Micrometers with Small Measuring Faces

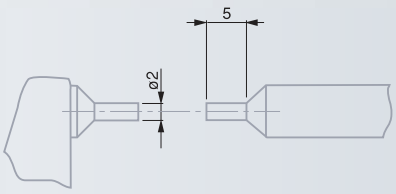
For measuring grooves, feather grooves, splines and other difficult to reach locations – Small measuring faces specially made to check precision workpieces.

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

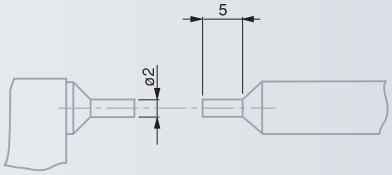
01961000	1 Lithium battery 3 V, 190 mAh, type CR 2032. For information on cables etc., see section A.



- ✓
- DIN 863 T3 (Style D3)
- 0.001 mm 0.00005 in
- Metric/Inch conversion
- Fixed measuring faces: tungsten carbide.
- Max. 10 N
- RS 232 interface, opto-coupled.
- Degree of protection (IEC 60529): IP54 or IP40 with use of the digital output
- For additional technical data: see page C-3.
- Plastic case
- Identification number
- Measuring range 0 to 100: with a SCS calibration certificate.
- Measuring range > 100 mm: inspection report with a declaration of conformity.

Models ISOMASTER AD

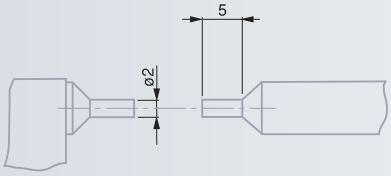
No	mm
00210101	0 ÷ 25
00210102	25 ÷ 50



- ✓
- DIN 863 T3 (Style D3) NF E 11-090
- 0.01 mm
- Fixed measuring faces: tungsten carbide.
- Max. 10 N
- Plastic case
- Identification number
- Inspection report with a declaration of conformity

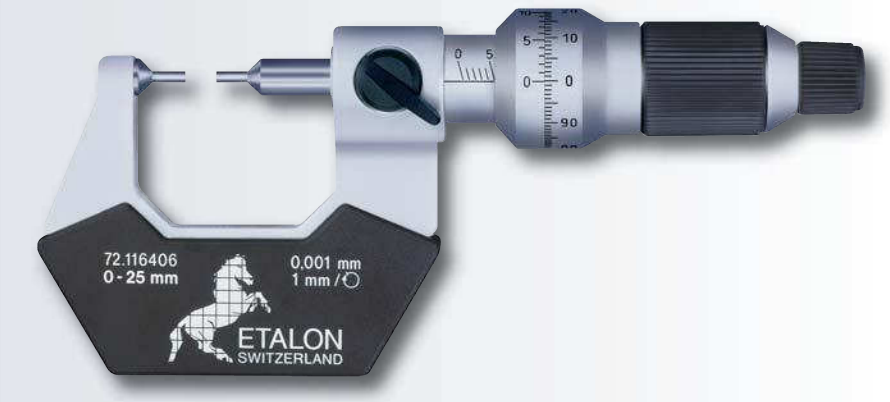
Model TESAMASTER AD

- ✓
- 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

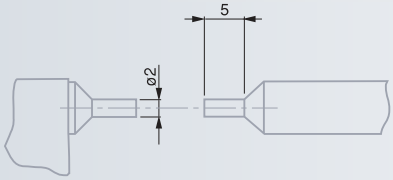


№	mm
00311301	0 ÷ 25

Model MICRORAPID



- ✓
- 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



№	mm
072116410	0 ÷ 20

Micrometers with One Spherical Measuring Face

Measure wall thickness of tubing.

Models MICROMASTER

No	mm	in
06030079	0 ÷ 30	0 ÷ 1.2
06030080	25 ÷ 50	1 ÷ 2

Model ETALON

No	mm
071115940	0 ÷ 25

✓
DIN 863 T3 (Style D1)
MICROMASTER: 0.001 mm or 0.00005 in
ETALON: 0.002 mm
Anvil: tungsten carbide (MICROMASTER) or titanium carbide hard-coating (ETALON). Tungsten carbide spindle.
Anvil with a 3.5 mm spherical face (MICROMASTER) or a 3.25 mm one (ETALON). Spindle with a flat measuring face.
Max. 10 N
RS 232 on MICROMASTER
Other technical data on MICROMASTER: see page C-3.
Plastic case
Identification number
Inspection report with a declaration of conformity

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

No	mm	in
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)
0.001 mm 0.00005 in
Tungsten carbide
Spherical. 3.5 mm radius.
Max. 10 N
Additional technical data: see page C-3.
Plastic case
Identification number
Inspection report with a declaration of conformity

Series AAS ISOMASTER

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

- ✓
- 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

№	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.

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

№	Ball tip
072103522	5 mm

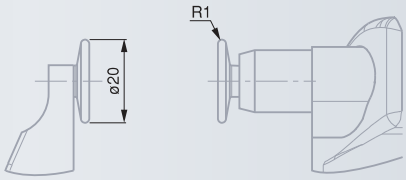
Micrometers for Soft Materials

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.

№	mm	in
06030085	0 ÷ 30	*0 ÷ 1.2*



- ✓
- 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

Model ISOMASTER AF

№	mm
00210301	0 ÷ 25

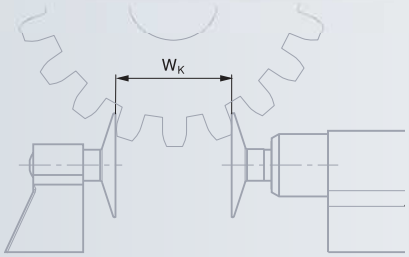
- ✓
- DIN 863 T3 (Style D6)
- 0.01 mm
- Hardened steel
- Ø 15 mm
- Flatness tolerance: 3 µm
- Tolerance in Parallelism: 6 µm
- Max. 10 N
- Plastic case
- Identification number
- Inspection report with a declaration of conformity

Micrometers for Gear Pitch Measurement

Flanges with ring-shaped measuring faces for root tangent lengths Wk 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.



№	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*

- ✓
- 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 ≤ 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

Models ISOMASTER AE

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

- ✓
- DIN 863 T3 (Style D7) NF E 11-090
- 0.01 mm
- Hardened steel
- ≤ 100 mm: 25 mm dia. > 100 ≤ 150 mm: 32 mm dia.
- Suitable from module 0.6
- Max. 10 N
- Plastic case
- Identification number
- Inspection report with a declaration of conformity

Micrometers for Gear Tooth Measurement

	Max. perm. error* with partial contact of the measuring face um	Max. perm. error with full contact of the measuring face (DIN 863-T1) um	Flatness um	Parallelism um	Max. flexure of the frame um
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.

MICROMASTER with 7 Pairs of Interchangeable Measuring Inserts

Non-rotating spindle – Without spindle lock.

No	mm	in
06030045	0 ÷ 30	*0 ÷ 1.2*

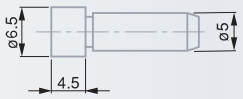
- ✓
- 0.001 mm 0.00005 in
- Metric/Inch conversion
- Micrometer element with a max. perm. error of 4 µm
- 7.5 mm dia.. non-rotating spindle. With a fixing bore for a measuring insert. Adjustable attachment on anvil for a measuring insert. with lock.
- Hardened steel
- Max. 10 N
- RS 232
- Additional technical data on page C-3
- Plastic case
- Identification number
- Inspection report with a declaration of conformity

Components of a Full Micrometer

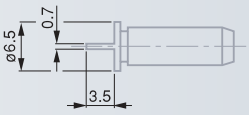
No	mm	in
Single Micrometer		
06030099	0 ÷ 30	*0 ÷ 1.2*
Full set of measuring inserts		
00269027		
Includes one pair of the following inserts		

No		mm
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°

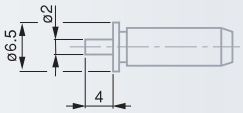
Specially designed measuring faces also available upon request.



00269020



00269024



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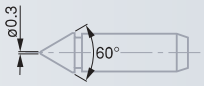

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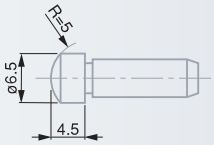

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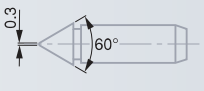

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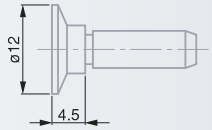
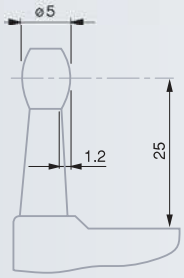


00269023

ETALON Basic for Tube Wall Thickness Measurement

Barrel-shaped anvil for measuring the tube wall thickness and other curved workpieces.

- ✓
- DIN 863 T3 (Style D12) NF E 11-090
- 0.01 mm
- Hardened steel anvil. Tungsten carbide spindle
- 5 mm dia. on anvil. 6.5 mm dia. on spindle
- 0.5 mm
- Max. 10 N
- Plastic case
- Identification number
- Inspection report with a declaration of conformity

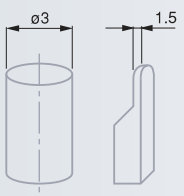


№	mm
00219066	0 ÷ 25

ETALON Basic with Two Interchangeable Anvils

Universal micrometer for assembly – Anvils have either a flat or a cylindrical measuring face.

- ✓
- Vernier reading to 0.002 mm
- Hardened steel anvils. Tungsten carbide spindle.
- Anvils: see drawing. Spindle: 6.5 mm dia.
- 0.5 mm
- Max. 10 N
- Plastic case
- Identification number
- Inspection report with a declaration of conformity



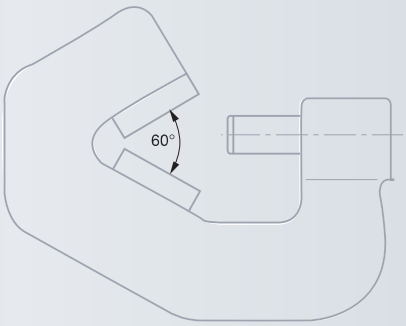
№	mm
00219067	0 ÷ 25

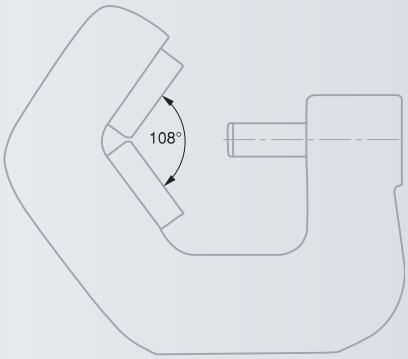
Micrometers with Prismatic Measuring Faces

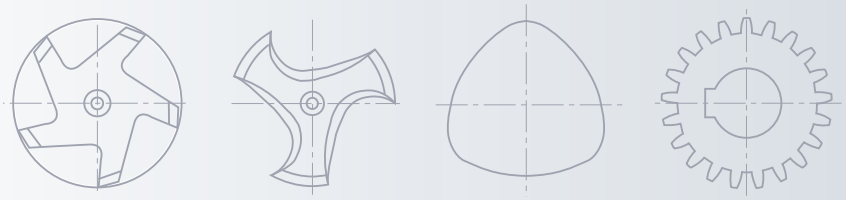
Measure test pieces with uneven number of grooves such as milling cutters, taps, drills and spline shafts as well as odd polygons. Determine roundness errors on cylindrical surfaces. Angle of the prism aperture is designed for workpieces having a number of 3 or 5 flutes.

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

N°	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

Cylindrical Setting Standards

- ✓
- 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

N°	Ø mm	// µm	d 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.

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

Models MICROMASTER AC

№	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

№	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 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

№	Pitch in mm	№	Threads per in	№	Threads per in
ISO metric threads 60° flank angle		*Whitworth threads 55° flank angle*		*Unified inch-treads UN. UNC. UNF... 60° flank angle*	
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				
Set of 12 pairs		*Set of 10 pairs*		*Set of 7 pairs*	
00240015	0.4 ÷ 6.0	***00250115***	*60 ÷ 3*	***00250015***	*64 ÷ 2.5*

Setting Standards for Screw Thread Micrometers

Hardened steel

Insulating sleeve marked with actual size

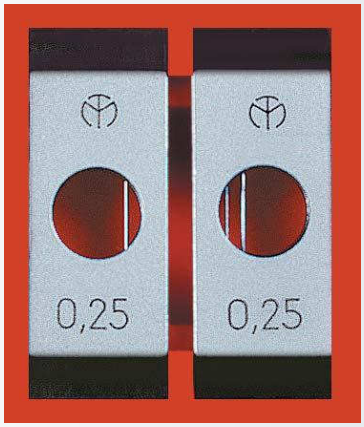
Identification number

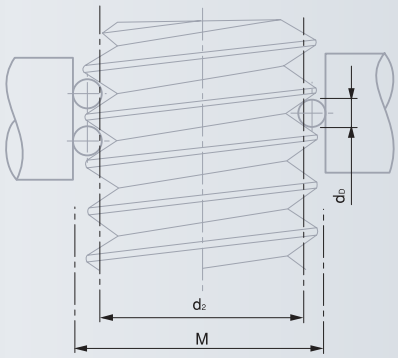
Declaration of conformity

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

XB Wires for Screw Threads

For measuring pitch diameter of threads using the three-wire method. Actual flank diameter d_2 can either be determined arithmetically or with the aid of the relevant tables based on the measured actual size M – Suitable for all standard micrometers with a measuring insert having a 6.5 mm diameter.





- Steel wires, hardened
- Wires are mounted on holders: 2-wire holder rests on anvil while the single wire holder is used on spindle side
- Single pairs are supplied in a plastic box, full set in a wooden case
- Declaration of conformity

No	Wires diameter	ISO metric threads	Whitworth threads	Unified inch-threads UN. UNC. UNF ...
	d_D mm	Pitch in mm	Number of threads per in	Number of threads per in
00240701	0.17	0.25/0.3	–	–
00240702	0.22	0.35	–	*72*
00240703	0.25	0.4	*60*	*64*
00240704	0.29	0.45/0.5	–	*56*
00240705	0.335	0.6	*48/40*	*48/44*
00240706	0.455	0.7 ÷ 0.8	–	*32*
00240707	0.53	0.9	*32/28*	*28*
00240708	0.62	1.0	*26/24*	*24*
00240709	0.725	1.25	*22 ÷ 19*	*20*
00240710	0.895	1.5	*18/16*	*18/16*
00240711	1.10	1.75	*14*	*14/13*
00240712	1.35	2.0	*12/11*	*12/11*
00240713	1.65	2.5	*10/9*	*10/9*
00240714	2.05	3.0/3.5	*8/7*	*8/7*
00240715	2.55	4.0/4.5	*6*	*6*
00240716	3.20	5.0/5.5	*5/4.5*	*5/4.5*
Set of 16 pairs				
00240700	0.17 ÷ 3.20			

Micrometer Stands

For micrometers up to 300 mm as well as many other hand-held tools.

No	
TESA	
00160201	
ETALON	
072110123	

- Clamp aperture: 16 mm (TESA) or 20 mm (ETALON)
- Lacquered cast iron base
- Tilt can be locked using a single bolt.