digimatic USB), 2m, Digimatic/ Digimatic 2/ Digimatic S1 Interface, IP Type
02AZF960	Connection Unit for IP Micrometer, U-WAVE fit, U-WAVE fit Bluetooth for Digimatic S1 Interface
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/ Indicator
04GAA899	Colour Speeder, for Ratchet Thimble Black
04GAA900	Colour Speeder, for Ratchet Thimble Red
04GAA901	Colour Speeder, for Ratchet Thimble Yellow
04GAA902	Colour Speeder, for Ratchet Thimble Green
04GAA903	Colour Speeder, for Ratchet Thimble Blue
04AAB208	Colour Speeder, for Ratchet Thimble Grey
156-105-10	Micrometer Stand, 45° Angle Type, for Micrometer 0-50mm/0-2"
156-101-10	Micrometer Stand, Adjustable Angle Type, for Micrometer 0-100mm/0-4"

Consumable spares

No.	Description
05SAA217D	Lithium battery CR-2032, 1 pcs.


293-140-40

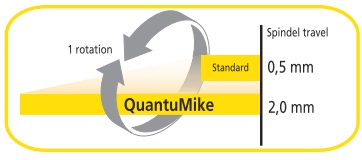

293-141-40

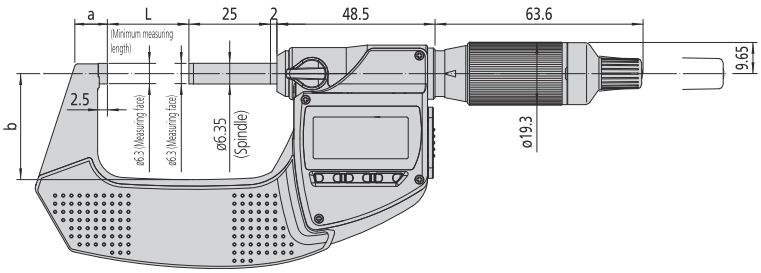

293-142-40


293-143-40

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force [N]	L [mm]	a [mm]	b [mm]	Mass [g]
293-140-40	0–25	0,001 mm	±1 µm	1 µm	Class 1	7-12	0	9	25	265
293-141-40	25–50	0,001 mm	±1 µm	1 µm	Class 1	7-12	25	9,8	32,5	325
293-142-40	50–75	0,001 mm	±2 µm	2 µm	Class 1	7-12	50	12,6	47	465
293-143-40	75–100	0,001 mm	±2 µm	2 µm	Class 1	7-12	75	14	60	620





Mitutoyo

Digimatic Micrometers IP65 Metric

Series 293 - Individual Range with Data Output

This IP65 micrometer offers outstanding accuracy, with data output, is highly robust and offers the following benefits:

- Oil-resistant material used for all plastic parts
- Extraordinary battery life of 2,4 years
- Excellent resistance against water and dust enables this micrometer to be used in machining situations that include splashing coolant fluid.

Dust- and Water-Protected

TÜVRheinland CERTIFIED

www.tuv.com ID 0000040191

PROPRIETARY INSPECTION CERTIFICATE

Only for 0-25, 25-50 mm

IP65

293-234-30 with ratched thimble

293-230-30 with ratched stop

293-252-30

293-237-30

Metric

With ratchet stop

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force [N]
293-230-30	0–25	0,001 mm	±1 µm	1 µm	Class 1	5-10
293-231-30	25–50	0,001 mm	±1 µm	1 µm	Class 1	5-10
293-232-30	50–75	0,001 mm	±2 µm	2 µm	Class 1	5-10
293-233-30	75–100	0,001 mm	±2 µm	2 µm	Class 1	5-10
293-250-30	100–125	0,001 mm	±2 µm	5 µm	Class 1	5-10
293-251-30	125–150	0,001 mm	±2 µm	5 µm	Class 1	5-10
293-252-30	150–175	0,001 mm	±3 µm	5 µm	Class 1	5-10
293-253-30	175–200	0,001 mm	±3 µm	5 µm	Class 1	5-10
293-254-30	200–225	0,001 mm	±3 µm	5 µm	Class 1	5-10
293-255-30	225–250	0,001 mm	±4 µm	5 µm	Class 1	5-10
293-256-30	250–275	0,001 mm	±4 µm	5 µm	Class 1	5-10
293-257-30	275–300	0,001 mm	±4 µm	5 µm	Class 1	5-10

No.	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
293-230-30	0	6,5	25	2,5	270
293-231-30	25	7,3	32,5	2,5	330
293-232-30	50	10,1	47	2,5	470
293-233-30	75	11,5	60	2,5	625
293-250-30	100	16,7	76	5,3	600
293-251-30	125	18,8	90	5,7	740
293-252-30	150	19,1	103	6,1	800
293-253-30	175	18,2	115	6,3	970
293-254-30	200	16,8	126	6,7	1100
293-255-30	225	18	139	5,5	1270
293-256-30	250	18	152	6,5	1340
293-257-30	275	18	166	6,5	1540

Functions	Series 293 - Individual Range with Data Output
Data output	●
ORIGIN (until 100 mm)	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●
2 x PRESET (over 100 mm)	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years, 1,2 years (range >100 mm)
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward) certificate of inspection (0-50 mm range)

Optional accessories

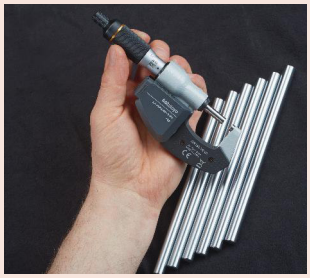
No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

Digimatic Micrometers IP65 Metric

Excellent resistance against water and dust IP65



With Wireless System U-WAVE fit

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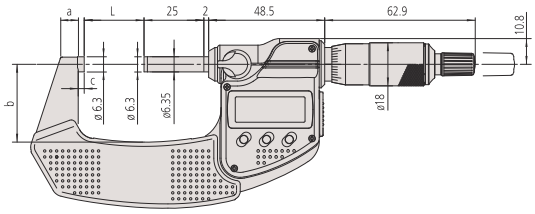
Metric

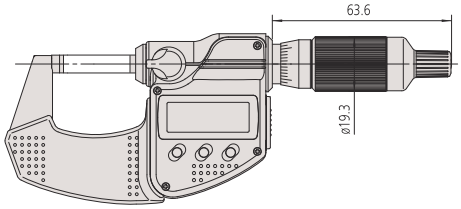
With ratchet thimble

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force [N]
293-234-30	0–25	0,001 mm	±1 µm	1 µm	Class 1	5-10
293-235-30	25–50	0,001 mm	±1 µm	1 µm	Class 1	5-10
293-236-30	50–75	0,001 mm	±2 µm	2 µm	Class 1	5-10
293-237-30	75–100	0,001 mm	±2 µm	2 µm	Class 1	5-10

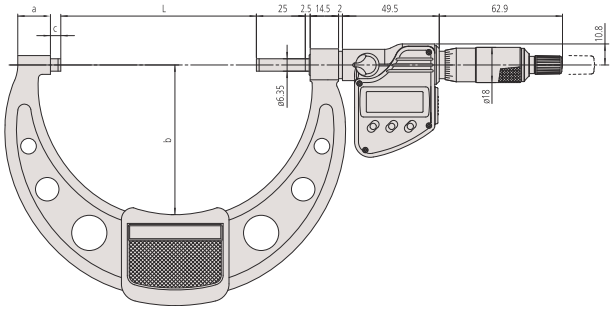
No.	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
293-234-30	0	6,5	25	2,5	270
293-235-30	25	7,3	32,5	2,5	330
293-236-30	50	10,1	47	2,5	470
293-237-30	75	11,5	60	2,5	625



Ratchet stop



Ratchet thimble



Ratchet stop over 100 mm range

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Digimatic Micrometers IP65 Metric

Series 293 - Individual Range without Data Output

This IP65 micrometer offers outstanding accuracy, without data output, is highly robust and offers the following benefits:

- Oil-resistant material used for all plastic parts
- Extraordinary battery life of 2,4 years
- Excellent resistance against water and dust enables this micrometer to be used in machining situations that include splashing coolant fluid.

Dust- and Water-Protected

TÜVRheinland CERTIFIED

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PROPRIETARY INSPECTION CERTIFICATE

Only for 0-25, 25-50 mm

IP65

293-240-30 with ratched stop

293-244-30 with ratchet thimble

Metric

With ratchet stop

No.	Range [mm]	Digital step	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]
293-240-30	0–25	0,001 mm	±1 µm	1 µm	Class 1	5-10	0	6,5	25	2,5	270
293-241-30	25–50	0,001 mm	±1 µm	1 µm	Class 1	5-10	25	7,3	32,5	2,5	330
293-242-30	50–75	0,001 mm	±2 µm	2 µm	Class 1	5-10	50	10,1	47	2,5	470
293-243-30	75–100	0,001 mm	±2 µm	2 µm	Class 1	5-10	75	11,5	60	2,5	625

Metric

With ratchet thimble

No.	Range [mm]	Digital step	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]
293-244-30	0–25	0,001 mm	±1 µm	1 µm	Class 1	7-12	0	6,5	25	2,5	270
293-245-30	25–50	0,001 mm	±1 µm	1 µm	Class 1	7-12	25	7,3	32,5	2,5	330
293-246-30	50–75	0,001 mm	±2 µm	2 µm	Class 1	7-12	50	10,1	47	2,5	470
293-247-30	75–100	0,001 mm	±2 µm	2 µm	Class 1	7-12	75	11,5	60	2,5	625

Functions	Series 293 - Individual Range without Data Output
ORIGIN (until 100 mm)	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward) certificate of inspection (0-50 mm range)

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

Excellent resistance against water and dust IP65

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Digimatic Micrometers IP65 Metric

Series 293 - Micrometer Set

This IP65 Micrometer offers outstanding accuracy, with data output, is highly robust and offers the following benefits:

- Oil-resistant material used for all plastic parts
- Extraordinary battery life of 2,4 years
- Excellent resistance against water and dust enables this micrometer to be used in machining situations that include splashing coolant fluid.

Dust- and Water-Protected

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PROPRIETARY INSPECTION CERTIFICATE

only for 0-25, 25-50 mm

IP65

Functions	Series 293 - Micrometer Set
Data output	●
ORIGIN (until 100 mm)	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward) certificate of inspection (0-50 mm range)

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

With Wireless System U-WAVE fit

293-963-30

Metric — Set/With ratchet stop

No.	Range [mm]	Digital step	Measuring force [N]	Content of Set	Mass [g]
293-966-30	0–50	0,001 mm	5-10	293-230-30 / 293-231-30 + setting standard 25 mm (ceramic gauge block grade 1)	1030
293-962-30	0–75	0,001 mm	5-10	293-230-30 / 293-231-30 / 293-232-30 + setting standard 25 mm and 50 mm	1640
293-963-30	0–100	0,001 mm	5-10	293-230-30 / 293-231-30 / 293-232-30 / 293-233-30 + setting standard 25 mm, 50 mm and 75 mm	2725

Mitutoyo

Digimatic Wide Range Micrometers

Series 293

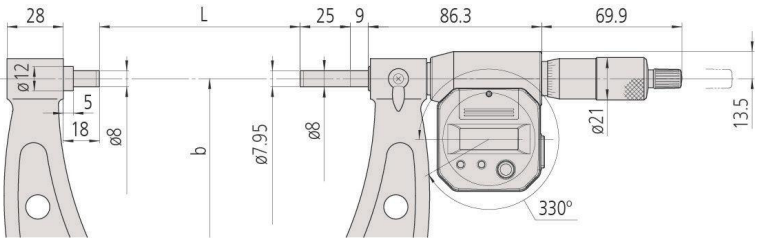
This Wide Measuring Range Digimatic Micrometer with data output offers the following benefits:

- The micrometer's 330° rotatable display unit enables easy reading in all measurement positions.
- With Carbide-tipped measuring faces

293-582

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force [N]	L [mm]	b [mm]	Mass [g]
293-582	300–325	0,001 mm	±6 µm	5 µm	Class 2	10-14	353	187	2000
293-583	325–350	0,001 mm	±6 µm	5 µm	Class 2	10-14	378	199	2150
293-584	350–375	0,001 mm	±6 µm	5 µm	Class 2	10-14	403	212	2300
293-585	375–400	0,001 mm	±7 µm	6 µm	Class 2	10-14	428	224	2450
293-586	400–425	0,001 mm	±7 µm	6 µm	Class 2	10-14	453	236	2600
293-587	425–450	0,001 mm	±7 µm	6 µm	Class 2	10-14	478	248	2750
293-588	450–475	0,001 mm	±8 µm	6 µm	Class 2	10-14	503	261	2900
293-589	475–500	0,001 mm	±8 µm	7 µm	Class 2	10-14	528	273	3100



The display is 330° rotatable

Functions	Series 293
Data output	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●
2 x PRESET	●

Specifications

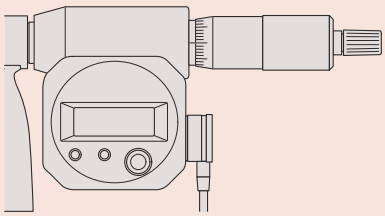
Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 8 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	2 batteries SR-44
Battery life	Approx. 1,8 years
Delivered	Including box, key, setting standard, 2 batteries

Optional accessories

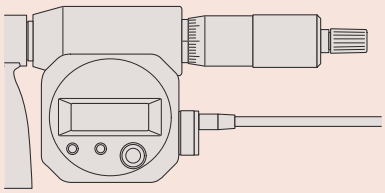
No.	Description
04AZB512	Digimatic Cable with Data Button, 1 m, Flat L-Shape Left Type
04AZB513	Digimatic Cable, Straight, Data Button, 2 m, Flat L-Shape Left Type
959149	Digimatic Cable, Straight, Data Button, 1 m
959150	Digimatic Cable, Straight, Data Button, 2 m
06AFM380C	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, Straight, with Data Button
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD790C	Connection Cable C for U-WAVE, Straight, with Data Button

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V



Cable orientation downwards
04AZB512, 04AZB513



Cable orientation in thimble direction
959149, 959150

Digimatic Micrometers

Functions	Series 293
ORIGIN	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, certificate of inspection

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

Series 293

This Standard Digimatic Micrometer is an affordable device that offers the following benefits:

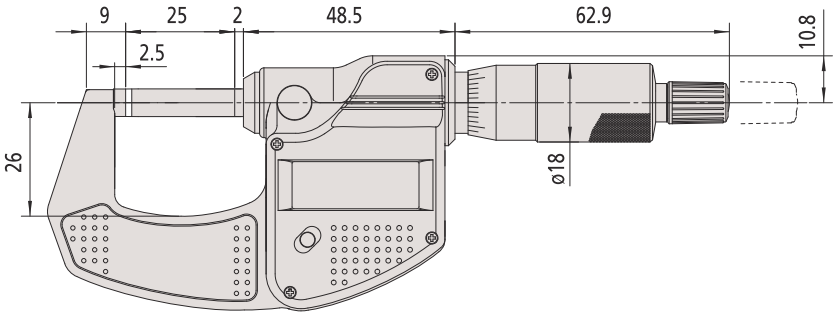
- It is cost-effective with simplified functionality for standard applications.
- Extraordinary battery life of 2,4 years. Without data output.
- Constant measuring force

293-821-30

Metric

With ratchet stop

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force [N]	Mass [g]
293-821-30	0–25	0,001 mm	±2 µm	1 µm	Class 2	5-10	275



Digimatic Micrometers with Non-Rotating Spindle

Series 406

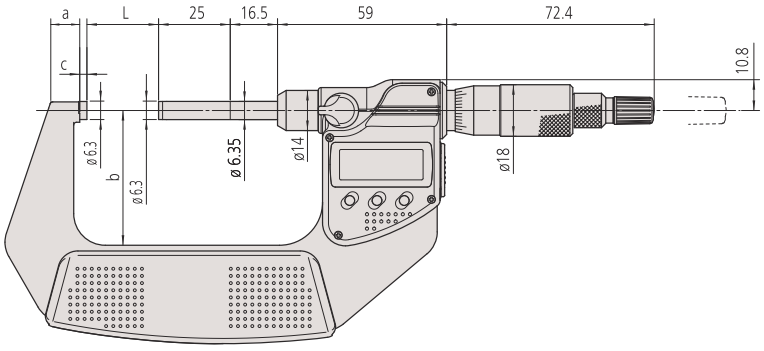
This Micrometer features a non-rotating spindle, and offers the following benefits:

- Sliding spindle, not rotating.
- Ratchet stop.
- Data output.

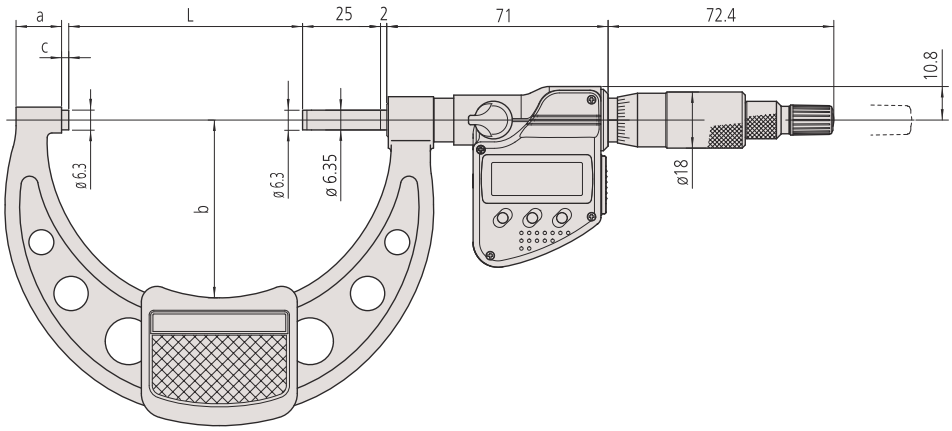
406-250-30

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
406-250-30	0–25	0,001 mm	±3 µm	3 µm	3-8	0	7	32	2,8	330
406-251-30	25–50	0,001 mm	±3 µm	3 µm	3-8	25	9,8	47	2,8	470
406-252-30	50–75	0,001 mm	±3 µm	3 µm	3-8	50	11,2	60	2,8	625
406-253-30	75–100	0,001 mm	±4 µm	3 µm	3-8	75	14,6	57	2,3	460



0 - 75 mm



75 - 100 mm

Functions	Series 406
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward)

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

With Wireless System U-WAVE fit

ABSOLUTE Digimatic Micrometers Quickmike

	Series 293
Functions	
Data output	●
ON/OFF	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

Display	LCD, character height 10 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	Non-rotating, spindle feed 10 mm
Power supply	1 battery SR-44
Battery life	Approx. 5 years
Delivered	Including box, setting standard (from 25 mm upward), 1 battery

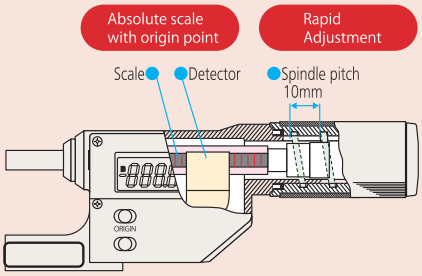
Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD790B	Connection Cable B for U-WAVE, with Data Button for IP Micrometer Type

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

293-666-20 with micrometer stand 156-101-10 (optional accessories)



This micrometer has a spindle mechanism enabling a spindle drive of 10 mm/rev.
The drive rate is therefore twenty times as fast as conventional micrometers.

Series 293

Dust- and Water-Protected
TÜVRheinland CERTIFIED
www.tuv.com ID 0000063013

ABSOLUTE®
IP65

This Quickmike, with a non-rotating spindle, delivers much faster movement than standard models.
The ABSOLUTE Digimatic Micrometer Quickmike offers the following benefits:

- With 10 mm feed per thimble rotation, it delivers twenty times as fast as standard devices.
- Excellent resistance against water and dust (IP65) enables this micrometer to be used in machining situations that include splashing coolant fluid.
- ABSOLUTE linear scale means no restriction on adjustment speed.
- Larger measuring range - 30 mm compared with 25 mm - than standard micrometer.

293-666-20

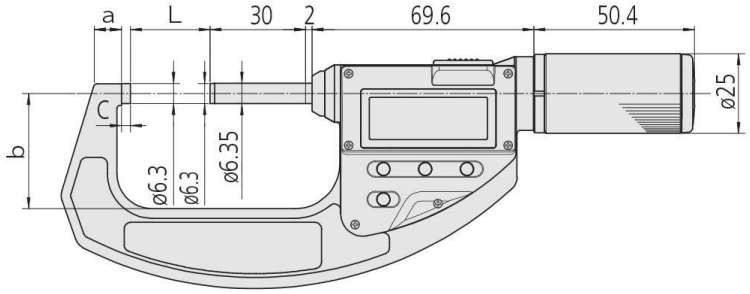
293-667-20

293-668-20

293-669-20

Metric

No.	Range [mm]	Digital step	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]
293-666-20	0–30	0,001 mm	±2 µm	2 µm	Class 2	5-12	0	7	25	2	275
293-667-20	25–55	0,001 mm	±2 µm	2 µm	Class 2	5-12	25	8,5	36	2,8	340
293-668-20	50–80	0,001 mm	±3 µm	2 µm	Class 2	5-12	50	10,3	47	2,8	480
293-669-20	75–105	0,001 mm	±3 µm	3 µm	Class 2	5-12	75	10,7	60	2,8	585



Mitutoyo

ABSOLUTE Digimatic Micrometers Quickmike

Series 227

ABSOLUTE®

This Quickmike has an adjustable measuring force to suit various kinds of workpieces.
The ABSOLUTE Digimatic Micrometer Quickmike offers the following benefits:

- It's dedicated to applications requiring a constant/low measuring force such as measuring wire, paper and plastic/rubber parts.
- Constant and low measuring force mechanism in the thimble.
- Non-rotating spindle.
- Speedy spindle feed of 10 mm per thimble rotation.

227-201-20

Functions	Series 227
Data output	●
ON/OFF	●
ABS / INC (INC ZERO)	●
Low voltage alarm	●
Function lock	●
HOLD	●
PRESET	●

Specifications

Display	LCD, character height 10 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	ø6,35 mm, non-rotating, spindle feed 10 mm
Power supply	1 battery SR-44
Battery life	Approx. 5 years
Delivered	Including box, setting standard (for 10-30 mm models), screwdriver, 1 battery

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD790B	Connection Cable B for U-WAVE, with Data Button for IP Micrometer Type

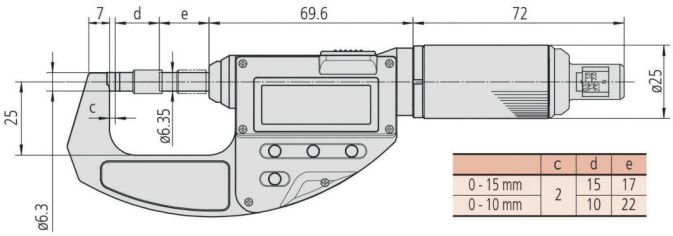
Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

Metric

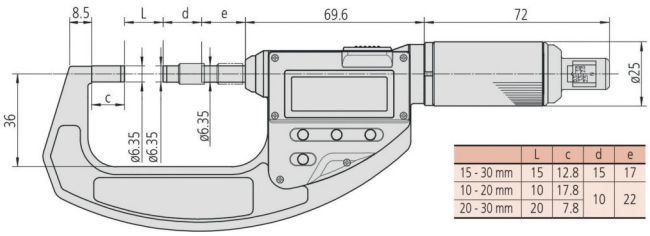
No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force settings [N]	Measuring force accuracy (1) [N]	Mass [g]
227-201-20	0–15	0,001 mm	±2 µm	2 µm	Class 2	0,5; 1; 1,5; 2; 2,5	±0,1 + (force setting/10)	300
227-203-20	15–30	0,001 mm	±2 µm	2 µm	Class 2	0,5; 1; 1,5; 2; 2,5	±0,1 + (force setting/10)	380
227-205-20	0–10	0,001 mm	±2 µm	2 µm	Class 2	2; 4; 6; 8; 10	±0,4 + (force setting/10)	345
227-206-20	10–20	0,001 mm	±2 µm	2 µm	Class 2	2; 4; 6; 8; 10	±0,4 + (force setting/10)	425
227-207-20	20–30	0,001 mm	±2 µm	2 µm	Class 2	2; 4; 6; 8; 10	±0,4 + (force setting/10)	415

(1) Only valid for instrument orientation within ±3 degrees of horizontal when measuring.



	c	d	e
0 - 15 mm	2	15	17
0 - 10 mm		10	22

227-201-20, 227-205-20



	L	c	d	e
15 - 30 mm	15	12.8	15	17
10 - 20 mm	10	17.8	10	22
20 - 30 mm	20	7.8		

227-203-20, 227-206-20, 227-207-20

Adjustable Measuring Force

Ratchet Thimble Micrometers

Series 102

This Ratchet Thimble Micrometer has a mechanism that ensures consistent and reliable measurements. It offers you the following benefits:

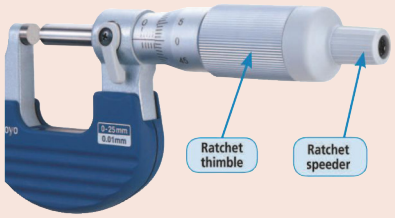
- It works both from the thimble and the speeder, enabling easy, one-handed operation.
- Ratchet's clearly audible operation provides reassurance that measurements are being taken at a constant, preset measuring force.
- Heat insulating frame.

Specifications

Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø19 mm
Delivered	Including box, key, setting standard (from 25 mm upward), certificate of inspection

Optional accessories

No.	Description
04GAA899	Colour Speeder, for Ratchet Thimble Black
04GAA900	Colour Speeder, for Ratchet Thimble Red
04AAB208	Colour Speeder, for Ratchet Thimble Grey
04GAA901	Colour Speeder, for Ratchet Thimble Yellow
04GAA902	Colour Speeder, for Ratchet Thimble Green
04GAA903	Colour Speeder, for Ratchet Thimble Blue

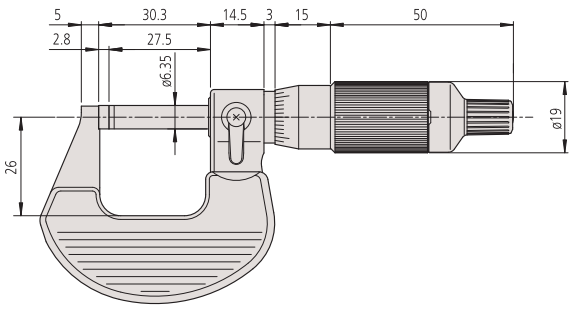


102-707

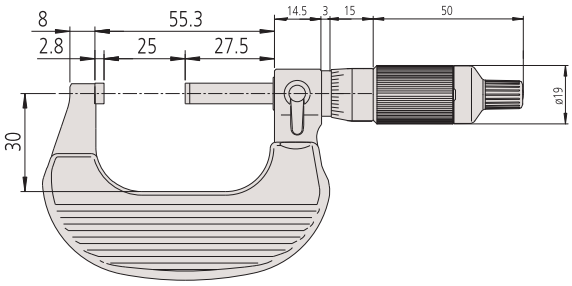
102-702

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Measuring force [N]	Mass [g]
102-701	0–25	0,01 mm	±2 µm	2 µm	Class 2	5-10	180
102-707	0–25	0,001 mm	±2 µm	2 µm	Class 2	5-10	180
102-702	25–50	0,01 mm	±2 µm	2 µm	Class 2	5-10	270
102-708	25–50	0,001 mm	±2 µm	2 µm	Class 2	5-10	270



0-25 mm



25-50 mm

Coloured ratchet caps (optional accessories)

Mitutoyo

Outside Micrometer with Thermally Insulating Plate

Series 102

Cut-away frame behind anvil for measuring in hard to reach places. A ratchet stop or friction thimble guarantees repeatable measurement.

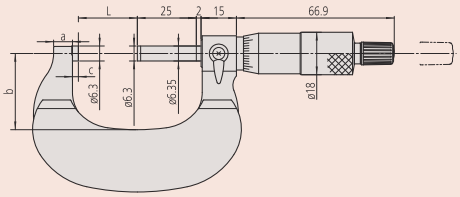
Only for 0-25, 25-50 mm

102-301

102-911-40

Specifications

Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, key, setting standard (from 25 mm upward), certificate of inspection (0-50 mm range)



Metric

Graduation 0.001 mm is obtained with vernier on sleeve

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Remarks	Measuring force [N]
102-311	0–25	0,001 mm	±1 µm	2 µm	Class 1	Ratched Stop	5-10
102-312	25–50	0,001 mm	±1 µm	1 µm	Class 1	Ratched Stop	5-10
102-313	0–25	0,001 mm	±1 µm	1 µm	Class 1	Friction Thimble	5-10

No.	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
102-311	0	5	26	2,5	180
102-312	25	7,8	32	2,5	270
102-313	0	5	26	2,5	180

Metric

Graduation 0.01 mm

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Class EN ISO 3611	Remarks	Measuring force [N]
102-301	0–25	0,01 mm	±2 µm	2 µm	Class 2	Ratched Stop	5-10
102-302	25–50	0,01 mm	±2 µm	2 µm	Class 2	Ratched Stop	5-10
102-303	50–75	0,01 mm	±2 µm	2 µm	Class 1	Ratched Stop	5-10
102-304	75–100	0,01 mm	±3 µm	3 µm	Class 2	Ratched Stop	5-10

No.	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
102-301	0	5	26	2,5	180
102-302	25	7,8	32	2,5	270
102-303	50	10,6	45	2,5	375
102-304	75	11	58	2,5	490

Metric

Micrometer set

No.	Range [mm]	Graduation	Remarks	Content of Set	Mass [g]
102-911-40	0–100	0,01 mm	Ratched Stop	102-301, 102-302, 102-303, 102-304, 3 setting standards	1200

Analog Outside Micrometers Metric

Series 103

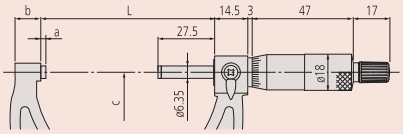
Lightweight workshop design with baked-enamel-finished frame.

- Equipped with Ratchet Stop for constant measuring force.

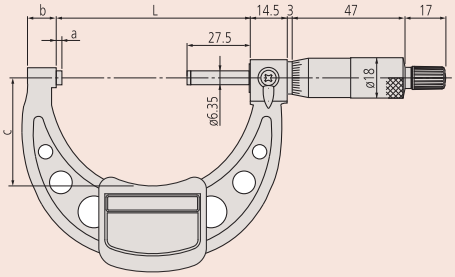
Only for 0-25, 25-50 mm

Specifications

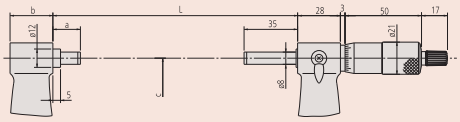
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm (21 mm models >300 mm)
Delivered	Including box, key, setting standard (from 25 mm upward), certificate of inspection (0-50 mm range)



Models up to 50 mm



Models 50 mm to 300 mm with insulating plate



Models over 300 mm

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	±2 µm	2 µm	Class 2	5-10	30,3	2,8	9	28	175
103-130	25–50	±2 µm	2 µm	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	±2 µm	2 µm	Class 2	5-10	30,3	2,8	9	28	175
103-138	25–50	±2 µm	2 µm	Class 2	5-10	55,3	2,8	10	38	215
103-139-10	50–75	±2 µm	2 µm	Class 1	5-10	80,3	2,8	12	46	315
103-140-10	75–100	±3 µm	3 µm	Class 2	5-10	105,3	2,8	14	57	375
103-141-10	100–125	±3 µm	3 µm	Class 2	5-10	132,8	5,3	17	76	515
103-142-10	125–150	±3 µm	3 µm	Class 2	5-10	158,2	5,7	19	90	665
103-143-10	150–175	±4 µm	3 µm	Class 2	5-10	183,6	6,1	20	102	720
103-144-10	175–200	±4 µm	4 µm	Class 2	5-10	208,8	6,3	19	115	920
103-145-10	200–225	±4 µm	4 µm	Class 2	5-10	234,2	6,7	18	127	1080
103-146-10	225–250	±5 µm	4 µm	Class 2	5-10	258	5,5	18	139	1255
103-147-10	250–275	±5 µm	4 µm	Class 2	5-10	284	6,5	18	152	1405
103-148-10	275–300	±5 µm	5 µm	Class 2	5-10	309	6,5	18	166	1565
103-149	300–325	±6 µm	5 µm	Class 2	10-15	353	18	28	187	1985
103-150	325–350	±6 µm	5 µm	Class 2	10-15	378	18	28	199	2155
103-151	350–375	±6 µm	5 µm	Class 2	10-15	403	18	28	212	2305
103-152	375–400	±7 µm	6 µm	Class 2	10-15	428	18	28	224	2455
103-153	400–425	±7 µm	6 µm	Class 2	10-15	453	18	28	236	2715
103-154	425–450	±7 µm	6 µm	Class 2	10-15	478	18	28	248	2965
103-155	450–475	±8 µm	6 µm	Class 2	10-15	503	18	28	261	3215
103-156	475–500	±8 µm	7 µm	Class 2	10-15	528	18	28	273	3450

Mitutoyo

Analog Outside Micrometers in Set

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

103-927-10

103-913-50

103-914-50

Setting standards
103-914-50

Specifications

Measuring face	Carbide tipped, micro-lap finish
Measuring spindle	With spindle lock, ø6,35 mm , spindle pitch 0,5 mm
Delivered	Including box, key, setting standard (from 25 mm upward),

Metric

Micrometer set

No.	Range [mm]	Graduation	Content of Set	Mass [g]
103-927-10	0–75	0,01 mm	103-137, 103-138, 103-139-10, 2 setting standards	750
103-913-50	0–150	0,01 mm	103-137, 103-138, 103-139-10, 103-140-10, 103-141-10, 103-142-10, 5 setting standards	2260
103-915-10	150–300	0,01 mm	103-143-10, 103-144-10, 103-145-10, 103-146-10, 103-147-10, 103-148-10, 6 setting standards	7695
103-914-50	0–300	0,01 mm	103-137, 103-138, 103-139-10, 103-140-10, 103-141-10, 103-142-10, 103-143-10, 103-144-10, 103-145-10, 103-146-10, 103-147-10, 103-148-10, 11 setting standards	9300

Digit Outside Micrometers

Series 193

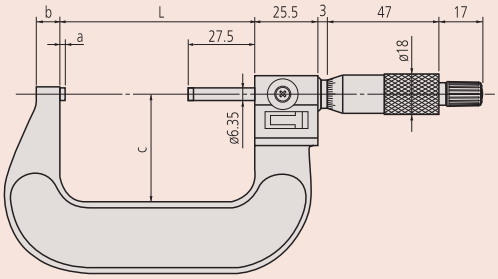
This Digit Outside Micrometer comes with a mechanical counter and offers you the following benefits:

- Mechanical Digit counter
- Quick and easy reading

Specifications

Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key

193-902



193-112

193-101

Metric

Graduation 0.001 mm is obtained with vernier on sleeve

No.	Range [mm]	Graduation	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]
193-111	0–25	0,001 mm	±2 µm	2 µm	Class 2	5-15	30	2,5	5	26	224
193-112	25–50	0,001 mm	±2 µm	2 µm	Class 2	5-15	55	2	8	32	275
193-113	50–75	0,001 mm	±2 µm	2 µm	Class 1	5-15	80	2	9	45	379
193-114	75–100	0,001 mm	±3 µm	3 µm	Class 2	5-15	105	2	9	57	489

Metric

Graduation 0.01 mm

No.	Range [mm]	Graduation	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]
193-101	0–25	0,01 mm	±2 µm	2 µm	Class 2	5-15	30	2,5	5	26	224
193-102	25–50	0,01 mm	±2 µm	2 µm	Class 2	5-15	55	2	8	32	275
193-103	50–75	0,01 mm	±2 µm	2 µm	Class 1	5-15	80	2	9	45	379
193-104	75–100	0,01 mm	±3 µm	3 µm	Class 2	5-15	105	2	9	57	489

Metric

Micrometer set

No.	Range [mm]	Graduation	Measuring force [N]	Content of Set	Mass [g]
193-901	0–75	0,01 mm	5-15	193-101, 193-102, 193-103, 2 setting standards	820
193-902	0–100	0,01 mm	5-15	193-101, 193-102, 193-103, 193-104, 3 setting standards	1367

Mitutoyo

Digimatic Micrometers with Interchangeable Anvils

Series 340

This Digimatic Micrometer offers you an extra wide measuring range, and has the following benefits:

- Easy, interchangeable anvils allow a wide range of measurements.
- Ratchet stop for constant force.

Dust- and Water-Protected

TÜVRheinland CERTIFIED

www.tuv.com ID 0000040191

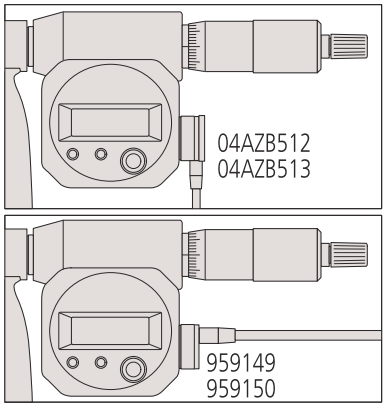
IP65 up 300 mm

340-251-30 (IP65 up to 300 mm Range)

340-520 (not IP65 protected >300 mm Range)

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	Setting standard	Interchangeable anvils	Mass [kg]
340-251-30	0–150	0,001 mm	±6 µm	3 µm	5-10	5 (25, 50, 75, 100, 125 mm)	6	0,96
340-252-30	150–300	0,001 mm	±8 µm	5 µm	5-10	6 (150, 175, 200, 225, 250, 275 mm)	6	1,88
340-520	300–400	0,001 mm	±10 µm	6 µm	10-15	4 (300, 325, 350, 375 mm)	4	2,6
340-521	400–500	0,001 mm	±11 µm	7 µm	10-15	4 (400, 425, 450, 475 mm)	4	4,1
340-522	500–600	0,001 mm	±12 µm	8 µm	10-15	4 (500, 525, 550, 575 mm)	4	5,5
340-523	600–700	0,001 mm	±14 µm	9 µm	10-15	4 (600, 625, 650, 675 mm)	4	6,8
340-524	700–800	0,001 mm	±15 µm	10 µm	10-15	4 (700, 725, 750, 775 mm)	4	8,2
340-525	800–900	0,001 mm	±16 µm	11 µm	10-15	4 (800, 825, 850, 875 mm)	4	9,5
340-526	900–1000	0,001 mm	±18 µm	12 µm	10-15	4 (900, 925, 950, 975 mm)	4	10,9



Models over 300 mm

Functions	Series 340
Data output	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●
2 x PRESET	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped spindle, hardened anvil
Measuring spindle	With spindle lock, ø 6,35 mm, ø8 mm (over 300 mm)
Scale	Thimble and sleeve satin chrome finish
Power supply	Battery SR-44
Battery life	Approx. 2,4 years, 1,8 years (range >300 mm)
Delivered	Including box, setting standard, anvils, key, 1 battery (2 batteries > 300 mm)

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
959149	Digimatic Cable, Straight, Data Button, 1 m
959150	Digimatic Cable, Straight, Data Button, 2 m
04AZB512	Digimatic Cable with Data Button, 1 m, Flat L-Shape Left Type
04AZB513	Digimatic Cable, Straight, Data Button, 2 m, Flat L-Shape Left Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
06AFM380C	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, Straight, with Data Button
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD790C	Connection Cable C for U-WAVE, Straight, with Data Button

05CZA662, 05CZA663, 06AFM380B, 264-622, 264-623, 264-626, 264-627, 02AZF310 for models up to 300 mm
959149, 959150, 04AZB512, 04AZB5130, 6AFM380C, 02AZD730G, 02AZD880G, 02AZD790C for models over 300 mm

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

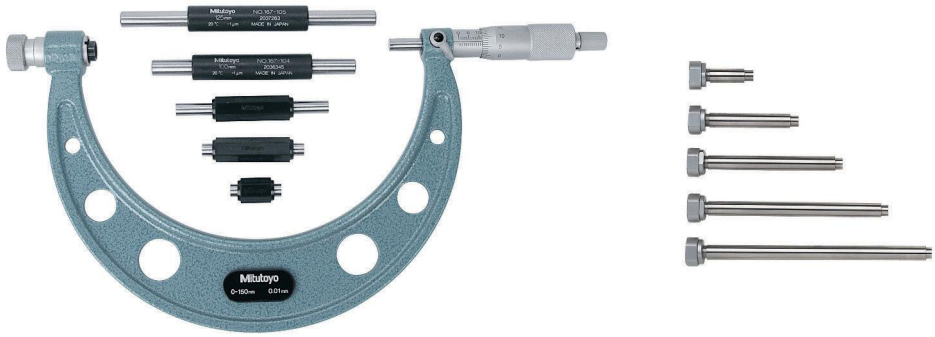
Outside Micrometers with Interchangeable Anvils

Series 104

This Outside Micrometer offers you an extra wide measuring range with the following benefits:

- Easy, interchangeable anvils allow a wide range of measurements.

104-171



104-135A

Specifications

Measuring face	Hardened, lapped (anvil), carbide tipped, lapped (spindle side)
Measuring spindle	With spindle lock, ø 6,35 mm (up to 300 mm) ø8 mm (over 300 mm), spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm (ø21 mm >300 mm)
Delivered	Including box, setting standard, anvils, key

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	Setting standard	Interchangeable anvils	Mass [kg]
104-171	0–50	0,01 mm	±5 µm	2 µm	5-10	1 (25 mm)	1	0,32
104-135A	0–150	0,01 mm	±6 µm	3 µm	5-10	5 (25, 50, 75, 100, 125 mm)	6	1,35
104-140A	100–200	0,01 mm	±7 µm	4 µm	5-10	4 (100, 125, 150, 175 mm)	4	1,38
104-136A	150–300	0,01 mm	±8 µm	5 µm	5-10	6 (150, 175, 200, 225, 250, 275 mm)	6	2,65
104-142A	300–400	0,01 mm	±10 µm	6 µm	10-14	4 (300, 325, 350, 375 mm)	4	3,31
104-143A	400–500	0,01 mm	±11 µm	7 µm	10-14	4 (400, 425, 450, 475 mm)	4	4,81
104-144A	500–600	0,01 mm	±12 µm	8 µm	10-14	4 (500, 525, 550, 575 mm)	4	6,35
104-145A	600–700	0,01 mm	±14 µm	9 µm	10-14	4 (600, 625, 650, 675 mm)	4	7,72
104-146A	700–800	0,01 mm	±15 µm	10 µm	10-14	4 (700, 725, 750, 775 mm)	4	9,08
104-147A	800–900	0,01 mm	±16 µm	11 µm	10-14	4 (800, 825, 850, 875 mm)	4	10,41
104-148A	900–1000	0,01 mm	±18 µm	12 µm	10-14	4 (900, 925, 950, 975 mm)	4	11,78

Digimatic Sheet Metal Micrometers

Series 389

This Digimatic Sheet Metal Micrometer is designed with a deep frame, for measuring the thickness of sheet material.

Dust- and Water-Protected
TÜVRheinland CERTIFIED
www.tuv.com ID 0000040191

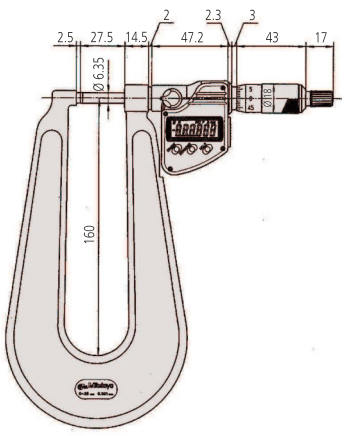
IP65 except 389-514

389-261-30

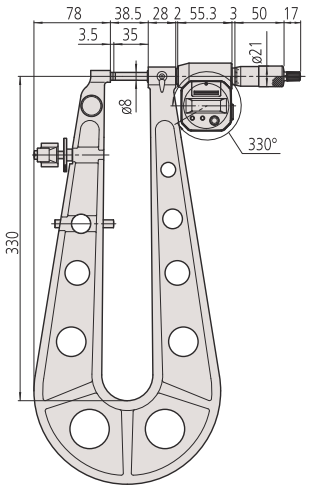
389-514

Metric

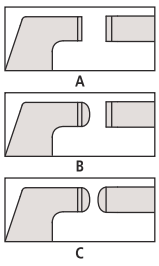
No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Anvil / Spindle	Measuring force [N]	Throat depth [mm]	Mass [g]
389-251-30	0–25	0,001 mm	±4 µm	3 µm	Type A, flat/flat	3-8	160	840
389-261-30	0–25	0,001 mm	±4 µm		Type B, spherical/flat	3-8	160	840
389-271-30	0–25	0,001 mm	±4 µm		Type C, spherical/spherical	3-8	160	840
389-514	0–25	0,001 mm	±5 µm	3 µm	Type A, flat/flat	10-14	330	2750
389-252-30	25–50	0,001 mm	±4 µm	3 µm	Type A, flat/flat	3-8	160	920
389-262-30	25–50	0,001 mm	±4 µm		Type B, spherical/flat	3-8	160	920
389-272-30	25–50	0,001 mm	±4 µm		Type C, spherical/spherical	3-8	160	920

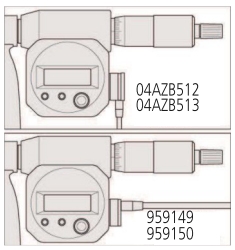


0-25 mm



389-514





Digimatic cable for 389-514

Functions	Series 389
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●
2 x PRESET	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm/ø 8 mm (389-514), spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	Battery SR-44
Battery life	Approx. 2,4 years, approx. 1,8 years (389-514)
Delivered	Including box, key, 1 battery, 2 batteries (389-514)

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth
959150	Digimatic Cable, Straight, Data Button, 2 m
959149	Digimatic Cable, Straight, Data Button, 1 m
04AZB512	Digimatic Cable with Data Button, 1 m, Flat L-Shape Left Type
04AZB513	Digimatic Cable, Straight, Data Button, 2 m, Flat L-Shape Left Type
06AFM380C	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, Straight, with Data Button
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD790C	Connection Cable C for U-WAVE, Straight, with Data Button

959149, 959150, 04AZB512, 04AZB513 06AFM380C, 02AZD880G, 02AZD730G, 02AZD790C for 389-514

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

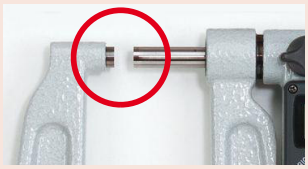
Sheet Metal Micrometers

Series 118

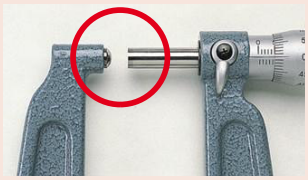
This Sheet Metal Micrometer is designed with a deep frame for measuring the thickness of sheet material.

Specifications

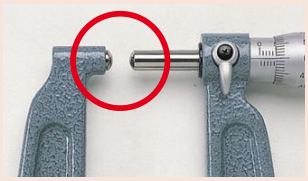
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, throat depth up to 150 mm : ø 6.35 mm throat depth up to 300 mm : ø 8 mm, spindle pitch 0.5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm (118-103 ø21 mm)
Delivered	Including box, key, setting standard (from 25 mm upward)



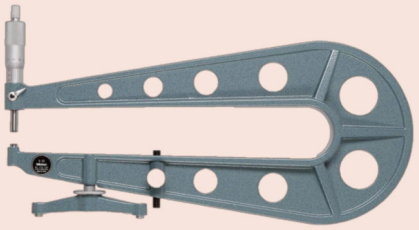
Type A
Flat-Flat



Type B
Spherical-Flat



Type C
Spherical-Spherical



118-103

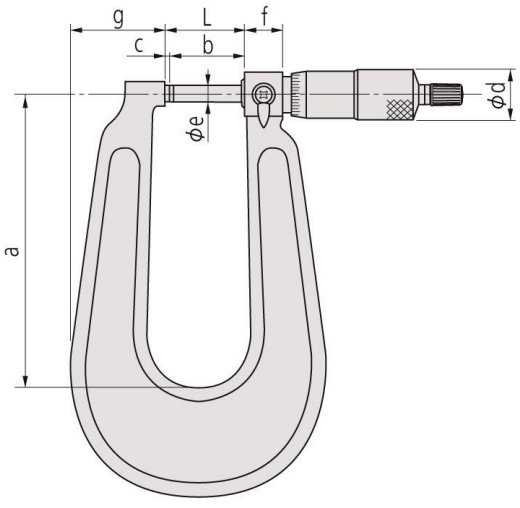
118-101

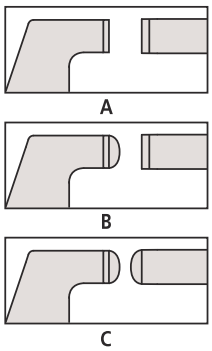
118-102

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Anvil / Spindle	Measuring force [N]	L [mm]
118-101	0–25	0,01 mm	±4 µm	3 µm	Type A, flat/flat	3-8	30,3
118-102	0–25	0,01 mm	±4 µm	3 µm	Type A, flat/flat	3-8	30,3
118-103	0–25	0,01 mm	±5 µm	3 µm	Type A, flat/flat	10-14	38,5
118-110	25–50	0,01 mm	±4 µm	3 µm	Type A, flat/flat	3-8	55,3
118-114	0–25	0,01 mm	±4 µm		Type B, spherical/flat	3-8	30,3
118-118	0–25	0,01 mm	±4 µm		Type C, spherical/spherical	3-8	30,3
118-126	25–50	0,01 mm	±4 µm		Type C, spherical/spherical	3-8	55,3

No.	a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	f [mm]	g [mm]	Mass [g]
118-101	110	27,5	2,5	18	6,35	14,5	34	445
118-102	160	27,5	2,5	18	6,35	14,5	43	740
118-103	330	35	3,5	21	8	28	84	2650
118-110	165	27,5	2,5	18	6,35	14,5	41	820
118-114	160	27,5	2,5	18	6,35	14,5	43	740
118-118	160	27,5	2,5	18	6,35	14,5	43	740
118-126	165	27,5	2,5	18	6,35	14,5	41	820





Mitutoyo

Sheet Metal Micrometers Graduated Dial

Series 119

This Sheet Metal Micrometer comes with a graduated dial.
It offers you the following features:

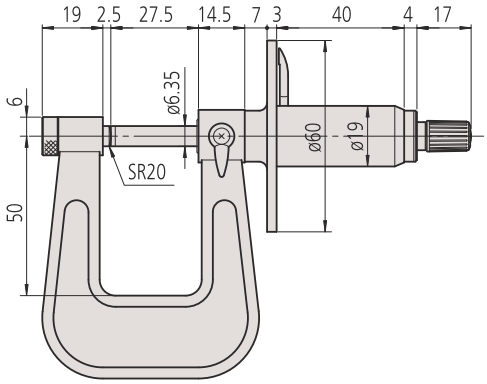
- A deep frame that enables you to measure the thickness of sheet material.
- Easy-to-read graduated dial.

119-202

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Measuring force [N]	Mass [g]
119-202	0–25	0,01 mm	±4 µm	5-10	305

mm



Specifications

Measuring face	Convex anvil and flat spindle, carbide-tipped
Measuring spindle	With spindle lock, ø 6,35 mm
Delivered	Including box

Optional accessories

No.	Description
156-105-10	Micrometer Stand, 45° Angle Type, for Micrometer 0-50mm/0-2"
156-101-10	Micrometer Stand, Adjustable Angle Type, for Micrometer 0-100mm/0-4"

The Series 119 is provided with a dial for making easy and quick reading.

Digimatic Caliper Jaw Micrometers

Series 343

This Digimatic Caliper Jaw Micrometer has been specially designed for measuring in hard-to-reach places.

343-250-30

Functions	Series 343
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

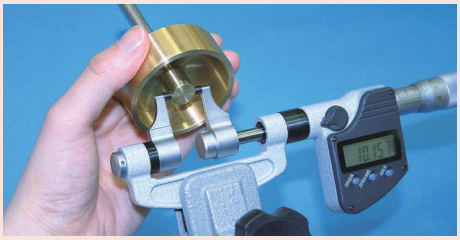
Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward)

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

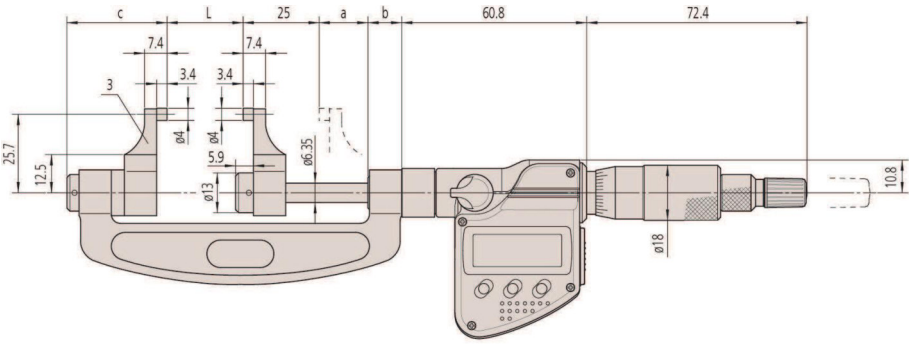
No.	Description
63AAA800	Battery SR44 1,5 V

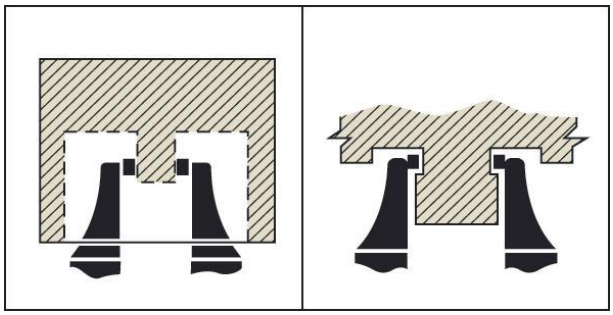


Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	L [mm]
343-250-30	0–25	0,001 mm	±5 µm	3 µm	1-6	0
343-251-30	25–50	0,001 mm	±6 µm	3 µm	1-6	25
343-252-30	50–75	0,001 mm	±7 µm	4 µm	1-6	50
343-253-30	75–100	0,001 mm	±8 µm	4 µm	1-6	75

No.	a [mm]	b [mm]	c [mm]	Mass [g]
343-250-30	16	10,6	32,9	320
343-251-30	16	10,6	32,9	340
343-252-30	16	10,6	32,9	390
343-253-30	16	10,6	32,9	440





Mitutoyo

Caliper Jaw Micrometers

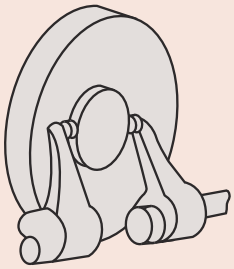
Series 143

This Caliper Jaw Micrometer has been specially designed for measuring in hard-to-reach places.

143-102

Specifications

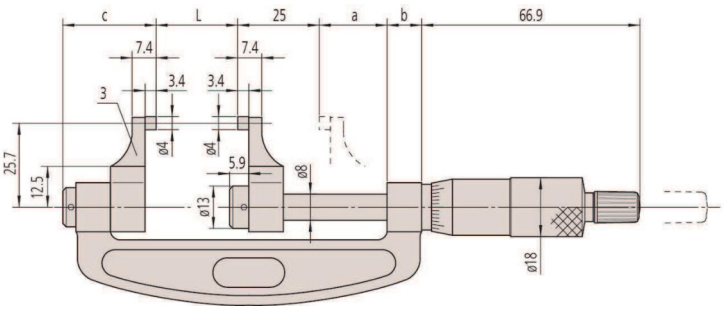
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	ø6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, key, setting standard (from 25 mm upward)



Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	L [mm]
143-101	0–25	0,01 mm	±5 µm	3 µm	1-6	0
143-102	25–50	0,01 mm	±6 µm	3 µm	1-6	25
143-103	50–75	0,01 mm	±7 µm	4 µm	1-6	50
143-104	75–100	0,01 mm	±8 µm	4 µm	1-6	75
143-105	100–125	0,01 mm	±9 µm	4 µm	1-6	100
143-106	125–150	0,01 mm	±9 µm	5 µm	1-6	125
143-107	150–175	0,01 mm	±10 µm	5 µm	1-6	150
143-108	175–200	0,01 mm	±10 µm	5 µm	1-6	175
143-109	200–225	0,01 mm	±11 µm	6 µm	1-6	200
143-110	225–250	0,01 mm	±11 µm	6 µm	1-6	225
143-111	250–275	0,01 mm	±12 µm	6 µm	1-6	250
143-112	275–300	0,01 mm	±12 µm	7 µm	1-6	275

No.	a [mm]	b [mm]	c [mm]	Mass [g]
143-101	31,8	10,6	28,6	210
143-102	31,8	10,6	28,6	230
143-103	31,8	10,6	28,6	280
143-104	31,8	10,6	28,6	330
143-105	31,8	10,6	28,6	400
143-106	31,8	10,6	28,6	450
143-107	31,8	10,6	28,6	520
143-108	31,8	10,6	28,6	600
143-109	27,8	14,5	32,5	690
143-110	27,8	14,5	32,5	790
143-111	27,8	14,5	32,5	900
143-112	27,8	14,5	32,5	920



Digimatic Screw Thread Micrometers with Interchangeable Tips

Functions	Series 326
Data output	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●
2 x PRESET	●

Series 326

This Digimatic Screw Thread Micrometer should be used with optional, interchangeable, anvils/spindle-tips that allow you to measure a wide range of metric/unified and Whitworth screw-thread pitch diameters.

A metric (unified) 60° setting standard is included with all models except those measuring range from 0-25 mm.

Dust- and Water-Protected

TÜVRheinland CERTIFIED

www.tuv.com ID 0000040191

IP65

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Interchangeable anvil/ spindle inserts (optional)
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward) interchangeable tips are optional

Standard accessories

No.	Description
167-261	Setting Standard Screw Thread Micrometer, 60°, Length: 25mm
167-262	Setting Standard Screw Thread Micrometer, 60°, Length: 50mm
167-263	Setting Standard Screw Thread Micrometer, 60°, Length: 75mm

326-251-30 with optional accessories

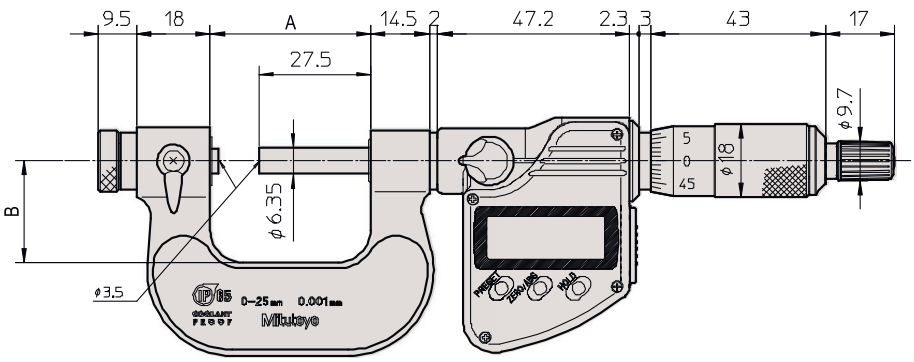
Interchangeable anvils/spindle tips in matching pairs (optional accessories)

Metric

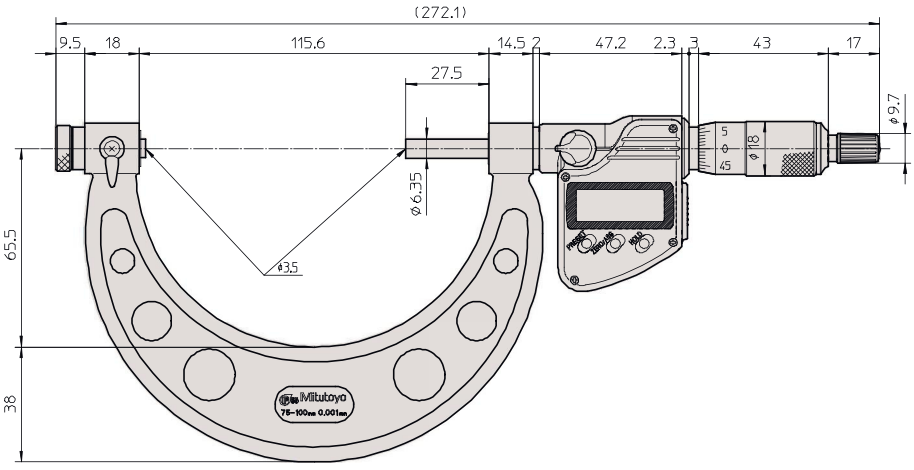
No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Measuring force [N]	A [mm]	B [mm]	Mass [g]
326-251-30	0–25	0,001 mm	±4 µm	5-10	39,5	25	350
326-252-30	25–50	0,001 mm	±4 µm	5-10	64,5	32	380
326-253-30	50–75	0,001 mm	±4 µm	5-10	90	45	470
326-254-30	75–100	0,001 mm	±5 µm	5-10	115,6	65	510

Mitutoyo

Digimatic Screw Thread Micrometers with Interchangeable Tips



0-75 mm



75-100 mm

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth
167-272	Setting Standard Screw Thread Micrometer, 55°, Length: 25mm
167-273	Setting Standard Screw Thread Micrometer, 55°, Length: 50mm
167-274	Setting Standard Screw Thread Micrometer, 55°, Length: 75mm
167-275	Setting Standard Screw Thread Micrometer, 55°, Length: 100mm
126-800	Interchangeable Tip Set (Metric/UNF), 6 pairs
126-810	Interchangeable Tip Set (Whitworth), 10 pairs
126-801	Interchangeable Tips, 0,4-0,5mm/ 64-48TPI
126-802	Interchangeable Tips, 0,6-0,9mm/ 44-28TPI
126-803	Interchangeable Tips, 1-1,75mm/ 24-14TPI
126-804	Interchangeable Tips, 2-3mm/13-9TPI
126-805	Interchangeable Tips, 3,5-5mm/8-5TPI
126-806	Interchangeable Tips, 5,5-7mm/ 4,5-3,5TPI
126-811	Interchangeable Tips, 60-48 TPI
126-812	Interchangeable Tips, 48-40 TPI
126-813	Interchangeable Tips, 40-32 TPI
126-814	Interchangeable Tips, 32-24 TPI
126-815	Interchangeable Tips, 24-18 TPI
126-816	Interchangeable Tips, 18-14 TPI
126-817	Interchangeable Tips, 14-10 TPI
126-818	Interchangeable Tips, 10-7 TPI
126-819	Interchangeable Tips, 7-4,5 TPI
126-820	Interchangeable Tips, 7-5-3,5 TPI

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

Screw Thread Micrometers with Interchangeable Tips

Series 126

This Screw Thread Micrometer should be used with optional, interchangeable, anvils/spindle-tips that allow you to measure a wide range of metric/unified and whitworth screw-thread pitch diameters.

A metric (unified) 60° setting standard is included with all models except those measuring range from 0-25 mm.

126-125 with optional accessories

Interchangeable anvils/spindle tips in matching pairs (optional accessories)

Specifications

Measuring face	Interchangeable anvil/ spindle inserts (optional)
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (60°) (from 25 mm upward), key Interchangeable anvils/spindle tips not included

Standard accessories

No.	Description
167-261	Setting Standard Screw Thread Micrometer, 60°, Length: 25mm
167-262	Setting Standard Screw Thread Micrometer, 60°, Length: 50mm
167-263	Setting Standard Screw Thread Micrometer, 60°, Length: 75mm
167-264	Setting Standard Screw Thread Micrometer, 60°, Length: 100mm
167-265	Setting Standard Screw Thread Micrometer, 60°, Length: 125mm
167-266	Setting Standard Screw Thread Micrometer, 60°, Length: 150mm
167-267	Setting Standard Screw Thread Micrometer, 60°, Length: 175mm
167-268	Setting Standard Screw Thread Micrometer, 60°, Length: 200mm
167-269	Setting Standard Screw Thread Micrometer, 60°, Length: 225mm
167-270	Setting Standard Screw Thread Micrometer, 60°, Length: 250mm
167-271	Setting Standard Screw Thread Micrometer, 60°, Length: 275mm

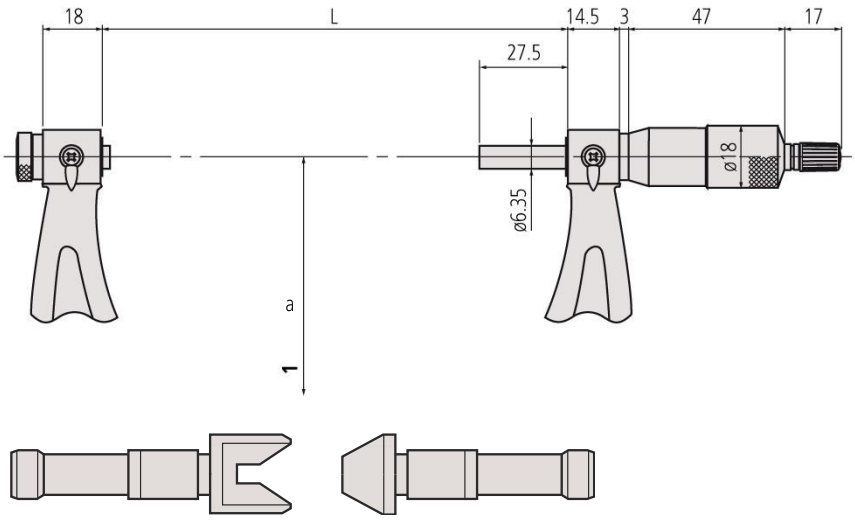
Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Measuring force [N]	L [mm]	a [mm]	Mass [g]
126-125	0–25	0,01 mm	±4 µm	5-10	39,5	25	240
126-126	25–50	0,01 mm	±4 µm	5-10	64,5	32	290
126-127	50–75	0,01 mm	±4 µm	5-10	90	45	390
126-128	75–100	0,01 mm	±5 µm	5-10	115,6	65	450
126-129	100–125	0,01 mm	±5 µm	5-10	140,6	79	530
126-130	125–150	0,01 mm	±5 µm	5-10	165,6	93	620
126-131	150–175	0,01 mm	±6 µm	5-10	190,5	105	730
126-132	175–200	0,01 mm	±6 µm	5-10	214,5	118	860
126-133	200–225	0,01 mm	±6 µm	5-10	240,5	131	1030
126-134	225–250	0,01 mm	±7 µm	5-10	265,5	144	1200
126-135	250–275	0,01 mm	±7 µm	5-10	290,5	156	1370
126-136	275–300	0,01 mm	±7 µm	5-10	314,5	169	1540

Mitutoyo

Screw Thread Micrometers with Interchangeable Tips

mm



Anvil/spindle-tip matching pair

Optional accessories

No.	Description
167-272	Setting Standard Screw Thread Micrometer, 55°, Length: 25mm
167-273	Setting Standard Screw Thread Micrometer, 55°, Length: 50mm
167-274	Setting Standard Screw Thread Micrometer, 55°, Length: 75mm
167-275	Setting Standard Screw Thread Micrometer, 55°, Length: 100mm
167-276	Setting Standard Screw Thread Micrometer, 55°, Length: 125mm
167-277	Setting Standard Screw Thread Micrometer, 55°, Length: 150mm
167-278	Setting Standard Screw Thread Micrometer, 55°, Length: 175mm
167-279	Setting Standard Screw Thread Micrometer, 55°, Length: 200mm
167-280	Setting Standard Screw Thread Micrometer, 55°, Length: 225mm
126-800	Interchangeable Tip Set (Metric/UNF), 6 pairs
126-810	Interchangeable Tip Set (Whitworth), 10 pairs
126-801	Interchangeable Tips, 0,4-0,5mm/ 64-48TPI
126-802	Interchangeable Tips, 0,6-0,9mm/ 44-28TPI
126-803	Interchangeable Tips, 1-1,75mm/ 24-14TPI
126-804	Interchangeable Tips, 2-3mm/13-9TPI
126-805	Interchangeable Tips, 3,5-5mm/8-5TPI
126-806	Interchangeable Tips, 5,5-7mm/ 4,5-3,5TPI
126-811	Interchangeable Tips, 60-48 TPI
126-812	Interchangeable Tips, 48-40 TPI
126-813	Interchangeable Tips, 40-32 TPI
126-814	Interchangeable Tips, 32-24 TPI
126-815	Interchangeable Tips, 24-18 TPI
126-816	Interchangeable Tips, 18-14 TPI
126-817	Interchangeable Tips, 14-10 TPI
126-818	Interchangeable Tips, 10-7 TPI
126-819	Interchangeable Tips, 7-4,5 TPI
126-820	Interchangeable Tips, 7-5-3,5 TPI

Interchangeable Thread Measuring Anvil / Spindle Tip Sets

Series 126

Optional accessories anvils/spindle-tips

Individual measuring anvil/spindle-tip pairs

No.	Half Angle Error	Metric pitch	UNF threads/inch	Withworth threads / inch	Tip angle
126-801	±30'	0,4 - 0,5 mm	64 - 48 TPI		60°
126-802	±20'	0,6 - 0,9 mm	44 - 28 TPI		60°
126-803	±15'	1 - 1,75 mm	24 - 14 TPI		60°
126-804	±10'	2 - 3 mm	13 - 9 TPI		60°
126-805	±10'	3,5 - 5 mm	8 - 5 TPI		60°
126-806	±10'	5,5 - 7 mm	4,5 - 3,5 TPI		60°
126-811	±30'			60 - 48 TPI	55°
126-812	±30'			48 - 40 TPI	55°
126-813	±20'			40 - 32 TPI	55°
126-814	±20'			32 - 24 TPI	55°
126-815	±15'			24 - 18 TPI	55°
126-816	±15'			18 - 14 TPI	55°
126-817	±10'			14 - 10 TPI	55°
126-818	±10'			10 - 7 TPI	55°
126-819	±10'			7 - 4,5 TPI	55°
126-820	±10'			4,5 - 3,5 TPI	55°

Measuring anvil/spindle-tip set Metric UNF (consists of No. 126-801 to 126-806)

No.	Content of Set	Metric pitch	UNF threads/inch	Tip angle
126-800	No. 126-801 to 126-806	0,4 - 7 mm	64 - 3,5 TPI	60°

Measuring anvil/spindle-tip set Whitworth (consists of No. 126-811 to 126-820)

No.	Content of Set	Withworth threads / inch	Tip angle
126-810	No. 126-811 to 126-820	60 - 3,5 TPI	55°

Ø Nominal	Thread pitch P	Pitch Ø d2
M 1	0,25	0,838
M 1,2	0,25	1,038
M 1,4	0,30	1,205
M 1,7	0,35	1,473
M 2	0,40	1,740
M 2,3	0,40	2,040
M 2,6	0,45	2,308
M 3	0,50	2,675
M 3,5	0,60	3,110
M 4	0,70	3,545
M 5	0,80	4,480
M 6	1,00	5,350
M 8	1,25	7,188
M 10	1,50	9,026
M 12	1,75	10,863

Ø Nominal	Thread pitch P	Pitch Ø d2
M 14	2,00	12,701
M 16	2,00	14,701
M 20	2,50	18,376
M 22	2,50	20,376
M 24	3,00	22,051
M 27	3,00	25,051
M 30	3,50	27,727
M 33	3,50	30,727
M 36	4,00	33,402
M 39	4,00	36,402
M 42	4,50	39,077
M 45	4,50	42,077
M 48	5,00	44,752
M 52	5,00	48,752
M 56	5,50	52,428
M 60	5,50	56,428

Screw Thread Micrometers

Series 125

This Screw Thread Micrometer has a fixed anvil, offering the following benefits:

- Fixed anvil type.
- It directly indicates screw pitch diameter, meaning no need for calculation.

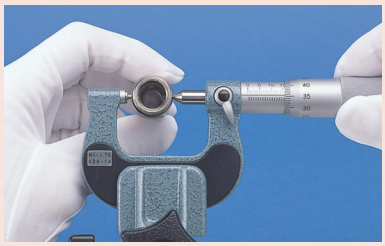
125-103

Specifications

Measuring face	Hardened steel, fixed anvil/spindle
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard 60° (from 25 mm upward), key

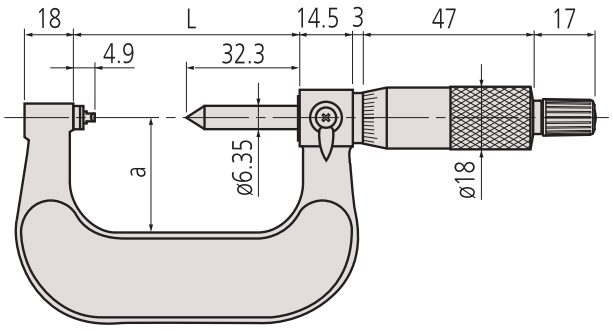
Optional accessories

No.	Description
156-105-10	Micrometer Stand, 45° Angle Type, for Micrometer 0-50mm/0-2"
156-101-10	Micrometer Stand, Adjustable Angle Type, for Micrometer 0-100mm/0-4"

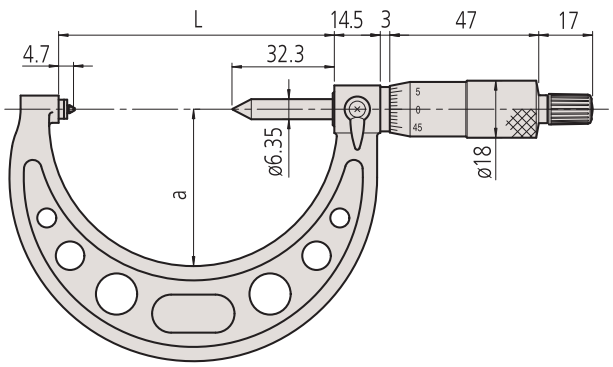


Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Thread to be measured (Metric/ Unified)	Tip angle	L [mm]	a [mm]	Mass [g]
125-101	0–25	0,01 mm	±6 µm	0,4-0,5 mm / 64-48 TPI	60°	37,2	25	200
125-102	0–25	0,01 mm	±6 µm	0,6-0,9 mm / 44-28 TPI	60°	37,2	25	200
125-103	0–25	0,01 mm	±6 µm	1-1,75 mm / 24-14 TPI	60°	37,2	25	200
125-104	0–25	0,01 mm	±6 µm	2-3 mm / 13-9 TPI	60°	37,2	25	200
125-105	0–25	0,01 mm	±6 µm	3,5-5 mm / 8-5 TPI	60°	37,2	25	200
125-106	25–50	0,01 mm	±6 µm	0,4-0,5 mm / 64-48 TPI	60°	62,2	32	250
125-107	25–50	0,01 mm	±6 µm	0,6-0,9 mm / 44-28 TPI	60°	62,2	32	250
125-108	25–50	0,01 mm	±6 µm	1-1,75 mm / 24-14 TPI	60°	62,2	32	250
125-109	25–50	0,01 mm	±6 µm	2-3 mm / 13-9 TPI	60°	62,2	32	250
125-110	25–50	0,01 mm	±6 µm	3,5-5 mm / 8-5 TPI	60°	62,2	32	250
125-111	50–75	0,01 mm	±6 µm	0,6-0,9 mm / 44-28 TPI	60°	87	49	260
125-112	50–75	0,01 mm	±6 µm	1-1,75 mm / 24-14 TPI	60°	87	49	260
125-113	50–75	0,01 mm	±6 µm	2-3 mm / 13-9 TPI	60°	87	49	260
125-114	50–75	0,01 mm	±6 µm	3,5-5 mm / 8-5 TPI	60°	87	49	260
125-115	50–75	0,01 mm	±6 µm	5,5-7 mm / 4,5-3,5 TPI	60°	87	49	260
125-116	75–100	0,01 mm	±7 µm	0,6-0,9 mm / 44-28 TPI	60°	112	63	330
125-117	75–100	0,01 mm	±7 µm	1-1,75 mm / 24-14 TPI	60°	112	63	330
125-118	75–100	0,01 mm	±7 µm	2-3 mm / 13-9 TPI	60°	112	63	330
125-119	75–100	0,01 mm	±7 µm	3,5-5 mm / 8-5 TPI	60°	112	63	330
125-120	75–100	0,01 mm	±7 µm	5,5-7 mm / 4,5-3,5 TPI	60°	112	63	330



0-50 mm



50-100 mm

Digimatic Gear Tooth Micrometers

Functions	Series 324
Data output	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●
PRESET	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Interchangeable anvil/ spindle inserts (optional)
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward) interchangeable tips are optional

Series 324

This Digimatic Gear Tooth Micrometer is designed to measure the over-pin diameter of gears.

TÜVRheinland CERTIFIED — Dust- and Water-Protected — www.tuv.com ID 0000040191

IP65

- It has interchangeable steel or carbide ball inserts (optional accessory) that allow you to measure modules sized between 0,5-5,25 mm.

324-251-30

324-252-30

324-253-30

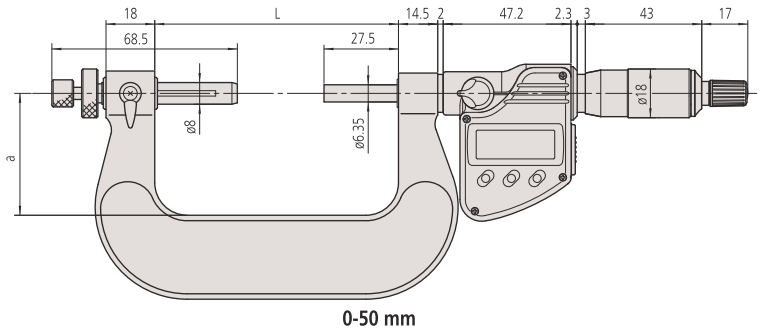
324-254-30

Metric

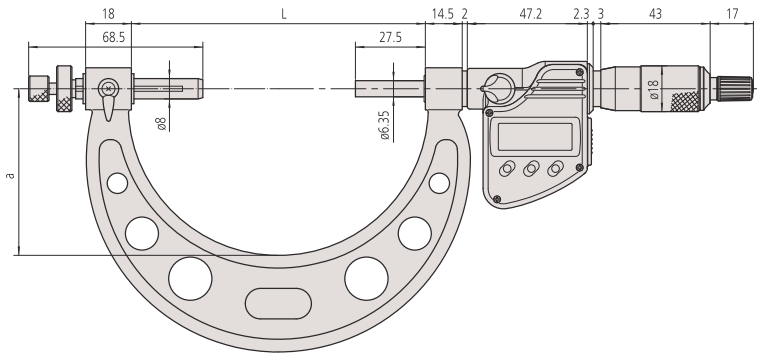
No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Measuring force [N]	L [mm]	a [mm]	Mass [g]
324-251-30	0–25	0,001 mm	±4 µm	5-10	64,5	32	400
324-252-30	25–50	0,001 mm	±4 µm	5-10	90	45	490
324-253-30	50–75	0,001 mm	±4 µm	5-10	115,6	65,5	530
324-254-30	75–100	0,001 mm	±5 µm	5-10	140,6	79	600

Mitutoyo

Digimatic Gear Tooth Micrometers



0-50 mm



50-100 mm

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth
124-801	Interchangeable Ball Anvil/Spindle Tip, 0,8mm
124-802	Interchangeable Ball Anvil/Spindle Tip, 1,0mm
124-821	Interchangeable Ball Anvil/Spindle Tip, 1,5mm
124-805	Interchangeable Ball Anvil/Spindle Tip, 2,0mm
124-822	Interchangeable Ball Anvil/Spindle Tip, 2,5mm
124-807	Interchangeable Ball Anvil/Spindle Tip, 3,0mm
124-823	Interchangeable Ball Anvil/Spindle Tip, 3,5mm
124-810	Interchangeable Ball Anvil/Spindle Tip, 4,0mm
124-824	Interchangeable Ball Anvil/Spindle Tip, 4,5mm
124-812	Interchangeable Ball Anvil/Spindle Tip, 5,0mm
124-814	Interchangeable Ball Anvil/Spindle Tip, 6,0mm
124-816	Interchangeable Ball Anvil/Spindle Tip, 7,0mm
124-819	Interchangeable Ball Anvil/Spindle Tip, 8,0mm
124-803	Interchangeable Ball Anvil/Spindle Tip, 1,191mm (3/64")
124-804	Interchangeable Ball Anvil/Spindle Tip, 1,588mm (1/16")
124-806	Interchangeable Ball Anvil/Spindle Tip, 2,381mm (3/32")
124-808	Interchangeable Ball Anvil/Spindle Tip, 3,175mm (1/8")
124-809	Interchangeable Ball Anvil/Spindle Tip, 3,969mm (5/32")
124-811	Interchangeable Ball Anvil/Spindle Tip, 4,763mm (3/16")
124-813	Interchangeable Ball Anvil/Spindle Tip, 5,556mm (7/32")
124-815	Interchangeable Ball Anvil/Spindle Tip, 6,35mm (1/4")
124-817	Interchangeable Ball Anvil/Spindle Tip, 7,144mm (9/32")
124-818	Interchangeable Ball Anvil/Spindle Tip, 7,938mm (5/16")
124-820	Interchangeable Ball Anvil/Spindle Tip, 8,731mm (11/32")

Gear Tooth Micrometers

Series 124

Measuring the over-pin diameter of gears.

- It has interchangeable steel or carbide ball inserts (optional accessory) that allow you to measure modules sized between 0,5-5,25 mm.

124-173 with optional accessories

Specifications

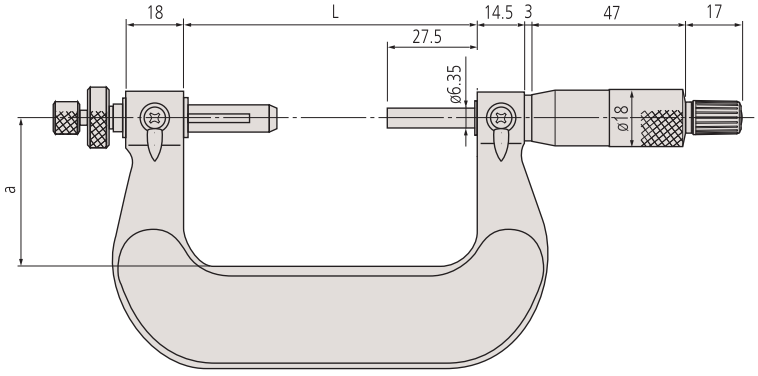
Measuring face	Interchangeable anvil/ spindle inserts (optional)
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key, interchangeable anvils/spindle tips not included

Optional accessories

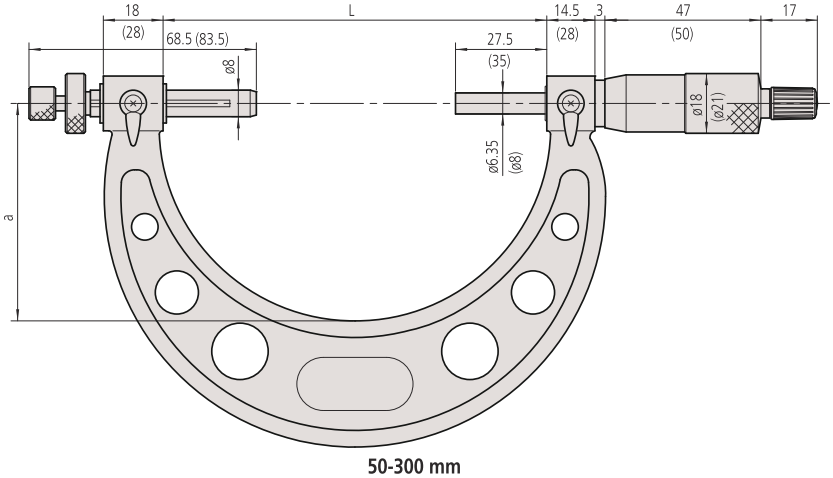
No.	Description
124-801	Interchangeable Ball Anvil/Spindle Tip, 0,8mm
124-802	Interchangeable Ball Anvil/Spindle Tip, 1,0mm
124-821	Interchangeable Ball Anvil/Spindle Tip, 1,5mm
124-805	Interchangeable Ball Anvil/Spindle Tip, 2,0mm
124-822	Interchangeable Ball Anvil/Spindle Tip, 2,5mm
124-807	Interchangeable Ball Anvil/Spindle Tip, 3,0mm
124-823	Interchangeable Ball Anvil/Spindle Tip, 3,5mm
124-810	Interchangeable Ball Anvil/Spindle Tip, 4,0mm
124-824	Interchangeable Ball Anvil/Spindle Tip, 4,5mm
124-812	Interchangeable Ball Anvil/Spindle Tip, 5,0mm
124-814	Interchangeable Ball Anvil/Spindle Tip, 6,0mm
124-816	Interchangeable Ball Anvil/Spindle Tip, 7,0mm
124-819	Interchangeable Ball Anvil/Spindle Tip, 8,0mm
124-803	Interchangeable Ball Anvil/Spindle Tip, 1,191mm (3/64")
124-804	Interchangeable Ball Anvil/Spindle Tip, 1,588mm (1/16")
124-806	Interchangeable Ball Anvil/Spindle Tip, 2,381mm (3/32")
124-808	Interchangeable Ball Anvil/Spindle Tip, 3,175mm (1/8")
124-809	Interchangeable Ball Anvil/Spindle Tip, 3,969mm (5/32")
124-811	Interchangeable Ball Anvil/Spindle Tip, 4,763mm (3/16")
124-813	Interchangeable Ball Anvil/Spindle Tip, 5,556mm (7/32")
124-815	Interchangeable Ball Anvil/Spindle Tip, 6,35mm (1/4")
124-817	Interchangeable Ball Anvil/Spindle Tip, 7,144mm (9/32")
124-818	Interchangeable Ball Anvil/Spindle Tip, 7,938mm (5/16")
124-820	Interchangeable Ball Anvil/Spindle Tip, 8,731mm (11/32")

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Measuring force [N]	L [mm]	a [mm]	Mass [g]
124-173	0–25	0,01 mm	±4 µm	5-10	64,5	32	295
124-174	25–50	0,01 mm	±4 µm	5-10	90	45	400
124-175	50–75	0,01 mm	±4 µm	5-10	115,6	65	460
124-176	75–100	0,01 mm	±5 µm	5-10	140,6	79	540
124-177	100–125	0,01 mm	±5 µm	5-10	165,6	93	640
124-178	125–150	0,01 mm	±5 µm	5-10	190,5	105	760
124-179	150–175	0,01 mm	±6 µm	5-10	214,5	120	900
124-180	175–200	0,01 mm	±6 µm	5-10	240,5	131	1060
124-181	200–225	0,01 mm	±6 µm	5-10	265,5	144	1230
124-182	225–250	0,01 mm	±7 µm	5-10	290,5	156	1430
124-183	250–275	0,01 mm	±7 µm	5-10	314,5	171	1620
124-195	275–300	0,01 mm	±7 µm	5-10	353	187	2070



0-50 mm



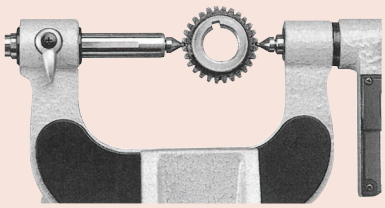
50-300 mm

Mitutoyo

Interchangeable Ball Anvil/Spindle Tip Sets

Series 124/ 324

These optional interchangeable anvils allow you to measure the over-pin diameter of gears.



124-801

124-801

124-802

124-807

124-822

Metric

No.	Diameter (D)	Remarks	Measurable module [mm]	Diameter over balls
124-801	0,8 mm	Carbide-tipped type	0,5 - 0,55	50 mm
124-802	1 mm	Carbide-tipped type	0,6 - 0,65	45 mm
124-821	1,5 mm	Carbide-tipped type	0,9 - 1	28 - 26 mm
124-805	2 mm	Carbide-tipped type	1,25	22 mm
124-822	2,5 mm	Steel type	1,5	17 mm
124-807	3 mm	Steel type	1,75	15 mm
124-823	3,5 mm	Steel type	2	13 mm
124-810	4 mm	Steel type	2,25	11 mm
124-824	4,5 mm	Steel type	2,5	10 mm
124-812	5 mm	Steel type	2,75	9 mm
124-814	6 mm	Steel type	3,5	7 mm
124-816	7 mm	Steel type	4	6,5 mm
124-819	8 mm	Steel type	4,75	5,5 mm

Digimatic Disc Micrometers

Functions	Series 323
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

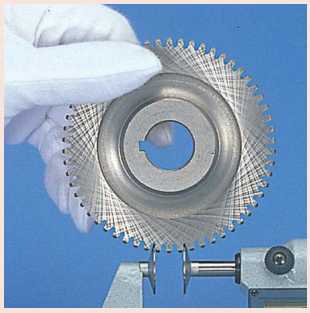
Display	LCD, character height 7,5 mm
Measuring face	Hardened steel
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward)

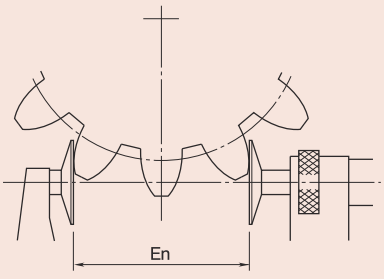
Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V





Root tangent length of gear (En)

Series 323

This Digimatic Disc Micrometer enables you to measure hard-to-reach features, offering you the following benefits:

- Measuring the root tangent length of spur and helical gears.
- You can measure recessed features that are difficult to reach with a standard micrometer.

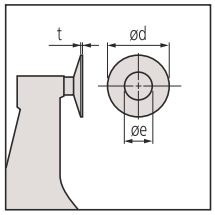
Dust- and Water-Protected

TÜVRheinland CERTIFIED

www.tuv.com ID 0000040191

IP65

323-250-30

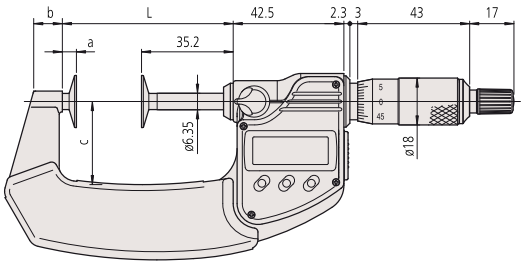


Metric

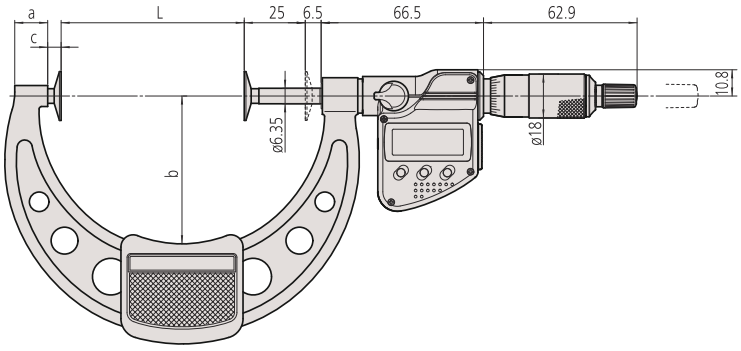
No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	Measurable module [mm]
323-250-30	0–25	0,001 mm	±4 µm	4 µm	3-8	0,5 - 6
323-251-30	25–50	0,001 mm	±4 µm	4 µm	3-8	0,5 - 6
323-252-30	50–75	0,001 mm	±6 µm	6 µm	3-8	0,5 - 6
323-253-30	75–100	0,001 mm	±6 µm	6 µm	3-8	0,5 - 6

No.	L [mm]	a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	t [mm]	Mass [g]
323-250-30	39,7	4,5	9,2	25	20	8	0,7	290
323-251-30	65,6	5,4	11	31	20	8	0,7	355
323-252-30	90,7	5,5	12,2	50	20	8	0,7	555
323-253-30	112,5	5,5	13,5	60	20	8	0,7	610

mm



0-75 mm



75-100 mm

Mitutoyo

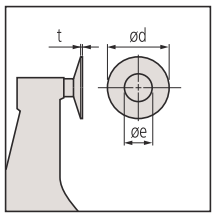
Disc Micrometers

Series 123

This Disc Micrometer enables you to measure hard-to-reach features, offering you the following benefits:

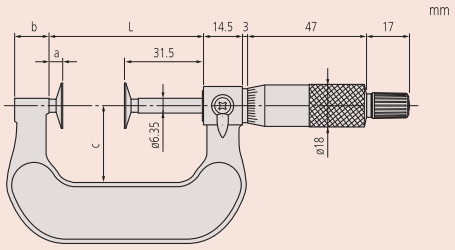
- Measuring the root tangent length of spur and helical gears.
- You can measure recessed features that are difficult to reach with a standard micrometer.

123-101

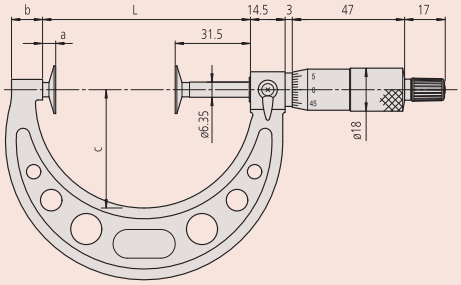


Specifications

Measuring face	Hardened steel or carbide-tipped
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, key, setting standard (from 25 mm upward)



0-50 mm



50-300 mm

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	Measurable module [mm]	L [mm]
123-101	0–25	0,01 mm	±4 µm	4 µm	5-10	0,5 - 6	37,5
123-102	25–50	0,01 mm	±4 µm	4 µm	5-10	0,5 - 6	62,5
123-103	50–75	0,01 mm	±6 µm	6 µm	5-10	0,5 - 6	87
123-104	75–100	0,01 mm	±6 µm	6 µm	5-10	0,5 - 6	112
123-105	100–125	0,01 mm	±7 µm	7 µm	5-10	0,7 - 11	137,5
123-106	125–150	0,01 mm	±7 µm	7 µm	5-10	0,7 - 11	162,5
123-107	150–175	0,01 mm	±8 µm	8 µm	5-10	0,7 - 11	187,5
123-108	175–200	0,01 mm	±8 µm	8 µm	5-10	0,7 - 11	212,5
123-109	200–225	0,01 mm	±8 µm	8 µm	5-10	0,7 - 11	237,5
123-110	225–250	0,01 mm	±9 µm	9 µm	5-10	0,7 - 11	262,5
123-111	250–275	0,01 mm	±9 µm	9 µm	5-10	0,7 - 11	287,5
123-112	275–300	0,01 mm	±9 µm	9 µm	5-10	0,7 - 11	312,5

No.	a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	t [mm]	Mass [g]
123-101	6	14	25	20	8	0,7	200
123-102	6	14	32	20	8	0,7	250
123-103	5,5	11	49	20	8	0,7	300
123-104	5,5	11	63	20	8	0,7	375
123-105	6	12	79	30	12	1	520
123-106	6	15	94	30	12	1	570
123-107	6	16	106	30	12	1	730
123-108	6	15	118	30	12	1	890
123-109	6	14	130	30	12	1	1000
123-110	6	14	143	30	12	1	1200
123-111	6	15	156	30	12	1	1410
123-112	6	15	169	30	12	1	1680

Metric

With carbide-tipped discs

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Remarks	Measuring force [N]	Measurable module [mm]
123-113	0–25	0,01 mm	±4 µm	4 µm	Disks have carbide tips	5-10	0,5 - 6
123-114	25–50	0,01 mm	±4 µm	4 µm	Disks have carbide tips	5-10	0,5 - 6
123-115	50–75	0,01 mm	±6 µm	6 µm	Disks have carbide tips	5-10	0,5 - 6
123-116	75–100	0,01 mm	±6 µm	6 µm	Disks have carbide tips	5-10	0,5 - 6

No.	L [mm]	a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	t [mm]	Mass [g]
123-113	39,7	4,5	9,2	25	20	9,8	0,7	200
123-114	65,6	5,4	11	31	20	9,8	0,7	250
123-115	90,7	5,5	12,2	50	20	9,8	0,7	300
123-116	112,5	5,5	13,5	60	20	9,8	0,7	375

Digimatic Disc Micrometers Non-Rotating Spindle Type

Functions	Series 369
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

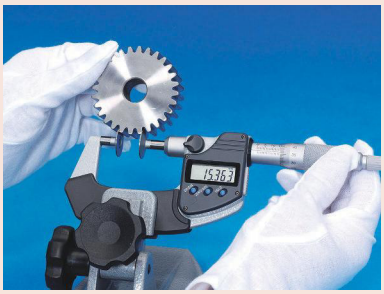
Display	LCD, character height 7,5 mm
Measuring face	Hardened steel
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward)

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

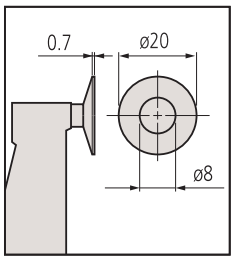


Series 369

This Digimatic Disc Micrometer allows you to measure a range of different materials.
It offers you the following benefits:

- Non-rotating spindle and disc-shaped measuring surfaces.
- Measuring the root tangent length of spur and helical gears
- Measurable range of gear pitch: 0,5-6 module
- Suitable for measuring felt, rubber, cardboard, fabric etc.

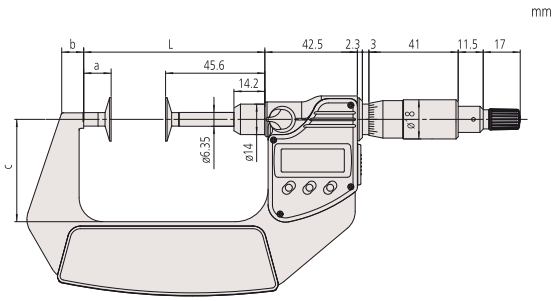
369-250-30



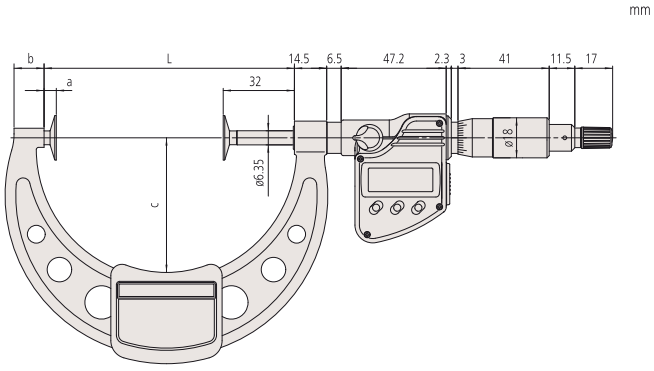
Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	Measurable module [mm]	L [mm]
369-250-30	0–25	0,001 mm	±4 µm	4 µm	3-8	0,5 - 6	58,5
369-251-30	25–50	0,001 mm	±4 µm	4 µm	3-8	0,5 - 6	83,5
369-252-30	50–75	0,001 mm	±6 µm	6 µm	3-8	0,5 - 6	108,5
369-253-30	75–100	0,001 mm	±6 µm	6 µm	3-8	0,5 - 6	112,5

No.	a [mm]	b [mm]	c [mm]	Mass [g]
369-250-30	12,9	7	32	340
369-251-30	12,9	9,8	47	480
369-252-30	12,9	11,2	60	635
369-253-30	5,5	13,5	60	775



0-75 mm



75-100 mm

Mitutoyo

ABSOLUTE Digimatic Disc Micrometers Quickmike

Series 369 and Series 227

ABSOLUTE®

IP65

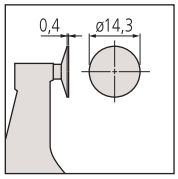
369-411-20
369-412-20

The ABSOLUTE Digimatic Disc Micrometer Quickmike allows you to measure with a fast spindle feed of 10 mm per thimble rotation.
It offers you the following benefits:

- Suitable for measuring felt, rubber, cardboard, fabric etc.
- Suitable to measure root tangent length of spur gears and helical gears.
- With a non-rotating spindle and disc-shaped measuring surface.
- Measuring force is adjustable for various kinds of workpieces (series 227)

369-411-20

227-221-20



Series 227 without recess

Functions	Series 369 and Series 227
Data output	●
ON/OFF	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Low voltage alarm	●
HOLD	●

Specifications

Display	LCD, character height 10 mm
Measuring face	Hardened steel, micro-lap finish
Measuring spindle	Non-rotating, spindle feed 10 mm
Power supply	1 battery SR-44
Battery life	Approx. 5 years
Delivered	Including box, 1 battery, setting standard (from 25 mm upward)

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD790B	Connection Cable B for U-WAVE, with Data Button for IP Micrometer Type

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	Measurable module [mm]	L [mm]
369-411-20	0–30	0,001 mm	±4 µm	4 µm	3-8	0,5 - 6	0
369-412-20	25–55	0,001 mm	±4 µm	4 µm	3-8	0,5 - 6	25

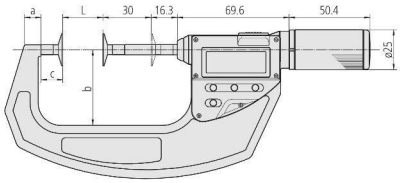
No.	a [mm]	b [mm]	c [mm]	Mass [g]
369-411-20	8,5	36	13,5	360
369-412-20	10,3	47	13,5	490

Metric

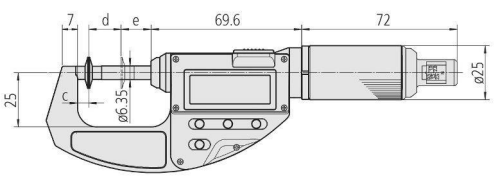
Quickmike type with adjustable measuring force

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force settings [N]	Measuring force accuracy (1) [N]	Measurable module [mm]
227-221-20	0–15	0,001 mm	±4 µm	3 µm	0,5 / 1 / 1,5 / 2 / 2,5	±0,1 + (force setting/10)	0,4-3
227-223-20	0–10	0,001 mm	±4 µm	3 µm	2 / 4 / 6 / 8 / 10	±0,4 + (force setting/10)	0,4-3

No.	c [mm]	d [mm]	e [mm]	Mass [g]
227-221-20	5,2	15	13,8	300
227-223-20	5,2	10	18,8	340



369-411-20, 369-412-20



227-221-20, 227-223-20

Ajustable Measuring Force
227-221-20
227-223-20

(1) Only valid for instrument orientation within ±3 degrees of horizontal when measuring.

Disc Micrometers Non-Rotating Spindle Type

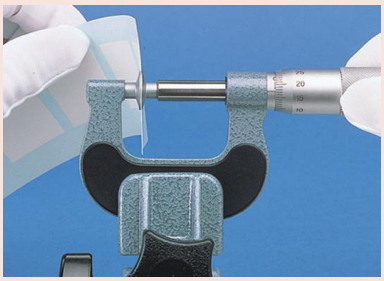
Series 169

This Disc Micrometer has a non-rotating spindle and allows you measure a range of different materials.
It offers you the following benefits:

- It features a non-rotating spindle and disc-shaped measuring surfaces.
- Measuring the root tangent length of spur and helical gears
- Measurable range of gear pitch: 0,5-6 module
- It's suitable for measuring materials such as felt, rubber, cardboard and fabric.

Specifications

Measuring face	Hardened steel, micro-lap finish
Measuring spindle	Spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key

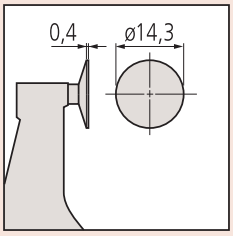


169-101-10

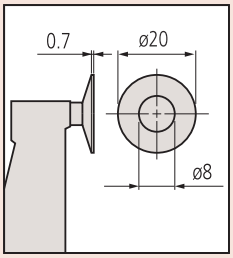
169-201-10

Metric

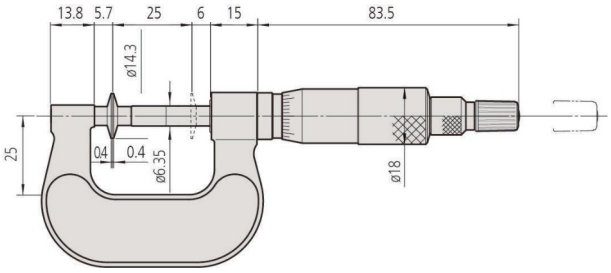
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
169-101-10	0–25	0,01mm	±4 µm	3 µm	8,02 N ± 0,8 N	0	13,8	25	5,7	230
169-201-10	0–25	0,01mm	±4 µm	4 µm	3 - 8 N	0	13,8	25	5,7	230
169-202-10	25–50	0,01mm	±4 µm	4 µm	3 - 8 N	25	13,8	32	5,7	280
169-205-10	50–75	0,01mm	±6 µm	6 µm	3 - 8 N	50	12	49	5,5	315
169-207-10	75–100	0,01mm	±6 µm	6 µm	3 - 8 N	75	14	63	5,5	400



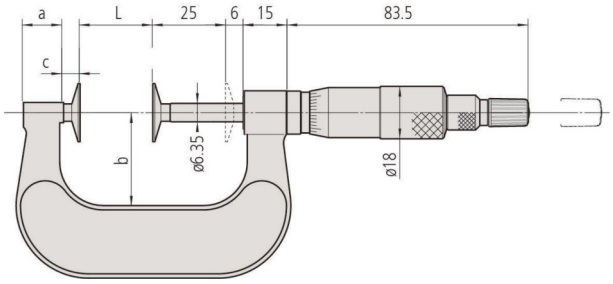
169-101-10 no central recess



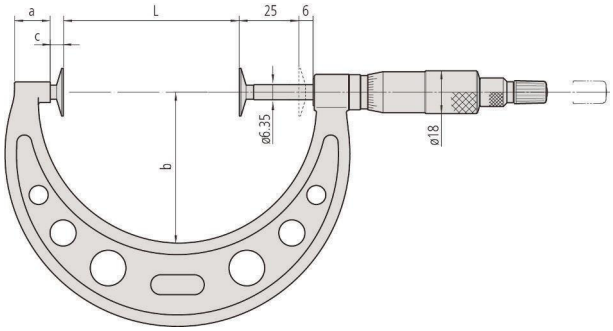
With annular measuring surfaces



169-101-10



0-50 mm



50-100 mm

Digimatic Spline Micrometers

Series 331

This Digimatic Spline Micrometer makes it easy for you to measure grooves and shaped parts. It offers you the following benefits:

- Anvil and spindle are of small diameter for measuring splined shafts, slots and keyways.
- Excellent resistance against water and dust (IP65 protection level) enables this micrometer to be used in machining situations that include splashing coolant fluid.

Dust- and Water-Protected
TÜVRheinland CERTIFIED
www.tuv.com ID 0000040191

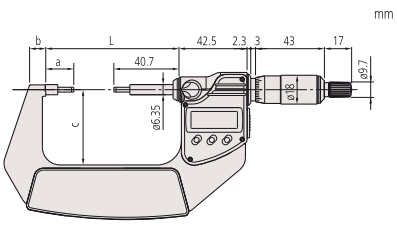
IP65

331-251-30

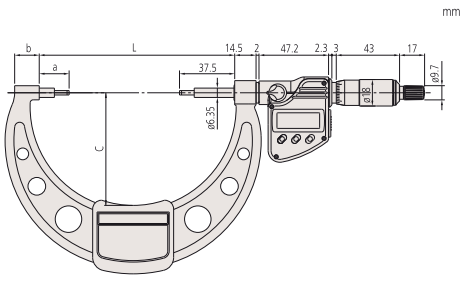
Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Anvil / Spindle	Measuring force [N]
331-251-30	0–25	0,001 mm	±2 µm	2 µm	Type A, D=3 mm	5-10
331-261-30	0–25	0,001 mm	±2 µm	2 µm	Type B, D=2 mm	5-10
331-252-30	25–50	0,001 mm	±2 µm	2 µm	Type A, D=3 mm	5-10
331-262-30	25–50	0,001 mm	±2 µm	2 µm	Type B, D=2 mm	5-10
331-253-30	50–75	0,001 mm	±2 µm	2 µm	Type A, D=3 mm	5-10
331-263-30	50–75	0,001 mm	±2 µm	2 µm	Type B, D=2 mm	5-10
331-254-30	75–100	0,001 mm	±3 µm	3 µm	Type A, D=3 mm	5-10
331-264-30	75–100	0,001 mm	±3 µm	3 µm	Type B, D=2 mm	5-10

No.	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
331-251-30	58,2	17,5	7,3	32,5	330
331-261-30	58,2	17,5	7,3	32,5	330
331-252-30	83,2	17,5	10,1	47	470
331-262-30	83,2	17,5	10,1	47	470
331-253-30	108,2	17,5	11,5	60	625
331-263-30	108,2	17,5	11,5	60	625
331-254-30	132,8	20,3	16,7	76	565
331-264-30	132,8	20,3	16,7	76	565



0-75 mm



75-100 mm

Functions	Series 331
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	
HOLD	●

Specifications

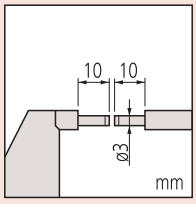
Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward)

Optional accessories

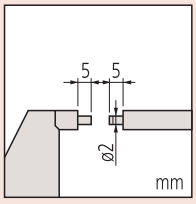
No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V



Type A



Type B

Spline Micrometers

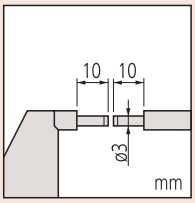
Series 111

This Spline Micrometer makes it easy for you to measure grooves and shaped parts.
It offers you the following benefits:

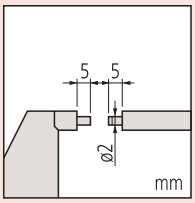
- Stepped measuring surfaces.
- Suitable for measuring grooves, splined shafts, recesses, shaped parts, etc.

Specifications

Measuring face	Carbide-tipped, micro-lap finish, stepped
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key



Type A



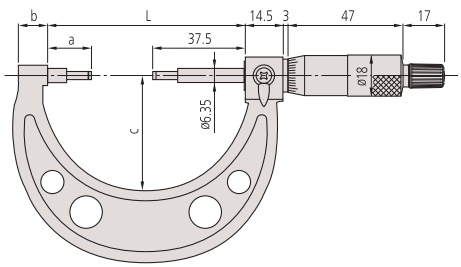
Type B

111-115

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Anvil / Spindle	Measuring force [N]	L [mm]
111-115	0–25	0,01 mm	±3 µm	2 µm	Type A, D=3 mm	5-10	54,5
111-215	0–25	0,01 mm	±3 µm	2 µm	Type B, D=2 mm	5-10	54,5
111-116	25–50	0,01 mm	±3 µm	2 µm	Type A, D=3 mm	5-10	79,5
111-117	50–75	0,01 mm	±3 µm	2 µm	Type A, D=3 mm	5-10	104,5
111-118	75–100	0,01 mm	±4 µm	3 µm	Type A, D=3 mm	5-10	132,3
111-119	100–125	0,01 mm	±4 µm	3 µm	Type A, D=3 mm	5-10	157,7
111-120	125–150	0,01 mm	±4 µm	3 µm	Type A, D=3 mm	5-10	183,1
111-121	150–175	0,01 mm	±5 µm	3 µm	Type A, D=3 mm	5-10	208,3
111-122	175–200	0,01 mm	±5 µm	4 µm	Type A, D=3 mm	5-10	233,7
111-123	200–225	0,01 mm	±5 µm	4 µm	Type A, D=3 mm	5-10	257,5
111-124	225–250	0,01 mm	±6 µm	4 µm	Type A, D=3 mm	5-10	283,5
111-125	250–275	0,01 mm	±6 µm	4 µm	Type A, D=3 mm	5-10	308,5
111-126	275–300	0,01 mm	±6 µm	5 µm	Type A, D=3 mm	5-10	333,5

No.	a [mm]	b [mm]	c [mm]	Mass [g]
111-115	17,5	10	38	205
111-215	17,8	10	38	205
111-116	17,8	12	49	305
111-117	17,8	14	60	370
111-118	20,3	16,7	79	500
111-119	20,7	18,8	94	655
111-120	21,1	19,1	106	710
111-121	21,3	18,2	118	900
111-122	21,7	16,8	130	1040
111-123	20,5	18	143	1245
111-124	21,5	18	156	1395
111-125	21,5	18	169	1555
111-126	21,5	18	181	1975



Mitutoyo

Digimatic Tube Micrometers

Series 395

This Digimatic Tube Micrometer allows you to measure curved surfaces such as the wall thickness of tubes, bearings and rings.

Dust- and Water-Protected

TÜVRheinland CERTIFIED

www.tuv.com ID 0000040191

IP65

395-251-30

Metric

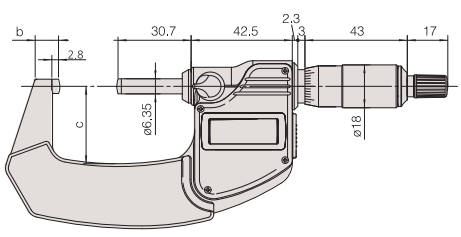
Model with spherical anvil

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Anvil / Spindle	Measuring force [N]	D [mm]	b [mm]	c [mm]	Mass [g]
395-251-30	0–25	0,001 mm	±2 µm	Type A, spherical anvil SR=4 mm/flat spindle	5-10	15	9	25	270
395-252-30	25–50	0,001 mm	±2 µm	Type A, spherical anvil SR=4 mm/flat spindle	5-10	15	9,8	32	330
395-253-30	50–75	0,001 mm	±2 µm	Type A, spherical anvil SR=4 mm/flat spindle	5-10	19	12,6	47	470
395-254-30	75–100	0,001 mm	±3 µm	Type A, spherical anvil SR=4 mm/flat spindle	5-10	20	14	60	625

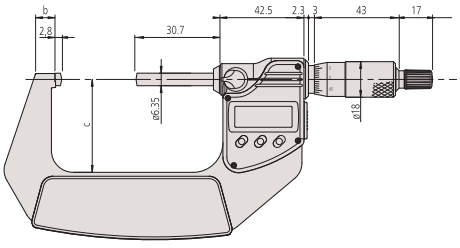
Metric

Model with spherical anvil and spindle

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Anvil / Spindle	Measuring force [N]	D [mm]	b [mm]	c [mm]	Mass [g]
395-271-30	0–25	0,001 mm	±2 µm	Type B, spherical anvil and spindle SR=4 mm	5-10	15	9	25	270
395-272-30	25–50	0,001 mm	±2 µm	Type B, spherical anvil and spindle SR=4 mm	5-10	15	9,8	32	330
395-273-30	50–75	0,001 mm	±2 µm	Type B, spherical anvil and spindle SR=4 mm	5-10	19	12,6	32	470
395-274-30	75–100	0,001 mm	±3 µm	Type B, spherical anvil and spindle SR=4 mm	5-10	20	14	60	625



0-50 mm



50-100 mm

Functions	Series 395
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

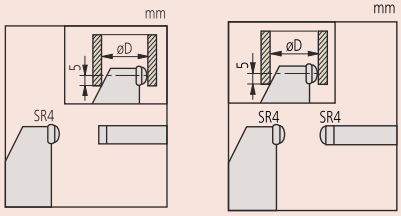
Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward)

Optional accessories

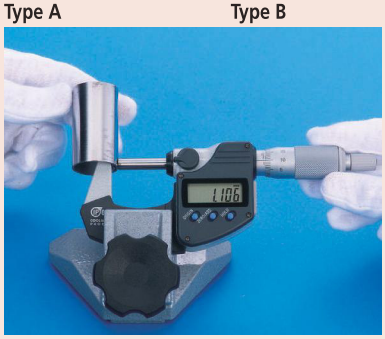
No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V



Type A Type B



Digimatic Tube Micrometers

Functions	Series 395
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Series 395

This Digimatic Tube Micrometer allows you to measure curved surfaces such as the wall thickness of tubes, bearings and rings. Spherical and cylindrical anvil type.

Dust- and Water-Protected

TÜVRheinland CERTIFIED

www.tuv.com ID 0000040191

IP65

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped, micro-lap finish (spindle) anvil: hardened steel
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward)

395-261-30

395-262-30

395-263-30

395-264-30

Optional accessories

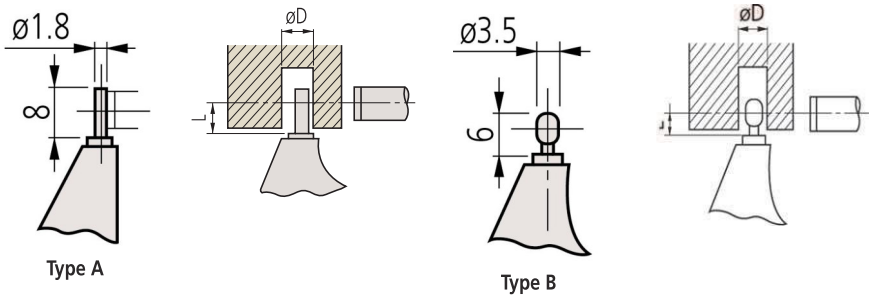
No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

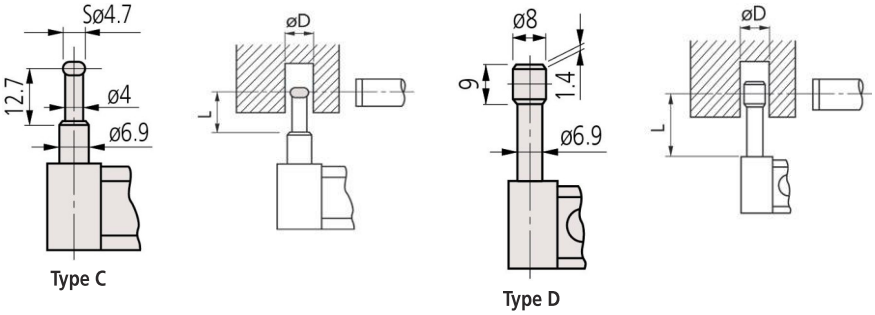
Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Anvil / Spindle	Measuring force [N]	L [mm]	D [mm]	Mass [g]
395-261-30	0–25	0,001 mm	±3 µm	Type A, pin D=1,8 mm/flat spindle	3-8	4	2	270
395-262-30	0–25	0,001 mm	±3 µm	Type B, spherical pin D=3,5 mm/ flat spindle	3-8	4	3,6	270
395-263-30	0–25	0,001 mm	±3 µm	Type C, spherical pin D=4,7 mm/ flat spindle	3-8	12	4,8	310
395-264-30	0–25	0,001 mm	±3 µm	Type D, cylindrical pin D=8 mm/ flat spindle	3-8	22	8,2	310



Type A

Type B



Type C

Type D

Mitutoyo

Tube Micrometers

Series 115

This Tube Micrometer allows you to measure curved surfaces such as the wall thickness of tubes, bearings and rings.

115-215

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Anvil / Spindle	Measuring force [N]	L [mm]	D [mm]	Mass [g]
115-302	0–25	0,01 mm	±3 µm	Type A, pin D=1,8 mm/ flat spindle	5-10	4	2	180
115-308	0–25	0,01 mm	±3 µm	Type B, spherical pin D=3,5 mm/ flat spindle	5-10	4	3,6	180
115-303	25–50	0,01 mm	±3 µm	Type A, pin D=1,8 mm/ flat spindle	5-10	4	2	240
115-309	25–50	0,01 mm	±3 µm	Type B, spherical pin D=3,5 mm/ flat spindle	5-10	4	3,6	240
115-315	0–25	0,01 mm	±3 µm	Type C, spherical pin D=4,7 mm/ flat spindle	3-8	12	4,8	180
115-316	0–25	0,01 mm	±3 µm	Type D, cylindrical pin D=8 mm/ flat spindle	3-8	22	8,2	180

Metric Model with spherical anvil

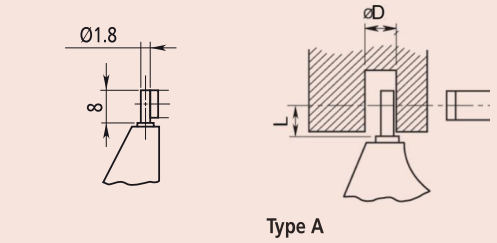
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Anvil / Spindle	Measuring force [N]	D [mm]	Mass [g]
115-115	0–25	0,01 mm	±3 µm	Type E, sperical anvil SR=4 mm/ flat spindle	5-10	10	180
115-116	25–50	0,01 mm	±3 µm	Type E, sperical anvil SR=4 mm/ flat spindle	5-10	11	240
115-117	50–75	0,01 mm	±3 µm	Type E, sperical anvil SR=4 mm/ flat spindle	5-10	17	315
115-118	75–100	0,01 mm	±4 µm	Type E, sperical anvil SR=4 mm/ flat spindle	5-10	18	375

Metric Model with spherical anvil and spindle face

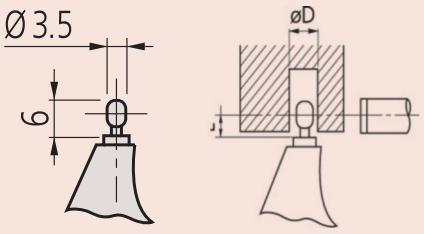
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Anvil / Spindle	Measuring force [N]	D [mm]	Mass [g]
115-215	0–25	0,01 mm	±3 µm	Type F, spherical anvil and spindle SR=4 mm	5-10	10	180
115-216	25–50	0,01 mm	±3 µm	Type F, spherical anvil and spindle SR=4 mm	5-10	11	240
115-217	50–75	0,01 mm	±3 µm	Type F, spherical anvil and spindle SR=4 mm	5-10	17	315
115-218	75–100	0,01 mm	±4 µm	Type F, spherical anvil and spindle SR=4 mm	5-10	18	375

Specifications

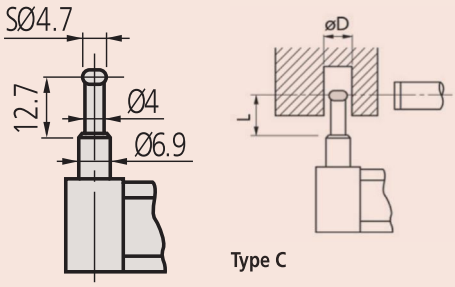
Measuring face	Spindle and anvil: carbide-tipped, micro-lap finish (115-1xx, 115-2xx) spindle: carbide-tipped anvil: hardened steel (115-3xx)
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key



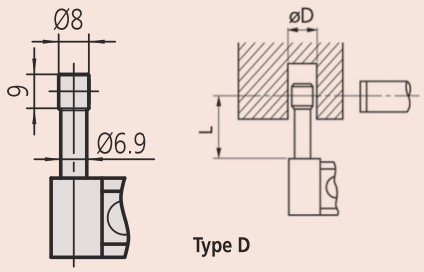
Type A



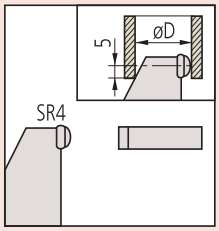
Type B



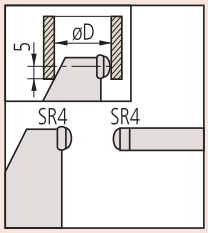
Type C



Type D



Type E



Type F

Digimatic Point Micrometers

Functions	Series 342
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●

Specifications

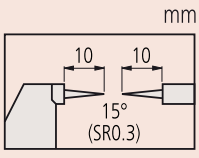
Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped and conical spindle and anvil, measuring point radius 0,3 mm
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward)

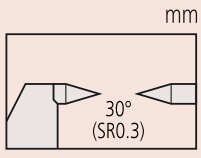
Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V





Series 342

This Digimatic Point Micrometer features a pointed anvil and spindle, and offers the following benefits:

- Its pointed anvil and spindle has a choice of included angle, ending in small-radius contact points.
- You can use it to measure grooves, steps and similar.

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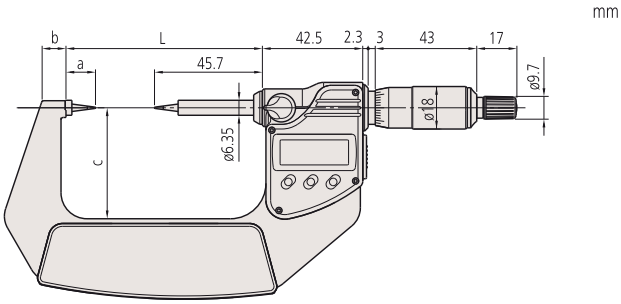
IP65

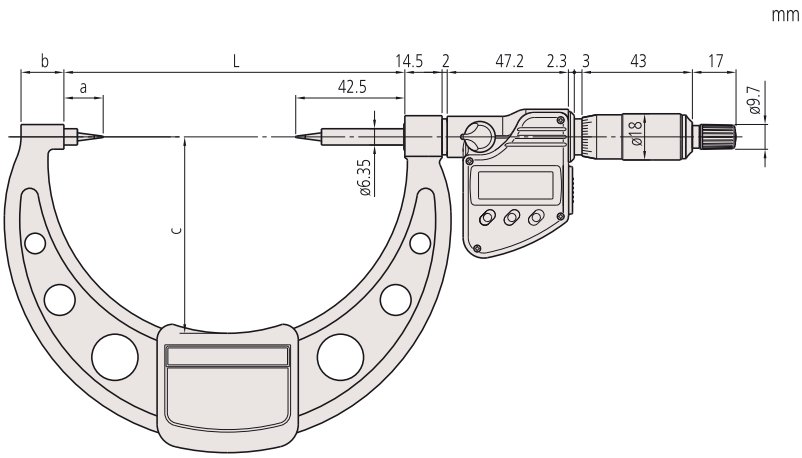
342-251-30

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Tip	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
342-251-30	0–25	0,001 mm	±2 µm	15°	3-8	58,2	12,5	7,3	32	330
342-261-30	0–25	0,001 mm	±2 µm	30°	3-8	58,2	12,5	7,3	32	330
342-252-30	25–50	0,001 mm	±2 µm	15°	3-8	83,2	12,5	10,1	47	470
342-262-30	25–50	0,001 mm	±2 µm	30°	3-8	83,2	12,5	10,1	47	470
342-253-30	50–75	0,001 mm	±2 µm	15°	3-8	108,2	12,5	11,5	60	625
342-263-30	50–75	0,001 mm	±2 µm	30°	3-8	108,2	12,5	11,5	60	625
342-254-30	75–100	0,001 mm	±3 µm	15°	3-8	132,8	15,3	16,7	76	565
342-264-30	75–100	0,001 mm	±3 µm	30°	3-8	132,8	15,3	16,7	76	565



0-75 mm



75-100 mm

Mitutoyo

Point Micrometers

Series 112

This Point Micrometer features a pointed anvil and spindle, and offers the following benefits:

- Its pointed anvil and spindle has a choice of included angle, ending in small-radius contact points.
- You can use it to measure grooves, steps and similar.

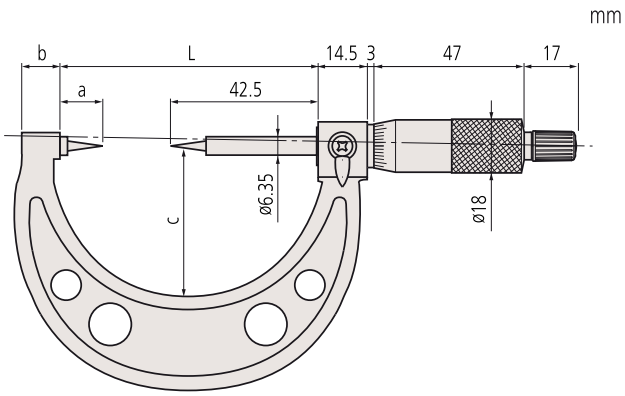
112-201

Metric — Carbide tip

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Tip	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
112-165	0–25	0,01 mm	±3 µm	15°	3-8	55,3	12,8	10	38	205
112-213	0–25	0,01 mm	±3 µm	30°	3-8	55,3	12,8	10	38	205
112-166	25–50	0,01 mm	±3 µm	15°	3-8	80,3	12,8	12	49	305
112-214	25–50	0,01 mm	±3 µm	30°	3-8	80,3	12,8	12	49	305
112-167	50–75	0,01 mm	±3 µm	15°	3-8	105,3	12,8	14	60	370
112-215	50–75	0,01 mm	±3 µm	30°	3-8	105,3	12,8	14	60	370
112-168	75–100	0,01 mm	±4 µm	15°	3-8	132,8	15,3	17	79	500
112-216	75–100	0,01 mm	±4 µm	30°	3-8	132,8	15,3	17	79	500

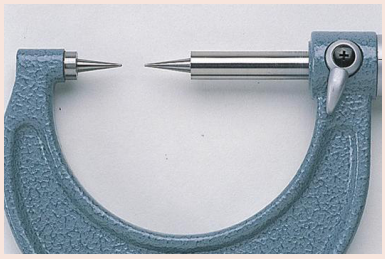
Metric — Hardened steel tip

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Tip	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
112-153	0–25	0,01 mm	±3 µm	15°	3-8	55,3	12,8	10	38	205
112-201	0–25	0,01 mm	±3 µm	30°	3-8	55,3	12,8	10	38	205
112-154	25–50	0,01 mm	±3 µm	15°	3-8	80,3	12,8	12	49	305
112-202	25–50	0,01 mm	±3 µm	30°	3-8	80,3	12,8	12	49	305
112-155	50–75	0,01 mm	±3 µm	15°	3-8	105,3	12,8	14	60	370
112-203	50–75	0,01 mm	±3 µm	30°	3-8	105,3	12,8	14	60	370
112-156	75–100	0,01 mm	±4 µm	15°	3-8	132,8	15,3	17	79	500
112-204	75–100	0,01 mm	±4 µm	30°	3-8	132,8	15,3	17	79	500

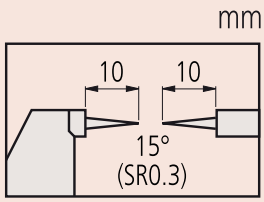


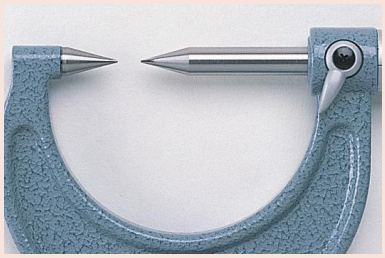
Specifications

Measuring face	Carbide pointed or hardened steel spindle and anvil, measuring point radius 0,3 mm
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key

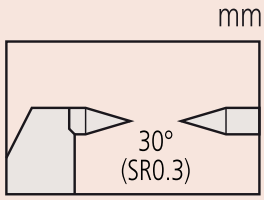


Tip angle : 15°





Tip angle : 30°



Crimp Height Micrometers

Series 342/ Series 112

This Crimp Height Micrometer that features a flat anvil and pointed spindle offers you the following benefits:

- It allows you to measure the crimped height of electrical contacts.
- Excellent resistance against water and dust (IP65 protection level).

Dust- and Water-Protected
TÜVRheinland CERTIFIED
www.tuv.com ID 0000040191
342-271-30

Dust- and Water-Protected
TÜVRheinland CERTIFIED
www.tuv.com ID 0000063013
342-451-20

ABSOLUTE®
342-451-20

IP65

Functions	Series 342/ Series 112 342-271-30	342-451-20
Data output	●	●
ON/OFF		●
ORIGIN	●	●
ABS / INC (INC ZERO)	●	●
Auto Power OFF after 20 min. non use	●	
Low voltage alarm	●	●
Function lock	●	
HOLD	●	●

Specifications

Measuring face	Hardened steel
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm (342-271-30, 112-401) without spindle lock ø 6,35 mm, spindle feed (342-451-20) 10 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm (112-401, 342-271-30)
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years (342-271-30), 5 years under normal use (342-451-20)
Delivered	Including box, 1 battery

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD790B	Connection Cable B for U-WAVE, with Data Button for IP Micrometer Type

02AZD880G, 02AZD730G, 02AZD790B
Wireless Sytem for 342-451-20

264-622, 264-623, 02AZF310
or
264-626, 264-627, 02AZF310
Wireless System for 342-271-30

112-401

342-271-30

342-451-20

Metric — Analog model

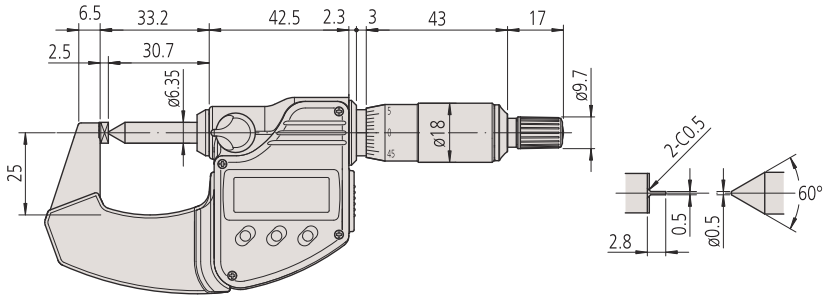
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Measuring force [N]	Mass [g]
112-401	0–25	0,01 mm	±3 µm	3-8	165

Metric — Digital model

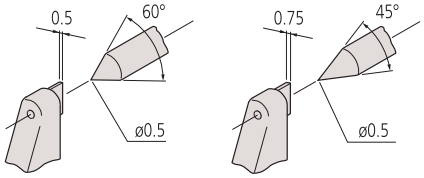
No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Measuring force [N]	Mass [g]
342-271-30	0–20	0,001 mm	±3 µm	3-8	270

Metric — Quickmike

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Measuring force [N]	Mass [g]
342-451-20	0–15	0,001 mm	±3 µm	4-6	270



342-271-30



342-271-30
112-401

342-451-20

Digimatic Blade Micrometers

Series 422

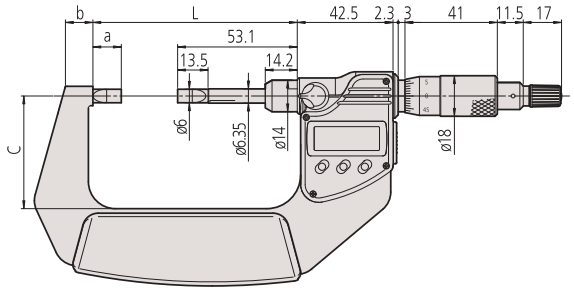
This Digimatic Blade Micrometer is designed to help you measure hard-to-reach features. It offers the following benefits:

- Blade-shaped anvil and spindle for measuring the groove diameter of shafts, keyways and other hard-to reach features
- Non-rotating spindle

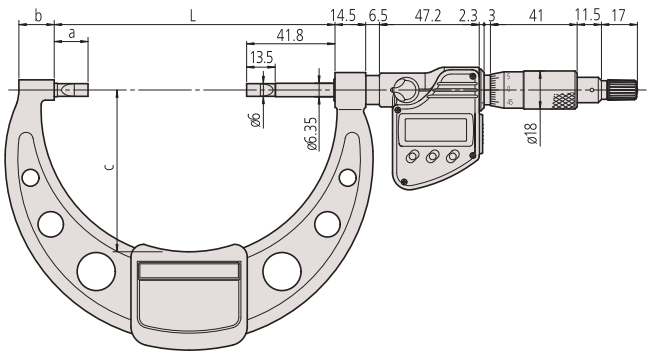
422-230-30

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Anvil / Spindle	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
422-230-30	0–25	0,001 mm	±3 µm	3 µm	Type A, hardened steel t=0,75 mm	65,6	12,5	11	31	365
422-260-30	0–25	0,001 mm	±3 µm	3 µm	Type B, hardened steel, t=0,4 mm	65,6	12,5	11	31	365
422-270-30	0–25	0,001 mm	±3 µm	3 µm	Type C, carbide t=0,75 mm	65,6	12,5	11	31	365
422-271-30	0–25	0,001 mm	±3 µm	3 µm	Type D, carbide t=0,4 mm	65,6	12,5	11	31	365
422-231-30	25–50	0,001 mm	±3 µm	3 µm	Type A, hardened steel t=0,75 mm	90,7	12,6	12,2	50	565
422-261-30	25–50	0,001 mm	±3 µm	3 µm	Type B, hardened steel, t=0,4 mm	90,7	12,6	12,2	50	565
422-232-30	50–75	0,001 mm	±3 µm	3 µm	Type A, hardened steel t=0,75 mm	105,3	13,5	14,1	57	465
422-233-30	75–100	0,001 mm	±4 µm	4 µm	Type A, hardened steel t=0,75 mm	132,8	16	16,7	76	580



0-50 mm



50-100 mm

Functions	Series 422
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

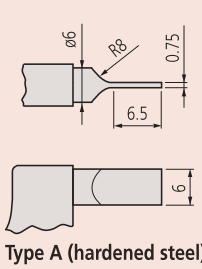
Display	LCD, character height 7,5 mm
Measuring face	Hardened steel or carbide-tipped
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Measuring force	3-8 N
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, key, 1 battery, setting standard (from 25 mm upward)

Optional accessories

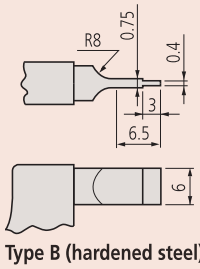
No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

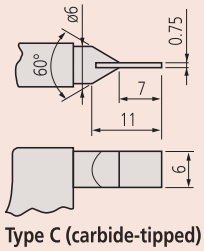
No.	Description
63AAA800	Battery SR44 1,5 V



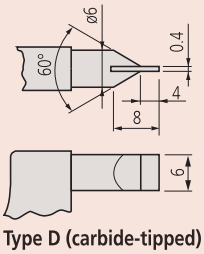
Type A (hardened steel)



Type B (hardened steel)



Type C (carbide-tipped)



Type D (carbide-tipped)

ABSOLUTE Digimatic Blade Micrometers Quickmike

Functions	Series 422
Data output	●
ON/OFF	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Low voltage alarm	●
HOLD	●

Specifications

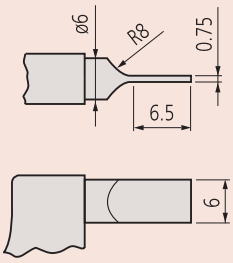
Display	LCD, character height 10 mm
Measuring face	Hardened steel
Measuring spindle	Non-rotating, spindle feed 10 mm
Power supply	1 battery SR-44
Battery life	Approx. 5 years
Delivered	Including box, setting standard (from 25 mm upward), 1 battery

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD790B	Connection Cable B for U-WAVE, with Data Button for IP Micrometer Type

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V



Type A (hardened steel)

Series 422

TÜVRheinland CERTIFIED — Dust- and Water-Protected — www.tuv.com ID 0000063013

ABSOLUTE® IP65

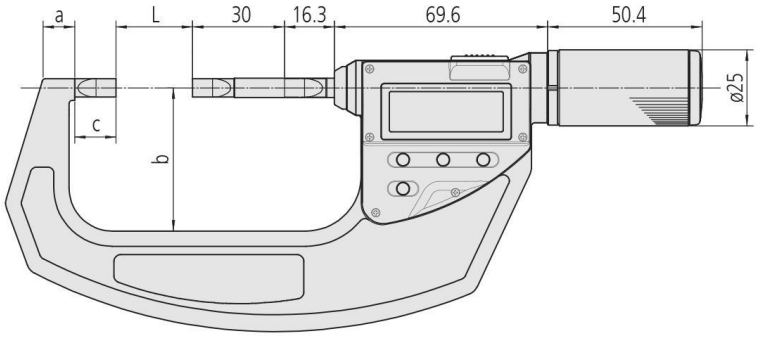
This ABSOLUTE Digimatic Blade Micrometer Quickmike is designed to help you measure hard-to-reach features. It offers the following benefits:

- Blade-shaped anvil and spindle for measuring the groove diameter of shafts, keyways and other hard-to reach features
- Non-rotating spindle
- Fast spindle feed of 10 mm/revolution

422-411-20

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Anvil / Spindle	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
422-411-20	0–30	0,001 mm	±3 µm	3 µm	Type A, hardened steel t=0,75 mm	5-12	0	8,5	36	13,5	350
422-412-20	25–55	0,001 mm	±3 µm	3 µm	Type A, hardened steel t=0,75 mm	5-12	25	10,3	47	13,5	490



Mitutoyo

Blade Micrometers

Series 122

This Blade Micrometer is designed to help you measure hard-to-reach features.
It offers the following benefits:

- Blade-shaped anvil and spindle for measuring the groove diameter of shafts.
- Non-rotating spindle.

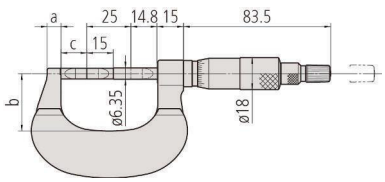
122-101-10

122-105-10

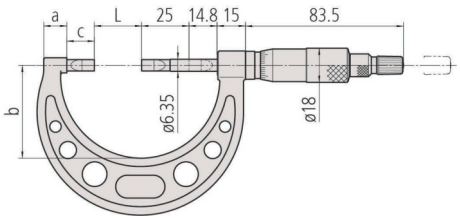
Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Anvil / Spindle
122-101-10	0–25	0,01 mm	±3 µm	3 µm	Type A, hardened steel t=0,75 mm
122-111-10	0–25	0,01 mm	±3 µm	3 µm	Type B, hardened steel t=0,4 mm
122-161-10	0–25	0,01 mm	±3 µm	3 µm	Type C, carbide t=0,75 mm
122-141-10	0–25	0,01 mm	±3 µm	3 µm	Type D, carbide t=0,4 mm
122-102-10	25–50	0,01 mm	±3 µm	3 µm	Type A, hardened steel t=0,75 mm
122-112-10	25–50	0,01 mm	±3 µm	3 µm	Type B, hardened steel t=0,4 mm
122-162-10	25–50	0,01 mm	±3 µm	3 µm	Type C, carbide t=0,75 mm
122-142-10	25–50	0,01 mm	±3 µm	3 µm	Type D, carbide t=0,4 mm
122-103-10	50–75	0,01 mm	±3 µm	3 µm	Type A, hardened steel t=0,75 mm
122-104-10	75–100	0,01 mm	±4 µm	4 µm	Type A, hardened steel t=0,75 mm
122-105-10	100–125	0,01 mm	±4 µm	4 µm	Type A, hardened steel t=0,75 mm
122-106-10	125–150	0,01 mm	±4 µm	4 µm	Type A, hardened steel t=0,75 mm
122-107-10	150–175	0,01 mm	±5 µm	5 µm	Type A, hardened steel t=0,75 mm
122-108-10	175–200	0,01 mm	±5 µm	5 µm	Type A, hardened steel t=0,75 mm
122-109-10	200–225	0,01 mm	±5 µm	5 µm	Type A, hardened steel t=0,75 mm
122-110-10	225–250	0,01 mm	±6 µm	6 µm	Type A, hardened steel t=0,75 mm
122-115-10	250–275	0,01 mm	±6 µm	6 µm	Type A, hardened steel t=0,75 mm
122-116-10	275–300	0,01 mm	±6 µm	6 µm	Type A, hardened steel t=0,75 mm

No.	Measuring force [N]	L [mm]	a [mm]	b [mm]	c [mm]	Mass [g]
122-101-10	3-8	0	7,8	32	15	260
122-111-10	3-8	0	7,8	32	14,7	260
122-161-10	3-8	0	7,8	32	14,7	275
122-141-10	3-8	0	7,8	32	14,7	275
122-102-10	3-8	25	12,2	49	14,5	300
122-112-10	3-8	25	12,2	49	14,5	300
122-162-10	3-8	25	12,2	49	14,5	315
122-142-10	3-8	25	12,2	49	14,5	315
122-103-10	3-8	50	14,6	60	14,5	360
122-104-10	3-8	75	16,7	79	17,5	525
122-105-10	3-8	100	18,8	94	17,9	670
122-106-10	3-8	125	19,1	106	18,3	775
122-107-10	3-8	150	18,2	118	18,5	950
122-108-10	3-8	175	16,8	130	18,9	1140
122-109-10	3-8	200	18	143	17,7	1300
122-110-10	3-8	225	18	156	18,7	1450
122-115-10	3-8	250	18	169	18,7	1600
122-116-10	3-8	275	18	181	18,7	2020



Models up to 25 mm measuring range

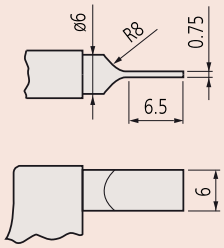


Models over 25 mm measuring range

Specifications

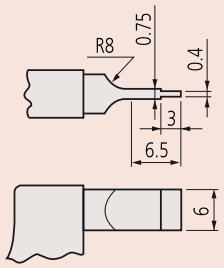
Measuring face	Hardened steel or carbide-tipped
Measuring spindle	ø6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key

mm



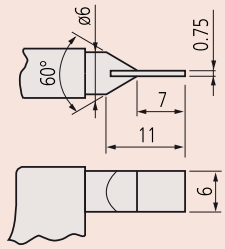
Type A (hardened steel)

mm



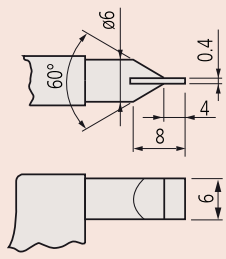
Type B (hardened steel)

mm



Type C (carbide-tipped)

mm



Type D (carbide-tipped)

Digimatic V-Anvil Micrometers

Functions	Series 314
Data output	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●
2 x PRESET	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Prism angle 60°
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,75 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, setting standard, key, 1 battery

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

Series 314

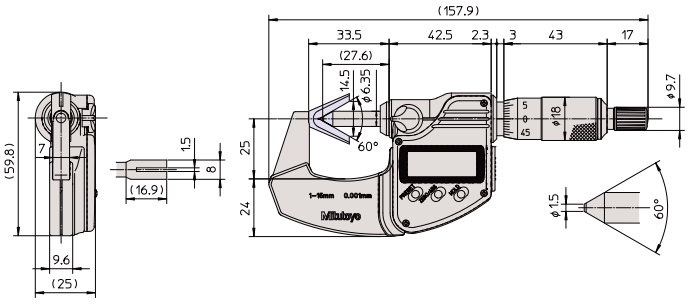
This Digimatic V-Anvil Micrometer helps you to measure cutting tools and taps.
It offers the following benefits:

- It measures the outside diameter of cutting tools (such as taps, reamers, end mills) which have three flutes.
- V-anvils with a centreline groove are available for measuring the pitch diameter of taps by the single-wire method.

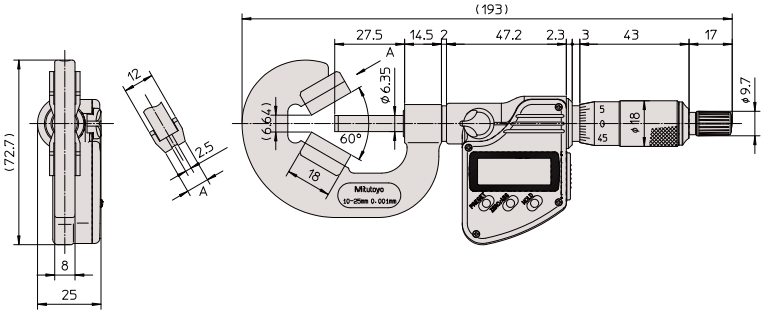
314-251-30

Metric

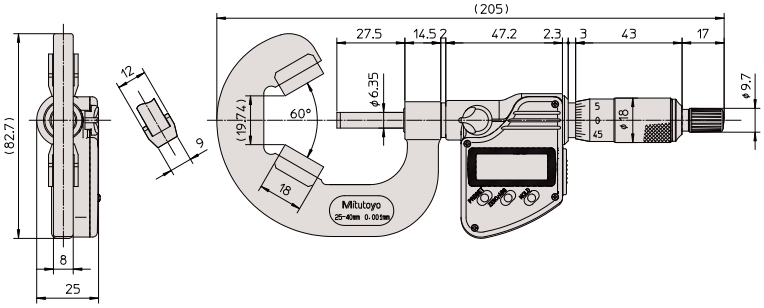
No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Flatness	Anvil	Measuring force [N]	Setting standard	Mass [g]
314-251-30	1–15	0,001 mm	±4 µm	0,3 µm (spindle), 1 µm (anvil)	With groove	3-8	167-327 ø 5 mm	275
314-261-30	1–15	0,001 mm	±4 µm	0,3 µm (spindle), 1 µm (anvil)	Without groove	3-8	167-327 ø 5 mm	275
314-252-30	10–25	0,001 mm	±4 µm	0,3 µm (spindle), 1 µm (anvil)	With groove	5-10	167-328 ø 10 mm	410
314-262-30	10–25	0,001 mm	±4 µm	0,3 µm (spindle), 1 µm (anvil)	Without groove	5-10	167-328 ø 10 mm	410
314-253-30	25–40	0,001 mm	±5 µm	0,3 µm (spindle), 1 µm (anvil)	Without groove	5-10	167-329 ø 25 mm	465



1 - 15 mm



10 - 25 mm



25 - 40 mm

Mitutoyo

V-Anvil Micrometers

Series 114

This V-Anvil Micrometer helps you measure cutting tools and taps.
It offers the following benefits:

- It measures the outside diameter of cutting tools (such as taps, reamers, end mills) which have three or five flutes.
- V-anvils with a centreline groove are available for measuring the pitch diameter of taps by the single-wire method.

114-204

114-121

Metric — For 3-flute cutting tools (60°)

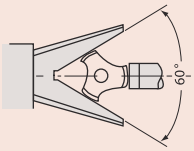
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Flatness	Anvil	Measuring force [N]	Setting standard	a [mm]	Mass [g]
114-101	1–15	0,01 mm	±4 µm	0,6 µm (spindle), 1,3 µm (anvil)	With groove	5-10	167-327 ø 5 mm	0,5	120
114-161	1–15	0,01 mm	±4 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-327 ø 5 mm	0,5	120
114-204	2,3–25	0,01 mm	±4 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-327 ø 5 mm	0,5	290
114-102	10–25	0,01 mm	±4 µm	0,6 µm (spindle), 1,3 µm (anvil)	With groove	5-10	167-328 ø 10 mm	6,2	280
114-162	10–25	0,01 mm	±4 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-328 ø 10 mm	6,2	280
114-103	25–40	0,01 mm	±5 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-329 ø 25 mm	19,14	400
114-104	40–55	0,01 mm	±6 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-330 ø 40 mm	32,13	465
114-105	55–70	0,01 mm	±6 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-331 ø 55 mm	45,12	675
114-106	70–85	0,01 mm	±7 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-332 ø 70 mm	58,11	910
114-107	85–100	0,01 mm	±7 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-333 ø 85 mm	71,1	1160
114-108	100–115	0,01 mm	±8 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-334 ø 100 mm	84,1	1480
114-109	115–130	0,01 mm	±8 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-335 ø 115 mm	97,09	2080
114-110	130–145	0,01 mm	±9 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-336 ø 130 mm	110,1	2880

Metric — For 5-flute cutting tools (108°)

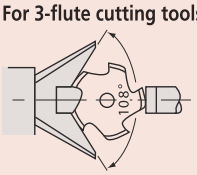
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Flatness	Anvil	Measuring force [N]	Setting standard	Mass [g]
114-137	2,3–25	0,01 mm	±4 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-327 ø 5 mm	220
114-121	5–25	0,01 mm	±4 µm	0,6 µm (spindle), 1,3 µm (anvil)	With groove	5-10	167-327 ø 5 mm	255
114-165	5–25	0,01 mm	±4 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-327 ø 5 mm	255
114-122	25–45	0,01 mm	±5 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-329 ø 25 mm	400
114-123	45–65	0,01 mm	±6 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-331 ø 55 mm	540
114-124	65–85	0,01 mm	±7 µm	0,6 µm (spindle), 1,3 µm (anvil)	Without groove	5-10	167-332 ø 70 mm	760

Specifications

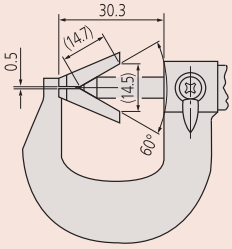
Measuring face	Prism angle 60°/108°, carbide tipped spindle hardened anvil (114-204, 114-137 carbide tipped anvil/spindle)
Measuring spindle	With spindle lock, ø6,35 mm, spindle pitch 0,75 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard, key



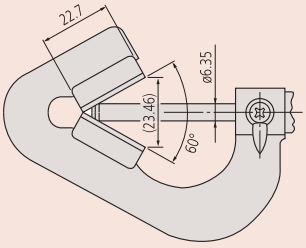
For 3-flute cutting tools



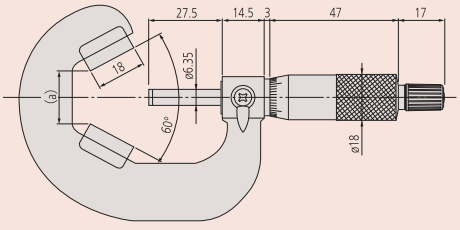
For 5-flute cutting tools



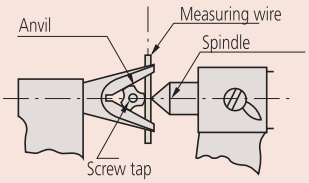
114-101, 114-161



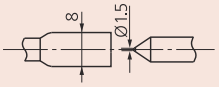
114-204



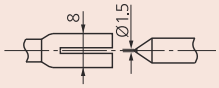
114-102 to 114-110



For 114-101, 114-102, 114-121



Plain anvil model



Grooved anvil model

Can Seam Micrometers

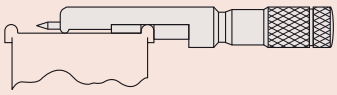
Series 147

This Can Seam Micrometer allows you to measure different types of can seams.
It offers the following benefits:

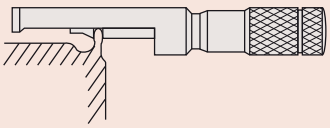
- Designed to measure the width, height and depth of can seams.
- Three types are available, for steel, aluminium and spray cans.

Specifications

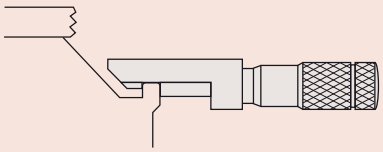
Measuring face	Hardened steel
Scale	Thimble and sleeve satin chrome finish ø13 mm
Delivered	Including box, key



147-103
For steel cans



147-105
For aluminium cans



147-202
For spray cans

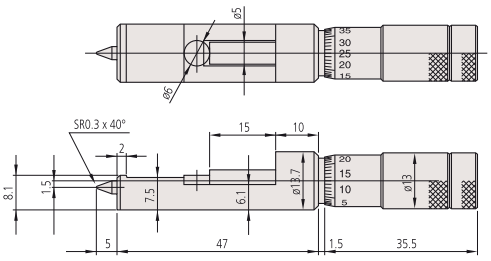
147-103

147-105

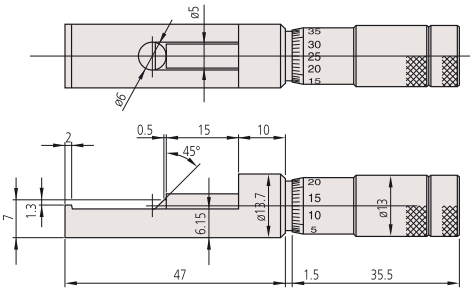
147-202

Metric

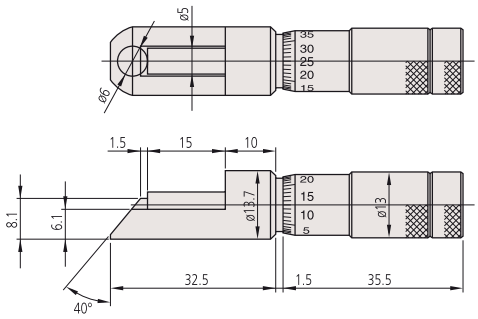
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Remarks	Mass [g]
147-103	0–13	0,01 mm	±3 µm	For steel cans	65
147-105	0–13	0,01 mm	±3 µm	For aluminium cans	65
147-202	0–13	0,01 mm	±3 µm	For spray cans	65



147-103



147-105



147-202

Mitutoyo

Hub Micrometers

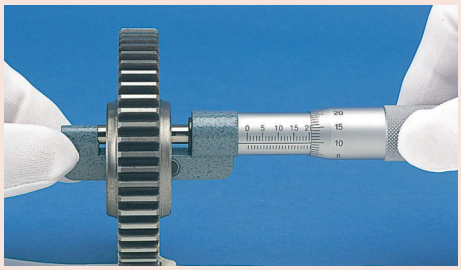
Series 147

This Hub Micrometer is designed with a very small throat depth, allowing you to measure hub thickness, shouldered features inside a bore and bearing bushings.

147-301

Specifications

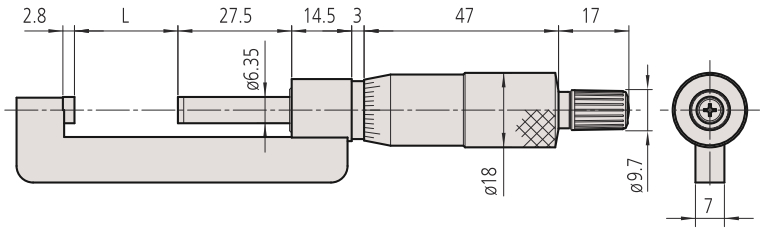
Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	ø6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key

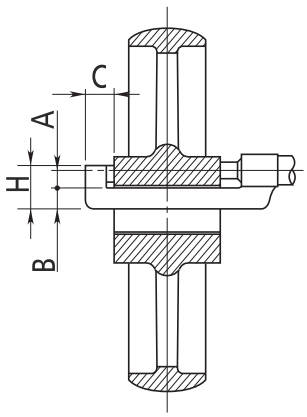


Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	L [mm]
147-301	0–25	0,01 mm	±2 µm	3 µm	5-10	0
147-302	25–50	0,01 mm	±2 µm	3 µm	5-10	25
147-303	50–75	0,01 mm	±2 µm	3 µm	5-10	50
147-304	75–100	0,01 mm	±3 µm	3 µm	5-10	75

No.	A [mm]	B [mm]	C [mm]	H [mm]	Mass [g]
147-301	6	8,5	13,5	17,5	135
147-302	6,5	11	14	20,5	150
147-303	6,5	11	13	20,5	170
147-304	6,5	11	13	20,5	185





Digimatic Micrometers Interchangeable Anvil Type

Functions	Series 317
Data output	●
ORIGIN	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Low voltage alarm	●
Function lock	●
HOLD	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped spindle, hardened anvil
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years
Delivered	Including box, setting standard (from 25 mm upward), key, 1 battery, anvils

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth
201218	V-Anvil
950758	Round Base for Series 117, for 0-25mm

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V
201217	Cylindrical Anvil 3mm
201379	Cylindrical Anvil 5mm
201216	Flat Anvil

950758 with micrometer

Series 317

Dust- and Water-Protected

TÜVRheinland CERTIFIED www.tuv.com ID 0000040191

IP65

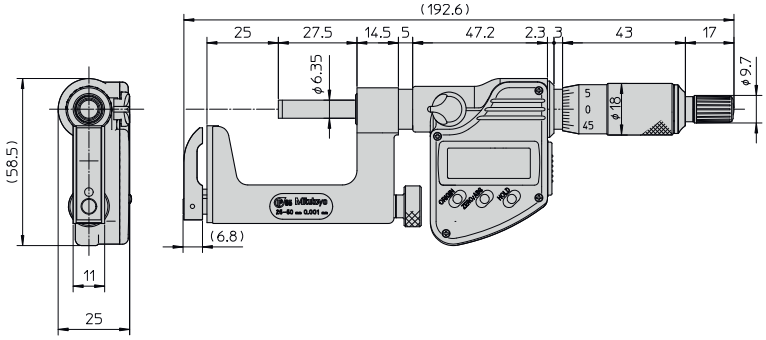
This Digimatic Micrometer Interchangeable Anvil Type lets you measure a range of different features.
It offers the following benefits:

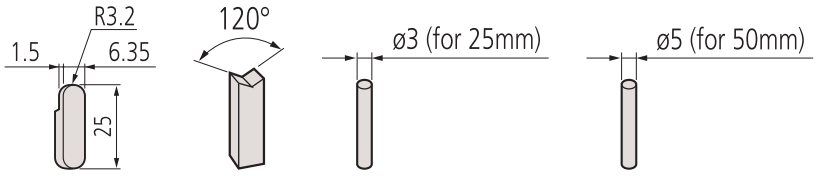
- Measures tubing thickness, shoulder edge distance, rivet head height, etc., with interchangeable anvils (flat anvil, rod anvil, V-anvil).

317-251-30

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Variation in length V MPE	Flatness	Measuring force [N]	Content of Set	Mass [g]
317-251-30	0–25	0,001 mm	±4 µm	3 µm	0,6 µm (spindle), 2 µm (anvil)	5-10	Anvils 201217, 201216	335
317-252-30	25–50	0,001 mm	±4 µm	3 µm	0,6 µm (spindle), 2 µm (anvil)	5-10	Anvils 201379, 201216	360





201216 Flat anvil

201218 V-anvil

201217 Cylindrical anvil

201379 Cylindrical anvil

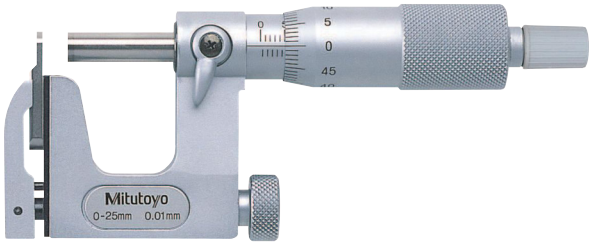
Mitutoyo

Micrometers Interchangeable Anvil Type

Series 117

This Micrometer Interchangeable Anvil Type lets you measure a range of different features.
It offers the following benefits:

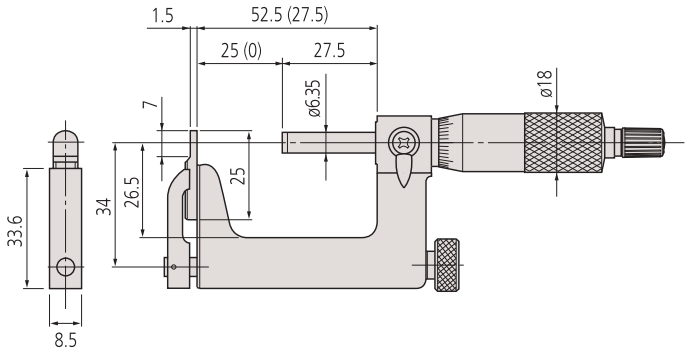
- Measures tubing thickness, shoulder edge distance, rivet head height, etc., with interchangeable anvils (flat anvil, rod anvil, V-anvil).

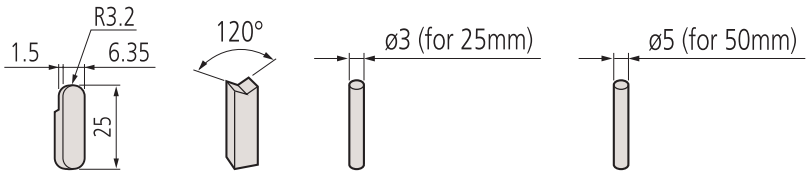


117-101

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Flatness	Measuring force [N]	Content of Set	Mass [g]
117-101	0–25	0,01 mm	±4 µm	3 µm	0,6 µm (spindle), 2 µm (anvil)	5-10	Anvils 201217, 201216	255
117-102	25–50	0,01 mm	±4 µm	3 µm	0,6 µm (spindle), 2 µm (anvil)	5-10	Anvils 201379, 201216	320





201216
Flat anvil

201218
V-anvil

201217
Cylindrical anvil

201379
Cylindrical anvil

Specifications

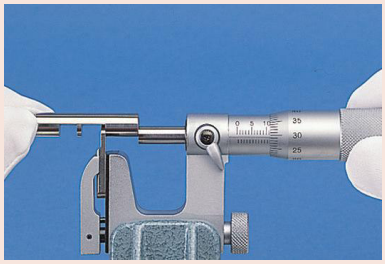
Measuring face	Carbide-tipped spindle, hardened anvil
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key, anvils

Optional accessories

No.	Description
950758	Round Base for Series 117, for 0-25mm
201218	V-Anvil

Consumable spares

No.	Description
201217	Cylindrical Anvil 3mm
201379	Cylindrical Anvil 5mm
201216	Flat Anvil



950758 with micrometer

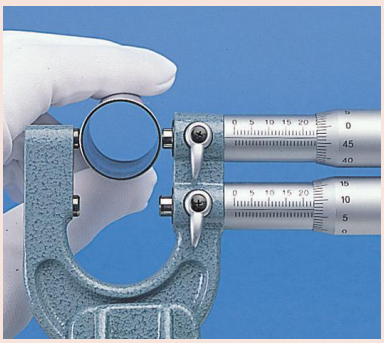
Limit Micrometers

Series 113

This Limit Micrometer offers the following benefits:
- Spindle and Anvil with chamfered edge.
- You can use it as a GO/±NG gauge by setting the upper and lower limits of dimension.

Specifications

Measuring face	Carbide-tipped with chamfer micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key

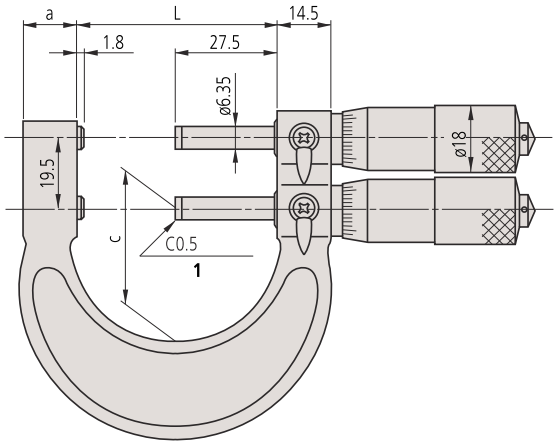


113-102

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	L [mm]	a [mm]	c [mm]	Mass [g]
113-102	0–25	0,01 mm	±3 µm	3 µm	5-10	29,3	15	23	340
113-103	25–50	0,01 mm	±3 µm	3 µm	5-10	54,3	15	37	380

mm



Indicating Micrometers

Series 510

This is an Indicating Micrometer with a dial comparator that enables you to take fast and highly accurate measurements. It offers you the following benefits:

- It is easy to use when operated one-handed due to retractable anvil.
- Protection level IP54 and large and easy to read characters on the dial plate
- Large dial comparator for easy reading (+/- 0.06 mm)
- Tolerance markers for GO/NG measurements
- 8 mm spindle diameter gives you easy positioning and highly accurate measurements.

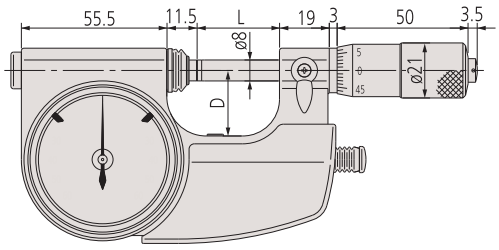
510-121

510-141

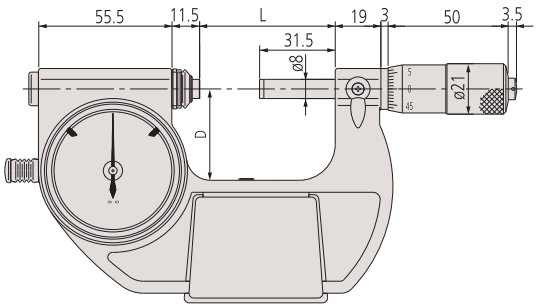
Metric

No.	Range [mm]	Graduation	Indicating range	Anvil retracting stroke	Spindle feed error [µm]
510-121	0–25	0,001 mm	±0,06 mm	2 mm	3
510-141	0–25	0,001 mm	±0,06 mm	2 mm	3
510-122	25–50	0,001 mm	±0,06 mm	2 mm	3
510-123	50–75	0,001 mm	±0,06 mm	2 mm	3
510-124	75–100	0,001 mm	±0,06 mm	2 mm	3

No.	Accuracy dial comparator	Repeatability	Flatness	Parallelism	Measuring force [N]	Operating button	L [mm]	D [mm]	Mass [g]
510-121	1 µm	0,4 µm	0,3 µm	0,6 µm	5-10	Right	31,5	25	520
510-141	1 µm	0,4 µm	0,3 µm	0,6 µm	5-10	Left	31,5	25	520
510-122	1 µm	0,4 µm	0,3 µm	0,6 µm	5-10	Left	56,5	38	670
510-123	1 µm	0,4 µm	0,3 µm	1 µm	5-10	Left	81,5	50	820
510-124	1 µm	0,4 µm	0,3 µm	1 µm	5-10	Left	106,5	63	970



0-25 mm



25-100 mm

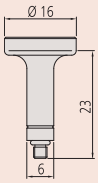
Specifications

Measuring face	Carbide-tipped, micro-lap finish, ø 8 mm
Scale	Thimble and sleeve satin chrome finish ø21 mm
Delivered	Including box, key

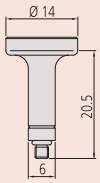
Optional accessories

No.	Description
04AZA124	Workpiece Stopper Indicating Micrometer, 23mm
04AZA125	Workpiece Stopper Indicating Micrometer, 20,5mm
04AZA126	Workpiece Stopper Indicating Micrometer, 15mm

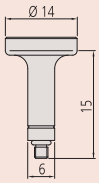
Measuring range mm	Nr.	Diameter range of workpiece supported A Ø mm	B Ø mm	C Ø mm
0– 25	510-121	–	4–16	15– 25
25– 50	510-122	25–37	30–42	41– 50
50– 75	510-123	50–61	54–66	65– 75
75–100	510-124	75–87	80–92	91–100



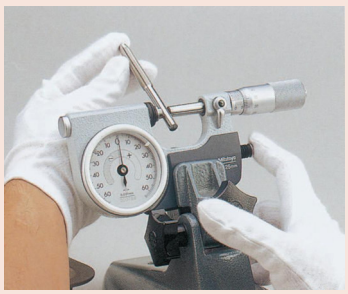
04AZA124 Workpiece stop A



04AZA125 Workpiece stop B



04AZA126 Workpiece stop C



Adjusting screw for dial comparator ± 5 µm

Indicating Snap Gauges

Specifications

Measuring face	Carbide-tipped, micro-lap finish ø 10,8 mm
Delivered	Including box, workpiece rest

Series 523

IP54

This is a Snap Gauge with integrated dial comparator. It offers you the following benefits:

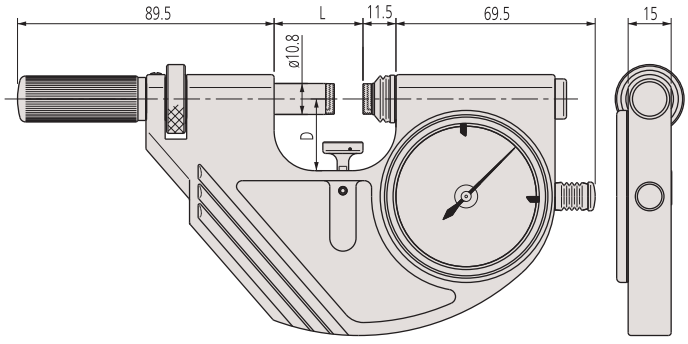
- It is ideal for rapidly inspecting workpieces, especially cylindrical, in batch or mass production situations.
- It can be set with external length standards such as block gauges.
- Easy-to-operate retracting button

523-121

Metric

No.	Range [mm]	Graduation	Indicating range	Anvil retracting stroke	Accuracy dial comparator	Repeatability	Flatness
523-121	0–25	0,001 mm	±0,06 mm	2 mm	1 µm	0,4 µm	0,3 µm
523-122	25–50	0,001 mm	±0,06 mm	2 mm	1 µm	0,4 µm	0,3 µm
523-123	50–75	0,001 mm	±0,06 mm	2 mm	1 µm	0,4 µm	0,3 µm
523-124	75–100	0,001 mm	±0,06 mm	2 mm	1 µm	0,4 µm	0,3 µm

No.	Parallelism	Measuring force [N]	L [mm]	D [mm]	Mass [g]
523-121	0,6 µm	5-10	31	25	740
523-122	0,6 µm	5-10	56	35	840
523-123	1 µm	5-10	81	47,5	950
523-124	1 µm	5-10	106	60	1080



Mitutoyo

Snap Gauges

Series 523

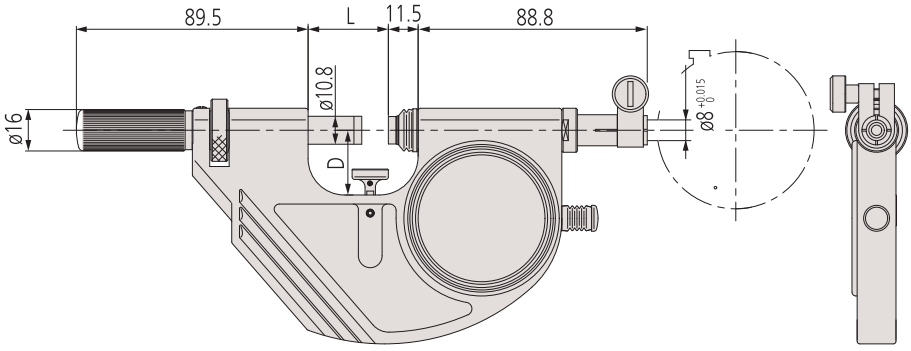
This Snap Gauge designed to mount an indicator to suit the measurement application, and offers the following benefits:

- It's ideal for rapidly inspecting workpieces, especially cylindrical, in batch or mass production situations, when you need an indication of where a measurement falls within the tolerance band.
- You can set it with external length standards such as block gauges.
- Easy-to-operate retracting button.

523-141 with optional indicator

Metric

No.	Range [mm]	Anvil retracting stroke	Repeatability	Flatness	Parallelism	Measuring force [N]	L [mm]	D [mm]	Mass [g]
523-141	0–25	2 mm	0,4 µm	0,3 µm	0,6 µm	5-10	31	25	710
523-142	25–50	2 mm	0,4 µm	0,3 µm	0,6 µm	5-10	56	35	810
523-143	50–75	2 mm	0,4 µm	0,3 µm	1 µm	5-10	81	47,5	920
523-144	75–100	2 mm	0,4 µm	0,3 µm	1 µm	5-10	106	60	1050



ABS Digimatic Indicator

Linear Gage and counter

Specifications

Measuring face	Carbide-tipped, micro-lap finish ø 10,8 mm
Delivered	Including box, workpiece rest, without indicator

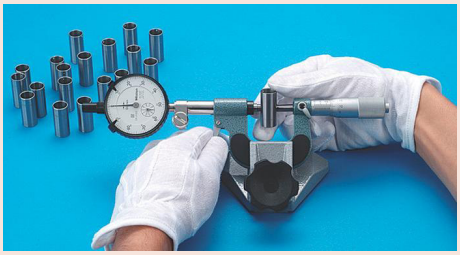
Optional accessories

No.	Description
2109AB-10	Dial Gauge, Flat Back, ISO Type, Jewelled Bearing, Shockproof, 1mm, 0,001mm
2900AB-10	Dial Gauge, Flat Back, ISO Type, One Revolution, Jewelled Bearing, Shockproof, 0,08mm, 0,001mm
543-700B	Digital Indicator ID-C, 12,7mm, 0,0005mm, Flat Back Plate

Dial Gauge Micrometers

Specifications

Measuring face	Carbide-tipped, micro-lap finish
Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, setting standard (from 25 mm upward), key



2900AB-10
(1 µm graduation)

543-700B
(0,0005 µm digital step)

542-192
(0,1 µm digital step)

Series 107

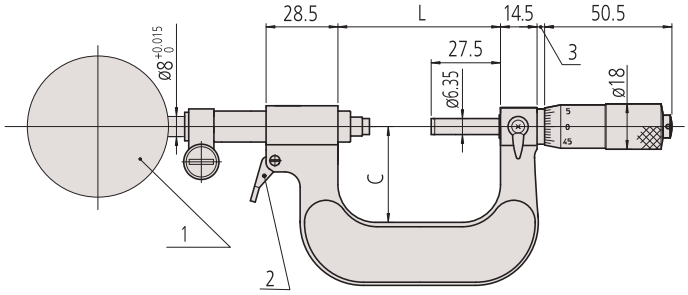
This Dial Gauge Micrometer allows you to quickly measure mass-produced parts.
It offers the following benefits:

- Designed to mount a dial or a Digital indicator for direct GO/NG judgement of mass-produced parts.
- You can take rapid measurements thanks to its anvil retracting trigger.
- 3 mm anvil retracting stroke.

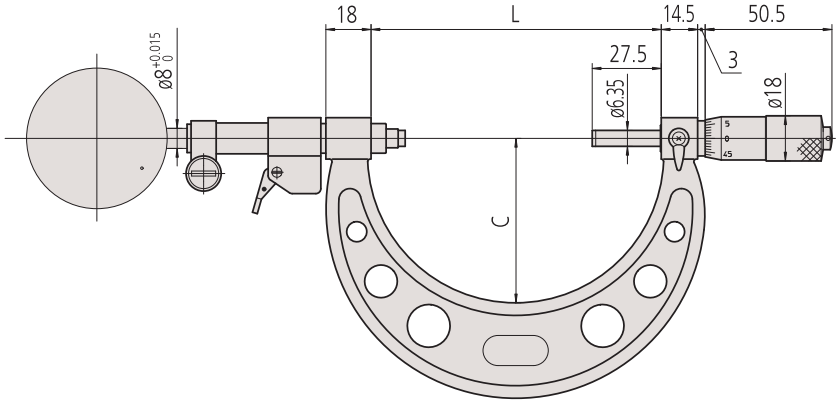
107-201 with optional dial indicator

Metric

No.	Range [mm]	Graduation	Anvil retracting stroke	Spindle feed error [µm]	Flatness	Parallelism	Measuring force [N]	L [mm]	C [mm]	Mass [g]
107-201	0–25	0,01 mm	3 mm	3	0,6 µm	2 µm	5-10	39,5	30	480
107-202	25–50	0,01 mm	3 mm	3	0,6 µm	2 µm	5-10	64,5	38	520
107-203	50–75	0,01 mm	3 mm	3	0,6 µm	2 µm	5-10	90	45	585
107-204	75–100	0,01 mm	3 mm	3	0,6 µm	3 µm	5-10	115,6	65	630
107-205	100–125	0,01 mm	3 mm	3	0,6 µm	3 µm	5-10	140,6	79	725
107-206	125–150	0,01 mm	3 mm	3	0,6 µm	3 µm	5-10	165,6	93	810
107-207	150–175	0,01 mm	3 mm	3	0,6 µm	3 µm	5-10	190,5	105	1050
107-208	175–200	0,01 mm	3 mm	3	0,6 µm	4 µm	5-10	215,5	120	1170



1: dial indicator
2: retracting trigger
(0 - 50 mm)



50 - 200 mm

Mitutoyo

Dial Snap Gauges

Series 201

These Dial Snap Gauges are designed to let you quickly carry out GO/NG judgement of the diameters of cylinders and shafts in machining processes.
They offer the following benefits:

- Wide, flat carbide anvils.
- 2 mm anvil retracting stroke.
- You can adjust the measuring range with an adjustment nut.

201-101

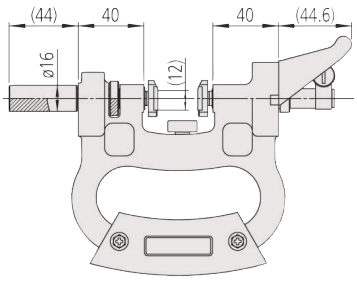
201-102

201-104

201-107

Metric

No.	Range [mm]	Anvil retracting stroke	Repeatability	Flatness	Parallelism	Remarks	Measuring force [N]	Mass [g]
201-101	0–25	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	570
201-102	25–50	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	660
201-103	50–75	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	700
201-104	75–100	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	770
201-105	100–125	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	870
201-106	125–150	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	950
201-107	150–175	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	1070
201-108	175–200	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	1160
201-109	200–225	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	1260
201-110	225–250	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	1350
201-111	250–275	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	1470
201-112	275–300	2 mm	2 µm	1 µm	5 µm	For indicator with 8 mm stem	12-18	1620



201-101

Specifications

Measuring face	Carbide-tipped, micro-lap finish
Delivered	Including hand guard adjustable workpiece stop

Optional accessories

No.	Description
2046AB	Dial Gauge, Flat Back, ISO Type, 10mm, 0,01mm
2109AB-10	Dial Gauge, Flat Back, ISO Type, Jewelled Bearing, Shockproof, 1mm, 0,001mm
2972AB	Dial Gauge, Flat Back, ISO Type, One Revolution, Shock- & Dustproof, 1mm, 0,01mm
2900AB-10	Dial Gauge, Flat Back, ISO Type, One Revolution, Jewelled Bearing, Shockproof, 0,08mm, 0,001mm
21DZA000	Protector for Indicator (plastic cover)

201-101 with optional accessories: stand 156-101-10 and dial indicator

Internal Groove Micrometers

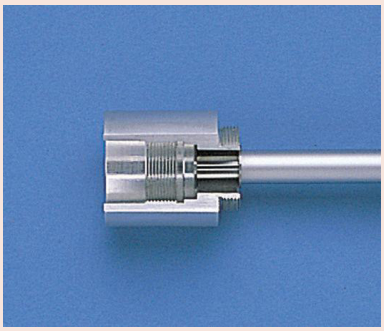
Series 146

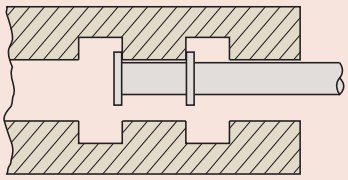
This Internal Groove Micrometer is designed to measure the width and location of grooves cut into bore walls.
It offers the following features:

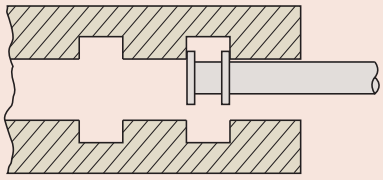
- Two-directional ratchet stop

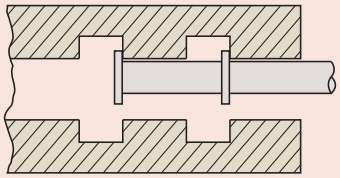
Specifications

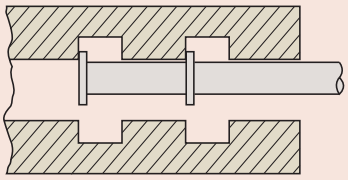
Measuring face	Hardened steel
Measuring spindle	Spindle pitch 0,5 mm
Scale	Thimble and sleeve satin chrome finish ø18 mm
Delivered	Including box, key











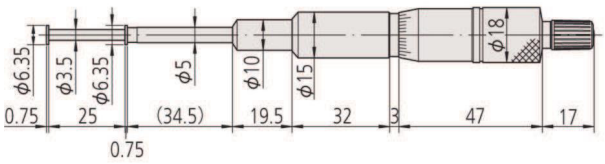
146-221

146-222

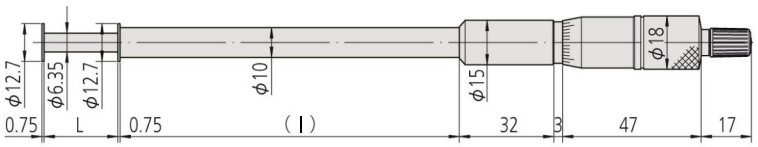
Metric

Non-rotating spindle type

No.	Range Outside	Range Inside	Graduation	Max. Permissible Error E MPE	Variation in length V MPE	Measuring force [N]	L [mm]	l [mm]	Mass [g]
146-221	0-25 mm	1,6-26,5 mm	0,01 mm	±10 µm	10 µm	5-10	25	115	135
146-222	0-25 mm	1,6-26,5 mm	0,01 mm	±10 µm	10 µm	5-10	25	115	185
146-223	25-50 mm	26,5-51,5 mm	0,01 mm	±10 µm	10 µm	5-10	50	90	175
146-224	50-75 mm	51,5-76,5 mm	0,01 mm	±10 µm	10 µm	5-10	75	65	165
146-225	75-100 mm	76,5-101,5 mm	0,01 mm	±10 µm	10 µm	5-10	100	40	160



146-221



146-222

Mitutoyo

Micrometer Setting Standards ≤ 1000 mm

Series 167

Used for adjusting the reference point of outside micrometers

167-103

167-108

Metric

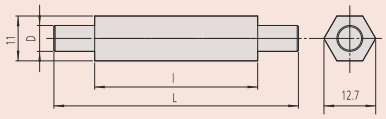
No.	Length (L)	Diameter (D)	Accuracy	Flatness	Parallelism	l [mm]
167-101	25 mm	6,35 mm	±1,5 µm	0,3 µm	2 µm	18
167-102	50 mm	6,35 mm	±2 µm	0,3 µm	2 µm	40
167-103	75 mm	6,35 mm	±2,5 µm	0,3 µm	2 µm	40
167-104	100 mm	7,9 mm	±3 µm	0,3 µm	2 µm	
167-105	125 mm	7,9 mm	±3,5 µm	0,3 µm	2 µm	
167-106	150 mm	7,9 mm	±4 µm	0,3 µm	2 µm	
167-107	175 mm	7,9 mm	±4,5 µm	0,3 µm	2 µm	
167-108	200 mm	7,9 mm	±5 µm	0,3 µm	2 µm	47
167-109	225 mm	7,9 mm	±5,5 µm	0,3 µm	2 µm	47
167-110	250 mm	7,9 mm	±6 µm	0,3 µm	2 µm	52
167-111	275 mm	7,9 mm	±6,5 µm	0,3 µm	2 µm	57
167-112	300 mm	7,9 mm	±7 µm	0,3 µm	2 µm	64
167-113	325 mm	7,9 mm	±7,5 µm	0,3 µm	2 µm	69
167-114	350 mm	7,9 mm	±8 µm	0,3 µm	2 µm	74
167-115	375 mm	7,9 mm	±8,5 µm	0,3 µm	2 µm	80
167-116	400 mm	7,9 mm	±9 µm	0,3 µm	2 µm	85
167-117	425 mm	7,9 mm	±9,5 µm	0,3 µm	2 µm	90
167-118	450 mm	7,9 mm	±10 µm	0,3 µm	2 µm	95
167-119	475 mm	7,9 mm	±10,5 µm	0,3 µm	2 µm	101
167-120	500 mm	11,9 mm	±11 µm	0,3 µm	2 µm	106
167-121	525 mm	11,9 mm	±11,5 µm	0,3 µm	2 µm	112
167-122	550 mm	11,9 mm	±12 µm	0,3 µm	2 µm	117
167-123	575 mm	11,9 mm	±12,5 µm	0,3 µm	2 µm	122
167-124	600 mm	11,9 mm	±13 µm	0,3 µm	2 µm	128
167-125	625 mm	11,9 mm	±13,5 µm	0,3 µm	2 µm	133
167-126	650 mm	11,9 mm	±14 µm	0,3 µm	2 µm	138
167-127	675 mm	11,9 mm	±14,5 µm	0,3 µm	2 µm	142
167-128	700 mm	11,9 mm	±15 µm	0,3 µm	2 µm	147
167-129	725 mm	11,9 mm	±15,5 µm	0,3 µm	2 µm	153
167-130	750 mm	11,9 mm	±16 µm	0,3 µm	2 µm	158
167-131	775 mm	11,9 mm	±16,5 µm	0,3 µm	2 µm	164
167-132	800 mm	11,9 mm	±17 µm	0,3 µm	2 µm	170
167-133	825 mm	11,9 mm	±17,5 µm	0,3 µm	2 µm	175
167-134	850 mm	11,9 mm	±18 µm	0,3 µm	2 µm	180
167-135	875 mm	11,9 mm	±18,5 µm	0,3 µm	2 µm	185
167-136	900 mm	11,9 mm	±19 µm	0,3 µm	2 µm	191
167-137	925 mm	11,9 mm	±19,5 µm	0,3 µm	2 µm	196
167-138	950 mm	11,9 mm	±20 µm	0,3 µm	2 µm	201
167-139	975 mm	11,9 mm	±20,5 µm	0,3 µm	2 µm	207
167-140	1000 mm	11,9 mm	±21 µm	0,3 µm	2 µm	211

Metric Sets

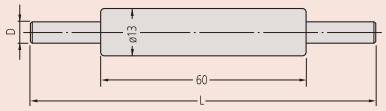
No.	Length (L)	Flatness	Parallelism	Content of Set
167-902	25-125 mm	0,3 µm	2 µm	167-101 up to 167-105
167-903	25-275 mm	0,3 µm	2 µm	167-101 up to 167-111

Specifications

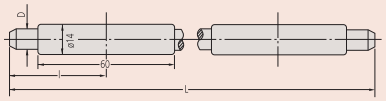
Measuring face	Micro-lap finish



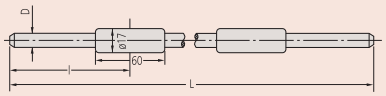
25 mm - 75 mm



100 mm - 175 mm



200 mm - 475 mm

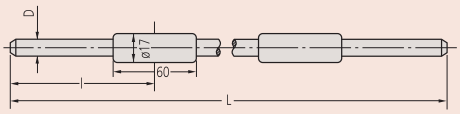


500 mm - 1000 mm

Micrometer Setting Standards > 1000 mm

Specifications

Measuring face	Micro-lap finish



1000-2000 mm

Series 167

Used for adjusting the reference point of outside micrometers

Metric

No.	Length (L)	Diameter (D)	Accuracy	Flatness	Parallelism	l [mm]
167-365	1025 mm	11,9 mm	±21,5 µm	0,3 µm	2 µm	217
167-366	1050 mm	11,9 mm	±22 µm	0,3 µm	2 µm	222
167-367	1075 mm	11,9 mm	±22,5 µm	0,3 µm	2 µm	227
167-368	1100 mm	11,9 mm	±23 µm	0,3 µm	2 µm	232
167-369	1125 mm	11,9 mm	±23,5 µm	0,3 µm	2 µm	238
167-370	1150 mm	11,9 mm	±24 µm	0,3 µm	2 µm	243
167-371	1175 mm	11,9 mm	±24,5 µm	0,3 µm	2 µm	248
167-372	1200 mm	11,9 mm	±25 µm	0,3 µm	2 µm	254
167-373	1225 mm	11,9 mm	±25,5 µm	0,3 µm	2 µm	259
167-374	1250 mm	11,9 mm	±26 µm	0,3 µm	2 µm	264
167-375	1275 mm	11,9 mm	±26,5 µm	0,3 µm	2 µm	269
167-376	1300 mm	11,9 mm	±27 µm	0,3 µm	2 µm	275
167-377	1325 mm	11,9 mm	±27,5 µm	0,3 µm	2 µm	280
167-378	1350 mm	11,9 mm	±28 µm	0,3 µm	2 µm	285
167-379	1375 mm	11,9 mm	±28,5 µm	0,3 µm	2 µm	291
167-380	1400 mm	11,9 mm	±29 µm	0,3 µm	2 µm	296
167-381	1425 mm	11,9 mm	±29,5 µm	0,3 µm	2 µm	301
167-382	1450 mm	11,9 mm	±30 µm	0,3 µm	2 µm	306
167-383	1475 mm	11,9 mm	±30,5 µm	0,3 µm	2 µm	312
167-384	1500 mm	11,9 mm	±31 µm	0,3 µm	2 µm	317
167-385	1525 mm	11,9 mm	±31,5 µm	0,3 µm	2 µm	322
167-386	1550 mm	11,9 mm	±32 µm	0,3 µm	2 µm	328
167-387	1575 mm	11,9 mm	±32,5 µm	0,3 µm	2 µm	333
167-388	1600 mm	11,9 mm	±33 µm	0,3 µm	2 µm	338
167-389	1625 mm	11,9 mm	±33,5 µm	0,3 µm	2 µm	343
167-390	1650 mm	11,9 mm	±34 µm	0,3 µm	2 µm	349
167-391	1675 mm	11,9 mm	±34,5 µm	0,3 µm	2 µm	354
167-392	1700 mm	11,9 mm	±35 µm	0,3 µm	2 µm	359
167-393	1725 mm	11,9 mm	±35,5 µm	0,3 µm	2 µm	364
167-394	1750 mm	11,9 mm	±36 µm	0,3 µm	2 µm	370
167-395	1775 mm	11,9 mm	±36,5 µm	0,3 µm	2 µm	375
167-396	1800 mm	11,9 mm	±37 µm	0,3 µm	2 µm	380
167-397	1825 mm	11,9 mm	±37,5 µm	0,3 µm	2 µm	386
167-398	1850 mm	11,9 mm	±38 µm	0,3 µm	2 µm	391
167-399	1875 mm	11,9 mm	±38,5 µm	0,3 µm	2 µm	396
167-400	1900 mm	11,9 mm	±39 µm	0,3 µm	2 µm	401
167-401	1925 mm	11,9 mm	±39,5 µm	0,3 µm	2 µm	407
167-402	1950 mm	11,9 mm	±40 µm	0,3 µm	2 µm	412
167-403	1975 mm	11,9 mm	±40,5 µm	0,3 µm	2 µm	417
167-404	2000 mm	11,9 mm	±41 µm	0,3 µm	2 µm	423

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Setting Standards for Screw Thread Micrometers

Setting Standards Metric (unified) 60°

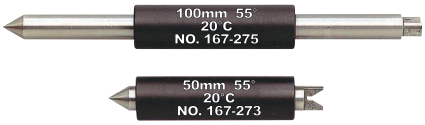
Used for accurately setting screw thread micrometers at the start or end of the measuring range.

Metric — Angle 60°

No.	Length (L)	Accuracy
167-261	25 mm	±4 µm
167-262	50 mm	±5 µm
167-263	75 mm	±6 µm
167-264	100 mm	±7 µm
167-265	125 mm	±8 µm
167-266	150 mm	±9 µm
167-267	175 mm	±10 µm
167-268	200 mm	±11 µm
167-269	225 mm	±12 µm
167-270	250 mm	±13 µm
167-271	275 mm	±14 µm

Setting Standards Metric Whitworth 55°

Used for accurately setting screw thread micrometers at the start or end of the measuring range.



Metric — Angle 55°

No.	Length (L)	Accuracy
167-272	25 mm	±4 µm
167-273	50 mm	±5 µm
167-274	75 mm	±6 µm
167-275	100 mm	±7 µm
167-276	125 mm	±8 µm
167-277	150 mm	±9 µm
167-278	175 mm	±10 µm
167-279	200 mm	±11 µm
167-280	225 mm	±12 µm
167-281	250 mm	±13 µm
167-282	275 mm	±14 µm

Setting Standards for V-Anvil Micrometers

Series 167

Used for accurately setting V-anvil micrometers

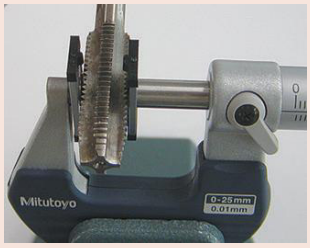
Metric

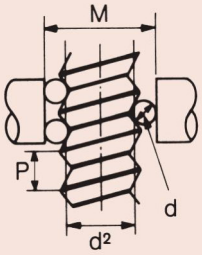
No.	Length (L)	Accuracy	Remarks
167-327	5 mm	±2 µm	Plug
167-328	10 mm	±2 µm	Plug
167-329	25 mm	±2 µm	Plug
167-330	40 mm	±3 µm	Ring
167-331	55 mm	±3 µm	Ring
167-332	70 mm	±3 µm	Ring
167-333	85 mm	±3 µm	Ring
167-334	100 mm	±5 µm	Ring
167-335	115 mm	±5 µm	Ring
167-336	130 mm	±5 µm	Ring

167-329

167-332

3-Wire Measuring Process





P =thread pitch
d_D =measuring wire Ø
d_2 =pitch diameter
M =theoretical dimension at measuring pressure d
a =pitch angle
d =correction factor

$$M = d_2 + \frac{d_D}{\sin\frac{a}{2}} - \frac{P}{2\tan\frac{a}{2}} + d_D + d$$

$$d = \frac{d_D}{2} \cdot \frac{P^2}{p^2} \cdot \frac{\cos\frac{a}{2} \cdot \cot\frac{a}{2}}{d_2^2}$$

ø Nominal	Thread pitch P	Pitch ø d2	Measuring wire ø dD	Measurement over wire M	(M-d2)
M 1	0,25	0,838	0,170	1,133	0,295
M 1,2	0,25	1,038	0,170	1,332	0,294
M 1,4	0,30	1,205	0,170	1,456	0,251
M 1,7	0,35	1,473	0,220	1,831	0,358
M 2	0,40	1,740	0,250	2,145	0,405
M 2,3	0,40	2,040	0,250	2,444	0,404
M 2,6	0,45	2,308	0,290	2,789	0,481
M 3	0,50	2,675	0,290	3,113	0,438
M 3,5	0,60	3,110	0,335	3,596	0,486
M 4	0,70	3,545	0,455	4,305	0,760
M 5	0,80	4,480	0,455	5,153	0,673
M 6	1,00	5,350	0,620	6,346	0,996
M 8	1,25	7,188	0,725	8,282	1,094
M 10	1,50	9,026	0,895	10,414	1,388
M 12	1,75	10,863	1,100	12,650	1,787

ø Nominal	Thread pitch P	Pitch ø d2	Measuring wire ø dD	Measurement over wire M	(M-d2)
M 14	2,00	12,701	1,350	15,021	2,320
M 16	2,00	14,701	1,350	17,021	2,320
M 20	2,50	18,376	1,650	21,163	2,787
M 22	2,50	20,376	1,650	23,163	2,787
M 24	3,00	22,051	2,050	25,606	3,555
M 27	3,00	25,051	2,050	28,605	3,554
M 30	3,50	27,727	2,050	30,848	3,121
M 33	3,50	30,727	2,050	33,848	3,121
M 36	4,00	33,402	2,550	37,591	4,189
M 39	4,00	36,402	2,550	40,590	4,188
M 42	4,50	39,077	2,550	42,832	3,755
M 45	4,50	42,077	2,550	45,832	3,755
M 48	5,00	44,752	3,200	50,025	5,273
M 52	5,00	48,752	3,200	54,024	5,272
M 56	5,50	52,428	3,200	57,267	4,839
M 60	5,50	56,428	3,200	61,267	4,839

Series 313

This three-wire measuring process is one of the most precise procedures for determining the pitch diameter of threads. It offers you the following benefits:

- The measuring wires are hardened and precision-lapped.
- They are placed onto the spindle and anvil of an outside micrometer, allowing you to measure the pitch diameter of threads.

313-101

1) Wire in set

No.	Accuracy	Remarks	Content of Set
313-101	DIN 2269, Grade 1	For micrometer spindle diameter 6,35 mm	18 pairs of wires D= 0,17 - 3,2 mm
313-102	DIN 2269, Grade 1	For micrometer spindle diameter 8 mm	18 pairs of wires D= 0,17 - 3,2 mm

Individual wires (content of 313-101)
One pair, support spindle ø 6.35 mm

No.	Diameter (D)	Accuracy
952131	0,17 mm	DIN 2269, Grade 1
952132	0,195 mm	DIN 2269, Grade 1
952133	0,22 mm	DIN 2269, Grade 1
952134	0,25 mm	DIN 2269, Grade 1
952135	0,29 mm	DIN 2269, Grade 1
952136	0,335 mm	DIN 2269, Grade 1
952137	0,39 mm	DIN 2269, Grade 1
952138	0,455 mm	DIN 2269, Grade 1
952139	0,53 mm	DIN 2269, Grade 1
952140	0,62 mm	DIN 2269, Grade 1
952141	0,725 mm	DIN 2269, Grade 1
952142	0,895 mm	DIN 2269, Grade 1
952143	1,1 mm	DIN 2269, Grade 1
952144	1,35 mm	DIN 2269, Grade 1
952145	1,65 mm	DIN 2269, Grade 1
952146	2,05 mm	DIN 2269, Grade 1
952147	2,55 mm	DIN 2269, Grade 1
952148	3,2 mm	DIN 2269, Grade 1

Individual wires (content of 313-102)
One pair, support spindle ø 8 mm

No.	Diameter (D)	Accuracy
952149	0,17 mm	DIN 2269, Grade 1
952150	0,195 mm	DIN 2269, Grade 1
952151	0,22 mm	DIN 2269, Grade 1
952152	0,25 mm	DIN 2269, Grade 1
952153	0,29 mm	DIN 2269, Grade 1
952154	0,335 mm	DIN 2269, Grade 1
952155	0,39 mm	DIN 2269, Grade 1
952156	0,455 mm	DIN 2269, Grade 1
952157	0,53 mm	DIN 2269, Grade 1
952158	0,62 mm	DIN 2269, Grade 1
952159	0,725 mm	DIN 2269, Grade 1
952160	0,895 mm	DIN 2269, Grade 1
952161	1,1 mm	DIN 2269, Grade 1
952162	1,35 mm	DIN 2269, Grade 1
952163	1,65 mm	DIN 2269, Grade 1
952164	2,05 mm	DIN 2269, Grade 1
952165	2,55 mm	DIN 2269, Grade 1
952166	3,2 mm	DIN 2269, Grade 1

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Micrometer Stands

Series 156

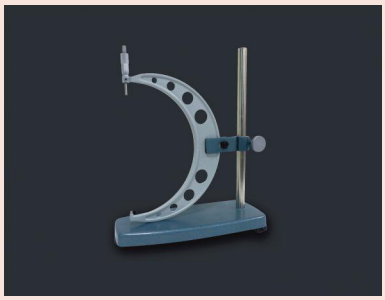
This is a micrometer stand that offers you the following benefits:

- Keeps both hands free for operating the micrometer and positioning the workpiece.
- Designed for batch or mass production measurements in manufacturing and quality assurance.

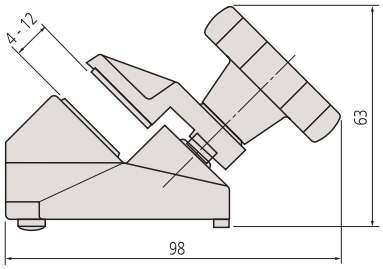
156-105-10

156-101-10

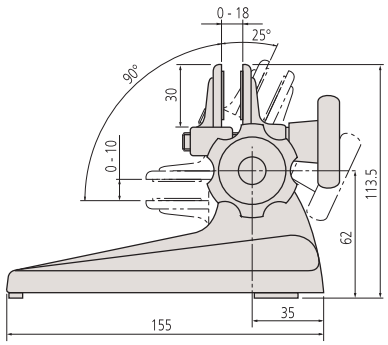
156-102



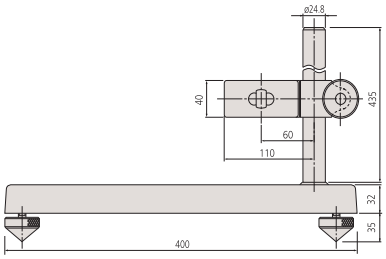
No.	Applicable measuring range	Remarks	Mass [g]
156-105-10	0 - 50 mm	Fixed angle type 45°	700
156-101-10	0 - 100 mm	Adjustable angle type	1210
156-102	100 - 300 mm	Vertical type	9000
156-103	300 - 1000 mm	Vertical type	8500



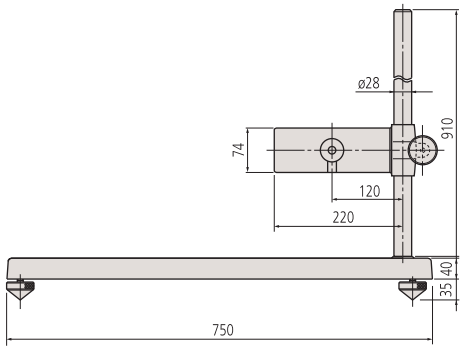
156-105-10



156-101-10



156-102



156-103

Colour Coded Ratchets and Speeders

Micrometer accessories

Colour-coded ratchets

Colour-coded speeders for Ratchet Thimble Micrometer series 102-7XX, QuantuMike and Series 293 with ratched thimble

Colour-coded ratchets for analogue micrometer 0-300 mm

No.	Colour
985056	Black
985061	Red
985081	Blue
985071	Yellow
985076	Green
985066	Brown
04GZA239	Grey

Colour-coded ratchets for analogue micrometer 300-1000 mm

No.	Colour
04GZA243	Grey

Colour-coded speeders for digital micrometer 0-300 mm

No.	Colour
04GZA241	Grey

Colour-coded speeders for series 102-7XX, QuantuMike and series 293 with ratched thimble

No.	Colour
04AAB208	Grey
04GAA900	Red
04GAA901	Yellow
04GAA902	Green
04GAA903	Blue
04GAA899	Black

Ball Attachments

Micrometer accessories

- Ball attachment to fit micrometer anvils (ø 6,35 mm only)

K544888

Sample application

Metric

No.	Diameter (D)
K544888	5 mm

Optical Parallels

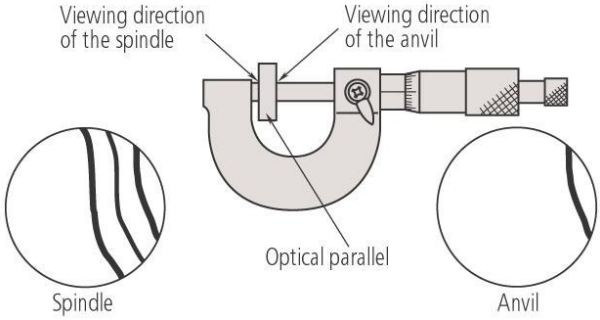
Series 157

These Optical Parallels allow you to inspect micrometers and other measuring tools. Using optical interference, they can inspect the measuring faces for parallelism and flatness.

157-904

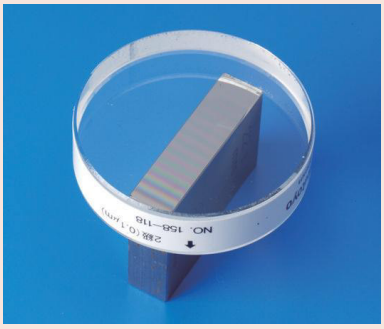
Metric

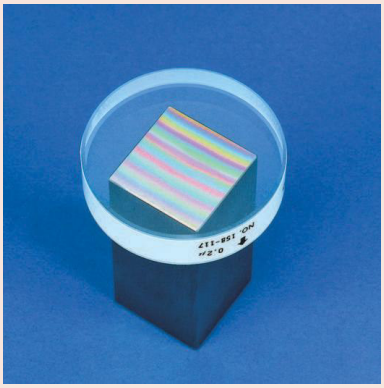
No.	Diameter (D)	Flatness	Parallelism	Remarks	Content of Set
157-903	30 mm	0,1 µm	0,2 µm	For micrometer range 0 - 25 mm	157-101 (12 mm), 157-102 (12,12 mm), 157-103 (12,25 mm), 157-104 (12,37 mm)
157-904	30 mm	0,1 µm	0,2 µm	For micrometer range 25 - 50 mm	157-105 (25 mm), 157-106 (25,12 mm), 157-107 (25,25 mm), 157-108 (25,37 mm)



Testing a micrometer for flatness and parallelism of anvil and spindle faces : flatness is indicated by straightness and regular spacing of interference fringes, and parallelism by how many fringes are visible.

Optical Flats





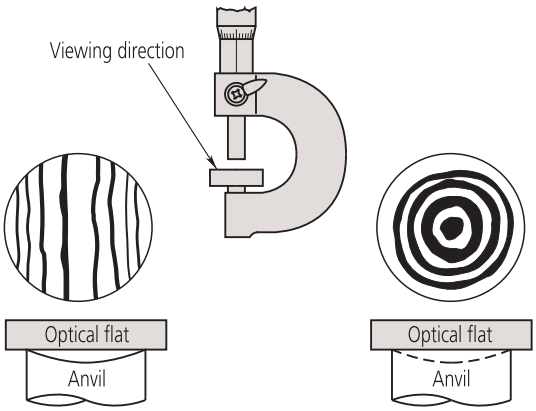
Series 158

These optical flats are an essential tool to test the flatness of reflective surfaces such as gauge blocks through optical interference technology.

158-118

Metric

No.	Length (L)	Diameter (D)	Flatness
158-117	12 mm	45 mm	0,2 µm
158-118	12 mm	45 mm	0,1 µm
158-119	15 mm	60 mm	0,2 µm
158-120	15 mm	60 mm	0,1 µm



Mitutoyo

Digital Micrometer Heads with Non-Rotating Spindle

Series 164

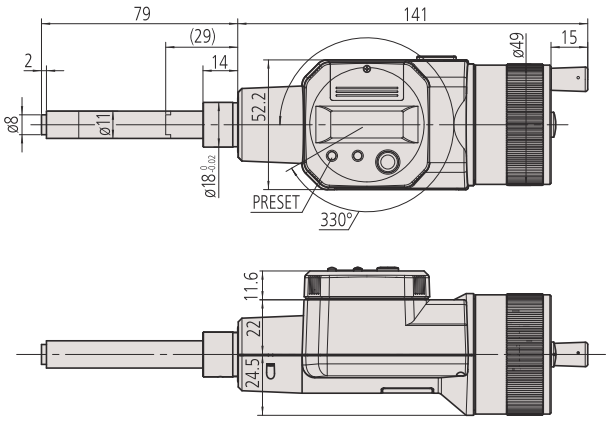
This is a digital micrometer head with non-rotating spindle. It offers you the following benefits:

- Rotatable display, carbide tipped and non-rotating spindle
- It is perfect for integration into machinery and measuring instruments.

164-163

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Remarks	Mass [g]
164-163	0 - 50	0,001 mm	±3 µm	Flat	0,5	18	Flat	Non-rotating spindle	490



164-163
(): with spindle full retracted

Functions	Series 164
Data output	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
2 x PRESET	●
Counting direction switchable	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped
Power supply	2 batteries SR-44
Battery life	Approx. 1,8 years

Optional accessories

No.	Description
959149	Digimatic Cable, Straight, Data Button, 1 m
959150	Digimatic Cable, Straight, Data Button, 2 m
06AFM380C	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, Straight, with Data Button
02AZD880G	U-WAVE-T, Buzzer Type, Wireless Transmitter
02AZD730G	U-WAVE-T, IP67 Type, Wireless Transmitter
02AZD790C	Connection Cable C for U-WAVE, Straight, with Data Button

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

164-163 Application

Digital Micrometer Heads with 10 mm Stem

Functions	Series 350
Data output	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Function lock	●
HOLD	●
2 x PRESET	●

Specifications

Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped
Measuring spindle	With spindle lock, ø 6,35 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years

Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V

Series 350

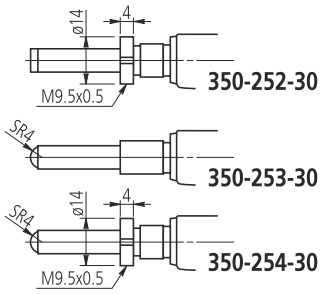
This Micrometer Head has a 25 mm range and a 10 mm stem, and offers the following benefits:

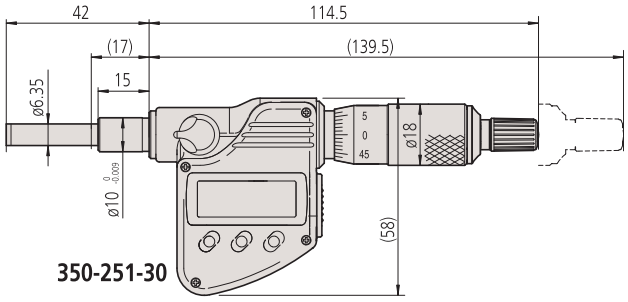
- You can integrate it into machinery and measuring instruments.
- Measurement values are clearly displayed in 0,001mm increments.
- Stem diameter: 10 mm.

350-251-30

Metric

No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Mass [g]
350-251-30	0 - 25	0,001 mm	±2 µm	Flat	0,5	10	Plain		230
350-252-30	0 - 25	0,001 mm	±2 µm	Flat	0,5	10	w/ clamp nut	11,5	230
350-253-30	0 - 25	0,001 mm	±2 µm	Spherical (SR4)	0,5	10	Plain		230
350-254-30	0 - 25	0,001 mm	±2 µm	Spherical (SR4)	0,5	10	w/ clamp nut	11,5	230





(): with spindle full retracted

Mitutoyo

Digital Micrometer Heads with 12 mm Stem

Series 350

Dust- and Water-Protected

TÜVRheinland CERTIFIED

www.tuv.com ID 0000040191

IP65

This Micrometer Head has a 25 mm range and a 12 mm stem, and offers the following benefits:

- You can integrate it into machinery and measuring instruments.
- Its excellent water and dust resistance (IP65 protection level) lets you use it in machining situations that include splashing coolant fluid (except types with threaded stem).

350-281-30

350-282-30

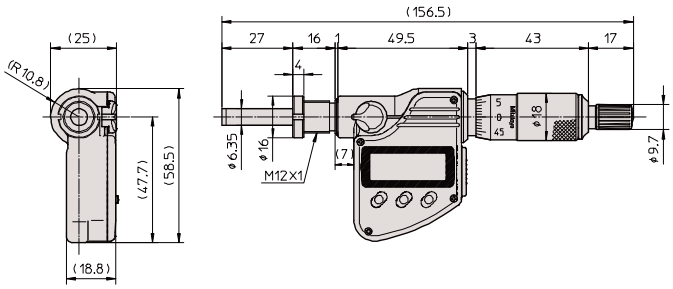
Functions	Series 350
Data output	●
ABS / INC (INC ZERO)	●
Auto Power OFF after 20 min. non use	●
Function lock	●
HOLD	●
2 x PRESET	●

Specifications

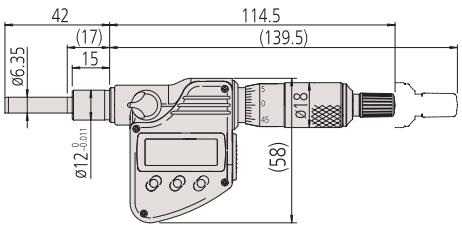
Display	LCD, character height 7,5 mm
Measuring face	Carbide-tipped
Measuring spindle	With spindle lock, ø 6,35 mm
Scale	Thimble and sleeve satin chrome finish
Power supply	1 battery SR-44
Battery life	Approx. 2,4 years

Metric

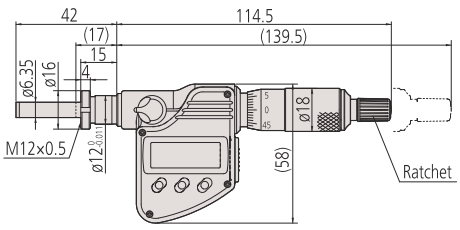
No.	Range [mm]	Digital step	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Remarks	Mass [g]
350-271-30	0 - 25	0,001 mm	±2 µm	Flat	0,5	12	Plain		IP65	230
350-272-30	0 - 25	0,001 mm	±2 µm	Flat	0,5	12	w/ clamp nut	11,5	Threaded stem	230
350-273-30	0 - 25	0,001 mm	±2 µm	Spherical (SR4)	0,5	12	Plain		IP65	230
350-274-30	0 - 25	0,001 mm	±2 µm	Spherical (SR4)	0,5	12	w/ clamp nut	11,5	Threaded stem	230
350-281-30	0 - 25	0,001 mm	±2 µm	Flat	0,5	12	Plain		IP65	230
350-282-30	0 - 25	0,001 mm	±2 µm	Flat	0,5	12	w/ clamp nut	11,5	IP65	230
350-283-30	0 - 25	0,001 mm	±2 µm	Spherical (SR4)	0,5	12	Plain		IP65	230
350-284-30	0 - 25	0,001 mm	±2 µm	Spherical (SR4)	0,5	12	w/ clamp nut	11,5	IP65	230
350-261-30	0 - 25	0,001 mm	±2 µm	Flat	0,5	12	Plain		IP65, w/ non-rotating measuring face w/o ratched stop	235



350-272-30



350-281-30



350-282-30

(): with spindle full retracted

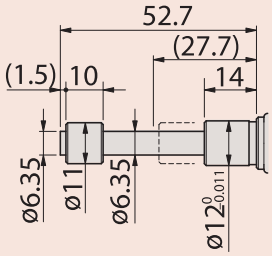
Optional accessories

No.	Description
05CZA662	Digimatic Cable with Data Button IP Type, 1 m, Micrometer Type
05CZA663	Digimatic Cable with Data Button IP Type, 2 m, Micrometer Type
06AFM380B	USB Input Tool Direct (Digimatic to USB), 2m Cable, Digimatic/Digimatic 2, with Data Button IP Micrometer Type
264-622	U-WAVE fit, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-623	U-WAVE fit, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
264-626	U-WAVE fit Bluetooth, IP67 Type, Wireless Transmitter for Micrometer/Indicator
264-627	U-WAVE fit Bluetooth, Buzzer Type, Wireless Transmitter for Micrometer/Indicator
02AZF310	Connection Unit for IP Caliper, Micrometer, with Data Button for U-WAVE fit, U-WAVE fit Bluetooth

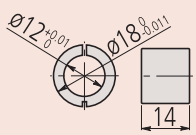
Consumable spares

No.	Description
63AAA800	Battery SR44 1,5 V
305307	Bush, Series 350, Ø 12/18 mm, 14 mm length
306625	Bush, Series 350, Ø 12/18 mm, 16 mm length

306625 Standard for 350-271-30, 350-273-30
305307 Standard for 350-261-30



350-261-30



305307

Micrometer Heads with Counter

Specifications

Measuring spindle	With spindle lock, ø 6,35 mm, spindle pitch 0,5 mm
Measuring face	Carbide-tipped
Scale	• Thimble and sleeve satin chrome finish • White anodized aluminium

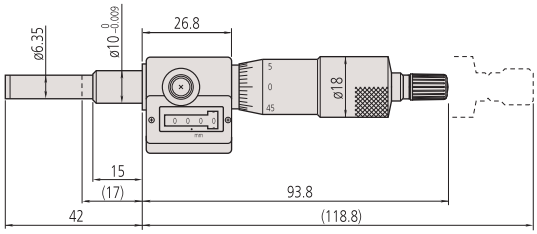
Series 250 - Digit counter type

This Digit counter type is a micrometer head with a mechanical counter.

250-301

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Mass [g]
250-301	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	Plain	165



250-301

Micro Jack

Specifications

Measuring face	Hardened steel (>60 HRC)

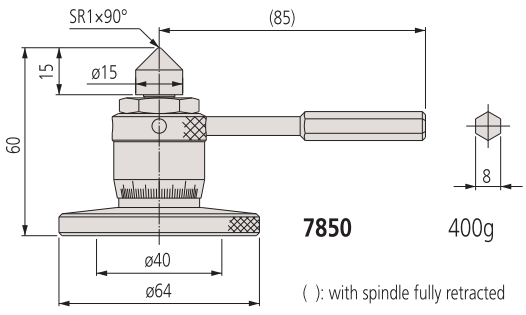
Series 7

This Micro Jack allows you to make easy adjustments under a heavy load.
It offers the following benefits:

- Adjustments can easily be made under a heavy load.
- You can use it to accurately level machines, surface plates, and other precision instruments.

Metric

No.	Graduation	Range [mm]	Remarks	Mass [g]
7850	0,01 mm	60 - 75	Max. load : 400kg	400



7850 400g

( ): with spindle fully retracted

Mitutoyo

Fine Spindle Feed 0,1 mm / rev Micrometer Heads 5 mm and 6,5 mm Range

Series 148 - Very fine spindle feed of 0,1/rev

These micrometer heads have a very fine spindle feed of 0.1 mm/rev.
They offer the following benefits:

- Small size micrometer heads with extremely fine pitch of 0.1 mm.
- Ideal for fine adjustment applications in scientific apparatus.

148-244

148-245

148-142-10

148-143-10

148-242-10

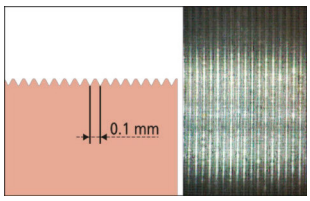
148-243-10

148-342-10

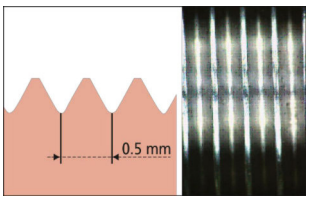
148-343-10

Metric

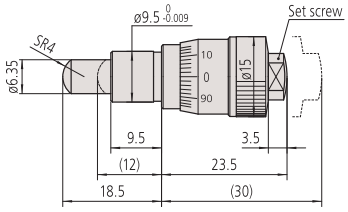
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Mass [g]
148-244	0 - 5	0,004 mm	±5 µm	Spherical (SR1,5)	0,1	3,5	Plain		4
148-245	0 - 5	0,004 mm	±5 µm	Spherical (SR1,5)	0,1	3,5	w/ clamp nut	3	5
148-142-10	0 - 6,5	0,002 mm	±2 µm	Spherical (SR4)	0,1	9,5	Plain		31
148-143-10	0 - 6,5	0,002 mm	±2 µm	Spherical (SR4)	0,1	9,5	w/ clamp nut	6	34
148-342-10	0 - 6,5	0,002 mm	±2 µm	Spherical (SR4)	0,1	9,5	Plain		29
148-343-10	0 - 6,5	0,002 mm	±2 µm	Spherical (SR4)	0,1	9,5	w/ clamp nut	6	31
148-242-10	0 - 6,5	0,002 mm	±5 µm	Spherical (SR3)	0,1	6	Plain		10
148-243-10	0 - 6,5	0,002 mm	±5 µm	Spherical (SR3)	0,1	6	w/ clamp nut	4	10



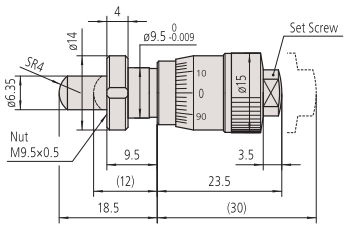
Pitch 0,1 mm



Pitch 0,5 mm



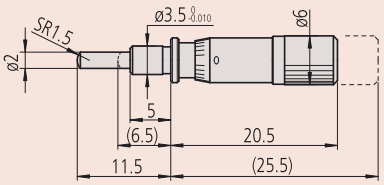
148-342-10



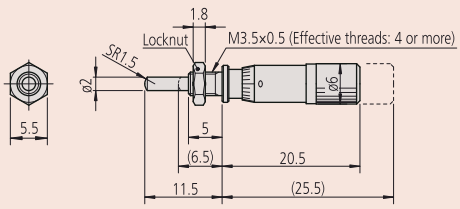
148-343-10
(): with spindle full retracted

Specifications

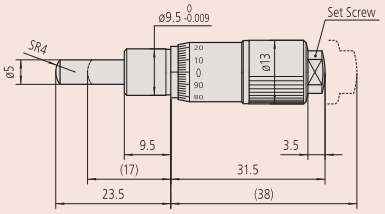
Measuring face	Hardened steel (>60 HRC)



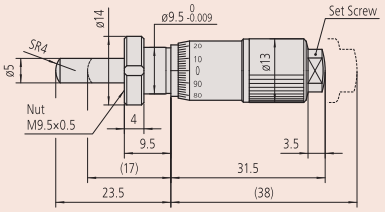
148-244



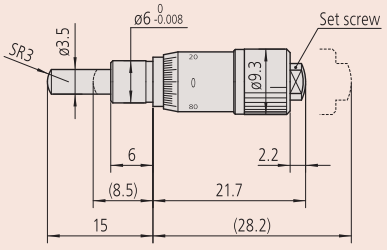
148-245



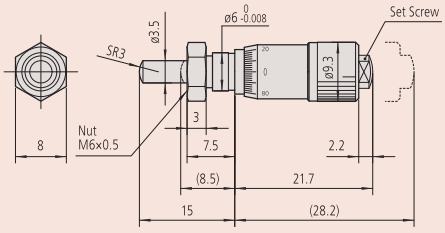
148-142-10



148-143-10



148-242-10



148-243-10

Ultra Small Micrometer Heads 5 mm and 6,5 mm Range

Specifications

Measuring face	Hardened steel (>60 HRC)

Series 148 - Ultra small

This ultra-small micrometer head allows you to easily incorporate it into machines and offers you the following benefits:

- Plain stem and a flat spindle end
- Hardened steel measuring surface

148-215

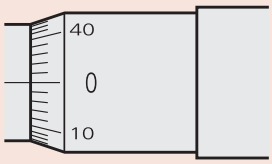
148-216

148-201-10

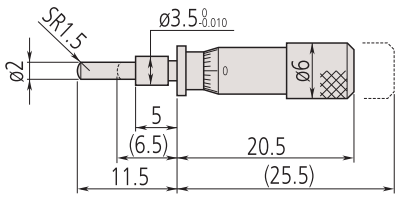
148-203-10

Metric

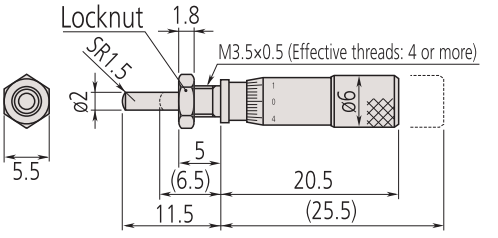
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
148-215	0 - 5	0,02 mm	±5 µm	Spherical (SR1,5)	0,5	3,5	Plain			4
148-216	0 - 5	0,02 mm	±5 µm	Spherical (SR1,5)	0,5	3,5	w/ clamp nut	3		4
148-201-10	0 - 6,5	0,01 mm	±5 µm	Flat	0,5	6	Plain			10
148-203-10	0 - 6,5	0,01 mm	±5 µm	Flat	0,5	6	w/ clamp nut	4		10
148-205-10	0 - 6,5	0,01 mm	±5 µm	Spherical (SR3)	0,5	6	Plain			10
148-207-10	0 - 6,5	0,01 mm	±5 µm	Spherical (SR3)	0,5	6	w/ clamp nut	4		10
148-209-10	0 - 6,5	0,01 mm	±5 µm	Flat	0,5	6	Plain		Reverse reading	10
148-211-10	0 - 6,5	0,01 mm	±5 µm	Flat	0,5	6	w/ clamp nut	4	Reverse reading	10



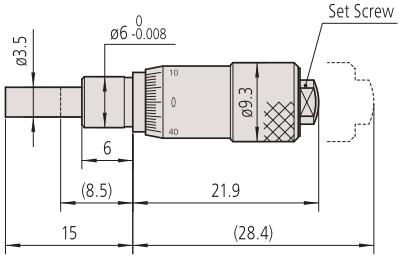
148-209-10
148-211-10
Reverse reading



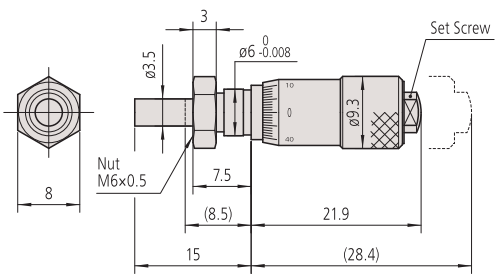
148-215



148-216



148-201-10
(): with spindle full retracted



148-203-10

Mitutoyo

Fine Spindle Feed 0,25 mm / rev Micrometer Heads 6,5 mm and 13 mm Range

Series 148 - Fine spindle feed of 0,25/rev

These micrometer heads are a standard, small-sized type with a 6,5 mm and 13 mm measuring range.
They offer the following benefits:

- Fine spindle feed of 0,25 mm/rev for fine adjustment.

148-132-10

148-133-10

148-322-10

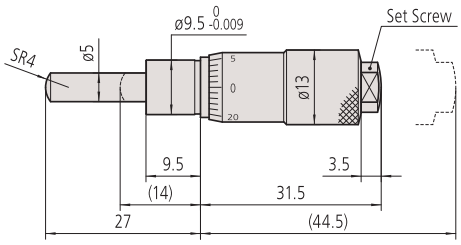
148-323-10

Specifications

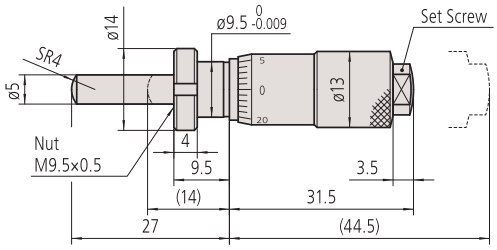
Measuring face	Hardened steel (>60 HRC)

Metric

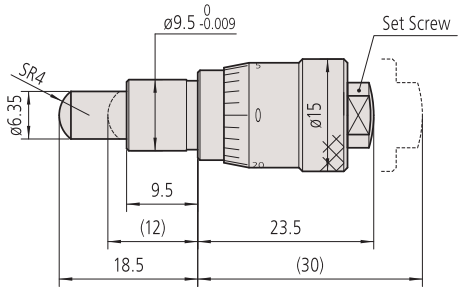
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Mass [g]
148-132-10	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,25	9,5	Plain		30
148-133-10	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,25	9,5	w/ clamp nut	6	35
148-322-10	0 - 6,5	0,01 mm	±2 µm	Spherical (SR4)	0,25	9,5	Plain		30
148-323-10	0 - 6,5	0,01 mm	±2 µm	Spherical (SR4)	0,25	9,5	w/ clamp nut	6	35



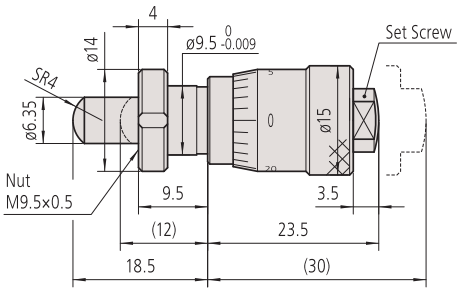
148-132-10



148-133-10



148-322-10



148-323-10
(): with spindle full retracted

Micrometer Head 6,5 mm and 13 mm Short Thimble Type

Specifications

Measuring face	Hardened steel (>60 HRC)

Series 148 - Compact Type for Limited Space Applications

Short thimble type with thimble diameter options.

148-301-10

148-302-10

148-303-10

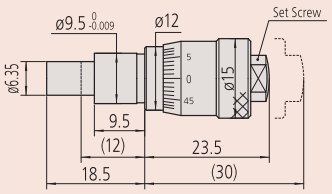
148-309-10

148-310-10

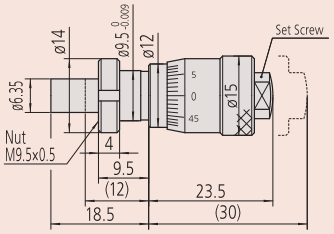
148-311-10

Metric

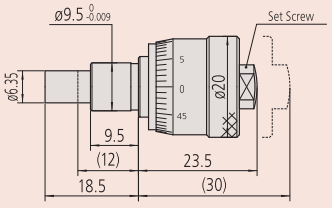
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Thimble Ø	Mass [g]
148-301-10	0 - 6,5	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		15 mm	26
148-302-10	0 - 6,5	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	15 mm	26
148-303-10	0 - 6,5	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		20 mm	39
148-304-10	0 - 6,5	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	20 mm	39
148-313-10	0 - 6,5	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	Plain		15 mm	26
148-314-10	0 - 6,5	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	w/ clamp nut	6	15 mm	26
148-307-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		15 mm	35
148-308-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	15 mm	35
148-309-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		20 mm	55
148-310-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	20 mm	55
148-311-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		29 mm	103
148-312-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	29 mm	103



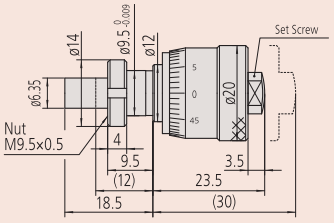
148-301-10



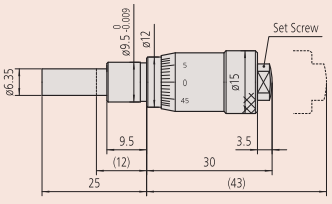
148-302-10



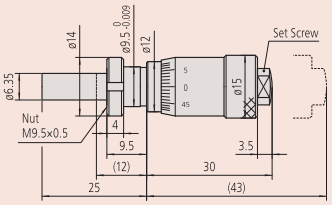
148-303-10



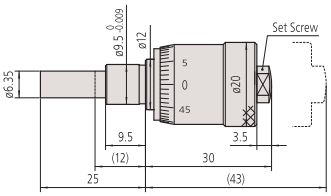
148-304-10



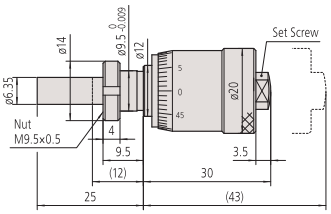
148-307-10



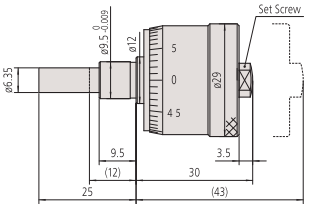
148-308-10



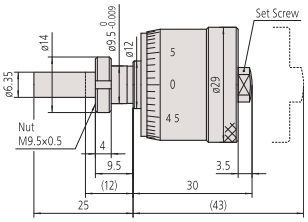
148-309-10



148-310-10



148-311-10
(): with spindle full retracted



148-312-10

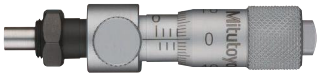
Mitutoyo

Micrometer Heads 6,5 mm Range with Spindle Lock

Series 148 - Locking screw Type

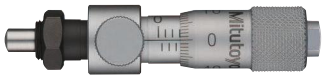
These micrometer heads feature a knurled locking screw so you can lock the spindle in any position with the knurled locking screw.

148-220-10

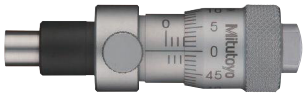


148-221-10

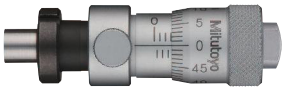
148-222-10



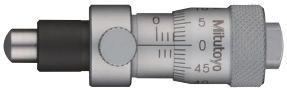
148-223-10



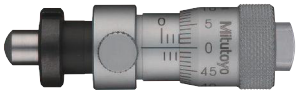
148-316-10



148-317-10



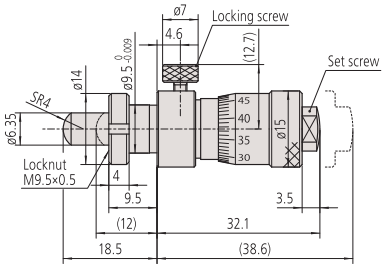
148-318-10



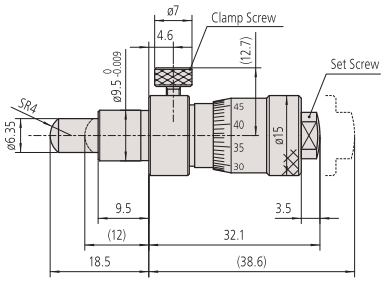
148-319-10

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Mass [g]
148-220-10	0 - 6,5	0,01 mm	±5 µm	Flat	0,5	6	Plain		16
148-221-10	0 - 6,5	0,01 mm	±5 µm	Flat	0,5	6	w/ clamp nut	4	17
148-222-10	0 - 6,5	0,01 mm	±5 µm	Spherical (SR3)	0,5	6	Plain		16
148-223-10	0 - 6,5	0,01 mm	±5 µm	Spherical (SR3)	0,5	6	w/ clamp nut	4	17
148-316-10	0 - 6,5	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		40
148-317-10	0 - 6,5	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	43
148-318-10	0 - 6,5	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	Plain		40
148-319-10	0 - 6,5	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	w/ clamp nut	6	43



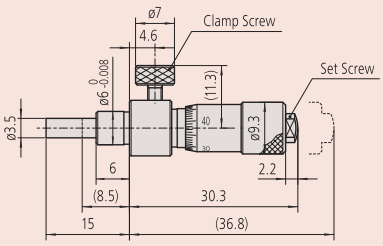
148-319-10



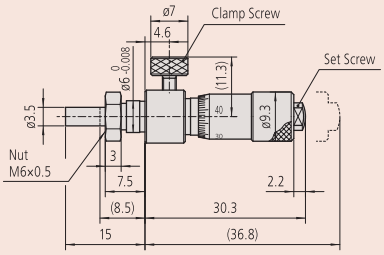
148-318-10
(): with spindle full retracted

Specifications

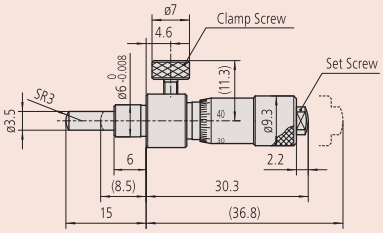
Measuring face	Hardened steel (>60 HRC)



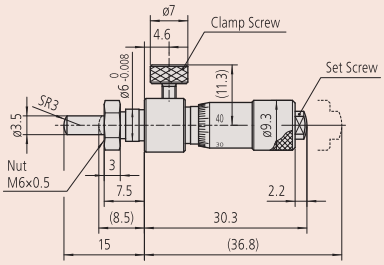
148-220-10



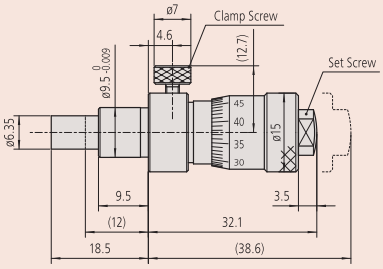
148-221-10



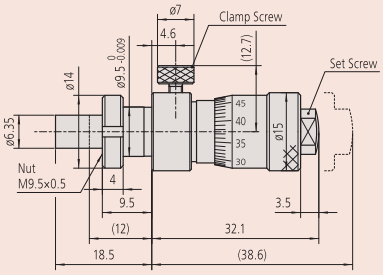
148-222-10



148-223-10



148-316-10



148-317-10

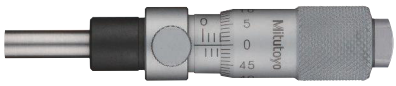
Micrometer Heads 13 mm Range with Spindle Lock

Specifications

Measuring face	Hardened steel (>60 HRC)

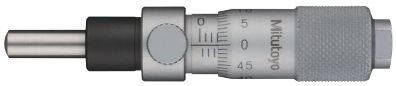
Series 148 - Locking screw Type

These micrometer heads feature a locking screw so you can lock the spindle in any position with the knurled locking screw.

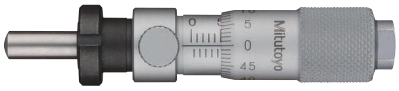


148-150-10

148-151-10



148-152-10

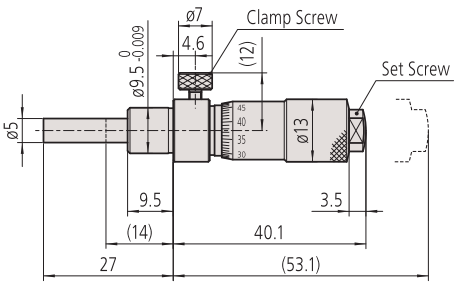


148-153-10

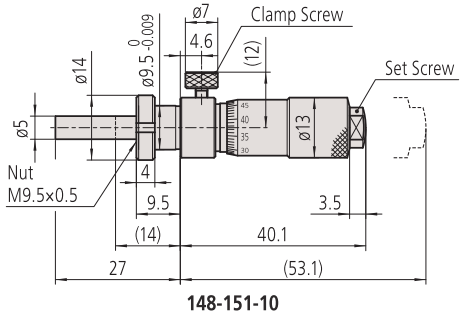
Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]
148-150-10	0 - 13	0,01 mm	±2 µm	Flat	0,5
148-151-10	0 - 13	0,01 mm	±2 µm	Flat	0,5
148-152-10	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5
148-153-10	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5

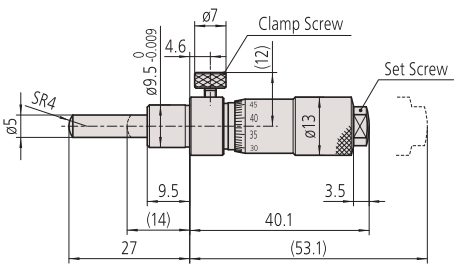
No.	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Mass [g]
148-150-10	9,5	Plain		40
148-151-10	9,5	w/ clamp nut	6	43
148-152-10	9,5	Plain		40
148-153-10	9,5	w/ clamp nut	6	43



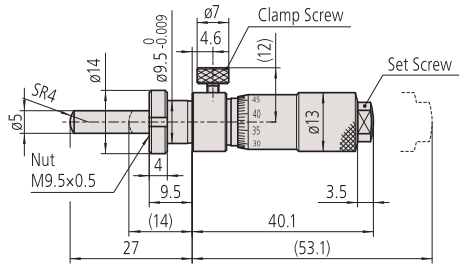
148-150-10



148-151-10



148-152-10



148-153-10
(): with spindle full retracted

Micrometer Heads 13 mm Range with Zero Thimble

Series 148 - Standard type, small size with zero-adjustable thimble.

These are a standard type of small size micrometer heads with a zero-adjustable thimble. They offer the following benefits:

- You can make a zero-setting at any position by loosening the setscrew in the thimble.


148-508


148-853


148-863


148-864


148-506


148-504

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Mass [g]
148-503	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		35
148-508	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	40
148-853	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	Plain		40
148-858	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	w/ clamp nut	6	40

Metric Reverse reading

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
148-863	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		Reverse reading	35
148-868	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	Reverse reading	40

Metric Reverse reading / with spindle lock

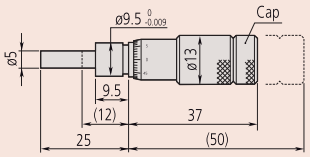
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
148-864	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	Reverse reading	40
148-866	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		Reverse reading	35

Metric With spindle lock

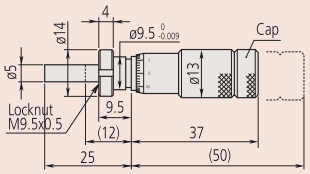
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Mass [g]
148-506	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		35
148-504	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	40
148-854	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	w/ clamp nut	6	40
148-856	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	Plain		35

Specifications

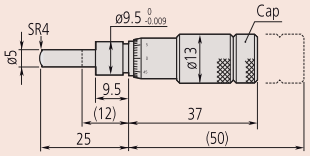
Measuring face	Hardened steel (>60 HRC)



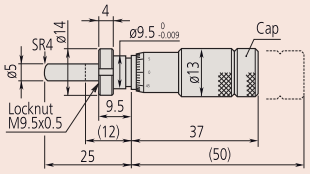
148-503



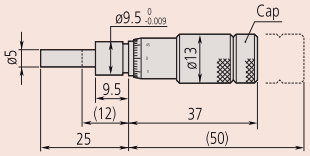
148-508



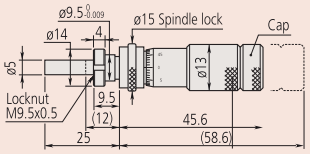
148-853



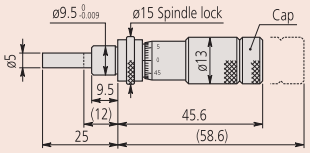
148-858



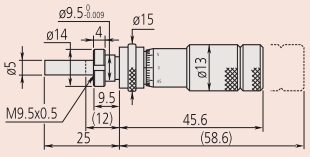
148-863



148-864



148-506



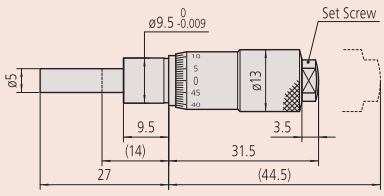
148-504

(): with spindle full retracted

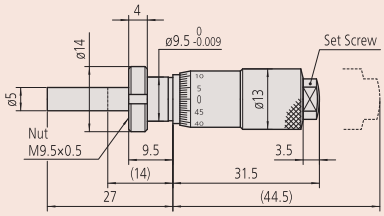
Micrometer Heads 13 mm Range Small Standard Type

Specifications

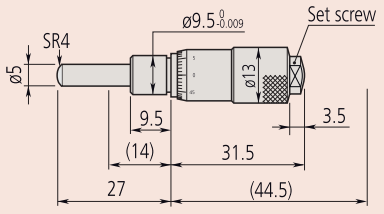
Measuring face	Hardened steel (>60 HRC)



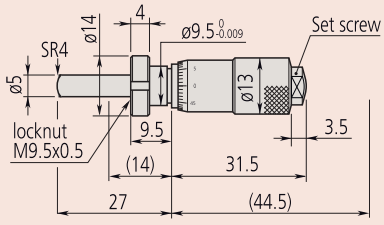
148-104-10



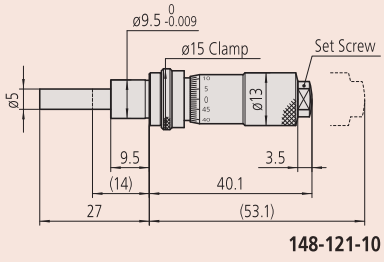
148-103-10



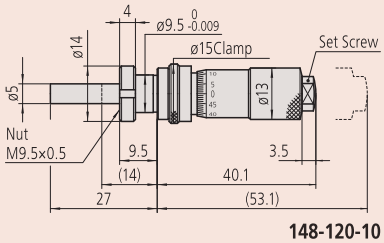
148-801-10



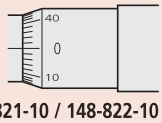
148-802-10



148-121-10



148-120-10



148-821-10 / 148-822-10
148-823-10 / 148-824-10
Reverse reading

Series 148 - Small standard type

This is a standard, small-sized micrometer head which offers you the following benefits:

- Plain stem and a flat or spherical spindle end
- Hardened steel measuring surface

148-104-10

148-103-10

148-801-10

148-802-10

148-121-10

148-120-10

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
148-104-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain			30
148-103-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6		35
148-801-10	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	Plain			30
148-802-10	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	w/ clamp nut	6		35
148-821-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		Reverse reading	30
148-822-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	Reverse reading	35

Metric With spindle lock

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
148-121-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain			40
148-120-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6		45
148-803-10	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	Plain			40
148-804-10	0 - 13	0,01 mm	±2 µm	Spherical (SR4)	0,5	9,5	w/ clamp nut	6		45
148-823-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	Plain		Reverse reading	40
148-824-10	0 - 13	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	Reverse reading	45

Mitutoyo

Micrometer Heads 15 mm Range

Series 149 - Small standard type with carbide-tipped spindle

This small micrometer head with tungsten carbide measuring surface offers you the following benefits:

- Stem with clamp nut and a flat or spherical spindle end
- Stem with carbide-tipped spindle

149-132-10

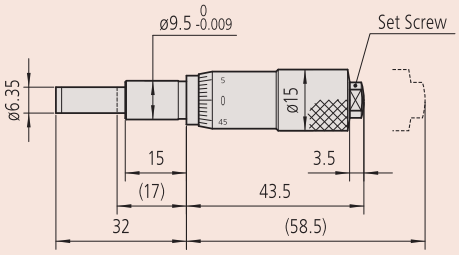
149-131-10

149-183-10

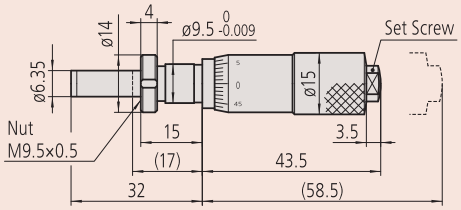
149-184-10

Specifications

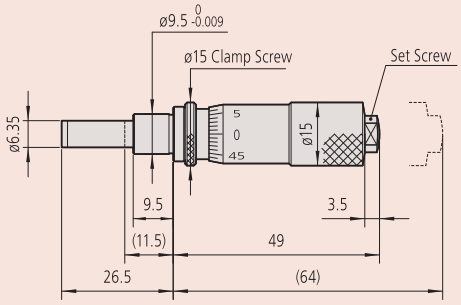
Measuring face	Carbide-tipped



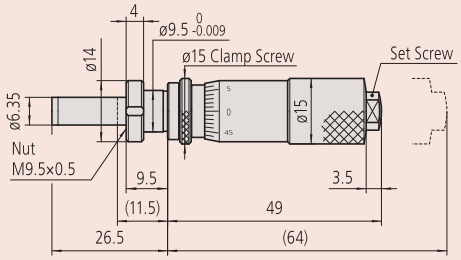
149-132-10



149-131-10



149-183-10



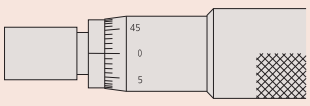
149-184-10

Metric

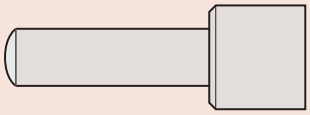
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
149-132-10	0 - 15	0,01mm	±2 µm	Flat	0,5	9,5	Plain			55
149-131-10	0 - 15	0,01mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	11,5		60
149-801-10	0 - 15	0,01mm	±2 µm	Spherical (SR4)	0,5	9,5	Plain			55
149-802-10	0 - 15	0,01mm	±2 µm	Spherical (SR4)	0,5	9,5	w/ clamp nut	11,5		60
149-821-10	0 - 15	0,01mm	±2 µm	Flat	0,5	9,5	Plain		Reverse reading	55
149-822-10	0 - 15	0,01 mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	11,5	Reverse reading	60

Metric With spindle lock

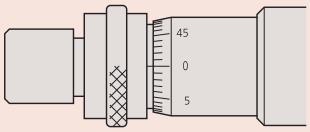
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
149-183-10	0 - 15	0,01mm	±2 µm	Flat	0,5	9,5	Plain			55
149-184-10	0 - 15	0,01mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6		60
149-803-10	0 - 15	0,01mm	±2 µm	Spherical (SR4)	0,5	9,5	Plain			55
149-804-10	0 - 15	0,01mm	±2 µm	Spherical (SR4)	0,5	9,5	w/ clamp nut	6		60
149-823-10	0 - 15	0,01mm	±2 µm	Flat	0,5	9,5	Plain		Reverse reading	55
149-824-10	0 - 15	0,01mm	±2 µm	Flat	0,5	9,5	w/ clamp nut	6	Reverse reading	60



Reverse reading



Spherical spindle end

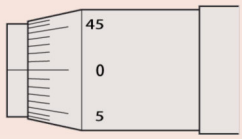


With spindle lock

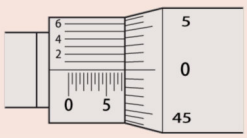
Micrometer Heads 25 mm Range

Specifications

Measuring face	Carbide-tipped



Reverse reading



Graduation 0.001mm

Series 150 - Medium-sized standard type

This is a standard, medium-size micrometer head that offers you the following benefits:

- Plain stem and a flat or spherical spindle end
- With carbide-tipped spindle


150-191


150-192


150-801


150-802


150-195-10


150-196-10


150-209


150-210


150-803


150-824


150-211-10


150-212-10

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
150-192	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	Plain			95
150-191	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	w/ clamp nut	11,5		100
150-801	0 - 25	0,01 mm	±2 µm	Spherical (SR4)	0,5	10	Plain			95
150-802	0 - 25	0,01 mm	±2 µm	Spherical (SR4)	0,5	10	w/ clamp nut	11,5		100
150-821	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	Plain		Reverse reading	95
150-822	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	w/ clamp nut	11,5	Reverse reading	100
150-190	0 - 25	0,001 mm	±2 µm	Flat	0,5	10	Plain		Graduation 0,001 mm	95
150-189	0 - 25	0,001 mm	±2 µm	Flat	0,5	10	w/ clamp nut	11,5	Graduation 0,001 mm	100
150-196-10	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	Plain		w/o ratchet stop	90
150-195-10	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	w/ clamp nut	11,5	w/o ratchet stop	90

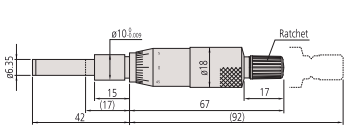
Mitutoyo

Micrometer Heads 25 mm Range

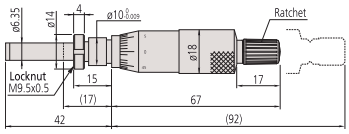
Metric

With spindle lock

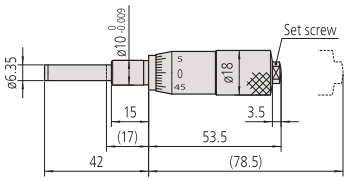
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
150-209	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	Plain			110
150-210	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	w/ clamp nut	11,5		115
150-803	0 - 25	0,01 mm	±2 µm	Spherical (SR4)	0,5	10	Plain			125
150-804	0 - 25	0,01 mm	±2 µm	Spherical (SR4)	0,5	10	w/ clamp nut	11,5		125
150-823	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	Plain		Reverse reading	125
150-824	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	w/ clamp nut	11,5	Reverse reading	125
150-183	0 - 25	0,001 mm	±2 µm	Flat	0,5	10	Plain		Graduation 0,001 mm	110
150-184	0 - 25	0,001 mm	±2 µm	Flat	0,5	10	w/ clamp nut	11,5	Graduation 0,001 mm	115
150-211-10	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	Plain		w/o ratchet stop	115
150-212-10	0 - 25	0,01 mm	±2 µm	Flat	0,5	10	w/ clamp nut	11,5	w/o ratchet stop	115



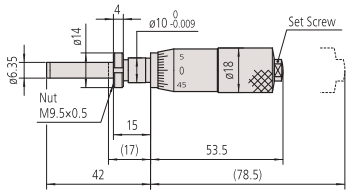
150-192



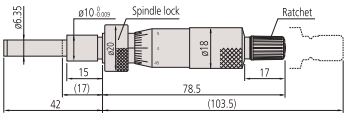
150-191



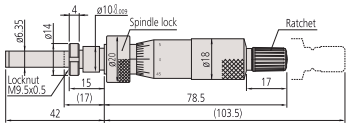
150-196-10



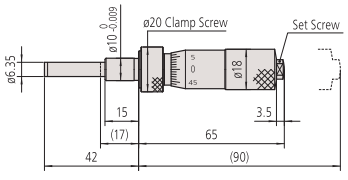
150-195-10



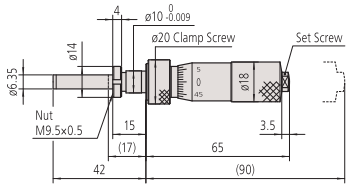
150-209



150-210



150-211-10



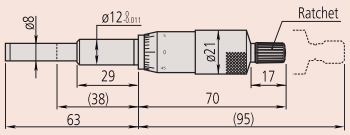
150-212-10

(): with spindle full retracte

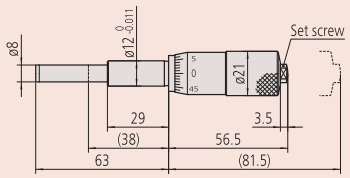
Micrometer Heads 25 mm and 50 mm Range with 8 mm Spindle Diameter

Specifications

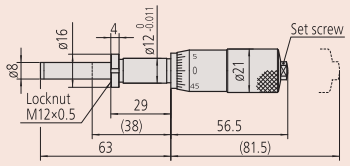
Measuring face	Carbide-tipped



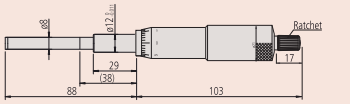
151-224



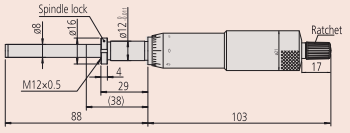
151-227-10



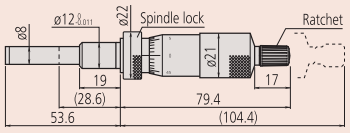
151-228-10



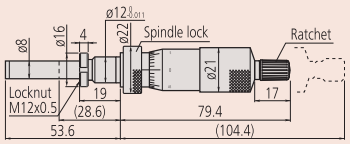
151-256



151-255



151-214



151-213

(): with spindle full retracted

Series 151 - Medium-sized standard type with 8 diameter spindle.

These micrometer heads are a medium-sized, standard type.
They offer the following benefits:

- 8 mm diameter spindle
- Extremely sturdy micrometer head with or without a ratchet.

151-224

151-223

151-256

151-255

151-214

151-213

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
151-224	0 - 25	0,01 mm	±2 µm	Flat	0,5	12	Plain			150
151-223	0 - 25	0,01 mm	±2 µm	Flat	0,5	12	w/ clamp nut	25,5		155
151-222	0 - 25	0,001 mm	±2 µm	Flat	0,5	12	Plain		Graduation 0,001 mm	150
151-221	0 - 25	0,001 mm	±2 µm	Flat	0,5	12	w/ clamp nut	25,5	Graduation 0,001 mm	155
151-227-10	0 - 25	0,01 mm	±2 µm	Flat	0,5	12	Plain		w/o ratchet stop	150
151-228-10	0 - 25	0,01 mm	±2 µm	Flat	0,5	12	w/ clamp nut	25,5	w/o ratchet stop	155
151-256	0 - 50	0,01 mm	±4 µm	Flat	0,5	12	Plain			240
151-255	0 - 50	0,01 mm	±4 µm	Flat	0,5	12	w/ clamp nut	25,5		250
151-260-10	0 - 50	0,01 mm	±4 µm	Flat	0,5	12	Plain		w/o ratchet stop	240
151-259-10	0 - 50	0,01 mm	±4 µm	Flat	0,5	12	w/ clamp nut	25,5	w/o ratchet stop	250

Metric With spindle lock

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
151-214	0 - 25	0,01 mm	±2 µm	Flat	0,5	12	Plain			160
151-213	0 - 25	0,01 mm	±2 µm	Flat	0,5	12	w/ clamp nut	15,5		165
151-212	0 - 25	0,001 mm	±2 µm	Flat	0,5	12	Plain		Graduation 0,001 mm	160
151-211	0 - 25	0,001 mm	±2 µm	Flat	0,5	12	w/ clamp nut	15,5	Graduation 0,001 mm	165
151-225-10	0 - 25	0,01 mm	±2 µm	Flat	0,5	12	Plain		w/o ratchet stop	165
151-226-10	0 - 25	0,01 mm	±2 µm	Flat	0,5	12	w/ clamp nut	15,5	w/o ratchet stop	165

Mitutoyo

Micrometer Heads with Large Thimble

Series 152 - Large thimble type for fine adjustment

These micrometer heads come with a large thimble, allowing you to make fine adjustments. They offer the following benefits:

- The large scale drum allows fine graduation and very easy rotation.

152-283

152-332

152-380

Specifications

Measuring face	Carbide-tipped

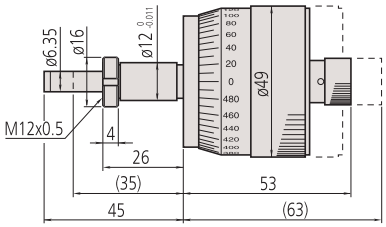
Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Thimble Ø	Mass [g]
152-283	0 - 10	0,002 mm	±2 µm	Flat	0,5	12	w/ clamp nut	22,5	49 mm	190
152-332	0 - 25	0,002 mm	±2 µm	Flat	0,5	12	Plain		49 mm	310

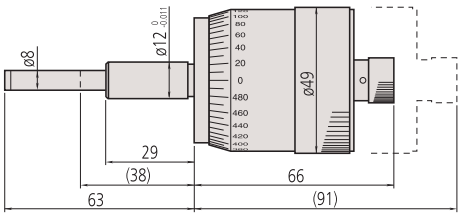
Metric

Black and red scaling in both directions

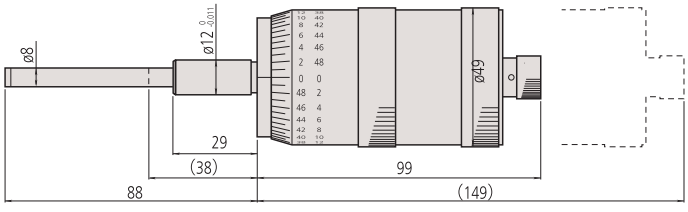
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Special features	Thimble Ø	Mass [g]
152-380	0 - 50	0,002 mm	±4 µm	Flat	0,5	12	Plain	Bidirectional graduation	49 mm	460



152-283



152-332



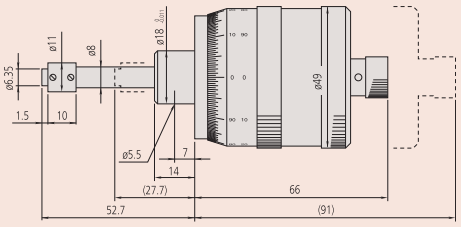
152-380

(): with spindle full retracted

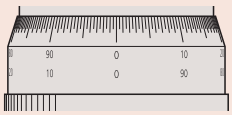
Micrometer Heads for XY-Stage

Specifications

Measuring face	Hardened steel (>60 HRC) 152-390, 152-389



152-390



152-389

Series 152 - XY Stage type

These XY Stage type micrometer heads let you read measurement values easily.
They offer the following benefits:

- Micrometer heads especially designed for accurate cross-travel stage translation in X and Y axes.
- Spindle end: Flat form and hardened, or spherical with carbide tip (more than HRA90), lapped surface.

152-389

152-390

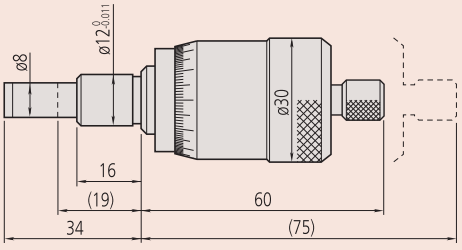
Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Special features	Mass [g]
152-389	0 - 25	0,005 mm	±2 µm	Flat with non-rotating device	1	18	Plain	For Y-axis Bidirectional grad.	270
152-390	0 - 25	0,005 mm	±2 µm	Flat with non-rotating device	1	18	Plain	For X-axis Bidirectional grad.	270

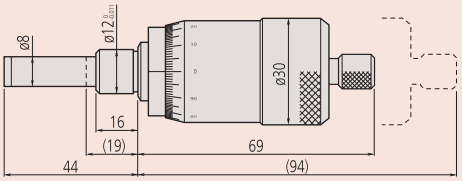
Quick Spindle Feed Micrometer Heads

Specifications

Measuring face	Carbide-tipped



152-101



152-102

(): with spindle full retracted

Series 152 - Quick spindle feed of 1/rev

This is a quick spindle micrometer head.
It offers you the following benefits:

- Micrometer head with 1 mm / rotation

152-101

152-102

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Mass [g]
152-101	0 - 15	0,01 mm	±2 µm	Flat	1	12	Plain	205
152-102	0 - 25	0,01 mm	±2 µm	Flat	1	12	Plain	230

Mitutoyo

Micrometer Heads with Non-Rotating Spindle

Series 110 - Differential screw translator (Extra-fine feed) type

This is a differential screw translator (extra-fine feed) type of micrometer head.
It offers you the following benefits:

- Micrometer head with ultra-fine rate of travel.
- With its non-rotating spindle it is particularly suited to fine adjustments.
- The differential travel mechanism with double spindle enables ultra-sensitive travel

110-101

110-102

110-105-10

110-106-10

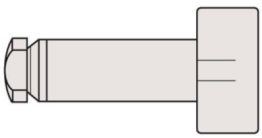
110-107-10

110-108-10

110-502-10

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Stem Ø [mm]	Stem	Fixture thickness for clamp nut [mm]	Special features	Mass [g]
110-101	0 - 2,5	0,001 mm	±5 µm / ±1,5 µm	Flat	12	w/ clamp nut	9,5		150
110-102	0 - 2,5	0,0001 mm	±5 µm / ±1,5 µm	Flat	12	w/ clamp nut	9,5	Fine Graduation	150
110-105-10	0 - 1	0,001 mm	±3 µm / ±1,5 µm	Flat	12	w/ clamp nut	9,5		150
110-106-10	0 - 1	0,0001 mm	±3 µm / ±1,5 µm	Flat	12	w/ clamp nut	9,5	Fine Graduation	150
110-107-10	0 - 1	0,001 mm	±3 µm / ±1,5 µm	Spherical (SR10)	12	w/ clamp nut	9,5		150
110-108-10	0 - 1	0,0001 mm	±3 µm / ±1,5 µm	Spherical (SR10)	12	w/ clamp nut	9,5	Fine Graduation	150
110-502-10	0 - 13	A: 0,01 mm / B: 0,0005 mm	±3 µm / ±1,5 µm	Spherical (SR3)	9,5	w/ clamp nut	11,5	Range A: 0-13 mm, Range B: 0-0,2 mm	100

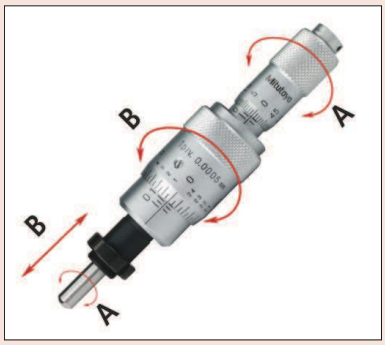


110-107-10
110-108-10

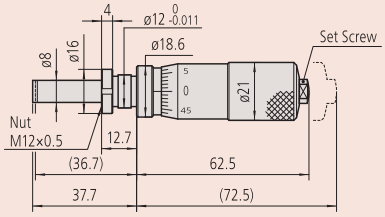
Specifications

Measuring face	Carbide-tipped

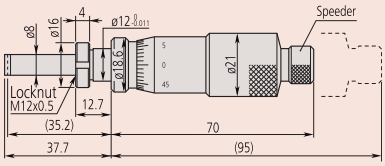
Version with non-rotating spindle



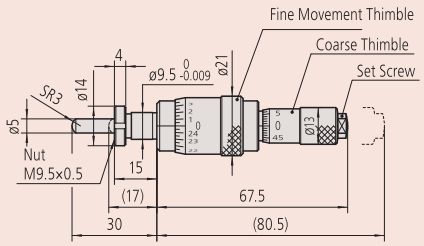
Version with rotating spindle
110-502-10



110-105-10
110-106-10



110-101
110-102



110-502-10
(): with spindle full retracted

Micrometer Heads with Non-Rotating Spindle

Specifications

Measuring face	Carbide-tipped

Series 153 - Standard type

- Micrometer Head featuring a non-rotating spindle for delicate workpieces
- Design suits applications where the twisting effect of the standard spindle is undesirable because of the risk of damage

Version with non-rotating spindle

153-101

153-203

153-201

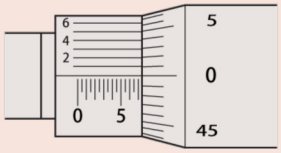
153-202

Metric

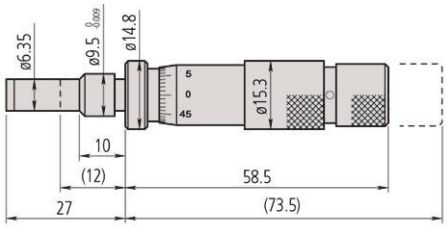
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Special features	Mass [g]
153-101	0 - 15	0,01 mm	±3 µm	Flat	0,5	9,5	Plain		70
153-203	0 - 25	0,01 mm	±3 µm	Flat	0,5	12	Plain		125
153-204	0 - 25	0,001 mm	±3 µm	Flat	0,5	12	Plain	Graduation with vernier	125

Metric With ratchet stop

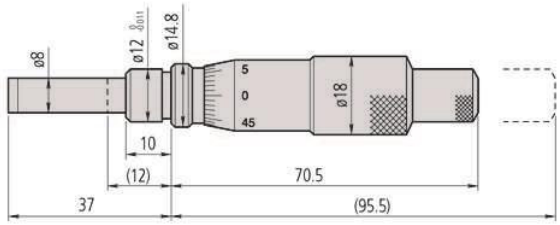
No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Special features	Mass [g]
153-201	0 - 25	0,01 mm	±3 µm	Flat	0,5	12	Plain		125
153-202	0 - 25	0,001 mm	±3 µm	Flat	0,5	12	Plain	Graduation with vernier	125



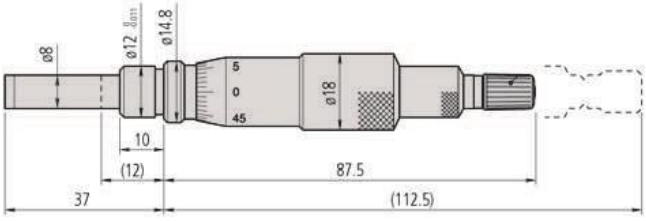
153-204 / 153-202
Graduation 0,001 mm



153-101



153-203 + 153-204



153-201 + 153-202

(): with spindle full retracted

Micrometer Heads with Non-Rotating Spindle

Series 197 - Non-rotating spindle and large thimble

- Micrometer Head with non-rotating spindle and 1 mm spindle pitch.
- Measurement values can be read directly from the 100-step graduation thimble without the complication of having to consider 1/2 mm values, which simplifies reading and therefore reduces the chance of error.
- The scale is set to zero by rotating the barrel.

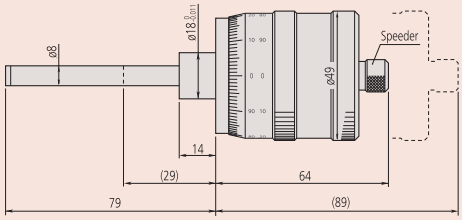
197-101

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Special features	Mass [g]
197-101	0 - 50	0,005 mm	±5 µm	Flat	1	18	Plain	Bidirectional graduation	300

Specifications

Measuring face	Carbide-tipped



197-101

Series 153 - Fine graduation and high accuracy

- Extra-large-diameter micrometer head with non-rotating spindle.

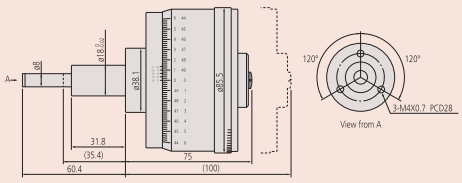
153-301

Metric

No.	Range [mm]	Graduation	Max. Permissible Error E MPE	Spindle end	Spindle pitch [mm]	Stem Ø [mm]	Stem	Special features	Mass [g]
153-301	0 - 25	0,0005 mm	±1 µm / ±0,5 µm	Flat	0,5	18	Plain	Bidirectional graduation	750

Specifications

Measuring face	Carbide-tipped



153-301