





















Explanations

In our catalogue you will find several pictograms beside the text description. They should be helpful for a quick and easier explanation of the articles and their attributes.








Protection (IP-Code) acc. to DIN 40050 / IEC 60529 etc.

	Protected against solid particles $\varnothing > 1 \text{ mm}$
	Protected against solid particles $\varnothing > 1 \text{ mm}$ and drop water resistant
	Splash water resistant
	Drop water resistant
	Drop water resistant
	Dust and spray water resistant
	Dust and spray water resistant
	Dust and drop water proof
	Dust and spray water proof
	Dust and splash water proof
	Dust and jet water proof
	Water and oil tight (at times)
	Water and oil tight (permanent)
	Article is explosion proof
	Article with UL-certificate (american safety norm)




























Manufacturing process

	Article with laser engraved scale / graduation
	Article with etched scale / graduation
	Article with printed scale / graduation (Pad print)
	Hardened
	Stainless steel

Icons for data process

	RS232 data output by data cable
	Opto RS232 data output
	Proximity data output, inductive, contactless
	Data output by USB and data cable
	Data output by USB and Mini USB (compatible with Mitutoyo Digimatic)
	wireless communication (WiFi) possible
	Software on CD-Rom

Several Icons

	Article-Number
	Reading / Resolution
	Weight in kg
	Cross section of the article
	Max. total accuracy(\pm)
	Repeatability (\pm)
	Individual measuring range
	Article dimension
	Measuring- and weighing-unit selectable or swichtable
	Corresponding battery included
	Corresponding battery included
	Corresponding cell battery included
	Corresponding cell battery included
	Corresponding lithium battery included
	Corresponding lithium battery included
	Accu
	Power supply
	Laser protection class
	Magnet power
	Induction
	Laser wavelength
	Shock proof
	Stand out
	Reading in mm and inch
	Reading in cm and inch
	Article with ABS/INC measuring system
	Article with ABSOLUTE measuring function

ATTENTION

We charge transport and packing costs for articles marked with *!














About the Certification:













We are also able to quote all DIN measuring tools with a certificate to VDI/VDE/DGQ 2618. Measuring tools manufactured at works standard will be certificated according to this norm. The calibrations will be done by an external calibration laboratory. The delivery time for external calibration will take approx one week. Calibration orders can't be cancelled and calibrated goods are excluded from sale of return. Whether you expect a calibration by laboratory of your choice, we are unable to guarantee for passing. Compensation of refund of costs are also impossible.

Norms, accuracy-classes, regulations	
EC I	Article fulfils the respective EC Class standard
EC II	Article fulfils the respective EC Class standard
E1	Article fulfils the respective verification standard
CC	Workshop calibration certificate, inclusive
TC	Article with test certificate, marked with Ident.-No.
CE	Article with CE classification
MID CODE	Directive of the European Parliament and of the council on measuring instruments
T2	Article with strengths tolerances acc. to DIN 2275
T3	Article with strengths tolerances acc. to DIN 2275
ASTM	Article fulfils the respective American standard
BS	Article fulfils the respective British standard
JIS K	Article fulfils the respective Japanese standard
DIN	Article fulfils the respective DIN standard
DIN EN	Article fulfils the respective DIN EN standard
ISO	Article fulfils the respective ISO standard
DIN ISO	Article fulfils the respective DIN ISO standard
NORM	Article manufactured acc. to tolerances of workshop standard
TÜV GS	Article with seal: "TÜV/Geprüfte Sicherheit (GS)"
vd TÜV	Article with seal: "TÜV"
IEC / EN	Article fulfils the respective norm standard

**Workshop or „DAkKS“-Calibration
(German Calibration Service)**
Calibrated instruments available for extra charge.
Please send us your specific inquiry.

Quality categories	
★★★★★	Product for highest demands
★★★★☆	Industry and craft
★★★☆☆	Craft
★★☆☆☆	DIY and training

Art of package for each article	
	Article will be packed in a carton box
	Article will be packed in a sturdy box (wood, plastic or aluminum)
	Article will be packed in a leatherette pouch
	Article will be packed in a PVC pouch
	Article will be packed in a sleeve
	Article will be sealed in a foil
	Article will be packed in a DIY plastic pouch with hanging card
	Article will be packed in a plastic film pouch with hanging card
	Article comes with wall hanging card
	Article will be packed in a blister packing
	Article will be packed a clear plastic box
	Carry bag, for outdoor use
	Article delivered on a pallet

Product specifications	
	Caliper jaw length
	Measuring internal dimension
	Caliper jaws (cross shape)
	Caliper jaws (knife shape)
	Depth Gauge
	Thumbroll
	Fine adjustment
	Thread pitch
	Measuring Inside
	Measuring outside
	Pointer rotation
	Setting gauge

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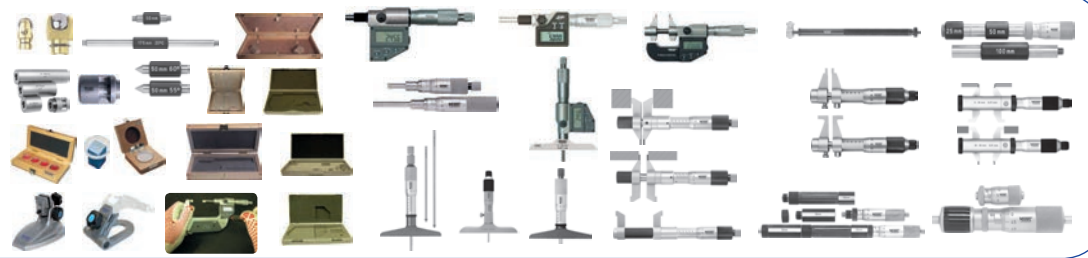
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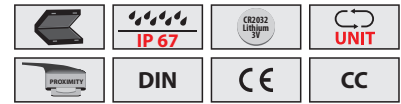
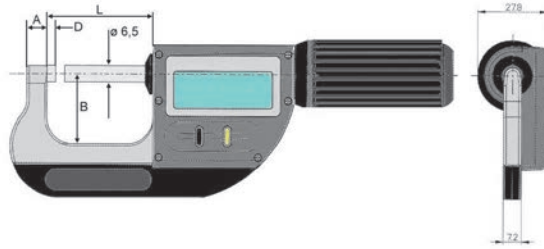


Precision Digital Micrometers

★★★★★ DIGI PLUS-LINE® Electr. Digital Micrometer *V*SPEED • IP67 DIN 863

- water and coolant proof acc. to DIN 40050 / IEC 60529
- with 2 mm spindle feed for quick measuring
- with Sylvac electronic • with Proximity data output

- connection proximity USB / RS232 / digimatic (optional choice)
- large LCD display, clear reading, digit height 7 mm
- frame lacquered, with insulation plates, carbide surfaces, lapped
- automatic turn on by movement of the measuring spindle, mode / set button
- zero setting at any position, switching to sleep mode after 20 minutes
- storage of position in the sleep mode, mm/inch switchable
- non swiveling measuring spindle, measuring range 0-102 mm, means total measuring range captured with 3 micrometers
- switchable measuring force 5N/10N art.-no.: 23 0101, meas.-force 10 N at art.-no.: 23 0102 - 23 0103
- incl. 1x 3 V battery (type CR2032, art.-no. 20 02093), with operation manual
- incl. calibration certificate

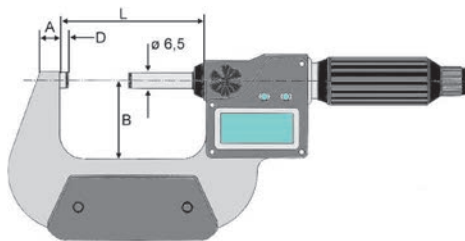


ART NO	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	CC
23 0101	0 - 30 / 0 - 1.2	0.001 / 0.00005	28	2	8	27.5	3.5	42	0.003	0.280	inclusive
23 0102	30 - 66 / 1.2 - 2.6	0.001 / 0.00005	28	2	9	43	3.5	78	0.004	0.450	inclusive
23 0103	66 - 102 / 2.6 - 4.0	0.001 / 0.00005	28	2	10	60	3.5	114	0.005	0.580	inclusive

★★★★★ DIGI PLUS-LINE® Electr. Digital Micrometer *V*SPEED • IP65 DIN 863

- water and coolant proof acc. to DIN 40050 / IEC 60529
- Absolute Measurement System (ABS-system)
- with 2 mm spindle feed for quick measuring

- sturdy quality, frame lacquered, with insulation plates
- large LCD display, clear reading, digit height 7 mm
- carbide surfaces, lapped, spindle hardened and ground
- zero setting at any position, On/Off button, automatic shut down
- mm/inch switchable, ABS/INC measuring system, ORIGIN system
- locking wheel for quick and precise fixing
- with friction ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no. 20 20192/B), with operation manual
- from up 25 mm with setting gauge



ART NO	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART NO CC
23 2130	0 - 25 / 0 - 1	0.001 / 0.00005	20	2	6	25	3	35.0	0.002	0.270	23 94000
23 2131	25 - 50 / 1 - 2	0.001 / 0.00005	20	2	8	32	3	59.5	0.002	0.325	23 94001
23 2132	50 - 75 / 2 - 3	0.001 / 0.00005	20	2	8	44.5	3	84.5	0.003	0.460	23 94001
23 2133	75 - 100 / 3 - 4	0.001 / 0.00005	20	2	8	57	3	109.5	0.003	0.555	23 94001



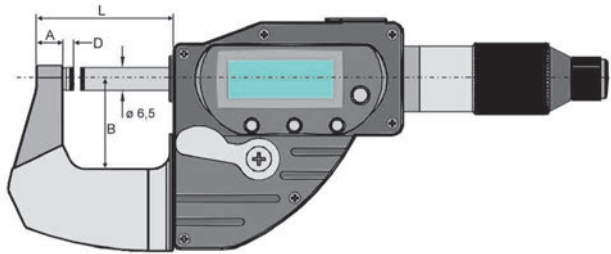
„Absolute“ Electr. Digital Micrometer **V_{SPEED}** • IP65 DIN 863

- water and coolant proof acc. to DIN 40050 / IEC 60529
- Absolute Measurement System (ABS-system)
- with lifting device for quick measuring processes with a constant measuring pressure
- with **VOCOM-S** duo data output, top model (connectivity also for Digimatic measuring devices)
- top model in sturdy quality, frame lacquered, with insulation plates
- large LCD display, clear reading, digit height 7 mm
- carbide surfaces, lapped, non swiveling hardened measuring spindle
- On/Off button, automatic shutdown, zero setting at any position
- mm/inch switchable, ABS/INC measuring system, ORIGIN system
- constant measuring pressure through even pressure of the measuring spindle
- incl. 1 x 3 V battery (type CR2032, art.-no. 2002093), with operation manual



Options

- data box with USB port, art.-no.: 24 20194
- foot switch for data box, art.-no.: 20 9010



ART N°	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART N° CC
23 0580	0 - 25 / 0 - 1	0.001 / 0.00005	20	-	8	26	3.5	32	0.002	0.295	23 94000
23 0581	25 - 50 / 1 - 2	0.001 / 0.00005	20	-	9	31	3.5	64.5	0.002	0.410	23 94001
23 0582	50 - 75 / 2 - 3	0.001 / 0.00005	20	-	9	44	3.5	90.5	0.003	0.485	23 94001
23 0583	75 - 100 / 3 - 4	0.001 / 0.00005	20	-	9	56	3.5	115.8	0.003	0.600	23 94001

V_{DIGI PLUS-LINE} Data Transmission with Data Box

- with **VOCOM-S** duo data output
- connection via USB data cable also suitable for Digimatic connection
- connection socket for foot switch



application example

article description

ART N°	article description	KG
24 20194	data box with USB port	0.060
20 9010	foot switch with port	0.170

Precision Digital Micrometers



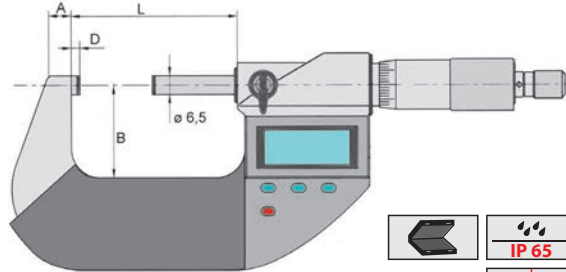
Electr. Digital Micrometer • IP65

DIN 863

NEW

- water and coolant proof acc. to DIN 40050 / IEC 60529
- with USB data output

- sturdy quality, frame lacquered, with insulation plates
- large LCD display, clear reading, digit height 7 mm
- carbide surfaces, lapped, spindle hardened and ground
- On button, automatic shutdown, zero setting at any position
- mm/inch switchable, ABS/INC measuring system
- locking lever for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 3 V battery (type CR2032, art.-no. 20 02093), with operation manual
- from up 25 mm with setting gauge



ART NO	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART NO CC
23 0130	0 - 25 / 0 - 1	0.001 / 0.00005	18	0.5	9	24	3.5	35	0.003	0.310	23 94000
23 0131	25 - 50 / 1 - 2	0.001 / 0.00005	18	0.5	9	32	3.5	60	0.003	0.394	23 94001
23 0132	50 - 75 / 2 - 3	0.001 / 0.00005	18	0.5	12	47	3.5	86	0.004	0.518	23 94001
23 0133	75 - 100 / 3 - 4	0.001 / 0.00005	18	0.5	14	60	3.5	111	0.004	0.700	23 94001

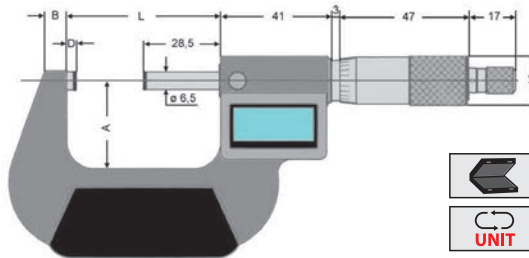


Electr. Digital Micrometer • IP54

DIN 863

- splash water proof acc. to DIN 40050 / IEC 60529

- large LCD display with clear reading, digit height 7 mm
- frame lacquered, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- autom. shutdown, zero setting at any position
- mm/inch switchable, without data output
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual
- from up 25 mm with setting gauge



ART NO	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART NO CC
23 1088	0 - 25 / 0 - 1	0.001 / 0.00005	18	0.5	24.0	6	3.0	32.0	0.002	0.275	23 94001
23 1089	25 - 50 / 1 - 2	0.001 / 0.00005	18	0.5	32.0	8	3.0	57.0	0.002	0.310	23 94001
23 1090	50 - 75 / 2 - 3	0.001 / 0.00005	18	0.5	45.0	8	3.0	82.0	0.003	0.440	23 94001
23 1091	75 - 100 / 3 - 4	0.001 / 0.00005	18	0.5	57.0	10	3.0	107.0	0.003	0.560	23 94001
23 1092	100 - 125 / 4 - 5	0.001 / 0.00005	18	0.5	70.0	10	3.0	133.0	0.003	0.690	23 94002
23 1093	125 - 150 / 5 - 6	0.001 / 0.00005	18	0.5	82.0	12	3.0	158.0	0.003	0.755	23 94002

Precision Digital Micrometers



Electr. Digital Micrometer • IP40

DIN 863

- dust proof acc. to DIN 40050 / IEC 60529
- Absolute Measurement System (ABS-system)
- frame lacquered, with insulation plates, sturdy quality
- large LCD display, clear reading, digit height 8 mm
- with carbide surfaces, lapped, spindle hardened and ground
- On/Off button, zero setting at any position
- mm/inch switchable, ABS/INC measuring system
- locking lever for quick and precise fixing
- with friction ratchet for constant measuring pressure
- friction ratchet with rubber studs for better handling
- incl. 1x 3 V battery (type CR2032, art.-no. 20 02093), with operation manual
- from up 25 mm with setting gauge



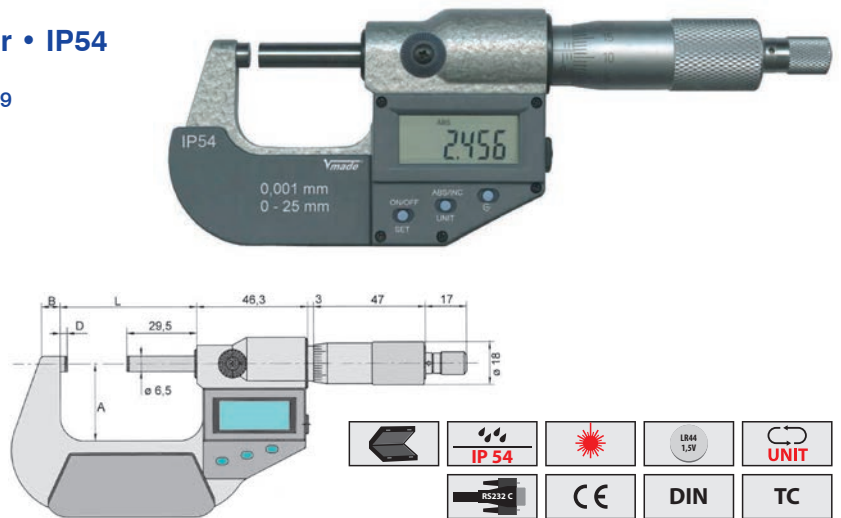
ART NO	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART NO CC
23 1061	0 - 25 / 0 - 1	0.001 / 0.00005	22	0.5	6	25	3.5	32	0.003	0.200	23 94000
23 1062	25 - 50 / 1 - 2	0.001 / 0.00005	22	0.5	6	32	3.5	57	0.003	0.330	23 94001
23 1063	50 - 75 / 2 - 3	0.001 / 0.00005	22	0.5	7	44	3.5	82	0.004	0.460	23 94001
23 1064	75 - 100 / 3 - 4	0.001 / 0.00005	22	0.5	8	59	3.5	108	0.005	0.555	23 94001



Electr. Digital Micrometer • IP54

DIN 863

- splash water proof acc. to DIN 40050 / IEC 60529
- Absolute Measurement System (ABS-system)
- with data output RS232C
- frame lacquered, with insulation plates, sturdy quality
- large LCD display with clear reading, digit height 7 mm
- carbide surfaces, lapped, spindle hardened and ground
- On/Off button, zero setting at any position
- mm/inch switchable, ABS/INC, ORIGIN system
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual
- from up 25 mm with setting gauge



ART NO drum mm	ART NO drum inch	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART NO CC
23 1070	23 1070/1	0 - 25 / 0 - 1	0.001 / 0.00005	18	0.5	6	26.5	3.5	32.5	0.002	0.275	23 94001
23 1071	23 1071/1	25 - 50 / 1 - 2	0.001 / 0.00005	18	0.5	8	32.0	3.5	57.5	0.002	0.325	23 94001
23 1072	23 1072/1	50 - 75 / 2 - 3	0.001 / 0.00005	18	0.5	8	44.5	3.5	82.5	0.003	0.465	23 94001
23 1073	23 1073/1	75 - 100 / 3 - 4	0.001 / 0.00005	18	0.5	8	57.0	3.5	107.5	0.003	0.560	23 94001
23 1074	23 1074/1	100 - 125 / 4 - 5	0.001 / 0.00005	18	0.5	10	70.0	3.5	133.0	0.003	0.615	23 94002
23 1075	23 1075/1	125 - 150 / 5 - 6	0.001 / 0.00005	18	0.5	10	82.0	3.5	158.5	0.003	0.720	23 94002
23 1076	23 1076/1	150 - 175 / 6 - 7	0.001 / 0.00005	18	0.5	12	94.5	5.5	184.0	0.004	0.785	23 94002
23 1077	23 1077/1	175 - 200 / 7 - 8	0.001 / 0.00005	18	0.5	12	107.0	5.5	209.5	0.004	1.575	23 94002
23 1078	23 1078/1	200 - 225 / 8 - 9	0.001 / 0.00005	18	0.5	23	129.5	5.5	234.0	0.004	1.080	23 94003
23 1079	23 1079/1	225 - 250 / 9-10	0.001 / 0.00005	18	0.5	23	142.5	5.5	259.5	0.004	1.230	23 94003
23 1080	23 1080/1	250 - 275 / 10-11	0.001 / 0.00005	18	0.5	23	155.0	5.5	285.0	0.005	1.290	23 94003
23 1081	23 1081/1	275 - 300 / 11-12	0.001 / 0.00005	18	0.5	23	167.5	5.5	310.5	0.005	1.470	23 94003

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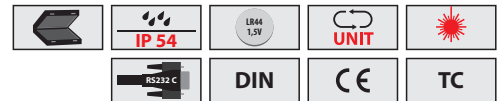
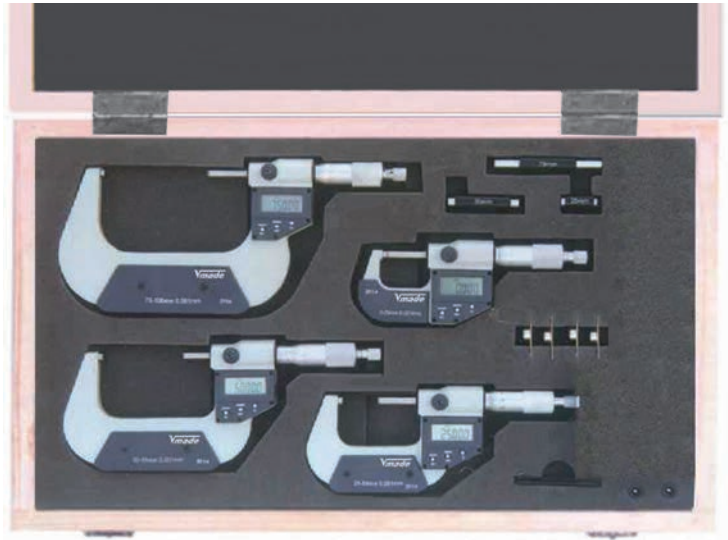


Electr. Digital Micrometer Set • IP54

DIN 863

- splash water resistant acc. to DIN 40050 / IEC 60529
- Absolute Measurement System (ABS-system)
- with data output RS232C

- frame lacquered, with insulation plates, sturdy quality
- large LCD display with clear reading, digit height 7 mm
- carbide surfaces, lapped, spindle hardened and ground
- On/Off button, zero setting at any position
- mm/inch switchable, ABS/INC, ORIGIN system
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual
- with setting gauges



ART NO	mm / inch	mm / inch	set contents	ø mm	mm	mm	KG	ART NO CC
23 2070	0 - 75 / 0 - 3	0.001 / 0.00005	3	18	0.5	0.002	1.350	23 94103
23 2071	0 - 100 / 0 - 4	0.001 / 0.00005	4	18	0.5	0.002/0.003	2.050	23 94104
23 2072	0 - 150 / 0 - 6	0.001 / 0.00005	6	18	0.5	0.002/0.003	2.800	23 94106



Electr. Digital Micrometer Set • IP40

DIN 863

- dust proof acc. to DIN 40050 / IEC 60529
- Absolute Measurement System (ABS-system)

- frame lacquered, with insulation plates, sturdy quality
- large LCD display, clear reading, digit height 8 mm
- with carbide surfaces, lapped, spindle hardened and ground
- On/Off button, zero setting at any position
- mm/inch switchable, ABS/INC measuring system
- locking lever for quick and precise fixing
- with friction ratchet for constant measuring pressure
- friction ratchet with rubber studs for better handling
- incl. 1x 3 V battery (type CR2032, art.-no. 20 02093), with operation manual
- with setting gauges

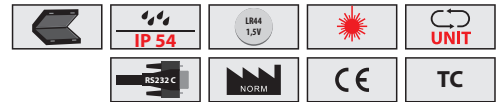
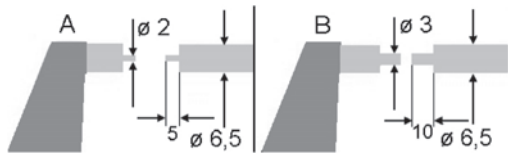


ART NO	mm / inch	mm / inch	set content	ø mm	mm	mm	KG	ART NO CC
23 2061	0 - 100 / 0 - 4	0.001 / 0.00005	4	22	0.5	0.002 / 0.003	1.850	23 94104

Precision Digital External Micrometers, Special Design

★★★★★
DIGI PLUS-LINE® Electr. Digital Micrometer • IP54
 DIN 863

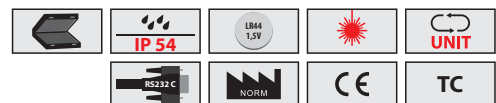
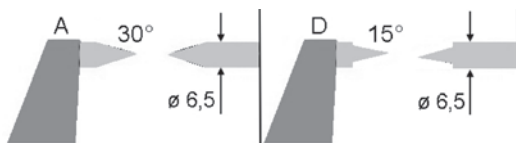
- splash water proof acc. to DIN 40050 / IEC 60529
- with small anvil measuring surfaces
- Absolute Measurement System (ABS-system)
- with data output RS232 C
- LCD display with clear reading, digit height 7 mm, mm/inch switchable
- frame lacquered, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- ABS/INC measurement system
- zero setting at any position, On/Off button
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual
- from up 25 mm with setting gauge



ART No type A	ART No type B	mm / inch	mm / inch	max. mm	ø mm	mm	KG	ART No CC
23 2871	23 2861	0 - 25 / 0 - 1	0.001 / 0.00005	0.002	18	0.5	0.275	23 94000
23 2872	23 2862	25 - 50 / 1 - 2	0.001 / 0.00005	0.002	18	0.5	0.325	23 94001
23 2873	23 2863	50 - 75 / 2 - 3	0.001 / 0.00005	0.003	18	0.5	0.465	23 94001
23 2874	23 2864	75 - 100 / 3 - 4	0.001 / 0.00005	0.003	18	0.5	0.560	23 94001

★★★★★
DIGI PLUS-LINE® Electr. Digital Micrometer • IP54
 DIN 863

- splash water proof acc. to DIN 40050 / IEC 60529
- with 30° and 15° measuring tips
- Absolute Measurement System (ABS-system)
- with data output RS232 C
- LCD display, with clear reading, digit height 7 mm, mm/inch switchable
- frame lacquered, with insulation plates, carbide surfaces, lapped
- ABS/INC measurement system
- zero setting at any position, On/Off button
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual
- form up 25 mm setting with gauge



ART No type A	ART No type D	mm / inch	mm / inch	meas. tips knife/radius mm	max. mm	ø mm	mm	KG	ART No CC
23 2971	23 2961	0 - 25 / 0 - 1	0.001 / 0.00005	0.3	0.002	18	0.5	0.275	23 94001
23 2972	23 2962	25 - 50 / 1 - 2	0.001 / 0.00005	0.3	0.002	18	0.5	0.325	23 94001

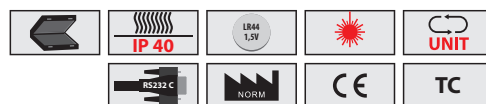
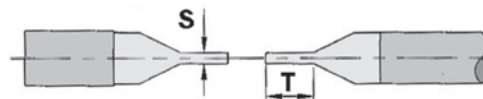
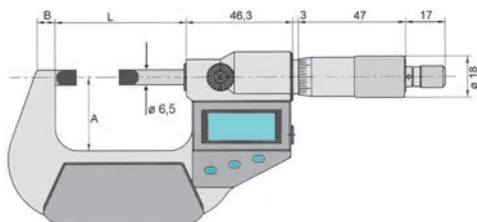
Precision Digital External Micrometers, Special Design



Electr. Digital Micrometer • IP40 DIN 863

- dust proof acc. to DIN 40050 / IEC 60529
- to measure small penetrations, grooves, etc.
- Absolute Measurement System (ABS-system)
- with data output RS232 C

- LCD display, with clear reading, digit height 7 mm, mm/inch switchable
- frame lacquered, with insulated plates
- non-rotating spindle with blade measuring faces
- ABS/INC measurement system
- zero setting at any position, On/Off button
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual
- from up 25 mm with setting gauge



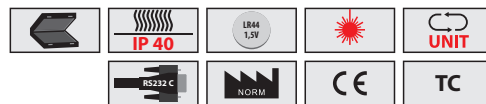
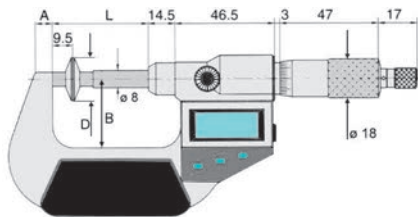
ART NO	mm / inch	mm / inch	A mm	B mm	S mm	T mm	L mm	max. mm	ø mm	mm	KG	ART NO CC
drum with metric scale												
23 2381	0 - 25 / 0 - 1	0.001 / 0.00005	26.5	6	0.75	6.5	57.0	0.002	18	0.5	0.275	23 94000
23 2382	25 - 50 / 1 - 2	0.001 / 0.00005	32.0	8	0.75	6.5	82.0	0.002	18	0.5	0.325	23 94001
23 2383	50 - 75 / 2 - 3	0.001 / 0.00005	44.5	8	0.75	6.5	107.0	0.003	18	0.5	0.465	23 94001
23 2384	75 - 100 / 3 - 4	0.001 / 0.00005	57.0	8	0.75	6.5	132.6	0.003	18	0.5	0.560	23 94001
23 2385	100 - 125 / 4 - 5	0.001 / 0.00005	70.0	10	0.75	6.5	158.0	0.003	18	0.5	0.615	23 94002
23 2386	125 - 150 / 5 - 6	0.001 / 0.00005	94.5	13	0.75	6.5	183.4	0.003	18	0.5	0.720	23 94002
23 2387	150 - 175 / 6 - 7	0.001 / 0.00005	94.5	13	0.75	6.5	208.8	0.004	18	0.5	0.785	23 94002
drum with inch scale												
23 2381/1	0 - 25 / 0 - 1	0.001 / 0.00005	26.5	6	0.4	3.5	57.0	0.002	18	0.5	0.275	23 94001
23 2382/1	25 - 50 / 1 - 2	0.001 / 0.00005	32.0	8	0.4	3.5	82.0	0.002	18	0.5	0.325	23 94001
23 2383/1	50 - 75 / 2 - 3	0.001 / 0.00005	44.5	8	0.4	3.5	107.0	0.003	18	0.5	0.465	23 94001
23 2384/1	75 - 100 / 3 - 4	0.001 / 0.00005	57.0	8	0.4	3.5	132.6	0.003	18	0.5	0.560	23 94001



Electr. Digital Micrometer • IP40 DIN 863

- dust proof acc. to DIN 40050 / IEC 60529
- for chordal measurement of gear teeth, keys, ribs, fins, etc.
- Absolute Measurement System (ABS-system)
- with data output RS232 C

- LCD display, with clear reading, digit height 7 mm, mm/inch switchable
- frame lacquered, with insulated plates
- non-rotating spindle with disc measuring faces
- ABS/INC measurement system, zero setting at any position, On/Off button
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual
- from up 25 mm with setting gauge

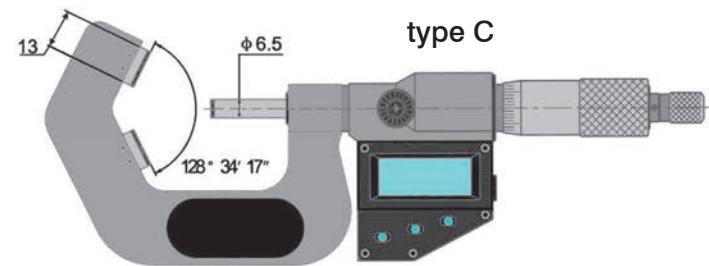
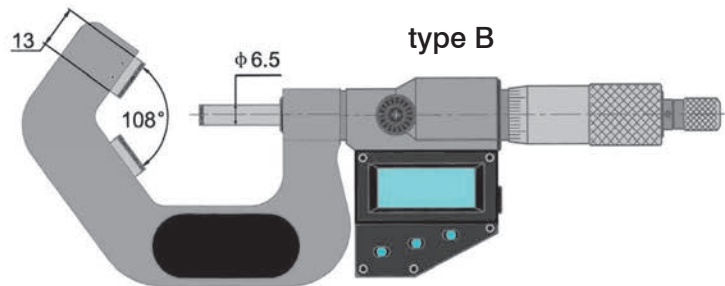
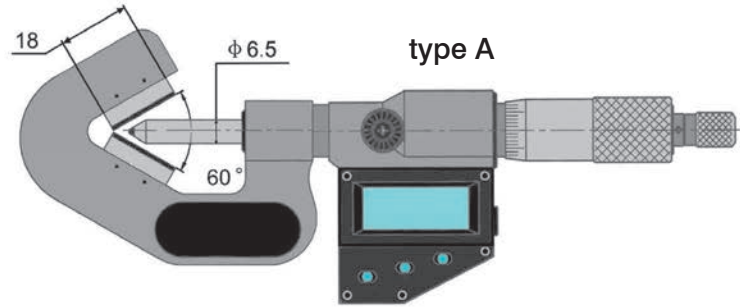


ART NO	mm / inch	mm / inch	A mm	B mm	D mm	L mm	ø mm	mm	max. mm	KG	ART NO CC
23 1171	0 - 25 / 0 - 1	0.001 / 0.00005	0.7	32.0	20	43.0	18	0.5	0.004	0.400	23 94000
23 1172	25 - 50 / 1 - 2	0.001 / 0.00005	0.7	44.5	20	68.0	18	0.5	0.004	0.535	23 94001
23 1173	50 - 75 / 2 - 3	0.001 / 0.00005	0.7	57.0	20	93.0	18	0.5	0.005	0.470	23 94001
23 1174	75 - 100 / 3 - 4	0.001 / 0.00005	0.7	70.0	20	118.5	18	0.5	0.005	0.565	23 94001

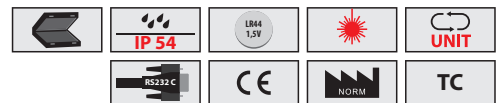
Precision Digital External Micrometers, Special Design

★★★★★ DIGI PLUS-LINE® Electr. Digital Micrometer with V-anvil • IP54

- spray water proof acc. to DIN 40050 / IEC 60529
- with data output RS232 C
- for measuring odd fluted taps, milling cutters, reamers, etc.
- LCD display, clear reading, digit height 7 mm, mm/inch switchable
- frame lacquered, with insulation plates, carbide surfaces and tip, lapped
- ABS/INC measurement system
- zero setting at any position, On/Off button
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual
- with adjusting key and setting gauge



application example



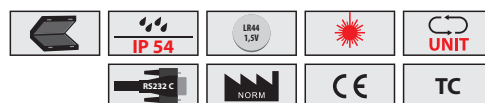
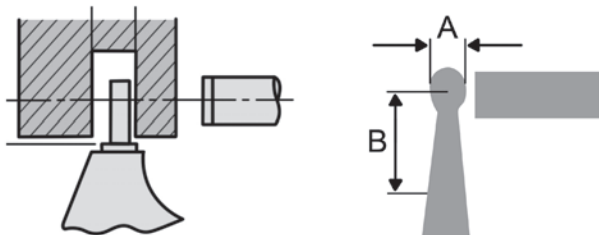
ART No type A 3 grooves 60°	ART No type B 5 grooves 108°	ART No type C 7 grooves 128°	 mm / inch	 mm / inch	 max. mm	 ø mm	 mm	 KG	ART No CC
23 2180	-	-	1 - 15 / 0.04 - 0.6	0.001 / 0.0005	0.002	18	0.5	0.580	23 94012
23 2181	-	-	5 - 20 / 0.2 - 0.8	0.001 / 0.0005	0.002	18	0.5	0.720	23 94012
23 2182	-	-	20 - 35 / 0.8 - 1.4	0.001 / 0.0005	0.003	18	0.5	0.880	23 94013
23 2183	-	-	35 - 50 / 1.4 - 2.0	0.001 / 0.0005	0.003	18	0.5	1.030	23 94013
23 2184	-	-	50 - 65 / 2.0 - 2.6	0.001 / 0.0005	0.003	18	0.5	1.140	23 94013
23 2185	-	-	65 - 80 / 2.6 - 3.2	0.001 / 0.0005	0.003	18	0.5	1.320	23 94013
-	23 2186	23 2191	5 - 25 / 0.2 - 1.0	0.001 / 0.0005	0.002	18	0.5	0.340	23 94012
-	23 2187	23 2192	25 - 45 / 1.0 - 1.8	0.001 / 0.0005	0.003	18	0.5	0.720	23 94012
-	23 2188	23 2193	45 - 65 / 1.8 - 2.6	0.001 / 0.0005	0.003	18	0.5	0.910	23 94013
-	23 2189	23 2194	65 - 85 / 2.6 - 3.4	0.001 / 0.0005	0.004	18	0.5	1.120	23 94013
-	23 2190	-	85 - 105 / 3.4 - 4.2	0.001 / 0.0005	0.004	18	0.5	1.310	23 94013

Precision Digital External Micrometers, Special Design

★★★★★ DIGI PLUS-LINE® Electr. Digital Micrometer • IP54

- spray water proof acc. to DIN 40050 / IEC 60529
- for measuring pipe wall thicknesses etc.
- Absolute Measurement System (ABS-system)
- with data output RS232 C

- LCD display, with clear reading, digit height 7 mm, mm/inch switchable
- frame lacquered, with insulated plates, carbide surface, hardened anvil
- ABS/INC measurement system
- zero setting at any position, On/Off button
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual

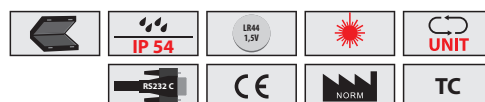
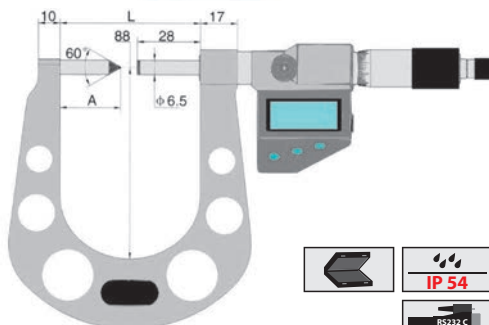
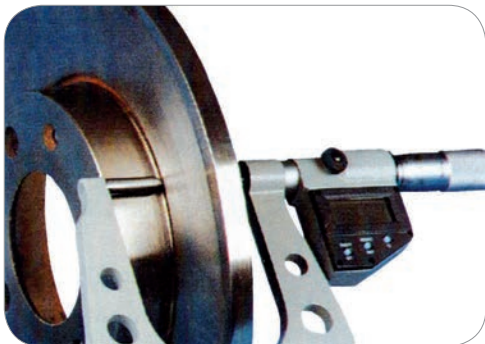


ART N°	mm / inch	mm / inch	ø mm	mm	A ø mm	B mm	max. mm	KG	ART N° CC
23 2813	0 - 25 / 0 - 1	0.001 / 0.00005	18	0.5	4.7	25	0.003	0.260	23 94000

★★★★★ DIGI PLUS-LINE® Electr. Digital Brake Disc Micrometer • IP54

- spray water proof acc. to DIN 40050 / IEC 60529
- for measuring wall thickness of brake discs
- Absolute Measurement System (ABS-system)
- with data output RS232 C

- LCD display, clear reading, digit height 7 mm, mm/inch switchable
- frame lacquered, with insulated plates, 60° carbide tipped face at left-side
- ABS/INC measurement system
- zero setting at any position, On/Off button
- locking wheel for quick and precise fixing
- with friction ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual

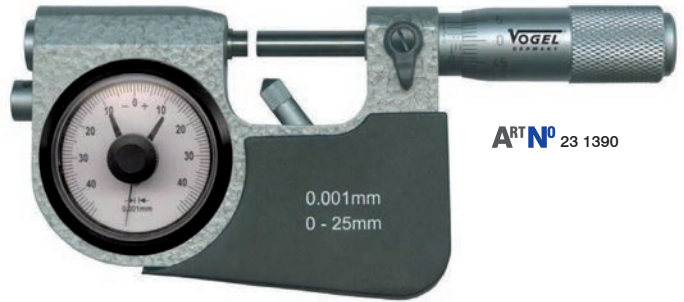


ART N°	mm	frame depth mm	mm / inch	ø mm	mm	A mm	L mm	max. mm	KG	ART N° CC
23 1031	7.6 - 33	88	0.001 / 0.00005	18	0.5	29	64.5	0.002	0.555	23 94001

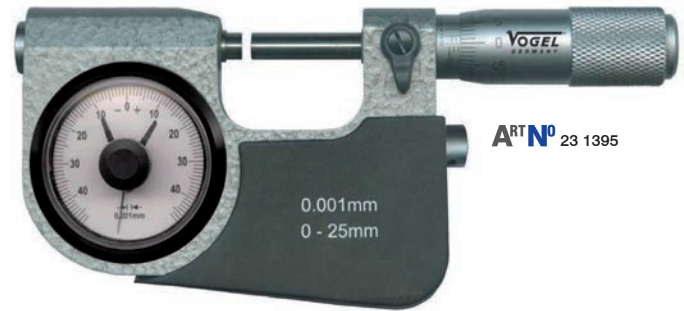
Indicator Snap Micrometers

★★★★★ BLUE-LINE® Indicator Snap Micrometer reading in μm

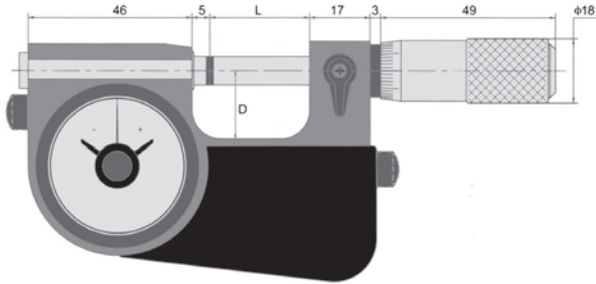
- for precise measurements in the series production
- drum and sleeve matt chrome
- frame hammer blow grey, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- locking lever for quick and precise fixing
- art. no. 23 1390 with anvil-lifting, adjustable depth stop
- accuracy micrometer $\pm 0.003 \text{ mm}$
- accuracy indicator $\pm 0.001 \text{ mm}$



ART No 23 1390



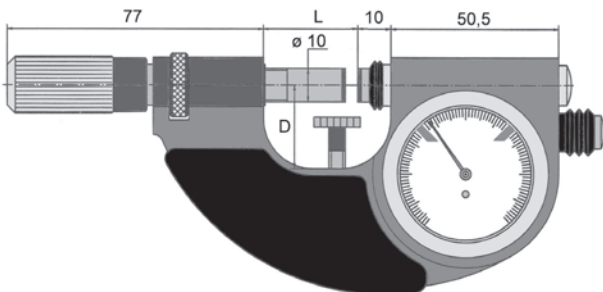
ART No 23 1395



ART No	mm	drum mm	dial mm	indicator mm	ϕ mm	mm	L mm	D mm	KG	ART No CC
23 1390	0 - 25	0.002	0.001	± 0.04	18	0.5	28.5	19.0	0.980	23 94190
23 1391	25 - 50	0.002	0.001	± 0.04	18	0.5	53.5	30.0	1.100	23 94193
23 1392	50 - 75	0.002	0.001	± 0.04	18	0.5	78.5	45.0	1.300	23 94193
23 1393	75 - 100	0.002	0.001	± 0.04	18	0.5	103.5	57.0	1.500	23 94193
23 1395	0 - 25	0.002	0.001	± 0.04	18	0.5	28.5	19.0	0.980	23 94190

★★★★★ SILVER-LINE® Indicator Snap Micrometer • IP54

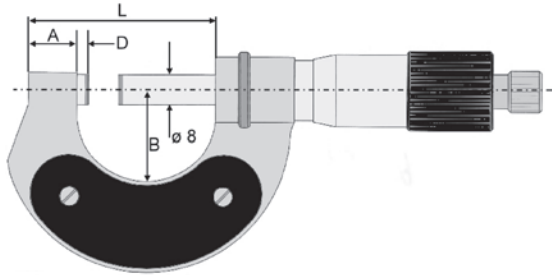
- spray water proof acc. to DIN 40050 / IEC 60529
- reading in μm
- adjustable snap gauge for measuring shafts, axis, etc.
- replaces a large number of gauges
- with lacquered frame and insulation plates
- locking wheel for precise fixing, adjustable depth stop
- carbide surfaces, spindle hardened and ground
- large, clear round scale, adjustable tolerance marks
- free lift $\sim 2.5 \text{ mm}$, anvil-lifting, measuring force 5-10 N



ART No	mm	dial mm	indicator mm	max. mm	ϕ mm	mm	L mm	D mm	KG	ART No CC
23 1410	0 - 25	0.001	± 0.04	0.001	18	0.5	28.5	25.0	0.800	23 94410
23 1411	25 - 50	0.001	± 0.04	0.001	18	0.5	53.5	35.0	1.000	23 94411
23 1412	50 - 75	0.001	± 0.04	0.001	18	0.5	78.5	47.5	1.200	23 94411
23 1413	75 - 100	0.001	± 0.04	0.001	18	0.5	103.5	60.0	1.300	23 94411

★★★★★
SILVER-LINE® Precision External Micrometer

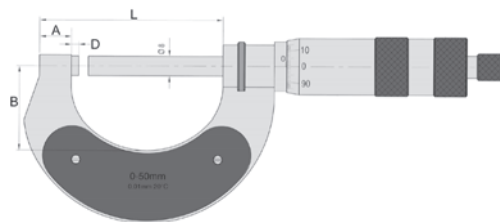
- top quality, accuracy better than DIN 863
- sturdy quality, in high precision version
- drum and sleeve matt chrome finish
- hammer blow grey lacquered frame, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjusting key, from up 25 mm with setting gauge



ART NO	mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART NO CC
23 0586	0 - 25	0.01	21	0.5	13	24	3	37	0.002	0.300	23 94000
23 0587	25 - 50	0.01	21	0.5	13	34	3	62	0.002	0.370	23 94001
23 0588	50 - 75	0.01	21	0.5	15	46	3	87	0.003	0.440	23 94001
23 0589	75 - 100	0.01	21	0.5	15	60	3	112	0.003	0.530	23 94001

★★★★★
SILVER-LINE® External Micrometer
 DIN 863

- with 50 mm spindle turning
- 100-step graduation
- drum and sleeve satin chrome finish
- hammer blow grey lacquered frame
- tungsten carbide measuring faces, parallel lapped
- insulated plates
- locking ring for quick and precise fixing
- with ratchet for constant measuring pressure
- delivery with setting key

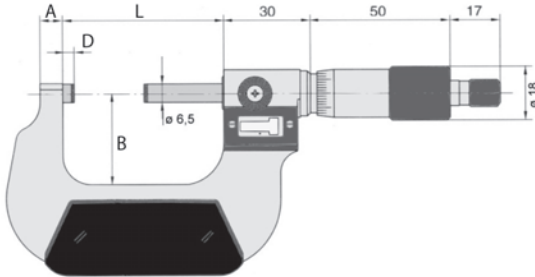


ART NO	mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART NO CC
23 0231	0 - 50	0.01	24	1.0	15	34	3	77	0.003	0.710	23 94102
23 0232	50 - 100	0.01	24	1.0	15	60	3	127	0.004	0.995	23 94102
23 0233	100 - 150	0.01	24	1.0	15	85	3	179	0.004	1.285	23 94102
23 0234	150 - 200	0.01	24	1.0	15	110	3	230	0.005	1.670	23 94102
23 0235	200 - 250	0.01	24	1.0	15	135	3	279	0.005	2.045	23 94102
23 0236	250 - 300	0.01	24	1.0	15	160	3	330	0.005	2.330	23 94102

Precision Micrometers

★★★★★ BLUE-LINE® Digital Counter External Micrometer

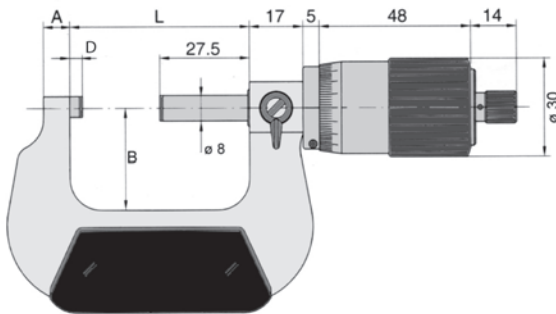
- easy handling and precise reading
- mechanical digital counter, frame lacquered, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- with ratchet for constant measuring pressure
- locking wheel for quick and precise fixing
- with adjustment key, from up 25 mm with setting gauge



ART No	mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	mm	KG	ART No CC
23 1451	0 - 25	0.01	18	0.5	6	26	3.5	32	0.004	0.370	23 94000
23 1452	25 - 50	0.01	18	0.5	8	32	3.5	57	0.004	0.525	23 94001
23 1453	50 - 75	0.01	18	0.5	8	44.5	3.5	82	0.005	0.685	23 94001
23 1454	75 - 100	0.01	18	0.5	8	57	3.5	107	0.005	0.845	23 94001

★★★★★ BLUE-LINE® External Micrometer DIN 863

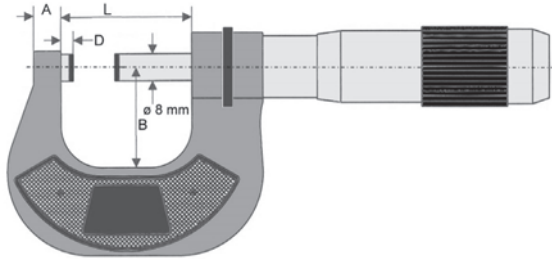
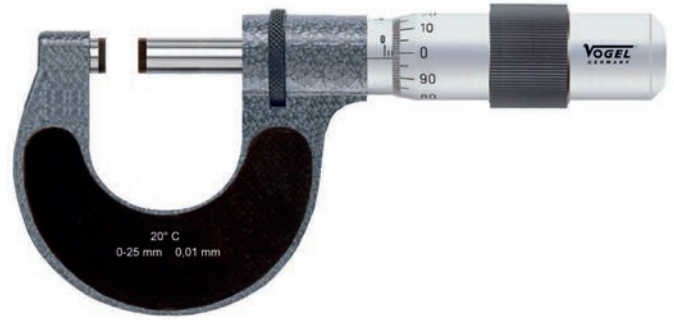
- with 100-step graduation
- drum and sleeve matt chrome, frame lacquered, with insulation plates
- carbide surfaces lapped, spindle hardened and ground
- locking lever for quick and precise fixing
- with friction ratchet for constant measuring pressure
- with adjustment key, from 25 mm with setting gauge



ART No	mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	mm	KG	ART No CC
23 0351	0 - 25	0.01	30	1.0	6	24	4.5	32	0.004	0.590	23 94000
23 0352	25 - 50	0.01	30	1.0	8	32	4.5	57	0.004	0.695	23 94001
23 0353	50 - 75	0.01	30	1.0	8	45	4.5	82	0.005	0.820	23 94001
23 0354	75 - 100	0.01	30	1.0	8	57	4.5	107	0.005	0.910	23 94001
23 0355	100 - 125	0.01	30	1.0	8	70	4.5	133	0.006	1.090	23 94002
23 0356	125 - 150	0.01	30	1.0	8	82	4.5	158	0.006	1.290	23 94002
23 0357	150 - 175	0.01	30	1.0	8	95	4.5	183	0.007	1.480	23 94002
23 0358	175 - 200	0.01	30	1.0	8	107	4.5	209	0.007	1.665	23 94002

BLUE-LINE® External Micrometer
DIN 863

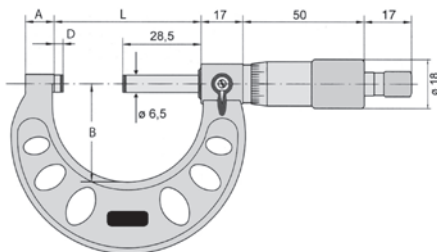
- sturdy quality, in precision version
- drum and sleeve matt chrome finish
- hammer blow grey lacquered frame, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjusting key, from up 25 mm with setting gauge



ART No	mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART No CC
23 1330	0 - 25	0.01	23	0.5	9	32	3	32.5	0.004	0.250	23 94000
23 1331	25 - 50	0.01	23	0.5	15	33	3	57.5	0.004	0.290	23 94001
23 1332	50 - 75	0.01	23	0.5	15	40	3	82.5	0.005	0.340	23 94001
23 1333	75 - 100	0.01	23	0.5	15	55	3	107.5	0.005	0.420	23 94001
23 1334	100 - 125	0.01	23	0.5	32	80	32	168.5	0.006	0.950	23 94002
23 1335	125 - 150	0.01	23	0.5	32	80	7.5	168.5	0.006	0.930	23 94002
23 1336	150 - 175	0.01	23	0.5	32	105	32	216	0.007	1.250	23 94002
23 1337	175 - 200	0.01	23	0.5	32	105	7.5	216	0.007	1.210	23 94002

BLUE-LINE® External Micrometers
DIN 863

- lightweight design, metric graduation
- e.g. for use in the workshop
- drum and sleeve matt chrome finish
- frame hammer blow blue lacquered
- carbide surfaces, lapped, spindle hardened and ground
- locking lever for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjustment key, from up 25 mm with setting gauge

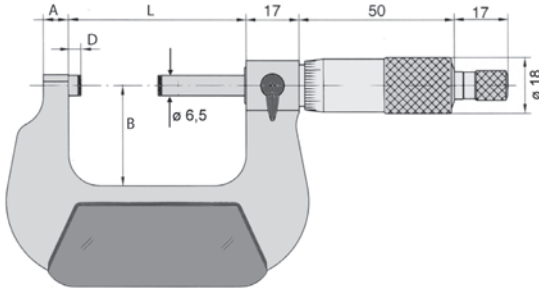


ART No	mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART No CC
23 1301	0 - 25	0.01	18	0.5	9.0	28	3.0	32	0.004	0.170	23 94000
23 1302	25 - 50	0.01	18	0.5	14.0	38	3.0	57	0.004	0.220	23 94001
23 1303	50 - 75	0.01	18	0.5	15.0	49	3.0	82	0.005	0.400	23 94001
23 1304	75 - 100	0.01	18	0.5	15.0	60	3.0	107	0.005	0.580	23 94001
23 1305	100 - 125	0.01	18	0.5	16.5	73	3.0	133	0.006	0.670	23 94002
23 1306	125 - 150	0.01	18	0.5	16.5	85	3.0	158	0.006	0.790	23 94002

Precision Micrometers

★★★★★
BLUE-LINE® External Micrometer
 DIN 863

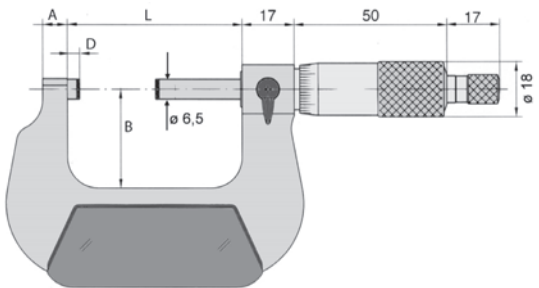
- for standard expectations
- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- locking lever for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjustment key, from up 25 mm with setting gauge



ART NO	mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART NO CC
23 1351	0 - 25	0.01	18	0.5	6	24	3.0	32	0.004	0.170	23 94000
23 1352	25 - 50	0.01	18	0.5	8	32	3.0	57	0.004	0.270	23 94001
23 1353	50 - 75	0.01	18	0.5	8	45	3.0	82	0.005	0.340	23 94001
23 1354	75 - 100	0.01	18	0.5	8	57	3.0	107	0.005	0.440	23 94001
23 1355	100 - 125	0.01	18	0.5	8	70	3.0	133	0.006	0.640	23 94002
23 1356	125 - 150	0.01	18	0.5	8	82	3.0	158	0.006	0.890	23 94002
23 1357	150 - 175	0.01	18	0.5	8	95	5.5	183	0.007	1.100	23 94002
23 1358	175 - 200	0.01	18	0.5	8	107	5.5	209	0.007	1.230	23 94002

★★★★★
BLUE-LINE® External Micrometer
 DIN 863

- with inch graduation
- for standard expectations
- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- locking lever for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjustment key, from up 1 inch with setting gauge



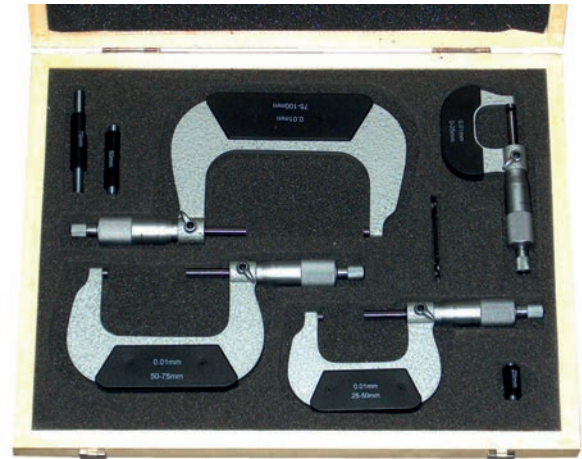
ART NO	inch	inch	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	KG	ART NO CC
23 1371	0 - 1	0.0001	18	0.5	6	24	3.0	32	0.004	0.170	23 94000
23 1372	1 - 2	0.0001	18	0.5	8	32	3.0	57	0.004	0.270	23 94001
23 1373	2 - 3	0.0001	18	0.5	8	25	3.0	82	0.005	0.340	23 94001
23 1374	3 - 4	0.0001	18	0.5	8	57	3.0	107	0.005	0.440	23 94001

★★★★★
BLUE-LINE® External Micrometer Set
 DIN 863

- for standard requirements in measuring
- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- locking lever for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjustment key, from up 25 mm with setting gauge



ART No 23 2006



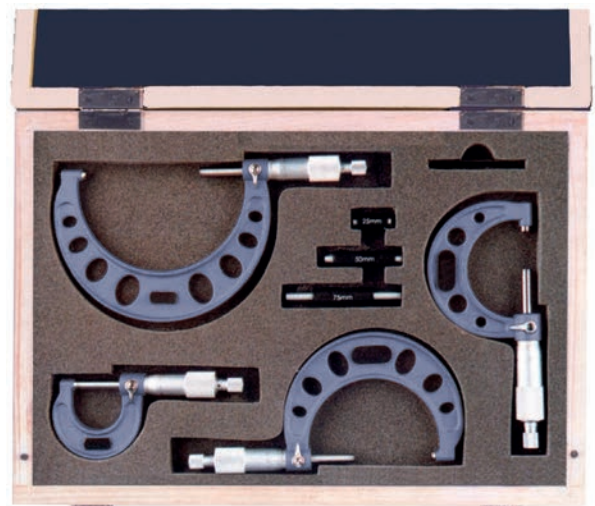
ART No 23 2003 - 23 2004



ART No	mm	mm	set content	ø mm	mm	spindle-ø mm	KG	ART No CC
23 2003	0 - 75	0.01	3	18	0.5	6.5	1.600	23 94103
23 2004	0 - 100	0.01	4	18	0.5	6.5	1.950	23 94104
23 2006	0 - 150	0.01	6	18	0.5	6.5	4.520	23 94105
23 2107	150 - 300	0.01	6	18	0.5	6.5	3.550	23 94105
23 2108	0 - 300	0.01	12	18	0.5	6.5	9.000	23 94112
23 2109	100 - 200	0.01	4	18	0.5	6.5	3.950	23 94104

★★★★★
BLUE-LINE® External Micrometer Set
 DIN 863

- lightweight design, metric graduation
- for simple requirements in measuring
- drum and sleeve matt chrome finish
- frame hammer blow blue lacquered
- carbide surfaces, lapped, spindle hardened and ground
- locking lever for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjustment key, from up 25 mm with setting gauge



ART No	mm	mm	set content	ø mm	mm	spindle-ø mm	KG	ART No CC
23 2001	0 - 100	0.01	4	18	0.5	6.5	1.950	23 94104

Precision Micrometers

Wooden cases for art.-no. 23 0290 - 23 0295 to be found on page 109

SILVER-LINE® External Micrometer DIN 863

- with 50 mm spindle revolution
- 100 step graduation

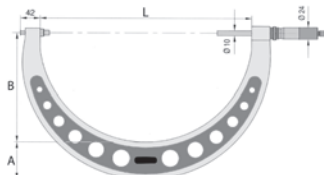
- drum and sleeve matt chrome finish
- lightweight metal frame, hammer blow grey lacquered
- carbide surfaces, lapped, spindle hardened and fine ground
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjusting key, without setting gauges, please see on page 107

Option

- insulated handle available on request and surcharge (art.-no. 23 0290/1)



ART N° 23 0290/1



ART N°	mm	mm	ø mm	mm	L mm	B mm	A mm	mm	KG	ART N° CC
23 0290	300 - 350	0.01	24	1.0	370	190	42	0.006	1.500	23 94102
23 0291	350 - 400	0.01	24	1.0	430	220	42	0.006	1.800	23 94102
23 0292	400 - 450	0.01	24	1.0	475	250	42	0.007	2.150	23 94102
23 0293	450 - 500	0.01	24	1.0	530	273	42	0.007	2.300	23 94102
23 0294	500 - 550	0.01	24	1.0	570	291	42	0.008	2.400	23 94102
23 0295	550 - 600	0.01	24	1.0	630	323	42	0.008	3.000	23 94102

SILVER-LINE® External Micrometer DIN 863

- for large measuring ranges
- with exchangeable extension
- with lightweight metal frame

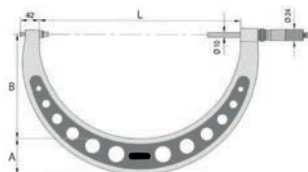
- drum and sleeve matt chrome finish, spindle revolution 50 mm
- lightweight metal frame, hammer blow grey lacquered
- carbide surfaces, lapped, spindle hardened and fine ground
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjusting key, without setting gauges, please see on page 107

Option

- insulated handle available on request and surcharge (art.-no. 23 0290/1)



ART N° 23 0290/1



Wooden cases for art.-no. 23 0170 - 23 0182 to be found on page 109



ART N°	mm	mm	ø mm	mm	L mm	B mm	A mm	mm	KG	ART N° CC
23 0170	200 - 300	0.01	24	1.0	325	165	64	0.006	1.500	23 94017
23 0171	300 - 400	0.01	24	1.0	430	220	74	0.007	1.900	23 94017
23 0172	400 - 500	0.01	24	1.0	530	273	87	0.008	2.400	23 94017
23 0173	500 - 600	0.01	24	1.0	630	323	102	0.009	3.100	23 94017
23 0174	600 - 700	0.01	24	1.0	730	378	107	0.009	3.800	23 94018
23 0175	700 - 800	0.01	24	1.0	830	423	113	0.009	4.200	23 94018
23 0176	800 - 900	0.01	24	1.0	930	473	118	0.010	5.000	23 94018
23 0177*	900 - 1000	0.01	24	1.0	1030	520	129	0.010	6.200	23 94018
23 0178*	1000 - 1100	0.01	24	1.0	1135	585	142	0.011	7.600	23 94018
23 0179*	1100 - 1200	0.01	24	1.0	1230	635	156	0.011	8.600	23 94019
23 0180*	1200 - 1300	0.01	24	1.0	1335	685	168	0.012	9.700	23 94019
23 0181*	1300 - 1400	0.01	24	1.0	1430	735	171	0.012	11.300	23 94019
23 0182*	1400 - 1500	0.01	24	1.0	1530	780	180	0.013	12.500	23 94019

SILVER-LINE® External Micrometer

- large measuring range
- with adjustable anvil
- with lightmetal frame

- with 50 mm spindle revolution
- drum and sleeve matt chrome finish
- frame hammer blow lacquered, carbide surfaces, lapped, spindle hardened and fine ground
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjusting key, without setting gauges, please see on page 107

Option

- insulated handle available on request and surcharge (art.-no. 23 0290/1)



Wooden cases for art.-no. 23 4205 - 23 4211 to be found on page 109



ART N° 23 0290/1



ART N°	mm	mm	ø mm	mm	spindle-ø mm	max. mm	KG	ART N° CC
23 4205	0 - 300	0.1 / 0.01	24	1.0	10.0	0.006	1.900	23 94018
23 4206	300 - 600	0.1 / 0.01	24	1.0	10.0	0.009	3.500	23 94018
23 4207*	600 - 900	0.1 / 0.01	24	1.0	10.0	0.012	5.400	23 94018
23 4208*	900 - 1200	0.1 / 0.01	24	1.0	10.0	0.015	9.000	23 94019
23 4209*	1200 - 1500	0.1 / 0.01	24	1.0	10.0	0.018	12.900	23 94019
23 4210*	1500 - 1800	0.1 / 0.01	24	1.0	10.0	0.023	16.600	23 94019
23 4211*	1700 - 2000	0.1 / 0.01	24	1.0	10.0	0.025	19.200	23 94019

SILVER-LINE® External Micrometer

- for measuring plates and panels
- 100 step graduation
- with deep frame

- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered
- carbide surfaces, lapped, spindle hardened and fine ground
- without insulation plates
- with ratchet for constant measuring pressure



ART N°	mm	mm	ø mm	mm	spindle-ø mm	max. mm	KG	ART N° CC
23 2611	0 - 25 x 50	0.01	24	1.0	6.5	0.002	0.380	23 94013
23 2612	0 - 25 x 100	0.01	24	1.0	8.0	0.003	0.800	23 94013
23 2613	0 - 25 x 150	0.01	24	1.0	6.5	0.005	1.300	23 94013
23 2615	0 - 25 x 250	0.01	24	1.0	6.5	0.007	2.200	23 94013
23 2616	0 - 50 x 50	0.01	24	1.0	8.0	0.003	0.550	23 94013
23 2617	0 - 50 x 100	0.01	24	1.0	8.0	0.004	0.950	23 94013
23 2618	50 - 100 x 100	0.01	24	1.0	8.0	0.004	1.200	23 94013

Precision Special Micrometers

★★★★★
SILVER-LINE® Tube Micrometer
 with extra deep frame

- to measure the thickness of tubes, etc.
- drum and sleeve matt chrome finish, 100 step graduation
- frame hammer blow grey lacquered
- ball shaped anvil, hardened steel
- with ratchet for constant measuring pressure



ART N°	mm	mm	D-ø mm	T mm	ø mm	mm	spindle-ø mm	mm	KG	ART N° CC
23 2710	0 - 15	0.01	8.0	25	24	1.0	6.5	0.004	0.360	23 94271
23 2711	0 - 25	0.01	10.0	35	24	1.0	6.5	0.004	0.610	23 94271

★★★★★
SILVER-LINE® Tube Micrometer

- to measure the thickness of tubes, etc.
- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered
- ball shaped anvil, hardened steel
- with ratchet for constant measuring pressure



ART N°	mm	mm	K-ø mm	T mm	ø mm	mm	spindle-ø mm	mm	KG	ART N° CC
23 2713	0 - 25	0.01	6.5	15	20	0.5	6.5	0.003	0.390	23 94271

★★★★★
SILVER-LINE® Tube Micrometer

- to measure the thickness of tubes, etc.
- drum and sleeve matt chrome finish, 100 step graduation
- frame hammer blow grey lacquered
- ball shaped anvil*, hardened steel
- with ratchet for constant measuring pressure



* anvil in sloping position,
 measuring depth dependent
 to tube inside-ø

ART N°	mm	mm	K-ø mm	T mm	ø mm	mm	spindle-ø mm	mm	KG	ART N° CC
23 2714	0 - 15	0.01	2.5	2 - 9*	24	1.0	6.5	0.004	0.330	23 94271

3d

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11



External Micrometer

DIN 863

- square or round frame, for wire- and rolling plants
- drum and sleeve matt chrome finish, 100 step graduation
- frame hammer blow grey lacquered
- carbide surfaces, lapped, spindle hardened and fine ground
- without insulation plates
- with ratchet for constant measuring pressure



ART No	measuring range / frame depth mm	mm	ø mm	mm	spindle-ø mm	max. mm	KG	ART No CC
23 2510	0 - 15 x 18	0.01	20	1.0	6.5	0.002	0.320	23 94000
23 2511	0 - 15 x 18	0.01	20	1.0	6.5	0.002	0.320	23 94000



Micrometer for rolling mills

- square frame, ideal for measuring sheets and bands
- drum and sleeve matt chrome finish, 100 step graduation
- frame hammer blow grey lacquered
- carbide surfaces, lapped, spindle hardened and fine ground
- large disc scale-ø 60 mm
- with ratchet for constant measuring pressure



ART No	measuring range / frame depth mm	mm	ø mm	mm	spindle-ø mm	max. mm	KG	ART No CC
23 3001	0 - 10 x 35	0.01	20	1.0	6.5	0.003	0.270	23 94000
23 3002	0 - 15 x 50	0.01	20	1.0	6.5	0.003	0.470	23 94000
23 3004	0 - 25 x 50	0.01	20	1.0	6.5	0.004	0.470	23 94000



Micrometer for soft materials

- to measure paper, cardboard, felt, leather, etc.
- drum and sleeve matt chrome finish, 100 step graduation
- frame hammer blow grey lacquered
- hardened measuring disc-ø 20 mm, rounded edges
- with ratchet for constant measuring pressure



ART No	measuring range / frame depth mm	mm	ø mm	mm	spindle-ø mm	max. mm	KG	ART No CC
23 2500	0 - 10 / 50	0.01	20	1.0	6.5	0.006	0.540	23 94000
23 2505	0 - 25 / 50	0.01	20	1.0	6.5	0.006	0.570	23 94000

Precision Special Micrometers

★★★★★
SILVER-LINE® Micrometer
 DIN 863

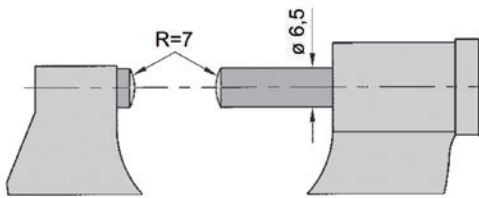
- with special measuring faces
- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered
- with insulation plates
- carbide surfaces, finely ground
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure



ART N° 23 2910



ART N° 23 2921



ART N° type A 60° R = 0.4 mm	ART N° type B R = 7 mm	mm	mm	ø mm	mm	spindle-ø mm	mm	KG	ART N° CC
23 2910	23 2921	0 - 25	0.01	20	0.5	6.5	0.003	0.420	23 94000
23 2911	23 2922	25 - 50	0.01	20	0.5	6.5	0.003	0.530	23 94000

★★★★★
SILVER-LINE® Micrometer
 DIN 863

- with 30° and 60° pointed measuring faces
- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered
- with insulation plates
- carbide surfaces, finely ground
- anvil length 15 mm
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure



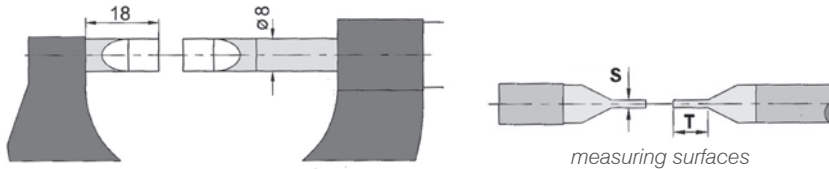
ART N°	mm	mm	ø mm	mm	measuring surfaces	spindle-ø mm	mm	KG	ART N° CC
23 0065	0 - 25	0.01	20	0.5	30° / R = 0.4	6.5	0.003	0.540	23 94000
23 0066	25 - 50	0.01	20	0.5	30° / R = 0.4	6.5	0.003	0.660	23 94000
23 0067	50 - 75	0.01	20	0.5	30° / R = 0.4	6.5	0.004	0.800	23 94000
23 0068	75 - 100	0.01	20	0.5	30° / R = 0.4	6.5	0.004	0.940	23 94000
23 0075	0 - 25	0.01	20	0.5	60° / R = 0.4	6.5	0.003	0.540	23 94000
23 0076	25 - 50	0.01	20	0.5	60° / R = 0.4	6.5	0.003	0.660	23 94000
23 0077	50 - 75	0.01	20	0.5	60° / R = 0.4	6.5	0.004	0.800	23 94000
23 0078	75 - 100	0.01	20	0.5	60° / R = 0.4	6.5	0.004	0.940	23 94000

Other measuring forms for art.-no. 23 0065 - 23 0068 are available on request, e.g. 15° / 20° / 45°

Suitable setting gauges are on page 107

★★★★★
SILVER-LINE® Precision Blade Micrometer
 DIN 863

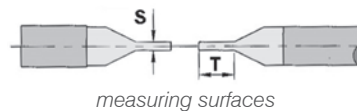
- to measure small punctures, grooves, etc.
- drum and sleeve matt chrome finish
- frame hammer blow lacquered
- with insulation plates
- flat measuring ends, flat surfaces
- anvil length 18 mm
- hardened measuring surfaces, finely ground
- non-rotating spindle
- with ratchet for constant measuring pressure



ART NO	mm	mm	ø mm	mm	measuring surface S x T mm	spindle-ø mm	max. mm	KG	ART NO CC
23 0380	0 - 25	0.01	20	0.5	0.40 x 4.0	8.0	0.003	0.560	23 94000
23 0381	25 - 50	0.01	20	0.5	0.40 x 4.0	8.0	0.003	0.680	23 94001
23 0382	50 - 75	0.01	20	0.5	0.75 x 7.0	8.0	0.004	0.820	23 94001
23 0383	75 - 100	0.01	20	0.5	0.75 x 7.0	8.0	0.004	0.960	23 94001
23 0384	100 - 125	0.01	20	0.5	0.75 x 7.0	8.0	0.005	1.080	23 94002
23 0385	125 - 150	0.01	20	0.5	0.75 x 7.0	8.0	0.005	1.250	23 94002

★★★★★
BLUE-LINE® Blade Micrometer
 workshop grade

- to measure small penetrations, grooves, etc.
- drum and sleeve matt chrome finish
- frame lacquered, with insulation plates
- flat measuring ends, flat surfaces
- hardened measuring surfaces, finely ground
- non-rotating spindle
- with ratchet for constant measuring pressure
- with adjusting key, from up 25 mm with setting gauge

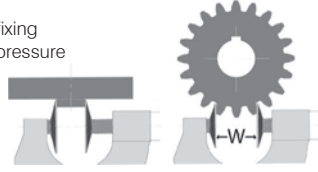






ART NO	mm	mm	ø mm	mm	measuring surfaces S x T mm	spindle-ø mm	max. mm	KG	ART NO CC
23 1380	0 - 25	0.01	20	0.5	0.75 x 6.5	6.5	0.004	0.270	23 94000
23 1381	25 - 50	0.01	20	0.5	0.75 x 6.5	6.5	0.004	0.340	23 94001
23 1382	50 - 75	0.01	20	0.5	0.75 x 6.5	6.5	0.005	0.435	23 94001
23 1383	75 - 100	0.01	20	0.5	0.75 x 6.5	6.5	0.005	0.655	23 94001

Precision Special Micrometers

SILVER-LINE® Precision Disc-Type Micrometer DIN 863

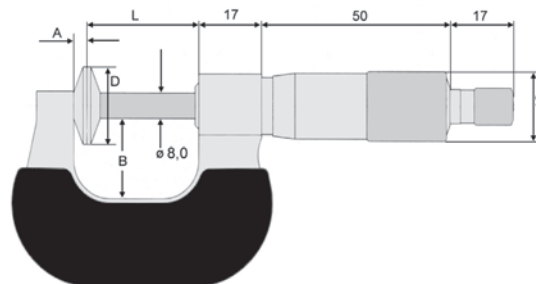
- for chordal measurement of gear teeth, keys, ribs, fins, etc.
- drum and sleeve matt chrome finish
- turning spindle, module 0.8 - 6
- frame hammer blow grey lacquered
- hardened measuring plates, lapped parallel
- with insulation plates
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure



ART N°	 mm	 mm	 ø mm	 mm	measuring disc-ø mm	spindle-ø mm	 max. mm	 KG	
23 0001	0 - 25	0.01	20	0.5	25	8	0.004	0.510	23 94000
23 0002	25 - 50	0.01	20	0.5	25	8	0.004	0.650	23 94001
23 0003	50 - 75	0.01	20	0.5	25	8	0.005	0.770	23 94001
23 0004	75 - 100	0.01	20	0.5	25	8	0.005	0.890	23 94001
23 0005	100 - 125	0.01	20	0.5	25	8	0.006	1.020	23 94002
23 0006	125 - 150	0.01	20	0.5	25	8	0.006	1.130	23 94002
23 0007	150 - 175	0.01	20	0.5	25	8	0.006	1.380	23 94002
23 0008	175 - 200	0.01	20	0.5	25	8	0.006	1.510	23 94002
23 0009	200 - 225	0.01	20	0.5	25	8	0.007	1.740	23 94003
23 0010	225 - 250	0.01	20	0.5	25	8	0.007	1.880	23 94003
23 0011	250 - 275	0.01	20	0.5	25	8	0.007	2.060	23 94003
23 0012	275 - 300	0.01	20	0.5	25	8	0.007	2.160	23 94003








BLUE-LINE® Disc-Type Micrometer DIN 863

- for chordal measurement of gear teeth, keys, ribs, fins, etc.
- drum and sleeve matt chrome finish
- non-rotating spindle
- frame lacquered, with insulation plates
- carbide measuring plates, lapped parallel
- with ratchet for constant measuring pressure
- with adjusting key, from up 25 mm with setting gauge



Other measuring plate-ø available on request! Other measuring ranges from 300 - 1000 mm available on request!



ART N°	 mm	 mm	 ø mm	 mm	A mm	B mm	D mm	L mm	 max. mm	 KG	
23 1121	0 - 25	0.01	18	0.5	3.3	20	20	34	0.004	0.390	23 94000
23 1122	25 - 50	0.01	18	0.5	3.3	28	20	59	0.004	0.440	23 94001
23 1123	50 - 75	0.01	18	0.5	3.3	41	20	85	0.005	0.590	23 94001
23 1124	75 - 100	0.01	18	0.5	3.3	53	20	110	0.005	0.750	23 94001

★★★★★
SILVER-LINE® Precision Spline Micrometer
 DIN 863

- for measuring splined shafts, slots and keyways
- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered, with insulation plates
- anvil and spindle with a small diameter
- offset surfaces, length 10 mm, flat surfaces
- carbide surfaces, finely ground and lapped
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure



ART NO	mm	mm	ø mm	mm	measuring ends-ø mm	spindle-ø mm	max. mm	KG	ART NO CC
23 0161	0 - 25	0.01	20	0.5	3	6.5	0.003	0.540	23 94000
23 0162	25 - 50	0.01	20	0.5	3	6.5	0.003	0.660	23 94001
23 0163	50 - 75	0.01	20	0.5	3	6.5	0.004	0.800	23 94001
23 0164	75 - 100	0.01	20	0.5	3	6.5	0.004	0.940	23 94001
23 0165	100 - 125	0.01	20	0.5	3	6.5	0.005	1.060	23 94002
23 0166	125 - 150	0.01	20	0.5	3	6.5	0.005	1.230	23 94002
23 0167	150 - 175	0.01	20	0.5	3	6.5	0.005	1.410	23 94002
23 0168	175 - 200	0.01	20	0.5	3	6.5	0.005	1.550	23 94002

★★★★★
BLUE-LINE® V-Anvil Micrometer

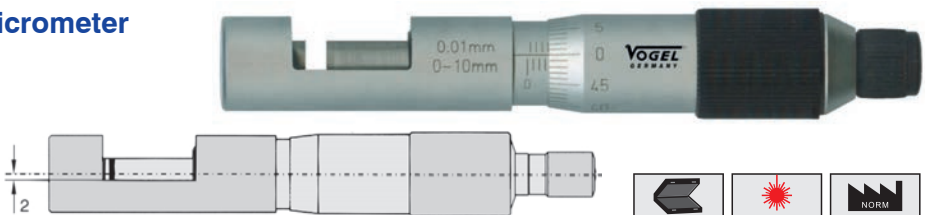
- for measuring odd fluted taps, milling cutters, reamers, etc.
- drum and sleeves matt chrome finish
- non-rotating spindle
- frame lacquered, with insulation plates
- carbide measuring plate, lapped flat
- with ratchet for constant measuring pressure
- locking wheel for quick and precise fixing
- with adjusting key and setting gauge



ART NO	mm	mm	ø mm	mm	max. mm	KG	ART NO CC
23 0080	3 flutes 60° 1 - 15	0.01	18	0.5	0.004	0.500	23 94112
23 0081	5 - 20	0.01	18	0.5	0.004	0.640	23 94112
23 0082	20 - 35	0.01	18	0.5	0.005	0.800	23 94113
23 0083	35 - 50	0.01	18	0.5	0.005	0.950	23 94113
23 0084	50 - 65	0.01	18	0.5	0.006	1.060	23 94113
23 0085	65 - 80	0.01	18	0.5	0.006	1.240	23 94113

★★★★★
BLUE-LINE® Wire Thickness Micrometer
 DIN 863

- to measure wire, rods etc.
- drum and sleeve matt chrome finish
- carbide surfaces, finely ground
- with ratchet for constant measuring pressure



ART NO	mm	mm	ø mm	mm	spindle-ø mm	max. mm	KG	ART NO CC
23 2902	0 - 10	0.01	19	0.5	6.5	0.004	0.250	23 94001

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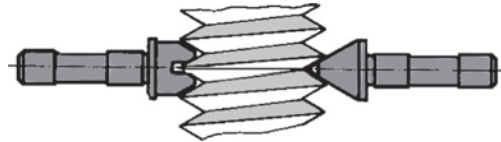
Precision Special Micrometers



Micrometer for external threads DIN 863

• for external thread measurements

- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered, with insulation plates
- hardened thread flanks measuring inserts, exchangeable
- delivery without inserts and **without** setting gauges
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure



ART N° size of inserts ø 4 x 15.5 mm	ART N° size of inserts ø 3.5 x 13.5 mm	mm	mm	ø mm	mm	spindle setting mm	max. mm	KG	ART N° CC
23 0420	23 0450	0 - 25	0.01	20	0.5	25 mm	0.003	0.590	23 94420
23 0421	23 0451	25 - 50	0.01	20	0.5	25 mm	0.003	0.660	23 94420
23 0422	23 0452	50 - 75	0.01	20	0.5	25 mm	0.004	0.780	23 94422
23 0423	23 0453	75 - 100	0.01	20	0.5	25 mm	0.004	0.920	23 94422
23 0424	23 0454	100 - 125	0.01	20	0.5	25 mm	0.004	1.060	23 94423
23 0425	23 0455	125 - 150	0.01	20	0.5	25 mm	0.004	1.180	23 94423
23 0426	23 0456	150 - 200	0.01	20	0.5	50 mm	0.005	1.600	23 94423
23 0427	23 0457	200 - 250	0.01	20	0.5	50 mm	0.005	1.940	23 94423
23 0428	23 0458	250 - 300	0.01	20	0.5	50 mm	0.005	2.210	23 94423



Thread Flanks Measuring Inserts, exchangeable DIN 863

• suitable for series 23 0420 - 23 0428 and 23 0450 - 23 0458

- hardened and finely ground
- each insert marked with thread pitch
- delivery in pair (groove and cone)
- calibration certificate available on request



ART N° metr. ISO 60° ø 4 x 15.5 mm	ART N° metr. ISO 60° ø 3.5 x 13.5 mm	mm	ART N° ISO trapez 30° ø 4 x 15.5 mm	ART N° ISO trapez 30° ø 3.5 x 13.5 mm	mm	ART N° whitworth 55° ø 4 x 15.5 mm	ART N° whitworth 55° ø 3.5 x 13.5 mm	thread/inch	ART N° CC
23 042060 01	23 045060 01	0.35 - 0.50	23 042070 01	23 045070 01	1.5	23 042055 01	23 045055 01	60 - 48	23 94042
23 042060 02	23 045060 02	0.60 - 0.80	23 042070 02	23 045070 02	2	23 042055 02	23 045055 02	40 - 32	23 94042
23 042060 03	23 045060 03	0.90 - 1.25	23 042070 03	23 045070 03	3	23 042055 03	23 045055 03	28 - 22	23 94042
23 042060 04	23 045060 04	1.50 - 2.00	23 042070 04	23 045070 04	4	23 042055 04	23 045055 04	20 - 16	23 94042
23 042060 05	23 045060 05	2.50 - 3.50	23 042070 05	23 045070 05	5 - 6	23 042055 05	23 045055 05	14 - 11	23 94042
23 042060 06	23 045060 06	4.00 - 6.00	23 042070 06	23 045070 06	7 - 8	23 042055 06	23 045055 06	10 - 7	23 94042
-	-	-	23 042070 07	23 045070 07	9 - 10	23 042055 07	23 045055 07	6 - 4	23 94042
-	-	-	23 042070 08	23 045070 08	12 - 14	-	-	-	23 94042

suitable setting gauges
are on page 107



Precision Gear Tooth Outside Micrometer

DIN 863

- to measure over-pin diameter of external gears
- drum and sleeve matt chrome finish
- interchangeable ball anvil-spindle tips for various gear modules
- borehole for measuring ball holder- \varnothing 3.0 mm, hardened measuring balls
- frame hammer blow grey lacquered, with insulation plates
- locking wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- delivery **without** measuring ball holder, available on page 106



ART N°	mm	mm	\varnothing mm	mm	measuring end- \varnothing x length mm	max. mm	KG	ART N° CC
23 0901	0 - 25	0.01	20	0.5	3 x 8	0.002	0.560	23 94001
23 0902	25 - 50	0.01	20	0.5	3 x 8	0.002	0.680	23 94001
23 0903	50 - 75	0.01	20	0.5	3 x 8	0.003	0.820	23 94001
23 0904	75 - 100	0.01	20	0.5	3 x 8	0.003	0.960	23 94001
23 0905	100 - 125	0.01	20	0.5	3 x 8	0.004	1.080	23 94002
23 0906	125 - 150	0.01	20	0.5	3 x 8	0.004	1.250	23 94002
23 0907	150 - 175	0.01	20	0.5	3 x 8	0.004	1.430	23 94002
23 0908	175 - 200	0.01	20	0.5	3 x 8	0.004	1.570	23 94002
23 0909	200 - 225	0.01	20	0.5	3 x 8	0.005	1.780	23 94003
23 0910	225 - 250	0.01	20	0.5	3 x 8	0.005	1.940	23 94003



Precision Gear Tooth Inside Micrometer

DIN 863

- to measure the pitch circle of internal gears
- drum and sleeve matt chrome finish
- borehole for measuring ball holder- \varnothing 3.0 mm, hardened measuring balls
- with insulation handles
- with ratchet for constant measuring pressure
- delivery **without** measuring ball holder, available on page 106



ART N°	version or extensions	mm	mm	\varnothing mm	mm	measuring end- \varnothing x length mm	max. mm	KG	ART N° CC
23 0919	jaws	25 - 50	0.01	21	0.5	3 x 6	0.003	0.480	23 94011
23 0920	jaws	50 - 75	0.01	21	0.5	3 x 8	0.003	0.480	23 94011
23 0921	measuring body, only	75 - 100	0.01	17	0.5	3 x 8	0.003	0.250	23 94011
23 0922	25/50	75 - 175	0.01	17	0.5	3 x 8	0.006	0.340	23 94011
23 0923	25/50/100	75 - 275	0.01	17	0.5	3 x 8	0.008	0.490	23 94011
23 0924	25/50/100/200	75 - 475	0.01	17	0.5	3 x 8	0.010	0.790	23 94011
23 0925	25/50/100/200/400	75 - 875	0.01	17	0.5	3 x 8	0.012	1.300	23 94011
23 0926	25/50/100/200/400/600	75 - 1475	0.01	17	0.5	3 x 8	0.015	2.030	23 94011

Suitbale setting gauges are on page 106

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Accessories for Precision Micrometers

BLUE-LINE® Measuringball Holder

- for series 23 0901 - 23 0926
- for external and internal gearing
- with hardened steel balls
- carbide balls available on request, please

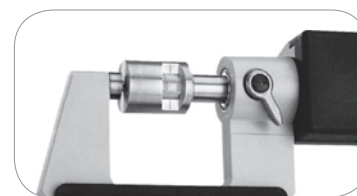


ART N°	ball-ø mm	module	max. mm
23 0928	1.5	0.9 / 1	0.001
23 0928/1	1.75	1.125	0.001
23 0929	2.0	1.25	0.001
23 0929/1	2.25	1.5	0.001
23 0930	2.5	1.75	0.001
23 0931	3.0	2	0.001
23 0932	3.5	2.25	0.001
23 0933	4.0	2.5 / 2.75	0.001
23 0934	4.5	3	0.001
23 0935	5.0	3.25 / 3.5	0.001
23 0936	5.5	3.75	0.001
23 0937	6.0	4	0.001

ART N°	ball-ø mm	module	max. mm
23 0938	6.5	4.25 / 4.5	0.001
23 0939	7.0	4.5	0.001
23 0940	7.5	5	0.001
23 0941	8.0	5.5	0.001
23 0942	9.0	6	0.001
23 0943	10.0	6.5	0.0015
23 0944	10.5	7	0.0015
23 0945	11.0	7.5	0.0015
23 0946	12.0	8	0.0015
23 0947	13.0	8.5 / 9	0.0015
23 0948	14.0	9.5	0.0015
23 0949	15.0	10	0.0015

★★★★★ BLUE-LINE® Measuring Pressure Test Gauge

- for micrometers
- pressure range 5-12 N
- for spindle-ø up to 8 mm

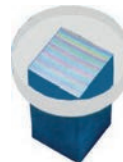


ART N°	mm	KG
23 0998	25 / 50 / 75 / 100	0.450
23 0999	25	0.120

★★★★★ SILVER-LINE® Optical Parallels

- designed to inspect parallelism and flatness of measuring faces of micrometers
- each glass is marked with an identification-number
- double sided finished

ART N° 35 0309



ART N° 35 0305/1



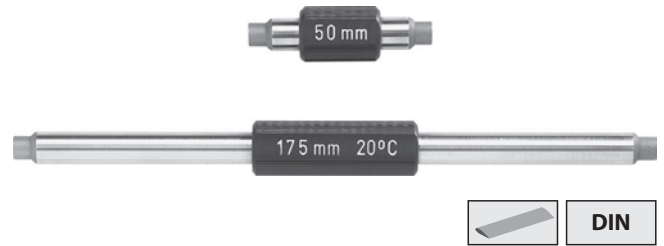
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ART N°	nominal size mm	glass-ø mm	accuracy of flatness μm	KG
35 0305/1	15	45	0.10	0.050
35 0309	12.00/12.12/12.25/12.37	30	0.10	0.250

Other sizes available on request!

BLUE-LINE® Setting Gauges for Micrometers DIN 863

- hardened surfaces, ground and lapped
- surfaces- \varnothing 6,5 mm, from size 300 mm with \varnothing 10 mm
- with insulation handle

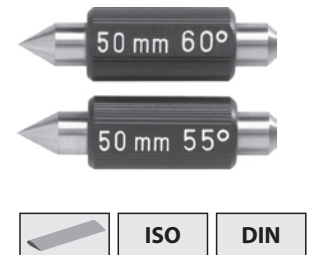


ART NO	mm	max. mm	KG	ART NO CC
23 09302	25	0.00125	0.020	23 94301
23 09303	50	0.00125	0.025	23 94301
23 09304	75	0.00150	0.040	23 94301
23 09305	100	0.00200	0.055	23 94302
23 09306	125	0.00250	0.070	23 94302
23 09307	150	0.00250	0.080	23 94302
23 09308	175	0.00250	0.090	23 94302
23 09309	200	0.00300	0.105	23 94302
23 09310	225	0.00300	0.120	23 94302
23 09311	250	0.00300	0.130	23 94302
23 09312	275	0.00300	0.145	23 94302
23 09313	300	0.00300	0.340	23 94302
23 09314	325	0.00350	0.370	23 94303
23 09315	350	0.00350	0.390	23 94303
23 09316	375	0.00350	0.420	23 94303
23 09317	400	0.00350	0.440	23 94303
23 09318	425	0.00350	0.470	23 94303
23 09319	450	0.00350	0.490	23 94303
23 09320	475	0.00350	0.520	23 94303
23 09321	500	0.00350	0.540	23 94303
23 09322	525	0.00350	0.570	23 94304
23 09323	550	0.00350	0.600	23 94304
23 09324	575	0.00350	0.620	23 94304
23 09325	600	0.00350	0.650	23 94304
23 09326	625	0.00400	0.670	23 94304

ART NO	mm	max. mm	KG	ART NO CC
23 09327	650	0.004	0.700	23 94304
23 09328	675	0.004	0.730	23 94304
23 09329	700	0.004	0.760	23 94304
23 09330	725	0.004	0.790	23 94304
23 09331	750	0.004	0.820	23 94304
23 09332	775	0.004	0.850	23 94304
23 09333	800	0.004	0.870	23 94305
23 09334	825	0.004	0.900	23 94305
23 09335	850	0.004	0.920	23 94305
23 09336	875	0.004	0.940	23 94305
23 09337	900	0.005	0.970	23 94305
23 09338	925	0.005	0.990	23 94305
23 09339	950	0.005	1.010	23 94305
23 09340	975	0.005	1.040	23 94305
23 09341	1000	0.005	1.060	23 94305
23 09342	1050	0.005	1.120	23 94306
23 09343	1150	0.006	1.220	23 94306
23 09344	1250	0.007	1.330	23 94306
23 09345	1350	0.007	1.420	23 94306
23 09346	1450	0.007	1.750	23 94307
23 09347	1550	0.009	1.880	23 94307
23 09348	1650	0.010	2.000	23 94307
23 09349	1750	0.010	2.120	23 94307
23 09350	1850	0.011	2.240	23 94307
23 09351	1950	0.012	2.360	23 94307

BLUE-LINE® Thread Setting Gauges DIN 863

- for external measuring
- hardened steel surfaces
- with insulation plates



ART NO metr. ISO 60°	ART NO whitworth 55°	mm	max. mm	ART NO CC
23 042160 01	23 042155 01	25	0.003	23 940421
23 042160 02	23 042155 02	50	0.003	23 940421
23 042160 03	23 042155 03	75	0.003	23 940421
23 042160 04	23 042155 04	100	0.004	23 940421
23 042160 05	23 042155 05	125	0.004	23 940421
23 042160 06	23 042155 06	175	0.004	23 940421
23 042160 07	23 042155 07	225	0.004	23 940421
23 042160 08	23 042155 08	275	0.004	23 940421

ART NO ISO trapez (DIN 103)	available for the following thread pitches mm	max. mm	ART NO CC
23 042165 01	2 / 3 / 4 / 5 - 6 / 7 - 8 / 9 - 10	0.004	23 940421
23 042165 02	2 / 3 / 4 / 5 - 6 / 7 - 8 / 9 - 10	0.004	23 940421
23 042165 03	2 / 3 / 4 / 5 - 6 / 7 - 8 / 9 - 10	0.004	23 940421
23 042165 04	3 / 4 / 5 - 6 / 7 - 8 / 9 - 10 / 12 - 14	0.005	23 940421
23 042165 05	4 / 5 - 6 / 7 - 8 / 9 - 10 / 12 - 14	0.005	23 940421
23 042165 06	4 / 5 - 6 / 7 - 8 / 9 - 10 / 12 - 14	0.005	23 940421
23 042165 07	5 - 6 / 7 - 8 / 9 - 10 / 12 - 14	0.005	23 940421
23 042165 08	5 - 6 / 7 - 8 / 9 - 10 / 12 - 14	0.005	23 940421

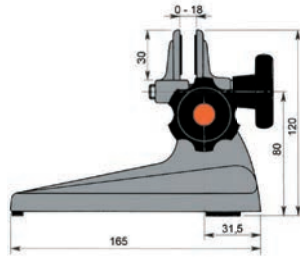
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Micrometer Stands

★★★★★ BLUE-LINE® Micrometer Stand

- with stable base
- made of cast iron
- hammer blow lacquered
- jaws equipped with rubber, to protect the instruments
- clamps rotate in axially position
- with fixing screw

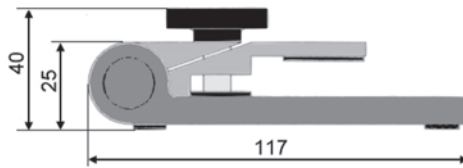
ART N° 23 9004



ART N°	for micrometer measuring range mm	→ mm ←	KG
23 9004	0 - 100	165 x 120 x 120	1.200

★★★★★ BLUE-LINE® Micrometer Stand

- with stable base
- steel version
- hammer blow lacquered
- jaws equipped with rubber, to protect the instruments
- clamps rotate in axially position
- with central fixing



ART N°	for micrometer measuring range mm	→ mm ←	KG
23 9005	0 - 100	117 x 70 x 40	0.780

Repair Service

Our well experienced service department offers you all usually repair of our products. Require our service for all kind of:

- repair or replacement
- general overhaul of VOGEL GERMANY measuring tools and devices



Wooden Boxes for series 23 0170 - 23 0182

ART N°	mm	KG	ART N°	mm	KG
23 99244	200 - 300	2.200	23 99251	900 - 1000	11.000
23 99245	300 - 400	2.200	23 99252	1000 - 1100	13.000
23 99246	400 - 500	2.700	23 99253	1100 - 1200	14.000
23 99247	500 - 600	3.500	23 99254	1200 - 1300	20.000
23 99248	600 - 700	5.500	23 99255	1300 - 1400	22.000
23 99249	700 - 800	7.500	23 99256	1400 - 1500	26.000
23 99250	800 - 900	9.000	-	-	-



ART N° 23 99245 - 23 99256

Wooden Boxes for series 23 4205 - 23 4209

ART N°	mm	KG	ART N°	mm	KG
23 99205	0 - 300	2.300	23 99208	900 - 1200	14.500
23 99206	300 - 600	5.600	23 99209	1200 - 1500	26.500
23 99207	600 - 900	9.430	-	-	-



ART N° 23 99205 - 23 99209

Wooden Boxes for series 23 0290 - 23 0295

ART N°	mm	KG	ART N°	mm	KG
23 99290	300 - 350	1.900	23 99293	450 - 500	2.700
23 99291	350 - 400	2.200	23 99294	500 - 550	3.500
23 99292	400 - 450	2.700	23 99295	550 - 600	3.500



ART N° 23 99501 - 23 99508

Wooden Boxes for series 23 1351 - 23 1358 / 23 1371 - 23 1374

ART N°	mm	KG	ART N°	mm	KG
23 99501	0 - 25	0.150	23 99505	100 - 125	0.350
23 99502	25 - 50	0.200	23 99506	125 - 150	0.400
23 99503	50 - 75	0.250	23 99507	150 - 175	0.450
23 99504	75 - 100	0.300	23 99508	175 - 200	0.500

Plastic Boxes

ART N°	mm	suitable for article-numbers	KG
23 97001	0 - 25	231021 / 231041 / 231070 / 231150	0.210
23 97002	25 - 50	231022 / 231042 / 231071 / 231151 / 231171 / 232381 / 232861 / 232871 / 232961 / 232971	0.225
23 97003	50 - 75	231023 / 231043 / 231072 / 231152 / 231172 / 232382 / 232862 / 232872 / 232962 / 232972	0.305
23 97004	75 - 100	231024 / 231044 / 231073 / 231153	0.480
23 97005	100 - 125	231045 / 231074	0.490
23 97006	125 - 150	231046 / 231075	0.545



ART N° 23 97001 - 23 97006

ART N°	mm	suitable for article-numbers	KG
23 97025	0 - 25	231351 / 231371 / 231451 / 231501	0.080
23 97050	25 - 50	231352 / 231372 / 231452 / 231502	0.130
23 97075	50 - 75	231353 / 231373 / 231453 / 231503	0.170
23 97100	75 - 100	231354 / 231374 / 231454 / 231504	0.480
23 97125	100 - 125	231355 / 231505	0.490
23 97150	125 - 150	231356 / 231506	0.520
23 97026	0 - 25	231301 / 231310 / 231351 / 231371 / 231501	0.055
23 97051	25 - 50	231302 / 231311 / 231352 / 231372 / 231502	0.080
23 97076	50 - 75	231303 / 231312 / 231353 / 231373 / 231503	0.110
23 97101	75 - 100	231304 / 231313 / 231354 / 231374 / 231504	0.145
23 97126	100 - 125	231305 / 231314 / 231355 / 231505	0.465
23 97151	125 - 150	231306 / 231315 / 231356 / 231506	0.500



ART N° 23 97025 - 23 97150



ART N° 23 97026 - 23 97151

Precision Micrometer Heads

DIGI PLUS-LINE® Electr. Digital Micrometer Head • IP54 • IP65 DIN 863

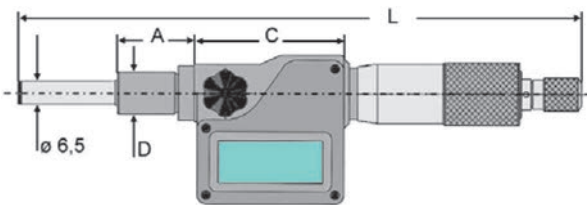
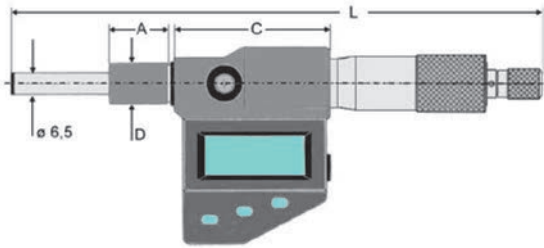
- splash water proof acc. to DIN 40050 / IEC 60529
- LCD display with clear reading
- with carbide surfaces, flat, lapped, spindle hardened and ground
- mm/inch switchable, with ABS/INC measurement system, SET function
- On/Off button, zero setting at any position
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual



23 1285 ratchet • IP54



23 1287 ratchet • IP65



Other sizes and other shaped faces available on request!



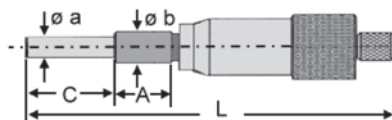
ART NO	mm / inch	mm / inch	ø mm	mm	A mm	C mm	D mm	L mm	max. mm	KG	ART NO CC
★★★★★ 23 1285	0 - 25 / 0 - 1	0.001 / 0.00005	18	0.5	17.5	47.6	12 ^{+0/-0.011}	160.5	0.003	0.115	23 94315
★★★★★ 23 1287	0 - 25 / 0 - 1	0.001 / 0.00005	18	0.5	17.5	47.6	12 ^{+0/-0.011}	165.5	0.003	0.110	23 94315

BLUE-LINE® Micrometer Head DIN 863

- drum and sleeve matt chrome finish
- hardened spindle, ground thread
- measuring surface in flat version, finely ground lapped



Other sizes and other shaped faces available on request!










ART NO	mm	mm	ø mm	mm	carbide		A mm	C mm	L mm	ø a mm	ø b mm	max. mm	ART NO CC
					yes	no							
23 1011	0 - 13	0.01	13	0.5	-	×	9.5	17	58.5	5	9.5 ^{+0/-0.009}	0.004	23 94311
23 1012	0 - 25	0.01	23	0.5	×	-	17.5	28.5	113	6.5	12 ^{+0/-0.011}	0.003	23 94311
23 1013	0 - 25	0.01	29	1.0	×	-	17.5	28.5	115	8	12 ^{+0/-0.011}	0.004	23 94311
23 1014	0 - 15	0.01	29	1.0	×	-	16	18	94	8	12 ^{+0/-0.011}	0.004	23 94311

BLUE-LINE® Precision Depth Gauge
workshop grade

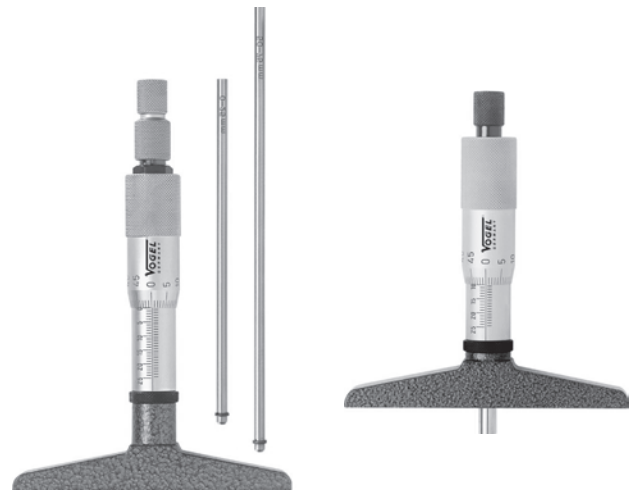
- suitable for standard requirements
- drum and sleeve matt chrome finish
- measuring pin and surface hardened and ground
- measuring face half round shape
- clamping screw for quick and precise fixing
- with ratchet for constant measuring pressure










ART NO	 mm	 mm	 ø mm	 mm	 mm	measuring pin-ø mm	quantity of pins	 max. mm	 KG	ART NO CC
23 1800	0 - 25	0.01	18	0.5	63 x 18	4.5	1	0.004	0.215	23 94001
23 1801	0 - 25	0.01	18	0.5	100 x 18	4.5	1	0.004	0.275	23 94001
23 1802	0 - 100	0.01	18	0.5	100 x 18	4.5	4	0.005	0.310	23 94003
23 1803	0 - 150	0.01	18	0.5	100 x 18	4.5	6	0.005	0.320	23 94003

SILVER-LINE® Precision Depth Gauge
DIN 863

- high standard quality, for calibration purposes
- drum and sleeve matt chrome finish
- measuring pin and surface hardened and fine ground
- measuring face plane ground and lapped
- clamping wheel for quick and precise fixing
- with ratchet for constant measuring pressure



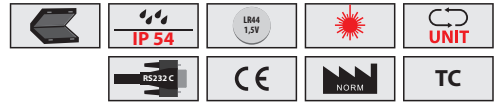
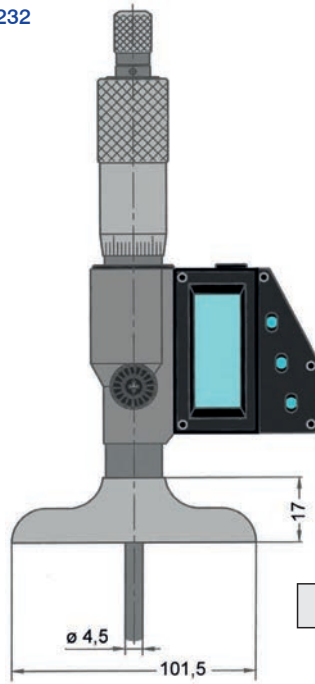
ART NO	 mm	 mm	 ø mm	 mm	 mm	measuring pin-ø mm	quantity of pins	 max. mm	 KG	ART NO CC
23 0800	0 - 25	0.01	20	0.5	50 x 17	6.5	1	0.003	0.360	23 94001
23 0801	0 - 25	0.01	20	0.5	100 x 17	6.5	1	0.003	0.490	23 94001
with exchangeable measuring pins										
23 0812	0 - 75	0.01	20	0.5	50 x 17	4.0	3	0.005	0.520	23 94003
23 0814	0 - 100	0.01	20	0.5	100 x 17	4.0	4	0.005	0.660	23 94003
23 0815	0 - 150	0.01	20	0.5	100 x 17	4.0	6	0.006	0.760	23 94005
23 0816	0 - 200	0.01	20	0.5	100 x 17	4.0	8	0.007	0.910	23 94005
23 0818	0 - 300	0.01	20	0.5	100 x 17	4.0	12	0.009	1.300	23 94005

Precision Digital Internal Micrometers

DIGI PLUS-LINE® Electr. Digital Depth Micrometer • IP54

- spray water proof acc. to DIN 40050 / IEC 60529
- absolute System, high accuracy, with data output RS232

- LCD display with clear reading, mm/inch switchable
- frame lacquered, with insulation plates
- ORIGIN button, ABS/INC measurement system
- zero setting at any position, On/Off button
- clamp wheel for quick and precise fixing
- measuring pins and surface hardened and ground
- exchangeable measuring pins, half round shape
- no need to readjust after the change of anvils
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual



ART NO	mm / inch	mm / inch	ø mm	mm	quantity of pins	max. mm	KG	ART NO CC
23 1830	0 - 25 / 0 - 1	0.001 / 0.00005	18	0.5	1	0.004	0.363	23 94140
23 1831	0 - 50 / 0 - 2	0.001 / 0.00005	18	0.5	2	0.004	0.363	23 94140
23 1832	0 - 75 / 0 - 3	0.001 / 0.00005	18	0.5	4	0.005	0.375	23 94140
23 1833	0 - 100 / 0 - 4	0.001 / 0.00005	18	0.5	4	0.005	0.375	23 94140
23 1834	0 - 150 / 0 - 6	0.001 / 0.00005	18	0.5	6	0.005	0.375	23 94140
23 1835	0 - 200 / 0 - 8	0.001 / 0.00005	18	0.5	8	0.006	0.375	23 94140
23 1836	0 - 300 / 0 - 12	0.001 / 0.00005	18	0.5	12	0.007	0.375	23 94140

DIGI PLUS-LINE® Electr. Digital Internal Micrometer

- for easy and rapid measurement of various internal intervals
- Absolute Measuring System, with data output RS232

- LCD display with clear reading, mm/inch switchable
- frame lacquered, with insulation plates, rounded carbide surfaces
- ORIGIN button, ABS/INC measurement system
- zero setting at any position, On/Off switch
- clamp wheel for quick and precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 1.5 V battery (type LR44, art.-no.: 20 20192/B), with operation manual
- art.-no. 23 1620 with setting ring



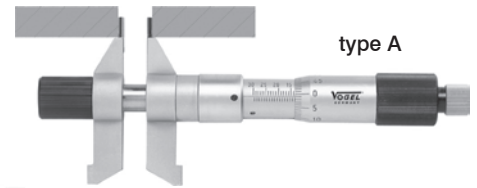
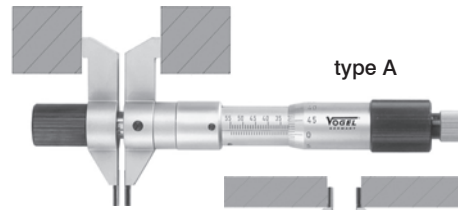
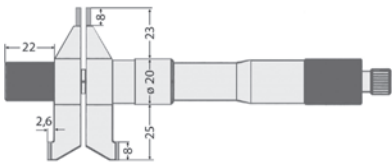
ART NO	mm / inch	mm / inch	ø mm	mm	max. mm	KG	ART NO CC
23 1620	5 - 30 / 0.2 - 1.2	0.001 / 0.00005	18	0.5	0.003	0.275	23 94140
23 1621	25 - 50 / 1.0 - 2.0	0.001 / 0.00005	18	0.5	0.003	0.325	23 94140
23 1622	50 - 75 / 2.0 - 3.0	0.001 / 0.00005	18	0.5	0.004	0.465	23 94140
23 1623	75 - 100 / 3.0 - 4.0	0.001 / 0.00005	18	0.5	0.004	0.560	23 94140
23 1624	100 - 125 / 4.0 - 5.0	0.001 / 0.00005	18	0.5	0.005	0.615	23 94141
23 1625	125 - 150 / 5.0 - 6.0	0.001 / 0.00005	18	0.5	0.005	0.720	23 94141
23 1626	150 - 175 / 6.0 - 7.0	0.001 / 0.00005	18	0.5	0.005	0.780	23 94141
23 1627	175 - 200 / 7.0 - 8.0	0.001 / 0.00005	18	0.5	0.005	0.825	23 94141



Internal Micrometer DIN 863

• top quality measuring instrument, for top requirements

- drum and sleeve matt chrome finish
- carbide measuring faces in rounded shape
- two measuring jaws for two different ranges, type „A“
- same version, but with one-sided jaw, type „B“
- easy reading through scale on the front and back
- smoothly through ball bearing spindle
- with friction ratchet for constant measuring pressure
- with insulation handle



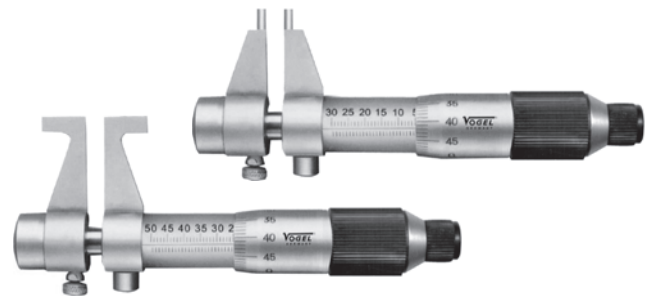
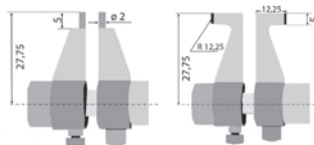
ART No	mm	type	mm	ø mm	mm	mm	max. mm	KG	ART No CC
23 0601	5 - 55	A	0.01	21	0.5	0.002	0.0025	0.480	23 94102
23 0602	50 - 75	B	0.01	21	0.5	0.002	0.003	0.450	23 94101
23 0603	75 - 100	B	0.01	21	0.5	0.002	0.003	0.530	23 94101
23 0604	100 - 125	B	0.01	21	0.5	0.002	0.004	0.550	23 94101
23 0605	125 - 150	B	0.01	21	0.5	0.002	0.004	0.640	23 94101



Internal Micrometer DIN 863

• for standard requirements in measuring

- drum and sleeve matt chrome finish
- carbide measuring faces in rounded shape
- clamping screw for quick and precise fixing
- with ratchet for constant measuring pressure
- with adjusting key



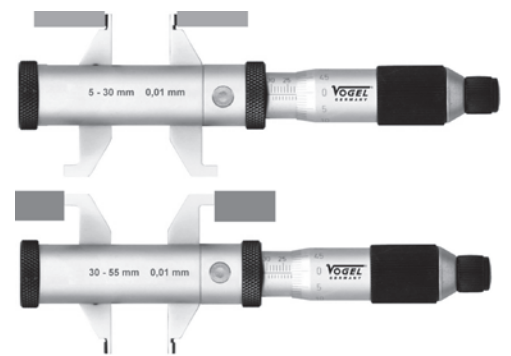
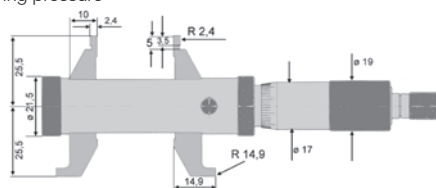
ART No	mm	mm	ø mm	mm	mm	mm	max. mm	KG	ART No CC
23 1611	5 - 30	0.01	18	0.5	5	0.005	0.270	0.270	23 94101
23 1612	25 - 50	0.01	18	0.5	25	0.006	0.360	0.360	23 94101
23 1613	50 - 75	0.01	18	0.5	-	0.007	0.310	0.310	23 94101
23 1614	75 - 100	0.01	18	0.5	-	0.008	0.345	0.345	23 94101
23 1615	5 - 100 (Set)	0.01	18	0.5	5 + 25	0.005 / 0.006 / 0.007 / 0.008	1.290	1.290	23 94104



Internal Micrometer workshop grade

• with double-measuring jaws and setting ring • quality measuring equipment, for standard requirements

- drum and sleeve chrome finish
- carbide measuring faces in rounded shape
- two measuring jaws for two different ranges
- easy reading through scale on the front and back
- clamping screw for quick and precise fixing
- with friction ratchet for constant measuring pressure
- with setting ring ø 30 mm
- with clamping screw for quick and precise fixing



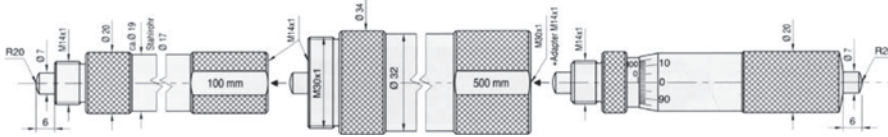
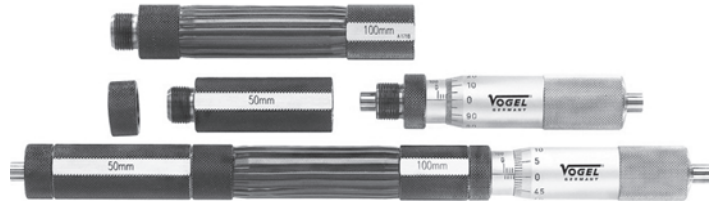
ART No	mm	mm	mm	mm	mm	max. mm	KG	ART No CC
23 0610	5 - 55	0.01	0.5	30	0.006	0.225	0.225	23 94102

Precision Internal Micrometers

SILVER-LINE® Internal Micrometer Set DIN 863

- spring loaded end gauges
- with screw-on extensions
- up to 6000 mm measuring range available

- drum and sleeve matt chrome finish
- carbide equipped measuring heads, spherically lapped, $\varnothing 7 \times 6$ mm
- high accuracy because of spring loaded measuring end
- with insulation handle
- individual packed extensions are available on request

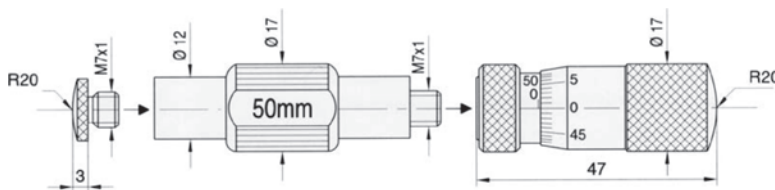
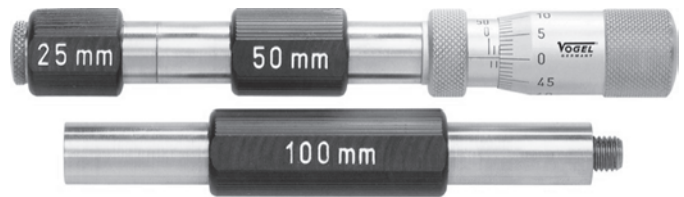


ART NO	mm	mm	mm	quantity of anvils with tube- \varnothing 17 mm / tube- \varnothing 32 mm	max. mm	KG	ART NO CC
23 0440	100 - 200	0.01	0.5	50	0.005	0.470	23 94043
23 0441	100 - 300	0.01	0.5	50 / 100	0.007	0.690	23 94044
23 0442	100 - 500	0.01	0.5	50 / 100 / 200	0.009	1.040	23 94045
23 0443	100 - 900	0.01	0.5	50 / 100 / 200 / 400	0.011	1.780	23 94046
23 0444	100 - 1300	0.01	0.5	50 / 100 / 200 / 400 / 400	0.013	2.530	23 94047
23 0445	100 - 1700	0.01	0.5	50 / 100 / 200 / 400 / 800	0.015	3.460	23 94047
23 0446	100 - 2100	0.01	0.5	50 / 100 / 200 / 400 / 400 / 800	0.018	4.060	23 94048
23 0447	100 - 2500	0.01	0.5	50 / 100 / 200 / 400 / 800 / 800	0.021	4.710	23 94050
23 0448	100 - 2000	0.01	0.5	50 / 100 / 200 / 200 / 500 / 1x1000	0.018	7.700	23 94049
23 0449	100 - 3000	0.01	0.5	50 / 100 / 200 / 200 / 500 / 2x1000	0.030	9.800	23 94050
23 0470	100 - 4000	0.01	0.5	50 / 100 / 200 / 200 / 500 / 3x1000	0.040	13.600	23 94050
23 0471	100 - 5000	0.01	0.5	50 / 100 / 200 / 200 / 500 / 4x1000	0.050	17.800	23 94051
23 0472	100 - 6000	0.01	0.5	50 / 100 / 200 / 200 / 500 / 5x1000	0.060	20.100	23 94051

SILVER-LINE® Internal Micrometer Set DIN 863

- resiliently mounted end gauges
- with screw-on extensions
- up to 1450 mm measuring range available

- drum and sleeve matt chrome finish
- carbide equipped measuring heads, spherically lapped, R20 mm
- with insulation handle
- individual packed extensions are available on request



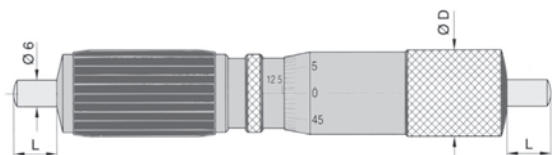
ART NO	mm	mm	mm	quantity of anvils with tube- \varnothing 17 mm	max. mm	KG	ART NO CC
23 0880	50 - 150	0.01	0.5	25 / 50	0.006	0.310	23 94080
23 0881	50 - 250	0.01	0.5	25 / 50 / 100	0.008	0.460	23 94081
23 0882	50 - 300	0.01	0.5	25 / 50 / 50 / 100	0.009	0.530	23 94082
23 0883	50 - 450	0.01	0.5	25 / 50 / 100 / 200	0.010	0.760	23 94083
23 0884	50 - 850	0.01	0.5	25 / 50 / 100 / 200 / 400	0.012	1.270	23 94084
23 0885	50 - 1450	0.01	0.5	25 / 50 / 100 / 200 / 400 / 600	0.015	2.000	23 94085

Precision Internal Micrometers

SILVER-LINE® Internal Micrometer DIN 863

- drum and sleeve matt chrome finish
- carbide equipped measuring heads, spherically lapped, \varnothing 6 mm
- from up 100 mm with clamping ring and with insulation handle
- please order the wooden box with the separate art.-no.

Other sizes available on request!



ART No	mm	mm	mm	\varnothing mm	L mm	max. mm	KG	ART No CC	ART No wooden box	KG
23 0740	25 - 30	0.01	0.5	15	1.5	0.003	0.025	23 94040	23 99740	0.070
23 0741	30 - 35	0.01	0.5	15	1.5	0.003	0.030	23 94040	23 99741	0.070
23 0742	35 - 50	0.01	0.5	15	1.5	0.003	0.035	23 94040	23 99742	0.070
23 0743	50 - 75	0.01	0.5	16	1.5	0.003	0.060	23 94041	23 99743	0.070
23 0744	75 - 100	0.01	0.5	17	6	0.003	0.090	23 94041	23 99744	0.070
23 0745	100 - 125	0.01	0.5	20	6	0.003	0.160	23 94041	23 99745	0.100
23 0746	125 - 150	0.01	0.5	20	10	0.003	0.180	23 94041	23 99746	0.100
23 0747	150 - 175	0.01	0.5	20	10	0.004	0.210	23 94041	23 99747	0.120
23 0748	175 - 200	0.01	0.5	20	10	0.004	0.240	23 94041	23 99748	0.120
23 0749	200 - 225	0.01	0.5	20	10	0.004	0.260	23 94041	23 99749	0.160
23 0750	225 - 250	0.01	0.5	20	10	0.004	0.280	23 94041	23 99750	0.160
23 0751	250 - 275	0.01	0.5	20	10	0.004	0.300	23 94041	23 99751	0.180
23 0752	275 - 300	0.01	0.5	20	10	0.004	0.320	23 94041	23 99752	0.180
23 0753	300 - 325	0.01	0.5	20	10	0.004	0.340	23 94041	23 99753	0.220
23 0754	325 - 350	0.01	0.5	20	10	0.004	0.360	23 94041	23 99754	0.220
23 0755	350 - 375	0.01	0.5	20	10	0.004	0.380	23 94041	23 99755	0.240
23 0756	375 - 400	0.01	0.5	20	10	0.004	0.400	23 94041	23 99756	0.240
23 0757	400 - 425	0.01	0.5	20	10	0.004	0.420	23 94042	23 99757	0.300
23 0758	425 - 450	0.01	0.5	20	10	0.004	0.450	23 94042	23 99758	0.300
23 0759	450 - 475	0.01	0.5	20	10	0.004	0.470	23 94042	23 99759	0.300
23 0760	475 - 500	0.01	0.5	20	10	0.004	0.490	23 94042	23 99760	0.300
23 0761	500 - 525	0.01	0.5	20	10	0.005	0.520	23 94042	23 99761	0.340
23 0762	525 - 550	0.01	0.5	20	10	0.005	0.540	23 94042	23 99762	0.340
23 0763	550 - 575	0.01	0.5	20	10	0.005	0.560	23 94042	23 99763	0.340
23 0764	575 - 600	0.01	0.5	20	10	0.005	0.580	23 94042	23 99764	0.340
23 0765	600 - 625	0.01	0.5	20	10	0.005	0.600	23 94043	23 99765	0.380
23 0766	625 - 650	0.01	0.5	20	10	0.005	0.630	23 94043	23 99766	0.380
23 0767	650 - 675	0.01	0.5	20	10	0.005	0.650	23 94043	23 99767	0.380
23 0768	675 - 700	0.01	0.5	20	10	0.005	0.670	23 94043	23 99768	0.380
23 0769	700 - 725	0.01	0.5	20	10	0.005	0.690	23 94043	23 99769	0.420
23 0770	725 - 750	0.01	0.5	20	10	0.005	0.710	23 94043	23 99770	0.420
23 0771	750 - 775	0.01	0.5	20	10	0.005	0.730	23 94043	23 99771	0.420

SILVER-LINE® Holder for Internal Micrometers

- allows insertion in deep, narrow bores
- especially for small measuring ranges



ART No	mm	KG
23 0739	220	0.105

3-Point Digital Bore Micrometers

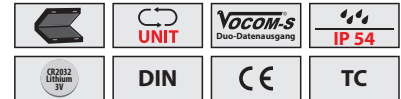
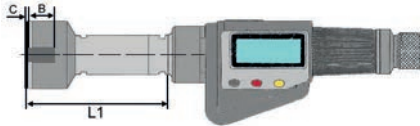


Electr. 3-Point Digital Bore Micrometer • IP54

NEW

- spray water proof acc. to DIN 40050 / IEC 60529
- for bore holes and blind holes
- with **VOCOM-S** duo data output, top model (connectivity also for Digimatic measuring devices, Mitutoyo compatible)

- LCD unit with clear reading, digit height 8 mm
- chromed finish, self-centering and self-aligning
- with friction ratchet for constant measuring pressure
- 6 - 12 mm with hardened measuring faces, from up 12 mm with tungsten carbide measuring faces
- zero setting at any position, On-/Off-button
- measuring unit switchable mm/inch, with ABS/INC-system
- data hold function, ± preset function
- incl. setting ring and with extension rod
- incl. 1x 3 V battery (type CR2032, art. no.: 20 02093), with operation manual



ART NO	mm / inch	mm / inch	max. mm	L1 mm	B mm	C mm	extension rod mm	setting ring ø mm	KG	ART NO CC
23 6431	6 - 8 / 0.24 - 0.32	0.001 / 0.00005	0.004	30	2.5	1.0	50	8	0.185	23 94020
23 6432	8 - 10 / 0.32 - 0.40	0.001 / 0.00005	0.004	30	2.5	1.0	50	8	0.190	23 94020
23 6433	10 - 12 / 0.40 - 0.50	0.001 / 0.00005	0.004	30	2.5	1.0	50	10	0.210	23 94020
23 6434	12 - 16 / 0.50 - 0.63	0.001 / 0.00005	0.004	48	6.3	0.4	100	16	0.225	23 94020
23 6435	16 - 20 / 0.63 - 0.80	0.001 / 0.00005	0.004	48	6.3	0.4	100	16	0.260	23 94020
23 6436	20 - 25 / 0.80 - 1.00	0.001 / 0.00005	0.004	50	9.2	0.4	150	25	0.305	23 94020
23 6437	25 - 30 / 1.00 - 1.20	0.001 / 0.00005	0.004	50	9.2	0.4	150	25	0.345	23 94020
23 6438	30 - 40 / 1.20 - 1.60	0.001 / 0.00005	0.004	50	9.2	0.4	150	30	0.440	23 94020
23 6439	40 - 50 / 1.60 - 2.00	0.001 / 0.00005	0.005	55	16.5	0.5	150	40	0.520	23 94020
23 6440	50 - 63 / 2.00 - 2.50	0.001 / 0.00005	0.005	55	16.5	0.5	150	50	0.725	23 94022
23 6441	62 - 75 / 2.45 - 3.00	0.001 / 0.00005	0.005	55	16.5	0.5	150	62	0.740	23 94022
23 6442	75 - 88 / 3.00 - 3.46	0.001 / 0.00005	0.005	55	16.5	0.5	150	87	1.010	23 94022
23 6443	87 - 100 / 3.43 - 4.00	0.001 / 0.00005	0.005	55	16.5	0.5	150	87	1.070	23 94022



Electr. 3-Point Digital Bore Micrometer • IP54

NEW

- spray water proof acc. to DIN 40050 / IEC 60529
- for bore holes and blind holes
- for large measuring range
- with **VOCOM-S** duo data output, top model (connectivity also for Digimatic measuring devices, Mitutoyo compatible)

- LCD unit with clear reading, digit height 8 mm
- chromed finish, self-centering and self-aligning
- with tungsten carbide measuring faces
- with friction ratchet for constant measuring pressure
- zero setting at any position, On-/Off-button
- measuring unit switchable mm/inch, with ABS/INC-system
- data hold function, ± preset function
- incl. 1x 3 V battery (type CR2032, art. no.: 20 02093), with operation manual



ART NO 23 6461 - 23 6470

ART NO 23 6471 - 23 6480



Option

- extension rods and setting rings on pages 120 + 236

mm	mm	max. mm	L1 mm	B mm	C mm	ART NO through hole	L1 mm	B mm	C mm	ART NO blind hole	KG	ART NO CC
100 - 125	0.001	0.008	130	18	20	23 6461	135	23	1	23 6471	0.950	23 94038
125 - 150	0.001	0.008	130	18	20	23 6462	135	23	1	23 6472	0.980	23 94038
150 - 175	0.001	0.008	130	18	20	23 6463	135	23	1	23 6473	1.230	23 94038
175 - 200	0.001	0.008	130	18	20	23 6464	135	23	1	23 6474	1.350	23 94038
200 - 225	0.001	0.008	130	18	20	23 6465	135	23	1	23 6475	1.755	23 94038
225 - 250	0.001	0.008	130	18	20	23 6466	135	23	1	23 6476	1.800	23 94038
250 - 275	0.001	0.008	130	18	20	23 6467	135	23	1	23 6477	1.850	23 94038
275 - 300	0.001	0.008	130	18	20	23 6468	135	23	1	23 6478	1.890	23 94038
300 - 325	0.001	0.010	130	18	20	23 6469	135	23	1	23 6479	1.945	23 94038
325 - 350	0.001	0.010	130	18	20	23 6470	135	23	1	23 6480	1.965	23 94038

3-Point Digital Bore Micrometers

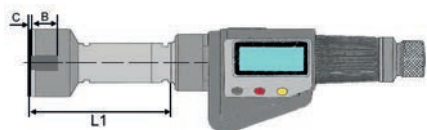


Electr. 3-Point Digital Bore Micrometer Set • IP54

NEW

- spray water proof acc. to DIN 40050 / IEC 60529
- for bore holes and blind holes
- with **Vocom-s** duo data output, top model (connectivity also for Digimatic measuring devices, Mitutoyo compatible)

- LCD unit with clear reading, digit height 8 mm, as set composition
- chromed finish, self-centering and self-aligning
- with friction ratchet for constant measuring pressure
- 6 - 12 mm with hardened measuring faces, from up 12 mm with tungsten carbide measuring faces
- zero setting at any position, On-/Off-button
- measuring unit switchable mm/inch, with ABS/INC-system
- data hold function, ± preset function
- incl. setting ring and with extension rod
- incl. 1x 3 V battery (type CR2032, art. no.: 20 02093), with operation manual



ART NO	mm / inch	mm / inch	mm / inch	mm	L1 mm	B mm	C mm	extension rod mm	setting ring ø mm	ART NO CC
23 6444	6 - 12 0.24 - 0.50	6 - 8 / 0.24 - 0.32 8 - 10 / 0.32 - 0.40 10 - 12 / 0.40 - 0.50	0.001 / 0.00005	0.004 0.004 0.004	30	2.5	1.0	50	8 10	23 94027
23 6445	12 - 20 0.50 - 0.80	12 - 16 / 0.50 - 0.63 16 - 20 / 0.63 - 0.80	0.001 / 0.00005	0.004 0.004 0.004	48	6.3	0.4	100	16	23 94028
23 6446	20 - 50 0.80 - 2.00	20 - 25 / 0.80 - 1.00 25 - 30 / 1.00 - 1.20 30 - 40 / 1.20 - 1.60 40 - 50 / 1.60 - 2.00	0.001 / 0.00005	0.004 0.004 0.004 0.004	50	9.2	0.4	150	25 40	23 94030
23 6447	50 - 100 2.00 - 4.00	50 - 63 / 2.00 - 2.50 62 - 75 / 2.45 - 3.00 75 - 88 / 2.45 - 3.46 87 - 100 / 3.43 - 4.00	0.001 / 0.00005	0.005 0.005 0.005 0.005	55	16.5	0.5	150	62 87	23 94030



Electr. 3-Point Digital Bore Micrometer Set • IP54

NEW

- spray water proof acc. to DIN 40050 / IEC 60529
- for bore holes and blind holes
- with **Vocom-s** duo data output, top model (connectivity also for Digimatic measuring devices, Mitutoyo compatible)

- LCD unit with clear reading, digit height 8 mm
- as set with 1 digital unit and with 2 interchangeable measuring heads
- chromed finish, self-centering and self-aligning
- with friction ratchet for constant measuring pressure
- 6 - 12 mm with hardened measuring faces, from up 12 mm with tungsten carbide measuring faces
- zero setting at any position, On-/Off-button
- measuring unit switchable mm/inch, with ABS/INC-system
- data hold function, ± preset function
- incl. setting ring and with extension rod
- incl. 1x 3 V battery (type CR2032, art. no.: 20 02093), with operation manual



ART NO	mm / inch	mm / inch	mm / inch	mm	L1 mm	B mm	C mm	extension rod mm	setting ring ø mm	ART NO CC
23 6451	6 - 10	6 - 8 / 0.24 - 0.32 8 - 10 / 0.32 - 0.40	0.001 / 0.00005	0.004 0.004	30	2.5	1.0	50	8	23 94028
23 6452	8 - 12	8 - 10 / 0.32 - 0.40 10 - 12 / 0.40 - 0.50	0.001 / 0.00005	0.004 0.004	30	2.5	1.0	50	10	23 94028
23 6453	12 - 20	12 - 16 / 0.50 - 0.63 16 - 20 / 0.63 - 0.80	0.001 / 0.00005	0.004 0.004	48	6.3	0.4	100	16	23 94028
23 6454	20 - 30	20 - 25 / 0.80 - 1.00 25 - 30 / 1.00 - 1.20	0.001 / 0.00005	0.004 0.004	50	9.2	0.4	150	25	23 94028
23 6455	30 - 50	30 - 40 / 1.20 - 1.60 40 - 50 / 1.60 - 2.00	0.001 / 0.00005	0.004 0.004	50	9.2	0.4	150	40	23 94028
23 6456	50 - 75	50 - 63 / 2.00 - 2.50 62 - 75 / 2.45 - 3.00	0.001 / 0.00005	0.005 0.005	55	16.5	0.5	150	62	23 94028
23 6457	75 - 100	75 - 88 / 2.45 - 3.46 87 - 100 / 3.43 - 4.00	0.001 / 0.00005	0.005 0.005	55	16.5	0.5	150	87	23 94028

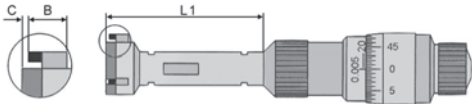
3-Point Digital Bore Micrometers

SILVER-LINE® 3-Point Bore Micrometer Set **NEW**

- for bore holes and blind holes
- set composition
- chromed finish, self-centering and self-aligning
- with ratchet for constant measuring pressure
- 6 - 12 mm with hardened measuring faces, from up 12 mm with tungsten carbide measuring faces
- incl. setting ring
- with operation manual

Option

- extension rods and setting rings on pages 120 + 236



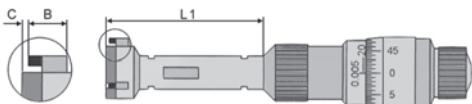
ART No	mm	mm	mm	max. mm	L1 mm	B mm	C mm	setting ring ø mm	ART No CC
23 6511	6 - 12	6 - 8 8 - 10 10 - 12	0.001	0.004 0.004 0.004	30	2.5	1.5	8 10	23 94027
23 6512	11 - 20	11 - 14 14 - 17 17 - 20	0.005	0.004 0.004 0.004	48	6.3	0.4	11 17	23 94028
23 6513	20 - 40	20 - 25 25 - 30 30 - 35 35 - 40	0.005	0.004 0.004 0.004 0.004	50	9.2	0.4	25 35	23 94030
23 6514	40 - 100	40 - 50 50 - 60 60 - 70 70 - 80 80 - 90 90 - 100	0.005	0.005 0.005 0.005 0.005 0.005 0.005	55	16.5	0.5	50 70 90	23 94030

SILVER-LINE® 3-Point Bore Micrometer **NEW**

- for bore holes and blind holes
- for large measuring range
- chromed finish, self-centering and self-aligning
- with ratchet for constant measuring pressure
- with tungsten carbide measuring faces
- incl. operation manual

Option

- extension rods and setting rings on pages 120 + 136



ART No 23 6561 - 23 6570

ART No 23 6571 - 23 6580



mm	mm	max. mm	L1 mm	B mm	C mm	ART No through hole	L1 mm	B mm	C mm	ART No blind hole	KG	ART No CC
100 - 125	0.005	0.008	130	18	20	23 6561	135	23	1	23 6571	0.920	23 94038
125 - 150	0.005	0.008	130	18	20	23 6562	135	23	1	23 6572	0.950	23 94038
150 - 175	0.005	0.008	130	18	20	23 6563	135	23	1	23 6573	1.200	23 94038
175 - 200	0.005	0.008	130	18	20	23 6564	135	23	1	23 6574	1.320	23 94038
200 - 225	0.005	0.008	130	18	20	23 6565	135	23	1	23 6575	1.725	23 94038
225 - 250	0.005	0.008	130	18	20	23 6566	135	23	1	23 6576	1.770	23 94038
250 - 275	0.005	0.008	130	18	20	23 6567	135	23	1	23 6577	1.820	23 94038
275 - 300	0.005	0.008	130	18	20	23 6568	135	23	1	23 6578	1.860	23 94038
300 - 325	0.005	0.010	130	18	20	23 6569	135	23	1	23 6579	1.915	23 94038
325 - 350	0.005	0.010	130	18	20	23 6570	135	23	1	23 6580	1.935	23 94038

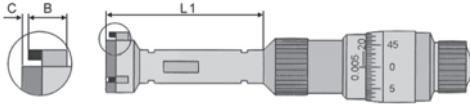
3-Point Digital Bore Micrometers

SILVER-LINE® 3-Point Bore Micrometer **NEW**

- for bore holes and blind holes
- chromed finish, self-centering and self-aligning
- with ratchet for constant measuring pressure
- 6 - 12 mm with hardened measuring faces, from up 12 mm with tungsten carbide measuring faces
- incl. setting ring and extension rod
- with operation manual

Option

- extension rods and setting rings on pages 120 + 236



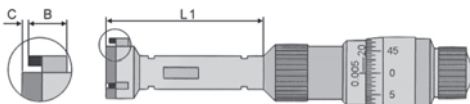
ART NO	mm	mm	mm	L1 mm	B mm	C mm	extension rod mm	setting ring ø mm	KG	ART NO CC
23 6531	6 - 8	0.001	0.004	30	2.5	1.0	50	8	0.155	23 94020
23 6532	8 - 10	0.001	0.004	30	2.5	1.0	50	8	0.160	23 94020
23 6533	10 - 12	0.001	0.004	30	2.5	1.0	50	10	0.180	23 94020
23 6534	12 - 16	0.005	0.004	48	6.3	0.4	100	16	0.195	23 94020
23 6535	16 - 20	0.005	0.004	48	6.3	0.4	100	16	0.230	23 94020
23 6536	20 - 25	0.005	0.004	50	9.2	0.4	150	25	0.275	23 94020
23 6537	25 - 30	0.005	0.004	50	9.2	0.4	150	25	0.315	23 94020
23 6538	30 - 40	0.005	0.004	50	9.2	0.4	150	30	0.410	23 94020
23 6539	40 - 50	0.005	0.005	55	16.5	0.5	150	40	0.490	23 94020
23 6540	50 - 63	0.005	0.005	55	16.5	0.5	150	50	0.695	23 94022
23 6541	62 - 75	0.005	0.005	55	16.5	0.5	150	62	0.710	23 94022
23 6542	75 - 88	0.005	0.005	55	16.5	0.5	150	87	0.780	23 94022
23 6543	87 - 100	0.005	0.005	55	16.5	0.5	150	87	0.870	23 94022

SILVER-LINE® 3-Point Bore Micrometer Set **NEW**

- for bore holes and blind holes
- as set composition, with setting ring and extension rod
- chromed finish, self-centering and self-aligning
- with ratchet for constant measuring pressure
- 6 - 12 mm with hardened measuring faces, from up 12 mm with tungsten carbide measuring faces
- with operation manual

Option

- extension rods and setting rings on pages 120 + 236



ART NO	mm	mm	mm	mm	L1 mm	B mm	C mm	extension rod mm	setting ring ø mm	ART NO CC
23 6581	6 - 12	6 - 8 8 - 10 10 - 12	0.001	0.004 0.004 0.004	30	2.5	1.0	50	8 10	23 94027
23 6582	12 - 20	12 - 16 16 - 20	0.005	0.004 0.004	48	6.3	0.4	100	16	23 94028
23 6583	20 - 50	20 - 25 25 - 30 30 - 40 40 - 50	0.005	0.004 0.004 0.004 0.004	50	9.2	0.4	150	25 40	23 94030
23 6584	50 - 100	50 - 63 62 - 75 75 - 88 87 - 100	0.005	0.005 0.005 0.005 0.005	55	16.5	0.5	150	62 87	23 94030

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Accessories, Internal Micrometers, Telescopic Gauges

Extension rods for 3-Point Bore Micrometers

NEW

- extension for to reach deep measuring points in tubes



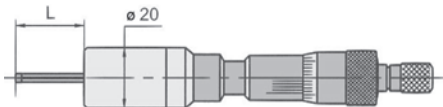
ART NO	L x ø mm	suitable for series
23 6400	150 x 29	23 6461 – 23 6480 / 23 6561 – 23 6580
23 6401	300 x 29	23 6461 – 23 6480 / 23 6561 – 23 6580
23 6402	50 x 5.7	23 6431 – 23 6433 / 23 65 31 – 23 6533 / 23 6511
23 6403	100 x 11.7	23 6434 – 23 6435 / 23 6534 – 23 6535 / 23 6512
23 6404	150 x 16.7	23 6436 – 23 6437 / 23 6536 – 23 6537 / 23 6513
23 6405	100 x 21.8	23 6438 – 23 6443 / 23 6538 – 23 6543 / 23 6514



SILVER-LINE® Internal Micrometer

NEW

- suitable for measuring in blind holes
- chromed finish
- tungsten carbide faces
- constant measuring pressure, with ratchet
- with setting ring
- incl. operation manual

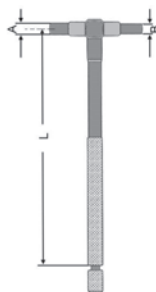


ART NO	mm	mm	mm	L mm	setting ring ø mm	KG	ART NO CC
23 6826	2.0 - 2.5	0.001	0.004	12.5	2.5	0.130	23 94027
23 6827	2.5 - 3.0	0.001	0.004	12.5	2.5	0.133	23 94027
23 6828	3.0 - 4.0	0.001	0.004	22.5	4.0	0.140	23 94027
23 6829	4.0 - 5.0	0.001	0.004	22.5	5.0	0.140	23 94027
23 6830	5.0 - 6.0	0.001	0.004	22.5	6.0	0.145	23 94027

BLUE-LINE® Telescopic Gauges, 6-pcs.

NEW

- in places that are hard to reach with standard measuring instruments
- steel made, satin chromed
- self-centering, spherical measuring faces, hardened
- constant spring pressure on the measuring faces
- with fixing device



ART NO	set / mm	mm	measuring depth (L) mm	A mm	B mm	KG
47 2030	8 - 150	8 - 12.7	102	4	3	0.290
		12.7 - 19	102	5	4	
		19 - 32	102	5	4	
		32 - 54	127	7.5	6	
		54 - 90	127	7.5	6	
		90 - 150	127	7.5	6	

★★★★★ BLUE-LINE® Bore Gauge Set with Dial Indicator

- for quick and easy measuring of bores
- standard precision, especially for workshop use
- matt chrome finish pipe, with insulation handle
- hardened contact points
- with operation manual



ART No 23 7011 - 23 7012



ART No 23 7013



ART No 23 7014 - 23 7017



ART No	mm	mm	quantity of contact points		L mm	KG	ART No CC
23 7011	10 - 18	0.01	9	1	50	0.450	23 94701
23 7012	18 - 35	0.01	7	2	142	0.700	23 94701
23 7013	35 - 50	0.01	5	2	155	0.800	23 94701
23 7014	50 - 100	0.01	7	2	200	2.950	23 94703
23 7015	50 - 160	0.01	8	2	200	3.500	23 94703
23 7016	100 - 160	0.01	8	2	205	3.100	23 94703
23 7017	160 - 250	0.01	8	2	205	3.545	23 94703

★★★★★ BLUE-LINE® Bore Gauge Set with Dial Indicator

- for quick and easy measuring of bores
- standard precision, for workshop use
- matt chrome finish pipe, with insulated plates
- carbid-tipped contact points for durability
- with operation manual

Option

- rugged cover ø 40 mm: art.-no. 23 7098
- rugged cover ø 60 mm: art.-no. 23 7099



ART No 23 7098
23 7099



ART No 23 7000



ART No 23 7001



ART No 23 7002



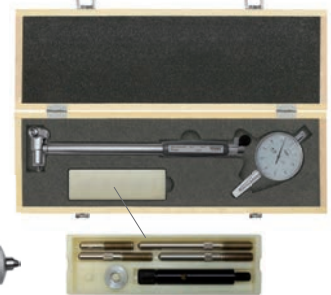
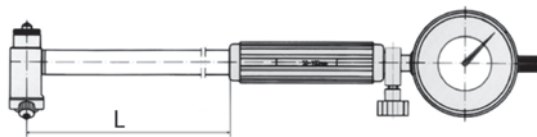
ART No 23 7003



ART No 23 7004 - 23 7007



ART No 23 7005



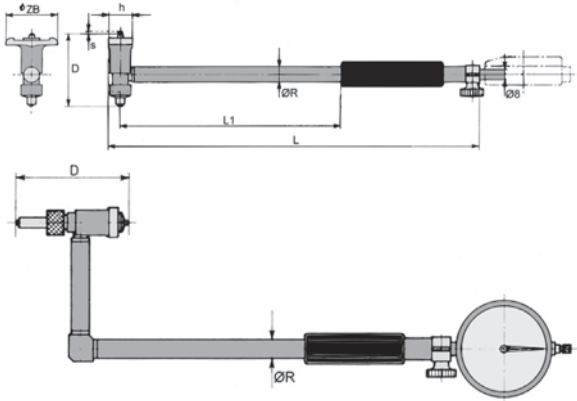
ART No	mm	mm	quantity of contact points		L mm	KG	ART No CC
23 7000	4 - 6	0.01	4	-	35	0.175	23 94701
23 7001	6 - 10	0.01	9	1	45	0.450	23 94701
23 7002	10 - 18	0.01	9	1	95	0.450	23 94701
23 7003	18 - 35	0.01	7	-	130	0.700	23 94701
23 7004	35 - 50	0.01	3	-	150	0.800	23 94701
23 7005	50 - 160	0.01	5	1	150	3.500	23 94703
23 7006	160 - 250	0.01	5	1	410	3.240	23 94703
23 7007	250 - 450	0.01	5	1	410	3.545	23 94703

Precision Internal Micrometers



Bore Gauge Set without Dial Indicator

- for quick and easy measuring of bores
- high precision quality, especially for workshop use
- steel tube, stainless, with Insulation plate
- measuring bolts hardened or made of carbide available
- repeatability at sizes:
4.5 - 290 mm = fw < 0.5 μm, 280 - 800 mm = fw < 1.5 μm
- deviation range at sizes:
4.5 - 290 mm = fe < 2.0 μm, 280 - 800 mm = fe < 3.0 μm
- with calibration certificate
- with operation manual



ART NO	ART NO	D	quantity of	L	L1	R	s	h	ZB	KG
steel contact points	carbide contact points	mm	contact points	mm	mm	ø mm	mm	mm	ø mm	
-	23 0720	4.5 - 6	9	80	147	4	0.35	2.00	4.0	0.450
-	23 0721	6 - 8	7	100	165	5	0.50	2.60	5.2	0.450
-	23 0722	8 - 12	9	100	165	5	0.70	3.25	6.5	0.450
-	23 0723	12 - 20	9	110	204	8	0.90	4.50	9.0	1.000
23 0700	23 0724	18 - 35	9	110	206	8	1.30	5.40	14.8	0.900
23 0701	23 0725	35 - 60	6	138	243	10	1.30	7.00	28.0	0.900
23 0702	23 0726	50 - 100	11	177	295	12	1.40	8.50	45.0	1.200
23 0703	23 0727	50 - 150	11	177	295	12	1.40	8.50	45.0	1.250
23 0704	23 0728	100 - 160	7	234	365	18	1.60	11.50	75.0	2.300
23 0705	23 0729	100 - 230	7	234	365	18	1.60	11.50	75.0	2.300
23 0706	23 0730	160 - 290	7	234	365	18	1.60	11.50	120.0	3.800
23 0707	23 0731	160 - 360	7	234	365	18	1.60	11.50	120.0	3.800
23 0708	23 0732	280 - 410	7	400	550	24	2.60	16.00	165.0	6.000
23 0709	23 0733	280 - 510	7	400	550	24	2.60	16.00	165.0	6.000
23 0710	23 0734	400 - 800	11	700	855	24	2.60	17.50	300.0	10.500



Extension for Bore Gauges

- for internal micrometer series 23 0701 - 23 0734
- suitable from up bore-ø 35 mm
- plug-in connection
- dial indicator shaft-ø 8 mm

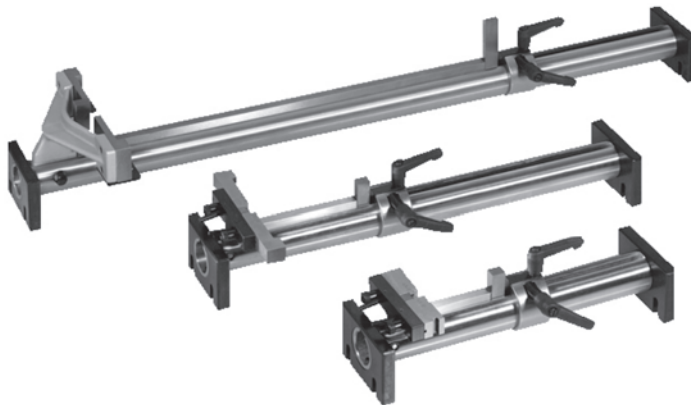


ART NO	mm	pipe-ø mm	ART NO	mm	pipe-ø mm
23 0790	250	12	23 0794	1000	18
23 0791	500	12	23 0795	1500	18
23 0792	750	12	23 0796	2000	18
23 0793	1000	12	-	-	-



Bore Gauge Zero-Setter, without Dial Indicator

- for easy zero adjustment of 2-point dial bore gauges by using blocks for series 23 0700 - 23 0734
- frame with gauge block holder
- pair of setting jaws, base and spanner
- carbide measuring jaws
- delivery **without** gauge blocks, **without** dial indicator
- with operation manual



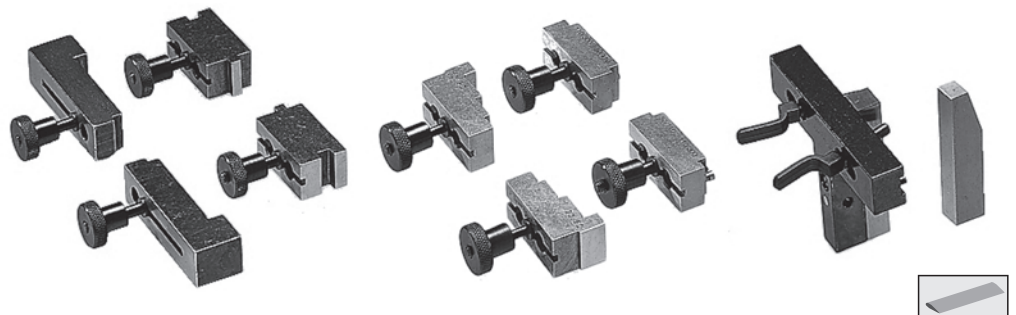
horizontal and vertical applications



ART N°	setting range mm
23 0950	4.5 - 35
23 0951	4.5 - 160
23 0952	4.5 - 290
23 0953	35 - 160
23 0954	35 - 290
23 0955	160 - 510
23 0956	160 - 800



Spare parts for Bore Gauge Zero-Setter suitable for series 23 0950 - 23 0956



ART N° setting jaw holder	ART N° pair of setting jaws	ART N° pair of measuring jaws	ART N° frame with spanner	ART N° base for setting up to 300 mm
23 0957	23 0958 4.5 - 35 mm	23 0960 4.5 - 300 mm	23 0962 up to 160 mm	23 0965
-	23 0959 18 - 290 mm	23 0961 160 - 800 mm	23 0963 up to 300 mm	-
-	-	-	23 0964 up to 600 mm	-