

Micrometer

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

Outside Micrometers SERIES 340, 104 — with Interchangeable Anvils

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

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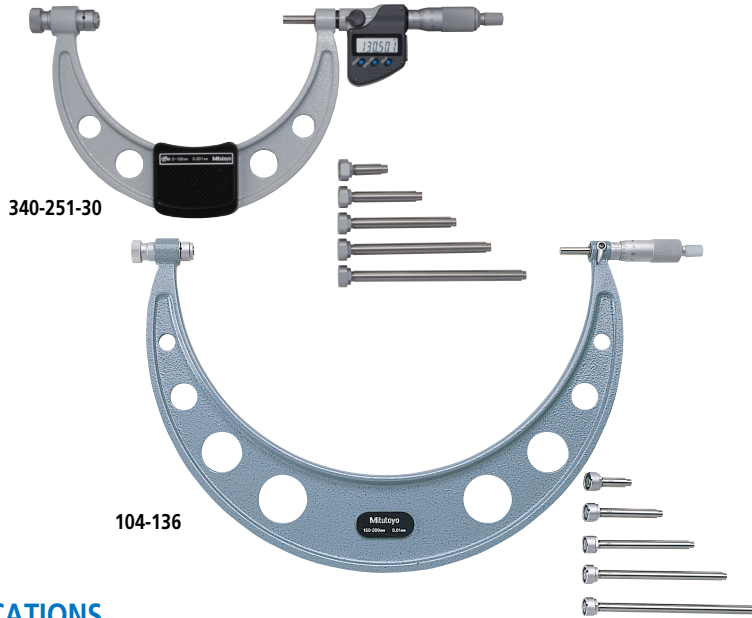
Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).



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



- Wide measuring range with interchangeable anvils.
- Measuring face of the spindle is carbide tipped (standard model).
- IP 65 water/dust protection (series 340)*.
- * Models with a measuring range up to 300 mm.
- Equipped with Ratchet Stop for constant measuring force.



IP Codes (series 340)

Level 6: Dust -proof.

No ingress of dust allowed.

Level 5: Protected against water jets.

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

Technical Data

Flatness:

0.6 μm / 0.000024 in for models up to 300 mm / 12 in
1.0 μm / 0.00004 in for models over 300 mm / 12 in

Parallelism:

2 μm / 0.00008 in for models up to 75 mm / 3 in
3 μm / 0.00012 in for models up to 150 mm / 6 in
(2+R/100) μm for models over 150 mm,
R=max. range (mm)

Fraction rounded up
 $\pm[0.00008 \text{ in} + .00004 (R/4)]$ in For models over 6 in

R= max. range (inch)

Fraction rounded up

Accuracy:

$\pm(4+R/75) \mu\text{m}$, R = max. range (mm)

$\pm[0.00016 \text{ in} + 0.00004(R/3)]$ in R = max. range (inch)
(excluding quantizing error for digital models)

Fraction rounded up

Excluding quantizing error

SPECIFICATIONS

Metric

Order No.	Range	Resolution	Interchangeable anvils	Setting Standard		Micrometer head stroke
				Qty	Size	
Digimatic (LCD)						
340-251-30	0 - 150 mm	0.001 mm	6 pcs.	5	25-125 mm	25 mm
340-252-30	150 - 300 mm			6	150-275 mm	
340-520	300 - 400 mm		4 pcs.	4	300-375 mm	
340-521	400 - 500 mm				400-475 mm	
340-522	500 - 600 mm				500-575 mm	
340-523	600 - 700 mm				600-675 mm	
340-524	700 - 800 mm				700-775 mm	
340-525	800 - 900 mm				800-875 mm	
340-526	900 - 1000 mm				900-975 mm	

Inch/Metric

Order No.	Range	Resolution	Interchangeable anvils	Setting Standard		Micrometer head stroke
				Qty	Size	
Digimatic (LCD)						
340-351-30	0 - 6 in	0.00005 in/ 0.001 mm	6 pcs.	5	1 - 5 in	1 in
340-352-30	6 - 12 in	0.0001 in/ 0.001 mm		6	6 - 11 in	
340-720	12 - 18 in		12 - 17 in			
340-721	18 - 24 in		18 - 23 in			
340-722	24 - 30 in		24 - 29 in			
340-723	30 - 36 in		30 - 35 in			

Metric

Order No.	Range	Graduation	Interchangeable anvils	Setting Standard		Micrometer head stroke
				Qty	Size	
Analog						
104-171*	0 - 50 mm	0.01 mm	1 pc.	1	25 mm	25 mm
104-139A	0 - 100 mm		4 pcs.	3	25-75 mm	
104-135A	0 - 150 mm		6 pcs.	5	25-125 mm	
104-161A	50 - 150 mm		4 pcs.	4	50-125 mm	
104-140A	100 - 200 mm				100-175 mm	
104-136A	150 - 300 mm		6 pcs.	6	150-275 mm	
104-141A	200 - 300 mm		4 pcs.	4	200-275 mm	
104-142A	300 - 400 mm				300-375 mm	
104-143A	400 - 500 mm				400-475 mm	
104-144A	500 - 600 mm				500-575 mm	
104-145A	600 - 700 mm	600-675 mm				
104-146A	700 - 800 mm	700-775 mm				
104-147A	800 - 900 mm	800-875 mm				
104-148A	900 - 1000 mm	900-975 mm				

Inch

Order No.	Range	Interchangeable anvils	Graduation	Setting Standard		Micrometer head stroke
				Qty	Size	
Analog						
104-165	0 - 2 in	1 pc.	0.0001 in	1	1 in	1 in
104-149	0 - 4 in	4 pcs.	0.001 in	3	1 - 3 in	
104-137	0 - 6 in	6 pcs.		5	1 - 5 in	
104-162	2 - 6 in	4 pcs.		4	2 - 5 in	
104-150	4 - 8 in				4 - 7 in	
104-138	6 - 12 in	6 pcs.		6	6 - 11 in	
104-151	8 - 12 in	4 pcs.		4	8 - 11 in	
104-152	12 - 16 in				12 - 15 in	
104-201	12 - 18 in	6 pcs.		6	12 - 17 in	
104-153	16 - 20 in	4 pcs.		4	16 - 19 in	
104-202	18 - 24 in	6 pcs.		6	18 - 23 in	
104-154	20 - 24 in	4 pcs.	4	20 - 23 in		
104-155	24 - 28 in			24 - 27 in		
104-203	24 - 30 in	6 pcs.	6	24 - 29 in		
104-156	28 - 32 in	4 pcs.	4	28 - 31 in		
104-204	30 - 36 in	6 pcs.	6	30 - 35 in		
104-157	32 - 36 in	4 pcs.	4	32 - 35 in		
104-158	36 - 40 in			36 - 39 in		
104-205	36 - 42 in	6 pcs.	6	36 - 41 in		

* The frame is fitted with a heat shield.

Battery for Series 340

SR44 (1 pc), **938882**, for initial operational checks (standard accessory)

Battery life: Approx. 2.4 years under normal use (for series 340-2XX, 340-3XX)
Approx. 1.8 years under normal use (for series 340-5XX, 340-7XX)

Length standard: Electromagnetic rotary sensor (for series 340)
Standard accessories: Spanner (301336), 1 pc (for maximum measuring range up to 300 mm (12 in))
Spanner (200154), 1 pc (for maximum measuring range 400 mm (16 in) or over)

Optional Accessories

Connecting cables for **340-251-30**, **340-252-30**, **340-351-30** and **340-252-30**

Wireless data output **U-WAVE** *fit*

U-WAVE-TM **264-622** (IP67 type)

264-623 (Buzzer type)

Connecting unit for U-WAVE-TM

02AZF310 (IP67 type)

Refer to page A-15 for details

USB Input Tool Direct

USB-ITN-B (2 m): **06AFM380B**

SPC cables for U-WAVE-T w/ data switch (160 mm):

02AZD790B

For foot switch: **02AZE140B**

Connecting cables for

340-5XX, **340-7XX**

Recommended cables:

L-Type (does not interfere with operating the thimble.)

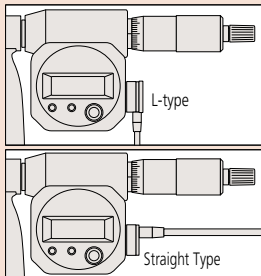
1 m: **04AZB512**

2 m: **04AZB513**

Straight type (may interfere with operating the thimble.)

1 m: **959149**

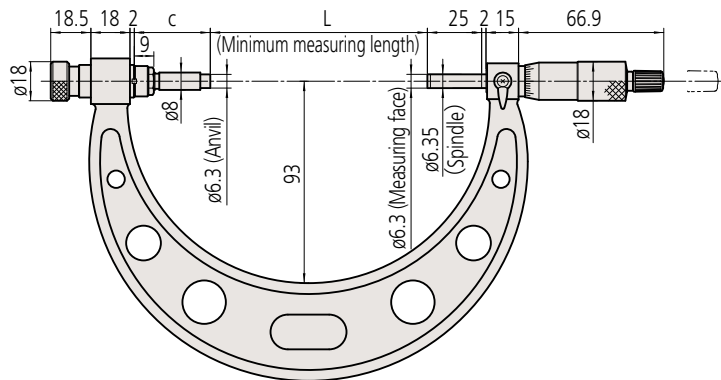
2 m: **959150**



DIMENSIONS

104-135A

Unit: mm

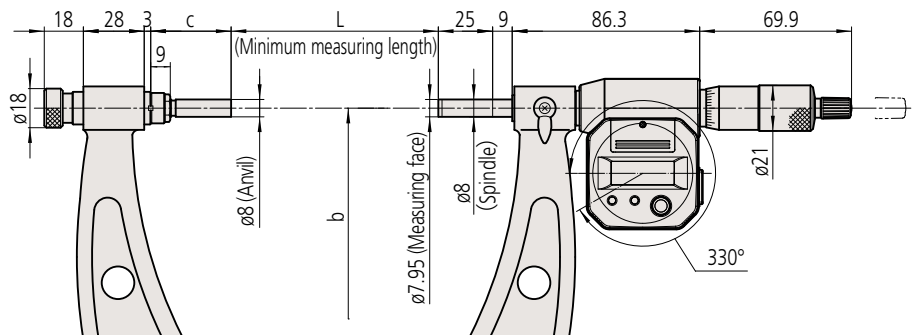


Interchangeable Anvil

		L : Range (mm)					
Range	0 to 150 mm models	0 - 25	25 - 50	50 - 75	75 - 100	100 - 125	125 - 150
Range	150 to 300 mm models	150 - 175	175 - 200	200 - 225	225 - 250	250 - 275	275 - 300
	Order No.	303950	303951	303952	303953	303954	303955
	c: Overall length (mm)	135	110	85	60	35	10
	Interchangeable anvil	M1	M2	M3	M4	M5	M6

		L : Range (mm)			
Range	300 to 400 mm models	300 - 325	325 - 350	350 - 375	375 - 400
Range	400 to 500 mm models	400 - 425	425 - 450	450 - 475	475 - 500
Range	500 to 600 mm models	500 - 525	525 - 550	550 - 575	575 - 600
Range	600 to 700 mm models	600 - 625	625 - 650	650 - 675	675 - 700
Range	700 to 800 mm models	700 - 725	725 - 750	750 - 775	775 - 800
Range	800 to 900 mm models	800 - 825	825 - 850	850 - 875	875 - 900
Range	900 to 1000 mm models	900 - 925	925 - 950	950 - 975	975 - 1000
	Order No.	304001	304002	304003	304004
	c: Overall length (mm)	87	62	37	12
	Interchangeable anvil	M3	M4	M5	M6

Over 400 mm up to 1000 mm



		L : Range (mm)				b
Range	300 to 400 mm models	300 - 325	325 - 350	350 - 375	375 - 400	224
Range	400 to 500 mm models	400 - 425	425 - 450	450 - 475	475 - 500	273
Range	500 to 600 mm models	500 - 525	525 - 550	550 - 575	575 - 600	332
Range	600 to 700 mm models	600 - 625	625 - 650	650 - 675	675 - 700	382
Range	700 to 800 mm models	700 - 725	725 - 750	750 - 775	775 - 800	430
Range	800 to 900 mm models	800 - 825	825 - 850	850 - 875	875 - 900	480
Range	900 to 1000 mm models	900 - 925	925 - 950	950 - 975	975 - 1000	530
	Order No.	304001	304002	304003	304004	
	c: Overall (mm)	87	62	37	12	
	Interchangeable anvil	M3	M4	M5	M6	