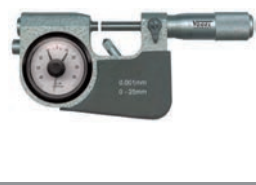
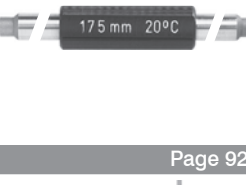
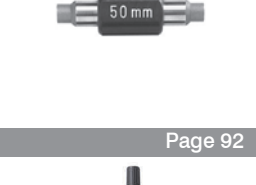
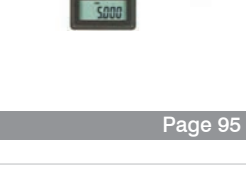
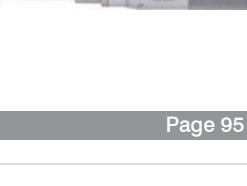
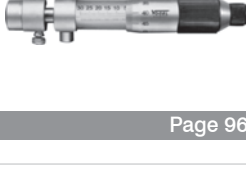




Micrometers

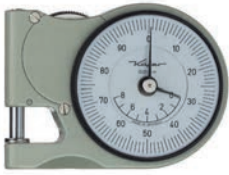
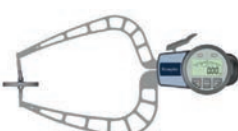
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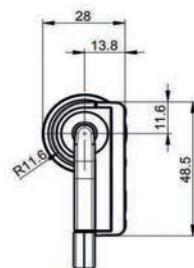
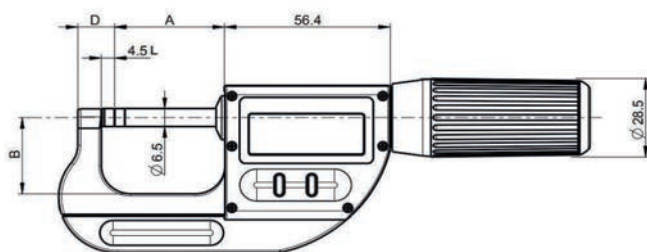
Sylvac • Professional micrometer S_Mike • IP67

DIN 863

- auto. wake-up by moving the measuring spindle
- large LCD display with clear reading, digit height 8 mm
- sleeping mode after 20 min. of no use
- position memorized in sleeping mode, absolute system S.I.S
- with carbide measuring surfaces, lapped, spindle hardened
- water and coolant resistant, protection class IP67 acc. to IEC 60529
- quick movement of the measuring spindle 10 mm / rotation
- spindle $\varnothing$ 6.5 mm
- with ratchet for constant measuring pressure
- repeatability and reproducibility never reached before
- incl. 1x 3 V battery (type CR2032, art. no. 90112), with operating manual

Options

- data output via cable, Proximity – USB, art. no. 2023101
- data output via cable, Proximity – RS 232, art. no. 2023100



ART N°	mm / inch	mm / inch	$\varnothing$ mm	mm	A mm	B mm	D mm	L mm	mm	CC
230155	0 – 30 / 0 – 1.2	0.001 / 0.00005	28.5	10	37.3	27.5	12.5	4.5	0.003	inclusive
230156	33 – 66 / 1.2 – 2.6	0.001 / 0.00005	28.5	10	73.3	43	13.5	4.5	0.004	inclusive
230157	66 – 102 / 2.6 – 4	0.001 / 0.00005	28.5	10	109.3	60	14.5	4.5	0.005	inclusive
230158	100 – 136 / 4 – 5.4	0.001 / 0.00005	28.5	10	143.3	95	19.5	4.5	0.007	inclusive
230159	125 – 161 / 5 – 6.4	0.001 / 0.00005	28.5	10	168.3	110	19.5	4.5	0.008	inclusive

Sylvac • Professional micrometer S_Mike • IP67

DIN 863

- auto. wake-up by moving the measuring spindle
- large LCD display with clear reading, digit height 8 mm
- sleeping mode after 20 min. of no use
- position memorized in sleeping mode, absolute system S.I.S
- with carbide measuring surfaces, lapped, spindle hardened
- water and coolant resistant, protection class IP67 acc. to IEC 60529
- quick displacement of the measuring spindle 10 mm / rotation
- with ratchet for constant measuring pressure
- repeatability and reproducibility never reached before
- incl. 1x 3 V battery (type CR2032, art.-no.: 90112), with operating manual

Options

- data output via cable, Proximity – USB, art.-no.: 2023101, see page 272
- data output via cable, Proximity – RS 232, art.-no.: 2023100, see page 272



ART N°	mm / inch	mm / inch	set contents	$\varnothing$ mm	mm	spindle- $\varnothing$ mm	CC
230188	0 – 102 / 0 – 4.0	0.001 / 0.00005	3	28.5	10	6.5	inclusive

Standard Digital Micrometers

Electr. Digital Micrometer • IP65

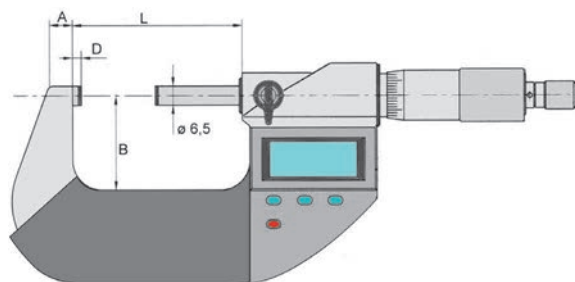
DIN 863

- water and coolant resistant acc. to DIN 40050 / IEC 60529
- with 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.: 90112), with operation manual
- from up 25 mm with setting gauge

Options

- data transfer via cable, art. no.: 3420195
- data transfer via WiFi, art. no.: 2040102
- data transfer via Bluetooth®, art. no.: 2090009



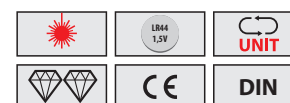
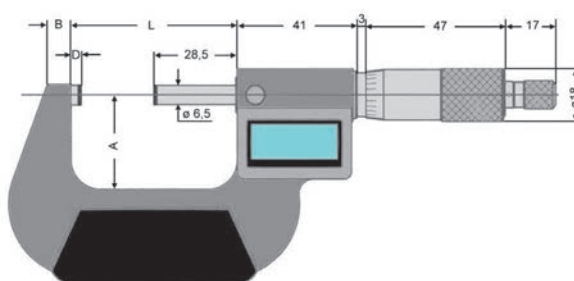
ART No	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	mm	CC
230130	0 – 25 / 0 – 1	0.001 / 0.00005	18	0.5	9	24	3.5	30	0.003	on request
230131	25 – 50 / 1 – 2	0.001 / 0.00005	18	0.5	9	32	3.5	60	0.003	on request
230132	50 – 75 / 2 – 3	0.001 / 0.00005	18	0.5	8	47	4	82	0.004	on request
230133	75 – 100 / 3 – 4	0.001 / 0.00005	18	0.5	14	60	3.5	111	0.004	on request

Electr. Digital Micrometer

DIN 863

- 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.: 90213), with operation manual
- from up 25 mm with setting gauge



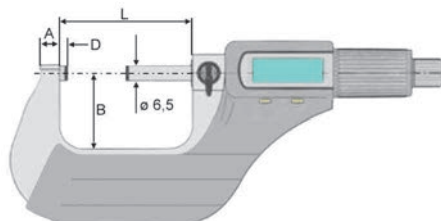
ART No	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	mm	CC
231088	0 – 25 / 0 – 1	0.001 / 0.00005	18	0.5	24	6	3	32	0.002	on request
231089	25 – 50 / 1 – 2	0.001 / 0.00005	18	0.5	32	8	3	57	0.002	on request
231090	50 – 75 / 2 – 3	0.001 / 0.00005	18	0.5	45	8	3	82	0.003	on request

Standard Digital Micrometers

Electr. Digital Micrometer • IP40

DIN 863

- dust resistant 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 (typee CR2032, art. no. 90112), with operation manual
- from up 25 mm with setting gauge



ergonomically designed handle shape

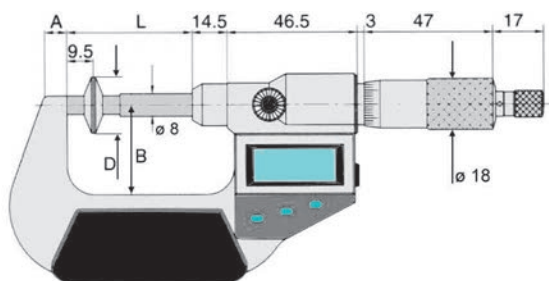


ART No	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	mm	CC
231061	0 – 25 / 0 – 1	0.001 / 0.00005	22	0.5	6	25	3.5	32	0.003	on request
231062	25 – 50 / 1 – 2	0.001 / 0.00005	22	0.5	6	32	3.5	57	0.003	on request
231063	50 – 75 / 2 – 3	0.001 / 0.00005	22	0.5	7	44	3.5	82	0.004	on request
231064	75 – 100 / 3 – 4	0.001 / 0.00005	22	0.5	8	59	3.5	108	0.005	on request

Electr. Digital Micrometer • IP40

DIN 863

- dust resistant acc. to DIN 40050 / IEC 60529 for chordal measurement of gear teeth, keys, ribs, fins, etc.
- Absolute Measurement System (ABS-system)
- 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 (typee LR44, art. no.: 90213), with operation manual
- from up 25 mm with setting gauge



ART No	mm / inch	mm / inch	A mm	B mm	D mm	L mm	mm	CC
231171	0 – 25 / 0 – 1	0.001 / 0.00005	0.7	32	20	43	0.004	on request
231172	25 – 50 / 1 – 2	0.001 / 0.00005	0.7	44.5	20	68	0.004	on request
231173	50 – 75 / 2 – 3	0.001 / 0.00005	0.7	57	20	93	0.005	on request
231174	75 – 100 / 3 – 4	0.001 / 0.00005	0.7	70	20	118.5	0.005	on request

Digital Micrometers and Special Design Micrometers

Electr. Digital Micrometer Set • IP65

DIN 863

- water and coolant resistant acc. to DIN 40050 / IEC 60529
- with 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. 3 V batteries (typee CR2032, art. no.: 90112), with operation manual
- from up 25 mm with setting gauge

Options

- data transfer via cable, art. no.: 3420195, see page 272
- data transfer via WiFi, art. no.: 2040102, see page 272
- data transfer via Bluetooth®, art. no.: 209009, see page 272

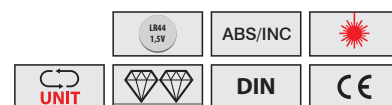
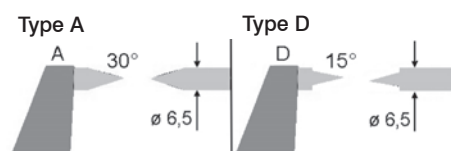


ART N°	mm / inch	mm / inch	set contents	ø mm	mm	max. mm	CC
232171	0 – 100 / 0 – 4	0.001 / 0.00005	4	18	0.5	0.003 / 0.004	on request

Electr. Digital Micrometer

DIN 863

- with 30° and 15° measuring tips
- Absolute Measurement System (ABS-system)
- 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 (typee LR44, art. no.: 90213), with operation manual
- form up 25 mm setting with gauge



ART N° Type A	ART N° Type D	mm / inch	mm / inch	meas. tips radius mm	max. mm	ø mm	CC
232971	232961	0 – 25 / 0 – 1	0.001 / 0.00005	0.3	0.002	18	on request

Repair Service

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

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

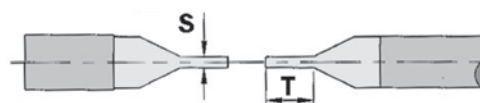
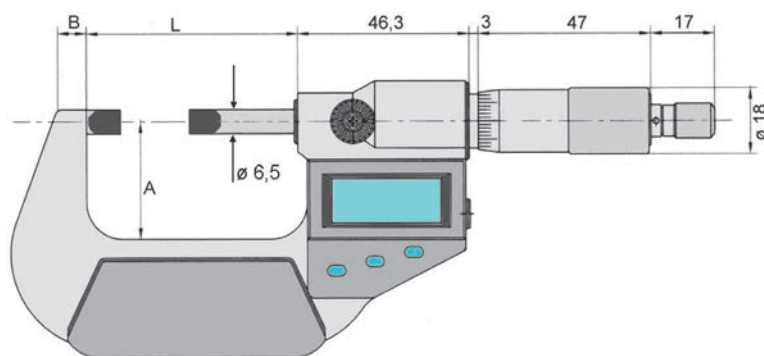


Special Design Digital Micrometers

Electr. Digital Micrometer • IP40

DIN 863

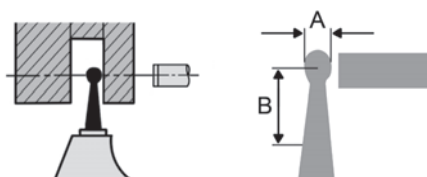
- dust resistant acc. to DIN 40050 / IEC 60529
- to measure small grooves, etc.
- Absolute Measurement System (ABS-system)
- LCD display, with clear reading, digit height 7 mm, mm/inch switchable
- drum with metric scale
- frame lacquered, with insulated plates
- non-rotating spindle with blade measuring 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 (typee LR44, art. no.: 90213), with operation manual
- from up 25 mm with setting gauge



ART N°	mm / inch	mm / inch	A mm	B mm	L mm	S mm	T mm	mm	CC
232381	0 – 25 / 0 – 1	0.001 / 0.00005	26.5	6	57	0.75	6.5	0.002	on request
232382	25 – 50 / 1 – 2	0.001 / 0.00005	32	8	82	0.75	6.5	0.002	on request
232383	50 – 75 / 2 – 3	0.001 / 0.00005	44.5	8	107	0.75	6.5	0.003	on request
232384	75 – 100 / 3 – 4	0.001 / 0.00005	57	8	132.6	0.75	6.5	0.003	on request

Electr. Digital Micrometer

- for measuring pipe wall thicknesses etc.
- Absolute Measurement System (ABS-system)
- 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 (typee LR44, art. no.: 90213), with operation manual



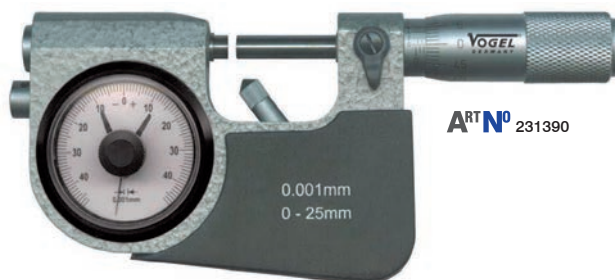
ART N°	mm / inch	mm / inch	ø mm	A ø mm	B mm	mm	CC
232813	0 – 25 / 0 – 1	0.001 / 0.00005	18	4.7	25	0.003	on request

Standard Analog Micrometers

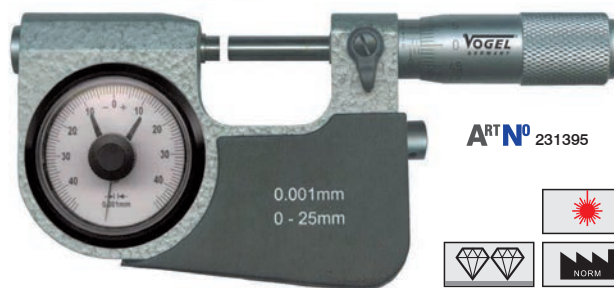
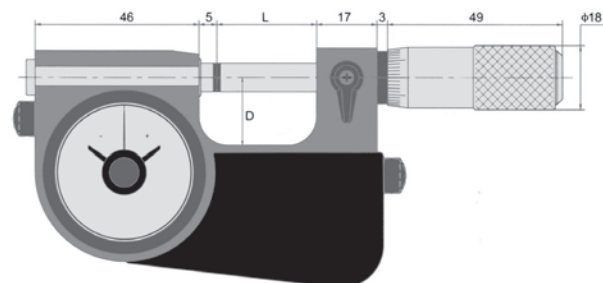
Indicator Snap Micrometers

- 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. 231390 with anvil-lifting, adjustable depth stop
- accuracy micrometer $\pm 0.003 \text{ mm}$
- accuracy indicator $\pm 0.001 \text{ mm}$



ART No 231390



ART No 231395

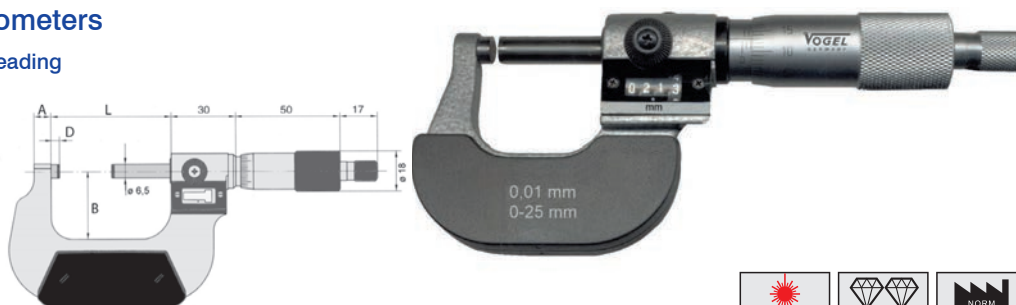


ART No	mm	drum mm	dial mm	indicator mm	ø mm	L mm	D mm	CC
231390	0 - 25	0.002	0.001	± 0.001	18	28.5	19	on request
231395	0 - 25	0.002	0.001	± 0.001	18	28.5	19	on request

Counter External Micrometers

- 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
- from up 25 mm with setting gauge



ART No	mm	mm	ø mm	A mm	B mm	D mm	L mm	max. mm	CC
231451	0 - 25	0.01	18	6	26	3.5	32	0.004	on request
231452	25 - 50	0.01	18	8	32	3.5	57	0.004	on request

Precision External Micrometers

- for professional industry purposes
- 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
- from up 25 mm with setting gauge



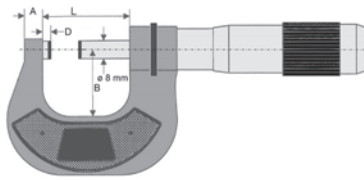
ART No	mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	CC
230586	0 - 25	0.01	21	0.5	13	24	3	37	0.002	on request
230587	25 - 50	0.01	21	0.5	13	34	3	62	0.002	on request
230588	50 - 75	0.01	21	0.5	15	46	3	87	0.003	on request
230589	75 - 100	0.01	21	0.5	15	60	3	112	0.003	on request

Standard Analog Micrometers

External Micrometers

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
- from up 25 mm with setting gauge



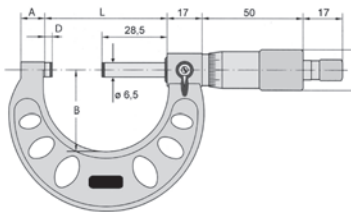
ART No	mm	mm	$\varnothing$ mm	mm	A mm	B mm	D mm	L mm	mm	CC
231330	0 – 25	0.01	23	0.5	9	32	3	32.5	0.004	on request
231331	25 – 50	0.01	23	0.5	15	33	3	57.5	0.004	on request
231332	50 – 75	0.01	23	0.5	15	40	3	82.5	0.005	on request
231333	75 – 100	0.01	23	0.5	15	55	3	107.5	0.005	on request
231334	100 – 125	0.01	23	0.5	32	80	3	168.5	0.006	on request
231335	125 – 150	0.01	23	0.5	32	80	7.5	168.5	0.006	on request

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
- from up 25 mm with setting gauge

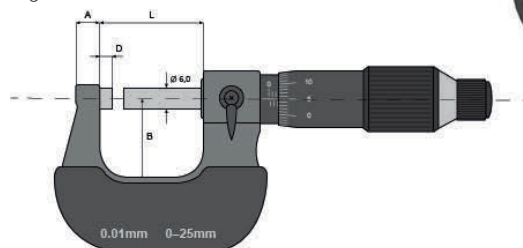


ART No	mm	mm	$\varnothing$ mm	mm	A mm	B mm	D mm	L mm	mm	CC
231301	0 – 25	0.01	18	0.5	9	28	3	32	0.004	on request
231302	25 – 50	0.01	18	0.5	14	38	3	57	0.004	on request
231303	50 – 75	0.01	18	0.5	15	49	3	82	0.005	on request
231304	75 – 100	0.01	18	0.5	15	60	3	107	0.005	on request
231305	100 – 125	0.01	18	0.5	16.5	73	3	133	0.006	on request
231306	125 – 150	0.01	18	0.5	16.5	85	3	158	0.006	on request

External Micrometers

DIN 863

- drum and sleeve black anodized surface
- black powder coated frame, with insulation plates
- carbide surfaces, lapped, spindle hardened and ground
- locking lever for quick and precise fixing
- with ratchet for constant measuring pressure



ART No	mm	mm	$\varnothing$ mm	mm	A mm	B mm	D mm	L mm	mm	CC
231309	0 – 25	0.01	19.5	0.5	7	24	3	31	0.004	on request

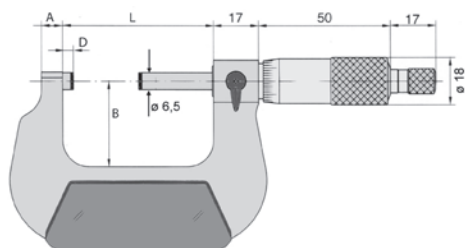
Standard Analog Micrometers

External Micrometers

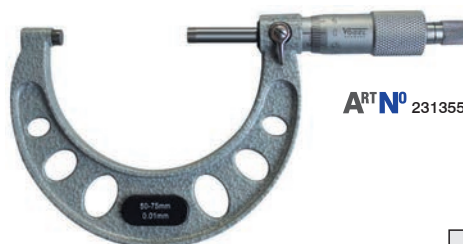
DIN 863

• for standard expectations

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



ART N° 231351 – 231354



ART N° 231355 – 231358



ART N°	 mm	 mm	 ø mm	 mm	A mm	B mm	D mm	L mm	 max. mm	 CC
231351	0 – 25	0.01	18	0.5	6	24	3	32	0.004	on request
231352	25 – 50	0.01	18	0.5	8	32	3	57	0.004	on request
231353	50 – 75	0.01	18	0.5	8	45	3	82	0.005	on request
231354	75 – 100	0.01	18	0.5	8	57	3	107	0.005	on request
231355	100 – 125	0.01	18	0.5	8	70	3	133	0.006	on request
231356	125 – 150	0.01	18	0.5	8	82	3	158	0.006	on request
231357	150 – 175	0.01	18	0.5	8	95	5.5	183	0.007	on request
231358	175 – 200	0.01	18	0.5	8	107	5.5	209	0.007	on request

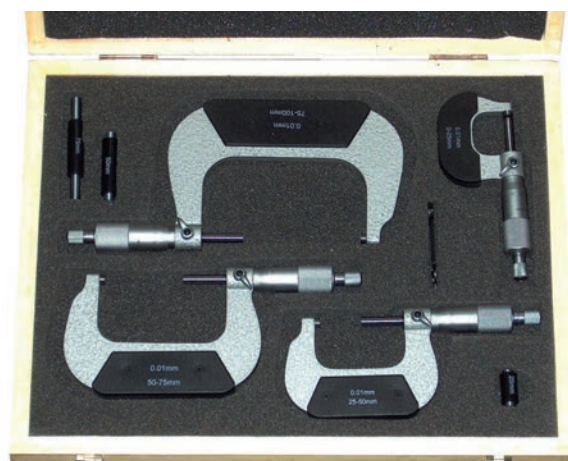
External Micrometer Sets

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 setting gauge

ART N° 232006



ART N° 232003 – 232004



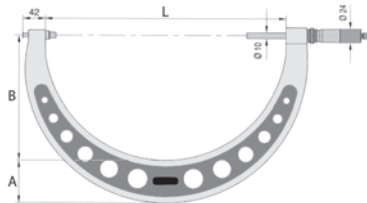
ART N°	 mm	 mm	set content	 ø mm	 mm	spindle-ø mm	 CC
232003	0 – 75	0.01	3	18	0.5	6.5	on request
232004	0 – 100	0.01	4	18	0.5	6.5	on request
232006	0 – 150	0.01	6	18	0.5	6.5	on request
232107	150 – 300	0.01	6	18	0.5	6.5	on request
232108	0 – 300	0.01	12	18	0.5	6.5	on request
232109	100 – 200	0.01	4	18	0.5	6.5	on request

Standard Analog Micrometers

External Micrometers

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
- without setting gauges, for setting gauges see page 92



Version with insulated handle on request



ART NO	 mm	 mm	 ø mm	 mm	L mm	B mm	A mm	 max. mm	CC
230290	300 – 350	0.01	24	1.0	370	190	42	0.006	on request
230291	350 – 400	0.01	24	1.0	430	220	42	0.006	on request
230292	400 – 450	0.01	24	1.0	475	250	42	0.007	on request
230293	450 – 500	0.01	24	1.0	530	273	42	0.007	on request
230294	500 – 550	0.01	24	1.0	570	291	42	0.008	on request
230295	550 – 600	0.01	24	1.0	630	323	42	0.008	on request

External Micrometers

DIN 863

- 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
- without setting gauges, for setting gauges see on page 92



Version with insulated handle on request



ART NO	 mm	 mm	 ø mm	 mm	spindle-ø mm	 max. mm	CC
234205	0 – 300	0.1 / 0.01	24	1.0	10.0	0.006	on request
234206	300 – 600	0.1 / 0.01	24	1.0	10.0	0.009	on request
234207	600 – 900	0.1 / 0.01	24	1.0	10.0	0.012	on request
 234208	900 – 1200	0.1 / 0.01	24	1.0	10.0	0.015	on request
 234209	1200 – 1500	0.1 / 0.01	24	1.0	10.0	0.018	on request
 234210	1500 – 1800	0.1 / 0.01	24	1.0	10.0	0.023	on request
 234211	1700 – 2000	0.1 / 0.01	24	1.0	10.0	0.025	on request

Standard Analog Micrometers

External Micrometers

- 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	 mm	CC
232611	0 – 25 x 50	0.01	24	1.0	6.5	0.002	on request
232612	0 – 25 x 100	0.01	24	1.0	8.0	0.003	on request
232613	0 – 25 x 150	0.01	24	1.0	6.5	0.005	on request

Setting Gauges for Micrometers

DIN 863

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

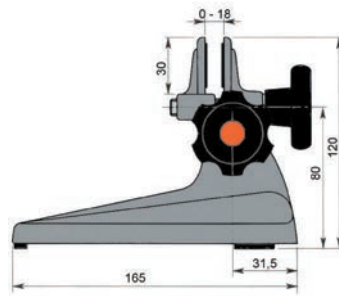
Other sizes available on request!



ART N°	 mm	 mm	CC	ART N°	 mm	 mm	CC
2309302	25	0.00125	on request	2309327	650	0.004	on request
2309303	50	0.00125	on request	2309328	675	0.004	on request
2309304	75	0.0015	on request	2309329	700	0.004	on request
2309305	100	0.002	on request	2309330	725	0.004	on request
2309306	125	0.0025	on request	2309331	750	0.004	on request
2309307	150	0.0025	on request	2309332	775	0.004	on request
2309308	175	0.0025	on request	2309333	800	0.004	on request
2309309	200	0.003	on request	2309334	825	0.004	on request
2309310	225	0.003	on request	2309335	850	0.004	on request
2309311	250	0.003	on request	2309336	875	0.004	on request
2309312	275	0.003	on request	2309337	900	0.005	on request
2309313	300	0.003	on request	2309338	925	0.005	on request
2309314	325	0.0035	on request	2309339	950	0.005	on request
2309315	350	0.0035	on request	2309340	975	0.005	on request
2309316	375	0.0035	on request	2309341	1000	0.005	on request
2309317	400	0.0035	on request	2309342	1050	0.005	on request
2309318	425	0.0035	on request	2309343	1150	0.006	on request
2309319	450	0.0035	on request	2309344	1250	0.007	on request
2309320	475	0.0035	on request	2309345	1350	0.007	on request
2309321	500	0.0035	on request	2309346	1450	0.007	on request
2309322	525	0.0035	on request	2309347	1550	0.009	on request
2309323	550	0.0035	on request	2309348	1650	0.01	on request
2309324	575	0.0035	on request	2309349	1750	0.01	on request
2309325	600	0.0035	on request	2309350	1850	0.011	on request
2309326	625	0.004	on request	2309351	1950	0.012	on request

Micrometer Stand

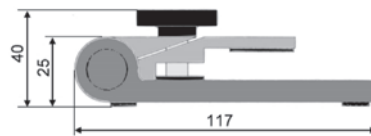
- with stable base
- made of cast iron
- hammer blow lacquered
- clamps equipped with rubber, to protect the instruments
- clamps rotate in axially position
- with fixing screw



ART N°	for micrometer measuring range mm	
239004	0 – 100	165 x 120 x 120

Micrometer Stand

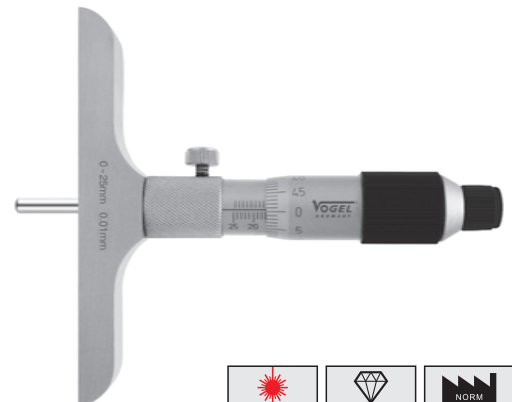
- with stable base
- steel version
- hammer blow lacquered
- clamps equipped with rubber, to protect the instruments
- clamps rotate in axially position
- with central fixing



ART N°	for micrometer measuring range mm	
239005	0 – 100	117 x 70 x 40

Precision Depth Gauges

- 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 N°	 mm	 mm	 ø mm	 mm	 mm	measuring pin-ø mm	quantity of pins	 max. mm	
231800	0 – 25	0.01	18	0.5	63 x 18	4.5	1	0.004	on request
231801	0 – 25	0.01	18	0.5	100 x 18	4.5	1	0.004	on request
231802	0 – 100	0.01	18	0.5	100 x 18	4.5	4	0.005	on request
231803	0 – 150	0.01	18	0.5	100 x 18	4.5	6	0.005	on request

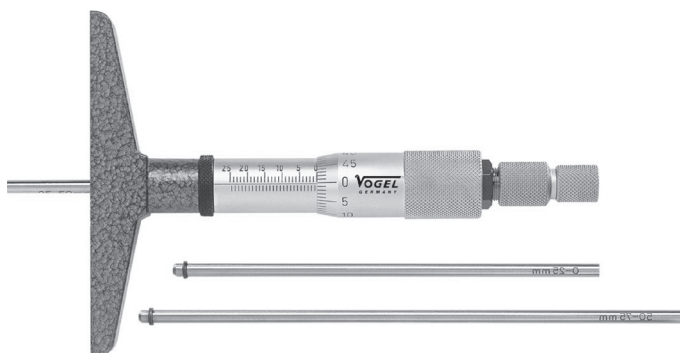
Depth Gauge Micrometers

Precision Depth Gauges

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

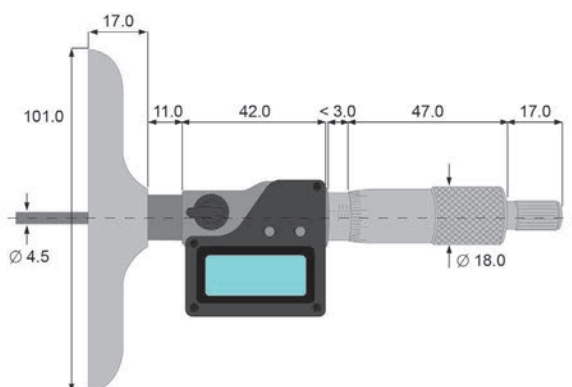


ART N°	mm	mm	ø mm	mm	mm	measuring pin-ø mm	quantity of pins	max. mm	CC
230812	0 – 75	0.01	20	0.5	50 x 17	4.0	3	0.005	on request
230814	0 – 100	0.01	20	0.5	100 x 17	4.0	4	0.005	on request
230815	0 – 150	0.01	20	0.5	100 x 17	4.0	6	0.006	on request
230816	0 – 200	0.01	20	0.5	100 x 17	4.0	8	0.007	on request
230818	0 – 300	0.01	20	0.5	100 x 17	4.0	12	0.009	on request

Electr. Digital Depth Micrometers

- 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.: 90213), with operation manual



ART N°	mm / inch	mm / inch	ø mm	mm	quantity of pins	max. mm	CC
231830	0 – 25 / 0 – 1	0.001 / 0.00005	18	0.5	1	0.004	on request
231831	0 – 50 / 0 – 2	0.001 / 0.00005	18	0.5	2	0.004	on request
231833	0 – 100 / 0 – 4	0.001 / 0.00005	18	0.5	4	0.005	on request
231836	0 – 300 / 0 – 12	0.001 / 0.00005	18	0.5	12	0.007	on request

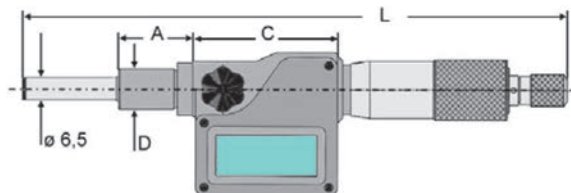
Depth Gauge and Internal Micrometers

Electr. Digital Micrometer Heads • IP65

DIN 863

- splash water proof acc. to DIN 40050 / IEC 6052

- LCD display with clear reading
- with carbide surfaces, flat, lapped, rotating 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.: 90213), with operation manual

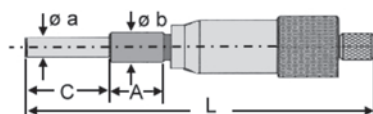


ART N°	mm / inch	mm / inch	ø mm	mm	A mm	C mm	D mm	L mm	mm	CC
231287	0 – 25 / 0 – 1	0.001 / 0.00005	18	0.5	17.5	47.6	12	165.5	0.003	on request

Micrometer Head

DIN 863

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



ART N°	mm	mm	ø mm	mm	A mm	C mm	L mm	ø a mm	ø b mm	mm	CC
231012	0 – 25	0.01	23	0.5	17.5	28.5	113	6.5	12	0.003	on request

Electr. Digital Internal Micrometers

- 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.: 90213), with operation manual
- art. no. 231620 with setting ring



ART N° 231620

Art. no. 231621-231626 may differ from this article picture.



Option

- data transfer via cable, art. no.: 2323100

ART N°	mm / inch	mm / inch	ø mm	mm	mm	CC
231620	5 – 30 / 0.2 – 1.2	0.001 / 0.00005	18	0.5	0.003	on request
231621	25 – 50 / 1 – 2	0.001 / 0.00005	18	0.5	0.003	on request
231622	50 – 75 / 2 – 3	0.001 / 0.00005	18	0.5	0.004	on request
231623	75 – 100 / 3 – 4	0.001 / 0.00005	18	0.5	0.004	on request
231624	100 – 125 / 4 – 5	0.001 / 0.00005	18	0.5	0.005	on request
231625	125 – 150 / 5 – 6	0.001 / 0.00005	18	0.5	0.005	on request
231626	150 – 175 / 6 – 7	0.001 / 0.00005	18	0.5	0.005	on request

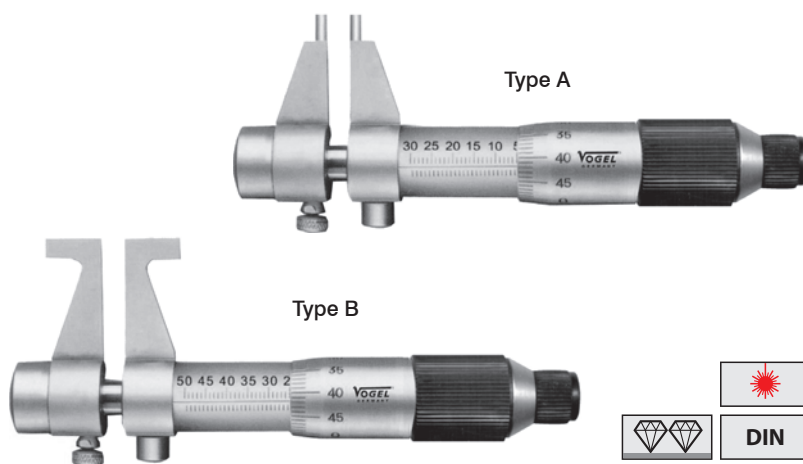
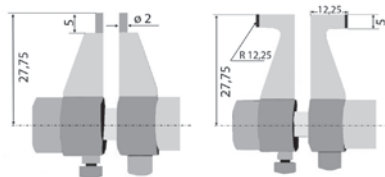
Analog Internal Micrometers

Internal Micrometers

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



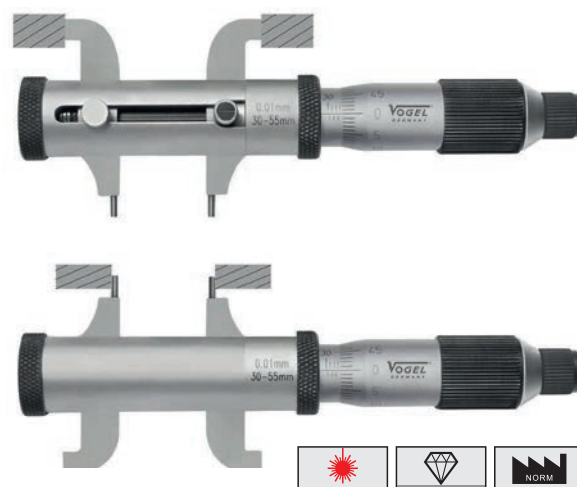
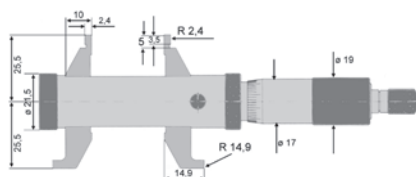
ART ^{NO}	 mm	Type	 mm	 ø mm	 mm	 mm	 max. mm	
231611	5 – 30	A	0.01	18	0.5	5	0.005	on request
231612	25 – 50	B	0.01	18	0.5	25	0.006	on request
231613	50 – 75	B	0.01	18	0.5	—	0.007	on request
231614	75 – 100	B	0.01	18	0.5	—	0.008	on request
231615	5 – 100 (Set)	A + B	0.01	18	0.5	5 + 25	0.005 / 0.006 / 0.007 / 0.008	on request

Internal Micrometer

workshop grade

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

- drum and sleeve matt 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



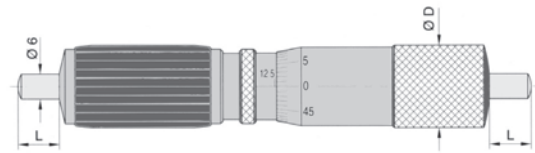
ART ^{NO}	 mm	 mm	 mm	 mm	 max. mm	
230610	5 – 55	0.01	0.5	30	0.006	on request

Analog Internal Micrometers

Internal Micrometers

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



Other sizes available
on request!



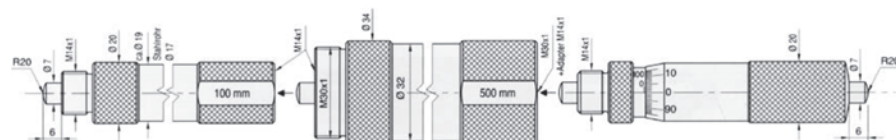
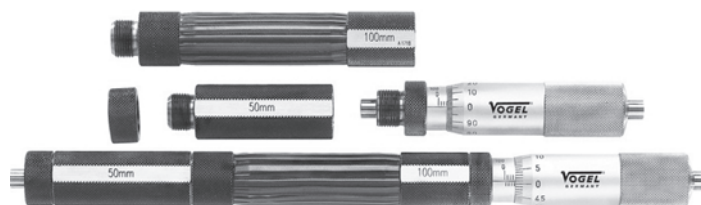
ART N°	 mm	 mm	 mm	 $\varnothing$ D mm	L mm	 mm	 on request
230740	25 – 30	0.01	0.5	15	1.5	0.003	on request
230741	30 – 35	0.01	0.5	15	1.5	0.003	on request
230742	35 – 50	0.01	0.5	15	1.5	0.003	on request
230743	50 – 75	0.01	0.5	16	1.5	0.003	on request
230744	75 – 100	0.01	0.5	17	6	0.003	on request
230745	100 – 125	0.01	0.5	20	6	0.003	on request
230746	125 – 150	0.01	0.5	20	10	0.003	on request
230747	150 – 175	0.01	0.5	20	10	0.004	on request
230748	175 – 200	0.01	0.5	20	10	0.004	on request
230749	200 – 225	0.01	0.5	20	10	0.004	on request
230750	225 – 250	0.01	0.5	20	10	0.004	on request
230751	250 – 275	0.01	0.5	20	10	0.004	on request
230752	275 – 300	0.01	0.5	20	10	0.004	on request
230753	300 – 325	0.01	0.5	20	10	0.004	on request
230754	325 – 350	0.01	0.5	20	10	0.004	on request
230755	350 – 375	0.01	0.5	20	10	0.004	on request
230756	375 – 400	0.01	0.5	20	10	0.004	on request
230757	400 – 425	0.01	0.5	20	10	0.004	on request
230758	425 – 450	0.01	0.5	20	10	0.004	on request
230759	450 – 475	0.01	0.5	20	10	0.004	on request
230760	475 – 500	0.01	0.5	20	10	0.004	on request
230761	500 – 525	0.01	0.5	20	10	0.005	on request
230762	525 – 550	0.01	0.5	20	10	0.005	on request
230763	550 – 575	0.01	0.5	20	10	0.005	on request
230764	575 – 600	0.01	0.5	20	10	0.005	on request
230765	600 – 625	0.01	0.5	20	10	0.005	on request
230766	625 – 650	0.01	0.5	20	10	0.005	on request
230767	650 – 675	0.01	0.5	20	10	0.005	on request
230768	675 – 700	0.01	0.5	20	10	0.005	on request
230769	700 – 725	0.01	0.5	20	10	0.005	on request
230770	725 – 750	0.01	0.5	20	10	0.005	on request
230771	750 – 775	0.01	0.5	20	10	0.005	on request

Internal Micrometers Sets

Internal Micrometer Sets

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, $\varnothing 7 \times 6 \text{ mm}$
- high accuracy because of spring loaded measuring end
- with insulation handle
- individual packed extensions are available on request



DIN

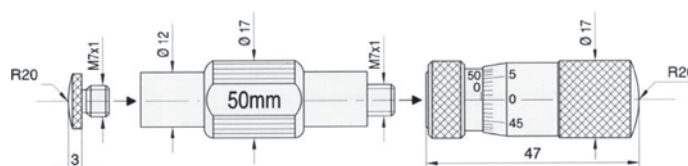
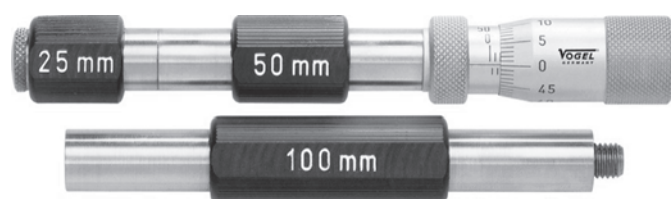
ART N°				quantity of anvils with ...			
	mm	mm	mm	... tube-ø 17 mm	... tube-ø 32 mm	mm	
230440	100 – 200	0.01	0.5	50		0.005	on request
230441	100 – 300	0.01	0.5	50 / 100		0.007	on request
230442	100 – 500	0.01	0.5	50 / 100 / 200		0.009	on request
230443	100 – 900	0.01	0.5	50 / 100 / 200 / 400		0.011	on request
230444	100 – 1300	0.01	0.5	50 / 100 / 200 / 400		0.013	on request
230445	100 – 1700	0.01	0.5	50 / 100 / 200 / 400 / 800		0.015	on request
230446	100 – 2100	0.01	0.5	50 / 100 / 200 / 400 / 800		0.018	on request
230447	100 – 2500	0.01	0.5	50 / 100 / 200 / 400 / 800		0.021	on request
230448	100 – 2000	0.01	0.5	50 / 100 / 200	500 / 1 x 1000	0.018	on request
230449	100 – 3000	0.01	0.5	50 / 100 / 200	500 / 2 x 1000	0.03	on request
230470	100 – 4000	0.01	0.5	50 / 100 / 200	500 / 3 x 1000	0.04	on request
230471	100 – 5000	0.01	0.5	50 / 100 / 200	500 / 4 x 1000	0.05	on request
230472	100 – 6000	0.01	0.5	50 / 100 / 200	500 / 5 x 1000	0.06	on request

Internal Micrometer Sets

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



DIN

ART N°	 mm	 mm	 mm	quantity of anvils with tube-ø 17 mm	 max. mm	
230880	50 – 150	0.01	0.5	25 / 50	0.006	on request
230881	50 – 250	0.01	0.5	25 / 50 / 100	0.008	on request
230882	50 – 300	0.01	0.5	25 / 50 / 50 / 100	0.009	on request
230883	50 – 450	0.01	0.5	25 / 50 / 100 / 200	0.01	on request
230884	50 – 850	0.01	0.5	25 / 50 / 100 / 200 / 400	0.012	on request
230885	50 – 1450	0.01	0.5	25 / 50 / 100 / 200 / 400 / 600	0.015	on request

Bowers • Electr. Digital 3-Point Bore Gauges • IP67

- with integrated Bluetooth® technology
- water- and coolant proof acc. to DIN 40050 / IEC 60529
- for through holes and from up 12.5 mm for blind holes also

- Proximity-USB / RS232 output
- large LCD display with clear reading, digit height 9 mm
- bi-directional communication, ratchet stop, to ensure constant measuring force
- from up 12.5 mm with carbide measuring faces, „0“-setting at any position
- On-/Off-button, mm/inch switchable, data hold function
- 4 preset memories, simple 2-button operation
- incl. setting ring, UKAS certificates for instruments and setting rings
- incl. 1x 3 V battery (CR2032, art. no.: 90112), with operation manual

Options

- other measuring ranges and other measuring heads available on request!
- extensions can be found on page 102



ART NO	mm / inch	mm / inch	max. mm	meas. depth mm	ø mm	CC
230631-BT	6 – 8 / 0.25 – 0.3	0.001 / 0.00005	0.004	58	8	inclusive
230632-BT	8 – 10 / 0.3 – 0.4	0.001 / 0.00005	0.004	58	8	inclusive
230633-BT	10 – 12.5 / 0.4 – 0.5	0.001 / 0.00005	0.004	58	12.5	inclusive
230634-BT	12.5 – 16 / 0.5 – 0.6	0.001 / 0.00005	0.004	62	12.5	inclusive
230635-BT	16 – 20 / 0.6 – 0.8	0.001 / 0.00005	0.004	62	20	inclusive
230636-BT	20 – 25 / 0.8 – 1	0.001 / 0.00005	0.004	66	20	inclusive
230637-BT	25 – 35 / 1 – 1.37	0.001 / 0.00005	0.004	66	35	inclusive
230638-BT	35 – 50 / 1.37 – 2	0.001 / 0.00005	0.004	80	35	inclusive
230639-BT	50 – 65 / 2 – 2.55	0.001 / 0.00005	0.005	80	65	inclusive
230640-BT	65 – 80 / 2.55 – 3.15	0.001 / 0.00005	0.005	80	65	inclusive
230641-BT	80 – 100 / 3.15 – 4	0.001 / 0.00005	0.005	100	80	inclusive
230642-BT	100 – 125 / 4 – 5	0.001 / 0.00005	0.006	115	125	inclusive
230643-BT	125 – 150 / 5 – 6	0.001 / 0.00005	0.006	115	125	inclusive
230644-BT	150 – 175 / 6 – 7	0.001 / 0.00005	0.007	115	175	inclusive
230645-BT	175 – 200 / 7 – 8	0.001 / 0.00005	0.007	115	175	inclusive
230646-BT	200 – 225 / 8 – 9	0.001 / 0.00005	0.008	118	225	inclusive
230647-BT	225 – 250 / 9 – 10	0.001 / 0.00005	0.008	118	225	inclusive
230648-BT	250 – 275 / 10 – 11	0.001 / 0.00005	0.009	118	275	inclusive
230649-BT	275 – 300 / 11 – 12	0.001 / 0.00005	0.009	118	275	inclusive

Bowers • Electr. Digital 2-/3-Point Bore Gauge Sets • IP67

- with integrated Bluetooth® technology
- water- and coolant proof acc. to DIN 40050 / IEC 60529
- for through holes and from up 12.5 mm for blind holes also

- Proximity-USB / RS232 output
- large LCD display with clear reading, digit height 9 mm
- bi-directional communication, ratchet stop, to ensure constant measuring force
- from up 12.5 mm with carbide measuring faces, „0“-setting at any position
- On-/Off-button, mm/inch switchable, data hold function
- 4 preset memories, simple 2-button operation
- incl. setting ring, UKAS certificates for instruments and setting rings
- incl. 1x 3 V battery (CR2032, art. no.: 90112), with operation manual

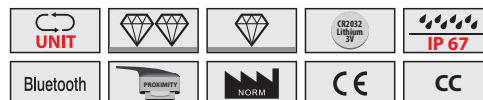


ART NO	mm / inch	mm / inch	max. mm	meas. depth mm	meas. heads amount	Pices	CC
2-Point Bore Gauge Set							
230611-BT	2 – 6 / 0.08 – 0.25	0.001 / 0.00005	0.004	9 / 12 / 18	5	3	inclusive
3-Point Bore Gauge Set							
230612-BT	6 – 10 / 0.25 – 0.4	0.001 / 0.00005	0.004	58	2	1	inclusive
230613-BT	10 – 20 / 0.4 – 0.8	0.001 / 0.00005	0.004	58 / 62	3	2	inclusive
230614-BT	20 – 50 / 0.8 – 2	0.001 / 0.00005	0.004	66 / 80	3	2	inclusive
230615-BT	50 – 100 / 2 – 4	0.001 / 0.00005	0.005	80 / 100	3	2	inclusive
230616-BT	100 – 150 / 4 – 6	0.001 / 0.00005	0.006	115	2	1	inclusive
230617-BT	150 – 200 / 6 – 8	0.001 / 0.00005	0.007	115	2	1	inclusive
230618-BT	100 – 200 / 4 – 8	0.001 / 0.00005	0.006 / 0.007	115	4	2	inclusive

Digital Bore Gauges

Bowers • Electr. Digital 3-Point Pistol Grip Bore Gauges • IP67

- with integrated Bluetooth® technology
- water- and coolant proof acc. to DIN 40050 / IEC 60529
- XT3 „Holematic“, with Sylvac-Electronic
- for through holes and from up 12.5 mm for blind holes also
- Proximity-USB / RS232 data output
- large LCD display with clear reading, digit height 9 mm
- bi-directional communication, easy handling, with rugged grip
- from up 12.5 mm with carbide measuring faces, „0“-setting at any position
- On-/Off-button, mm/inch switchable, data hold function
- 4 preset memories, simple 2-button operation
- incl. setting ring, UKAS certificates for instruments and setting rings
- incl. 1x 3 V battery (CR2032, art. no.: 90112), with operation manual



Options

- other measuring ranges and other measuring heads available on request!

ART NO	mm / inch	mm / inch	mm	meas. depth mm	ø mm	
230976-BT	6 – 8 / 0.25 – 0.3	0.001 / 0.00005	0.004	58	8	inclusive
230977-BT	8 – 10 / 0.3 – 0.4	0.001 / 0.00005	0.004	58	8	inclusive
230978-BT	10 – 12.5 / 0.4 – 0.5	0.001 / 0.00005	0.004	58	12.5	inclusive
230979-BT	12.5 – 16 / 0.5 – 0.6	0.001 / 0.00005	0.004	62	12.5	inclusive
230980-BT	16 – 20 / 0.6 – 0.8	0.001 / 0.00005	0.004	62	20	inclusive
230981-BT	20 – 25 / 0.8 – 1	0.001 / 0.00005	0.004	66	20	inclusive
230982-BT	25 – 35 / 1 – 1.37	0.001 / 0.00005	0.004	66	35	inclusive
230983-BT	35 – 50 / 1.37 – 2	0.001 / 0.00005	0.004	80	35	inclusive
230984-BT	50 – 65 / 2 – 2.55	0.001 / 0.00005	0.005	80	65	inclusive
230985-BT	65 – 80 / 2.55 – 3.15	0.001 / 0.00005	0.005	80	65	inclusive
230986-BT	80 – 100 / 3.15 – 4	0.001 / 0.00005	0.005	100	80	inclusive
230987-BT	100 – 125 / 4 – 5	0.001 / 0.00005	0.006	115	125	inclusive
230988-BT	125 – 150 / 5 – 6	0.001 / 0.00005	0.006	115	125	inclusive
230989-BT	150 – 175 / 6 – 7	0.001 / 0.00005	0.007	115	175	inclusive
230990-BT	175 – 200 / 7 – 8	0.001 / 0.00005	0.007	115	175	inclusive
230991-BT	200 – 225 / 8 – 9	0.001 / 0.00005	0.008	118	225	inclusive
230992-BT	225 – 250 / 9 – 10	0.001 / 0.00005	0.008	118	225	inclusive
230993-BT	250 – 275 / 10 – 11	0.001 / 0.00005	0.009	118	275	inclusive
230994-BT	275 – 300 / 11 – 12	0.001 / 0.00005	0.009	118	275	inclusive

Bowers • Electr. Digital 2-/3-Point Pistol Grip Bore Gauge Sets • IP67

- with integrated Bluetooth® technology
- water- and coolant proof acc. to DIN 40050 / IEC 60529
- XT3 „Holematic“, with Sylvac-Electronic
- for through holes and from up 12.5 mm for blind holes also

- Proximity-USB / RS232 data output
- large LCD display with clear reading, digit height 9 mm
- bi-directional communication, easy handling, with rugged grip
- from up 12.5 mm with carbide measuring faces, „0“-setting at any position
- On-/Off-button, mm/inch switchable, data hold function
- 4 preset memories, simple 2-button operation
- incl. setting ring, UKAS certificates for instruments and setting rings
- incl. 1x 3 V battery (CR2032, art.-no.: 90112), with operation manual

OPTIONS
see above



ART NO	mm / inch	mm / inch	mm	meas. depth mm	meas. heads amount	quantity	
2-Point Bore Gauge Set							
230840-BT	2 – 6 / 0.08 – 0.25	0.001 / 0.00005	0.004	9 / 12 / 18	5	3	inclusive
3-Point Bore Gauge Set							
230841-BT	6 – 10 / 0.25 – 0.4	0.001 / 0.00005	0.004	58	2	1	inclusive
230842-BT	10 – 20 / 0.4 – 0.8	0.001 / 0.00005	0.004	58 / 62	3	2	inclusive
230843-BT	20 – 50 / 0.8 – 2	0.001 / 0.00005	0.004	66 / 80	3	2	inclusive
230844-BT	50 – 100 / 2 – 4	0.001 / 0.00005	0.005	80 / 100	3	2	inclusive
230845-BT	100 – 150 / 4 – 6	0.001 / 0.00005	0.006	115	2	1	inclusive
230846-BT	150 – 200 / 6 – 8	0.001 / 0.00005	0.007	115	2	1	inclusive
230847-BT	100 – 200 / 4 – 8	0.001 / 0.00005	0.006 / 0.007	115	4	2	inclusive

Bowers • Electr. Digital 3-Point Bore Gauge Sets • IP67

- with integrated Bluetooth® technology
- water- and coolant proof acc. to DIN 40050 / IEC 60529
- Bowers Model „XT500“, with Sylvac-Electronic
- designed specifically for the measurement of internal diameters between 300 – 500 mm
- measuring head with exchangeable anvils

- Proximity-USB / RS232 data output
- large LCD display with clear reading, digit height 9 mm
- hardened, radiussed measuring anvils provide optimum centralisation in the part
- anvil sets are supplied in 25 mm steps, each set has been manufactured to exact tolerance size
- the 300 – 325 mm anvils are the master reference set and are used for setting gauge in the setting ring
- only one 300 mm setting ring is required to set the gauge for all diameters in the full 300 – 500 mm range of the instrument
- bi-directional communication, ratchet stop, to ensure constant measuring force
- On-/Off-button, mm/inch switchable, data hold function, simple 2-button operation
- 4 preset memories, simple 2-button operation
- incl. setting ring with UKAS certificate for setting ring
- incl. 1x 3 V battery (CR2032, art.-no. 90112), with operation manual

Option

- extensions for deeper bores 150 / 500 / 1000 mm available on request



application example



ART N°	mm / inch	mm	max. mm	mm	meas. depth mm	ø mm	CC
230437-BT	300 – 400 / 12 – 16	0.01 / 0.0001 0.0005 / 0.00005	0.015	0.003	120	300	inclusive
230438-BT	300 – 325 / 400 – 500 12 – 12.8 / 16 – 20	0.01 / 0.0001 0.0005 / 0.00005	0.015	0.003	120	300	inclusive
230439-BT	300 – 500 / 12 – 20	0.01 / 0.0001 0.0005 / 0.00005	0.015	0.003	120	300	inclusive

Bowers • Electr. Digital 2-Point Bore Gauge Sets • IP65

- water- and coolant proof acc. to DIN 40050 / IEC 60529
- Micro Gauge, with Sylvac-Electronic
- designed specifically for the measurement of small bores between 1.0 – 10.0 mm

- Proximity-USB / RS232 data output
- slimline LCD display with clear reading, digit height 7 mm
- switchable resolution 0.01 / 0.001 / 0.0005 mm
- hard-chromed ball-contacts
- On-/Off-button, mm/inch switchable, data hold function, simple 2-button operation
- Linearity: ø 1.0 – 1.5 max. 2% of measuring travel, min. 0.001 mm, ø 1.5 – 10 mm max. 1% of measuring travel, min. 0.001 mm
- incl. setting ring with UKAS certificate for setting ring
- incl. 2x 1.5 V battery (LR44, art.-no. 90213), with operation manual

Options

- also available as single devices with various measuring ranges on request
- data transfer via WiFi, art.-no. 2023104 + 2023105, see page 272



ART N°	mm / inch	mm	max. mm	meas. depth mm	quantity	CC
230190	0.95 – 1.55 / 0.037 – 0.045	0.01 / 0.001 / 0.0005	0.001	0.6 – 11	5	inclusive
230191	1.50 – 2.45 / 0.059 – 0.096	0.01 / 0.001 / 0.0005	0.001	0.9 – 17	4	inclusive
230192	2.25 – 4.25 / 0.089 – 0.167	0.01 / 0.001 / 0.0005	0.001	1.2 – 22	7	inclusive
230193	3.65 – 6.35 / 0.144 – 0.250	0.01 / 0.001 / 0.0005	0.001	2.0 – 40	5	inclusive
230194	6.15 – 8.35 / 0.242 – 0.329 8.15 – 10.35 / 0.321 – 0.408	0.01 / 0.001 / 0.0005	0.001	2.0 – 40 2.0 – 50	8	inclusive

Digital Bore Gauges

Bowers • Accessories for Analogue- and Electr. Digital 3-Point Bore Gauges

- extensions in different length
- depth stop for measuring range 2 – 6 mm

Extension	ART N°	 mm	for measuring heads
	230651	63	6 – 10
	230652	76	10 – 12,5
	230653	100	12,5 – 20
	230654	150	20 – 50
	230655	150	50 – 300

Depth Stop for Electr. Digital 3-Point Bore Gauges	ART N°	 mm
	230656	2 – 6

Bowers • Accessories for Electr. Digital 2-Point Bore Gauge (MicroGauge)

- extensions in different length
- stand for MicroGauge

Depth Stop for MicroGauge	ART N°	 mm
	230475	0.95 – 1.55
	230476	1.50 – 2.45
	230477	2.25 – 4.25
	230478	3.65 – 6.35
	230479	6.15 – 10.35

Stand for MicroGauge	ART N°
	230658

Bowers • Accessories setting ring for XT500 Electr. Digital 3-Point Bore Gauge

- setting ring, hardened and lapped, incl. UKAS-calibration certificate

ART N°	 mm	
230770-3000	300	inclusive



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partnership request



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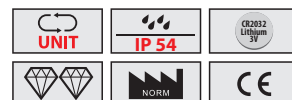


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Electr. Digital 3-Point Bore Micrometers • IP54

- spray water proof acc. to DIN 40050 / IEC 60529
- for bore holes and blind holes
- with 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, $\pm$ preset function
- incl. setting ring and with extension rod
- incl. 1x 3 V battery (typee CR2032, art. no.: 90112), with operation manual



Options

- data transfer via cable, art. no.: 2420194, see page 272
- data transfer via WiFi, art. no.: 2040101, see page 272
- data transfer via Bluetooth®, art. no.: 209000, see page 272

ART NO	mm / inch	mm / inch	max. mm	L1 mm	B mm	C mm	extension rod mm	ø mm	CC
236431	6 – 8 / 0.24 – 0.32	0.001 / 0.00005	0.004	30	2.5	1	50	8	on request
236432	8 – 10 / 0.32 – 0.4	0.001 / 0.00005	0.004	30	2.5	1	50	8	on request
236433	10 – 12 / 0.4 – 0.5	0.001 / 0.00005	0.004	30	2.5	1	50	10	on request
236434	12 – 16 / 0.5 – 0.63	0.001 / 0.00005	0.004	48	6.3	0.4	100	16	on request
236435	16 – 20 / 0.63 – 0.8	0.001 / 0.00005	0.004	48	6.3	0.4	100	16	on request
236436	20 – 25 / 0.8 – 1	0.001 / 0.00005	0.004	50	9.2	0.4	150	25	on request
236437	25 – 30 / 1 – 1.2	0.001 / 0.00005	0.004	50	9.2	0.4	150	25	on request
236438	30 – 40 / 1.2 – 1.6	0.001 / 0.00005	0.004	50	9.2	0.4	150	30	on request
236439	40 – 50 / 1.6 – 2	0.001 / 0.00005	0.005	55	16.5	0.5	150	40	on request
236440	50 – 63 / 2 – 2.5	0.001 / 0.00005	0.005	55	16.5	0.5	150	50	on request
236441	62 – 75 / 2.45 – 3	0.001 / 0.00005	0.005	55	16.5	0.5	150	62	on request
236442	75 – 88 / 3 – 3.46	0.001 / 0.00005	0.005	55	16.5	0.5	150	87	on request
236443	87 – 100 / 3.43 – 4	0.001 / 0.00005	0.005	55	16.5	0.5	150	87	on request

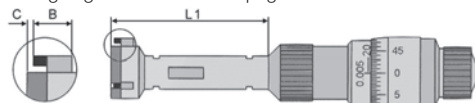
3-Point Bore Micrometers

- 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

- Setting rings can be found on page 206



ART NO	mm	mm	max. mm	L1 mm	B mm	C mm	extension rod mm	ø mm	CC
236531	6 – 8	0.001	0.004	30	2.5	1	50	8	on request
236532	8 – 10	0.001	0.004	30	2.5	1	50	8	on request
236533	10 – 12	0.001	0.004	30	2.5	1	50	10	on request
236534	12 – 16	0.005	0.004	48	6.3	0.4	100	16	on request
236535	16 – 20	0.005	0.004	48	6.3	0.4	100	16	on request
236536	20 – 25	0.005	0.004	50	9.2	0.4	150	25	on request
236537	25 – 30	0.005	0.004	50	9.2	0.4	150	25	on request
236538	30 – 40	0.005	0.004	50	9.2	0.4	150	30	on request
236539	40 – 50	0.005	0.005	55	16.5	0.5	150	40	on request
236540	50 – 63	0.005	0.005	55	16.5	0.5	150	50	on request
236541	62 – 75	0.005	0.005	55	16.5	0.5	150	62	on request
236542	75 – 88	0.005	0.005	55	16.5	0.5	150	87	on request
236543	87 – 100	0.005	0.005	55	16.5	0.5	150	87	on request

Analog Bore Gauges

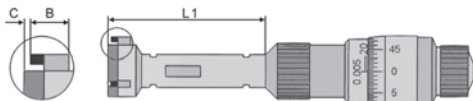
3-Point Bore Micrometer Set

• 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

- Setting rings can be found on page 206



ART No	mm	mm	mm	max. mm	L1 mm	B mm	C mm	extension rod mm	ø mm	CC
236581	6 – 12	6 – 8 8 – 10 10 – 12	0.001	0.004 0.004 0.004	30	2.5	1	50	8 10	on request
236582	12 – 20	12 – 16 16 – 20	0.005	0.004 0.004	48	6.3	0.4	100	16	on request
236583	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	on request
236584	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	on request

Bowers • 3-Point Bore Gauges

• for through holes and from up 12.5 mm for blind holes also

- vernier scale 6 – 20 mm with 0.002 mm
- chromed finish with clear reading, ergonomically designed
- ratchet stop to ensure constant measuring force
- from up 12.50 mm with carbide measuring faces
- incl. setting ring, UKAS certificates for instruments and setting rings, with operation manual



ART No	mm	mm	max. mm	meas.-depth mm	ø mm	CC
230500	6 – 8	0.002	0.004	58	8	inclusive
230501	8 – 10	0.002	0.004	58	8	inclusive
230502	10 – 12.5	0.002	0.004	58	12.5	inclusive
230503	12.5 – 16	0.002	0.004	62	12.5	inclusive
230504	16 – 20	0.002	0.004	62	20	inclusive
230505	20 – 25	0.005	0.004	66	20	inclusive
230506	25 – 35	0.005	0.004	66	35	inclusive
230507	35 – 50	0.005	0.004	80	35	inclusive
230508	50 – 65	0.005	0.005	80	65	inclusive
230509	65 – 80	0.005	0.005	80	65	inclusive
230510	80 – 100	0.005	0.005	100	80	inclusive
230511	100 – 125	0.005	0.006	115	125	inclusive
230512	125 – 150	0.005	0.006	115	125	inclusive
230513	150 – 175	0.005	0.007	115	175	inclusive
230514	175 – 200	0.005	0.007	115	175	inclusive
230515	200 – 225	0.005	0.008	118	225	inclusive
230516	225 – 250	0.005	0.008	118	225	inclusive
230517	250 – 275	0.005	0.009	118	275	inclusive
230518	275 – 300	0.005	0.009	118	275	inclusive

Bowers • 2-/3-Point Bore Gauge Sets

- for through holes and from up 12.5 mm for blind holes also

- vernier scale 2 – 6 mm with improved resolution in 0.001 mm (micro version)
- vernier scale 6 – 20 mm with improved resolution in 0.002 mm (micro version)
- chromed finish with clear reading, ergonomically designed
- ratchet stop to ensure constant measuring force
- from up 12.50 mm with carbide measuring faces
- incl. setting ring, UKAS certificates for instruments and setting rings, with operation manual

Option

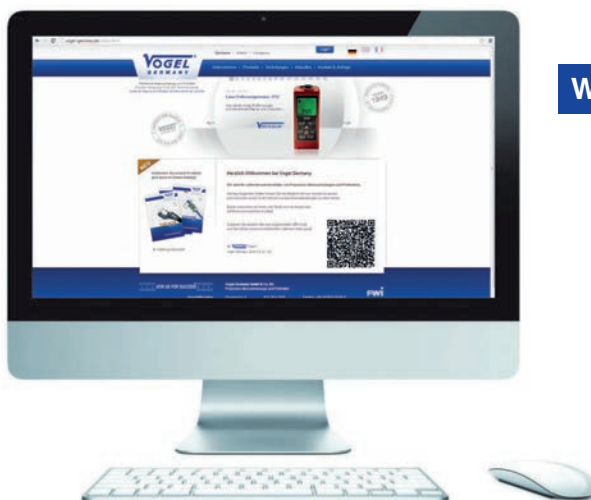
- extensions see page 102



ART NO	mm	mm	mm	meas.-depth mm	meas.-heads amount	quantity	
2-Point Bore Gauge Sets							
230520	2 – 3	0.001	0.004	9	2	1	inclusive
230521	3 – 6	0.001	0.004	12 / 18	3	2	inclusive
3-Point Bore Gauge Sets							
230522	6 – 10	0.002	0.004	58	2	1	inclusive
230523	10 – 20	0.002	0.004	58 / 62	3	2	inclusive
230524	20 – 50	0.005	0.004	66 / 80	3	2	inclusive
230525	50 – 100	0.005	0.005	80 / 100	3	2	inclusive
230526	100 – 150	0.005	0.006	115	2	1	inclusive
230527	150 – 200	0.005	0.007	115	2	1	inclusive

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www.vogel-germany.de



Any questions?

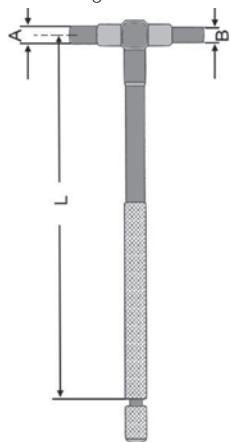
We are pleased to advise.

Telescopic Gauges and Bore Gauges

Telescopic Gauges, 6-pcs.

- 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 N° 472030



ART N° 472031



ART N°	Set / mm	mm	measuring depth (L) mm	A mm	B mm
472030	8 – 150	8 – 12.7	102	4	3
		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
472031	8 – 150	8 – 12.7	300	4	3
		12.7 – 19	300	5	4
		19 – 32	300	5	4
		32 – 54	300	7.5	6
		54 – 90	300	7.5	6
		90 – 150	300	7.5	6

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 N° 237011 – 237012



ART N° 237013



ART N° 237014 – 237017

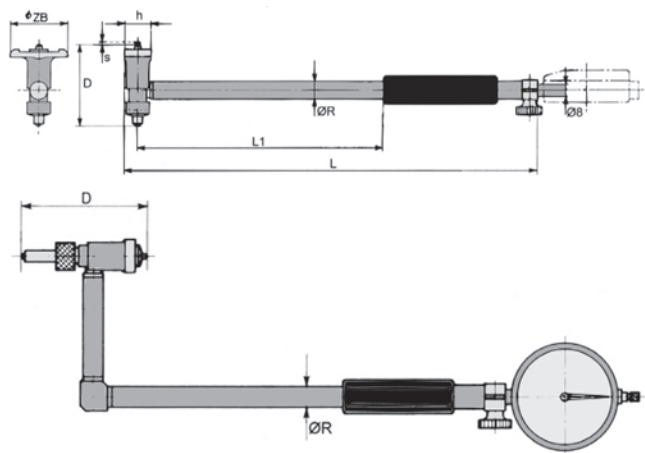


ART N°	mm	mm	quantity of contact points	quantity of distance plates	L mm	CC
237011	10 – 18	0.01	9	1	50	on request
237012	18 – 35	0.01	7	2	142	on request
237013	35 – 50	0.01	5	2	155	on request
237014	50 – 100	0.01	7	2	200	on request
237015	50 – 160	0.01	8	2	200	on request
237016	100 – 160	0.01	8	2	205	on request
237017	160 – 250	0.01	8	2	205	on request

Schwenk • 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:
4.50 – 290 mm = fw < 0.50 µm, 280 – 800 mm = fw < 1.50 µm
- deviation range at sizes:
4.50 – 290 mm = fe < 2.00 µm, 280 – 800 mm = fe < 3.00 µm
- with operation manual



ART N° steel contact points	ART N° carbide contact points	D mm → ←	quantity of contact points	L1 mm	L mm	R ø mm	s mm	h mm	ZB ø mm	CC
—	230720	4.5 – 6	9	80	147	4	0.35	2	4	on request
—	230721	6 – 8	7	100	165	5	0.5	2.6	5.2	on request
—	230722	8 – 12	9	100	165	5	0.7	3.25	6.5	on request
—	230723	12 – 20	9	110	204	8	0.9	4.5	9	on request
230700	230724	18 – 35	9	110	206	8	1.3	5.4	14.8	on request
230701	230725	35 – 60	6	138	243	10	1.3	7	28	on request
230702	230726	50 – 100	11	177	295	12	1.4	8.5	45	on request
230703	230727	50 – 150	11	177	295	12	1.4	8.5	45	on request
230704	230728	100 – 160	7	234	365	18	1.6	11.5	75	on request
230705	230729	100 – 230	7	234	365	18	1.6	11.5	75	on request
230706	230730	160 – 290	7	234	365	18	1.6	11.5	120	on request
230707	230731	160 – 360	7	234	365	18	1.6	11.5	120	on request
230708	230732	280 – 410	7	400	550	24	2.6	16	165	on request
230709	230733	280 – 510	7	400	550	24	2.6	16	165	on request
230710	230734	400 – 800	11	700	855	24	2.6	17.5	300	on request

Schwenk • Extension for Bore Gauges

- for internal micrometer series 230701 – 230734
- suitable from up bore-ø 35 mm

- plug-in connection
- dial indicator shaft-ø 8 mm



ART N°	→ ← mm	pipe-ø mm	ART N°	→ ← mm	pipe-ø mm
230790	250	12	230794	1000	18
230791	500	12	230795	1500	18
230792	750	12	230796	2000	18
230793	1000	12	—	—	—

Thickness Gauges

Käfer • Thickness Gauge

• with adjustable scale

- measuring surfaces hardened, ground and lapped
- spindle and probe made of stainless steel, measuring pressure approx. 1 N
- zero setting of the display by rotating the knurled outer ring
- different but **not** exchangeable probes are available

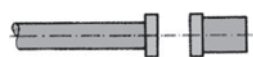
The probe type "F" is delivered as standard!



ART No	 mm	 mm	thread depth mm	 mm	available probes
240401	0 – 10	0.1	15	10	F G H K
240402	0 – 20	0.1	15	10	F G H K

Tasterformen

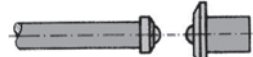
form F: standard version 6.35 mm ø, flat



form G: curved



form H: ball shaped



form K: 10 mm ø, flat



Electr. Digital Thickness Gauge

• pocket size, with spindle lifting knob

- stainless, hardened measuring surface, rugged plastic cover
- large LCD display with clear reading, digit height 10 mm
- measuring plate Ø15 mm
- On/Off button, mm/inch switchable
- zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



example of application



ART No	 mm / inch	 mm / inch	 mm	 max. mm	thread depth mm
240409	0 – 25	0.01 / 0.0005	0.01	0.02	30

Käfer • Thickness Gauge

DIN 878

• pocket size, with spindle lifting wheel

- measuring surfaces hardened, ground and lapped
- spindle and probe made of stainless steel, measuring pressure approx. 1 N
- reading by concentrically mm pointer
- zero setting by rotating the knurled outer ring
- different but **not** exchangeable probes are available

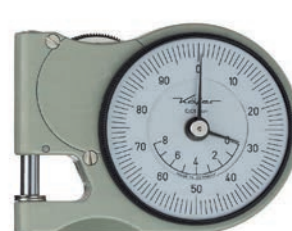
The probe type "F" is delivered as standard!

In case of order indicate the probe type, please!

ART No 240404



ART No 240403

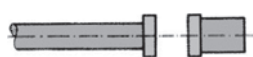


DIN

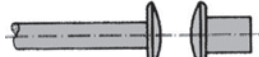
ART No	 mm	 mm	thread depth mm	available probes	 mm	
240403	0 – 8	0.01	12	F H	1	on request
240404	0 – 10	0.01	18	F G H K	1	on request

Stylus shapes

form F: standard version 6.35 mm ø, flat



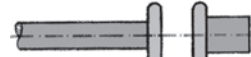
form G: arched



form H: ball shaped



form K: 10 mm ø, flat



Käfer • Thickness Gauges

DIN 878

- for measuring the thickness of leather, paper, felt, rubber etc.

- frame made of light metal, hammer blow lacquered
- measuring faces hardened, ground and lapped
- spindle and probe made of stainless steel
- zero-setting of the display by rotating the knurled outer ring
- different **but not** exchangeable probes are available

*The probe type "C" is delivered as standard!
In case of order indicate the probe type, please!*



type P



type L



type M



type N

Contact Points



rubber, felt, soft materials	rubber, felt, soft materials	soft leather, cardboard, paper, foils	hard leather, plywood etc.	sheet metals, etc.
form A	form B	form C (Standard)	form D	form E

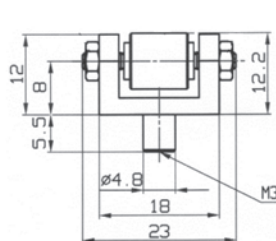
ART N°	mm	mm	type	throat depth mm	available probes	mm	
240410	0 – 10	0.01	P	50	A B C D E	1	on request
240411	0 – 10	0.01	L	50	A B C D E	1	on request
240412	0 – 10	0.01	L	100	A B C D E	1	on request
240413	0 – 10	0.01	M	200	A B C D E	1	on request
240414	0 – 10	0.1	P	50	A B C D E	10	on request
240415	0 – 10	0.1	L	50	A B C D E	10	on request
240416	0 – 20	0.1	P	50	A B C D E	10	on request
240417	0 – 30	0.1	N	50	A B C D E	10	on request
240420	0 – 30	0.1	M	200	A B C D E	10	on request
240421	0 – 30	0.1	M	300	A B C D E	10	on request
240422	0 – 30	0.1	M	400	A B C D E	10	on request
240423	0 – 30	0.01	M	200	A B C D E	1	on request

Thickness Gauges

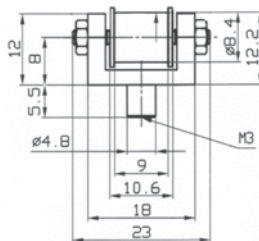
Käfer • Thickness Gauges with Wheels

- designed for the measuring of threads, wires, strings, foils, etc.
- as special version with side discs on the lower wheel available

- frame made of solid cast iron. hammer blow lacquered
- measuring wheels hardened and ground
- scale rotateable by a knurled outer ring
- dial indicator with spindle lifting lever
- measuring pressure approx. 1.2 N



240425 without discs



240426 with side discs



ART N°			size of wheels length x ø mm	throat depth mm	side discs			
	mm	mm			yes	no	mm	
240425	0 – 5	0.01	8.7 x 8.4	50	—	✗	1	on request
240426	0 – 5	0.01	8.7 x 8.4	50	✓	—	1	on request

Käfer • Foil Thickness Gauge

- exclusively to use to measure the thickness of thin foils

- frame made of solid cast iron, hammer blow lacquered
- with isolation handle
- measuring surfaces hardened, ground and lapped, probe-ø 6.35 mm
- dial indicator in a dustproof housing, housing-ø 58 mm
- measuring pressure approx. 2 N, shockproof version



example of application



ART N°	 mm	 mm	graduation mm	throat depth mm	 mm	
240400	0 – 1	0.001	0 – 100	30	0.10	on request

Käfer • Saw Teeth Setting Dial Indicator

- designed to check the right setting of the saw teeth

- sturdy housing made of light metal, hammer blow lacquered
- dial on both sides, for right and left hand use
- with tolerance fingers and rotatable scale
- 4 bearing points for exact measurements
- spring loaded measuring plate, measuring plate- $\varnothing$ 10 mm



example of application

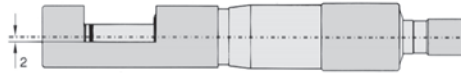


ART N°	 mm	 mm	graduation mm	 mm	outer ring-ø mm	
240370	0 – 2	0.1	0.05	1	40	on request

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 N°	 mm	 mm	 ø mm	 mm	spindle-ø mm	 max. mm	CC
232902	0 – 10	0.01	19	0.5	6.5	0.004	on request

Precision In- and Outside Caliper

- made of Dur-Aluminium, surface hardened HRC63
- scratch-resistant, black anodized surface
- laser engraved, clear reading scale

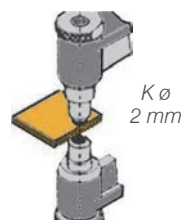


ART N°	 mm	 mm	total length mm
303306	120	0.1	190
303307	160	0.1	250
303308	200	0.1	310
303309	250	0.1	380
303310	300	0.1	460

Quicktest "Pocotest"

- universal and handy pocket measuring instrument

- tungsten carbide measuring contact points
- with moveable contact arm
- incl. operation manual



ART N°	 mm	 mm	L mm	Hb mm	Hf mm	F min. N	F max. N	 max. mm	CC
241420	0 – 10	0.1	36	5	5	0.3	1.3	0.1	on request

Quick Test Gauges

Kroepelin • Quicktest Gauge “Oditest” • IP65

- for measuring of external grooves, bars and flats etc.

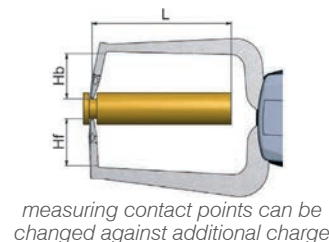
- water proof
- tungsten carbide measuring contact points
- with moveable arm, with tolerance fingers
- zero setting by rotating the knurled outer ring

ART N° 240437



D = form of measuring contact points

form 6 T ø 6/10 mm	form 7 S R 0.40 mm	form 8 K ø 1.50 mm	form 14 HM-K ø 3/5 mm	form 18 HM-K ø 3.00 mm



ART N°	mm	mm	form D	L mm	Hb mm	Hf mm	F min. N	F max. N	mm	CC
240435	0 – 10	0.005	6 / ø 6	35	21.7	14.8	0.80	1.2	0.02	inclusive
240435-1	0 – 20	0.01	6 / ø 10	85	28.2	20.7	1.10	1.6	0.04	inclusive
240436	0 – 20	0.01	7	85	24.6	24.6	1.10	1.6	0.03	inclusive
240437	0 – 20	0.01	8	85	24.6	24.6	1.10	1.6	0.03	inclusive
240438	0 – 50	0.05	14 / ø 3	170	32	32	1.20	1.8	0.05	inclusive
240439	0 – 50	0.05	18	170	32	1	1.20	1.8	0.05	inclusive
240440	50 – 100	0.05	14 / ø 5	170	32	32	1.20	1.8	0.075	inclusive
240441	100 – 150	0.05	14 / ø 5	170	32	32	1.20	1.8	0.075	inclusive

Explore our **Website.**

www.vogel-germany.de



Any questions?

We are pleased to advise.

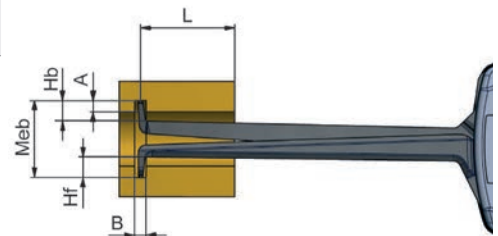
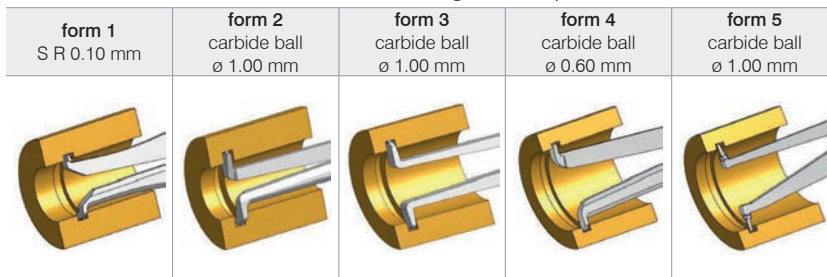
Kroeplin • Quicktest Gauge “Intertest“ • IP65

• for measuring of internal grooves, bore etc.

- water and colant proof acc. to DIN 40050 / IEC 60529
- tungsten carbide measuring contact points
- with rack gear
- with moveable contact arm
- with tolerance fingers
- incl. operation manual



D = form of measuring contact points

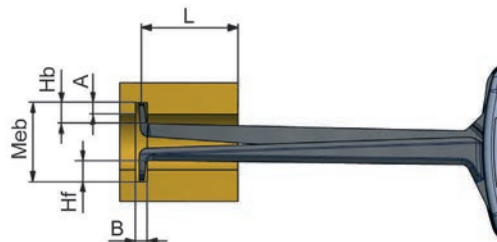


ART N°	mm	mm	form	L mm	A mm	B mm	Hb mm	Hf mm	F min. N	F max. N	mm	CC
240530	2.5 – 12.5	0.005	1	35	0.7	0.4	0.9	0.9	0.8	1.2	0.015	inclusive
240532	5 – 15	0.005	4	35	2.3	0.8	2.5	2.5	0.8	1.2	0.015	inclusive

Kroeplin • Quicktest Gauge “Intertest“ • IP65

• for measuring of internal grooves, bores, etc.

- water and colant proof acc. to DIN 40050 / IEC 60529
- tungsten carbide measuring contact points
- with steel filament drive
- with moveable contact arm
- with tolerance fingers
- incl. operation manual



ART N°	mm	mm	form	L mm	A mm	B mm	Hb mm	Hf mm	F min. N	F max. N	mm	CC
240539	10 – 30	0.01	2	85	5.2	1.2	5.4	5.4	1.1	1.6	0.03	inclusive
240540	20 – 40	0.01	3	85	7	1.2	7.3	7.3	1.1	1.6	0.03	inclusive
240541	30 – 50	0.01	3	85	7	1.2	7.3	7.3	1.1	1.6	0.03	inclusive
240542	40 – 60	0.01	5	85	8.3	1.2	12.2	12.2	1.1	1.6	0.03	inclusive
240543	50 – 70	0.01	5	85	8.3	1.2	12.2	12.2	1.1	1.6	0.03	inclusive
240544	60 – 80	0.01	5	85	8.3	1.2	12.2	12.2	1.1	1.6	0.03	inclusive
240545	70 – 90	0.01	5	85	8.3	1.2	12.2	12.2	1.1	1.6	0.03	inclusive
240546	80 – 100	0.01	5	85	8.3	1.2	12.2	12.2	1.1	1.6	0.03	inclusive

Quick Test Gauges

Kroepelin • Electr. Digital Quicktest Gauge • IP67

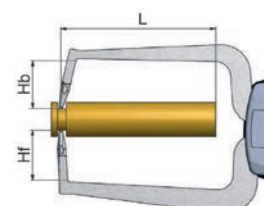
- with analogous and digital display
- with USB interface and with Mitutoyo interface (as accessories available)

- robust, rugged plastic housing, LCD-Display with clear digits
- ABS and REL measuring system, red/green display for tolerance measurement
- with tungsten carbide measuring contact points, one movable contact arm
- reading in mm/inch, numeric interval switch
- incl. 1x 1.5 V battery (type AA, art. no.: 90003), and operation manual



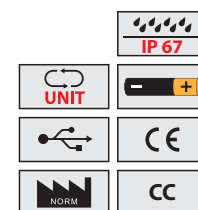
D = form of measuring contact points **external**

form A carbide ball ø 1.50 mm / ø 3.00 mm	form B S / R 0.40 mm	form C disc ø 6 / 10 mm	form D disc ø 50 mm	form E carbide ball ø 1.50 mm / ø 3.00 mm



D = form of measuring contact points **inside**

form F S / R 0.40 mm	form G S / R 0.10 mm	form H carbide ball ø 0.60 mm	form K carbide ball ø 1.00 mm	form L carbide ball ø 1.00 mm

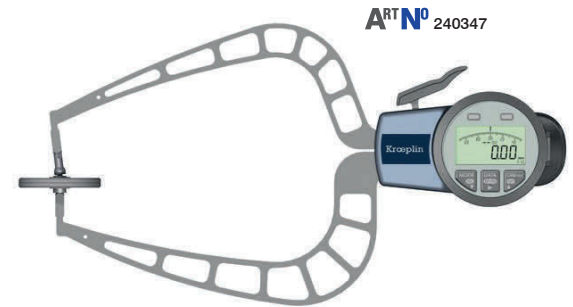
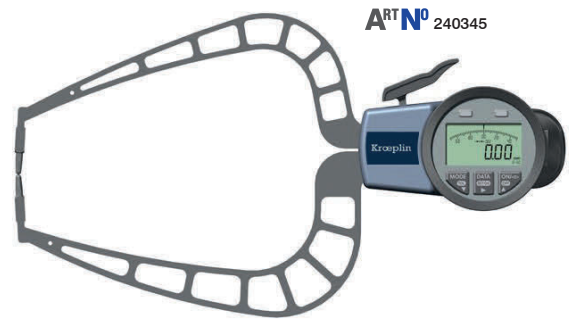
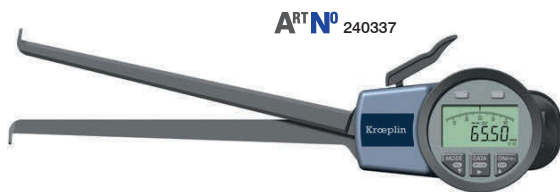


ART N°	mm	mm	form D	L mm	Hb mm	Hf mm	F min. N	F max. N	mm	CC
external quicktest gauge										
240300	0 – 10	0.005	E / ø 1.5	35	19.1	18.6	0.8	1.2	0.005	inclusive
240301	0 – 10	0.005	C / ø 6	35	21.7	14.8	0.8	1.2	0.005	inclusive
240302	0 – 20	0.01	E / ø 1.5	85	24.6	24.6	1.1	1.6	0.01	inclusive
240303	0 – 20	0.01	F	85	24.6	2.5	1.1	1.6	0.01	inclusive
240307	0 – 20	0.01	D	85	28.2	20.7	1.1	1.6	0.01	inclusive
240304	0 – 30	0.02	E / ø 3	115	22	22	1	1.5	0.02	inclusive
240305	0 – 30	0.02	A / ø 3	115	22	1	1	1.5	0.02	inclusive
240306	0 – 30	0.02	D	115	22	18	1	1.5	0.02	inclusive
internal quicktest gauge										
240310	2.5 – 12.5	0.005	G	35	0.9	0.9	0.8	1.2	0.005	inclusive
240311	5 – 15	0.005	H	35	2.5	2.5	0.8	1.2	0.005	inclusive
240312	10 – 30	0.01	K	85	5.4	5.4	1.1	1.6	0.01	inclusive
240313	20 – 40	0.01	K	85	7.3	7.3	1.1	1.6	0.01	inclusive
240314	30 – 50	0.01	K	85	7.3	7.3	1.1	1.6	0.01	inclusive
240315	40 – 60	0.01	L	85	12.2	12.2	1.1	1.6	0.01	inclusive
240316	50 – 70	0.01	L	85	12.2	12.2	1.1	1.6	0.01	inclusive
240317	60 – 80	0.01	L	85	12.2	12.2	1.1	1.6	0.01	inclusive
240318	70 – 90	0.01	L	85	12.2	12.2	1.1	1.6	0.01	inclusive
240324	80 – 100	0.01	L	85	12.2	12.2	1.1	1.6	0.01	inclusive
240319	13 – 43	0.02	L / ø 1.5	114	4.5	2.5	1.2	1.7	0.02	inclusive
240320	30 – 60	0.02	L / ø 2	114	8	4	1.3	1.87	0.02	inclusive
240321	50 – 80	0.02	L / ø 2	114	8	4	1.3	1.87	0.02	inclusive
240322	70 – 100	0.02	L / ø 2	114	8	4	1.3	1.87	0.02	inclusive
240323	90 – 120	0.02	L / ø 2	114	8	4	1.3	1.87	0.02	inclusive

Kroepelin • Electr. Digital Quicktest Gauge • IP67

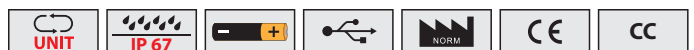
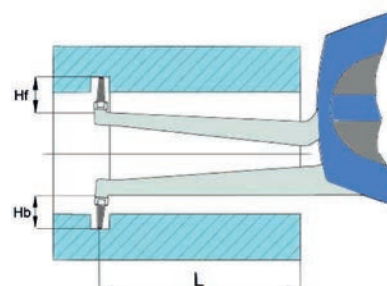
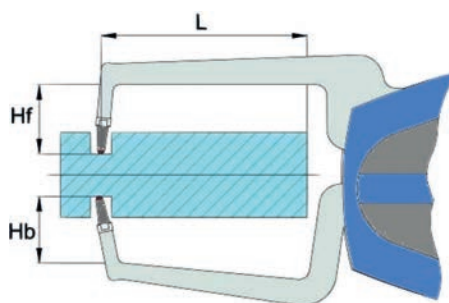
- with extra long contact arms
- with analogous and digital display
- with USB interface and with Mitutoyo interface (as accessories available)

- robust, rugged plastic housing
- LCD-Display with clear digits
- ABS and REL measuring system
- red/green display for tolerance measurement
- with tungsten carbide measuring contact points
- one movable contact arm
- reading in mm/inch
- numeric interval switch, repeatability ± 0.04 mm
- incl. 1x 1.5 V Battery (type AA, art. no.: 90003), with operation manual



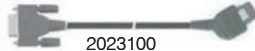
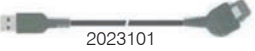
form of measuring contact points **internal** / **external**

form K carbide ball ø 1.50 mm	form L carbide ball ø 2.00 mm	form E carbide ø 5.00 mm	form M carbide ball ø 5.00 mm	form D disc ø 50.00 mm



ART N°	mm	mm	form	L mm	Hb mm	Hf mm	F min. N	F max. N	mm	CC
external quicktest gauge										
240345	0 – 50	0.02	E	180	25.3	25.3	0.9	1.2	0.06	inclusive
240347	0 – 50	0.02	D	180	27.2	19.5	0.6	1	0.08	inclusive
internal quicktest gauge										
240336	15 – 65	0.02	K	175	4.5	2.5	1	1.2	0.06	inclusive
240337	40 – 90	0.02	L	195	8	4	1	1.2	0.06	inclusive

Data Processing

	ART N°	article description
 compatible with 	2040101	WiFi
 compatible with 	2040102	WiFi Mini-USB
 2023100  2023101 Software 	2023100	PROXIMITY - RS232 Software
 Software 	2023101	PROXIMITY - USB Software
 Software 	2424101	POWER - USB, external power Software
 2020188	2020188	USB - RS232, adapter (optional suitable for 2323100)
 compatible with 	2420192	USB - Mini-USB (with data key) optional, additional available: foot switch (art. no. 209011)
 compatible with 	2420194	USB-PC - Duo-Data output interface box with data key and with foot switch port (connectivity also for Mitutoyo Digimatic measuring devices) optional, additional available: foot switch (art.-no.: 209011)

	ART N°	article description
 compatible with 	3420195	USB - Mini-USB interface box with data key and with foot switch port optional, additional available: foot switch (art.-no.: 209011)
 compatible with 	230139	USB - Mini-USB interface box with data key and with foot switch port optional, additional available: foot switch (art.-no.: 209011)
 compatible with 	209001	Interface USB - Mini-USB, 0.01 mm / 0.001 mm, with data key
	209010	foot switch made of metal, with cinch plug 2.5 mm
	209011	foot switch made of metal, with cinch plug 3.5 mm
	2023105	wireless data transfer transmitter module for measuring devices with proximity interface
	2023104	wireless data transfer USB receiver (up to 15 m distance)
	2023106	wireless data transfer USB receiver Bluetooth®
	2023106S	wireless data transfer USB receiver Bluetooth®
	209000	Bluetooth® transmitter
	209009	Bluetooth® transmitter Mini-USB

Our certified QM-System is constantly controlled and improved by internal and external Audits of **TÜV Rheinland**.



Calibration certificates for our products on request, please!

CC

Workshop Calibration Certificate in german or english language, acc. to DIN/ISO etc.

Scope: Calibration certificate indicating the deviation and limits of normal and with the test curve(s) for the measured according to the criteria of standards, confirmation of their performance. Confirmation of traceability to national normal, indicating an identification number.

Validity: Individually for each single instrument/device. Period of validity in accordance with your quality management manual (usually 12 month)

Price: See our price list, prices valid only for initial delivery from the factory, price for re-calibration on request, please.

DAkks

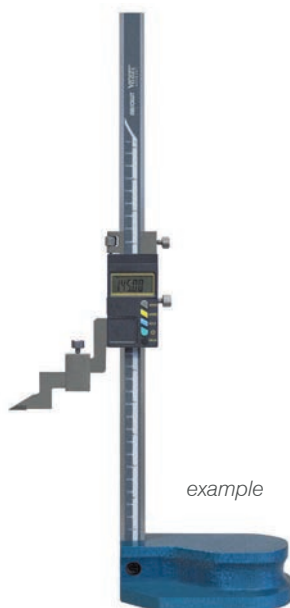
Calibration test report by an accredited testing laboratory

Scope: As mentioned above, calibration test report as mentioned above, but accredited by testing laboratory.

Validity: Individually for each single instrument/device. Period of validity in accordance with your quality management manual (usually 12 month)

Price: see price list, prices valid only for initial delivery from the factory, price for re-calibration on request, please.

Height Measuring Devices, Marking Devices and Height Calipers



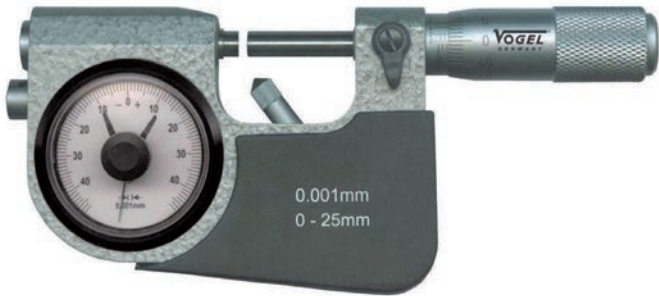
		
300	3494110	3494110-DKD
600	3494111	3494111-DKD
1000	3494112	3494112-DKD

External Micrometers



		
25	2394000	2394000-DKD
100	2394001	2394001-DKD
200	2394002	2394002-DKD
300	2394003	2394003-DKD
600 - 1000	2394004	—

Indicator Snap Micrometers



example

		
25	2394190	2394190-DKD

Gear Tooth Outside Micrometers



example

	
25	2394420
100	2394421
600	2394422
1000	2394423

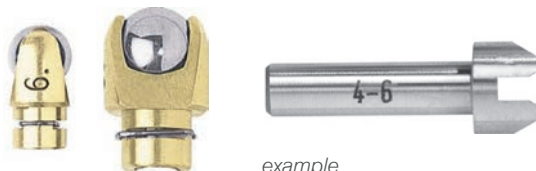
Setting Gauges for Micrometers



example

		
100	2394006	2394006-DKD
300	2394007	2394007-DKD
500	2394008	2394008-DKD
1000	2394009	—

Thread Flanks Measuring Inserts and Measuring Ball Holders



example



2394042

Thread Setting Gauges



example

	
100	23940421
200	23940422
500	23940423
1000	23940424
> 1000	23940425

2-Point Internal Micrometers



example

		
50	2394040	2394040-DKD
200	2394043	2394043-DKD
500	2394045	2394045-DKD
1000	2394046	—
1500	2394047	—

2-Point Internal Micrometer Extensions



example

		
1000	2394055	—

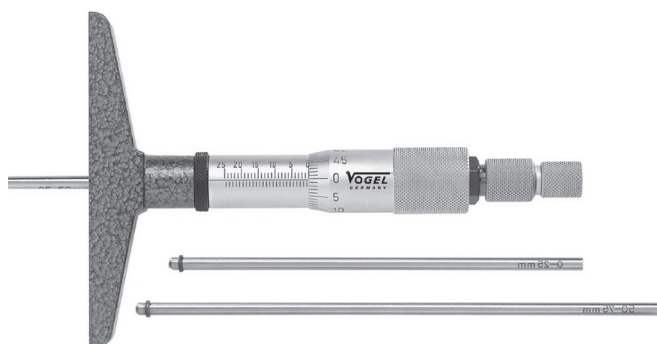
3-Point Bore Micrometers



example

		
50	2394020	2394020-DKD
100	2394021	2394021-DKD
180	2394023	2394023-DKD
250	2394024	—

Depth Micrometers and Extensions



example

		
Depth Micrometers		
25	2394500	2394500-DKD
>25	2394501	2394501-DKD
Extensions		
100	2394502	2394502-DKD
200	2394504	2394504-DKD
500	2394505	2394505-DKD

Dial Indicators



example

		
0 - 30	2494200	2494200-DKD
30 - 50	2494201	2494201-DKD
50 - 100	2494202	2494202-DKD
100 - 150	2494203	2494203-DKD

Dial Test Indicators



example

	
2494600	2494600-DKD