

Inside Micrometers

Inside Micrometers
SERIES 345 — Caliper Type

- Useful for measuring workpieces with grooves that cannot be measured by a two-point or three-point inside micrometer.
- Carbide-tipped measuring faces.
- Equipped with a constant measuring-force device.
- An optional inside-length standard, such as Gauge Block Accessory Set, CERA Inside Micro Checker (more than 25 mm) or a setting ring (nominal size below 300 mm), is required for accurately setting the micrometer before measurement. (refer to pages 01-19 to 01-22, 08-28, and 08-52 for details)



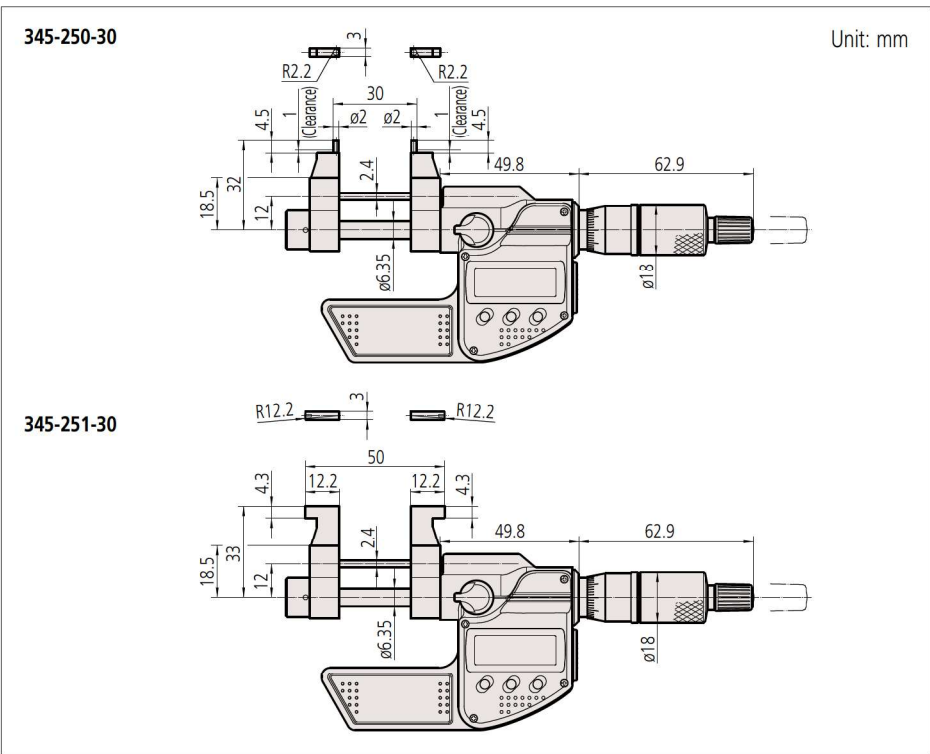
SPECIFICATIONS

Metric					
Code No.	Range (mm)	Resolution (mm)	Maximum permissible error <i>JMP</i> (μm)	Jaw	Mass (g)
345-250-30	5 - 30	0.001	±5	Pin	320
345-251-30	25 - 50		±6	Anvil	325

Inch / Metric					
Code No.	Range (in)	Resolution	Maximum permissible error <i>JMP</i> (in)	Jaw	Mass (g)
345-350-30	0.2 - 1.2	0.00005 in/ 0.001 mm	±0.00025	Pin	320
345-351-30	1 - 2	0.001 mm	±0.0003	Anvil	325

- Power source: SR44 battery (1 pc.), **938882** included as standard (for operational checks)
 - Battery life: Approx. 2.4 years under normal use
 - Position detection method: Electromagnetic induction-type rotary encoder
- Note 1: For the functions, refer to SERIES **293** with SPC data output on page 02-7.
This model is NOT water-proof. Also, the origin setting is the free preset type.
Note 2: The minimum pitch circle measurement is $\varnothing 5$ mm with pin type (**345-250-30**, **345-350-30**).

DIMENSIONS



Measurement example



Optional Accessories

Code No.	Type	description
264-020	—	USB Input Tool Series USB Keyboard Signal Conversion Type IT-020U
05CZA662	B	Connection cable (1 m)
05CZA663	B	Connection cable (2 m)
06AFM380B	B	USB Input Tool Direct (2 m)
02AZD730*	IP67	U-WAVE-T
02AZD880*	Buzzer	U-WAVE-T
02AZD790B	B	Connection cable for U-WAVE-T (160 mm)
02AZE140B	B	Connection cable for U-WAVE-T For foot switch
264-622	IP67	U-WAVE-TM
264-623	Buzzer	U-WAVE-TM
264-626	IP67	U-WAVE-TMB
264-627	Buzzer	U-WAVE-TMB
02AZF310	IP67	Connecting unit for U-WAVE-TM/TMB

* Add suffix to Code No.; **G** for Asia, Europe and the Americas,
H for Brazil and **J** for Korea.

Note 1: This instrument requires the cap and the holder for mounting on a micrometer stand.

Note 2: It may not be applicable to a custom specification.

Refer to page 08-25.

- This is an analog version of the **SERIES 345** calliper type micrometer for inside measurement.
- Carbide-tipped measuring faces.
- Equipped with a constant measuring-force device.

- An optional inside-length standard, such as Gauge Block Accessory Set, CERA Inside Micro Checker (more than 25 mm) or a setting ring (nominal size below 300 mm), is required for accurately setting the micrometer before measurement. (refer to pages 01-19 to 01-22, 08-28, and 08-52 for details)



145-185

Unit: mm

145-185

Technical drawing of part 145-185 showing a side view and a top view. The side view shows a base with a total height of 27.5 mm, a central shaft with a diameter of $\varnothing 2$, and a top flange with a diameter of 5 mm and a thickness of 3 mm. The top view shows a rectangular base with rounded corners (R2.2) and a central slot.

145-186

Technical drawing of part 145-186 showing a side view and a top view. The side view shows a base with a total height of 27.5 mm, a central shaft with a diameter of $\varnothing 8$, and a top flange with a diameter of 9.3 mm and a thickness of 4.3 mm. The top view shows a rectangular base with rounded corners (R12) and a central slot.

Metric					
Code No.	Range (mm)	Graduation (mm)	Maximum permissible error J_{MPE} (μ m)	Jaw	Mass (g)
145-185	5 - 30	0.01	± 5	Pin	130
145-186	25 - 50		± 6	Anvil	140

Inch					
Code No.	Range (in)	Graduation (in)	Maximum permissible error J_{MPE} (in)	Jaw	Mass (g)
145-193	0.2 - 1.2	0.001	± 0.00025	Pin	130
145-194	1 - 2		± 0.0003	Anvil	140

Note: The minimum pitch circle measurement is $\varnothing 5$ mm with pin type (145-185, 145-193).



145-187

145-187 to 145-220 Unit: mm

Technical drawing showing the dimensions for part numbers 145-187 to 145-220. The unit is mm.

Dimensions shown:

- Overall length: 27.5
- Distance from left end to start of flange: 12.5
- Flange thickness: 4.3
- Flange outer diameter: 9.3
- Flange inner diameter: 3
- Fillet radius: R12
- Distance from right end to start of flange: 31.4
- Flange outer diameter (detail): 9.3
- Fillet radius (detail): R12

Metric					
Code No.	Range (mm)	Graduation (mm)	Maximum permissible error J_{MPE} (μ m)	Jaw	Mass (g)
145-187	50 - 75	0.01	± 7	Anvil	160
145-188	75 - 100		± 8	Anvil	180
145-189	100 - 125		± 9	Anvil	210
145-190	125 - 150			Anvil	230
145-191	150 - 175		± 10	Anvil	250
145-192	175 - 200			Anvil	270
145-217	200 - 225		± 11	Anvil	310
145-218	225 - 250			Anvil	330
145-219	250 - 275			Anvil	350
145-220	275 - 300			± 12	Anvil

Inch					
Code No.	Range (in)	Graduation (in)	Maximum permissible error J_{MPE} (in)	Jaw	Mass (g)
145-195	2 - 3	0.001	± 0.00035	Anvil	160
145-196	3 - 4		± 0.0004	Anvil	180