

# f GUMASTER – Ferramentas e Técnicas Inovadoras, Lda

Ferramentas Energeticamente Ecológicas em todos os sentidos **MICROMETROS EXTERIORES ANALÓGICOS DIGITAIS** 

Pag. 2M03 2020

### **Micrometers**

- Measuring range: 0-300 mm.
   Graduation: 0.01 mm.
- Friction thimble.
- Tungsten carbide measuring faces: ø6.5 mm.
   Varnished cast iron frame with insulating
- grip. DIN 863 T1.
- From measuring range 25 50 mm including setting gauge.





Item No.	Measuring range/mm	Accuracy mm
906.000	0- 25	±0.004
906.001	25 - 50	$\pm 0.004$
906.002	50 - 75	$\pm 0.005$
906.003	75 - 100	$\pm 0.005$
906.004	100-125	$\pm 0.006$
906.005	125 - 150	$\pm 0.006$
906.006	150 - 175	$\pm 0.007$
906.007	175 - 200	$\pm 0.007$
906.008	200-225	$\pm 0.008$
906.009	225 - 250	$\pm 0.008$
906.010	250-275	±0.009
906.011	275 - 300	$\pm 0.009$

906.011	213-300	±0.009
Model for	left- and righ	nt-handed use
907.167	0- 25	±0.004
907.168	25 - 50	±0.004
907.169	50 - 75	±0.005
907.170	75 - 100	±0.005

#### Sets

Item No.	Measuring range/mm
906.055	0- 75
906.056	0-100
906.057	0-150
906.058	150-300
906.059	0-300



#### **Micrometers**

Rugged micrometers with a vernier ation of 0.001 mm and a favourable price-performance ratio.

- Measuring range: 0-200 mm.
- Vernier: 0.001 mm, parallax-free by
- enlarged thimble.

  Friction thimble.
- Tungsten carbide measuring faces: ø6.5 mm. Varnished frame with insulating grip.
- DIN 863 T1.
- Delivery incl. adjustment tool.
   From measuring range 25 50 mm including setting gauge.



Item No.	Measuring range/mm	Accuracy mm
906.280	0- 25	±0.004
906.281	25 - 50	±0.004
906.282	50 - 75	±0.005
906.283	75 - 100	±0.005
906.284	100-125	±0.006
906.285	125 - 150	±0.006
906.286	150-175	±0.007
906.287	175 - 200	±0.007

### Fast adjustable micrometers

Fast adjustable micrometers because one revolution results in a displacement of 1 mm. The measuring value can be read directly from the 100 step graduation on the thimble.

- Measuring range: 0-200 mm.

- Measuring range: 0-200 mm.
  Graduation: 0.01 mm.
  I revolution of the thimble = 1 mm.
  Thimble with 100 step graduation.
  Tungsten carbone measuring faces: \$8 mm.
  No-glare chrome finished frame
- (up to 100 mm).
   DIN 863 T1.
- From measuring range 25-50 mm including setting gauge.



Item No.	Measuring range/mm	Accuracy mm
907.000	0- 25	±0.004
907.001	25 - 50	±0.004
907.002	50 - 75	$\pm 0.005$
907.003	75 - 100	±0.005
907.004	100 - 125	±0.006
907.005	125 - 150	±0.006
907.006	150-175	±0.007
907.007	175-200	$\pm 0.007$

# **TESA** Isomaster micrometers

- Measuring range: 0-300 mm.
   Graduation: 0.01 mm.
- Tungsten carbide measuring faces:
- 0-100 mm: Ø6.5 mm,
  100-300 mm: Ø8 mm.

  No-glare chrome finished frame and thimble (0-100 mm), or varnished frame and chrome finished thimble (100-300 mm). DIN 863 T1.
- Delivery in a case with adjustment tool, an inspection report and a declaration of conformity.



Item No.	Measuring range/mm	Accuracy mm
779.005	0- 25	±0.004
779.006	25 - 50	±0.004
779.007	50- 75	±0.005
779.008	75-100	±0.005
779.009	100-125	±0.006
779.010	125-150	±0.006

Item No.	Measuring range/mm	Accuracy mm
779.011	150-175	±0.007
779.012	175 - 200	±0.007
779.013	200-225	±0.008
779.014	225-250	±0.008
779.015	250-275	±0.009
779.016	275-300	±0.009

# **Tesamaster micrometers**

- Measuring range: 0-250 mm.
  Vernier: 0.001 mm, parallax-free.
  Counter resolution: 0.1 mm.
  Tungsten carbide measuring faces:
  0-100 mm: 66.5 mm,
- 100 100 mm; 60.5 mm, 100 250 mm; 68 mm.

   No-glare chrome finished frame and thimble (0 100 mm), or varnished frame and chrome finished thimble (100 250 mm).
- DIN 863 T1.
- Delivery in a case with adjustment tool, an inspection report and a declaration of conformity.

Item No.	Measuring range/mm	Accuracy mm
779.206	0- 25	±0.004
779.207	25 - 50	±0.004
779.208	50- 75	±0.005
779.209	75-100	±0.005
779.210	100-125	±0.006
779.211	125-150	±0.006

Also fast adjustable models available (with a pitch of 1 mm).



Item No.	Measuring range/mm	Accuracy mm
779.212	150-175	±0.007
779.213	175-200	±0.007
779.214	200-225	±0.008
779.215	225 - 250	±0.008

# Mitutoyo lightweight micrometers

Mitutoyo micrometers in a lightweight workshop design.

- Measuring range: 0-300 mm. Graduation: 0.01 mm. Measuring force: 5-10 N (from 100 mm: 5-15 N).

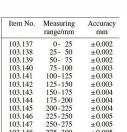
- Locking screw.
  Tungsten carbide measuring faces: 
  ø6.35 mm.
- Varnished frame with insulating grip (from 75 mm).

   Delivery in a case incl. adjustment tool and setting gauge (except 103.137).

   Delivery with an inspection report (only 103.137/138).

   Available up to 1000 mm.







#### Sets (delivered incl. setting gauges)

Item No.	Measuring range/mm	Pieces
103.927	0- 75	3
103.913	0-150	6
103.915	150-300	6
103.914	0-300	12

#### Mitutoyo micrometers

- Measuring range: 0-100 mm.
  Graduation: 0.01 mm.
  Measuring force: 5-10 N.
  Locking screw.
  Tungsten carbide measuring faces: ø6.35 mm.
  No-glare chrome finished frame with insulating origin.
- No-grate chrome limitshed train with insulating grip.
  Delivery in a case incl. setting gauge (except 102.301).
  Delivery with an inspection report (only 102.301/302).





#### Set (delivered incl. setting gauges)

Item No.	Measuring range/mm	Pieces
102.911	0-100	4

Item No.	Measuring range/mm	Accuracy mm
102.301	0- 25	±0.002
102.302	25 - 50	$\pm 0.002$
102.303	50 - 75	$\pm 0.002$
102.304	75 - 100	$\pm 0.003$

# Mitutoyo micrometers with a constant measuring force

Mitutoyo micrometers with a constant measuring force due to a special combined thimble construction. The insulating grip is especially designed for maximum grip with one-handed operation.

- Measuring range: 0-50 mm. Graduation: 0.01 mm or vernier 0.001 mm.
- Measuring force: 5 10 N.
   Locking screw.
   Tungsten carbide measuring
- faces: ø6.35 mm.
   No-glare chrome finished frame with insulating grip.
- Delivery in a case incl. adjustment tool and setting gauge (except

Delivery with an inspection report.					
Item No.	Measuring range/mm	Graduation mm	Accuracy mm		
102.701	0-25	0.01	±0.002		
102.702	25 - 50	0.01	$\pm 0.002$		
102.707	0-25	0.001	$\pm 0.002$		
102.708	25-50	0.001	$\pm 0.002$		
	Delivery report.  Item No.  102.701 102.702 102.707	report.  Item No. Measuring range/mm  102.701 0-25 102.702 25-50 102.707 0-25	Delivery with an inspection report.           Item No.         Measuring range/mm         Graduation mm           102.701         0-25         0.01           102.702         25-50         0.01           102.707         0-25         0.001		





# Micrometers with a large measuring range

The varnished tubular frame is very stable and equipped with heat insulating grips. With two spacers for a large measuring span.

- Measuring range: 300-2000 mm.

   Measuring span:
   300-1000 mm: 100 mm
   (travel 25 mm, spacers 25 and 50 mm),
   1000-2000 mm: 200 mm
   (travel 50 mm, spacers 50 and 100 mm).
- Graduation: 0.01 mm.
- Rotating spindle.
   Rotating spindle.
   Tungsten carbide measuring faces: ø 8 mm.
   No-glare chrome finished thimble.
   DIN 863 T3.

- With two setting gauges

Item No.	Measuring range/mm	Accuracy mm
Measurin	g span 100 m	m:
906.012	300 - 400	±0.011
906.013	400 - 500	$\pm 0.013$
906.014	500 - 600	±0.015
906.015	600 - 700	±0.016
906.016	700 - 800	$\pm 0.018$
906.017	800 - 900	$\pm 0.020$
906.018	900-1000	$\pm 0.020$
Measurin	g span 200 m	m:
906.019	1000 - 1200	$\pm 0.020$
906.020	1200 - 1400	$\pm 0.024$
906.021	1400 - 1600	$\pm 0.028$
906.022	1600-1800	$\pm 0.031$
906.023	1800 - 2000	$\pm 0.034$



# Micrometers with a large measuring range

Micrometers with a large measuring range, with very accurate, interchangeable anvils.

- Measuring range: 0-300 mm. Graduation: 0.01 mm.
- Tungsten carbide measuring faces.
- Delivery incl. setting gauges and interchangeable anvils (increasing per 25 mm).



Item No.	Measuring range/mm	Accuracy mm	Number of anvils	Number of setting gauges
906.290	0- 50	±0.004	2	1
906.294	0-100	±0.005	4	3
906.292	0-150	$\pm 0.006$	6	5
906.291	50-100	±0.005	2	2
906.295	100-200	$\pm 0.007$	4	4
906.293	150-300	±0.009	6	6
906.296	200 - 300	±0.009	4	4

# Micrometers with adjustable anvil with dial indicator

Micrometers with an adjustable anvil with dial indicator, for measurements in a wide measuring range.

- Measuring range: 0-1000 mm. Graduation: 0.01 mm.
- Specifications dial indicator:

  Graduation: 0.01 mm.
- Range adjustable anvil: 5 mm.
- Max. measuring force anvil with dial indicator: 10 N.
- Adjustable tolerance markers.



# Digital micrometers IP65 with a large measuring range

- Measuring range: 0 1000 mm. Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable Automatic switch-off.
- Reset/preset.
- Rotating spindle.Adjustable tolerance limits.
- Tungsten carbide measuring faces: ø6.35 mm.
   0- 300 mm: cast iron frame,
- 300-1000 mm: tubular steel frame with insulating grips.
- Protection: IP65.
- Delivery in a case with setting gauges and interchangeable anvils.
- Power supply: 1 battery type V357.





Item No.	Measuring range/mm	Accuracy mm	Number of anvils	Number of setting gauges
909.580	0- 100	±0.005	4	3
909.581	100 - 200	$\pm 0.007$	4	4
909.582	200 - 300	$\pm 0.008$	4	4
909.583	300 - 400	$\pm 0.009$	4	2
909.584	400 - 500	$\pm 0.010$	4	2
909.585	500- 600	±0.010	4	2
909.586	600 - 700	±0.011	4	2
909.587	700 - 800	±0.012	4	2
909.588	800 - 900	±0.013	4	2
909.589	900 - 1000	±0.013	4	2

Option:

836.535 Spare battery

#### TESA micrometers with a large measuring range

Micrometers with interchangeable anvils and a measuring span of 100 mm. The anvils are adjusted and numbered in sets, so they can be changed without resetting the micrometer. Therefore only one setting gauge per micrometer is needed.

- Measuring range: 0-500 mm.
- Measuring range: 0-300 mm.
   Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
   Max. measuring force: 10 N.

- Tungsten carbide measuring faces: Ø8 mm.
   0-500 mm: cast iron frame,
  ≥500 mm: tubular steel frame with insulating grips.
  ■ DIN 863 T3.
- Delivery in a case with 4 anvils (779.069), an inspection report and a declaration of conformity.
- Available on request up to 1500 mm.

- mm/inch conversion.
- ABS/INC switchable.Opto-RS232C data output.
- Power supply: 1 battery type CR2032.

Adjustable dial indicator element
Can replace the interchangeable anvils.
Facilitates finding the reversal point. The spring in the element ensures a constant measuring force.

Schut

- Measuring range: ±1.5 mm.■ Graduation: 0.01 mm.
- Graduation: 0.01 mm.
   Clamping stem: ø11 mm.





#### Analog (Isomaster)

Item No.	Measuring range/mm	Accuracy mm
779.021	0-100	±0.006
779.022	100 - 200	$\pm 0.007$
779.023	200 - 300	$\pm 0.008$
779.024	300-400	$\pm 0.009$
779.025	400-500	±0.010



#### Digital (Micromaster)

Measuring range/mm	Accuracy mm
0-100	±0.006
100 - 200	$\pm 0.007$
200-300	$\pm 0.008$
300-400	±0.009
400 - 500	±0.010
	0-100 100-200 200-300 300-400

495.157 Spare battery

781.887 Opto-RS232C cable 9p (2 m) 779.069 Set of 4 interchangeable anvils 779.070 Dial indicator element

# Tolerance micrometers with precision dial indicator

Because of the retractable anvil, the fine adjustment and the tolerance markers very suitable for batch inspection and tolerance measurements.

- Measuring range: 0-100 mm.
- Measuring range dial indicator: ±0.04 mm.
- Graduation (dial indicator): 0.001 mm.
- Accuracy:

micrometer: ±0.003 mm (only 906.568), dial indicator: ±0.001 mm.

- Measuring force: 5-10 N (only 906.569/570/571/614).
- Adjustable tolerance markers
- Tungsten carbide measuring faces: 906.568-599: Ø 6.5 mm, 906.569-614: ø10 mm







Item No.	Measuring range/mm	Graduation mm	Vernier thimble/mm
906.568	0- 25	0.001	0.002
906.597	25 - 50	0.001	-
906.598	50 - 75	0.001	
906.599	75-100	0.001	_
With pro	tection IP54:		
906.569	0- 25	0.001	-
906.570	25 - 50	0.001	-
906.571	50- 75	0.001	-
906.614	75-100	0.001	

# Tolerance micrometers with two spindles

Can be used as a Go/NoGo micrometer by setting of the lower and upper limits.

- Measuring range: 0-50 mm.
- Vernier: 0.002 mm.
- Accuracy: ±0.003 mm.
- Tungsten carbide measuring faces: ø6.5 mm.



# Micrometers with dial indicator

Micrometers with adjustable anvil and clamping shaft for a dial indicator. Especially suitable for Go/NoGo judgement and batch measurements

- Measuring range: 0-175 mm
- Graduation thimble and dial indicator: 0.01 mm
- Range adjustable anvil: 8 mm.
- Trigger for (fast) adjustment
- Tungsten carbide measuring faces: Ø6.5 mm.
- Can also be used in combination with various other dial indicators with clamping stem ø8 mm.



#### Mini-micrometer

- Measuring range: 0-15 mm. Graduation: 0.01 mm.



- Measuring faces: ø5 mm.
- Without friction thimble.
- Dimensions: total length: 70 mm, throat depth: 14 mm.

Item No.	Measuring range/mm	]
906.180	0-15	

# Micrometer with an extra large measuring range

The measuring range of this micrometer can be 'switched' from 25- 50 to 0- 25 mm by easy mounting of the prolonged anvil.

■ Measuring range: 0-50 mm.



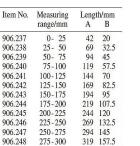
- Graduation: 0.01 mm
- Accuracy: ±0.004 mm.
  Tungsten carbide measuring faces: Ø6.5 mm. ■ Delivery incl. adjustment tool and prolonged anvil.

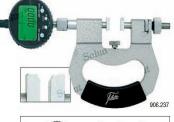
Item No.	Measuring range/mm	Accuracy mm
906.567	0-50	±0.004

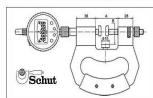
# Snap gauges with dial indicator

Snap gauges with adjustable anvil and clamping shaft for a dial indicator. Especially suitable for Go/NoGo judgement and batch measurements

- Measuring range: 0-300 mm
- Measuring force: 6-9 N.
- Clamping shaft: Ø8 mm (dial gauge not
- Travel of moving anvil: 3 mm.
  Anvil size: 14x11 mm.
- Chamfered anvils for easy insertion.
- For suitable dial indicators refer to the dial indicators elsewhere in this catalog.







# Digital vertical micrometers

Digital vertical micrometers for easy reading, for example, when measuring the thickness of metal or plastic sheet. These micrometers have an IP65 classification and are therefore not only resistant to dust but can also withstand water jets.

- Measuring range: 0-50 mm Resolution: 0.001 mm.
- Accuracy: ±0.002 mm. mm/inch conversion.



- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Tungsten carbide measuring faces: ø6.5 mm.
- Protection: IP65.
- Power supply: 1 battery type V357.

Item No.	Measuring range/mm
909.458	0-25
909.459	25-50
Option:	
836.535	Spare battery

# **Sheet metal micrometers**

Micrometers especially for measuring the thickness of metal sheets, e.g. sheet metal. The large dial makes the reading very easy and quick.

- Measuring range: 0-25 mm.
   Graduation: 0.01 mm.

- Accuracy: ±0.004 mm.
   Tungsten carbide measuring faces: ø6.5 mm.



Item No.	Measuring range/mm	Accuracy mm	Measuring faces	Price
907.058	0-15	±0.004	flat/flat	
907.059	0-25	±0.004	flat/flat	
907.099	0-15	$\pm 0.004$	spherical/flat	
907.100	0-25	$\pm 0.004$	spherical/flat	

# Micrometers with extra large measuring faces

Micrometers with extra large disk-shaped measuring faces for measurements of e.g. paper thickness and soft materials.

- Measuring range: 0-100 mm. Graduation: 0.01 mm.
- Non-rotating spindle.
- Tungsten carbide measuring faces: ø60 mm.



Accuracy

mm

±0.008 ±0.008

±0.010

 $\pm 0.010$ 

Price

	Item No.	Measuring range/mm
2	906.588	0- 25
	906.589	25 - 50
	906.590	50- 75
	906.591	75-100

#### **Hub micrometers**

Micrometers with a shallow bracket for measuring the thickness bearing bushes, bore shoulders and other hard-toreach places.



Accuracy

Price

- Measuring range: 0-100 mm.
   Graduation: 0.01 mm.
- Lapped tungsten carbide measuring
   Varnished frame.
- Throat depth: 10.2 mm.
   Throat height: 21.2 mm (907.133: 18.7 mm).

faces.		range/mm	mm	
	907.133	0- 25	$\pm 0.004$	
	907.134	25 - 50	$\pm 0.004$	
PRICE	907.135	50- 75	$\pm 0.004$	
	907.136	75-100	±0.005	

Item No. Measuring

# Can seam micrometer

Micrometer especially for measuring the depth and thickness of e.g. the seams of steel cans.

- Measuring range: 0-13 mm. Graduation: 0.01 mm.
- Accuracy: ±0.004 mm.
- Tungsten carbide measuring faces.



Item No.	Measuring range/mm	Price	ann.	
907.175	0-13			

# Wire and ball micrometer

- Measuring range: 0-10 mm.
- Graduation: 0.01 mm. Accuracy: ±0.004 mm.



Item No.	Measuring range/mm	Price	a)Ro	<b>~</b>
906.175	0-10		- Inde	*

# Wire and ball micrometer

With varnished frame and no-glare chrome finished thimble. Ideal for single-handed measurements.

■ Measuring range: 0-10 mm. ■ Graduation: 0.01 mm.

