

TESA MICROMASTER

Electronic Micrometers with Digital Display



With patented TESA capa μ system

- Measuring span of 30 mm or 25 mm.
- Large easy-to-read digital display.
- Models:
 - EASY with a single function key.
 - IP54 with water spray protection as well as IP54 RS with added RS 232 interface.



MICROMASTER EASY

06030010	0 ÷ 30	0 ÷ 30	0 ÷ 1.2	0 ÷ 1.2	IP40	–
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MICROMASTER IP54

06030020	0 ÷ 30	0 ÷ 30	0 ÷ 1.2	0 ÷ 1.2	IP54	–
06030021	25 ÷ 50	23 ÷ 53	1 ÷ 2	0.9 ÷ 2.1	IP54	–
06030022	50 ÷ 75	48 ÷ 78	2 ÷ 3	1.9 ÷ 3.1	IP54	–
06030023	75 ÷ 100	74 ÷ 104	3 ÷ 4	2.9 ÷ 4.1	IP54	–

MICROMASTER IP54 RS

06030030	0 ÷ 30	0 ÷ 30	0 ÷ 1.2	0 ÷ 1.2	IP54	RS 232
06030031	25 ÷ 50	23 ÷ 53	1 ÷ 2	0.9 ÷ 2.1	IP54	RS 232
06030032	50 ÷ 75	48 ÷ 78	2 ÷ 3	1.9 ÷ 3.1	IP54	RS 232
06030033	75 ÷ 100	74 ÷ 104	3 ÷ 4	2.9 ÷ 4.1	IP54	RS 232
06030071	100 ÷ 125	98 ÷ 127	4 ÷ 5	3.9 ÷ 5.01	IP54	RS 232
06030072	125 ÷ 150	123 ÷ 152	5 ÷ 6	4.9 ÷ 6.01	IP54	RS 232
06030073	150 ÷ 175	149 ÷ 178	6 ÷ 7	5.9 ÷ 7.01	IP54	RS 232
06030074	175 ÷ 200	174 ÷ 203	7 ÷ 8	6.9 ÷ 8.01	IP54	RS 232
06030075	200 ÷ 225	199 ÷ 229	8 ÷ 9	7.9 ÷ 9.01	IP54	RS 232
06030076	225 ÷ 250	224 ÷ 254	9 ÷ 10	8.9 ÷ 10.01	IP54	RS 232
06030077	250 ÷ 275	250 ÷ 279	10 ÷ 11	9.9 ÷ 11.01	IP54	RS 232
06030078	275 ÷ 300	275 ÷ 304	11 ÷ 12	10.9 ÷ 12.01	IP54	RS 232

MICROMASTER Set



06030029	Micromaster Set IP54 RS	0 ÷ 75
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Consisting of:



06030030	Micromaster IP54, RS	0 ÷ 30	IP54	RS232
06030031	Micromaster IP54, RS	25 ÷ 50	IP54	RS232
06030032	Micromaster IP54, RS	50 ÷ 75	IP54	RS232
02119021	Setting standard, 50 mm			

Optional Accessory

01961000	1 Lithium battery 3 V, 190 mAh, type CR 2032 – Connecting cables etc., see chapter A.
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Micrometers with Small Measuring Faces

For measuring grooves, feather grooves, splines and other difficult to reach locations – Small measuring faces specially made to check precision workpieces.

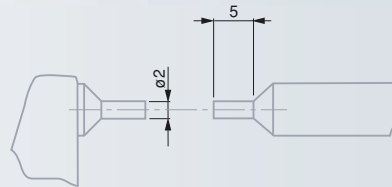
Models MICROMASTER



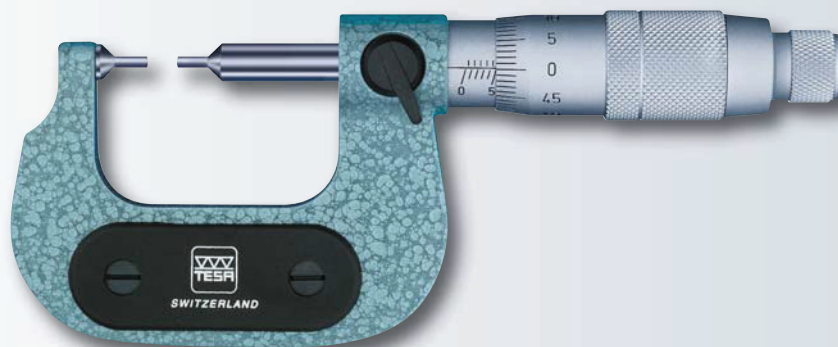
No		
	mm	in
06030034	0 ÷ 30	0 ÷ 1.2
06030035	30 ÷ 60	1.2 ÷ 2.3
06030036	60 ÷ 90	2.3 ÷ 3.5
06030037	90 ÷ 120	3.5 ÷ 4.7

Optional Accessory

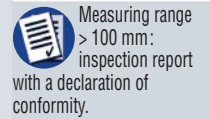
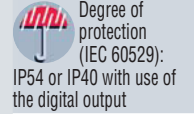
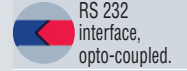
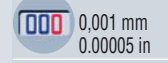
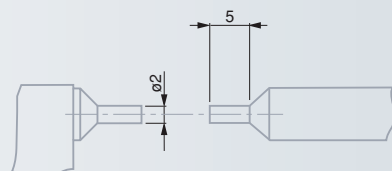
01961000	1 Lithium battery 3 V, 190 mAh, type CR 2032. For information on cables etc., see section A.
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Models ISOMASTER AD



No	
	mm
00210101	0 ÷ 25
00210102	25 ÷ 50





DIN 863 T3
(Style D3)
NF E 11-090

Vernier reading
to 0,001 mm

Scale division
0,1 mm

Fixed measuring
faces:
tungsten carbide

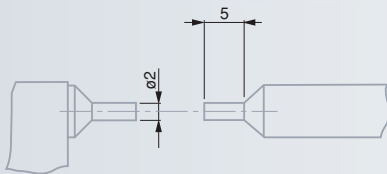
Max. 10 N

Plastic case

Identification
number

Inspection report
with a declaration
of conformity

Model TESAMASTER AD



No



00311301

mm

0 ÷ 25



DIN 863 T3
(Style D3)
NF E 11-090

0,001 mm.
Parallax-free
reading on vernier

100 divisions

Fixed measuring
faces:
tungsten carbide.

1 mm

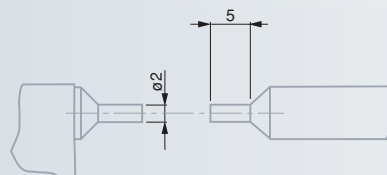
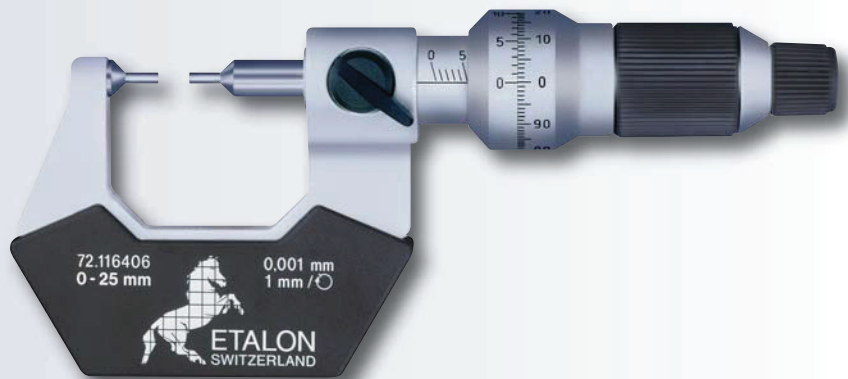
Max. 10 N

Plastic case

Identification
number

Inspection report
with a declaration
of conformity

Model MICRORAPID



No



072116410

mm

0 ÷ 20

Micrometers with One Spherical Measuring Face

Measure wall thickness of tubing.

Models MICROMASTER



06030079	0 ÷ 30	0 ÷ 1.2
06030080	25 ÷ 50	1 ÷ 2

Model ETALON



071115940	0 ÷ 25

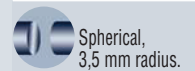
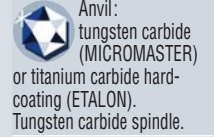
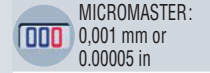
Micrometers with Two Spherical Measuring Faces

Rounded Measuring faces on anvil and spindle for measuring concave surfaces of workpieces, e.g. ball-bearing guides or walls of tubing.

Models MICROMASTER



06030081	0 ÷ 25	0 ÷ 1
06030082	20 ÷ 50	0.8 ÷ 1.9
06030083	45 ÷ 75	1.8 ÷ 2.9
06030084	70 ÷ 100	2.8 ÷ 3.9





DIN 863 T3
(Style D1)
NF E 11-090

0,01 mm

Measuring
faces rounded
to 3,25 mm

Titanium
carbide
coated

for model
No. 00112106.
Hardened steel for
other models.

0,5 mm

Max. 10 N

Plastic case

Identification
number

Inspection report
with a declaration
of conformity



Steel ball tip,
hardened and
lapped.
Dull-chrome brass retainer.

Series AAS ISOMASTER

Rounded measuring faces for checking concave surfaces such as ball-bearing guides and tubing walls.



No



mm

00112106	0 ÷ 25 (TiC)
00110901	0 ÷ 25
00110902	25 ÷ 50
00110903	50 ÷ 75
00110904	75 ÷ 100

Spherical Element for External Micrometers

Holder with a ball tip that fits on measuring faces having a 6,5 mm diameter – Serve to measure tubing wall thickness or workpieces with concave surfaces and the like.



No



Ball tip

072103522	5 mm
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Micrometers for Soft Materials

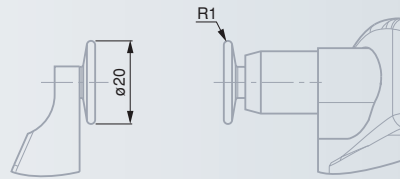
With two large, round-edge measuring faces – Measure the thickness of materials such as paper and plastic sheets, felt, cloth and other soft materials.

Model MICROMASTER

Non-rotating measuring spindle – Without spindle lock.



06030085	0 ÷ 30	0 ÷ 1.2



Model ISOMASTER AF



00210301	0 ÷ 25

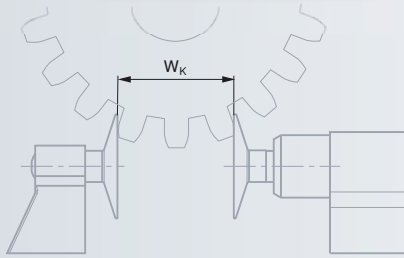
- ✓
 - DIN 863 T3 (Style D6)
 - 0,001 mm
0.00005 in
 - Metric/Inch conversion
 - Hardened steel
 - Non-rotating, 20 mm dia.
 - Flatness tolerance: 3 µm
 - Tolerance in Parallelism: 6 µm
 - Max. perm. error: 4 µm
 - Max. 10 N
 - RS 232
 - Additional technical data: see page C-3.
 - Plastic case
 - Identification number
 - Inspection report with a declaration of conformity
-
- ✓
 - DIN 863 T3 (Style D6)
 - 0,01 mm
 - Hardened steel
 - Ø 15 mm
 - Flatness tolerance: 3 µm
 - Tolerance in Parallelism: 6 µm
 - Max. 10 N
 - Plastic case
 - Identification number
 - Inspection report with a declaration of conformity

Micrometers for Gear Pitch Measurement

Flanges with ring-shaped measuring faces for root tangent lengths W_k on gear pitches, distance between grooves and slots as well as other hard-to-reach locations.

Models MICROMASTER

Non-rotating measuring spindle – Without spindle lock.



No	mm	in
06030041	0 ÷ 30	0 ÷ 1.2
06030042	25 ÷ 55	1 ÷ 2.1
06030043	55 ÷ 85	2.1 ÷ 3.35
06030044	85 ÷ 115	3.35 ÷ 4.5

Models ISOMASTER AE



No	mm
00210201	0 ÷ 25
00210202	25 ÷ 50
00210203	50 ÷ 75
00210204	75 ÷ 100
00210205	100 ÷ 125
00210206	125 ÷ 150

Micrometers for Gear Tooth Measurement

	Max. perm. error* with partial contact of the measuring face μm	Max. perm. error with full contact of the measuring face (DIN 863-T1) μm	Flatness μm	Parallelism μm	Max. flexure of the frame μm
0 ÷ 30	10	4	2	5	2
25 ÷ 55	10	4	2	5	2
55 ÷ 85	11	5	2	5	3
85 ÷ 115	12	5	2	6	4

* Disregarding a rim of 1 mm as the measuring faces are being inspected. For enhanced accuracy, the micrometer should be calibrated in the position of use.



DIN 863 T3 (Style D7)

0,001 mm
0.00005 in

Metric/Inch conversion

Hardened steel

Non-rotating spindle ≤ 85 mm: 25 mm dia.
 $> 85 \leq 115$ mm: 30 mm dia.

Suitable from module 0,5

Max. 10 N

RS 232

Additional technical data: see page C-3.

Plastic case

Identification number

Inspection report with a declaration of conformity



DIN 863 T3 (Style D7)
NF E 11-090

0,01 mm

Hardened steel

≤ 100 mm: 25 mm dia.
 $> 100 \leq 150$ mm: 32 mm dia.

Suitable from module 0,6

Max. 10 N

Plastic case

Identification number

Inspection report with a declaration of conformity







MICROMASTER

with 7 Pairs of Interchangeable Measuring Inserts







Non-rotating spindle – Without spindle lock.

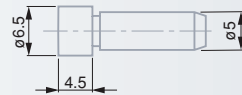


		
06030045	0 ÷ 30	0 ÷ 1.2

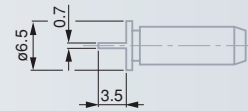
-  ✓
-  0,001 mm
0,00005 in
-  Metric/Inch conversion
-  Micrometer element with a max. perm. error of 4 µm
-  7,5 mm dia., non-rotating spindle.
- With a fixing bore for a measuring insert.
Adjustable attachment on anvil for a measuring insert, with lock.
-  Hardened steel
-  Max. 10 N
-  RS 232
-  Additional technical data on page C-3
-  Plastic case
-  Identification number
-  Inspection report with a declaration of conformity

Components of a Full Micrometer

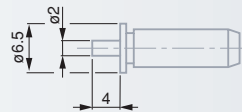
		
<i>Single Micrometer</i>		
06030099	0 ÷ 30	0 ÷ 1.2
<i>Full set of measuring inserts</i>		
00269027		
<i>Includes one pair of the following inserts</i>		
		
00269020	flat	Ø 6,5
00269021	small, flat	Ø 2
00269022	spherical	R = 5
00269023	large, flat	Ø 12
00269024	narrow, flat	0,7
00269025	cone-shaped	Ø 0,3/60°
00269026	knife-edged	0,3/60°
Specially designed measuring faces also available upon request.		



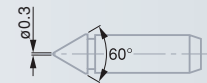
00269020



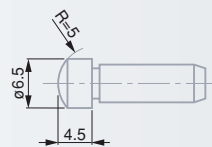
00269024



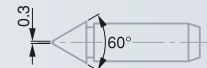
00269021



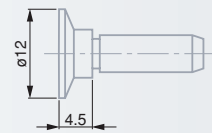
00269025



00269022



00269026



00269023

Micrometers with Prismatic Measuring Faces

Measure test pieces with uneven number of grooves such as milling cutters, taps, drills and spline shafts as well as odd polygons. Determine roundness errors on cylindrical surfaces. Angle of the prism aperture is designed for workpieces having a number of 3 or 5 flutes.

Models MICROMASTER



mm

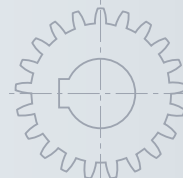
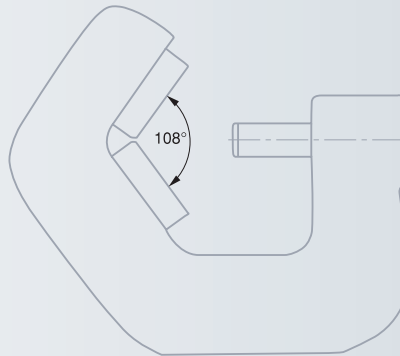
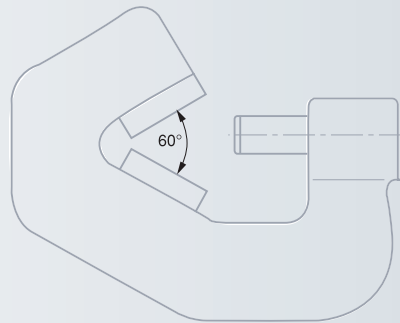
in

3-flute test pieces (60°)

06030087	1 ÷ 7	0.04 ÷ 0.27
06030088	5 ÷ 20	0.20 ÷ 0.80
06030089	20 ÷ 35	0.80 ÷ 1.38
06030090	35 ÷ 50	1.38 ÷ 1.97
06030091	50 ÷ 65	1.97 ÷ 2.56
06030092	65 ÷ 80	2.56 ÷ 3.15

5-flute test pieces (108°)

06030093	1 ÷ 7	0.04 ÷ 0.27
06030094	5 ÷ 25	0.20 ÷ 0.98
06030095	25 ÷ 45	0.98 ÷ 1.77
06030096	45 ÷ 65	1.77 ÷ 2.56
06030097	65 ÷ 85	2.56 ÷ 3.35



DIN 863 T3
(Style D 10)



0,001 mm
0.00005 in



Metric/Inch
conversion



Tungsten carbide
tipped



Angle of the
prism aperture:
60° for 3-flute test
pieces or 108° for 5-flute test
pieces.



0,75 mm for
3-flute test pieces
or 0,559 mm for
5-flute test pieces.



Max. 10 N



RS 232



Additional
technical data
on page C-3



Plastic case



Identification
number



Inspection report
with a declaration
of conformity

Models ISOMASTER AS



DIN 863 T3
(Style D 10)
NF E 11-090

0,01 mm

Tungsten carbide
tipped

Angle of the
prism aperture:
60° for 3-flute test
pieces or 108° for 5-flute test
pieces.

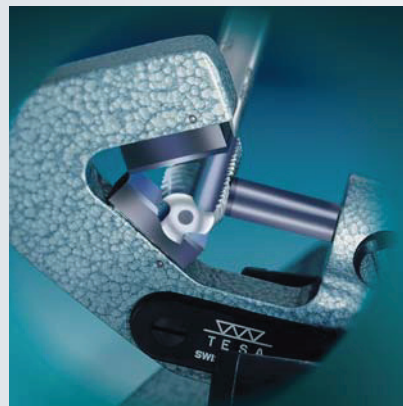
0,75 mm for
3-flute test pieces
or 0,559 mm for
5-flute test pieces.

Max. 10 N

Plastic case

Identification
number

Declaration
of conformity



mm

3-flute test pieces (60°)

00410001 1 ÷ 7

00410002 5 ÷ 20

00410003 20 ÷ 35

00410004 35 ÷ 50

00410005 50 ÷ 65

5-flute test pieces (108°)

00410102 5 ÷ 25



Hardened steel

Fitted with plastic
guard plates from
nominal dimension
of 20 mm.
Actual size engraved
on the top face

Identification
number

Declaration
of conformity

Cylindrical Setting Standards



mm

µm

µm

00440001 5 0,5 -

00440002 20 0,7 1

00440003 25 0,7 1

00440004 35 1 1

00440005 45 1,2 1,5

00440006 50 1,2 1,5

00440007 65 1,5 1,5

Micrometers for Thread Measurement

Used for pitch diameter inspection – Anvil with adjustable holder for mounting a measuring insert with prismatic faces – Fine screw adjustment and locking device – Spindle has a fixing bore for a cone-shaped measuring insert.

Models MICROMASTER AC



No		
	mm	in
06030062	0 ÷ 25	0 ÷ 1
06030063	25 ÷ 50	1 ÷ 2
06030064	50 ÷ 75	2 ÷ 3
06030065	75 ÷ 100	3 ÷ 4
06030066	100 ÷ 125	4 ÷ 5
06030067	125 ÷ 150	5 ÷ 6

Important

Measuring Inserts and setting standards must be ordered separately.

Models ISOMASTER AC



No	
	mm
00210001	0 ÷ 25
00210002	25 ÷ 50
00210003	50 ÷ 75
00210004	75 ÷ 100

Important

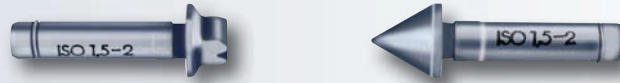
Measuring Inserts and setting standards must be ordered separately.

- ✓
- DIN 863 T3 (Style D18)
- 0,001 mm
0.00005 in
- Metric/Inch conversion
- 30 mm measuring span
- Max. 10 N
- RS 232
- Additional technical data on page C-3
- Plastic case
- Identification number
- Inspection report with a declaration of conformity

- ✓
- DIN 863 T3 (Style D 18)
NF E 11-090
- 0,01 mm
- 0,5 mm
- Max. 10 N
- Plastic case
- Identification number
- Declaration of conformity

Interchangeable Thread Inserts for TESA Micrometers Series AC

With measuring faces specially designed for checking pitch diameters.



Hardened steel



Fixing rod:
3,5 mm dia.,
15,5 mm long



Supplied in sets
or pairs

No		Pitch in mm	No		Threads per in	No		Threads per in
		<i>ISO metric threads</i>			<i>Whitworth threads</i>			<i>Unified inch-threads UN, UNC, UNF...</i>
		<i>60° flank angle</i>			<i>55° flank angle</i>			<i>60° flank angle</i>
00240000		0,4 ÷ 0,5	00250100		60 ÷ 48	00250000		64 ÷ 42
00240001		0,5 ÷ 0,6	00250101		48 ÷ 40	00250001		42 ÷ 25
00240002		0,6 ÷ 0,8	00250102		40 ÷ 32	00250002		25 ÷ 17
00240003		0,8 ÷ 1,0	00250103		32 ÷ 24	00250003		17 ÷ 10
00240004		1,0 ÷ 1,25	00250104		24 ÷ 18	00250004		10 ÷ 6.5
00240005		1,25 ÷ 1,5	00250105		18 ÷ 14	00250005		6.5 ÷ 4
00240006		1,5 ÷ 2,0	00250106		14 ÷ 10	00250006		4 ÷ 2.5
00240007		2,0 ÷ 2,5	00250107		10 ÷ 7			
00240008		2,5 ÷ 3,0	00250108		7 ÷ 4.5			
00240009		3,0 ÷ 4,0	00250109		4.5 ÷ 3			
00240010		4,0 ÷ 5,0						
00240011		5,0 ÷ 6,0						
		<i>Set of 12 pairs</i>			<i>Set of 10 pairs</i>			<i>Set of 7 pairs</i>
00240015		0,4 ÷ 6,0	00250115		60 ÷ 3	00250015		64 ÷ 2.5



Hardened steel



Insulating
sleeve marked
with actual size



Identification
number



Declaration
of conformity

Setting Standards for Screw Thread Micrometers



No		No	
<i>60° flank angle</i>			
00240501	25	00250501	1
00240502	50	00250502	2
00240503	75	00250503	3
00240504	100	00250504	4
00240505	125	00250505	5
<i>55° flank angle</i>			
00240601	25		
00240602	50		
00240603	75		